



ARCHAEOLOGY
OF THE MODERN CITY 1788-1900

Assessment of Historical and Archaeological Resources of the Lilyvale site, The Rocks, Sydney

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The Archaeology of the Modern City project incorporates two research ventures: 'Exploring the Archaeology of the Modern City: Sydney 1788–1900' and 'Managing the Archaeology of Central Sydney and Melbourne 1788–1900'. Both projects are funded by the Australian Research Council Linkage Scheme and conducted by Project Partners: La Trobe University, the Historic Houses Trust of New South Wales, Godden Mackay Logan Pty Ltd, the Sydney Harbour Foreshore Authority, the NSW Heritage Office, Heritage Victoria and the Sydney City Council.



Introduction to the Historical and Archaeological Resources Assessment Reports

This is one of seven reports concerning the assessment of historical and archaeological resources at sites selected for the Exploring the Archaeology of the Modern City (EAMC). The series as a whole requires some introduction.

The assessment reports were written for each archaeological site by the EAMC team following the assessment of the status of resources available to the project. While they provide some background to the excavations and historical research undertaken at each site, the reports were not intended as a comprehensive history of such work. Rather, they are an assessment of whether the surviving *products* of that work were sufficient to justify further research within the scope of the EAMC project.

These reports were originally intended for review by Industry Partners only and have not been written for a general audience. It was decided many months after their preparation, that the contents were significant enough to warrant distribution to interested parties, despite containing some sensitive discussion of the work of peers.

All primary consultants discussed in the reports were provided the opportunity to comment on the presentation of their work prior to publication.

Any errors discovered in the assessment process are presented as matters of fact, and the EAMC assessment should not be read as a judgement upon the professionalism of the consultants and researchers discussed in the report.

Further, it is worth noting that the primary purpose of the EAMC reports should not be confused with a generalised evaluation of past work: resources considered to be inappropriate for EAMC work are not necessarily ruled out for use in other research contexts.

The systematic assessment of artefact catalogues in Australian historical archaeology is uncharted territory and the EAMC team had to develop their own methods to undertake this task. Any feedback on our approach and procedures is most welcomed.

We hope that the circulation of these reports will spark serious consideration of the many important issues raised by the need to systematically record data in heritage archaeology contexts.

Professor Tim Murray
Chief Investigator

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1.0 INTRODUCTION

The Lilyvale site was excavated in 1989 by Wendy Thorp for CRI Property Management, and indirectly for site owners, the Sydney Cove Redevelopment Authority.

The 'Exploring the Archaeology of the Modern City' project (EAMC) has been established by the Archaeology Program of La Trobe University, and Industry Partners, to comprehensively analyse and interpret the large assemblages excavated from historical archaeological sites, which are held in storehouses across Sydney. The aim is to develop a clearer and more precise understanding of Sydney's past material, personal and working worlds from its archaeological remains, than has been previously attempted in Sydney.

The archaeological collection from the Lilyvale site is among the suite of material selected for analysis in this project. Other collections include those from the Hyde Park Barracks, the Royal Mint, Susannah Place, First Government House, the Cumberland and Gloucester Streets site and Paddy's Markets. Artefacts from each collection will be comprehensively analysed within their specific archaeological and broader historical contexts. Once each site has been successfully analysed and interpreted on its own merits, a program of inter-site research, analysis and interpretation will be undertaken to reach a new perspective on Sydney's past.

Prior to undertaking intra-site research, the records of each collection (excavation records and reports, the artefact database and related historical material) will be reviewed for their accuracy and their utility within the research program.

A review of records pertaining to the Lilyvale site archaeological collection was undertaken in December 2001 and January 2002.

This report outlines the details of this review and potential utility of historical and archaeological records of the Lilyvale site in the EAMC project. The details are included as appendices. Appendix One provides an assessment of the documents and reports relating to the history and archaeology of the Lilyvale site, including an overview of works on the site, and levels of analysis and interpretation offered to date. Appendix Two provides a detailed review of the artefact database.

This report was prepared in January 2002 for the Industry Partners of the AMC Project: the Historic Houses Trust of New South Wales, the Sydney Harbour Foreshore Authority, Godden Mackay Logan Pty Ltd, the NSW Heritage Office, Heritage Victoria and the Sydney City Council. (It was revised in July 2002 and May 2003.)

1.1 AUTHORSHIP

Sections 1.0–3.0 were prepared by Penny Crook (Project Archaeologist). Appendix One was prepared by Laila Ellmoos (Project Historian) and Penny Crook. Appendix Two was prepared by Penny Crook. Tim Murray (Chief Investigator) reviewed this report.

1.2 ACKNOWLEDGEMENTS

We are grateful to Wendy Thorp for providing us with available site records and records, and also to Jane Lydon, Graham Wilson and Leah McKenzie for their assistance with tracking down (and handing over, where available) stray site records.

Many thanks also to Wayne Johnson from the Sydney Harbour Foreshore Authority (SHFA) for assistance with understanding the history and archaeology of the site.

2.0 SUMMARY ASSESSMENT OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES

The review of historical and archaeological records pertaining to the Lilyvale site was undertaken in December 2001 and January 2002 by the EAMC team. The team reviewed all historical and archaeological reports held by the SHFA, including those recently handed-over by Wendy Thorp, and undertook the analysis of a sampled portion of the artefact catalogue. Details of the review are included in Appendices One and Two. The major results and conclusions of the review are briefly outlined below.

While the Lilyvale site was excavated in 1989, the site report has been in draft form since 1994. SHFA has held only some trench and artefact reports since the completion of the draft report. Other available trench and artefact reports and original site records were made available to the EAMC 2003 by the excavator Wendy Thorp by the EAMC team in November 2001 and May 2003. Some notebooks remained unaccounted for.

Of those reports and original that were available for review, most were comprehensive and suitable for the EAMC's research.

Unfortunately, the sample of the vast Lilyvale site artefact assemblage indicates that the catalogue will not be suitable for the EAMC's research. The most significant problems encountered with the catalogue include the restricted and non-standardised field list used to record the artefacts; a high level of data-entry errors and alterations; a Type Series which was not incorporated into the database and which did not allow for repeats; several largely unsorted 'bulk' and 'mixed' bags; and some misidentified artefacts and questionable records. Many of these problems are understandable given that this was one of the first major cataloguing projects in NSW and much more information has been gathered and improved systems developed since 1989.

Overall, the assemblage is best treated as preliminarily recorded, requiring additional information and some revision of already-recorded data.

Such work cannot be undertaken for the whole catalogue within the scope of the EAMC project, and it is proposed that the EAMC team select a sample house or two from the site, upgrade those records and proceed with the analysis and inter-site interpretation.

Regarding the remainder of the catalogue, it is recommended that SHFA fund a post-doctoral scholar under the ARC Linkage Scheme to study and upgrade the records, analyse the revised data and write-up interpretations derived from that analysis. (It is not possible that such research could be undertaken within the timeframe of the EAMC project.)

3.0 RECOMMENDATIONS

It is proposed that the EAMC team select a manageable sample from the assemblage, derived perhaps from one or two houses on the Lilyvale site, and undertake necessary corrective or verificatory work to that part of the artefact catalogue, before proceeding with comprehensive analysis framed around the record from each house.

3.1 LIST OF SPECIFIC TASKS

Following is a list of tasks required to make catalogue records from selected, significant deposits of the Lilyvale site ready for comprehensive analysis (see 3.1.1). The EAMC team will undertake this list of tasks within the scope of the project.

Also provided are recommendations for the SHFA to consider (see 3.1.2), and other suggestions for improvements to the storage of the artefacts themselves (see 3.1.3). The latter are *suggestions only*, concerning issues that will not greatly impact upon the EAMC project. Should funding for a post-doctoral scholar be made available and should the Linkage project be awarded, the tasks to be undertaken within the scope of that project have also been provided.

3.1.1 Tasks to be Undertaken for the Current EAMC Research Program

1. Select a sample of stratigraphic contexts from one or two houses and upgrade catalogue records for artefacts recovered from that assemblage.
2. Enter selected stratigraphic data into database.
3. Add box numbers to the database.

3.1.2 Recommendations for the Sydney Harbour Foreshore Authority

4. Provide funding, as part of the ARC Linkage Scheme, for a post-doctoral research fellow to upgrade the Lilyvale site catalogue and analyse and interpret the site assemblage.
5. Order, inventory, copy and bind the site records and reports handed over by Ms Thorp in November.

3.1.3 Improvements to be Considered by the SHFA

6. Expedite the removal of the Lilyvale artefact collection to improved premises; or stabilise the condition of artefacts at Howard O'Farrell in the short-term by relocating boxes away from damp spots, repairing windows and shoring up the piles of boxes.
7. Re-box artefacts from damaged boxes when relocated.

3.1.4 Tasks Proposed to be Undertaken by Post-Doctoral Scholar

- | | |
|---|---|
| <i>Consolidate stratigraphic and other data</i> | <ul style="list-style-type: none"> – Recover outstanding site records if not already gathered by EAMC team – Input data from context sheets into relational database – Review and if necessary revise existing stratigraphic interpretations, if in conflict with dates arising from artefact research |
|---|---|

- Revise existing catalogue*
 - Tidy up the existing database, transfer notes data to dedicated fields
 - Review and where necessary correct existing data in the database
 - Complete additional fields
 - Sort, separate and catalogue items from bulk bags
 - Rebag all artefacts into plastic bags with labels derived from the database
 - Re-establish a more comprehensive type series and allocate all artefacts to its categories
 - Undertake minimum vessel counts
 - Photograph as many artefacts as possible to include in artefact database
- Analyse and interpret assemblage*
 - Utilise corrected database and stratigraphic data to perform site-wide, cross-class analyses of the site assemblage
- Report and other outcomes*
 - Publish a monograph on the site that contributes to local, national and international issues related to the history and archaeology of the modern city in the 19th and 20th centuries, and includes:
 - photographs of the excavation and artefacts;
 - synthesised account of the excavation and trench areas;
 - revised stratigraphic matrices; and
 - digitised plans of the excavated site and its features.
 - Provide detailed account of cataloguing procedure for the SHFA's records
 - Prepare draft interpretive and display options for the SHFA to use in its public programs.

4.0 APPENDICES

Appendix One: Assessment of Records Relating to the History and Archaeology of the Lilyvale Site

Appendix Two: Sampling the Accuracy and Utility of the Artefact Catalogue

Appendix One:

ASSESSMENT OF RECORDS RELATING TO THE HISTORY AND ARCHAEOLOGY OF THE LILYVALE SITE

1.0 BACKGROUND

The Lilyvale site is bounded by Cumberland Street to the west, Essex Street to the south, Gloucester Street to the east, and the Cahill Expressway to the north. The site comprises the ANA Hotel as well as three renovated buildings dating from the 1840s: Lilyvale Cottage (176 Cumberland Street), the Butchery Buildings (178–180 Cumberland Street) and the Hart's Buildings (10–14 Essex Street). A row of terrace houses at 158–170 Cumberland Street, some also dating from the 1840s, were demolished in 1989, prior to archaeological excavations and the later construction of the ANA Hotel. The Gloucester Street frontage between Essex Street and the Cahill Expressway¹ was cleared for development, and later used for car parking sometime in 1987.

Prior to European settlement in Australia, the rocky ridges above the west side of Sydney Cove were 'heavily timbered', its higher points covered in 'blackbutts, angophoras, kunzeas...berries, wild figs, wild spinach, parsley and other herbs'. Archaeological evidence indicates that Aboriginal people 'moved across this portion of the later European settlement and, at least once in around c1450, stopped to make a fire and cook fish and shellfish' (Attenbrow 1992: 20, Thorp 1994: 4.1).

Throughout the 19th and early 20th century, the Lilyvale site was a residential block comprising a number of dwellings and shops that housed a largely working-class community. Little is known about the people who lived here between 1788 and c1830 because minimal research has been undertaken on make-up of the residential population in this period. Most of the research to date has centred on those who owned land and buildings on the Lilyvale site, such as William Sibley or Robert Fopp.² Similarly to the Cumberland and Gloucester Streets site nearby, it is presumed that many of the people who lived on the Lilyvale site at this time were convicts or ex-convicts, such as the Chandler family.

The Lilyvale block was sparsely populated in this early period, with many of the houses surrounded by gardens, yards and outbuildings. However, by 1839 all formal claims for land grants were made for the site. Consequently, the population increased into the 1840s, with houses, shops, factories and hotels gradually replacing these open spaces and outbuildings. By the late 19th century, the Lilyvale site was densely populated—a trend that would continue into the 20th century. The exception to the closely packed nature of this residential block was the:

¹ The Cahill Expressway follows the configuration of Little Essex Street.

² Further research is currently underway on these landlords as part of the EAMC project, to ascertain whether they were absentee landlords or owner-occupiers.

corner of Essex and Cumberland Streets...which had retained a configuration that was more akin to the early nineteenth century use of space than of the later years. This was to change after the depression. (Thorp 1994: 4.4 fn 36³).

Sections 1.1–1.7 provide a detailed historical account of each of the building groups on the Lilyvale site.

1.1 158–166 CUMBERLAND STREET (SMIDMORE COTTAGES)⁴

There were four stages of construction at 158–166 Cumberland Street in the 19th century, with the first structure built there sometime between 1800 and 1810 (Thorp 1994: 4.2 fn 69, 70). Then,

...in about the year 1820 the cottage, its well and any other buildings that were associated with it were superseded by a new building...most likely to have been the substantial building shown on Harper's survey of 1822 in the centre of the street frontage. (Thorp 1994: 4.2 fn 73, 74).

Associated service and out buildings were discovered during archaeological excavations, including the well and a building that may have functioned as a 'store room, root cellar or even a wash-house' (Thorp 1994: 4.2 fn 75). There were no remains of these actual dwelling(s) in-situ as it appears that 'the house, its outbuilding and any other services it possessed, like their predecessors, were removed some time in the 1830s to make way for the construction of a group of terraces' (Thorp 1994: 4.2 fn 76). As such, it is unclear where this cottage was actually located. As well, according to Thorp, 'it is now impossible to attribute a particular person or family to the house' (Thorp 1994: 4.2 fn 68, 69).⁵

Between the late 1820s and 1836⁶, two rows of joined terraces were built along the Cumberland Street frontage, bounded by the Chandler cottages to the south, Essex Lane to the north and the future Gloucester Lane to the rear. Five of these terraces fronted Cumberland Street, while another seven were constructed to the rear, separated by a laneway that was parallel to Cumberland and Gloucester Streets. These twelve terrace houses were constructed for Thomas Smidmore, who arrived in the colony in 1828. Council rates records indicate that these terraces had two storeys, with three rooms each (Thorp 1994: 4.3 fn 20).⁷

When Thomas Smidmore died in 1861, his wife took over ownership of these buildings (Thorp 1994: 4.4 fn 13).⁸ By 1875, these twelve terraces were occupied by 'a variety of trades people, including a

³ Owing to the fact that this report has no page numbers, all citations to it are listed by their Section number, e.g. '4.4', and—because some sections of the report are quite lengthy—the footnote reference number to which they are closest, e.g. 'fn 36'.

⁴ Thomas Smidmore's surname variously appeared as Smedmore, Smidmore and Skidmore. For the purpose of this report, he will be referred to as Thomas Smidmore while his cottages on Cumberland Street are to be referred to as the Smidmore Cottages. Note also that T. Smidmore was listed as having a shop on George Street in 1848 (Fowles 1962: 94).

⁵ Thomas Smidmore was the claimant for this land (Lot 10, Section 70) as noted on the Russell Plan 1838/1880.

⁶ In the report, the construction date for the Smidmore terraces was given as '...no earlier than 1828; an approximate date of c1830 is likely to be close. The houses were certainly in existence by 1836' (Thorp 1994: 4.3 fn 15).

⁷ Council rates records indicate that the seven tenements to the rear had only one storey, with two to three rooms apiece. Room and floor numbers for the five terraces at 158–166 Cumberland Street are inconsistent in the rates records: between 1845 and 1856, these dwellings were listed as having one floor and three rooms each, and from 1858 to 1877, each dwelling was listed as having two floors and three rooms (with the exception of 1871, when the Smidmore terraces were recorded as having one floor and three rooms each).

⁸ According to the Darling Harbour Resumption Plan Q (1902), Joseph S. Smidmore and Albert M. Smidmore (Thomas Smidmore's sons) were registered as trustees in the estate of Thos. Smidmore (Block 503).

stonemason, a coach-builder, engine driver and boatmen amongst others’ (Thorp 1994: 4.4 fn 13). It appears that the Smidmore terraces ‘and other housing in Gloucester Street and Little Essex Street’ were also occupied by maritime workers and policemen, who tended to lose ‘their buttons off their uniforms in considerable numbers’ and may have worked ‘at the watch house that was couple of blocks down Cumberland Street’ (Thorp 1994: 4.3 fn 60, 58).

The Smidmore terraces were ‘inspected during 1875 as part of the investigation into the sewerage and drainage of Sydney’, at which time only the seven buildings to the rear were still remaining. In the inspection report, the Smidmore buildings were described as ‘seven two roomed brick cottages’ separated from Cumberland Street by a passageway (Thorp 1994: 4.4 fn 12). Presumably the other five buildings on Cumberland Street frontage had already been demolished to make way for the construction of new buildings on the site around this time (Thorp 1994: 4.4 fn 14). Thorp claims that ‘the Smidmore Buildings were treated lightly (compared to other buildings inspected at the time) and must leave the impression that they were much better than some of their contemporaries, even at this late stage of their existence’ (Thorp 1994: 4.4 fn 13).

In c1880 four joined terraces were constructed at 158–166 Cumberland Street, possibly for Smidmore’s widow or his children, on land that had been granted some 40 years previously, which replaced the twelve terraces (Thorp 1994: 4.4 fn 13, 14). On completion, the seven tenements to the rear of these new buildings were presumably demolished (Thorp 1994: 4.4 fn 17, 18). New toilets were later installed to the terraces between c1883 and 1887 (Thorp 1994: 4.4 fn 19).

Although the State Government resumed the Smidmore Terraces under the *Darling Harbour Resumption Act* in around 1903, they continued to be in use until the late 1970s. These four Victorian terraces, along with the two McRoberts terraces at 168–170 Cumberland Street, were demolished in 1989–1990 to make way for the ANA Hotel development.

1.2 168–174 CUMBERLAND STREET (CHANDLER OWNED COTTAGES, MCROBERTS TERRACES)

Jane Chandler (earlier Gammage [also spelt Gabbage and Gammon], nee Appleton)⁹ claimed the ‘building and the land immediately north of Geranium Cottage’ in 1833 (Thorp 1994: 4.2 fn 52).¹⁰ There were three cottages in evidence here by the 1830s, one of which was owned and occupied by Chandler, an ex-convict, and her family. Although not made explicit in the Lilyvale excavation report, it appears that the Chandler-occupied cottage was located to the rear of the two cottages on the Cumberland Street frontage (which would later have been numbered 172–174 Cumberland Street) (Wayne Johnson pers comm February

⁹ For other references to Jane Chandler see *The Rocks: Life in Early Sydney* (Karskens 1997: 123, 152, 156, 196). Jane Chandler is depicted in Thorp’s report as representing ‘a considerable story of success for a woman who only gained her freedom in 1807’ as she was the claimant for the property and owner of three houses here by the 1830s (Thorp 1994: 4.3 fn 10).

¹⁰ ‘The block adjoining Geranium Cottage, on its northern perimeters, was developed by c1830, and quite possibly by an earlier date. This included all the land that would later be occupied by double stone terraces on Cumberland Street and back to the point where Gloucester Lane would be constructed in the next century. It is recorded that three cottages occupied this land by 1836. One of these cottages was the Chandler House’. (Thorp 1994: 4.3 fn 8).

2002).¹¹ This location is also confirmed by cartographical evidence, such as the 1865 *Trigonometrical Survey of the City of Sydney*.

According to contemporary newspaper accounts and archaeological evidence, there was a fire at the Chandler house in 1814 (Karskens 1997: 156; *Sydney Gazette*, 20 August 1814; Wayne Johnson pers comm Feb 2002).¹² It is unclear whether the Chandlers rebuilt their house immediately after the fire. According to Thorp, the Chandlers did not rebuild until the c1830s, using the foundations of their earlier dwelling (Thorp 1994: 4.3, fn 13).¹³

The other two cottages owned by the Chandlers were located on Cumberland Street and bounded by the Chandler cottage to the rear, Geranium/Lilyvale Cottage to the south and the Smidmore cottages to the north. They were both constructed between 1822 and 1835 (Thorp 1994: 4.3, fn 9).¹⁴ The cottage closest to Lilyvale appears to have been two 'single storey terraces joined with a common party wall' with three rooms apiece, and constructed from brick with a shingled roof (Thorp 1994: 4.3, fn 10). The third cottage, demolished around 1845–1847 to make way for the terrace built for Edward McRoberts, was possibly of a similar construction; described as 'a single storey brick dwelling' (Thorp 1994: 4.3, fn 11). A timber out building, either a kitchen or 'residential apartment', had been 'built onto the southern yard wall of a row of tenement houses¹⁵ that occupied the site next to these houses' (Thorp 1994: 4.3, fn 11).

In 1836, Edward McRoberts, a teacher at the 'day school adjoining St Phillips Church at Church Hill' purchased the three Chandler cottages for a sum of £400 (Thorp 1994: 4.3, fn 37, 40; see also Walker 1930: 305). In around 1845, McRoberts 'replaced the northernmost cottage and its timber out-building, tacked onto the south wall of the Smidmore Terraces, with two well-built two storey stone terraces with detached kitchens'. These two new buildings were also described in the council rates books as having five to six rooms each (Thorp 1994: 4.3 fn 40, 41).¹⁶ McRoberts appears to have carried out renovations on the remaining cottage facing Cumberland Street and the Chandler Cottage cottages in around c1845–7. At this time, internal partition walls, possibly timber, were built inside the 'relatively new brick shell' (Thorp 1994: 4.3 fn 44, 45).

It is unclear whether Edward McRoberts was an owner-occupier or an absentee landlord. It appears that the construction of the two stone terraces, and the renovations to the former Chandler home by McRoberts were 'for investment purposes only; he never occupied any of the buildings' (Thorp 1994: 4.3 fn 40, 47).¹⁷ However, it is possible that he may have lived in one of these stone terraces as he was listed

¹¹ 'Jane's memorial for her claim records the fact that a single storey building occupied its most eastern boundary' (Thorp 1994: 4.2 fn 52).

¹² No mention of this fire was made in the archaeological report, the trench reports or the available context sheets for the Lilyvale site.

¹³ 'There is good evidence to suggest that Jane and her husband also rebuilt their own home at the same time as they were constructing the new cottages or soon after' (between 1822–1836). (Thorp 1994: 4.3 fn 13).

¹⁴ 'The two new cottages must have been built between 1822 and 1835, hence a date of 1830 for their construction' (Thorp 1994: 4.3 fn 9).

¹⁵ It is presumed that these 'tenement houses' were the twelve Smidmore cottages.

¹⁶ There is speculation that these two terrace houses at 168–170 Cumberland Street) were from sandstone from the old St Phillip's Church, demolished in 1847 (Wayne Johnson pers comm. Feb 2002).

¹⁷ The reference to Edward McRoberts living on Cumberland Street in 1828 was probably from the Census undertaken in this year.

as living on Cumberland Street in 1828. Four years later, in the NSW Calender and General Post Office Directory for 1832, Edward McRoberts was listed as living on Kent Street.

For the remainder of the 19th century, a wide range of tenants occupied the McRoberts terraces and the former Chandler Cottages. Joseph Ives, a water carrier, lived in the cottage adjacent to Geranium/Lilyvale Cottage in 1857 and then rented the cottage further north from 1867 to 1873 (see Thorp 1994: 4.3 fn 69, 72).¹⁸ Meanwhile the 'Southern McRoberts terrace, in particular, was probably home to a man or woman producing slop clothing and embroidered bead work' (Thorp 1994: 4.3 fn 96).¹⁹ John MacNamarra occupied the McRoberts terraces between 1861 and 1867, first living at the terrace to the north then moving to the southern terrace in 1865. He was possibly related to Thomas and Michael MacNamarra, who were also 'living in the McRoberts cottages and those to the south from the 1860s to the 1880s' (Thorp 1994: 4.3 fn 69). Mrs Thurston, who ran a butchery on corner of Little Essex and Gloucester Streets in the c1840s, later lived at Chandler Cottage 'as a tenant of Mr McRoberts', and possibly ran a laundry business there as well (Thorp 1994: 4.3 fn 51, 68).²⁰

The two-storey McRoberts terraces were sold to William Forbes in c1860, and then to Owen J. Caraher in c1870, who also owned and lived on land fronting Gloucester Street and Long's Lane (see Section 1.7) (Thorp 1994: 4.3 fn 47).²¹

Chandler Cottage was demolished in c1892 (Thorp 1994: 4.4 fn 31), while the cottage on 'the northern side of Lilyvale lay vacant between 1892 and 1897 probably because of disrepair and lack of services' (Thorp 1994: 4.4 fn 35). According to Thorp, this cottage was demolished at the turn of the 19th century:

...the two²² cottages adjoining Lilyvale Cottage to the north were removed at about this time.²³ And probably as part of this programme [of resumption in The Rocks]. They had been vacant for some time and were demolished by 1902. After their demolition, the ground on which they had been built and the lane between them and the McRoberts terraces was covered in rubbish. (Thorp 1994: 4.5 fn 5, 6).

It appears that 'all of the houses between Lilyvale Cottage and McRoberts terraces...had no form of services up to the period of their demolition' in the 1890s and 1902 respectively (Thorp 1994: fn 78).

The vacant block between the McRoberts terraces and Lilyvale Cottage was leased out to 'J. Watterman, a coal and wood merchant' in the early 20th century, then to Wally Watkins between 1920 and the 1970s.

¹⁸ Is it possible that Joseph Ives was related to Isaac Ellis Ives, who became the Lord Mayor of Sydney in 1896-7 and owned the Argyle Stores.

¹⁹ Note: no date range is given for the occupant who may have undertaken this kind of work, and it is likely to be based on archaeological evidence recovered from the house.

²⁰ It is probable that Margaret Thurston had been married to Ezekial Thurston, who kept a butchery shop on Gloucester Street in the 1840s. There may also be a link between the Thurstons mentioned in *The Rocks: Life in Early Sydney*: 'Teacher Daniel Thurston and his wife Jane kept a small boarding school with only four children, along with their own two, in Cumberland Street in 1823' (Karskens 1997: 130), as well as William Thurston, 'a Rocks publican'.

²¹ Council Rates records indicate that the two McRoberts stone cottages and the three former Chandler cottages were owned by J. J. Forbes in 1861, William Forbes in 1863 and Owen J. Caraher in 1867.

²² There was only one cottage between McRoberts Terrace and Lilyvale Cottage, although it was divided into two dwellings by way of a party wall.

²³ These cottages were resumed in around 1901 at the insistence of the Rocks Resumption Board.

The McRoberts terraces were continuously tenanted between 1915 and the late 1980s (Thorp 1994: 4.5 fn 13) but were demolished in 1990 to make way for the ANA Hotel development.

1.3 176 CUMBERLAND STREET (GERANIUM COTTAGE c1821-1847, LILYVALE COTTAGE 1847-PRESENT)

It appears that William Sibley²⁴, 'a dealer of Brickfield Hill', constructed Geranium Cottage on the present site of the Lilyvale Cottage, but set back further on the block, in around 1821-22. A stable at the rear was 'located in what later would be Gloucester Lane, well below the house at its north-eastern corner and on a slope' (Thorp 1994: 4.2 fn 31).

Geranium Cottage reportedly contained 'four capacious rooms, and a cellar; likewise a two-stall stable newly erected, and detached kitchens, with a well of pure spring water, always abounding in the driest season' (Thorp 1994: 4.2 fn 38, *Sydney Gazette* 15 September 1825). A fence divided it from the block of land on Essex Street, which contained the earlier Myrtle Cottage. Although it appears that Sibley built and furnished Geranium Cottage as an investment rental property, it was offered for sale and was purchased by Robert Fopp²⁵ for £800 in 1825 (Thorp 1994: 4.2 fn 36). Fopp auctioned the contents of Geranium Cottage in 1826, and is then presumed to have let both properties from that time onwards as an absentee landlord.

Research undertaken to date has indicated that the land where the Lilyvale Cottage now stands was officially granted to Robert Fopp in 1835.²⁶ Michael Farrell, an inn-keeper, purchased this land 'with its building' in 1838 for an amount of £617, and around eight years later replaced Geranium Cottage with a two-storey brick house, which was to be known as Lilyvale Cottage by the 1920s (Thorp 1994: 4.3, fn 29). Lilyvale Cottage was 'in the municipal rate books as a structure made of brick with a shingled roof, of two floors with four rooms, a kitchen and stables'. Between 1845 and 1847, the house was 'considerably extended' with eleven rooms, and a coach house and stables to the rear (Thorp 1994: 4.3 fn 31, 34).²⁷

There is some confusion about the occupation of Lilyvale during the 1840s and 1850s. Although this property was apparently advertised for rent in 1847, there is some speculation that the Michael Farrell and his family also lived at Lilyvale, running a hotel there throughout the later part of the 19th century (Thorp 1994: 4.3 fn 37). Indeed it is claimed that these extensions to the cottage were carried out in order 'to

²⁴ Referred to as William Gibley in the Lilyvale report; and referred to as William Sibley in *Inside The Rocks* 1999 and *The Rocks: Life in Early Sydney* 1997.

²⁵ Robert Fopp was earlier butler to Governor Lachlan Macquarie, and arrived in Australia in 1809 from St. Helens, England aboard the *Dromedary* (15 May-25 December 1819).

²⁶ Two years earlier, '...in 1834 Robert Fopp presented a memorial to claim the land that he occupied in Cumberland Street. He claimed both the southern and northern portions that encompassed Geranium and Myrtle Cottages.' (Thorp 1994: 4.3 fn 2). See also *NSW Government Gazette* 1834, p. 379 and *NSW Government Gazette* 1836, p. 712.

²⁷ Council Rates records indicate that the property at 176 Cumberland Street had one storey with four rooms in 1845, at which time it was leased by Samuel Dones and possibly run as a boarding house. In 1848, 176 Cumberland Street was recorded as having two storeys with four rooms in 1848. Between 1848 and 1852, Frederick Harpur, a surgeon, leased this property. In 1856, 176 Cumberland Street was recorded as having three storeys and twelve rooms (similarly to the present configuration of Lilyvale). There was a second dwelling constructed to the rear of 176 Cumberland Street, which appeared from 1845 and was described as having two storeys and four rooms. It would seem plausible to assume that Geranium Cottage was replaced by Farrell between 1845 and 1847 with an eleven roomed dwelling, and not replaced with an identical two storey brick terrace with four rooms that would later be enlarged.

accommodate Mrs Farrell's very large family'. In their reminiscences of the Rocks, both Eliza Walker and J. M. Forde claim that the Farrells lived at Lilyvale.²⁸ However, the Farrells were not listed as occupants in the Council rates records or Post Office Directories between 1845 and 1900, only as landlords.²⁹

Although apparently intended as a middle-class townhouse³⁰, Lilyvale Cottage functioned as an inn and boarding house from the 1850s until the early 20th century, variously known as the Cumberland Hotel (1855–57), Clare Tavern (1858), Hen and Chickens and Athol Blair. In the early 1880s, when Michael Farrell died, the cottage and surrounding land was passed on to George Farrell³¹ and Ann Samuels, who let it. Mrs Brooks ran a boarding house there from 1880 to 1890, as did Ann O'Donoghue from 1905 to 1915 (Thorp 1994: 4.3 fn 68). William Bird lived there in the intervening years, between 1890 and 1905.

In c1900, the State Government resumed the Lilyvale Cottage under the *Darling Harbour Resumption Act*, ending the Farrell family's ownership of the site.

By 1928, Lilyvale Cottage became the official name bestowed on this two-storey building.

In 1983, the Sydney Cove Redevelopment Authority (SCRA) undertook the substantial conservation works on the Lilyvale Cottage, which included the replacement of timber roof shingles, chimney pots and window shutters, and the re-application of the 'original' paint scheme on the exterior walls. In 1988, the building was in use as the site office for CRI) (Schwager Brooks 1989: 5). In 1989³² the Lilyvale Cottage was converted for use by the Nature Conservation Council, and was then refurbished a third time in 1992, as a restaurant for the ANA Hotel development.

1.4 178–180 CUMBERLAND STREET

John Michael Anthony and Captain Edward Edwards³³ were recorded as the owners of a parcel of land on the 'south-western corner of the Lilyvale precinct later occupied by the buildings along Essex Street' by c1816. This parcel of land included Myrtle Cottage, a 'commodious dwelling house in one of the most agreeable situations in the Rocks', constructed sometime in the early 1810s (Thorp 1994: 4.2 fn 22). In the

²⁸ Further along Cumberland Street [from Myrtle Cottage] was a public-house called the Hen and Chickens. It was owned and kept by Michael Farrell, and the name was a well-known one, as Mrs Farrell had brought a large family with her. Next to this inn – now a boarding house – were two very nice cottages that had been built for Mr McRoberts' (Walker 1930: 309).

²⁹ Michael Farrell was the publican at the Whale Fishery Hotel (1831–34) as was his possible relative, John Farrell (1848). R. Farrell was publican at the Whaler's Arms (1878–90). Confusingly, there were two Michael Farrells, both publicans, living in Sydney during the 1840s. One was the proprietor at The Shamrock on George Street south (and went bankrupt in 1844), while the other was at the Welsh Harp on the corner of George and King Streets. According to the reminiscences of J. M. Ford 'Old Chum', Michael Farrell of the Welsh Harp and the Farriers Arms was also the publican of the Hen and Chickens on Cumberland Street in the Rocks: 'I think when Michael Farrell left the Welsh Harp (in the 1850s) he returned to The Rocks, and kept the Hen and Chickens in Cumberland Street between Frazer-lane (now Little Essex-street) and Essex-street.' (*The Truth* 15 March 1908).

³⁰ Lilyvale Cottage was also described as a 'gentlemen's residence' (Schwager Brooks 1989: 24).

³¹ George Farrell was possibly the son of Michael Farrell.

³² The other date given for this conservation work on Lilyvale Cottage is 1987 (Schwager Brooks 1989: 1).

³³ For more on Edward Edwards see Karskens 1997: 53, 90, 127 and 186. See also inventory of Edward Edwards's house, Coroner's Inquest, 6 November 1818, CSC AONSW (Karskens 1999: 210; see endnote 11).

following years, this land changed hands several times: Edwards and Anthony advertised it for sale in 1816³⁴, it was then purchased by Richard Archbold³⁵ in 1820, who in turn sold to William Sibley in 1821.

Sibley offered Myrtle Cottage for auction in 1824. Also known as Lot B, Myrtle Cottage and surrounding land were purchased by Robert Fopp that year for £260, 'part of which payment was made in kind; a horse, gig and harness' (Thorp 1994: 4.2 fn 35).

In 1834, Fopp made a claim for land he owned on Cumberland Street, claiming 'both the southern and northern portions that encompassed Geranium and Myrtle Cottages' (Thorp 1994: 4.3 fn 2). James Thompson made a counter claim for this land, asserting that 'he and Fopp had bought it from William Sibley while they were partners in a butchery business...The partners had rented the premises out for six or seven years and they had jointly paid repairs for the cottage.' Although this 'matter was eventually settled to their satisfaction' it is unclear how this was so (Thorp 1994: 4.3 fn 3-5).³⁶

Sibley kept Geranium Cottage for three years then sold it to Robert Fopp in c1825, who auctioned the contents of the cottage the following year and rented the property out. It appears that Fopp was officially granted the land where the Lilyvale Cottage now stands in 1835. Robert Fopp sold 'his land with its building' to Michael Farrell in 1838 for £617, at a loss (Thorp 1994: 4.3, fn 29).³⁷

Following James Thompson's death in c1841, the half share of this land grant passed to his widow, and was then mortgaged (see Section 1.3 for more detail on the ownership of land on the corner of Cumberland and Essex Streets).

According to the reminiscences of Eliza Walker, the Townsend family occupied Myrtle Cottage during the mid-19th century: husband, wife and their only son, Orlander who ran a butchery on Essex Street before leaving Australia for the Californian goldfields (Thorp 1994: 4.3 fn 37). However, there is no record of the Townsends in the Council rates or post office directory records.

By 1880, a new building was constructed on the corner of Cumberland and Essex Streets, and was occupied by John Duggan, who ran a butchery from around 1885 there until the early 20th century (Schwager Brooks 1989: 12).

In 1900, the State Government resumed the Butchery Building under the *Darling Harbour Resumption Act*. In 1990s, the Butchery Building was restored for the ANA Hotel development.

³⁴ It is unclear whether this property was sold in 1816, as 60 Cumberland Street, and adjoining land, was advertised for sale in 1820, as part of the estate of Edward Edwards and John Michael Anthony (*Sydney Gazette* 13 April 1816, 18 November 1820).

³⁵ Richard Archbold was referred to as Richard (or Michael) Archibald in the draft archaeological assessment report.

³⁶ For example, did Thompson retain any claim over the title of this land? And what of his widow, Elizabeth Thompson, when he died in 1841? Elizabeth Thompson was listed as the claimant for Lot 14, Section 70 on 19 April 1839 (location of the Hart's buildings). The 1838/1888 Russell plan shows that Robert Fopp and James Thompson claimed Lot 13 while only Robert Fopp claimed Lot 12, both in October 1835. Elizabeth Thompson was also registered as the claimant for Lot 14 as Thompson's widow. See also Walker 1930: 308 'Further along Cumberland Street you came to a public-house called the Coach and Horses. For many years this was kept by Elizabeth Thompson, a widow.'

³⁷ It is unclear whether this land grant, sold to Robert Fopp at this time, included both Myrtle and Geranium Cottages.

1.5 ESSEX STREET, BETWEEN REAR OF 178-180 CUMBERLAND STREET AND 10-14 ESSEX STREET

The Essex Street frontage was not excavated during 1989, with the exception of Myrtle Cottage (see Section 1.4)—some of the foundations of Myrtle Cottage were located under the Butchery Buildings (180 Cumberland Street) on the corner of Essex and Gloucester Streets. No historical information particular to these buildings was available at the time of writing.

1.6 10-14 ESSEX STREET, HART'S BUILDINGS

The Hart's buildings had remained intact from the time of their construction c1900 until they were extensively damaged when they were 'roughly converted in 1988 to serve as a temporary construction site office' for CRI Pty Ltd. (Schwager Brooks 1989: 1). As such, these buildings were determined to have negligible heritage value in the Conservation Plan for the Lilyvale site (Schwager Brooks 1989: 1, 17). It also appears that the Hart's buildings were not excavated in 1989 as part of the overall excavation of the site, although some floorboards were apparently lifted in order for archaeological work to be carried out (Schwager Brooks 1989: 57). As well, the Hart's buildings were not part of the watching brief in c1991, which only included Lilyvale and the Butchery Buildings.

1.7 GLOUCESTER STREET FRONTAGE

Owen Caraher 'operated a soap factory and had his own residence on a large portion of land along the Gloucester Street frontage partially backing onto the Smidmore terraces' from around the 1840s (Thorp 1994: 4.3 fn 47, 48). In c1881, Caraher's 'old factory and residence were demolished ...and the site built with a six block tenement' (Thorp 1994: 4.4 fn 32). In 1909, shortly after the State Government resumed land here, the Sydney Harbour Trust constructed a row of workers housing along the Gloucester Street frontage (135-155½ Gloucester Street), which eradicated the foundations of the 19th-century houses and shops (Thorp 1994: 4.5 fn 9). The construction of the workers' housing at this time also coincided with the creation of Gloucester Lane.³⁸

All archaeological resources were removed along the Gloucester Street frontage in 1987, when the terraces on this site were cleared for development by Sydney Cove Authority, and then used as car parking (Thorp 1994: 4.5, Schwager Brooks 1989: 26).

³⁸ Gloucester Lane was named in 1926 (Fitzgerald 1995: 78).

2.0 HISTORICAL, ARCHAEOLOGICAL AND CONSERVATION WORK UNDERTAKEN AT THE LILYVALE SITE

Table I provides a detailed list of the projects that have been undertaken on the Lilyvale site since the early 1980s.

Table I Conservation, archival and archaeological projects undertaken on the Lilyvale site since the early 1980s.

Year	Details	Reports
1978	National Trust Listing (Smidmore, McRoberts and Lilyvale Cottages & the Butchery building).	—
1980	Registered by the Australian Heritage Commission (placed on the register of the National Estate).	—
1983	Conservation of Lilyvale Cottage by SCRA.	—
1984	Lilyvale site delineated as site D1 under the SCRA Planning Scheme.	—
1987	Lower portion of the Lilyvale site, fronting Gloucester Street, cleared for development and used for car parking.	—
1988	EIS by Planning Workshop for CRI Property Management ('to assess the potential impact of development of a 594 bed hotel'). CRI Property Management Pty Ltd announced as developers for the site.	Planning Workshop 1988 —
c1989	Floorboards of the Hart's Buildings removed (or lifted) for archaeological investigation.	Schwager Brooks 1989: 57
1989	Archaeological excavation of the site, concentrated along the Cumberland Street frontage, and preparation of site reports.	Thorp 1994; Johnson c1989a, Lydon c1989a, Rossi c1989a, Steele 1989a, Wilson c1989a; anon. nd.
1989	Artefact analysis and reporting.	Thorp 1994, McKenzie 1989; Byrnes 1989, Chidlow 1989, Hickson c1989, Johnson 1989b, Lydon c1989b-d, Noble 1989, Rossi 1989b-e, Steele 1989b-c, Wilson 1989b
1989	Conservation Plan for extant historic buildings on Lilyvale site (Lilyvale, Butchery & Hart's buildings).	Schwager Brooks 1989
1990	Structural report on extant buildings on Lilyvale site.	Schwager Brooks 1990 (report missing)
1990-92	Construction of ANA Hotel.	—
April 1991	Excavations of Lilyvale and Butchery buildings.	Thorp 1991, Noble 1991
June-Aug 1991	Further excavations at Lilyvale Cottage concurrent with renovation, by Sarah Dillane, for Wendy Thorp.	Thorp 1992, Dillane 1991
1994	Draft copy of the report.	Thorp 1994

2.1 HISTORICAL ANALYSIS

Wendy Thorp assessed the archival and archaeological resources related to the Lilyvale site in 1988, one year prior to excavation, as part of the Environmental Impact Statement (EIS). Thorp was commissioned to prepare a site history for this EIS at this time, showing its 'historical development' from the time of European settlement in Australia. This report was comprised of brief historical overviews of each site (most at about one page each), as well as a short bibliography. The sites under investigation were:

- 158–166 Cumberland Street
- 168–170 Cumberland Street
- 172–74 Cumberland Street
- 176 Cumberland Street (Lilyvale Cottage)
- 178–180 Cumberland Street (Butchery buildings)
- Essex Street, between 178–180 Cumberland Street and 10–14 Essex Street
- 10–14 Essex Street (Hart's Buildings)
- Gloucester Street Frontage

Archival research undertaken prior to excavation of the Lilyvale was seen to provide 'a detailed framework of evidence which relates to the physical evolution of the site, its economic and social profiles and contemporary and later accounts of and commentaries on life in The Rocks'. Archival repositories, including the State Library, State Records, the City of Sydney Council and Sydney Water archives were used to carry out this research. Standard resources from these repositories were consulted, such as 'pictorial and cartographic evidence, rates and directories information, official investigations and other contemporary accounts as well as secondary sources' (Thorp 1994: 2.5.1).

The main interpretation of the Lilyvale site was presented in the draft report on the archaeological excavations, authored by Wendy Thorp in 1994. This report was intended to be a discursive history of the site, and as such aimed to synthesise the archaeological findings with archival resources.

The five key phases of use identified by Thorp are as follows (Thorp 1994):

Phase 1: Aboriginal Occupation and the Pre-European Landscape

Phase 2: 1788–1830 Georgian Gardens

Phase 3: c1830–c1870 Victorian Tenements

Phase 4: 1870–1900 A Workingman's Paradise?

Phase 5: 1901–1990 Public Property: Deterioration and Conservation Awareness

Thorp's goal in writing the report was to present:

...a narrative which, using the evidence retrieved from the site as well as documentary sources, tries to provide an impression of the way in which this portion of land was first used, how it was developed, in response to what stimuli and, most importantly, how this affected the people who lived there. The rhythms and depths of those lives are the focus of this report. (Thorp 1994: 2.6)

It is a significant problem that the report is still only at draft stage, which means that it does not achieve its stated aim. For example, the report does not contain images, maps or plans. This absence is particularly alarming considering that the 'narrative' is reliant on 'pictorial and cartographic evidence'.

This lack of site maps or plans also means that the narrative is difficult to decipher, in order to work out where the cottages were located, their dates of construction and demolition, and most significantly, who lived in them. Other problems are that the pages are unnumbered (and not in sequential order), and the only copy made available to the EAMC team has been marked-up.

Confusingly, inconsistent terminology is also used throughout the report to refer to the grants and dwellings on the Lilyvale site. For example, the Chandler-owned cottages on Cumberland Street are variously described as the cottages to the north of Lilyvale or to the south of the McRoberts or Smidmore terraces. The cottage adjacent to Geranium/Lilyvale Cottage is sometimes referred to as one cottage, at other it times as two (when it was apparently *one* cottage divided into *two* dwellings with a timber party wall).

Of most concern, however, is the complete lack of references. As there is no list of the footnotes referenced throughout the report or a bibliography of sources, it is impossible to re-check sources, or to assess the extent of archival research undertaken prior to excavation.

The bulk of archival research on the Lilyvale site was carried out on the buildings, their owners and the people who lived in them, on the portion of the site bounded by Essex and Cumberland Streets. Some limited research was also undertaken on the buildings to the north of Geranium/Lilyvale Cottage, owned by Thomas Smidmore and family as well as Jane Chandler and later, Edward McRoberts. In the report, the actual site history begins in c1816 when John Michael Anthony and Edward Edwards were recorded as owners of land on the south-west portion of the site, fronting Essex Street (Thorp 1994: 4.2 fn 21). The earlier history of the site has been little researched to date.

In the absence of substantial site-specific primary documentary evidence, use has been made of descriptions about other places in Sydney to speculate on what it may have been like at the Lilyvale site. For example, quotes are used to describe Sydney in 1829 (Thorp 1994: 4.2 fn 78) or 'a scene of tavern life in the 1840s', as recalled by Alexander Harris (Thorp 1994: 4.3 fn 54).

The three main research questions posed for the Lilyvale site in 1989 were intended to provide a framework for the archaeological excavations carried out there.

The key topics of the Research Design were:

- stereotypes of working-class life in The Rocks;
- 19th-century slums and moral decay;
- 20th-century nostalgia

These research questions were later refined through the processes of excavation and analysis.

In Section 4 of Thorp's report, considerable emphasis was placed on the 'class' of the people who lived on the Lilyvale site, and how the buildings they lived in and the material culture they left behind demonstrated their identity with either the middle- or working-class. This concern with assessing the middle-class occupation of the site was set out in the introduction to the report. In discussing the methodology for the excavation of Trench 16, Thorp claimed 'It was intended to examine evidence of middle class housing rather than working class occupation in terms of construction methods, materials and durability' (Thorp 1994: 2.5.4). As well, the early history of the site, as presented in Sections 4.2 and 4.3 of the report, attempted to show that Geranium and Myrtle Cottages were evidence of the 'wealth and standing' of the people who owned and (possibly) occupied them (Thorp 1994: 4.2 fn 41). The discourse about the affluence of Lilyvale Cottage is also contradictory, for although Geranium Cottage was presented as a

middle-class dwelling in Section 4.2, it is later claimed in the report that the ‘first sign of better times for the Lilyvale block was the replacement of Geranium Cottage by its owner Michael Farrell’ (Thorp 1994: 4.3, fn 31).

This attempt at class analysis in Section 4 is problematic primarily because the middle-class is associated with wealth. Belonging to middle-class or working-class should be something more than the ownership of china such as Spode (Thorp 1994: 4.2 fn 64, 72) or having connection to services such as water and sewerage. It is claimed that only the wealthiest houses were directly connected to the water mains, while other methods were used to service the rest of the population with fresh, clean water such as public pumps (there were two on Cumberland Street from about 1844), wells (both communal and privately owned) and water carriers. However, the first water and sewerage lines to Lilyvale precinct were apparently laid during 1860s–1870s to the Smidmore terraces (which have been described as tenement housing). Other properties with sewerage connected at this time included ‘another tenement on Little Essex Street and three buildings on Gloucester Street’ (Thorp 1994: 4.3 fn 76). As such, it becomes confusing as to whether the Lilyvale site was a working-class or middle-class community, or neither (forcing a re-evaluation of class).

2.2 CONSERVATION WORK AND CULTURAL RESOURCE MANAGEMENT

In 1984 the Sydney Cove Redevelopment Authority (SCRA) scheme, the Lilyvale site was delineated as site D1. Buildings on the Lilyvale site, at 158–180 Cumberland Street (including the Smidmore and McRoberts terraces, Lilyvale Cottage and the Butchery Building), were classified by the National Trust in 1978 and placed on the Register of National Estate in 1980, both individually and as part of the Cumberland Street Group.³⁹ While the site is not currently listed on the State Heritage Inventory, extant buildings at 176–180 Cumberland Street and 10–14 Essex Street are listed on SHFA’s draft Heritage and Conservation Register.⁴⁰

In August 1988, the Minister for Planning announced that CRI Properties Pty Ltd the nominated developer to undertake construction of a 38-storey hotel on the Lilyvale site.

In October 1988, the Planning Workshop produced an EIS for a proposed hotel on the site for CRI Project Management Pty. Ltd. The EIS included a historical overview of each of the sites under investigation (Wendy Thorp), a structural analysis of the extant heritage buildings (Schwager Brooks and Partners), and a geo-technical report (Peter J. Burgess & Associates).

In 1988, Schwager Brooks and Partners prepared an assessment of Lilyvale Cottage, the Butchery Buildings and the Hart’s Buildings, also as part of the EIS (Schwager Brooks 1988). A year later, Schwager Brooks completed a Conservation Plan for these extant historical buildings on the Lilyvale site (Schwager Brooks 1989). CRI Project Management Pty. Ltd commissioned this Conservation Plan at the request of the SCRA (the landowners), as part of the development consent. In 1990, Schwager Brooks carried out ‘detailed structural analyses of each of these buildings’, also as part of this development consent (Thorp 1994: 2.1).

³⁹ CCP 57/9 and Lot 1 in DP 65399.

⁴⁰ The listings for the Hart’s (SHI 4500022) and Butchery buildings (SHI 4500016) were partially completed at the time of preparing this report. Lilyvale Cottage (SHI 4500015), along with the Hart’s and Butchery buildings, are to be included on the State Heritage Inventory in 2002. The ANA Archaeology (SHI 4500369) and Lilyvale Group (SHI 4500464) are in draft format only.

A Statement of Significance was prepared for Lilyvale Cottage, the Butchery Building and the Hart's buildings in 1989 as part of the Conservation Plan.

2.3 ARCHAEOLOGY

Following her identification of the archaeological potential of the mix of cottages in 1988 for the EIS, Thorp was selected by CRI Project Management Pty Ltd to undertake the excavation of the Lilyvale site. There was no brief for the work, only the stipulation that the excavation be carried out within eight weeks. A Research Design for the site was prepared and included as part of the Excavation Permit application submitted to Heritage Council in January 1989.

The project was a salvage excavation; as most of the site was to be dug below bedrock for the ANA Hotel development (ie everywhere but under the Lilyvale Cottage, the Butchery Buildings and the Hart's Buildings which were retained), the team's task was to identify and record all archaeological evidence prior to its bulk excavation by the developers.

The bulk of the site was excavated between February and May⁴¹ 1989, with following-up sample-trenching and monitoring in the Lilyvale Cottage and Butchery Buildings in 1991 and 1992. The 1989 team comprised seven archaeologists and specialists and several hundred volunteers (see Table 2).

Table 2 List of personnel involved in the Lilyvale site archaeological investigation (Thorp 1994).

Excavation		Post-excavation	
<i>Excavation Director</i>	Wendy Thorp	<i>Co-ordinator</i>	Leah McKenzie
<i>Assistant Director</i>	Graham Wilson	<i>Ceramics</i>	Graham Wilson (tobacco pipes)
<i>Trench supervisors</i>	Graham Wilson (13), Wayne Johnson (12), Jane Lydon (14), Mafalda Rossi (15), Dominic Steele (16)	<i>Glass</i>	J Byrnes
		<i>Animal bone & shell</i>	Dominic Steele
		<i>Building Materials</i>	Brett Noble
		<i>Sewing artefacts</i>	Jane Lydon
		<i>Clerical/education artefacts</i>	Jane Lydon
		<i>Flatware (cutlery)</i>	Jane Lydon
		<i>Coins and tokens</i>	Wayne Johnson
		<i>Lead bottle seals</i>	Mafalda Rossi
		<i>Buttons & beads</i>	Mafalda Rossi
		<i>Seeds</i>	Mafalda Rossi
		<i>Conservation</i>	Ruth Norton & Kate Chidlow, Powerhouse Museum

Around 500,000 artefacts and the remains of several houses (which at times operated as pubs or boarding houses) and associated outbuildings dating from the 1810s were preserved under the successive layers of development on site. Excavation was concentrated on the Cumberland Street frontage, as all

⁴¹ Based on dates on Context Sheets.

archaeological evidence along the Gloucester Street frontage—the site of Owen Caraher’s soap factory, then c1881 housing, then 1909 workers cottages—were removed in the late 1980s when the workers cottages were demolished for a carpark (Thorp 1994: 2.5.3).

Five main trenches were excavated, numbered from Trench 12 to 16 (Trenches 1–11 were test trenches). The key archaeological remains recovered from revealed the trenches is summarised below.

- Trench 12* Foundations and associated deposits of two three-room, single-storey buildings at 172–174 Cumberland Street, and laneway adjacent to the buildings. Built c1835 and certainly by c1855, demolished c1902. No. 172 was used as a residence and No. 174 as a tavern at least in 1858–59. (Johnson)
- Trench 13* Foundations and associated deposits of Smidmore’s Terraces and then-current structures (House 4) at 160–166 Cumberland Street and the two McRoberts stone terraces at 168–170 (House 5) built 1846 (the site of Chandlers’ 3 cottages); excavation recovered a pre-Smidmore well, pit and ground disturbance. (Wilson)
- Trench 14* Smidmore Terraces (yards of then present 1881 terraces), footings of some of the Smidmore Terraces and remains of the existing four double-storey terraces. (Lydon)
- Trench 15* Trench 15 lay on the eastern half of the vacant block north of the Lilyvale cottage, adjacent to trench 12. (Rossi)
- Trench 16* Southern end of Gloucester Lane: remains of Geranium and/or Lilyvale Cottage outbuildings. (Steele)

The dig was affected by heavy and persistent rain (McKenzie 1989: 7), which affected the excavation trenches 12–16 and the watching brief trenches 17–23, but not the underfloor deposits.

After the excavation of the main trenches, there was monitoring of further development to the site which revealed a well and cesspit (Logan 1989: 23) and an Aboriginal hearth (Johnson 1989a: 4).

In 1991, there were additional excavations undertaken by Brett Noble and Sarah Dillane (subconsultants to Thorp) during works to the extant Lilyvale Cottage and adjacent Butchery Building. Below the standing structure of Lilyvale Cottage, built 1845, the structural and yard remains of the 1830s Geranium cottage were discovered. In the Butchery building, the remains of a yard or road surface, probably dating after 1845 and before c1885 when the extant building was construction. In April 1991, Thorp prepared a report on these excavations (Thorp 1991).

A report for the 1989 excavations was not drafted until January 1994 and was never finalised (see Section 3.2 below).

3.0 RECORDS AND REPORTS

3.1 HISTORICAL RECORDS AND REPORTS

Since the early 1980s, over ten publications have been prepared for the Lilyvale site. These include:

- Archaeological reports
- Conservation reports
- Development documentation
- Environmental Impact Statements
- Historical reports
- Maintenance and structural reports

Full bibliographic references for these publications, which were prepared by or on behalf of the former Sydney Cove Redevelopment Authority (SCRA, now SHFA), are included at the end of this report. These reports are presently located at Foreshore House in the Built Environment Library.

Other documentation related to historical research undertaken on the Lilyvale site remains in the possession of site excavator, Wendy Thorp.

3.2 EXCAVATION AND ARTEFACT RECORDS AND REPORTS

Until recently, the records and several reports prepared by the excavation team and cataloguers in the months following the Lilyvale site excavation in 1989 had been held by the excavator, Wendy Thorp. Some of these were handed over to the SCA in 1994, but many more were collected from Ms Thorp in November 2001 (see Table 3 below for a detailed list). In May 2003, as this report was going to print, Ms Thorp delivered the original site plans and sections to the Sydney Harbour Foreshore Authority.

The draft, main report written in 1994 aimed to provide a narrative of the historical and archaeological evidence researched and recovered during the archaeological investigation, and as already noted, lacked plates, plans, sections, stratigraphic matrices, photographs, references and a bibliography (see discussion in Section 2.1 above). Owing to the structure and the draft form of the report, it is challenging to quickly gather details about the excavation itself, although summarised information about trench locations is provided in the introduction. Otherwise, the nature of stratigraphic integrity or the details of the artefact assemblage can only be discovered in the more detail trench and artefact reports. These are discussed in more detail in Sections 3.2.1 and 3.2.2 below.

3.2.1 STRATIGRAPHIC RECORDING AND REPORTING

The records created during the excavation of the Lilyvale site are comprehensive and informative, although some key documents are unaccounted for. There are no notebooks for Trenches 13 and 15, nor context sheets for Trench 14. While there are no context sheets for Trench 12, a list of contexts survives in the notebook (Johnson pers comm, May 2003). Black-and-white slides of features revealed during excavation were also produced (see Photographic Log), and it is expected that they have been retained by Wendy Thorp, although this has not been confirmed.

Stratigraphic information recorded during excavation was synthesised into detailed trench reports prepared by the supervisor of each area. While, some reports have hand-written annotations and at least one appendix is missing, they are well developed documents that provide a clear description and assessment of structural remains and significant artefact deposits recovered from the trench. All make good use of available artefact data to date and explain the purpose of pits, fills and structures recovered during the excavation. Some contain lists of all contexts and some include stratigraphic matrices (although in the case of Trench 15, the appendix containing the matrix is missing from the report).

Regarding the missing records, some are likely to be held by Thorp, others may be in the hands of excavators and still others may be found somewhere in the SHFA's archives. In summary this includes:

- Trench 14 context sheets
- Trench 13 notebook
- Trench 15 notebook
- Stratigraphic matrix for Trench 15 (the appendix is missing from the report)
- Site photographs (monochrome slides)

Of the records and reports collected by the EAMC team, from Thorp in November 2001, there were no context sheets for Trenches 12 and 14, nor notebooks for Trenches 12-15. The notebook for Trench 14 was provided to the EAMC team by the trench supervisor Jane Lydon in 2001.

In the case of the missing context sheets for Trench 14, Lydon left these with SCA in 1991 (Lydon pers comm 30 Jan 2002). The Howard O'Farrell store was searched but the records could not be found and are presumed lost.

In the case of the notebook for Trench 13, Graham Wilson delivered this to Wendy Thorp with the context sheets following the completion of the reports in 1989 (Wilson pers comm 31 Jan 2002). It may still be held by Thorp. It was expected that the site photographs are still retained by Ms Thorp.

Owing to clarity and detail of most trench reports, the absence of trench notebooks and context sheets would impede, rather than prevent, detailed site and assemblage analysis. However, the absence of photographs is a significant problem which may hamper future research.

3.2.2 ARTEFACT RECORDING AND REPORTING

With some notable exceptions (e.g. the absence of a ceramics report), the post-excavation project was well recorded and reported.

There were no pro-forma sheets for the artefact data entry, as all data was written on the paper bags in which the artefacts are held, and on a cardboard label inserted into the bags.

The artefact reports were prepared by the specialists who undertook and oversaw the cataloguing of that artefact group. The artefact groups were defined by material type and function. Thus, there are lengthy reports on all bone artefacts for example, and briefer, more specialised reports on beads, sewing or clerical artefacts for example. The reports are detailed and informative, providing statements of methodology and more meaningful discussion of artefact groups, usually for the assemblage as a whole (e.g. see Lydon c1989b: 7-8). All reports included clear definitions of artefact descriptions and several provided drawings and sketches of each Type in the Series.

For some artefact groups—namely Ceramics, Jewellery, Religion, Marbles and Personal—no reports are available. The report for ceramic artefacts was never prepared as sufficient resources (ie database printouts) and funding were not available (Leah McKenzie pers comm 20 Feb 2002). It has not been confirmed whether reports for Jewellery, Religion, Marbles and Personal artefacts were prepared, although sketches of the Type Series were present in records provided by Thorp in November. These drawings may be the only record of the cataloguing for those classes. It is likely that these missing reports and resources will significantly hinder the re-analysis of the affected classes of artefacts.

Table 3 Summary of excavation and artefact records and reports.

Project	Original records	Reports
<i>Main Excavation</i>	<ul style="list-style-type: none"> Context Sheets for Trenches 13, 15 and 16⁴² Notebooks for Trenches 12, 14 and 16 Lilyvale Photographic log: monochrome Miscellaneous historical maps and plans Plans and Sections 	<ul style="list-style-type: none"> Draft report Trench reports anon. nd.
<i>Lilyvale Cottage and Butchery Building Watching Brief 1991</i>	<ul style="list-style-type: none"> Context Sheets for the Butchery Building Miscellaneous inked drawings relating to watching brief of Lilyvale Cottage and the Butchery Building in 1991. Notebook entitled 'Throsby Park 1989' but appears to relate to Lilyvale, with notes, context lists and photographic refs dating from Tues 19 Sept 1989 to 19 Aug 1991. This could be the Butchery notebook. 	<ul style="list-style-type: none"> Thorp 1991 Noble 1991 Dillane 1991
<i>Artefact cataloguing</i>	<ul style="list-style-type: none"> Wendy Thorp, TS [drawings] Jewellery: pers dec Wendy Thorp, TS [drawings]: Religion Other miscellaneous drawings 	<ul style="list-style-type: none"> McKenzie 1989 Byrnes 1989; Chidlow 1989; Johnson 1989b; Lydon c1989b, c1989c, c1989d; Noble 1989; Rossi 1989b, 1989c, 1989d, 1989e; Steele 1989b, 1989c; Wilson 1989b; anon 1989

⁴² The notebook for Trench 12 contains a list of contexts.

4.0 ARCHAEOLOGICAL ANALYSIS

The examination of artefacts recovered from the Lilyvale site was undertaken within trench areas and artefact-class and function categories: glass, bone, shell, seeds; then tobacco pipes, beads, buttons and amusements, among other functional groups. Reports for most artefact classes were prepared.

The primary objective of the artefact reports was to outline the cataloguing process, not to analyse the assemblage. Nonetheless, some specialists provided general analyses of the character of the assemblage as a whole (e.g. Byrne 1989: 56, Hickson 1989: 63), and all provided descriptions of the most significant types within it (e.g. Lydon c1989c: 13–14; Rossi 1989 buttons; and Johnson 1989: 8–12). Some specialists quantified artefacts in selected units (e.g. the breakdown of Activities represented by glass artefacts, Byrne 1989: 39–55; the beads in House 5, Rossi 1989d: 17–18; or the distribution of amusements types, Hickson 1989: 60–61) or across the assemblage as a whole (e.g. the dominance of clay pipe manufacturers, Wilson 1989b: App. 2).

Trench Supervisors performed presence–absence analysis of datable artefacts and unique functions for select deposits (e.g. Wilson c1989a: 7, 11–13, 20–22 and Lydon 1989a: 5–24 throughout, Rossi 1989a: 10–15, Steele 1989a: Phase Three). While the absence of systematic quantification for trenches overall was noted (Wilson c1989a: 31), some specific quantifications were prepared (e.g. Wilson c1989a: 11: MVC for glass in the pit fill 13.099, Rossi 1989a: 15–16).

There was no systematic, quantitative comparison of artefacts from multiple classes across or within trenches in the artefact reports, nor the main report.

In summary, the few cases of analysis that have been undertaken on artefacts recovered from the Lilyvale site (like many other Sydney sites) may be considered artefact-based rather than assemblage-based. It has been undertaken within artefact classes, within selected contexts and largely without the aid of the database. The provision of the database to the EAMC team will allow larger-scale, inter-class, and inter- as well as intra-context, analysis of this extensive assemblage.

Appendix Two:

SAMPLING THE ACCURACY AND UTILITY OF THE ARTEFACT CATALOGUE

1.0 HISTORY OF THE ARTEFACT ASSEMBLAGE AND CATALOGUES

The Lilyvale site was excavated in 1989 by Wendy Thorp for CRI Project Management in advance of the construction of the ANA hotel. The extensive assemblage recovered from the site—reported to be in the order of 500,000 sherds—was examined between February and August 1989 under the direction of Leah McKenzie. It was (arguably) the first large-scale cataloguing project to be undertaken in Sydney and aimed to undertake detailed ‘cataloguing and computerization of the artefacts’ because a ‘simple inventory’ would have been inadequate for the sophisticated questions being asked of the site and material recovered from it.⁴³ It was also clearly a priority to make the collection accessible to future researchers.

The project comprised the following eight stages (McKenzie 1989: 2):

1. cleaning of all artefacts from underfloor deposits of Houses 1–11;
2. cataloguing of artefacts from underfloor deposits of Houses 1–11;
3. cleaning of artefacts from the excavation Trenches 12–16;
4. cataloguing of artefacts from the excavation Trenches 12–16;
5. cleaning of artefacts from the watching brief Trenches 17–23;
6. cataloguing of artefacts from the watching brief Trenches 17–23;
7. creating a Type Series of artefacts for Lilyvale; and
8. analysis of the entire collection of artefacts recovered in the Lilyvale excavation.

The specialists who worked on the project included:

Wendy Thorp (Jewellery and personal artefacts)	Jane Lydon (Haberdashery, flatware and clerical/education)
Graham Wilson (Clay pipes and figurines)	Norma Dickson (Ferrous and copper-based metals)
Leah McKenzie (Ceramics)	Kevin Hickson (Toys)
Mafalda Rossi (Buttons, beads and seeds)	Rebecca Bower (Leather)
Wayne Johnson (Coins and tokens)	
Julie Byrnes (Glass)	
Dominic Steele (Unworked bone & shell)	

⁴³ The cataloguing for Sydney’s other ‘big digs’ did not begin until after 1990, and the only other large catalogue prepared to date was the preliminary First Government House catalogue which included only half of the site assemblage.

More than 500 volunteers (Thorp 1994: 2.7) assisted the specialists with the preliminary sorting into artefact classes.

The artefacts were stored in paper bags on which some of their catalogue details were handwritten, and an additional hand-written card with duplicated catalogue data was stored inside the bags.

The data-entry was undertaken by a volunteer who had considerable experience with computer systems and was made a member of staff and worked part- and full-time to complete the data entry (McKenzie 1989: 6). All data on the artefact bag was entered into a Minark (Version 4.25) database, and an Artefact ID number allocated at that time.

McKenzie identified a number of constraints on the cataloguing project: lack of good weather (affecting the condition of the artefacts themselves, keeping some volunteers away or when it was too wet to dig, caused overcrowding in the on-site artefact processing lab), lack of space, lack of time, lack of volunteers overall and a high turnover of volunteers that were available, and poor security. The cataloguing project began in Lilyvale House (also occupied by the development team and security people), in three rooms, later reduced to two. It was moved to a warehouse provided by the SCRA after the conclusion of the dig.

McKenzie also reports of 'tampering' with artefacts during the catalogue process, despite the presence of security guards. Two registered objects disappeared, and it was never known how many unregistered objects may have been souvenired.

In 1995, the Sydney Cove Authority (now SHFA) converted the data from Minark into a custom-designed Access database.

The collection was reboxed in October 1997 and continues to be stored by the SHFA in the Howard O'Farrell building in the Rocks.

2.0 TERMINOLOGY

The following discussion includes the use of some database terminology. For this reason, the following distinctions between the collection, catalogue and database and some additional definitions have been provided.

The **collection** or **assemblage** is comprised of the artefacts excavated from the Lilyvale site, presently stored in their boxes. The **catalogue** is the paper and electronic record of what is in the boxes. The **database** is a tool for presenting, searching and electronically storing the catalogue. Each catalogued bag of artefacts has been allocated a unique **Artefact Identification Number** (eg LV0110). Information pertaining to this bag is stored in a single **record** in the database (ie the record for LV0110). Each record is composed of a number of **fields**, which comprise the catalogue entry for that item, for example, 'Function', 'Type Name' and 'Quantity'. When referring specifically to a field name or its contents, the name is shown as a proper noun.

Table 4 Fields used to compile the Lilyvale site catalogue, those available in the current database created by SHFA in 1995 and those required for the EAMC database. (Bold = crucial or important to EAMC analysis)

Lilyvale: data recorded	Lilyvale: 1995 database	EAMC database
Site	Site	Site
ID number	ID number	ID number
Unit	Unit	Unit
—	—	Unit Area (sq.)
		Phase A (from)
		Phase B (to)
	Artefact class	Artefact class
TS Name [noted for Building Materials only]	TS Name [noted for Building Materials only]	TS Name
TS No [noted for Types only, not Repeats]	TS No [noted for Types only, not Repeats]	TS No
		TS Details
[sometimes noted]	Activity	Activity
Function	Function	Function
	Subfunction	Subfunction
Material	Material	Material
		Mineral
Portion [not always noted]	Portion [Integrity often placed in this field]	Portion
		Form
		Shape
		Technique of Manufacture
		Modifications
Decoration	Decoration	Decoration
	Pattern	Pattern
Colour [ceramic col. mostly in Decoration]	Colour	Colour
		Tile strike
[sometimes noted]	Date from	Date one
[sometimes noted]	Date to	Date two
		Date notes
Quantity	Quantity	Quantity
[sometimes noted]	Percentage	Percentage
[sometimes noted]	[sometimes noted]	Integrity
		Minimum Vessel ID No.
		MV Notes
		Conjoin ID No.

Lilyvale: data recorded	Lilyvale: 1995 database	EAMC database
		Weight (g)
		Length in mm
		Width in mm
		Thick in mm
		ID marks (type of transcript)
Transcript	Transcript	Transcript
		Provenance
Notes	Notes	Notes
		Image File
		Image Caption
		Conservation
		Box Number
		Record Admin fields ⁴⁴
<i>Bone common name</i>	<i>Bone common name</i>	<i>Bone common name</i>
<i>Animal size</i>	<i>Animal size</i>	<i>Animal size</i>
		<i>Other bone fields⁴⁵</i>
<i>Seed</i>	<i>Seed</i>	<i>Seed</i>
		<i>Organic</i>
<i>Shell</i>	<i>Shell</i>	<i>Shell fields⁴⁶</i>

Italicised fields are those required for detailed analysis of bone, shell and other organic artefacts. While these will not be assessed as part of the EAMC project, the fields will remain in the EAMC database for future research.

⁴⁴ Record admin fields: Date entered; Entered by; Date updated; Updated by; EAMC Notes; EAMC Checked

⁴⁵ Other bone fields: Scientific name; No. complete bones; No. bone fragments; Portion of bone; % of bone portion; Condition of bone; Cond. description; Cond. assessment; Attribute type; Attr. location; Attr. assessment; Ageing location; Ageing state; Tooth name; Tooth condition; Butchery location; Butchery type; Butchery orientation; Animal size; Animal max size.

⁴⁶ Shell fields: Shell scientific name; Shell common name; Shell no. complete; Shell no. fragments.

3.0 SAMPLE SIZE AND ASSESSMENT METHODS

In total, 542 artefact records (ie one or more artefacts grouped in one bag) were examined in the sample. The sample represents 2.5% of bags in the collection as a whole and 3.0% excluding bone, shell and building materials. (See Table 5.)

The sample was derived by randomly selecting eighteen boxes from the box collection. Every tenth box was selected from a list of all boxes in the collection, to reach the target of 3%.

Only some building materials (12 bags) were inspected and no edible bone, shell or unmodified organic material was examined. Unmodified bone and shell artefacts will not be analysed in the EAMC project and building materials will receive far less attention than other artefact classes, hence little or no time was invested in their review.

Table 5 Number of bags and estimated fragments sampled and in the Lilyvale site artefact assemblage.

	TOTAL ASSEMBLAGE		SAMPLE	
	Bags	Est. Frags	Bags	Est. Frags
<i>Assemblage excluding edible bone, shell & bldg materials</i>	17,823	63,139	530 (3.0%)	1,413 (2.2%)
<i>Edible bone, shell & bldg materials</i>	4,272	15,615	12 (0.3%)	23 (0.1%)
Total	22,095	78,754	542 (2.5%)	1,436 (1.8%)

The artefacts were inspected box by box, and each artefact was examined for its appropriate correspondence with the records contained in the artefact database. Data from the 1995 SCA database, imported into the EAMC Access database, was used in the review.

Where anomalies between the artefacts and their database record were discovered, they were noted in an additional database field entitled 'EAMC Notes'. No changes were made to the original fields at this stage.

Data-entry errors were identified by comparing the original, hand-written paper bags with the current database, however, there were no records of the 1995 SCA conversion process to confirm whether some of the errors were generated during the export from Minark into Access, rather than the input to Minark in 1989.

The re-examination was undertaken over 10 working days in December 2001 and January, 2002.

4.0 DISCUSSION OF ISSUES

4.1 NEEDS OF EAMC

The Exploring the Archaeology of the Modern City Project (EAMC) has been established to comprehensively analyse and interpret Sydney's major historical-archaeological collections. The project team will analyse all archaeological sites managed by the HHT within the Sydney CBD and two or three of the major sites managed by the Sydney Harbour Foreshore Authority. Altogether, the artefacts from these sites are estimated to comprise over one million in number.

Given the scale of the project, the analysis process needs to be as efficient as possible. This is why the bulk of the analytical work on the artefacts will be undertaken on a computer database. The accuracy and fullness of the information about function, colour, portion, form, quantity and diagnostic features in the database is critical to the database's effective utility in the analytical process.

The basis of meaningful artefact analysis and interpretation is the development of minimum vessel counts. A minimum vessel count is the minimum number of pipes, teacups or glass bottles, for example, in an archaeological context or entire collection, rather than the number of ceramic or glass fragments into which the objects shattered. Minimum vessel counts are calculated by selecting the highest number of diagnostic portion-parts in one artefact type. For example, if there are several hundred plain pipe stems, 20 mouthpieces and 70 fragments of pipe bowls, there must have been *at least* 20 whole pipes.

Unfortunately, the calculation of minimum numbers of vessels is not standard practice in Australian historical archaeology, and has not been undertaken for the sites under study. The project team will undertake such counts, but can only do so with confidence if the database is comprehensive and accurate.

Another excellent tool for efficient artefact analysis is a fully catalogued Type Series. This provides an easy mechanism for searching and grouping all bottles, tablewares and pen nibs, for example, of the same specific style or product and quickly sorts the diagnostic artefacts from non-diagnostic ones, to produce a meaningful result. Pen nib Type 10, for example, may include all nibs stamped 'ECKERSTEIN'S BANK PEN', distinguishable from 'ECKERSTEIN'S CLERK PEN', or other bank pens.

In summary, the key needs of the EAMC team in regard to artefact databases provided to the project are:

- comprehensive records that provide information relevant to minimum vessels counts: quantity, portion and integrity;
- accurate and reliable records; and
- a well developed type series that is recorded in the database.

The Lilyvale site database does not provide the above requirements. The limitations of the database and other issues affecting the catalogue and collection are also discussed below.

4.2 THE ARTEFACT CATALOGUE OF THE LILYVALE SITE

Overall, approximately 42% of the Lilyvale artefact records sampled by the EAMC were considered 'satisfactory', within the limitations of the cataloguing system that did not include a type series and omitted several key fields. Approximately 7% of the sampled records contained minor or major errors, 48%

contained significant errors or omissions and 2.6% contained errors considered to be major problems for future archaeological research. (See Table 6 below.)

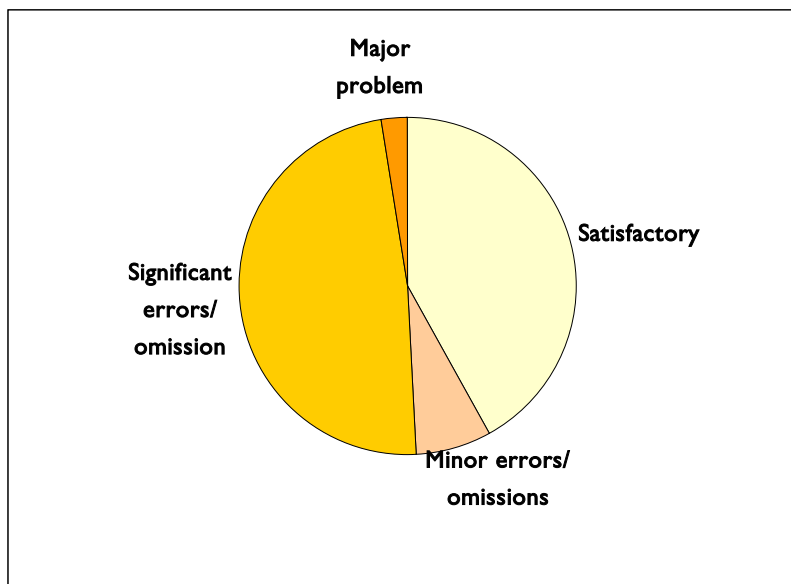
Significant errors or omissions are typically those that affect the key fields required for minimum vessel counts, for example Colour, Material and Portion; or where other significant information, for example an inscription, was omitted. Any record that had erroneous or inconsistent information regarding the function or subfunction of the vessel, was recorded as having a significant error.

Minor errors include recording four instead of three fragments; slightly mis-representing an inscription for which the manufacturer's names remained clear; or when an incised border around a button was not noted in the record.

These errors, omission and inconsistencies are discussed in detail below.

Table 6 Accuracy of records in the sample of the Lilyvale site catalogue and a projection of the number of records likely in the assemblage as a whole.⁴⁷

Assess of Record	Nº Records	Projected Nº Records
Satisfactory	227 (41.9%)	9,254
Minor errors or omissions	40 (7.4%)	1,631
Significant errors or omissions	261 (48.2%)	10,640
Major problem	14 (2.6%)	571
Total	542 (2.5%)	22,095



⁴⁷ This assessment is based on whether the individual records are adequately representative of 'what's in the box', within the parameters of the database's information structure. It does not account for noted errors and inconsistencies in the Type Series, eg that several nail Types group ferrous and copper nails. These issues are discussed in Section 4.2.4.

4.2.1 RESTRICTED FIELD LIST AND INCONSISTENT RECORDING

One of the greatest problems affecting the Lilyvale database is the restricted number of fields required of the cataloguers, and the lack of printed pro-forma sheets. McKenzie (1989: 5) reports that the data recorded on each bag included:

1. Site Name
2. ID number
3. Trench and Unit Number
4. Class of artefact (essentially Material)
5. Number of artefacts in the bag
6. 'Catalogue details pertaining to that item'

These 'catalogue details' typically included:

7. Function
8. Decoration (eg transfer-printed pattern or colour of glass)
9. Additional notes

And for representative Types from the series:

10. TS Number

As can be seen in Table 4, the field list excludes several fields, including Activity, Subfunction, Form/Shape, Modifications, Provenance, Integrity, Percentage, Weight and other measurements. Some of this data, was at times included in the 'catalogue details pertaining to [each] item' which were at the discretion of the cataloguer. For example, the Integrity of most buttons can be derived from the additional notes on each bag: in almost all cases in which a button was fragmentary, 'fragment' was noted on the bag; for those in which the button was complete, no comment was made.

Often, however, even if the cataloguer decided to record the information, it was not necessarily recorded for each item, because there was no printed or stamped pro-forma to guide or trigger all data to be recorded. Thus, the Portion of many ceramic sherds was not recorded on the bags, and only rarely was the Integrity recorded. This problem is further complicated by data-entry alterations. For at least nine bags of ceramics on which no Portion was recorded, 'BodySherd' was entered into the database (see 4.2.2 below for other examples of this). Approximately 7,600 records (only 34.4%) currently have portion-related data in the Portion field (4,200 other records state 'Incomplete' which is essentially Integrity data).

The lack of a standard form is also likely to be reason why five inscriptions (some difficult to discern, others quite clear) were not noted.⁴⁸

Database structure

An additional problems arising from the limited field list and unstructured form is that where additional data was provided, it was entered into the Notes field rather than the designated fields that are currently available in artefact databases. This is less problematic than the absence or inconsistent recording of data,

⁴⁸ LVI4955, LVI9592, LV21185, LV21230, LV21668

and can be corrected from the database alone. However, the task of cutting and pasting data from the Notes field to designated fields to allow sorting is time-consuming.

4.2.2 DATA-ENTRY ERRORS AND ALTERATIONS

Ninety-six of the 542 database records sampled contained information accidentally, and in some cases systematically, altered or omitted when typing data from the written paper bags, or when reconfiguring that data from Minark to Access. This represents an error rate of 17.7%, which is a startlingly high figure.

Some of the errors and omissions appeared to be accidental, such as entering Quantity '3' rather than '2' or omitting a question mark after a statement (eg 'shanked' instead of 'shanked?'). Others were systematic, including the entry of 'Medium' for all plates and bowls not otherwise identified as large or small, when the original records did not systematically record Subfunction and despite the fact that several of these plates and bowls were small and large. It is uncertain whether this blanket allocation of Subfunction occurred during the initial data-entry or during the SCA upgrade in 1995.

It is also uncertain when the widespread re-allocations of Activities, which were recorded on the paper bags for the vast majority of artefacts, also occurred at this time. For example, several pharmaceutical and other glass bottles noted as 'Household, small' on the bag are in the database as 'Food prep'.

Two other cases of widespread discrepancy between electronic database and the paper bags, regard the Function and Portion fields. Eighteen of the 477 ceramics bags sampled marked with multiple functions—eg 'cups, plates and saucers'—were reduced to recordings of just one of their functions in the database—eg as either 'cup' or 'plate'. A similar truncation occurred for any glass artefacts recorded as having multiple functions, for example LV10272 'Part Finish & Part Neck' became 'Part Neck'. As a partial result of inconsistent recording (see Section 4.2.1 above), for nine of the 170 food-service records examined (ie 5.2%), when no Portion was written on the bag, the data-processor added 'BodySherd' regardless of what portion the sherd actually was.

In other cases, alterations seem to have been intended as corrections but did not always result in an improved record. For example, ceramic sherd LV14796 was correctly recorded as fine stoneware, but was crossed out and entered into the database as 'porcelain'.

It is uncertain whether other changes occurred during initial data-entry or in 1995. For example, Clasp LV14043, appropriately sized for a leather diary or case and originally noted to be 'Personal' was entered into the database as 'Jewellery, Finding'. Ceramic sherd LV06762 sherd that shows the skirt and feet of a woman who seems to be sitting was noted to be 'scenic', but was entered into the database as 'yawl, house inset'—an alteration or error which cannot be resolved.

4.2.3 TYPE SERIES

The type series prepared for the Lilyvale site was probably the first type series prepared for such a large assemblage in Australia. It was conceived, as most type series continue to be, as a representative sample of the assemblage recovered from the site. Specifically, it was intended to:

...demonstrate the complete repertoire of different examples of artefacts found at Lilyvale...a 'type' being a class or single item which was sufficiently different to similar examples as to be considered a separate entity. (McKenzie 1989: 5)

As noted in Section 1.0, the type series was prepared at the conclusion of the cataloguing project. The representative Types themselves were marked 'TS', often with the Type number, and were boxed separately, but there was no evident recorded system of 'repeats'.

In bag LVI0272, there was a computer printout of 'TS DECANT 1' and its related types, suggesting some kind of manipulation of the type-series data at the time of cataloguing. In the current database, however, only 12% of records in the database have TS numbers, and when the TS number was recorded, it was rarely accompanied by a name.

Descriptions for each type category can be found in the each available artefact-class report. Lists of written descriptions for Coins and Sewing, Flatware and Clerical artefacts are provided in their respective reports, and illustrated lists are provided for the following artefact groups or classes:

- Glass
- Bottle seals
- Buttons
- Beads
- Jewellery
- Personal items
- Religious items
- Tokens

Unfortunately, there is no written or illustrated list of the Ceramic type series, owing the fact that no report was prepared (see Section 3.2.2).

While the existing descriptions are details, the fact that artefacts in the database have not been allocated as representative Types, nor 'repeats' of these categories reduces the utility of the Type Series for the EAMC's purposes.⁴⁹

4.2.4 MIXED BAGS

Bulk ceramic bags

Fourteen of the 163 glass and ceramic bags (8.6%) sampled should be considered largely unsorted, 'bulk' bags, containing several sherds of various functions, material or type. All these were originally recorded as 'cups, plates and saucers', for example, but have since been reduced to 'cup', 'plate' or 'saucer' in the database (see data-entry mix-ups, Section 4.2.2). Problematically, in addition to the identified subfunctions that were lost in the database, most mixed bags contain sherds from vessels of other functions. For example, bag LVI8690 identified in the database as two teacup fragments, in fact contains seven fragments, representing two teacups, two saucers and one plate.

Owing to the fact that the original function allocations have been truncated, and that those allocations themselves were deficient, these 'bulk' bags present a major problem for artefact analysis, largely because they appear to be regular records. They cannot be easily distinguished in the database alone, unlike 'bulk bags' from the Cumberland and Gloucester Streets collection, for example.

⁴⁹ The artefact reports were not available to the EAMC team when the sample of artefacts was examined, so it was not possible to evaluate how well the artefact catalogue corresponds with the Type lists.

Other mixed bags

Forty-nine other bags contained sherds of various functions, material or type, although they were easier to distinguish from the database alone, owing largely to the fact that most were bagged as large quantities of 'Unidentified' sherds. In the case of bag LVI9587, the 14 Unidentified glass bottle sherds represent 11 varieties identifiable as salad/oil bottles, pickles/chutneys, aerated waters and others.

Other mixtures of type or vessel, while not readily identifiable from the database alone, affect few fragments within the bag or affect fields or data of lesser importance. For example, one of two buttons in bag LV21662 was lacquered; a jug handle was found with the other teacup handles, rim and body sherds in bag LVI2382; and LVI4177 contained at least two gilt Willow fragments among the other plain Willow-ware plate fragments, which ideally should be bagged (and Typed) separately.

All these examples are considered significant errors and will impact on minimum vessel counts.

4.2.5 MISIDENTIFICATIONS AND INCONSISTENCIES

Function

In addition to mixed bags for which several groups of sherds from vessels of different function were bagged together, 16 bags containing one or two sherds were misidentified. The errors ranged from failing to identify typical functions such as blue castor oil bottles, to recording saucers as plates, specialised function vessels such as a teapot or jug as a bowl and surprisingly flat sherds from a plate or saucer as a teacup (see list below).

Cat #	Identified as	Actually is	Notes
LVI8719	Cup	Plate or saucer	Tiny fragment.
LVI4173	Plate	Platter	Heavy, squared edges
LVI4792	Plate	Saucer	
LV08157	Plate	Bowl	
LVI7140	Bowl	Teapot or jug base	
LV03809	Unid	Teacup	
LVI2405	Unid	Teacup handle	
LVI4177	Plate	Saucer	
LV03172	Plate	Saucer	
LVI2411	Saucer	Unid	Small fragment
LVI2394	Plate	Saucer or unid	
LVI6374	Jug	Possibly teacup	Or very small jug, eg for milk
LVI2383	Unid	Slit-glz bottle, jar	
LVI9576	Food prep/store bottle	Medicinal bottle	
LV21226	Unid bottle	Castor oil bottle	
LVI9581	Unid bottle	Pharmaceutical bottle	

Several of the ‘mixed bags’ (not the bulk bags) that now require resorting (see 4.2.4 above) do so owing to the mix of functions within the bag, despite the fact they were clearly allocated to only one function. Altogether then, these mixed bags and the misidentified artefacts listed above comprise 51 bags, which is 16.8% of the sampled glass and ceramic sherds—the groups affected most by function misidentifications.

Decoration and colour

Another significant error identified during the sample is the misidentification of several regular transfer-printed sherds as ‘flow’ transfer-print. Of the six bags identified as ‘flow blue’ or ‘flow black’, only one contained a majority of flow transfer-printed sherds, another contained one flow sherd (among 7 other transfer-printed sherds) and the rest were all regular transfer-printed sherds. In at least one bag, LV18715, four of the eight sherds were actually sharp, detail scenic transfer-printed sherds (interestingly described as Floral). Two other fragments of flow transfer-printed were noted among sherds identified as cobalt-blue transfer print (LV18672) and ‘Potato Print’ (LV18709).

Further, of the 29 transfer-printed sherds identified as red and mulberry, the mulberry were mostly purple and the red was mulberry. This mis-use of terms was not consistent, however, as there were two cases for which red was red (albeit it a crimson or mulberry red, not primary red) and one for which mulberry was mulberry. Any examples identified as red or mulberry should be considered highly questionable.

There was also one example (LV18719) of a faded black transfer-printed sherd being identified as grey transfer print.

In at least other cases, when a sherd was embellished with more than one decorative type, only one of two was noted; for example, hand-painted green transfer-printed sherd LV12398 recorded as ‘Green TPW’ only, the floral-moulded plate with a dark-blue band at the rim was identified as ‘moulded’ only, and blue band-and-line ware sherd LV03172 was recorded as ‘Pearlware’ only.

Material

There were several other cases where material, particularly ceramics, were mis-identified. In most cases the mis-recording may have been the result of insufficient sorting, owing to the fact that all but three of the examples listed below are from ‘mixed bags’. In at least one other case (LV14796), the original cataloguer had determined the correct ceramic body and but it was later altered.

ID No.	Identified as	Actual material	Notes
LV18459	Oriental porcelain	Glazed red-bodied stoneware	Could be of Asian origin
LV12383	Coarse earthenware	1 fragment of salt-glazed fine stoneware	(Mixed bag)
LV03808	Fine earthenware	1 flat porcellaneous stoneware, 1 stoneware, 1 fine earthenware	(Mixed bag)
LV03635	Fine earthenware	1 porcellaneous stoneware	(Mixed bag)
LV14796	Porcelain	Fine stoneware	‘FSW’ and was crossed out and replaced with ‘porcelain’.
LV03809	Porcelain	Fine stoneware	(Mixed bag)
LV18703	Porcelain	1 oriental porcelain, 1 earthenware; 1 porcellaneous, not convincingly porcelain	(Mixed bag)

ID No.	Identified as	Actual material	Notes
LV14795	Porcelain	1 porcellaneous	(Mixed bag)
LV16386	Fine earthenware	1 fragment earthenware, 4 fragments of porcelain or oriental porcelain	(Mixed bag)
LV12380	Fine earthenware	Blue-bodied fine earthenware	(Mixed bag)
LV18458	Fine stoneware	1 sherd coarse, lead-glazed earthenware	(Mixed bag)
LV14797	Fine stoneware	7 fragments of salt-glaze bottle and 1 glazed, cane-coloured earthenware teacup handle	(Mixed bag)
LV04875	Bone button	Plastic button	

Portion

In addition to generic portion data that entered into the database when not identified on the bag, there were 37 cases where the Portion now present in the database was misidentified. Similarly to the Function, Decoration and Material misidentifications, poor sorting and 'mixed bags' may be the cause of many of these mis-attributions.

ID No.	Identified as	Actual portion	ID No.	Identified as	Actual portion
LV12391	Body	Base	LV19588	Body	Body and base
LV02610	Body	Bases, rims, bodies, neck	LV18715	Body	Body, rim and base
LV14799	Body	Rim and body	LV18714	Body	Body and rim
LV14798	Body	Body and rim	LV18708	Body	Rim
LV14791	Body	Base and body	LV18697	Body	Body and rim
LV14790	Body	Body and rim	LV21219	Body	Body and rim
LV12402	Body	Body and rim	LV18688	Body	Body, rim, base & handle
LV14958	Body	Body and base	LV18672	Body	Body and rim
LV12395	Body	Body and base	LV18669	Body	Body, rim, base & handle
LV14960	Body	Body and base	LV18668	Body	Body, rim, base & handle
LV12386	Body	Body, rim and base	LV18666	Body	Body, rim and base
LV12383	Body	Body and rim	LV18459	Body	Body and rim
LV12382	Body	Body, rim and handle	LV18458	Body	Body, rim and base
LV12380	Body	Body and rim	LV18702	Body	Base
LV07881	Body	Body and base	LV12405	Handle	Handle and rim
LV03809	Body	Body and base	LV03636	Handle	Handle and rim
LV12399	Body	Body, rim and base	LV15909	PrtBase	Handle, base and body
LV18696	Body	Body and base			
LV19930	Body	Body and neck			
LV19594	Body	Body and base			

Quantity

Despite the fact that the Quantity field is defined as 'number of items relating to artefact' (McKenzie 1989: 5)⁵⁰, the Quantity counts for ceramics was clearly not a representation of the number of sherds in the bag. In one of the worst cases, 129 sherds were recorded as '5'. Quantity '1' at times represented one, two, five, eight or 11 fragments.

It may be speculated that the cataloguers attempted a kind of minimum vessel count, but in few cases was the count found to be accurate or close (eg LV12403, LV18709, LV08616). At times, it was significantly different: for example, the four sherds LV12394 derived from at least three plates were recorded as '1' and the 17 fragment comprising at least 10 vessels were recorded as '4'.

Quantity counts for other classes of artefacts adhere to the conventional use of the Quantity field, as a number represented the number of fragments in the bag, not necessarily the number of vessels they may represent.

4.2.6 QUESTIONABLE TERMS

In addition to incorrect or questionable determinations of function, material and decoration, some terms used to describe some sampled sherds were unusual, and have lost their meaning with the passage time. The decoration of ceramic sherd LV14799 is described as 'Cafe Bongo', which is a colloquial term used in the 1980s (G Wilson pers comm Dec 2001) for a type of ceramics now known as 'dipped wares', and overseas as 'industrial wares'. The term 'Chinese foot' was used to describe vestigial feet (eg LV08181), a type of base on plates and bowls. The term 'gilded' which refers specifically to bands of gold-leaf gilt was used to describe a red hand-painted band around the rim of cup sherd LV06839. In the latter case, the sherds were originally described, more appropriately, as 'TP Red'/'Linear' but was entered as 'gilded'.

4.2.7 BOX NUMBERS

Box numbers are presently not entered in the database. There are hand-written pro-forma sheets listing all bags in each box, produced when the Sydney Cove Authority reboxed the Lilyvale material. In order to undertake the sample, selected box numbers were entered into the database for each bag recorded to be in that box. As it will be frequently necessary to inspect specific sherds, the remaining box numbers will be required to be entered into the database in order to undertake further research.

4.2.8 THE AGE OF THE CATALOGUE

Regardless of specific errors or inconsistencies noted during the sample, it is important to observe that there have been several advances in the identification of ceramic patterns, tobacco pipe manufacturers and other artefact attributes since the cataloguing of the Lilyvale assemblage in 1989. Thanks to other large excavations in the Rocks and other parts of Sydney, many sherds unidentifiable in 1989 may now be identifiable, and many more may be attributed dating or provenance information that was not available at the time.

⁵⁰ This definition for Quantity is ambiguous owing to the lack of a definition for what is meant by 'item' and 'artefact'. As elsewhere in the field definitions 'artefact', 'object' and 'item' interchangeably. In any case, it seems that different cataloguers developed their own approach.

4.3 ARTEFACT STORAGE

4.3.1 THE HOWARD O'FARRELL BUILDING

The Lilyvale site artefact collection is currently stored in the Howard O'Farrell building on Cumberland Street. Several other collections now in the hands of the Sydney Harbour Foreshore Authority are also stored there. They are grouped in smaller boxes which are in turn stored in Government Records Repository cardboard boxes, piled 3–5 high along walls and within two rooms.

The Howard O'Farrell building is not maintained and awaits demolition. While other collections (namely the Cumberland and Gloucester Streets site assemblage) are suffering considerably under leaking roofs and broken windows, the Lilyvale collection is in comparably good condition. Nonetheless, about 20 boxes in two corners of the storage rooms are currently affected by wet conditions, and several boxes have tumbled onto the wet floor.

While it is intended to remove the Cumberland and Gloucester Streets collection from the Howard O'Farrell building to the Foreshore House in the near future, it is uncertain where other collections including Lilyvale will be relocated (Wayne Johnson, pers comm 2001).

In July 2002, the Cumberland and Gloucester Streets assemblage was relocated to Level 1 of Foreshore House. Damaged boxes were replaced and all boxes are now stored on sturdy shelves in a stable and secure environment.

4.3.2 ARTEFACT BAGS

Overall, the artefacts are well protected in their paper bags which have for the most part remained in tact. Some bags holding several bulky artefacts such as glass and ceramic sherds have torn.

In the case of buttons, the artefacts are in fact protected perhaps too well, being wrapped and folded in tissue paper then placed in the bags. While this is appropriate for some much fragmented bone and metal buttons, it is quite unnecessary for otherwise robust examples. It was unnecessarily time-consuming to unwrap each example during the sampling examination.

4.4 RESEARCH POTENTIAL OF THE LILYVALE SITE ARTEFACT ASSEMBLAGE

Prior to excavation, Thorp identified the high likelihood for 'a considerable archaeological resource' relating to 19th- and 20th-century occupation to remain on site. It was noted that the site represented 'a typical example of archaeological material which may be located on other sites in The Rocks which have a similar social and economic character' (Planning Workshop 1988: 104). The excavation certainly proved this to be true, and the research potential of the Lilyvale site assemblage, in its recovered form, may still be considered exceptional—with some limitations.

The Lilyvale excavation revealed evidence of early colonial and later 19th-century domestic, and some commercial, occupation in The Rocks. While few underfloor deposits were revealed in association with the earlier buildings (eg the Chandler cottage floor was probably covered, Thorp 1994: 4.2 fn 56), there were several yard scatters, refuse deposits and well backfills pre-dating to the 1830s (e.g. Wilson c 1989a).

There was even evidence of pre-European occupation of The Rocks in the form of an Aboriginal fireplace with burnt fish bone (Johnson 1989a: 4).

In addition to the archaeological evidence, the research potential of the assemblage is enhanced by the suite of personal and official documents that refer to some of the properties on site. While some periods of occupation are still unclear, some of the residents on the Lilyvale block are cited in Eliza Walker's reminiscences of the Rocks, for example, and some properties are recorded in the 1875 investigation of Sydney's sewerage and drainage. The contents of Geranium Cottage were auctioned in 1826 by Robert Fopp, who—being Governor Macquarie's butler—is in turn recorded in the Colonial Secretary's papers.

It is this combination of specific historical evidence, and the rich artefact assemblage recovered from securely dated deposits (McKenzie 1989: 13) and other more tentatively assigned deposits⁵¹, that gives the assemblage its high research potential.

There are, however, some limitations; the primary one being access to site records. Should the remainder of the site records not be secured or found, there will be some aspects of the excavation that can never be known with certainty required for high-level research. This is particularly the case given some of the inconsistencies in excavation methodology utilised during the project. For example, owing to the pressure of the development, some deposits in Trench 15 were not 'completely excavated' and during 1989 monitoring works, the cesspit south of the Chandler house (associated either 172 or 174 Cumberland Street) was bulk excavated with the deposit lying beside it (all deposits are now identified as 15.119; Rossi 1989a: 5–6). Also, some distinctions between layers within underfloor contexts were attributed after they had been excavated and some deposits considered 'poorer' by the excavator(s) were not sieved (Johnson 1989a: 2).

The context sheets and site notebooks are essential to understanding these differences in methodology and to what extent they may impact on the comparison of the Lilyvale assemblage with other sites (eg where all deposits were retained and/or sieved), or other lines of enquiry.

⁵¹ For example, Thorp attributes the well backfill in Trench 13 to an unknown, demolished structure rather than the Chandler cottage (Thorp 1989: 4.2 fn 69–74).

5.0 ASSESSMENT OF THE ACCURACY AND USEFULNESS OF THE CATALOGUE

Based on the sample outlined above, the Lilyvale site artefact catalogue as a whole is not ready for analysis in the EAMC project. Being one of the first major cataloguing projects in NSW in the 1980s, this is not surprising. The reasons for this include:

- the restricted and non-standardised field list (see Section 4.2.1);
- the large number of data-entry errors and alterations (see Section 4.2.2);
- the restricted Type Series which did not allow for repeats and is otherwise unrecorded (see Section 4.2.3);
- the largely unsorted, 'bulk' and 'mixed' bags (see Section 4.2.4); and
- the misidentified artefacts and questionable records (see Section 4.2.5).

Other less significant issues which will hamper analysis to a lesser extent include:

- the questionable terms used for some artefacts (see Section 4.2.6);
- the absence of box numbers in the database (see Section 4.2.7); and
- the age of the catalogue.

Overall, the assemblage is best treated as a preliminarily sorted collection, which requires consideration and recording of additional information such as subfunction, portion, integrity and method of manufacture, while reviewing and revising some of the already-recorded data.

5.1 IMPLICATIONS

The Lilyvale catalogue is in need of a significant upgrade—completing unrecorded fields, making consistent the data recorded and utilising current material-culture research—before it can be utilised in the wide-scale analysis program planned for the EAMC. This upgrade cannot be undertaken within the scope of the EAMC program.

Nonetheless, the research potential of the assemblage is far too significant for the collection to be overlooked in the EAMC research program.

Consequently, it is proposed that the EAMC project select a sample house or two from the site, upgrade those records and proceed with the analysis and inter-site interpretation. It is recommended that SHFA fund a post-doctoral scholar to study and upgrade the remainder of the catalogue. Owing to the time investment required, and the schedule of the EAMC project, the results of the post-doctoral scholar's work would not be available to the EAMC team.

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