

Archaeological Assessment & Impact Statement Stage 1 DA – Concept Application

Blackfriars Research Facility Stage 1, UTS





Colonial Sugar Co., Chippendale, 1868, watercolour by Samuel Elyard. SLNSW, Dixon Galleries, digital order no. a1528154

**Report to
University of Technology Sydney**

November 2015

Casey & Lowe Pty Ltd
Archaeology and Heritage Consultants
51 Reuss Street, Leichhardt NSW 2040
ABN: 32 101 370 129

 (02) 9569 1130
 www.caseyandlowe.com.au



EXECUTIVE SUMMARY

Results

- This Archaeological Assessment and Impact Statement for a Stage 1DA – Concept Application identified that the subject site contains archaeology of potential State significance.
- This State significant archaeology is associated with the Brisbane Distillery and the Colonial Sugar Refinery, which were active on the site between 1824 and 1878.
- The archaeology of the site is buried beneath fills introduced in c.1878 to backfill the dam and to raise the levels of the site. It is noted that the site is above the level of Buckland Street. Likely depth of fill above the archaeology is:
 - At the north of the site, where the main industrial structures are expected, the fill is expected to be between 1m to 2m deep.
 - At the south of the site, where no historic structures are expected, the c.1878 fill may be only 0.5m deep.
- While the design is at Concept stage it is considered that the design envelop is located above the area of the State significant archaeology. It therefore may have a number of impacts on this potential archaeology. The presence of fill should mitigate against many of these impacts in terms of ground slab and services.
- Construction of a new building will have impacts from individual piles, concentrations of piles and deeper excavation such as lift pits, stairwells and beams, as well as the basement. These have varying levels of impact on the potential:
 - Individual piles are not considered to have a major impact on significance but this depends up locations.
 - Concentrations of piles are considered to have a major impact in an isolated location. The individual piles would remove archaeology but in addition the concentrations of piles may make it impossible for an archaeologist in the future to record or understand the archaeology in such a location. Such impacts are typically associated with lift pits which may be of depth and remove archaeology within their footprint remove the archaeology.
- A basement of -5m will remove all archaeology within its footprint. This would require an archaeological salvage program to be undertaken to mitigate this impact prior to development.

Mitigation

- Archaeological testing should be undertaken as part of developing the Stage 2 DA design to confirm the survival of the potential archaeology in key areas of the site and to inform the design process and issues associated with the location of basements and lift cores.
- Establish service corridors to limit impacts from services.
- Minimise impacts from lift cores on substantial and significant archaeology.
- Interpretation of the archaeological site within the new development. This would be set out in an Interpretation Plan and would need to include the results of any archaeological testing and possible excavations and identify opportunities for the location of interpretation.
- All archaeological work, either testing or salvage, would require the writing of an Archaeological Research Design to establish the approach and methodology to any archaeological excavation.
- All approved archaeological excavation directors for this project would need to be in accordance with the Heritage Council's Excavation Director Criteria for State significant sites.

Recommendations

1. Undertake archaeological testing to inform the Stage 2 design and to determine where the archaeology may survive within the site and the degree to which it survives. The results of this testing will need to be written up in a report outlining opportunities for conservation *in situ*, development and interpretation.
2. Avoid impacts as much as possible on the State significant archaeology of the site.
3. The need for an approval for testing will depend upon the stage of the approval process. It is possible that archaeological testing may be able to be completed under a SSD approval through Planning or it may require a S140/S139(4) application to the NSW Heritage Division to be approved. In either case it will require an Archaeological Research Design to be written outlining which areas will be tested and the purpose of the testing.
4. Conservation of State significant archaeology should be a key outcome for this development.
5. Opportunities for interpretation should be undertaken within the proposed new building and in the landscaping.
6. An Interpretation Strategy should be undertaken to achieve the best heritage and interpretation outcome.

Contents

1.0	Introduction	1
1.1	Background	1
1.2	Study Area	1
1.3	Previous Reports	3
1.4	Statutory Constraints	4
1.5	Heritage listings	6
1.6	Authorship	8
1.7	Acknowledgements	8
1.8	Limitations	9
1.9	Abbreviations	9
2.0	Historical Background	10
2.1	Early land use (1788 – 1824)	10
2.2	Robert Cooper’s industrial complex (1824 – 1852)	11
2.3	Sugar Company ownership (1852 – 1878)	15
2.4	Blackfriars Estate (1878 – present)	23
2.5	Phasing of buildings	29
3.0	Archaeological Context	34
3.1	Nearby sites	34
3.2	Industrial archaeology of similar sites in Sydney	35
4.0	Archaeological Potential	37
4.1	Overview	37
4.2	Principles for assessing archaeological potential	37
4.3	2015 Site Visit	38
4.4	Impacts from 1994 works	41
4.5	1994 Archaeological monitoring	43
4.6	Geotechnical testing	57
4.7	Summary	58
5.0	Heritage Significance	61
5.1	Heritage Significance	61
5.2	Heritage significance and archaeology	61
5.3	Previous Statements of Heritage Significance	62
5.4	Discussion of Heritage Significance	63
5.5	Statement of Heritage Significance	67
6.0	Concept Proposal and Impacts	68
6.1	Proposed Impacts	68
6.2	Impact on Significance	70
7.0	Mitigation	71
7.1	Mitigation Strategies	71
8.0	Results and Recommendations	72
8.1	Results	72
8.2	Recommendations	72
9.0	References	73

Appendices77

Appendix 1: Extracts from Sands Directory

Appendix 2: Summaries of geotechnical and environmental boreholes with archaeological interpretation

Date	Purpose	Author	Authorised
14/8/2015	Draft 1	Nick Pitt	Mary Casey
11/9/2015	Draft 2	Mary Casey	Mary Casey
15/9/2015	Final	Nick Pitt	Mary Casey
10/11/2015	Final 2 (response to client comments)	Nick Pitt	Mary Casey

**Archaeological Assessment & Impact Statement
Stage 1 DA – Concept Application
Blackfriars Research Facility Stage 1, UTS**

1.0 Introduction

1.1 Background

The University of Technology Sydney (UTS) is presently planning to construct upgraded research facilities at the Blackfriars Precinct of its City Campus. The project design is still being developed and this Archaeological Assessment and Impact Statement has been commissioned as part of the planning process. It assesses the potential of historical archaeological remains within the Blackfriars Precinct and their heritage significance, and identifies preliminary impacts and mitigation strategies. It does not address any issues relating to Aboriginal archaeology and heritage of the place, this is being done by a separate consultant.

1.2 Study Area

The Blackfriars Precinct is located within the Sydney suburb of Chippendale. It is bounded by Buckland Street on the west, Blackfriars Street on the south, Blackfriars Place on the east and the University of Notre Dame, Broadway Campus on the east and north (Figure 1.1). It consists of the following cadastral units:

- Lots 10 to 20 and 22 to 25, Section 3, DP466
- Lots 1 to 14, Section 4, DP466
- Lots 9 to 12, Section 5, DP466
- Lot 1, DP832799
- Lot 1, DP724081
- Lot 221, DP133367
- Lot 1, DP122324

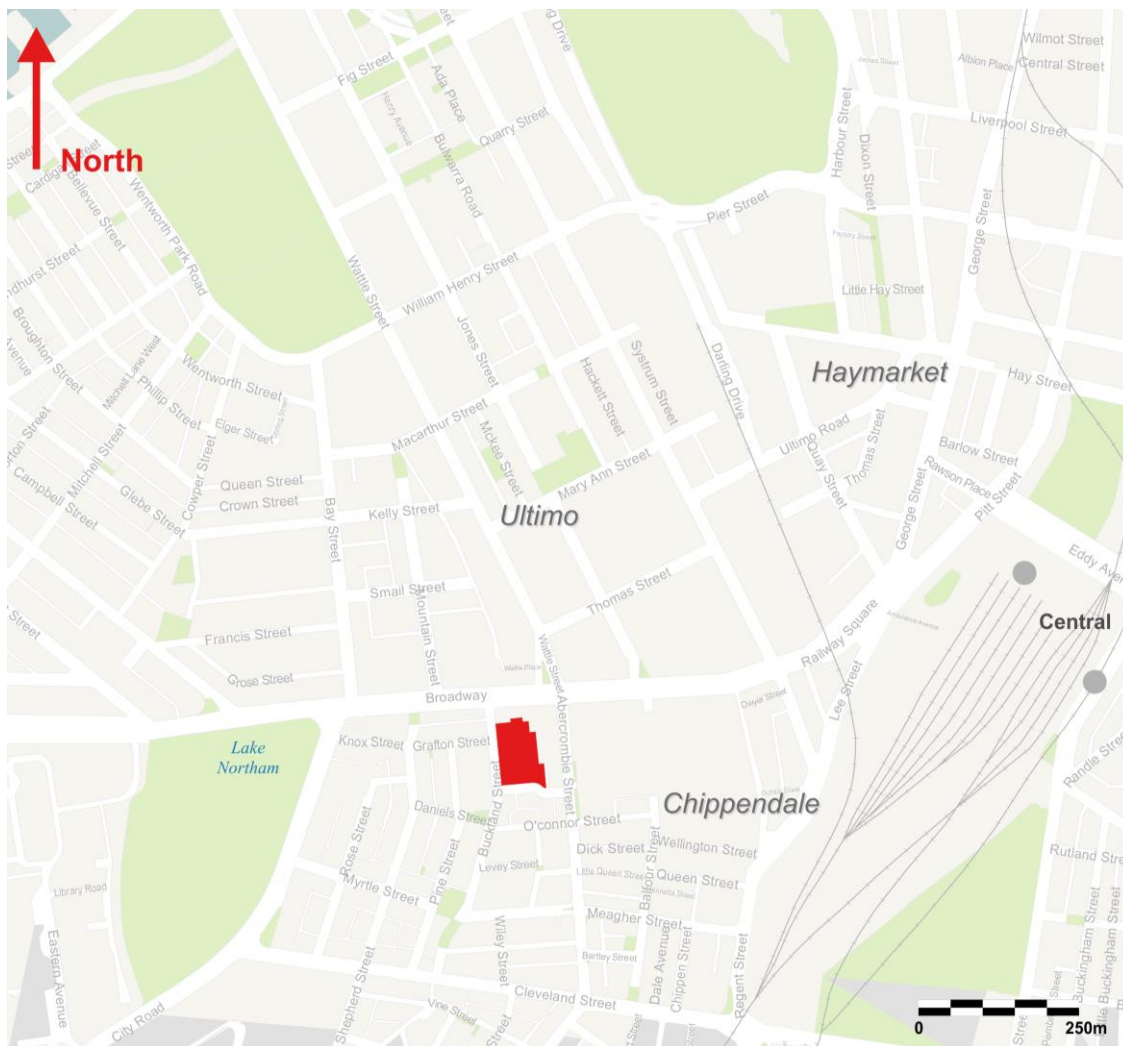


Figure 1.1: Location plan showing the Blackfriars Precinct shaded in red. Based on map data from the City of Sydney, Historical Atlas of Sydney, City of Sydney Archives.

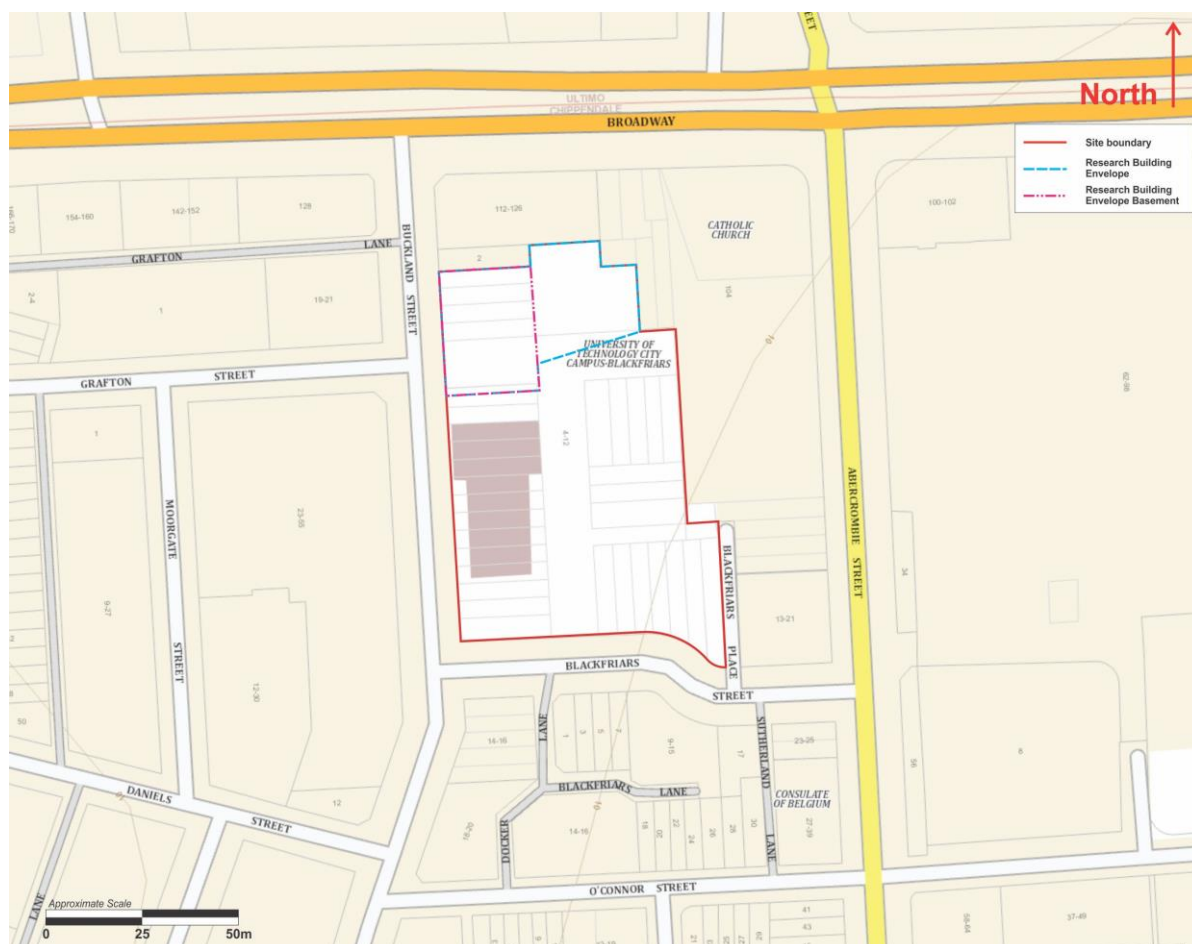


Figure 1.2: Site plan. SIX Maps, NSW LPI

1.3 Previous Reports

The Blackfriars precinct has been subject of a previous archaeological assessment by Casey & Lowe:

Blackfriars School Site, Baseline Archaeological Assessment, for the University of Technology, Sydney, August 1993.

Although this report assessed the archaeological potential of the entire Blackfriars Precinct, it is necessary to produce a new assessment of the site, given the changes in archaeological knowledge, heritage guidelines and available historical resources over the last 22 years and to make it consistent with current guidelines in relation to assessing the significance of relics.

Limited archaeological monitoring was undertaken in 1994 by Casey & Lowe:

Blackfriars School Site, Archaeological Monitoring, for the University of Technology, Sydney, November 1994.

To date, three conservation management plans have been prepared covering the site. The first was completed in 1990:

Perumal Partners Pty Ltd, *Blackfriars Conservation Plan*, for the Department of Planning, 1990.

This report has been reviewed during the preparation of this report, although it does not make many comments relevant to the historical archaeological potential of the site.

In October 1999, Wayne Mcphee & Associates Pty Ltd was commissioned to prepare a new conservation management plan. This report was completed and issued in August 2000. Wayne Mcphee & Associates were commissioned to review and revise this report in October 2011:

Wayne Mcphee & Associates Pty Ltd, *Conservation Management Plan, University of Technology, Sydney, Blackfriars Campus, 4-12 Buckland Street, Chippendale* for University of Technology, Sydney, final draft March 2012, as amended December 2012.

Only the 2012 revision of this CMP has been reviewed during the preparation of this report.

1.4 Statutory Constraints

1.4.1 Legislation under Part 4, Division 4.1

1.4.1.1 Environmental Planning & Assessment Act Part 4, Division 4.1

The current project is being undertaken as a State Significant Development (SSD) under Part 4, Division 4.1 (application number SSD 6746). The Secretary's Environmental Assessment Requirements (SEARs) for this project were issued on 18 November 2014.

The SEARs included the following requirements relevant to historical archaeology:

8. Heritage

- The EIS shall include a statement of significance and an assessment of the impact on the heritage significance of any heritage items and/or conservation areas and/or potentially archaeologically significant areas in accordance with the guidelines in the NSW Heritage Manual.

The SEARs also included a requirement to consult with the City of Sydney Council. In their initial response to the draft project SEARs, the City of Sydney Council provided the following comment regarding the potential archaeology on the site:

The archaeological assessment should be updated to reflect the current proposal. The archaeological potential of the site is of state significance and should inform the design approach and enable interpretation of former cultural and natural features. The disturbance of areas of high potential should be avoided by appropriate placement, footprint and by minimising excavation through appropriate construction types.

This report addresses the requirement of the SEARs to provide a statement of significance and an assessment of impact on the potential archaeology on the site. It has been prepared in accordance with the guidelines endorsed by the NSW Heritage Council. It is a thorough update of the 1993 archaeological assessment of the site.

Section 89J Approvals etc - legislation that does not apply

As stated in Section 89J of the *Environmental Planning and Assessment Act 1979*:

1. The following authorisations are not required for State significant development that is authorised by a development consent granted after the commencement of this Division (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):
 - (c) an approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*,
 - (d) an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*.

2. Division 8 of Part 6 of the *Heritage Act 1977* does not apply to prevent or interfere with the carrying out of State significant development that is authorised by a development consent granted after the commencement of this Division.

In effect, the Department of Planning and Environment provides consent to impact on relics under 89J. Therefore no approvals are required under S139 or S57 of the *Heritage Act 1977* or S90 of the *National Parks and Wildlife Act 1974*. The Department of Planning and Environment will of course consult with the Office of Environment and Planning, both the Heritage Division and the Aboriginal Heritage Section, and the proposed work needs to conform with Heritage Division and Aboriginal Heritage Branch guidelines. This section does not exempt requirements under S170 of the *Heritage Act*.

1.4.2 NSW Heritage Act 1977

When a site is not being assessed under the *EP&A Act*, Part 4.1 or when work is it is being undertaken outside of Part 4.1 the main legislative constraint on archaeological remains is the relic provisions of the *Heritage Act 1977*. Provisions relating to S139 of the *Heritage Act 1977* are suspended by Part 4.1, Division 4.1, S89J.

According to Section 139:

- (1) *A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*
- (2) *A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*
- ...
- (4) *The Heritage Council may by order published in the Gazette create exceptions to this section, either unconditionally or subject to conditions, in respect of any of the following:*
 - a. *any relic of a specified kind or description,*
 - b. *any disturbance or excavation of a specified kind or description,*
 - c. *any disturbance or excavation of land in a specified location or having specified features or attributes,*
 - d. *any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates that there is little likelihood of there being any relics in the land.*

A 'relic' is an item of 'environmental heritage'. Environmental heritage is defined by the *Heritage Act 1977* (amended) as:

those places, buildings, works, relics, moveable objects, and precincts of State or local heritage significance. (Section 4)

A relic as further defined by the Act as:

any deposit, object or material evidence that:

- a) *relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and*
- b) *is of State or local heritage significance. (Section 4)*

Any item identified as an historical archaeological site or relic cannot be impacted upon without an **excavation permit**. An excavation permit forms an approval from the Heritage Council for permission to 'disturb' a relic.

An application for an excavation permit must be made to the Heritage Council of NSW (Section 140) (or its delegate) and it will take approximately three to six weeks to be processed. The application for a permit must nominate a qualified archaeologist to manage the disturbance of the relics. There is a processing fee for each excavation permit application the details of which can be obtained from the Heritage Division, Office of Environment and Heritage website.

Exceptions

An application for a S139(4) Exception to applying for an Excavation Permit may be made where the impact is considered to be in accordance with the following categories:

- (1A) An archaeological assessment, zoning plan or management plan has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that any relics in the land are unlikely to have State or local heritage significance.
- (1B) The excavation or disturbance of land will have a minor impact on archaeological relics including the testing of land to verify the existence of relics without destroying or removing them.
- (1C) A statement describing the proposed excavation demonstrates that evidence relating to the history or nature of the site, such as its level of disturbance, indicates that the site has little or no archaeological research potential.

1.4.3 Sydney Local Environmental Plan 2012

Although the provisions of the Sydney 2012 LEP are primarily geared for built heritage items, it also includes the following requirements which are relevant to archaeological heritage:

5.10 Heritage conservation

(1) Objectives

The objectives of this clause are:

.....

- (c) to conserve archaeological sites,

(2) Requirement for consent

Development consent is required for any of the following:

.....

- (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,

.....

(7) Archaeological sites

The consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies):

- (a) notify the Heritage Council on its intention to grant consent, and
- (b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.

The Blackfriars site is listed as a heritage item on Schedule 5 of the Sydney LEP 2012 (I170). This listing explicitly includes the archaeology on the site (Table 1.1).

1.5 Heritage listings

1.5.1 Sydney LEP 2012

The Sydney LEP 2012 lists the entire Blackfriars Precinct as a heritage item, and also includes three items in its immediate vicinity. The Blackfriars Precinct is also part of the Chippendale Conservation area (Figure 1.3, Table 1.1).



Figure 1.3: Detail from Sydney LEP 2012 Heritage Map 9, showing heritage items near the study area which are listed on the LEP. North arrow added and Blackfriars Precinct outlined in blue.

Table 1.1: Sydney LEP 2012, Schedule 5 heritage items in or near the Blackfriars Precinct

Item no on Heritage Map	Item name	Address	Property description	Significance
I170	Former Blackfriars Public School and Headmaster Residence including interiors, fence, grounds and archaeology	4–12 Buckland Street, Chippendale	Lot 1, DP 122324; Lot 1, DP 724081; Lot 9, Section 5, DP 466; Lot 1, Section 4, DP 466	Local
I165	St Benedict's Church group including church, convent, hall, presbytery and interiors of each, grounds and fences	104–110 Broadway, Chippendale	Lots 7–9 and 17, Section 3, DP 466; Lots 1 and 2, Section 5, DP 466; Lot 1, DP 456453; Lots 1 and 2, DP 782481; Lot 1, DP 171705; Lot 1, DP 190200; Lot 1, DP 190532; Lot 1, DP 190750	Local
I166	Former Bank, retail and warehouse building "Pioneer House" including interiors	128 Broadway, Chippendale	Lot 1, DP 184686	Local
I171	Former warehouse "WA Davidson Clothing Manufacturers" including interior	14–16 Buckland Street, Chippendale	Lots 31–35, Section 2, DP 466	Local
C9	Chippendale Conservation Area	See map	–	Local

1.5.2 Non-statutory heritage listings

A search of the Register of the National Estate (RNE) has been undertaken for the area surrounding the Blackfriars Precinct. This is a key non-statutory heritage list, which provides no statutory protection but is generally considered to be a sign of recognition of the heritage values of a site. The Register of the National Estate lists the study area as part of the 'St Benedicts Precinct', which includes:

- St Benedicts Precinct, Abercrombie St, Chippendale, NSW. Place ID 1970; Place file no. 1/12/036/0176; Registered 21/03/1978.
- Blackfriars Public School (former), 8 Buckland St, Chippendale, NSW. Place ID 1973; Place file no. 1/12/036/0179; Registered 21/03/1978.
- Two Storey House, Blackfriars St, Chippendale, NSW. Place ID 1974; Place file no. 1/12/036/0180

Other nearby items include:

- St Benedicts Catholic Church, 104 Broadway, Chippendale, NSW. Place ID 1971; Place file no. 1/12/036/0177; Registered 21/03/1978.
- St Benedicts Convent and Hall, 11 Abercrombie St, Chippendale, NSW. Place ID 1972; Place file no. 1/12/036/0178; Registered 21/03/1978.

The National Trust of Australia (NSW) includes several items in and near the study area in its register (Table 1.2). Listings by the National Trust provide no statutory protection but are generally considered to be a sign of recognition of the heritage values of a site.

Table 1.2: National Trust of Australia (NSW) heritage listings in the in the immediate vicinity of the Blackfriars Precinct. Note that some of these listings appear to be duplicates.

LISTING ID	LGA	Locality	Item Name	ADDRESS
S10605	Sydney	Chippendale	Two-Storey House	Blackfriars Place (Part Of St Benedict's Precinct)
S6773	Sydney	Chippendale	Blackfriars Public School	Blackfriars Street Corner Buckland Street (Part Of St Benedict's Precinct)
S9801	Sydney	Chippendale	St. Benedict's Precinct:	Abercrombie Blackfriars & Buckland Streets & Broadway (St Benedict's Precinct)
S9802	Sydney	Chippendale	St. Benedict's Roman Catholic Church	Abercrombie Street Corner Broadway (Part Of St Benedict's Precinct)
S9803	Sydney	Chippendale	St. Benedict's Roman Catholic Convent & Hall	Abercrombie Street (Part Of St Benedict's Precinct)

1.6 Authorship

This report was prepared by Nick Pitt, Archaeologist/Researcher, Casey & Lowe Pty Ltd, with reference to previous assessments by Casey & Lowe. The historic background (Section 2) is based on material written by Dr Mary Casey for the 1993 assessment, with additional information added by Nick Pitt. The 1994 monitoring results reproduced in section 4.5 were written by Dr Mary Casey.

The report was reviewed by Dr Mary Casey, Director, Casey & Lowe Pty Ltd.

1.7 Acknowledgements

Sarkis Aznavoorian, Project Manager, University of Technology Sydney
 Alan Cadogan, Urbanac
 Mark O'Dwyer, H²O Architects
 Louise Pearson, Aspect Studios
 Paul Davies, Paul Davies Architects

Clive Gunton, University of Technology Sydney

1.8 Limitations

This report does not address issues relating to Aboriginal heritage or archaeology. Those issues have been addressed in another report. Sufficient time and funding have been provided to provide for the completion of this report to a high standard.

1.9 Abbreviations

ANU	Australian National University
DBYD	Dial Before You Dig [service plans]
DP	Deposited Plan
Ha	Hectare
HRA	<i>Historical Records of Australia</i>
HRNSW	<i>Historical Records of NSW</i>
HLRV	Historical Land Records Viewer, NSW LPI [website: http://images.maps.nsw.gov.au]
LEP	Local Environment Plan
LPI	Land and Property Information (NSW)
NLA	National Library of Australia
PHALMS	Parramatta Historical Archaeological Landscape Management Study
SAG	Society of Australian Genealogists
SIX	Spatial Information Exchange, NSW LPI [website: https://six.nsw.gov.au/wps/portal]
SLNSW	State Library of NSW
SRNSW	State Records NSW
TNA [UK]	The National Archives [UK]
UTS	University of Technology Sydney

2.0 Historical Background

2.1 Early land use (1788 – 1824)

Settlement of the area to the south of the city area did not occur as a steady expansion. When the burial ground on the site of the present Central Railway Station opened in 1819 it was well outside the town. Even in the 1830s few people lived south of Goulburn Street. The area was mostly given over to the manufacture of bricks and tiles as part of Brickfield Hill and this activity moved slowly southwards as the clay source was exhausted. Further along George Street the land was unoccupied. The land in the vicinity of the study area was first granted in 1815 to newly arrived William Chippendale. Farms belonging to Redfern, Chisholm, Grose and Hutchinson were nearby. John Harris of Ultimo Estate owned the land on the other side of Parramatta Road. The area had several small creeks, including Blackwattle Swamp Creek, which ran together to form a swampy area, crossed the road at what is now Broadway, and ran northwards to Blackwattle Bay.¹

The area east of Blackwattle Creek was known as the Military Garden (Figure 2.1). Although no initial lease or grant for the area has been identified, it appears to have been in use by 1814, when Lieutenant Colonel O'Connell was paid £274 11s 3d from the Police Fund for expenses incurred by the 73rd Regiment in 'making a Military Garden at Sydney'.² The 73rd Regiment was commanded by Governor Macquarie. The 1823 report by Thomas Bigge contained a further description of the military garden. In about 1820, when he visited Sydney, he found out that the vegetables supplied to the convicts at the Hyde Park Barracks and Carters Barrack came from this garden. He provided the following description:

...a small piece of land near Sydney, consisting of five acres, that had been originally cleared and fenced by the soldiers of the 73rd regiment, who received payment for their labour from the police fund. The garden continued to be cultivated by the 46th regiment, and for the purpose of supplying them with vegetables, but it does not appear that it was very productive in their hands. On the arrival of the 48th regiments, Major Druitt, the chief engineer, undertook several improvements in it, and having received a grant of a small allotment immediately adjoining the military garden, some labour and expense were bestowed upon both pieces of land; and a front paling towards the Sydney road was put up by the direction of Governor Macquarie, and at the expense of government....The soil of this military garden is loose sand; but with the large supply of manure that it has lately received, it has been made productive.³

Although he was not always a neutral observer, the fundamentals of Bigge's description appear to be sound. Major Druitt was granted 8 acres [3.2 ha] immediately to the west of the Military Garden by Lachlan Macquarie on 20 May 1819, and the Police Fund accounts paid one Joseph Wharton in 1820 on account of a 'batten fence' around the Military Garden.⁴ Later evidence suggests that the western fence of the Military Garden did not follow the Blackwattle Creek exactly, but rather extended southeast from Parramatta Street (later Broadway), corresponding with the later east boundary of Robert Cooper's grant.

¹ Fitzgerald 2008:13-16.

² SRNSW Colonial Secretary's Papers, Reel 6038; SZ758 p.487; *Sydney Gazette* 30 April 1814, p 2a.

³ Bigge 1823:65.

⁴ SRNSW Registers of Land Grants and Leases, Item: 7/448, Reel 2561, vol. 3, grant no. 94, bk 7, f. 44; *Sydney Gazette* 8 January 1820, p 2b.

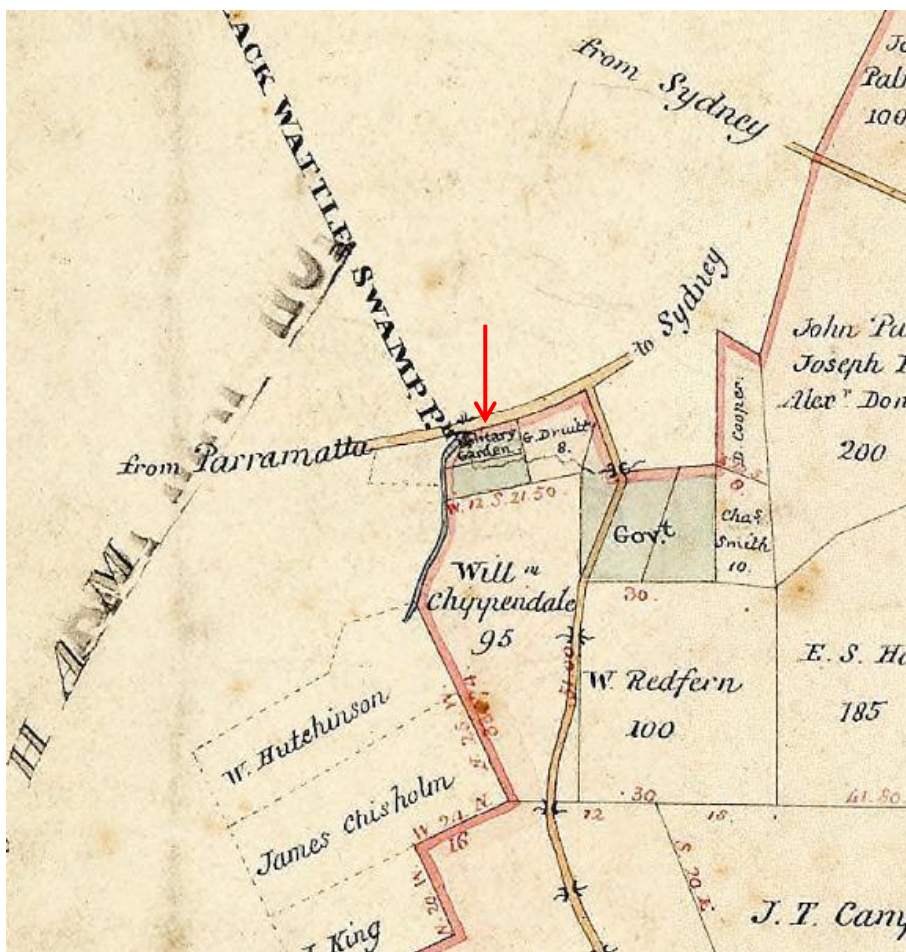


Figure 2.1: Detail of undated early map of the Parish of Alexandria, showing the location of the Military Garden. Note that the western boundary of the garden is shown on this plan as Blackwattle Creek, which also is the parish boundary with Petersham. The map also appears to show the approximate location of Robert Cooper's grant as a dashed line. Source: AO Map No. 185, NSW LPI, HLRV.

2.2 Robert Cooper's industrial complex (1824 – 1852)

After the Military Garden, the first major development on the study area was Robert Cooper's distillery. Robert Cooper was an emancipated convict, who had been transported in 1813, pardoned in 1818 and by 1824 already had diverse commercial interests. He had already been involved in an earlier distillery located on [Old] South Head Road.⁵

In October 1824, it was reported that Cooper had commenced construction of a distillery and a watermill on a site provided by the Government at Blackwattle Swamp (Figure 2.2).⁶ By December 1824 construction was well underway and attracting further attention in the local press.⁷ In February 1825, the Crown brought legal proceedings against Robert Cooper regarding the land. From evidence given at the time, it appears that the fence of the Military Garden formed the east boundary of Robert Cooper's land, although the west boundary of the garden was technically Blackwattle Creek. During the court case, it came out that Cooper had petitioned to be granted land on which to erect a distillery. The grant, for the west side of the swamp, was verbally passed on by the Surveyor General but his assistant put Cooper in possession of the east side. Rather than have Cooper demolish his new building, the grant was adjusted on the recommendation of the Chief Justice.⁸

⁵ Fitzgerald 2008:17-18; Knight 1966.

⁶ *Sydney Gazette* 14 October 1824, p 2c; 21 October 1824, p 3b.

⁷ *Sydney Gazette* 11 November 1824, p 2d; 9 December 1824, p 4b.

⁸ Chief Justice Forbes to Gov. Brisbane, Feb 16, 1825 in Sir Thomas Brisbane's Letter Book, 1, p.46-8, SLNSW ML A1559-J.

Cooper also faced legal proceedings in September 1825, after he was accused by John Harris of cutting timber on his Ultimo Estate for use in building the distillery. Cooper countered by offering to buy Harris' Estate for £4000 but the offer was refused. Cooper himself lived at Juniper Hall in Paddington. His links with eastern Sydney had begun after the legalising of distilling in 1822 when he built a distillery on Old South Head Road. In 1825, this was the only other distillery in operation.⁹

The Brisbane Distillery, named in honour of the governor, commenced operations on 14 November 1825.¹⁰ By March the following year, the *Sydney Gazette* could write, 'The Brisbane distillery is working up grain quite rapidly, and converting the wheat of the Colony into excellent Australian gin'.¹¹ Reviews of Cooper's spirits varied; the *Sydney Gazette* in 1829 could write, 'His cordials are really good ... but we have never yet tasted any of his gin that could have the least chance of competition with foreign spirits.'¹² A little over a year later *The Australian* opined that 'his rum was execrable [i.e. awful], his gin is excellent, and his whiskey is pronounced by good judges to be super excellent'.¹³ Evidence given at an 1839 enquiry into Colonial distilleries provided the general impression that imported spirits were considered superior to the local product, including the output of the Brisbane Distillery.¹⁴

Robert Cooper continued to construct new buildings at the Brisbane Distillery. In 1826 the *Sydney Gazette* reported, 'Mr. Cooper's immense site of buildings at the Brisbane Distillery keep rising higher and higher'.¹⁵ In 1828 it was reported that he was importing two steam engines for use in a mill, one of 12 horse power, the other of 20.¹⁶ By February 1829, one of these steam mills was being leased to Francis Girard for £1000 per year.¹⁷ By June 1829, Cooper had constructed three substantial buildings and was building a fourth to house the second of the two steam engines.¹⁸ A further building was under construction in 1830; it was variously described as a 'cyder mill' and a brewery.¹⁹ Reports from 1830 also spoke of a new cloth mill, which was probably new machinery in an existing building (cf Table 2.1).²⁰

Cooper dammed the creeks feeding into the swamp and created a lake to provide a plentiful source of water for his works. He had created this lake from the Blackwattle Swamp. According to Cooper, this had extended up to Parramatta Street (now Broadway) until he had constructed an embankment.²¹ This dam created a broad lake which by 1826 was attracting native ducks.²² In 1830 the dam burst (or perhaps simply overflowed) after heavy rain.²³ It is not clear how much damage this caused at the time.

A sympathetic visitor to Cooper's establishment in March 1833 provided a description of the buildings on the site.²⁴ These consisted of:

⁹ Fitzgerald 2008:18.

¹⁰ *The Australian* 24 November 1825, p 3d; *Sydney Gazette* 24 November 1825, p 2d.

¹¹ *Sydney Gazette* 18 March 1826, p 3a.

¹² *Sydney Gazette* 4 June 1829, p 2b.

¹³ *The Australian* 24 September 1830, p 3e.

¹⁴ *The Colonist* 19 October 1839, p 4b.

¹⁵ *Sydney Gazette* 3 June 1826, p 2d.

¹⁶ *The Australian* 27 July 1827, p 2d, 20 February 1828, p 3b, 21 March 1828, p 2d, 8 August 1828, p 3a; *The Monitor* 10 March 1828, p 8a.

¹⁷ *The Australian* 20 February 1829, p 3a.

¹⁸ *The Australian* 12 June 1829, p 3d.

¹⁹ *Sydney Monitor* 12 June 1830, p 2e; *The Australian* 24 September 1830, p 3e.

²⁰ *Sydney Gazette* 16 October 1830, p 4b.

²¹ *Sydney Herald* 18 March 1833, p 3b.

²² *The Australian* 26 August 1826, p 3b.

²³ *Sydney Monitor* 1 December 1830, p 4d.

²⁴ *Sydney Herald* 18 March 1833, p 3b.

- A. 'A secure and capacious reservoir'
- B. 'The distill-house' – housing stills with a capacity of 3000 gallons (13 600L).
- C. A flour mill, containing a large steam engine, two pairs of mill stones and machinery for smutting and dressing grain.
- D. A store building, measuring 150 x 40 feet (46 x 12m) and five storeys high. It contained cisterns for steeping grain and on its east side were 2 malt kilns. A 'substantial bakehouse' and a smith's workshop also were in its vicinity.
- E. The 'cloth factory' with an engine house at its extreme end, containing a 20 horse power steam engine, two pairs of mill stones and various machinery for making coarse cloth, flannel and blankets.
- F. A brew-house 'on a considerable scale and formed entirely under ground'.

Most of these structures can be related back to features shown on an undated plan of the site, thought to date to the early 1840s (Figure 2.3, Figure 2.16).

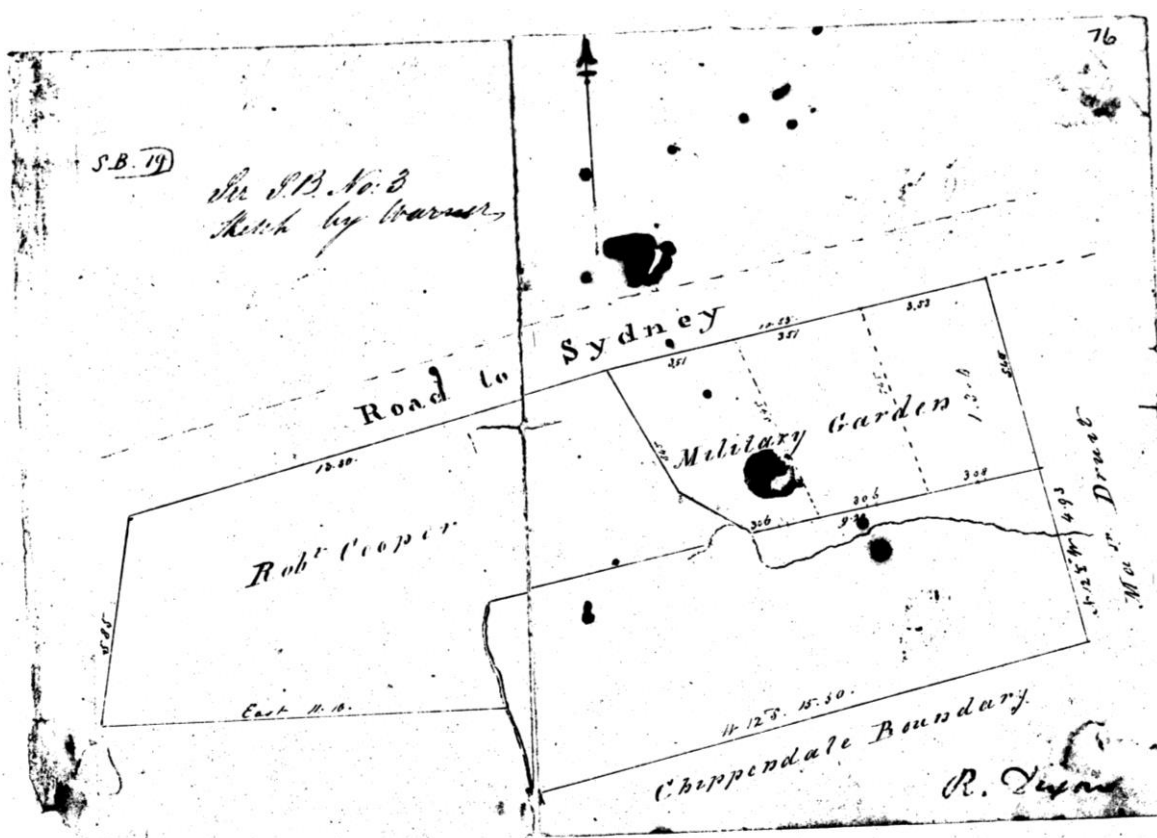


Figure 2.2: Undated map showing location of Robert Cooper's grant and the Military Garden. Note that this appears to reflect the west boundary of the Military Garden established by legal action in 1825. Surveyor General's Sketch Books, vol. 1, f 19, SRNSW Reel 2778.

Robert Cooper was affected by the economic depression of the early 1840s. In 1843, he engaged in borrowing to construct numerous houses on his land in Chippendale. Cooper then went into voluntary bankruptcy to avoid paying the constructors. After a number of complicated dealings, Cooper managed to maintain control of the industrial buildings, but lost the residential properties to the bank.²⁵

²⁵ Fitzgerald 2008:20-22.

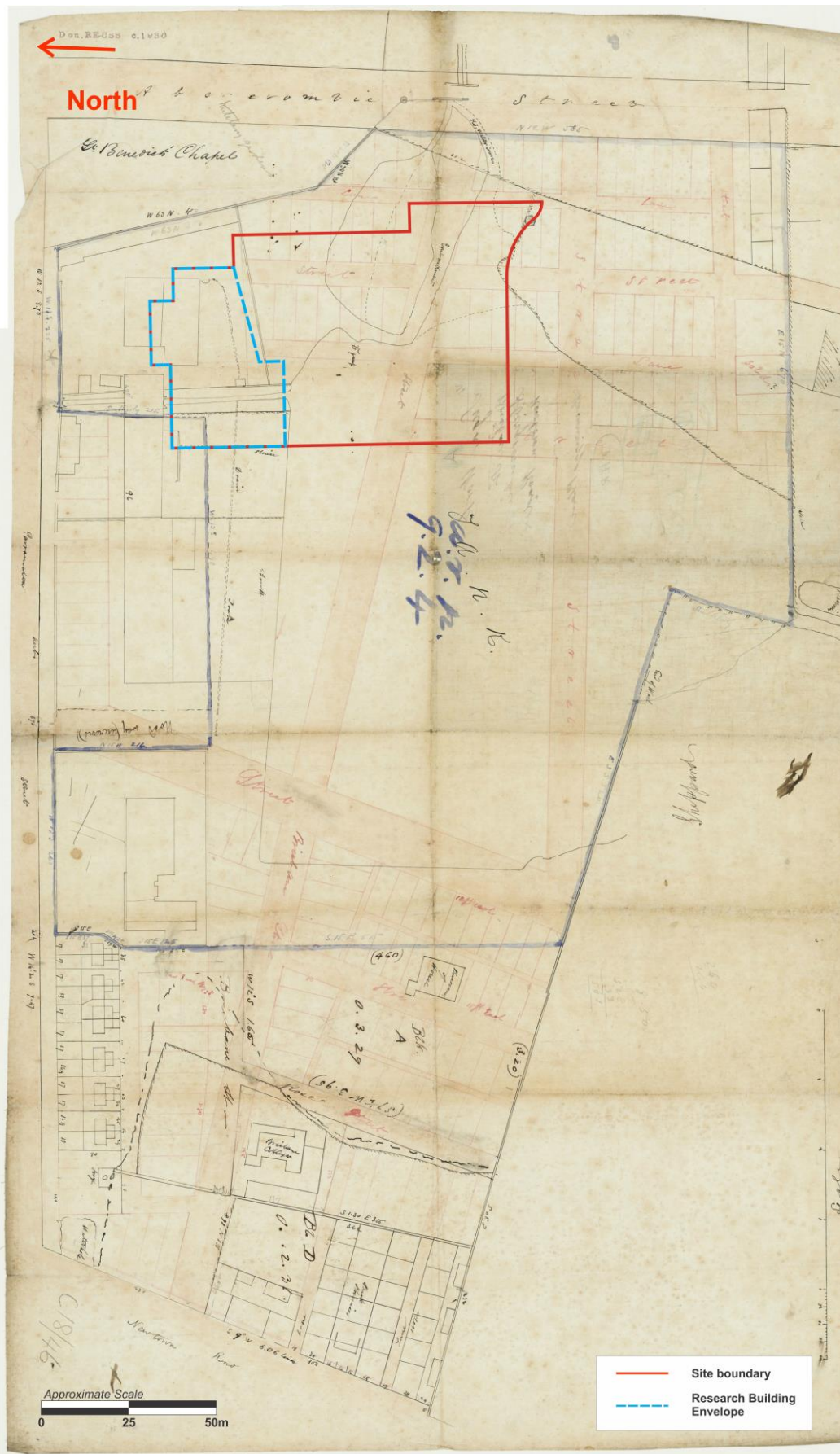


Figure 2.3: Untitled and undated plan showing Robert Cooper's property, around the early 1840s. SLNSW Chippendale Subdivision Plans, Z/SP/C18/46, digital order no. c035520049.

Between 1846 and 1849, the large store was adapted as the 'Royal Pantechnicon'. This was a cross between an auction room, a warehouse, retail bazaar and meeting rooms. It was almost certainly modelled on the Pantechnicon, Belgrave Square, London. The 'Royal Pantechnicon' was also the venue of public events, both large and small. It was the temporary location of services for the Redfern Congregational Church in 1847, and the Sydney Mayor's Ball in October 1848. At its opening the dam was used for grand aquatic displays.²⁶ By February 1849 the Pantechnicon appears to have ceased operation, and was offered for lease.²⁷

Debt forced Cooper to declare bankruptcy in 1849 and in 1850 the property was up for sale. The notice of sale described the industrial part of the property as follows:

THE BRISBANE DISTILLERY,
situated in Parramatta-street, in the city of Sydney, with all the PLANT AND MACHINERY therein contained, in complete working order.

A STORE
on the south side of the Distillery, well adapted for a Wool-washing Establishment.

THE BRISBANE STEAM FLOUR MILLS,
at present let to Mr. James Pemell for £250 per annum, payable weekly.

The large store adjoining the Mill known as
THE PANTECHNICON ;

the Sugar House known as

COOPER'S SUGAR REFINERY,
at present let to R. M. Robey, Clark Irving, and Edward Knox, Esqrs., for £400 per annum —with all the fixtures and apparatus therein, consisting of STEAM ENGINE. BOILERS, VACUUM PAN, PIPES FOR HEATING THE FLOORS BY STEAM. &c, &c, &c.²⁸

On 10 April 1850 Robert Cooper was the highest bidder for his property at a price of £9,500.²⁹ Financial troubles, however, continued to plague him and in 1852, Robert Cooper and others who by now had a financial interest in the property, sold all his land at Chippendale to the Australasian Sugar Company.³⁰

2.3 Sugar Company ownership (1852 – 1878)

The Australasian Sugar Company had been in operation since 1842. Its initial refinery was in Canterbury, on the Cooks River, and by 1852 it had also acquired another refinery in Sydney at the corner of Liverpool and George Street, Sydney. Its principals were R.M. Robey, Clark Irving and Edward Knox. They had leased Cooper's sugar house since around 1850, and gradually moved their activities to the Sydney facilities on account of labour shortages.³¹

After the company had purchased Cooper's facilities, they began to rebuild, enlarge and refit the sugar refinery on site. It resumed operations on the 1st of January, 1855.³² It is unclear how old Cooper's sugar refinery was. Although the building it was situated within had been built in 1828 (Table 2.1), the first known mention of the refinery in the Sydney newspapers dates to 1849, when

²⁶ *Bell's Life in Sydney* 17 October 1846, p 3e; *Sydney Morning Herald* 14 November 1846, p 1d, 30 December 1846, p 3d, 15 February 1847, p 4a, 7 May 1847, p 3f, 11 October 1848, p 2f, 12 October 1848, p 2c; Fitzgerald 2008:22.

²⁷ *Sydney Morning Herald* 20 February 1849, p 4b.

²⁸ *Sydney Morning Herald* 25 January 1850, p 6e; cf Fitzgerald 2008:22-23; see also letter from CSR to J. Robey, 1/11/1852 which refers to Brisbane House and 'the Engine therein', ANU/ABL:CSR 142/2765, r.SS1.

²⁹ ANU/ABL:CSR Box A-5.0, Folder 8; Fitzgerald 2008:23.

³⁰ Fitzgerald 2008:24.

³¹ *Sydney Morning Herald* 25 January 1850, p 6e; Fitzgerald 2008:40-41.

³² E. Day, *History of the CSR*, 1948 [unpublished manuscript], ANU/ABL CSR:A 1.0.1.1, p.1.9, 2.2; Fitzgerald 2008:40-42; *Sydney Morning Herald* 2 April 1853, p 4e.

he first offered the facility for lease.³³ The new additions by the sugar company seem to have included buildings of brick and stone adjoining the Sugar House and a large galvanised iron store.³⁴

In 1854, the company was sold to the newly formed Colonial Sugar Refining Company, an unlimited company of which Edward Knox was a director and which had a capital of £150 000 (Figure 2.4, Figure 2.5, Figure 2.6).³⁵

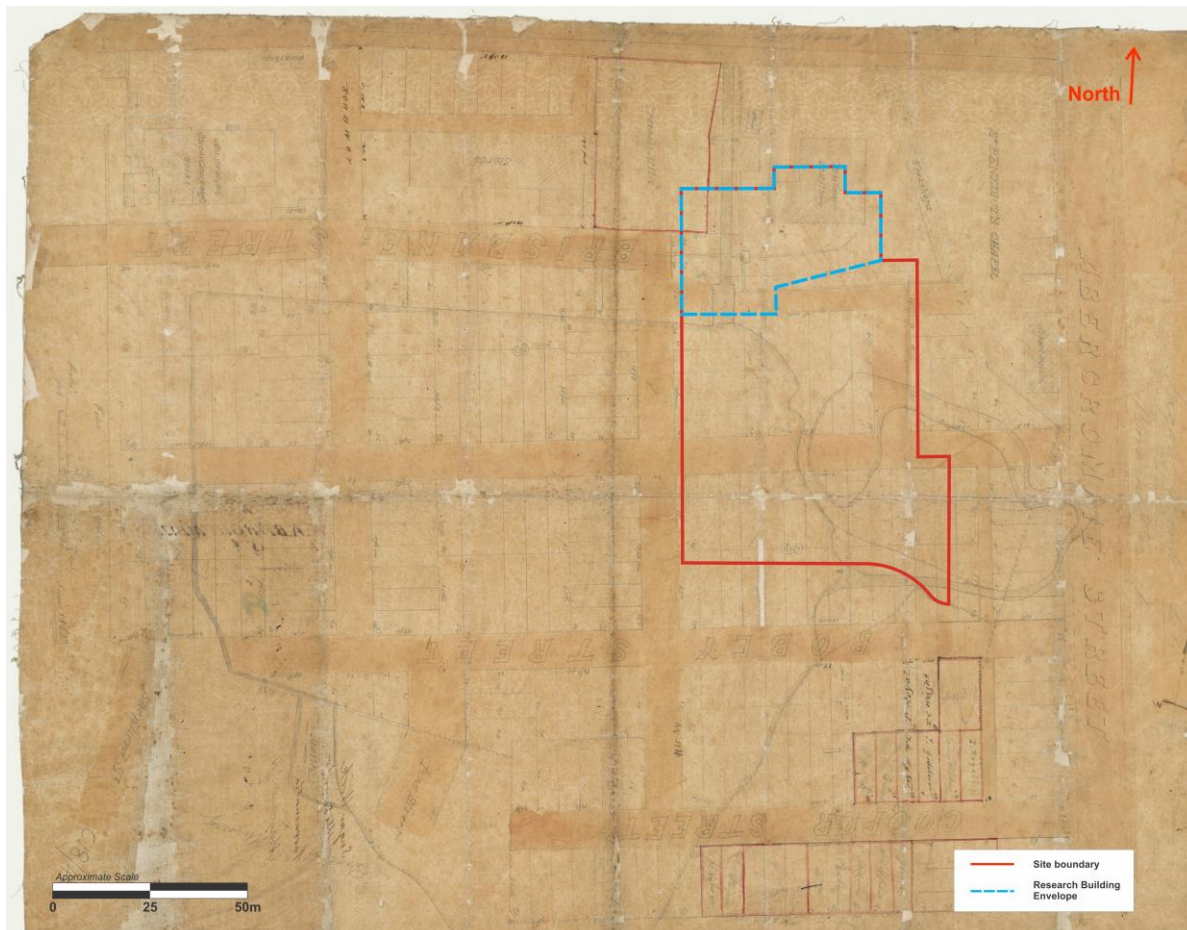


Figure 2.4: Untitled plan showing the site probably between 1852 and 1855, after the Australasian Sugar Company had purchased the site, based on the annotation 'Australian [sic] Sugar Company's Works' on the sugar refinery building (west of study area). Note that the subdivision in the area covered by the dam never took place at the time. SLNSW Chippendale Subdivision Plans, Z/SP/C18/48, digital order no. c035520051.

³³ *Sydney Morning Herald* 20 February 1849, p 4b.

³⁴ ANU/ABL CSR:A1.1.2-2, section 3.

³⁵ Fitzgerald 2008:41-42; ANU/ABL:CSR A-5.0, folder 8.

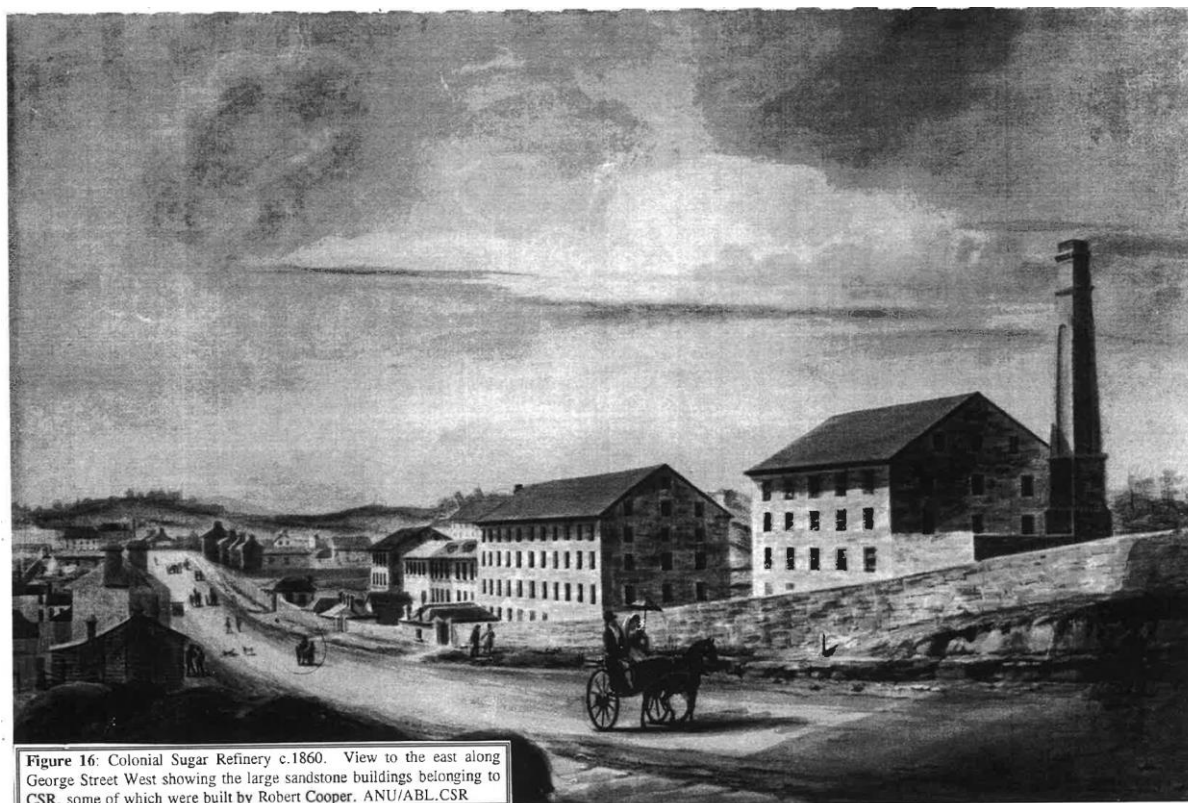


Figure 2.5: Painting entitled 'Colonial Sugar Refinery'. Although usually dated to c.1860, it must predate the completion of St Benedict's Church in 1856, as it is not shown in the painting. ANU/ABL, Noel Butlin Archives.



Figure 2.7: On the right of this painting is the Brisbane Distillery industrial complex which was aligned along Parramatta Road. In the middle ground is the dam and Abercrombie Street is in the foreground. It was painted looking west, towards Sydney University, visible in the background. 'Sugar Works. 17 Dec. 66. 7am looking N.W.', watercolour by Samuel Elyard. SLNSW DG*D 22 / 2, digital order no. a763002.

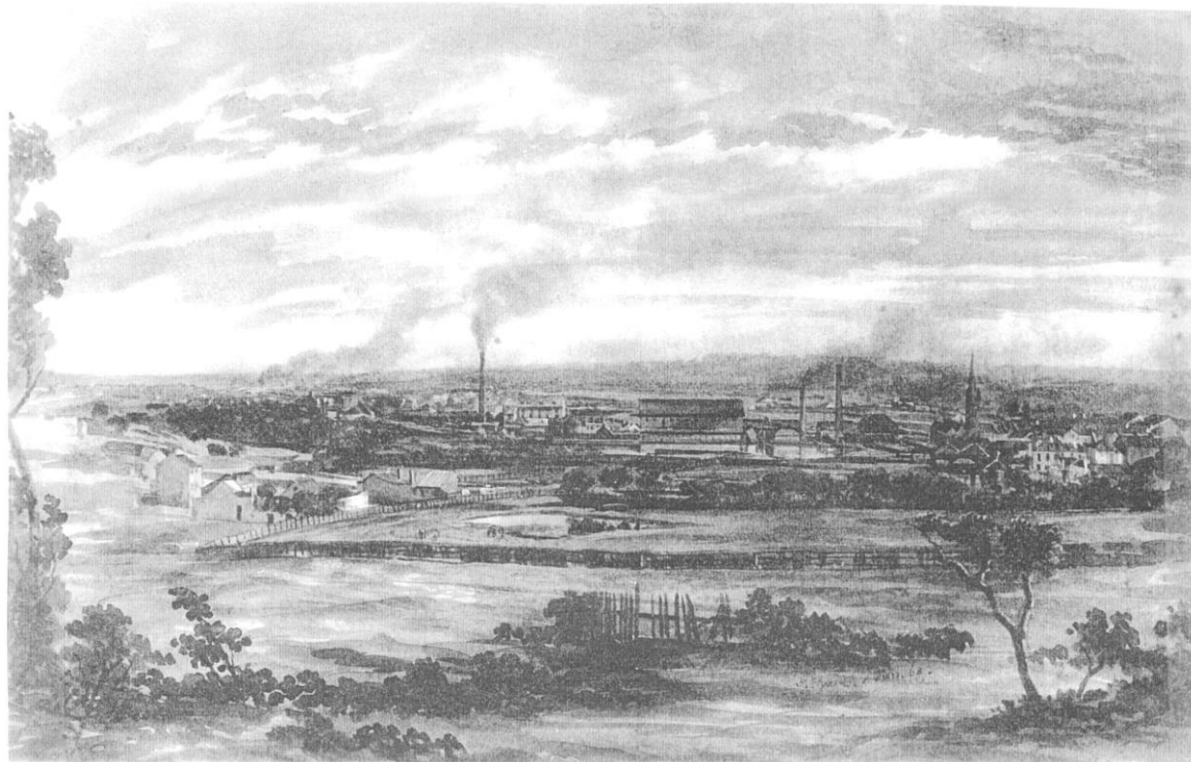


Figure 2.8: 'Chippendale from near Deaf, Dumb and Blind Institute, 1868', watercolour by Samuel Elyard, dated 1 June 1868. This view was painted looking north; the dam and the industrial buildings behind it are visible in the centre, St Benedict's Church is on the right. SLNSW DG V* / Sp Coll / Elyard / 15.

As well as the sugar refinery, the sugar company continued to operate the Brisbane Distillery as a going concern up to around 1873.³⁶ As noted at the time, there were considerable economies in connecting a distillery to the sugar refinery, as excess molasses from the refining process could be used to make rum. The distillery could produce 3000 gallons (13 600L) of rum a week and during the 1850s at least, rum was probably the more profitable part of the company's business.³⁷ The operation of the Brisbane Distillery was almost stopped in February 1853, when the roof caught fire, apparently from an ember from a smokestack. The fire destroyed most of the roof, but it was contained and did not spread to the lower floors of the building, where most of the stored spirits and machinery was located (Figure 2.9).³⁸ This meant that the distillery could continue operations relatively smoothly.

Although the sugar company operated most of the buildings on the site, including the sugar refinery, the large store building and the Brisbane Distillery, the flour mill was leased to James Pemell. James Pemell was a member of the NSW Legislative Assembly from June 1859 to November 1860, and again from February 1865 to May 1869. He also sat on the City of Sydney Council from November 1851 to September 1852.³⁹ Pemell's Mills, as the site was commonly known, operated on the site from around 1846 until a major fire in December 1870. Part of Pemell's mill was 'washed away' during a storm in October 1850.⁴⁰ Analysis of maps suggests that this was probably part of the mill building which extended over the channelised Blackwattle Creek (Figure 2.3). This aspect of the design was probably a legacy of when the facility operated as a watermill, and the structure was then repaired without it. The 1870 fire destroyed almost the entire mill building as well as most of the surrounding smaller buildings (Figure 2.9).⁴¹ However, the large neighbouring distillery and stores buildings were not destroyed, and according to the *Sydney Morning Herald* the engine and boiler rooms at the rear of the mill also survived.⁴² Nevertheless, the mill was not rebuilt, as Pemell had acquired the Victoria Mills on Sussex Street, Haymarket a short time before the fire.⁴³

³⁶ Cf *Sands Directory* 1873 and 1875, Appendix 1; the last identified newspaper reference to the 'Brisbane Distillery' as a going concern is in *Sydney Morning Herald* 17 June 1873, p 5b.

³⁷ *Sydney Morning Herald* 2 April 1853, p 4e; Fitzgerald 2008:43.

³⁸ *Bell's Life in Sydney* 19 February 1853, p 2f; *Empire* 19 February 1853, p 2c; *Freeman's Journal* 24 February 1853, p 10c.

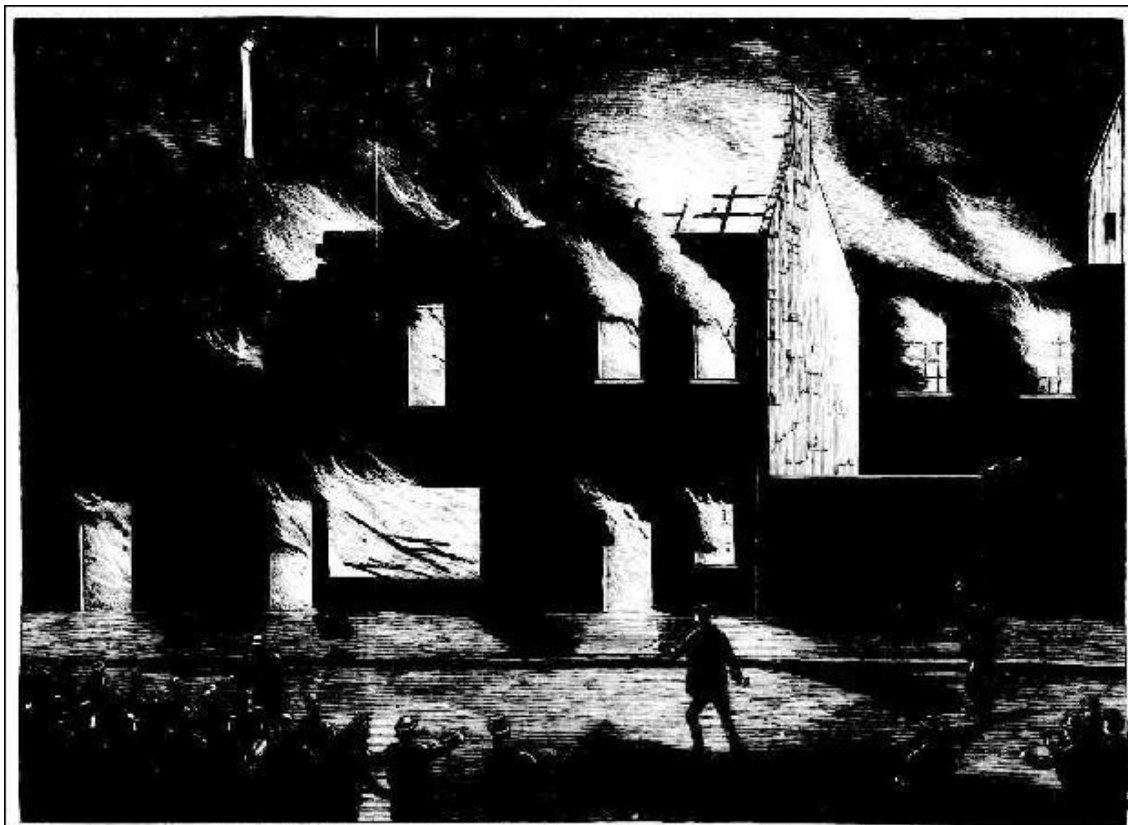
³⁹ City of Sydney 2015.

⁴⁰ *Bell's Life in Sydney* 19 October 1850, p 2f.

⁴¹ *Empire* 12 December 1870, p 3a; *Sydney Morning Herald* 12 December 1870, p 5c; *Freeman's Journal* 17 December 1870, p 10b; *Sydney Mail* 17 December 1870, p 4e; *Illustrated Sydney News*, 24 December 1870, p 1.

⁴² *Sydney Morning Herald* 12 December 1870, p 5c.

⁴³ *Evening News* 14 December 1870, p 3f; *Maitland Mercury* 17 December 1870, p 3f; *Australian Town and Country Journal* 4 February 1871, p 30d.



DESTRUCTION BY FIRE OF PEMELL'S FLOUR MILLS, PARRAMATTA STREET.—SEE PAGE 99.

Figure 2.9: The December 1870 fire at Pemell's Flour Mills, as depicted by the *Illustrated Sydney News*, 24 December 1870, p 1.

CSR continued to operate, its refining and distilling processes continued through into the 1860s and 70s. There were certain levels of complaint at the more obnoxious parts of the process, such as the storing and burning of animal bones for charcoal (used for filtering) and the polluting of the dam and Blackwattle Swamp Creek. There was a long process of negotiation with the City Council over sewerage and water consumption, which in the end saw the company's sewage diverted into the Abercrombie Street sewer and the company using town water by 1875. As part of these negotiations, the company also received water free of charge to flush out its dam for six weeks.⁴⁴

During the 1860s and 1870s the company's fortunes improved and they achieved a near monopoly in the growing and refining of sugar. Sugar production increased from about 100 tons in 1855 to 240 tons a week in 1878.⁴⁵ It became apparent though that the site could sustain only a certain level of expansion, despite the acquisition of adjoining land in 1871. From 1875 plans to move the company's operations to a site with harbour access at Pyrmont were being assessed. This land was purchased in September 1875, and preparation for the move started immediately, with reports of unwanted sugar baskets and the like being burnt at Brisbane House. Work ceased at Parramatta Road from February 1878 except for clearing out the house and boiling down molasses.⁴⁶ The CSR refinery relocated to Pyrmont on the waterfront.

⁴⁴ Fitzgerald 2008:43-48.

⁴⁵ Fitzgerald 2008:43.

⁴⁶ E. Day, *History of the CSR*, 1948 [unpublished manuscript], ANU/ABL CSR:A 1.0.1.1, p.3.6; Fitzgerald 2008:47-48; ANU/ABL:CSR Z303 Box 3 A-1-1.2, folder 2.

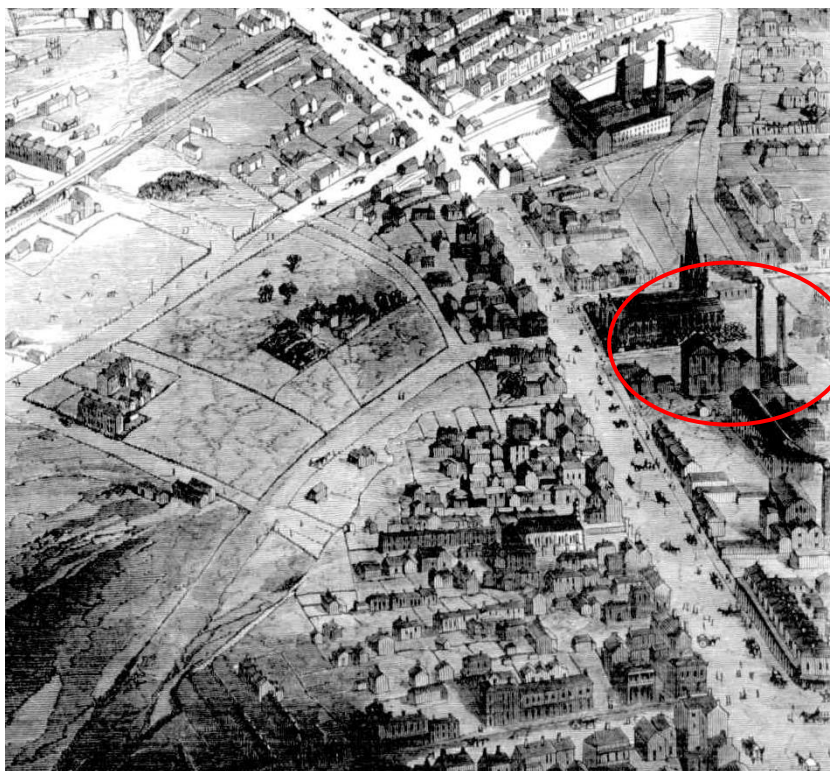


Figure 2.10: Detail of a Birds-Eye View of Sydney, published in *Illustrated Australian News for Home Readers*, 25 March 1874, p 95. Note that it does not show Pemell's Mills, which had already burnt down by this date. Also note that the representation of the buildings is not strictly accurate (cf Figure 2.11).

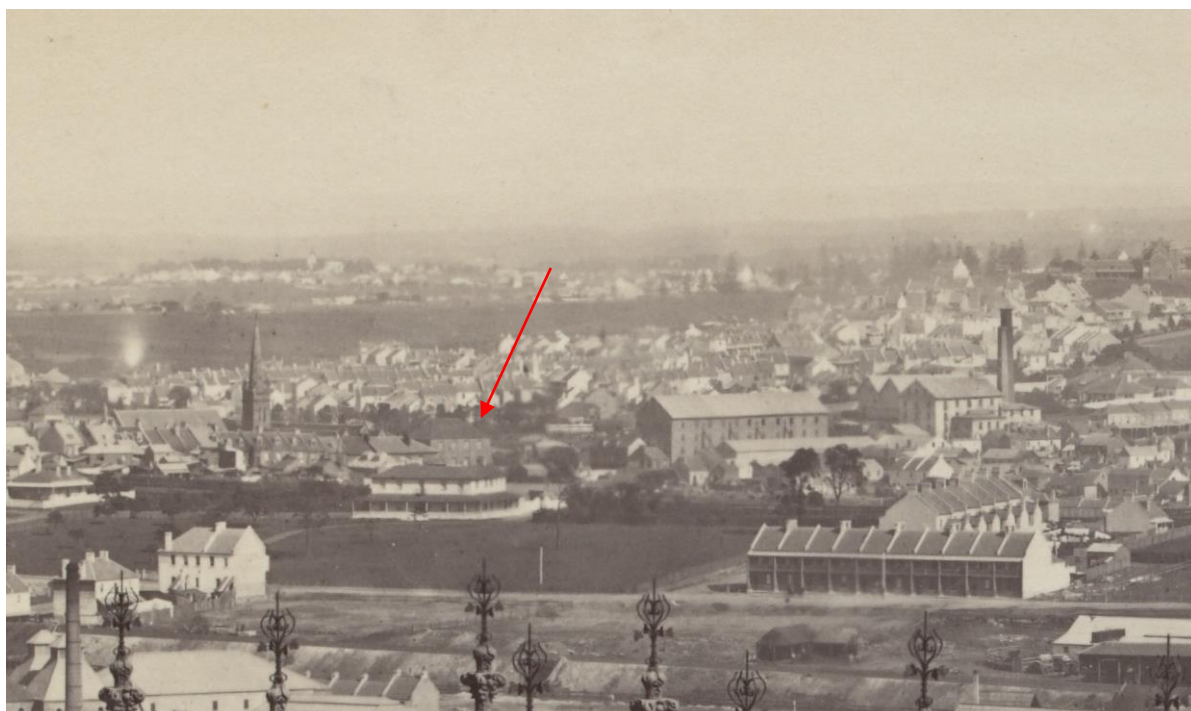


Figure 2.11: Detail of 1877 photo taken from the Sydney Town Hall Tower looking southwest showing the Brisbane Distillery building (arrowed) shortly before its demolition. State Library of Victoria H96.160/14.

2.4 Blackfriars Estate (1878 – present)

In 1878 the CSR site was sold to A.H. McCulloch, C.F. Stokes and R.S. Black for £47 500. The new owners proceeded to subdivide the site under the name of the 'Blackfriars Estate', probably inspired by the nearby St Benedict's Church.⁴⁷ The old buildings were demolished and the ground was levelled during the second half of 1878. Salvaged girders and machinery from the sugar mill were sold off, as were salvaged building materials, including stone, bricks and timber.⁴⁸ The levelling works included filling in the dam and Blackwattle Creek, which had previously been situated on the estate. This had the predictable result of causing substantial problems with water runoff and drainage, which continued to plague the area throughout the 1880s.⁴⁹ The initial auction sale of the land was held in January 1879, and although well attended, only around 40 lots were sold (Figure 2.12). Further auctions were held, but sales remained slow.⁵⁰

The subdividers also began a legal dispute with the City Council regarding responsibility for roads and drainage. Laws passed in 1879 and 1881 made it illegal to create roads less than 66 feet (20.1m) wide. As the Blackfriars Estate contained roads were narrower than 66 feet, the City Council considered that it was an illegal subdivision and refused to surface the roads within it.⁵¹

Then the newly formed Department of Education decided to resume the Blackfriars Estate to build a public school. The 1880 *Public Schools Act* meant that financial assistance to church schools would cease by 1883 and it was therefore thought there would be a big increase in demand for public schools. In 1881 the Department resumed land for a new school. It was partly from St Benedict's, who had purchased allotments immediately adjacent to their property, but mostly from the subdividers, who were paid £3500 compensation. Construction of the school buildings began in 1883 and the first students moved in, in April of that year. Further resumptions took place in 1884, covering the former roadways and the north portion of the site (Figure 2.13).⁵² The buildings were designed by G. Mansfield, who favoured an ecclesiastical Gothic style. The original swampy ground and creek survived in some form at least into the 1890s.⁴⁰

The school never functioned to its capacity of 1500 pupils, although a peak of 1300 was achieved in the 1890s. From 1905 some of the excess space was given over to the Sydney Teachers College, who occupied part of the site until 1924. Subsequently the vacant space was occupied by the Department of Education Correspondence School, who operated on the site until the 1960s. Initially the Correspondence School operated 'The School in the Mailbox' from the site. Later it operated the 'School of the Air', which conducted lessons via two-way radio broadcast from Broken Hill and then relayed back to the Blackfriars School.⁵³ In December 1965, the secondary level section of the Correspondence School moved out of Blackfriars to premises at the corner of William and Riley Street Surry Hills. At the time the Correspondence School had over 6000 pupils and 380 teachers. The primary section moved out in July 1967.⁵⁴

The Blackfriars School also became a pioneering centre of early childhood education. In 1906 the state's first properly established kindergarten was established on the site. From 1912 the school became a centre for the introduction of Montessori methods in NSW under its infants mistress,

⁴⁷ Fitzgerald 2008:62.

⁴⁸ *Sydney Morning Herald* 30 September 1878, p 4d, 9 December 1878, p 9b, 22 January 1879, p 12a, 18 April 1879, p 1f.

⁴⁹ Fitzgerald 2008:62-74; *Sydney Morning Herald* 10 October 1878, p 7d, 23 November 1878, p 13c, 27 November 1878, p 6b.

⁵⁰ Fitzgerald 2008:62-64; *Sydney Morning Herald* 28 December 1878, p 11f, 23 January 1879, p 4b, 26 April 1879, p 4e, 10 July 1880, p 6d; *Sydney Mail* 25 January 1879, p 149a.

⁵¹ Fitzgerald 2008:35-68.

⁵² Fitzgerald 2008:69-71; *Freeman's Journal* 22 February 1879, p 15b; *Sydney Mail* 5 June 1880, p 1042d; *Sydney Morning Herald* 3 November 1881, p 13a, 3 June 1882, p 5c, 25 April 1884, p b.

⁵³ McPhee Architects 2012:40-50.

⁵⁴ Ramsland 2015.

Miss Martha Simpson. Miss Simpson's successor, Miss Stevens introduced other innovations, including an after-school play centre for young children and older girls (1918), a special class for pupils who had learning difficulties (1921) and a Children's Health Lunch Cafeteria (1929).⁵⁵

In 1932 the Department of Education reorganised the school and Blackfriars became an infants school, nominally attached to the Forest Lodge School. The school became an independent infants school in 1950. It remained a functioning school until 1990, when it was closed.⁵⁶

As the Blackfriars School site found different uses, various mostly weatherboard buildings were added to meet these requirements. The oldest of the weatherboard structures apparently dates to before 1906. Other brick buildings, mostly toilets, were also added. The playground was tarred in 1886-7.⁵⁷

The road to the north of the site also kept evolving throughout this period, and its name changed two times. In the 1870s, Parramatta Street, as it was then known, was renamed George Street West. The level of George Street West was raised in 1882 in the vicinity of Blackwattle Creek. This was in order to decrease the steepness of the slope and facilitate the passage of the new tramway long the street. In the 1920s plans were made for the widening of George Street West. This took some time to eventuate, but actual demolition of resumed properties started in the early 1930s. St Benedict's Church had to be shortened and the frontage rebuilt. This was carried out from the end of 1939. The current configuration of Broadway resulted from these works.⁵⁸

After the closure of the Correspondence School, other uses were found for the building, including the Arts Education Studio and the Adult Migrant Education Services.⁵⁹ The University of Technology Sydney, bought the site in 1990. In 1993 it began a program of conservation and re-use of the site. A childcare facility was built at the north of the site in 1994. Other works included removing a number of small timber buildings and various additions to the main buildings. Tared school yards were also removed in places and replaced with grass.⁶⁰

⁵⁵ Fitzgerald 2008:80; Perumal Partners 1990: Annexure 4, pp x-xi, citing J. J. Fletcher 1982 *Blackfriars Public School*, History Files, NSW Education Department.

⁵⁶ Perumal Partners 1990: Annexure 4, p xiii; McPhee Architects 2012:50.

⁵⁷ Perumal Partners 1990:14.

⁵⁸ Fitzgerald 2008:58, 67, 103-106.

⁵⁹ Perumal Partners 1990: Annexure 4, p xiii.

⁶⁰ McPhee Architects 2012:50.

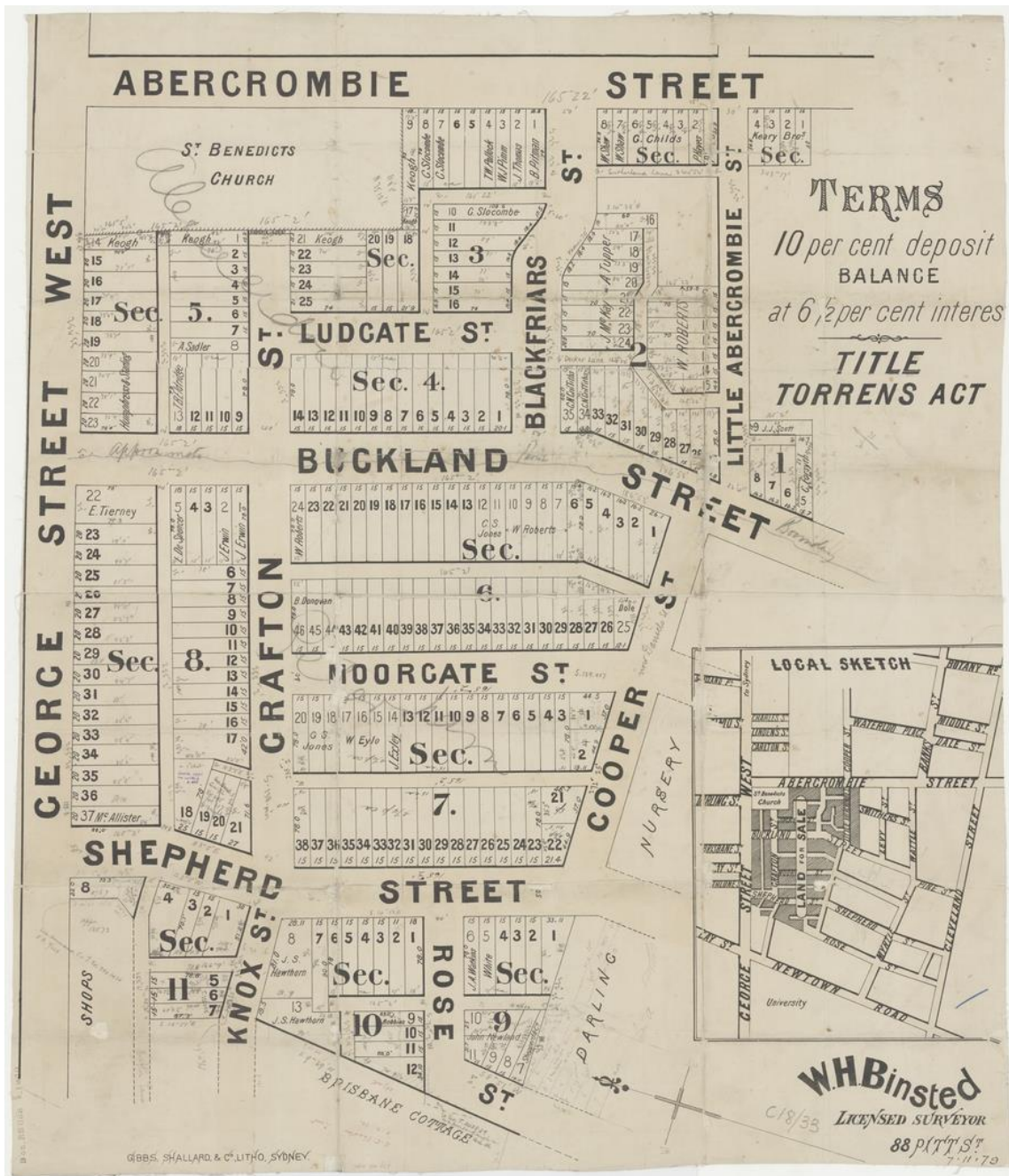


Figure 2.12: Subdivision plan for the Brisbane Distillery site. Blackfriars subdivision plan, c. 1880. SLNSW Chippendale Subdivision Plans, Z/SP/C18/33, digital order no. c035520035.

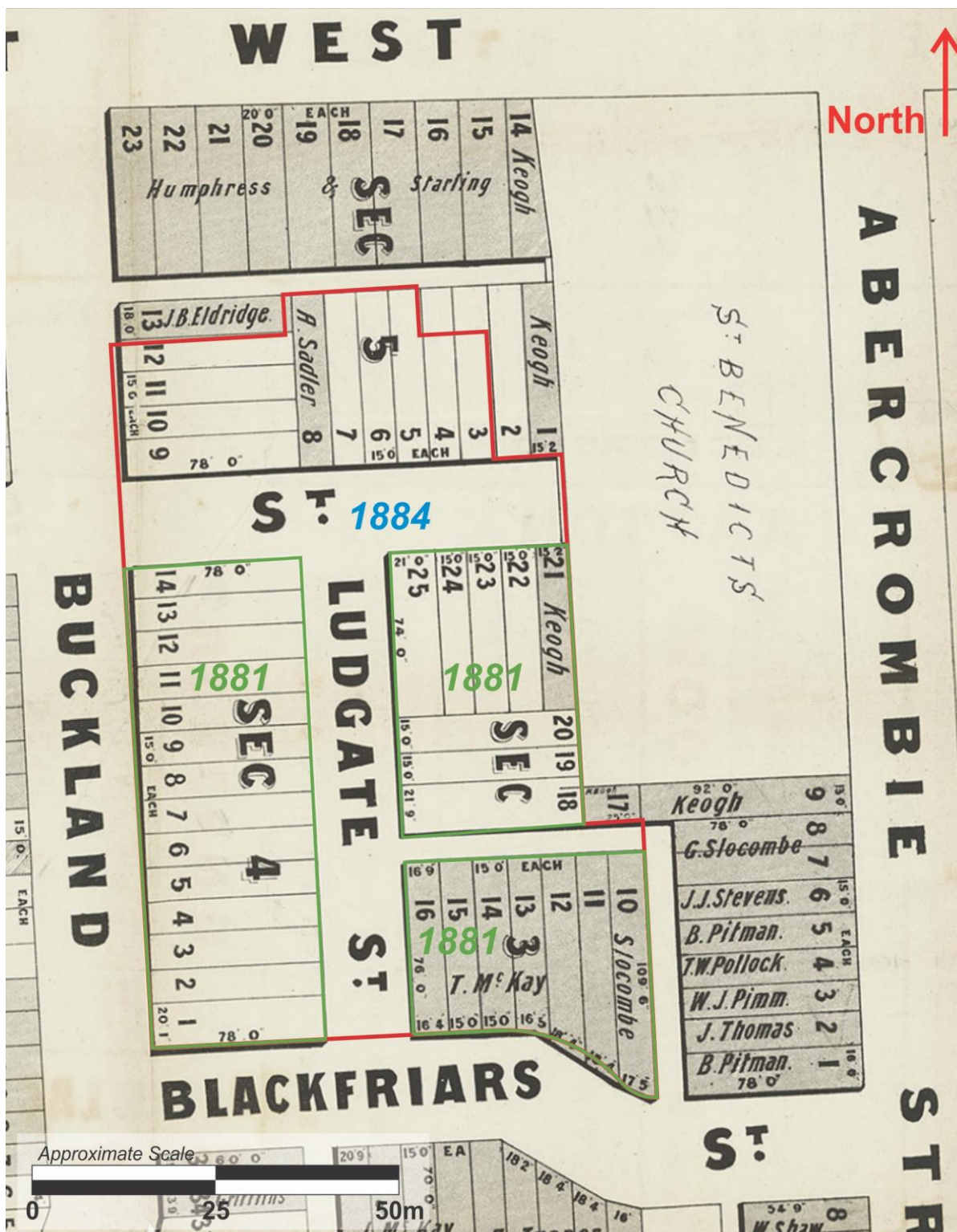


Figure 2.13: Detail of Blackfriars Estate subdivision plan, lots for auction 19 September 1881. Blackfriars Precinct outlined in red with annotations showing areas of 1881 and 1884 Government resumptions for the school. SLNSW Chippendale Subdivision Plans, Z/SP/C18/71, digital order no. c035520077.

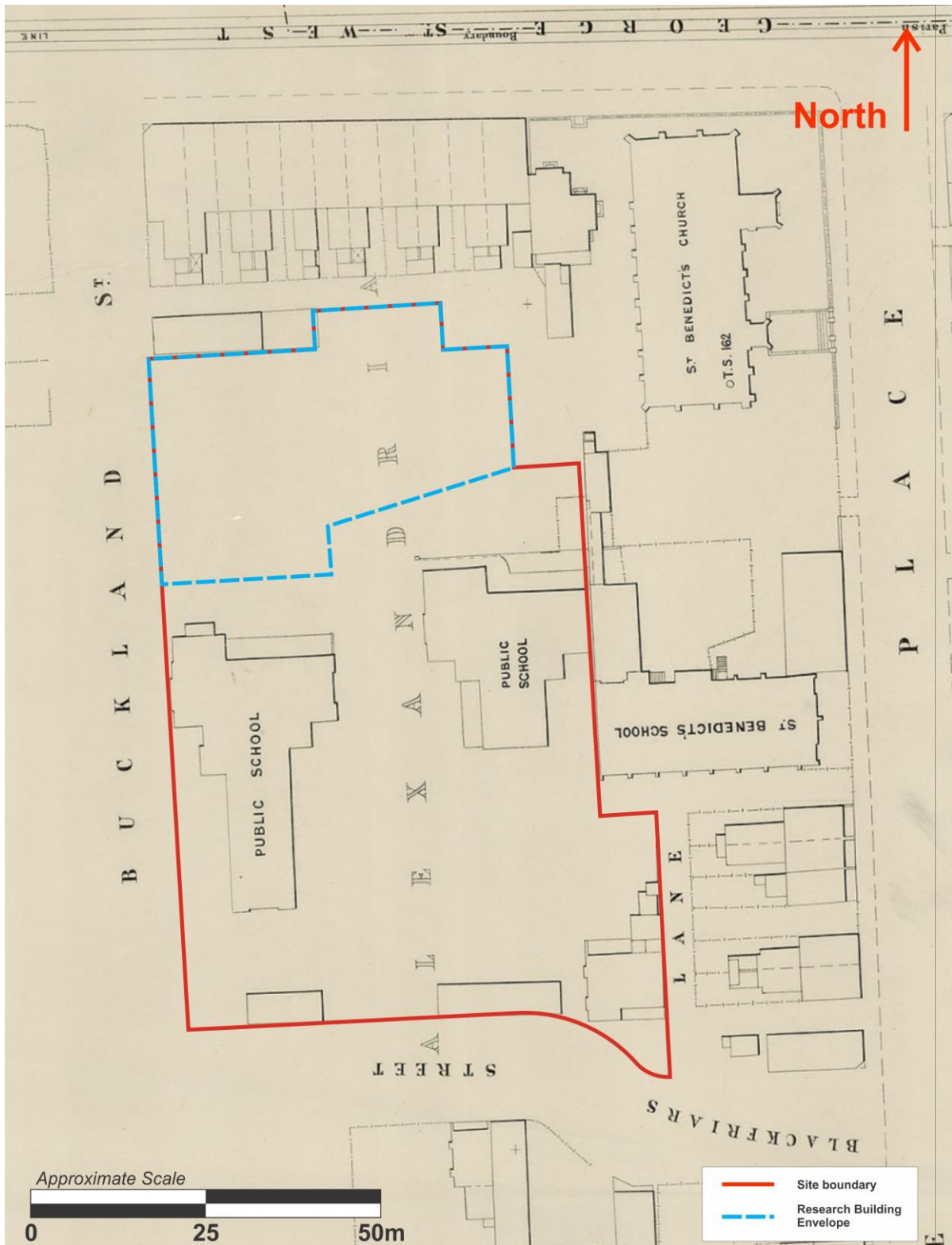


Figure 2.14: Detail of 'City of Sydney, Detail Sheet D2', 1888. SLNSW M Ser 4 811.17/1, digital order no. a1367494.

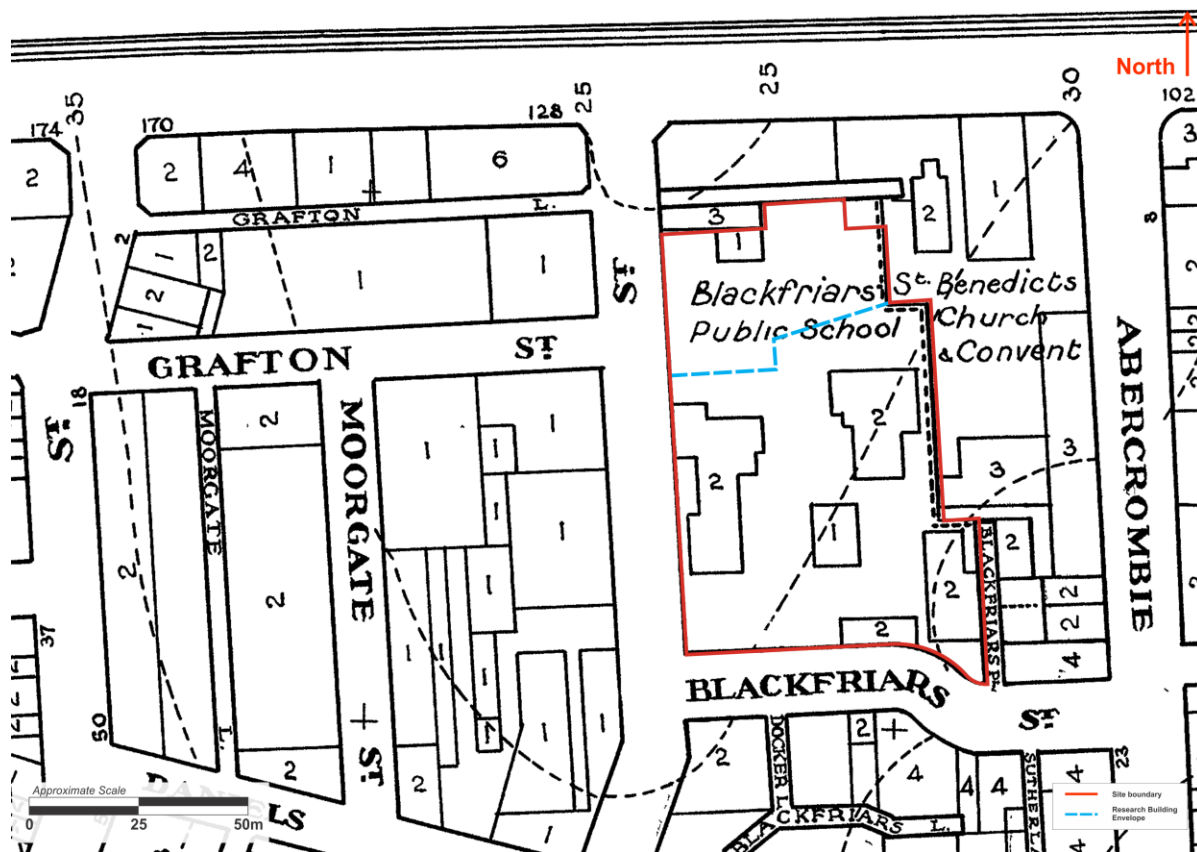


Figure 2.15: Detail of 1948 City of Sydney, Civic Survey, showing the site after the changes to Broadway. Historical Atlas of Sydney, City of Sydney Archives.

2.5 Phasing of buildings

During the late 1820s and 1830s, Robert Cooper constructed what must have been one of the largest industrial complexes in Australia at the time. His buildings extended along ‘Parramatta Street’ (now Broadway) from the present Blackfriars site to roughly where Shepherd Street now is, a distance of roughly 250m. Phasing of construction of the buildings area outlined in Table 2.1. The location of these buildings are shown on the annotated maps and images following this table.

Table 2.1: Details of main buildings in Robert Cooper’s industrial complex at Blackwattle Swamp.

Feature ID	Feature Name	Date constructed	Date demolished	Description & notes	Images & Plans
1	Brisbane Distillery	Oct 1824 – Nov 1825 ⁶¹	Second half of 1878	Constructed from stone; Roof burn down in Feb 1853, while remainder of building was largely unaffected. ⁶²	Figures 2.10-2.11, 2.16-2.20, 2.22,
2	Shed along east boundary	By 1840s	By 1855	Replaced by another shed when the east boundary wall was realigned	Figures 2.16-2.17
3	Second shed along east boundary	By 1855	Second half of 1878?	Constructed from iron	Figures 2.19, 2.20
4	Brisbane Flour Mill/ Pemell’s Mills	From Oct 1824 ⁶³	Dec 1870 (by fire)	Three-storey, stone building; ⁶⁴ Converted to steam by Feb 1829; ⁶⁵ section over Blackwattle Creek probably damaged by storms in Oct 1850 and removed by 1855. ⁶⁶ Additional buildings at front and rear added by 1855. In 1870 measured approx. 100 x 30 feet (30.4 x 9.1m).	Figures 2.9, 2.16-2.22
5	Building north of Pemell’s Mills	By 1855	Dec 1870 (by fire)	Two-storey building, north of Pemell’s Mills with approx. 70 feet (21.3m) frontage to Parramatta Street, used as an office and dwelling for person in charge overnight. ⁶⁷	Figures 2.19-2.20
6	Building linking Pemell’s Mills to Parramatta Street building	By 1855	Dec 1870 (by fire)	Three-storey, brick building ⁶⁸	Figures 2.19-2.20
7	Engine and boiler house attached to Pemell’s Mills	By 1855	c.1871	Not destroyed by the Dec 1870 fire, but likely to have been demolished soon afterwards. ⁶⁹	Figures 2.19-2.21
8	Large Stores/ Pantehnicon	By June 1829 ⁷⁰	Second half of 1878	Constructed from stone; 150 x 40 feet (46 x 12m), five storeys high. ⁷¹	Figures 2.16-2.22
9	Sugar Store	By 1855	Second half of 1878	Constructed from iron	Figures 2.19-2.22
10	Cloth Mill/Sugar Refinery	June 1829 – before March 1833 ⁷²	Second half of 1878	Constructed from stone; built to house Cooper’s second Steam Engine; housed a sugar refinery by 1849; refurbished between 1852 and 1855. ⁷³	Figures 2.16-2.22
11	Dam/Reservoir	By Aug 1826 ⁷⁴	Second half of 1878		Figures 2.16-2.22
12	Blackwattle Creek canal	c.1825	Second half of 1878	Canalised route of Blackwattle Creek. Probably aligned as a mill race during the construction of the flour mill, which was initially designed as a water mill. Later used for overflow of the dam/reservoir.	Figures 2.16-2.17, 2.19-2.20
13	Brewery	June 1830 – before March 1833 ⁷⁵	Before 1850	Constructed in the location of Cooper’s former quarry, ‘on a considerable scale and formed entirely under ground’ ⁷⁶	Not shown on any known plan or image.

⁶¹ *Sydney Gazette* 14 October 1824, p 2c, 24 November 1825, p 2d; *The Australian* 24 November 1825, p 3d.

⁶² *Bell’s Life in Sydney* 19 February 1853, p 2f; *Empire* 19 February 1853, p 2c; *Freeman’s Journal* 24 February 1853, p 10c.

⁶³ *Sydney Gazette* 21 October 1824, p 3b.

⁶⁴ *Sydney Morning Herald* 12 December 1870, p 5c.

⁶⁵ *The Australian* 20 February 1829, p 3a.

⁶⁶ *Bell’s Life in Sydney* 19 October 1850, p 2f.

⁶⁷ *Sydney Morning Herald* 12 December 1870, p 5c.

⁶⁸ *Sydney Morning Herald* 12 December 1870, p 5c.

⁶⁹ *Sydney Morning Herald* 12 December 1870, p 5c.

⁷⁰ *The Australian* 12 June 1829, p 3d.

⁷¹ *Sydney Herald* 18 March 1833, p 3b

⁷² *The Australian* 12 June 1829, p 3d; *Sydney Herald* 18 March 1833, p 3b.

⁷³ *The Australian* 12 June 1829, p 3d; *Sydney Morning Herald* 20 February 1849, p 4b; Fitzgerald 2008:40-42.

⁷⁴ *The Australian* 26 August 1826, p 3b.

⁷⁵ *Sydney Monitor* 12 June 1830, p 2e; *The Australian* 24 September 1830, p 3e; *Sydney Herald* 18 March 1833, p 3b.

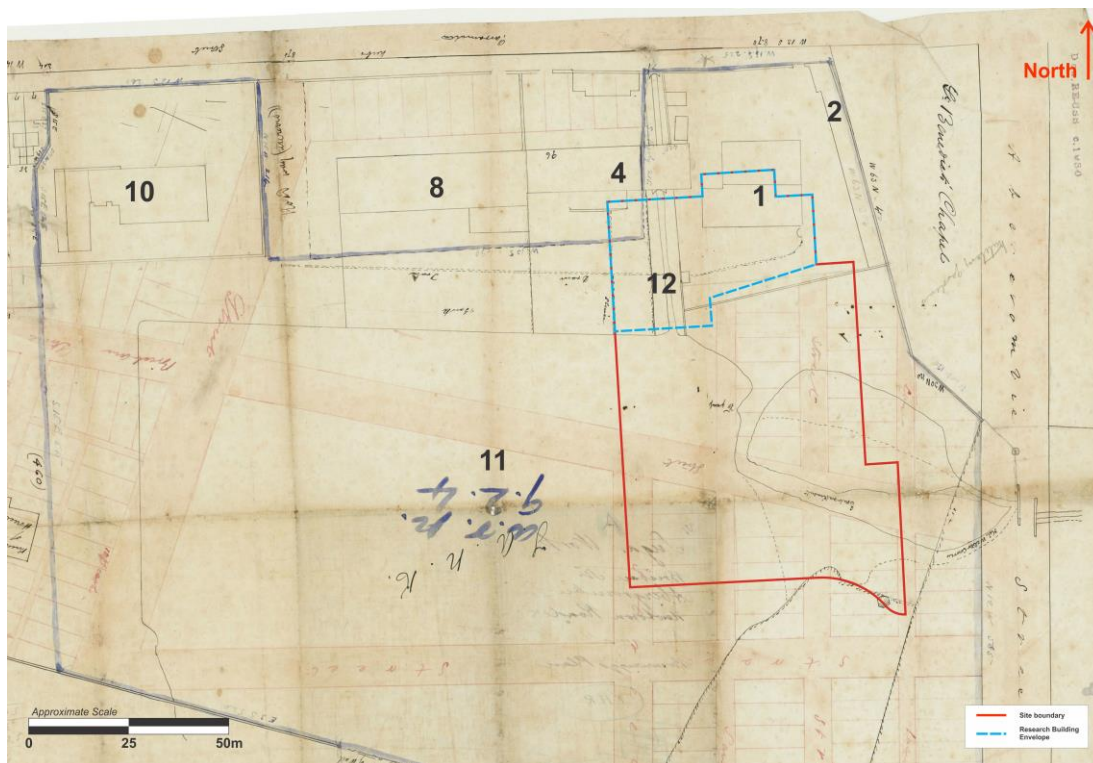


Figure 2.16: Detail of undated c.1840s subdivision plan showing buildings on Robert Cooper's land. Features numbered corresponding to Table 2.1. SLNSW Chippendale Subdivision Plans, Z/SP/C18/46, digital order no. c035520049.

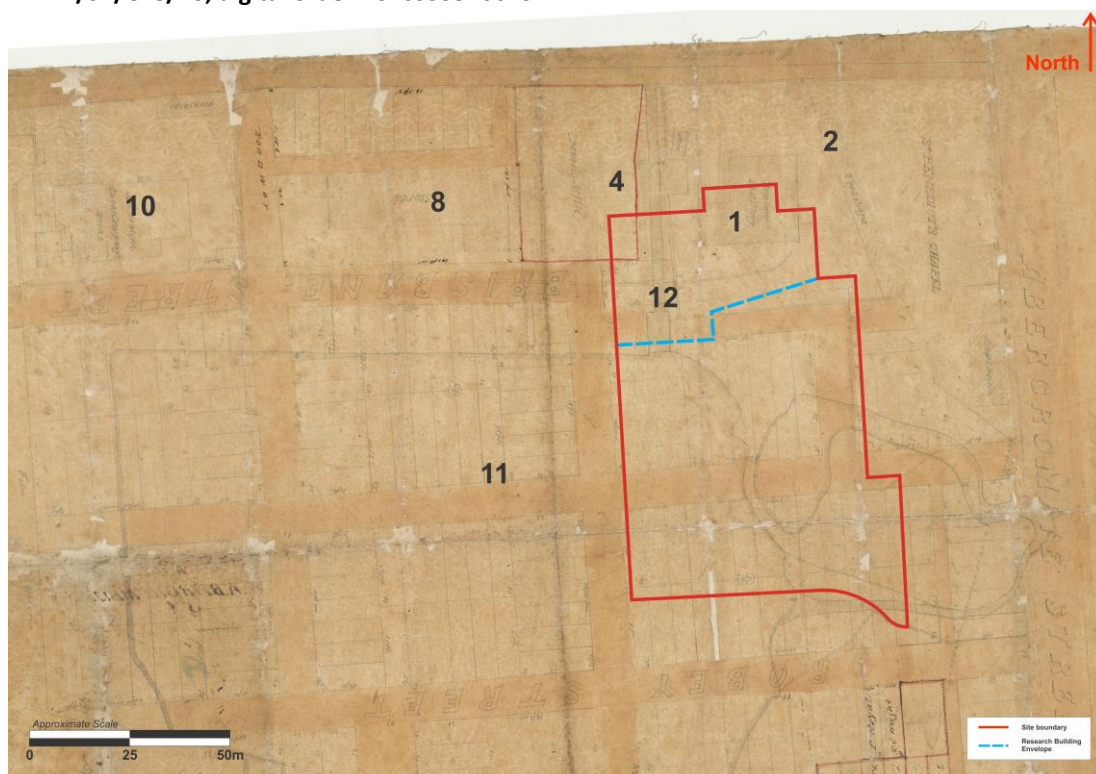


Figure 2.17: Detail of undated subdivision plan probably dating to the ownership of the Australasian Sugar Company], annotated with industrial features numbered corresponding to Table 2.1. Note that the subdivision in the area covered by the dam never took place at the time. SLNSW Chippendale Subdivision Plans, Z/SP/C18/48, digital order no. c035520051.

⁷⁶ *The Australian* 24 September 1830, p 3e; *Sydney Herald* 18 March 1833, p 3b.

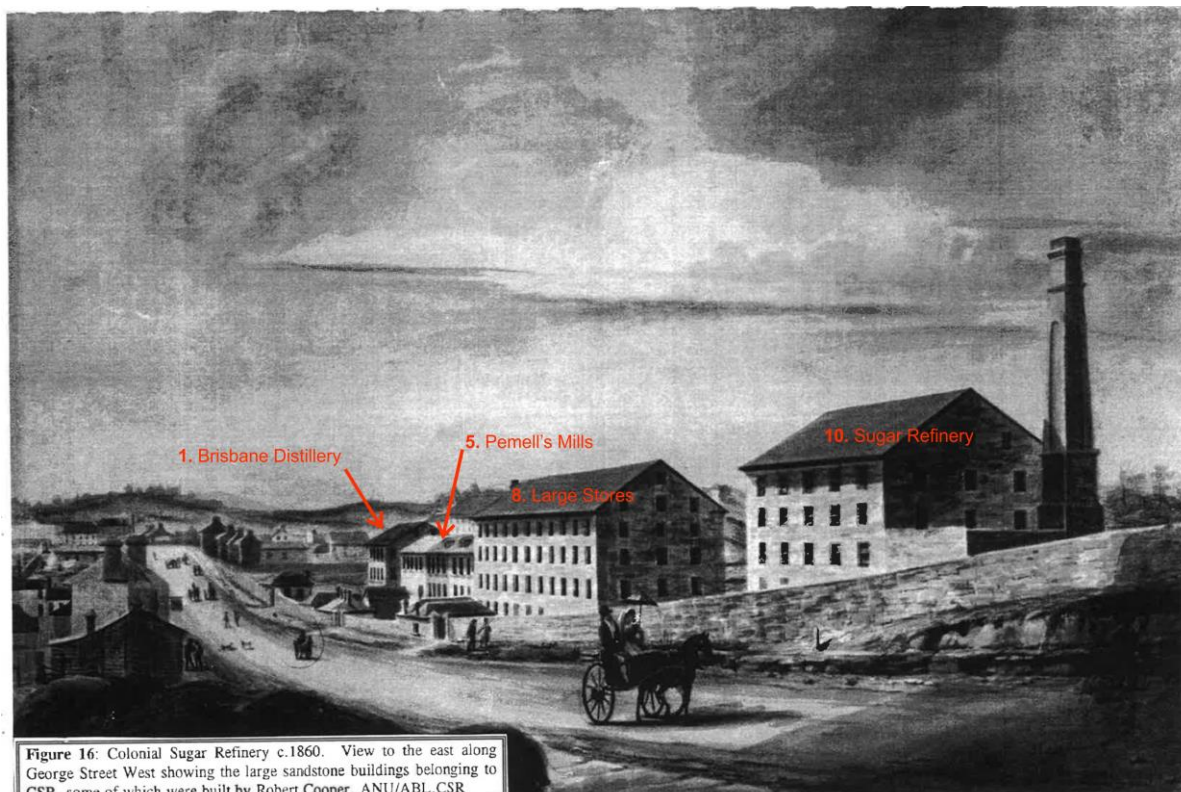


Figure 16: Colonial Sugar Refinery c.1860. View to the east along George Street West showing the large sandstone buildings belonging to CSR, some of which were built by Robert Cooper. ANU/ABL.CSR

Figure 2.18: View east along Parramatta Street (now Broadway) showing the sugar refinery buildings, c.1852-1855. ANU/ABL, Noel Butlin Archives.

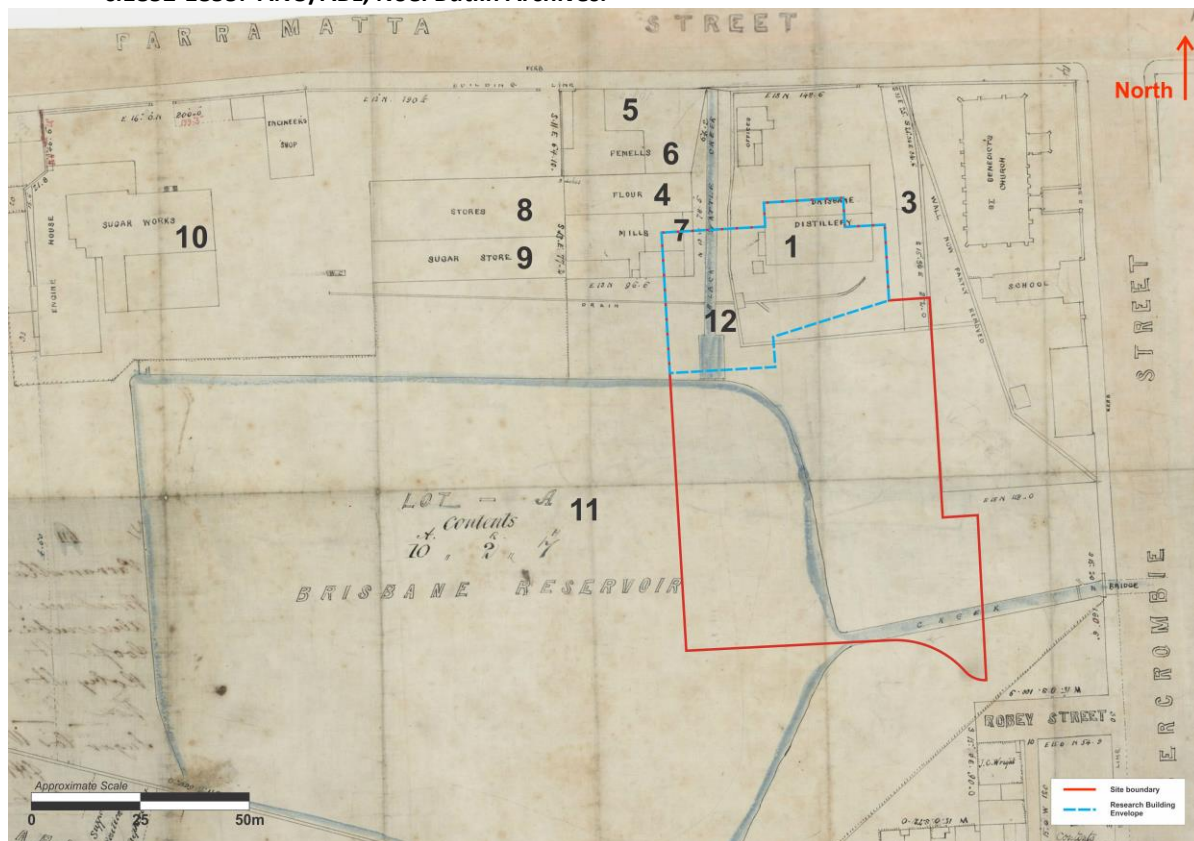


Figure 2.19: Detail of 1855 plan of the Colonial Sugar Refinery, with industrial features numbered corresponding to Table 2.1. SLNSW Z/M2 811.18194/1855/1, digital order no. c017120001.

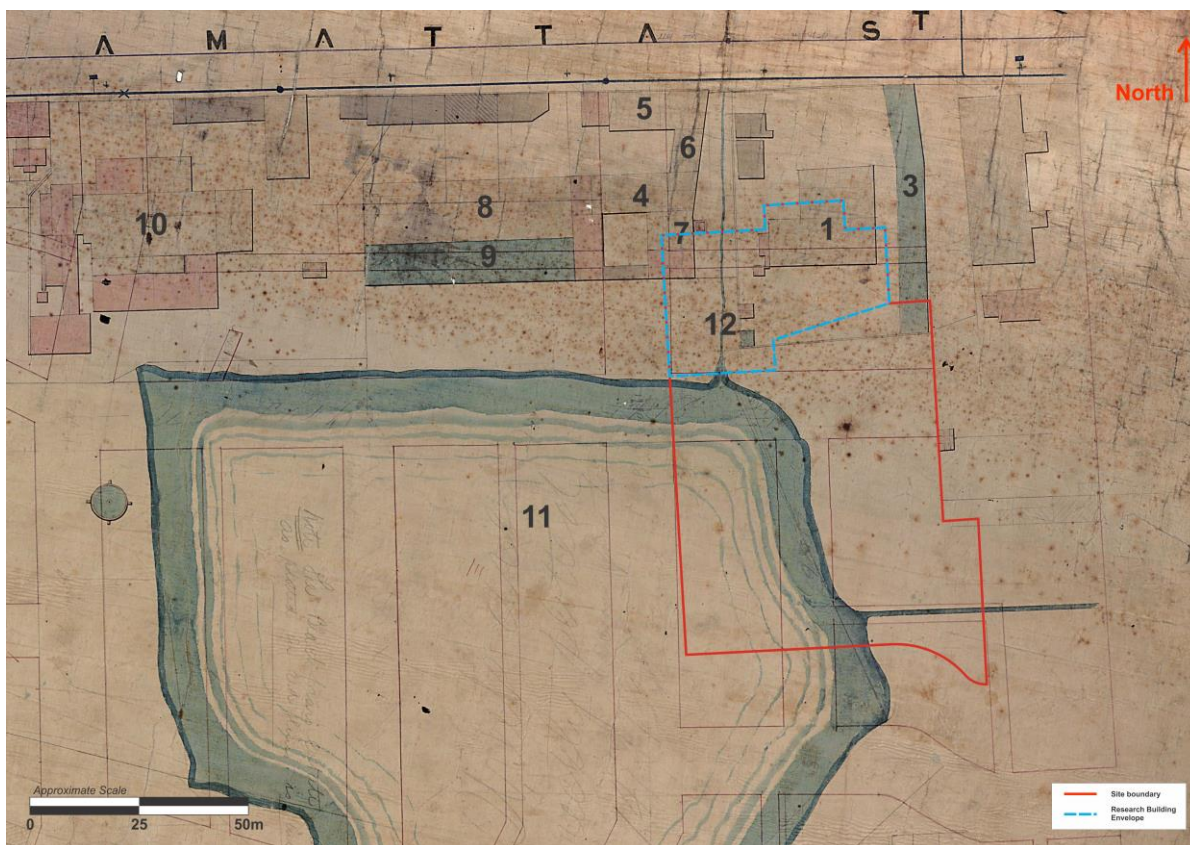


Figure 2.20: Detail of 1865 Trigonometrical Survey of Sydney, Section U2, with industrial features numbered corresponding to Table 2.1. Historical Atlas of Sydney, City of Sydney Archives.



Figure 2.21: 'Colonial Sugar Co., Chippendale, 1868', watercolour by Samuel Elyard, with industrial features annotated corresponding to Table 2.1. SLNSW DG V* / Sp Coll / Elyard / 2, digital order no. a1528154.

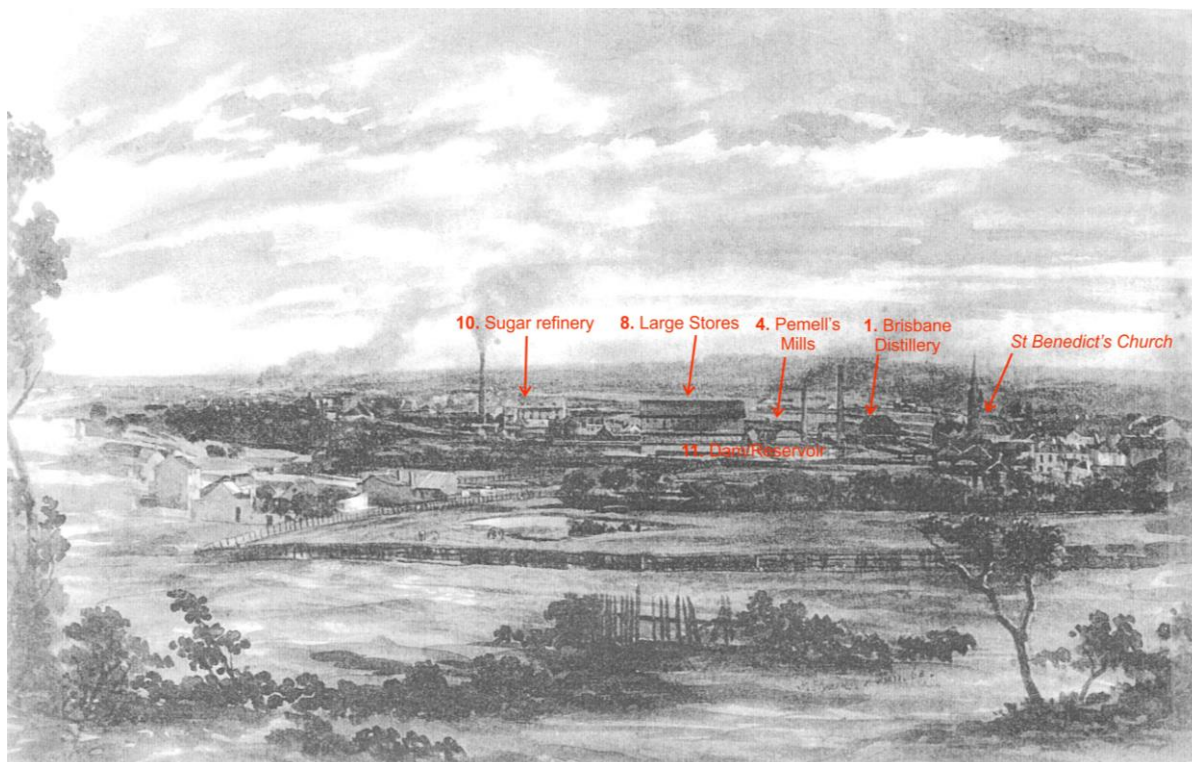


Figure 2.22: 'Chippendale from near Deaf, Dumb and Blind Institute, 1868', watercolour by Samuel Elyard, dated 1 June 1868. Industrial features annotated corresponding to Table 2.1. SLNSW DG V* / Sp Coll / Elyard / 15.

3.0 Archaeological Context

3.1 Nearby sites

3.1.1 St Benedict's Church

A historical archaeological and impact assessment for the St Benedict's Church site was undertaken by archaeological consultants AHMS in 2005, prior to changes to the site to enable its use as part of the University of Notre Dame Broadway Campus. This report, and a subsequent research design recommended an archaeological strategy which included testing for archaeological remains of Robert Cooper's eastern boundary wall and archaeological monitoring.⁷⁷ However, no report from these archaeological investigations has been located, so it is not known whether this strategy was proceeded with, or what may have been found during any testing or subsequent monitoring.

If the results of these investigations were known, the information which would help to understand the Blackfriars site the most would be the RL of the top of any archaeological features.

3.1.2 Quadrant Site

The area behind 147-171 Broadway was the location of a major historical archaeological excavation between 2002 and 2004 known as the Quadrant Site. This excavation found evidence relating to the use of the site from before British colonisation through to the early 20th century. Most of the material dated from the 1830s to the 1860s and represented the remains of housing, tanneries, slaughter yards and other structures.⁷⁸

Although no excavation report has ever been completed for this site, some descriptive material is available on interpretive panels shown across the site. One panel showing a cross-section of sediments across the site appears to suggest that archaeological deposits were found between approximately RL 4 and 5m.

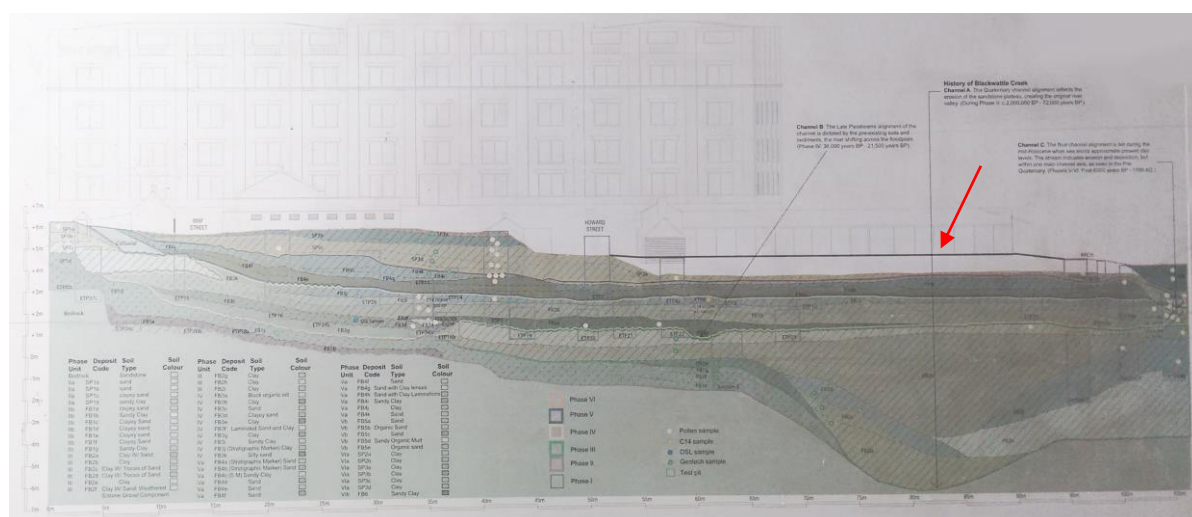


Figure 3.1: Interpretive (south-facing) section showing environmental deposits found associated with Blackwattle Creek at the Quadrant Archaeological Site, as well as the location of archaeological deposits (arrowed). Part of the on-site interpretive display. Panel photographed 14 July 2015.

⁷⁷ AHMS 2005a; AHMS 2005b.

⁷⁸ Colley 2013:119.

3.2 Industrial archaeology of similar sites in Sydney

3.2.1 Dickson's Mill

John Dickson was responsible for establishing the first steam engine and steam flour mill in Australia, which commenced operations in 1815. His operations were located at the south end of Cockle Bay (later Darling Harbour), in what is now the Haymarket area of Sydney. Two archaeological investigations have recorded some of his structures.

Between February and March 1992, an archaeological team Godden Mackay excavated remains associated with a later addition to Dickson's Mill, built between 1831 and 1836. There were substantial structural remains and deposits, with archaeological features existing within 200mm of the ground surface and extending to a depth of more than 3m.⁷⁹

In September 2014, Casey & Lowe undertook archaeological testing to confirm the location and condition of the dam wall or embankment constructed as part of John Dickson's mill complex. This investigation found evidence for the dam wall in the form of clay and sand fills. The wall was tested in two places. In one test trench (Trench 1D) the fills were laid above roughly cut sandstone blocks and rubble. In the other test trench (Trench 3A) there was no sandstone rubble core, but instead the fills appeared to be more systematically laid and selected.⁸⁰

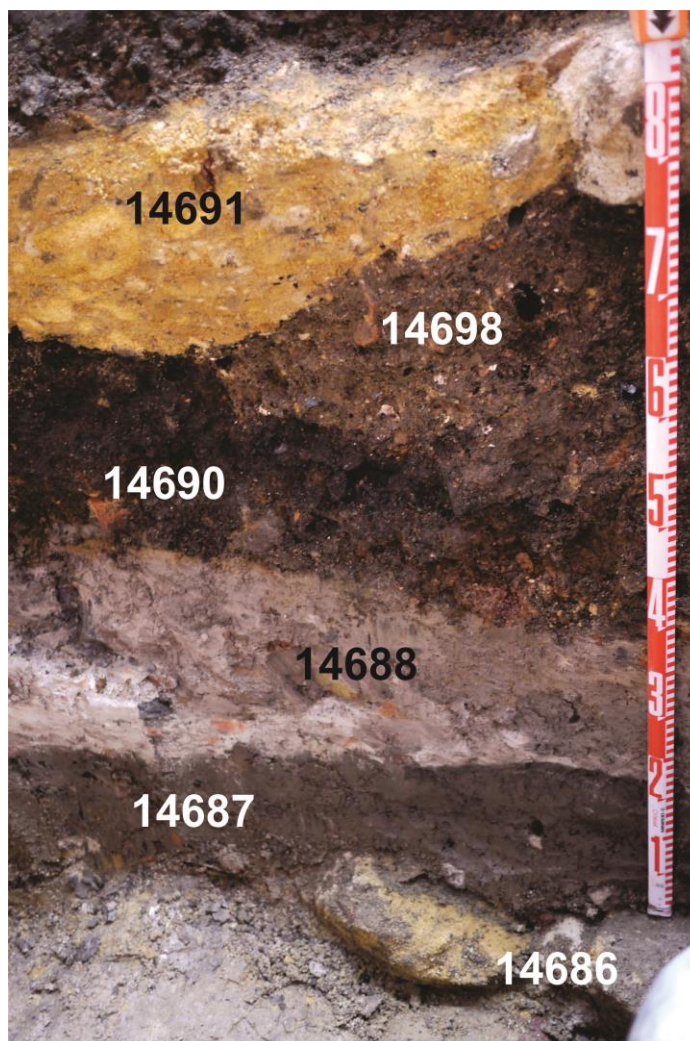


Figure 3.2: Fills used in the construction of the dam wall, trench 1D, 2014 Casey & Lowe testing for Dickson's dam wall. Numbers on scale represent 100mm increments. View to the east.

⁷⁹ Godden Mackay 1992.

⁸⁰ Casey & Lowe 2014.

3.2.2 Barker's Mill, Darling Harbour

Thomas Barker operated a steam mill at Darling Harbour from 1827. It was located southwest of the intersection between Bathurst and Sussex Streets. It was initially constructed in the mid 1820s by a partnership between Daniel Cooper (no relation to Robert Cooper) and Samuel Levy.

The mill itself has been subject to archaeological investigations in 1985 by Andrew Wilson and in 2004 by Casey & Lowe. Other features associated with it, including a dam and jetty, were investigated by Casey & Lowe in 2008 as part of the Darling Quarter project.⁸¹

In March 2004, sections of the 1m thick northern, middle and southern wall of the mill building were uncovered. These walls correspond to the original 1820s mill, with the 1830s addition on its southern side. A timber-lined pit was located in the western half of the northern mill building, presumably associated with cloth manufacturing. A segment of millstone was also found. Concrete pads and machine-made brick walls from later buildings were evident on both sides of the mill.



Figure 3.3: Foundations of Barker's Mill, uncovered during archaeological investigations by Casey & Lowe in 2004.

⁸¹ Casey & Lowe 2006; Casey & Lowe 2013; Wilson 1985.