

Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) Concept Plan, The Haymarket - SSDA2

Non-Indigenous Archaeological Assessment and Impact Statement



Report to
Lend Lease Development Pty Ltd
March 2013

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

The study area of this report is The Haymarket area within the SICEEP site. The historical research and archaeological analysis undertaken for this report indicates that the study area was involved in the very beginnings of steam technology in Australia with the introduction of Dickson's 1815 steam mill and the construction of a dam wall for his mill pond. The later 1830s Dickson's mill building is also partly within the study area. Much of the study area was within Darling Harbour, except for the western edge of foreshore. Reclamation and subdivision of Dickson's Mill Estate, to the east of the dam wall, between 1855 and 1857 saw the initial residential and commercial development of the study area. Around 1865 the area to the west of the dam wall was reclaimed and by 1880 there was considerable occupation of the study area. Early development prior to 1880 was focused to the east of Lackey Street, except for an early cooperage building.

This Archaeological Assessment has identified that the land to the east of former Lackey Street has medium to high archaeological potential and significance at a local level. In the area west of Lackey Street only some of the area is considered to have local heritage significance.

Potential archaeological remains of State significance were identified as being within The Haymarket development area. These are:

State Significance

- Dickson's c1815 dam wall
- Dickson's 1830 mill buildings

Mitigation strategies have been identified to minimise impacts on State-significant archaeology. In relation to Dickson's c1815 dam wall it is proposed:

- To design buildings with bridging piers to minimise impact on the dam wall.
- Undertake archaeological testing to clarify the nature, extent and degree of survival of the dam wall prior to refining the design for the NW and SW complexes.

Potential archaeological remains of local significance were identified as being within The Haymarket development area. These are:

Local Significance

- Residential housing throughout the eastern half of the study area: remains of 27 houses and yards established prior to 1880, including later Chinese residents; also includes 15 houses and Australian Inn hotel built by 1865, and the rear yards and cesspits of 19 houses which are beneath Harbour Street.
- 1870s/1880s manufactories
 - Cormack cooperage, later Centennial Cooperage
 - Biddell Bros confectionery factory
 - Rowlands Aerated and Mineral Water works
- Four pub sites.
- Some small shops operated where the tenant lived as well as worked, including Chinese shops and store keepers and warehouses.
- Workshop associated with the Sydney Hydraulic Pumping Station.
- 1850 and 1860s reclamation of the millpond and Darling Harbour.
- Possible remains of 1860s ditch running near the alignment of Lackey Street and illustrated on the 1865 plan.

Hay Street Stormwater - Sydney Water S170 item

This is outside the development footprint and 5m away from likely piling. By implementing the requirements of the engineering report for this S170 register item (Appendix 2) there should be no impacts from vibration. There is the possibility of other services in the vicinity of the stormwater culvert, as well as the linking in of other services. This will be subject to further engineering and heritage assessment at detailed design stage.

RECOMMENDATIONS

1. Archaeological remains of State significance within The Haymarket area should be retained *in situ*. Strategies to mitigate development impacts to include:
 - Bridging beams to minimise impacts on the c1815 dam wall.
 - Design of piers, beams etc to minimise impacts on the dam wall.
 - Reduce the number of crossing points across the line of the dam wall for new infrastructure services, diversion and augmentation to a point at the north and south of the NE and SE buildings.
 - Archaeological testing to provide information about the archaeology, notably RLs so as to appropriately manage the State-significant archaeological remains.
 - Develop protocols to manage issues during the demolition, regrading and construction stages of redevelopment so as to minimise intended or unintended impacts.
 - Include site heritage and archaeology information during workers' induction.
2. Archaeological testing needs to be undertaken so as to:
 - Inform the detailed design process.
 - Refine our knowledge of the location, nature and degree to which the predicted archaeology survives within The Haymarket area.
 - Write a specific research design for testing identifying areas requiring further assessment.
 - Integrate the results of the testing in relation to State-significant heritage into the detailed design of the buildings, site regrading for flood mitigation, infrastructure services and landscaping.
3. Where there are impacts on archaeological remains, either local or State, archaeological recording will need to be undertaken in accordance with Heritage Council and Heritage Branch guidelines and best practice methodologies.
4. Write a Non-indigenous Archaeological Research Design and Management Strategy to refine impacts, identify appropriate archaeological methodologies and research questions and guide the archaeological program. This is to be written once the detailed design for the buildings has been prepared.
5. Produce site protocols to manage and minimise intended and unintended impacts.
6. Any proposed development in the vicinity of the Hay Street stormwater channel needs to be undertaken in accordance with engineering and heritage advice. Depending on the final design for new or augmented infrastructure services, it may be necessary to write a specific Heritage Impact Statement.
7. SHFA will need to provide a repository for artefacts following the completion of the archaeological program.
8. Public interpretation of the archaeology of State and locally significant archaeology should undertake within the proposed redevelopment. It may include a mixture of opportunities for:
 - Public open days for engagement of the public with the significant archaeology within the site.
 - Exposure of surviving archaeology within the redevelopment and acknowledging the environmental constraints of such projects.
 - Interpretation of artefacts through site display.

- Interpretation of the results of the archaeology program throughout the precinct.
9. Write an excavation report in accordance with Heritage Council guidelines and standard conditions of consent. This is to include:
- detailed trench or area reports
 - overall excavation report
 - catalogue of artefacts and artefact reports
 - conservation of important artefacts
 - response to research questions
 - photo archive.
10. Consultation with SHFA and Heritage Branch archaeologists about the archaeological issues of the site, approaches to *in situ* retention of the State-significant archaeology, and the Non-indigenous Archaeological Research Design and Management Strategy.

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APPENDICES

Appendix 1

Proposed Haymarket Redevelopment, Hay Street-Lackey Street, Darling Harbour, Assessment of Impacts on Adjacent Infrastructure, Pells Sullivan and Meynink, for Lend Lease Development, PSM1986-010R, March 2013, (provided under separate cover)

Appendix 2: Sydney Water S170 inventory sheet

Appendix 3: Chinese occupants within the study area

Appendix 4: LPI Land Title Schedule - Select Documents linked to Dickson's Mill Estate

Appendix 5: LPI Land Title Schedule - Select Documents linked to Government Subdivision

Appendix 6: Land Title Schedule - Select Documents linked to Harris' Ultimo Estate

Appendix 7: Schedule of City of Sydney Council's Rate Assessments, CCSA

Appendix 8: Schedule of Listings in *Sands Sydney & Suburban Directory*

Appendix 9: Further Research

Document Status

Name	Date	Purpose	Author	Approved
Draft 1	6/3/2013	Draft review	Mary Casey, Caroline Plim and Nick Pitt	Tony Lowe
Draft 2	8/3/2013	Issue INSW	Mary Casey, Caroline Plim and Nick Pitt	Tony Lowe
Draft 3	11/3/2013	Final		Mary Casey

Non-Indigenous Archaeological Assessment Impact Statement, The Haymarket Concept Plan

1.0 Introduction

1.1 Introduction

This report supports a State Significant Development Application (SSD 12_5752) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Application seeks approval for the establishment of building envelopes and design parameters for a new neighbourhood and a community hub (referred to as The Haymarket) as part of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) Project at Darling Harbour.

The project will develop The Haymarket into one of Sydney's most innovative residential and working districts. Through the delivery of the overall Project, Darling Harbour will also become home to Australia's largest convention and exhibition facilities, Sydney's largest red carpet entertainment venue, and a hotel complex of up to 900 rooms.

The SICEEP project importantly forms a critical element of the NSW Government's aspiration to "make NSW number one again".

1.2 Overview of Proposed Development

The proposal relates to a staged development application and seeks to establish concept plan details for The Haymarket, located within the southern part of the SICEEP Site.

The Haymarket will include student housing, public car parking, a commercial office building, and four mixed use development blocks (retail/commercial/residential podium with residential towers above) centred around a new public square to be named Haymarket Square (Figure 1.2, Figure 1.3).

More specifically concept approval is sought for the following:

- Demolition of existing site improvements, including the existing Sydney Entertainment Centre (SEC), Entertainment car park, and part of the pedestrian footbridge connected to the Entertainment car park and associated tree removal.
- North-west block – construction of a part public car park and part commercial/office building.
- North-east block – construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential).
- South-east block - construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential).
- South-west block - construction of a mixed use podium (comprising retail, commercial, above ground parking, and residential).
- North block – construction of a low rise mixed use building comprising retail, commercial and residential.
- Student housing – construction of two buildings providing for student accommodation;
- Public domain improvements including a new square, water features, new pedestrian streets and laneways, streetscape embellishments, and associated landscaping. (It is intended that a Stage 2 DA

seeking approval for parts of the part of the public domain (The Boulevard and Haymarket Square) will be lodged with the first residential stage).

- Reconfiguration and upgrade of Darling Drive (part).
- Remediation strategy.
- Car parking rates.

1.3 Background

Key features of the Darling Harbour Live Preferred Concept Proposal include:

- Delivering world-class convention, exhibition and entertainment facilities, including:
 - Up to 40,000m² exhibition space;
 - Over 8,000m² of meeting rooms space, across 40 rooms;
 - Overall convention space capacity for more than 12,000 people;
 - A ballroom capable of accommodating 2,000 people; and
 - A premium, red-carpet entertainment facility with a capacity of 8,000 persons.
- Providing up to 900 hotel rooms in a hotel complex at the northern end of the precinct.
- A vibrant and authentic new neighbourhood at the southern end of the precinct, called 'The Haymarket', home to an IQ Hub focused on the creative industries and high-tech businesses, apartments, student accommodation, shops, cafes and restaurants.
- Renewed and upgraded public domain, including an outdoor event space for up to 25,000 people at an expanded Tumbalong Park.
- Improved pedestrian connections linking to the proposed Ultimo Pedestrian Network drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pymont and the City.

1.4 Site Description

The SICEEP Site is located within the Darling Harbour precinct. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside shopping centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south.

The SICEEP Site has been divided into three distinct redevelopment areas (from north to south) – Bayside, Darling Central and The Haymarket. The PPP Application Site area is located within Bayside and Darling Central as shown in Figure 1.1.

The study area is located in the southern section of Darling Harbour, Sydney. It is bounded by Darling Drive in the west, Harbour Street to the east, Pier Street to the north and Ultimo Road to the south. The western boundary is formed by the Darling Harbour Goods line and includes Darling Drive.



Figure 1.1: The Haymarket study area is highlighted in blue.

1.5 Planning Approvals Strategy

In response to separate contractual agreements with the NSW Government and staging requirements, Lend Lease (Haymarket) Pty Ltd is proposing to submit a number of separate development applications for key elements of the overall Project.

This staged development application involves the establishment of building envelopes and design parameters for a new neighbourhood and a community hub (The Haymarket) within the southern part of the SICEEP Site. Detailed development applications will accordingly follow seeking approval for specific aspects of The Haymarket in accordance with the approved staged development application.

Separate development applications will be lodged for the PPP component of the SICEEP Project (comprising the convention centre, exhibition centre, entertainment facility and associated public domain upgrades) and Hotel complex.



Figure 1.2: Plan of various stages of development and planning approvals.



Figure 1.3: Buildings proposed as part of the Concept Plan. Lend Lease Development Pty Ltd

1.6 Statutory Constraints

1.6.1 Legislation under Part 4, Division 4.1

1.6.1.1 Environmental Planning & Assessment Act Part 4, Division 4.1

The current project is being undertaken as a State significant development under Part 4, Division 4.1. The Director General's Requirements for this project were updated and reissued on 21 January 2013.

Director-General's Requirements

The specific issues identified in the DGR's issued on 21 January 2013 include:

- (2) Policies and Guidelines to be addressed: Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics.
- (10) Heritage
 - Address the impacts of the proposal on heritage significance of the site and adjacent area including any built and landscape heritage items including places, items or relics of significance to Aboriginal people; and
- Consultation with Office of Environment and Heritage.
- Deliverables Table:
 - Heritage Impact Assessment for SSDA2.
 - Development specific heritage/archaeological reports for SSDA2, SSDA3, SSDA4, SSDA5, SSDA6.

Casey & Lowe are writing a Non-Indigenous Archaeological Assessment and Impact Statement for the project that fulfils the guidelines of the NSW Heritage Council and addresses Assessing the Significance of Archaeological Sites and Relics guidelines. Comber Consultants are writing a separate report that addresses the significance of the place to Aboriginal people. These assessments will also include an updated Impact Statement. Therefore this report has addressed the DGRs.

89J Approvals etc - legislation that does not apply

As stated in 89J:

1. 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 Infrastructure 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 Infrastructure will of course consult with the Office of Environment and Planning, both the Heritage Branch and the Aboriginal Heritage Section, and the proposed work needs to conform with Heritage Branch and Aboriginal Heritage Branch guidelines. This section does not exempt requirements under S170 of the Heritage Act.

1.6.2 Relics Provisions, *NSW Heritage Act, 1977*

1.6.2.1 Division 9: Section 139, 140–146 – Relics Provisions – Excavation Permit

When a site is not being assessed under the EP&A Act, 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:

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.

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.

(b) 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:

any relic of a specified kind or description,

any disturbance or excavation of a specified kind or description,

any disturbance or excavation of land in a specified location or having specified features or attributes,

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' defined by the *Heritage Act 1977* (amended) as: those places, buildings, works, relics, moveable objects, and precincts of State or local heritage significance.

It was more recently further defined as:

Relevant case law and the general principles of statutory interpretation strongly indicate that a 'relic' is properly regarded as an object or chattel. A relic can, in some circumstances, become part of the land and be regarded as a fixture (a chattel that becomes permanently affixed to land).

A relic as further defined by the Act is:

..any deposit, object or material evidence –

(b) which 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.

1.6.3 Heritage Lists – S170 Register

We have also reviewed the SHFA S170 register and the State Heritage Inventory (SHI) (Table 1.1) for the entire SICEEP area (although only the northern and central areas will be analysed in detail in this document). It is noted that the SHFA S170 register items have point data only and have not provided a mapped curtilage for its various precincts. While general descriptions have been provided, our understanding of the location of these precincts is based on our best guess. The requirements of a statutory authority under S170 of the *Heritage Act* are:

(3) A government instrumentality shall establish and keep a register entitled the 'Heritage and Conservation Register'.

(4) A government instrumentality shall enter in the register details of each item of the environmental heritage which is subject to an interim heritage order or listing on the State Heritage Register; or is listed in an environmental planning instrument under the *Environmental Planning and Assessment Act 1979* as an item of environmental heritage, or could, in accordance with guidelines issued from time to time by the Heritage Council, be subject to an interim heritage order or listing on the State Heritage Register; and which in the case of a statutory body, is owned or occupied by the statutory body; or in the case of a Department head, is vested in or owned or occupied by, or subject to the control of, the appropriate minister or the Department.

Table 1.1: List of S170 register items within the study area and impacts by The Haymarket Concept Proposal.

Site/Structure	S170	SHR	Significance	Location	Impact
Exhibition Centre Precinct, Archaeological Remains – Iron Wharf (Directly east of the Exhibition Centre, Darling Harbour)	SHFA		State	Tumbalong Park Central	N/A
Cockle Bay Precinct, Archaeological Remains (East side of Darling Harbour, West of Sussex Street, North of Pier Street, Darling Harbour)	SHFA		State/Local	Central	
Darling Harbour Rail Corridor (West side of Darling Harbour to Pyrmont, Darling Harbour)	SHFA		State?	Western boundary of the site, North/Central	Adjacent
Chinese Garden of Friendship (includes buried archaeology) (Day Street / Pier Street, Darling Harbour)	SHFA		State?	Adjacent to Central	Adjacent
Pier Street Precinct Archaeological Remains (Bounded By Hay, Harbour, Pier Streets and Merino Boulevard (Darling Drive))	SHFA		State	The Haymarket	Yes
Hydraulic Pumping Station archaeology	SHFA	yes	State	Adjacent	No
Water Cooling System and Manifold (Powerhouse to Murray Street to water's edge, Darling Harbour)	SHFA			North/Hotel	N/A
Hay Street Stormwater Channel No.30P11 (Hay Street, see curtilage plan)	Sydney Water		Local	Haymarket	No

1.7 Previous Reports

There have been a number of archaeological reports written which address part or all of the SICEEP study area:

- *Baseline Archaeological Assessment of Darling Harbour South; Block bounded by Pier, Harbour and Hay Streets and former Railway Corridor*, Wayne Johnson, Sydney Harbour Foreshore Authority, April 2011.
- *Sydney International Convention Exhibition and Entertainment Precinct, Darling Harbour, Historical Archaeological Assessment*, City Plan Heritage, for Infrastructure NSW, May 2012.
- *Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP), Baseline Heritage Impact Assessment*, City Plan for Infrastructure NSW, May 2012.
- *Archaeology Heritage Impact Statement, Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP)*, Casey & Lowe for Lend Lease August, 2012.

¹ Incorrectly identified as being of State significance in May 2012 assessment. Endorsed significance on Sydney Water S170 register is local.

It is noted that updated versions of the City Plan reports were provided to Lend Lease by INSW and then to Casey & Lowe on 21 February. These reports only included minor changes. The relevance of these reports is somewhat limited as the recommendations they make preceded the Concept Proposal proposal, and so they focus on piling rather than bulk excavation. In addition there are a number of inaccuracies in these reports which are corrected in this report.

In addition, we have drawn on the archaeological work, reports and draft reports written by Casey & Lowe for Lend Lease for Darling Walk, now Darling Quarter, and Barangaroo South which we finished excavating in August 2012:

- *Non-Indigenous Archaeological Assessment, Barangaroo Stage 1 (Barangaroo South), for Lend Lease (Millers Point) Pty Ltd, Casey & Lowe, July 2010.*
- *Archaeological Research Design & Management Strategy, Barangaroo Stage 1, for Lend Lease (Millers Point) Pty Ltd, Casey & Lowe, May 2010.*
- *Archaeological Management Strategy & Research Design, Darling Walk, Darling Harbour, Sydney, for Lend Lease Development, Casey & Lowe, August 2008*
- *Non-Indigenous Archaeological Assessment, Darling Walk, Darling Harbour, for Lend Lease Development, Casey & Lowe, June 2008.*
- *Darling Walk, Archaeological Excavation 2008/2009, Preliminary Results, for Lend Lease Development, Casey & Lowe, June 2009.*
- *Draft Archaeological Investigation Report, Darling Quarter (Darling Walk), for Lend Lease, Casey & Lowe in prep.*
- *SICEEP, Archaeology, Heritage Impact Statement, for Lend lease, Casey & Lowe Pty Ltd, August 2012.*
- *SICEEP, Archaeology, Heritage Impact Statement, for Lend lease, Casey & Lowe Pty Ltd, August 2012.*
- *SICEEP, Non Indigenous Archaeological Assessment and Impact Statement for SSDAI, Casey & Lowe Pty Ltd, February 2013.*

In addition, other nearby projects includes Paddys Markets which was excavated in 1990 and more recent work at the UTS Dr Chau site, Ultimo Road and Mary Ann Street.

- *Archaeological Assessment & Research Design, Dr Chau Chak Wing Building, 14-28 Ultimo Road, Ultimo, for University of Technology, Casey & Lowe, February 2011.*

1.7.1 Recommendations from City Plan reports

The City Plan Archaeological Assessment (May 2012, updated February 2013) contained the following recommendations:

Heritage Items/Archaeological Sites or relics to be retained *in situ*:

- Archaeology of Dickson's Mill.
- Dickson's mill dam wall.
- Hay Street Stormwater.

1.7.2 Recommendations from Casey & Lowe 2012

Other archaeological remains (relics) identified in Casey & Lowe (August 2012) which should be conserved *in situ*:

- Dickson's c1815 dam wall.
- Dickson's 1830s mill site.
- Hay Street stormwater.

All other archaeological remains were not required to be retained *in situ* but needed to be subject to archaeological testing, excavation and recording prior to removal. This current report and the recommended research design will provide the basis for managing the archaeological resource in light of the proposed development.

1.8 Report methodology

This report methodology conforms to the Heritage Branch, Office of Environment & Heritage guidelines for Archaeological Assessments. It addresses the impacts of the proposed design on the potential archaeology resource within The Haymarket study area. The specific details of the design will be addressed. There is a separate report for Aboriginal Cultural Heritage by Comber Consultants: *Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP), Aboriginal Archaeological Due Diligence Assessment*, March 2013.

1.9 Authorship

This report was written by Dr Mary Casey, Director and Nick Pitt, Researcher, Casey & Lowe. The history chapter was written by Caroline Plim, professional historian. The report was reviewed by Tony Lowe, Director, Casey & Lowe. Nick Pitt did the many, many overlays of historic plans for this report.

1.10 Acknowledgements

Warwick Bowyer, Lend Lease Development
Paula Mottek, Lend Lease Development
Michelle Mason, Lend Lease Development

1.11 Limitations

The study area has a long and complex history. Due to the tight time frame for research and writing of the history and the complexity of the subject area, it has been necessary to prioritise the areas of focus. Land titles searches were undertaken to understand the complex development of the study area, particularly the early private reclamation of Dickson's millpond.

Overlay maps are a standard tool for archaeologists but we are always reliant on the accuracy of the original maps. The larger the study area, and this is a large study area, the less accurate are the overlay plans. Typically, we consider that most overlay plans will have an error of 1m to 2m when relating to the ground. With these plans the error could be as large as 10m. In addition to the size of the study area, other contributory factors to errors include the lack of fit between the eastern and western side of the harbour. We have tended to link the overlays in with the streets on the eastern side of the harbour as there are many more to connect into. Therefore it is likely that the inaccuracies are larger on the western side than the eastern side. In addition, there are concerns about how the western side of the plans fit with the position of the Darling Harbour railway line, the current light rail line. This also illustrates the poor fit on the western edge of the study area.

Other than the above there were no particular constraints to producing this report. There was sufficient time and funding to complete this report to a quality standard. Casey & Lowe have undertaken considerable archaeological research and fieldwork on nearby sites and this has provided them with considerable additional information on which to base their assumptions, analysis and recommendations, see Section 4.

1.12 Glossary

Historical Archaeology (Non-Indigenous/European)

Historical Archaeology (in NSW) is the study of the physical remains of the past, in association with historical documents, since the British occupation of NSW in 1788. As well as identifying these remains the study of this material can help elucidate the processes, historical and otherwise, which have created our present surroundings. Historical archaeology includes an examination of how the late 18th and 19th-century arrivals lived and coped with a new and alien environment, what they ate, where and how they lived, the consumer items they used and their trade relations, and how gender and cultural groups interacted. The material remains studied include:

- Archaeological Sites:
 - below ground: these contains relics which include building foundations, occupation deposits, rubbish pits, cesspits, wells, other features, and artefacts.
 - above ground: buildings, works, industrial structures and relics that are intact or ruined.
- cultural landscapes: major foreshore reclamation
- structures associated with maritime activities.

Archaeological Potential

Archaeological potential is here used and defined as a site's potential to contain archaeological relics which fall under the provisions of the *Heritage Act 1977* (amended). This potential is identified through historical research and by judging whether current building or other activities have removed all evidence of known previous land use.

Archaeological Site

A place that contains evidence of past human activity. Below ground sites include building foundations, occupation deposits, features and artefacts. Above ground archaeological sites include buildings, works, industrial structures and relics that are intact or ruined.

Archaeological Investigation or Excavation

The manual excavation of an archaeological site. This type of excavation on historic sites usually involves the stratigraphic excavation of open areas.

Archaeological Monitoring

Archaeological monitoring is recommended for those areas where the impact of the works is not considered to mean the destruction of significant archaeological fabric. Nevertheless the disturbance of features both suspected and unsuspected is possible. In order to provide for the proper assessment and recording of these features an archaeologist should inspect the works site at intervals they consider to be adequate and to be 'at call' in case the contractor uncovers remains that should be assessed by the archaeologist.

Monitoring is a regular archaeological practice used on many building and development sites.

Research Design

A set of questions which can be investigated using archaeological evidence and a methodology for addressing them. A research design is intended to ensure that archaeological investigations focus on genuine research needs. It is an important tool that ensures that when archaeological resources are destroyed by excavation, their information content can be preserved and can contribute to current and relevant knowledge.

Research Potential

The ability of archaeological evidence, through analysis and interpretation, to provide information about a site that could not be derived from any other source and which contributes to the archaeological significance of that site and its 'relics'.²

Relic

Means any deposit, artefact, 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.
- (NSW *Heritage Act 1977*, Definitions, Part 1.4)

It was more recently further defined as:

Relevant case law and the general principles of statutory interpretation strongly indicate that a 'relic' is properly regarded as an object or chattel. A relic can, in some circumstances, become part of the land and be regarded as a fixture (a chattel that becomes permanently affixed to land).³

1.13 Abbreviations

AO	Archives Office
AT&CJ	<i>Australian Town & Country Journal</i>
CCSA	Council of the City of Sydney Archives
EIS	Environmental Impact Statement
HRNSW	Historic Records of NSW
LPI	Land and Property Information NSW
ML, SLNSW	Mitchell Library, State Library of New South Wales
MUP	Melbourne University Press
NLA	National Library of Australia
nd	not dated
np	not paginated
SHFA	Sydney Harbour Foreshore Authority
SHI	State Heritage Inventory
SICEEP	Sydney International Convention, Exhibition and Entertainment Precinct
SHR	State Heritage Register
SLNSW	State Library of New South Wales
SMH	<i>Sydney Morning Herald</i>
SRNSW	State Records, New South Wales

² Taken from the *Assessing Significance for Historical Archaeological Sites and 'Relics'*, 2009:11.

³ *Assessing Significance for Historical Archaeological Sites and 'Relics'*, 2009:7.

2.0 Historical Background

2.1 Background

A number of heritage reports have been written addressing the history of Darling Harbour, including part or all of the study area. This chapter provides a background for this Archaeological Assessment and any subsequent investigation of The Haymarket study area with the main focus on items of significance identified in Casey & Lowe's *Sydney International Convention, exhibition and Entertainment Precinct (SICEEP) Archaeology: Heritage Impact Statement* (August 2012). The Aboriginal history of the study area is contained in a separate report.

2.2 The Environment and Early European Settlement Associated with the Study Area

Darling Harbour is named 'Long Cove' in colonial government records as early as 1788.⁴ This inlet to the west of Sydney Cove, the focus of the colonial settlement, was commonly known as Cockle Bay until officially named Darling Harbour in 1826. The rocky shores of Cockle Bay were covered in scrub and the wetlands at the head of the tidal inlet were fed by a number of small streams. An 1802 plan by Charles Leseur illustrates some of the characteristics of the landscape (Figure 2.1).



Figure 2.1: Part of the *Plan de la Ville de Sydney* by Charles Leseur (1802) showing creeks and other watercourses feeding into the wetlands at the head of Darling Harbour (top left). Leseur 1802, ML SLNSW.

The small watercourses feeding the wetlands at the head of the inlet were influential in the later use, development and management of the bay. The environment provided a rich source of food and other natural resources for Aboriginal communities and also for colonists in the early years of British settlement. Characteristics of the environment are examined in James Broadbent's *Transformations: Ecology of the Pyrmont Peninsula 1788-2008*.⁵

2.2.1 Early Land Grants and John Harris' Ultimo Farm (from 1803)

From 1803 land to the west and south of Darling Harbour was granted to Surgeon John Harris (1754-1838).⁶ Ultimo Farm comprised 34 acres (13.76 ha) granted on 31 December 1803, 135 acres

⁴ Public Works Department NSW (PWD), Darling Harbour Bi-Centennial Development Project: Conservation Study, [Sydney], [1984]: 2.

⁵ J. Broadbent, *Transformations: Ecology of the Pyrmont Peninsula 1788-2008*, 2010.

⁶ S. Fitzgerald & H. Golder, *Pyrmont & Ultimo: Under Siege*, Ultimo, NSW, Halstead Press, 2007: 16.

(54.63 ha) granted on 1 January 1806 and 12 ¾ acres (5.16 ha) granted on 8 May 1818 (Figure 2.2).⁷ In 1804 Harris built a house on his 'rural retreat' at Ultimo. A strip of land on the eastern side of Harris's 135-acre grant is linked to The Haymarket study area. Before 1837 Harris sold (and or leased) land on the west shore of Darling Harbour to William Shepherd and Mr Thompson; both sites were used as 'gardens'.⁸ It has not been able to be determined if these allotments are linked to the study area or lie to the west of it.

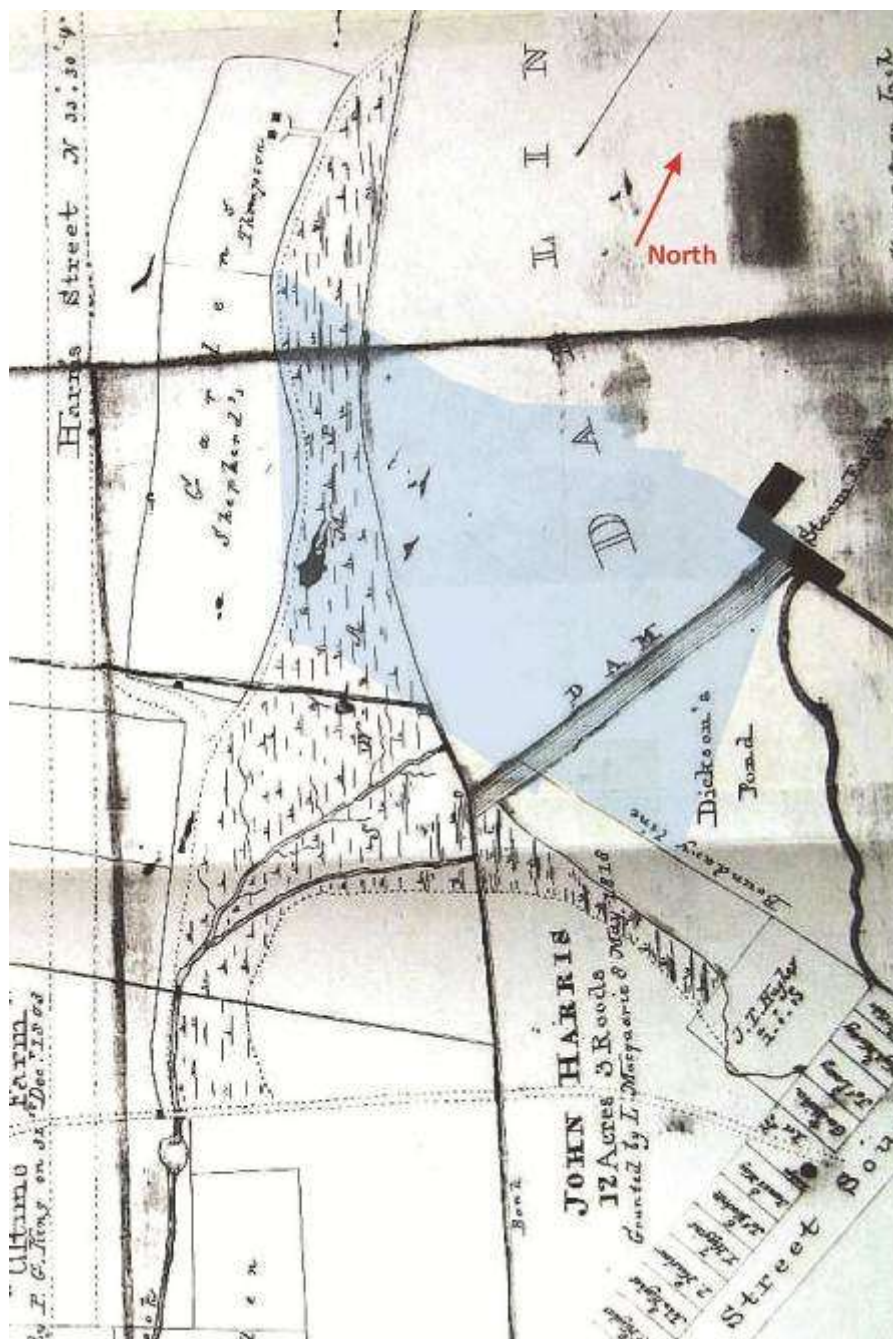


Figure 2.2: Copy of a plan of John Harris' Ultimo Estate prepared in 1837 showing the various grants. The plan is not highly accurate. Harris Family - Papers concerning John Harris ML MSS 4897.

⁷ Casey & Lowe Pty Ltd, *Archaeological Assessment & Research Design: Dr Chau Chak Wing Building, Ultimo*, February 2011.

⁸ Harris Family Papers, MSS 4897, ML SLNSW, MSS 4897.

The 1837 plan of Harris' grant in Figure 2.2 above shows the location of Ultimo farm buildings, the wetland and creek at the head of Darling Harbour as well as land use in the vicinity of the study area. The land associated with the study area includes an area to the northwest of Dickson's millpond embankment, adjacent to a creek and wetlands.⁹

2.3 Industrial Development in Darling Harbour in the first half of the 19th century

By 1807 the colony's trade was increasing and Sydney was a regular port for shipping from Europe, China and India, as well as a refitting port for American and British whalers. The overflow of shipping from Sydney Cove was accommodated in nearby Cockle Bay.¹⁰ Tidal mudflats extended almost to George Street and Ultimo Road (Figure 2.2). When Surgeon Harris built Ultimo House in 1804 there were 18 houses at Cockle Bay, with most likely to have been on the eastern shore opposite Ultimo Farm.¹¹ Ultimo Farm (outside the study area) retained its rural character for decades, standing in stark contrast to the growing industrial development to the east along the shores of Darling Harbour.

Industry was established at Cockle Bay by 1811 when the ships the *Hawkesbury Packet* and the *Governor Macquarie* were launched there. The Market Wharf, established in 1811 further north on the east side of the harbour, is thought to be the stimulus for Cockle Bay's expansion. Industries included a pottery and glassworks operating in 1812 or 1813 at unknown locations in the bay. A slaughterhouse, also at an unrecorded location, operated between 1814 and 1820.¹² The nature of the Darling Harbour landscape c1821 is depicted in the background of Figure 2.3.



Figure 2.3: Circa 1821 view of Sydney looking south from Flagstaff Hill. This image illustrates the environment around the head of Darling Harbour, visible on the right hand side. Ultimo house is depicted on the eastern shore. James Taylor c1821, ML SLNSW.

⁹ Harris Family Papers, MSS 4897, ML SLNSW, MSS 4897.

¹⁰ PWD, Darling Harbour: *Conservation Study*, [1984]: 2.

¹¹ 'Return of Houses', *Sydney Gazette* 15 Apr 1804.

¹² Godden Mackay Pty Ltd, 'Little Pier Street Precinct: Archaeological Excavation: Vol 2 Main Report', for the Darling Harbour Authority, Oct 1992: 19.

2.3.1 John Dickson's Steam Engine and Mill at Darling Harbour (1813-1843)

John Dickson (1774-1843), a free settler and business entrepreneur, arrived in Sydney in October 1813 with £10,000 of goods and machinery to establish a steam mill. The enterprising engineer was recommended to Governor Lachlan Macquarie in March 1813 as 'an excellent Engineer and Millwright' and granted land in Sydney 'and the interior proportionate to his capital'. Arriving with a steam engine, tools and turning lathes worth £5200, Dickson established himself on the grant of a little over 15 acres (6.07 ha) selected in Cockle Bay (Darling Harbour).¹³ Thomas Barker was among the apprentices accompanying Dickson to the colony. He became a key figure in the industrial development in Darling Harbour through his own mill and business enterprises, as well as being involved in the management of Dickson's Mill and his estate.¹⁴

Dickson's grant between Brickfield Hill and Ultimo Farm was selected for its proximity to the harbour for conveyance of grain, timber and firewood, as well as to the small stream at the head of the bay providing fresh water for the steam engines. The stream was dammed forming a freshwater reservoir separating it from the saltwater of the bay. Channels through the swamp funnelled fresh water into the reservoir from where it could be pumped to the steam engine. The millpond and dam embankment are located within the study area. Obediah West recalled Dickson's pond c1810-20 as close to George Street, commencing at a 'large creek, which ran along the present Hay Street, entering it at about the corner of George and Hay Streets. The pond was extensive, spreading over part of the Ultimo Estate, and ... a noted place for all sorts of game, ducks and teal'.¹⁵

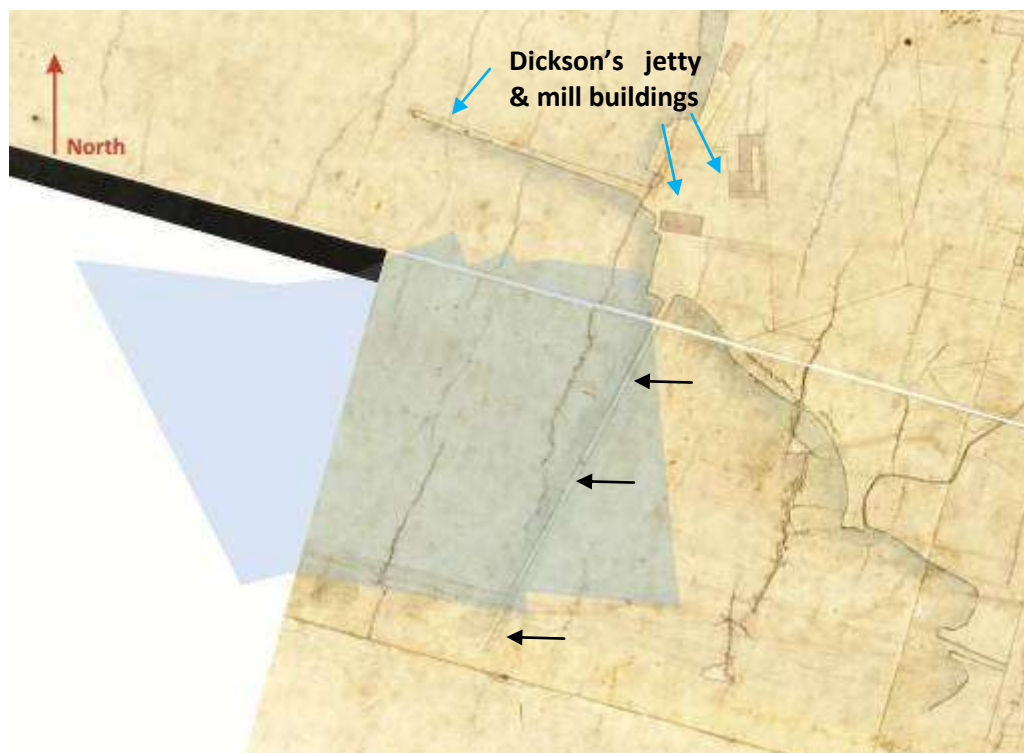


Figure 2.4: Plan showing Dickson's 1815 dam wall (black arrows), jetty and mill buildings (blue arrows) erected by 1822. Only the dam wall from the original mill is within the Haymarket study area. Harper 1822 plan, SRNSW AO Map SZ435, SZ436.

¹³ *Sydney Gazette* 17 Jun 1815: 2; GP Walsh, 'Dickson, John (1774-1843)', *Australian Dictionary of Biography*, 1966, <http://adb.anu.edu.au>; Property brought by John Dickson to NSW, Letter 26 Oct 1813, Reel 6043, 4/1728, p257, SRNSW; Free settlers to receive grants of land, Fiche 3266; 9/2652 p14, SRNSW. Note: 'Dickson' is sometimes recorded in sources as 'Dixon.'

¹⁴ Godden Mackay Pty Ltd, Oct 1992: 24.

¹⁵ E Marriott (Ed), 'The Memoirs of Obediah West,' cited in Godden Mackay Sep 1993: 41.

The mill commenced grain-milling operations (mainly wheat and corn) in 1815. The steam engine was intended for a variety of uses also including timber and tanner's bark, however it is thought that they might not have eventuated.¹⁶ Governor Macquarie attended the opening of Dickson's three-storey mill on 29 May 1815. The output and reliability of Dickson's steam mill compared favourably to windmills of the era, and was considered indispensable to the colony reliant on bread.¹⁷

Dickson's store commenced business at the same time as the steam mill, selling goods brought to the colony in 1813. In 1821 a variety of raw materials and goods including ham, tobacco, china and fabric were advertised. Agents were employed to procure wheat at colonial settlements and ship it to Sydney for grinding at the mill.¹⁸ Trade was established with agents in China, Mauritius and Van Diemen's Land. Dickson's Wharf or pier, shown in plans as early as 1822, was integral to business operations (Figure 2.4). The narrow, elongated structure extended into deep and navigable waters where ships and boats could safely berth.¹⁹

Dickson's business known as the 'Steam Engine' gradually expanded with alterations being carried out in the 1820s. The site described in the *Sydney Gazette* in 1825 as a 'ponderous pile of structures' suggests haphazard planning and arrangement of buildings due to the speed of expansion of the new centre for flour production and growing hub of commerce and trade.²⁰ The port and trade facilities at Cockle Bay slowly improved and by 1826 the area was thought to warrant a 'less antiquated' name. Contemporary commentators noted the security, extent, depth of water and good anchorage of Cockle Bay, in their view surpassing Sydney Cove. The inlet was duly renamed Darling Harbour in honour of the then Governor of NSW.²¹

In 1827 John Dickson went into partnership with Mr Mackie from the Cape who had experience in brewing and soap manufacture. By 4 January 1827 Dickson & Co were selling 'Yellow Soap, of very superior quality' from the Steam Engine Soap Manufactory. The brewery venture required a new steam engine and by February 1827 a building for the brewery was under construction on the 'adjacent ground'.²² The working vat and boiler estimated to hold 40 hogshead beer measures each, amply supplying the colony with the 'wholesome and renovating beverage'. The brewery commenced 'in fine style' and the extent of Dickson's buildings by 1828 is illustrated in the plan below (Figure 2.5).²³ The northern boundary of the study area lies just south of Dickson's Wharf.

¹⁶ *Sydney Gazette* 17 Jun 1815: 2; Walsh 1966, <http://adb.anu.edu.au>.

¹⁷ *Sydney Gazette* 3 Jun 1815: 2.

¹⁸ *Sydney Gazette* 14 Jul 1821: 4; *Hobart Town Gazette* 10 Mar 1821: 1.

¹⁹ Walsh 1966, <http://adb.anu.edu.au>; Plan, Svyr William Harper, 1822 AO Map No SZ435, SZ 436 SRNSW.

²⁰ *Sydney Gazette* 6 Oct 1825: 2.

²¹ *Sydney Gazette* 6 Oct 1825: 2.

²² *Monitor* 6 Oct 1826: 2; *Sydney Gazette* 4 Jan 1827: 4; *The Australian* 14 Feb 1827: 4.

²³ *Sydney Gazette* 10 Dec 1827: 2.



Figure 2.5: A plan showing the development of Dixon's [sic] mill by 1828. Features of the study area include the millpond dam wall (black arrows), and buildings to the south of the jetty which appear to be those shown on the 1831 field book (Figure 2.6) are just within the study area. A later mill building was built on reclaimed land. Surveyor Thompson, SR Item No: SZ467 SRNSW, accessed at acli.arts.usyd.edu.au.

Between 1822 and 1828 Dickson had built the substantial building in Figure 2.6 on reclaimed land to the south of the wharf. It is thought to be part of a range of buildings uncovered in archaeological investigation of the Little Pier Street Precinct in 1991-92 (Buildings 13-16).²⁴ Although not drawn to scale, Surveyor Hallen's c1831 field book shows the dimensions of the new mill building. The southern portion of Dickson's grant to the east of the millpond remained relatively undeveloped and is also shown in Hallen's c1831 field book, part of which is reproduced in Figure 2.6.

²⁴ Godden Mackay Pty Ltd, Oct 1992: 23.

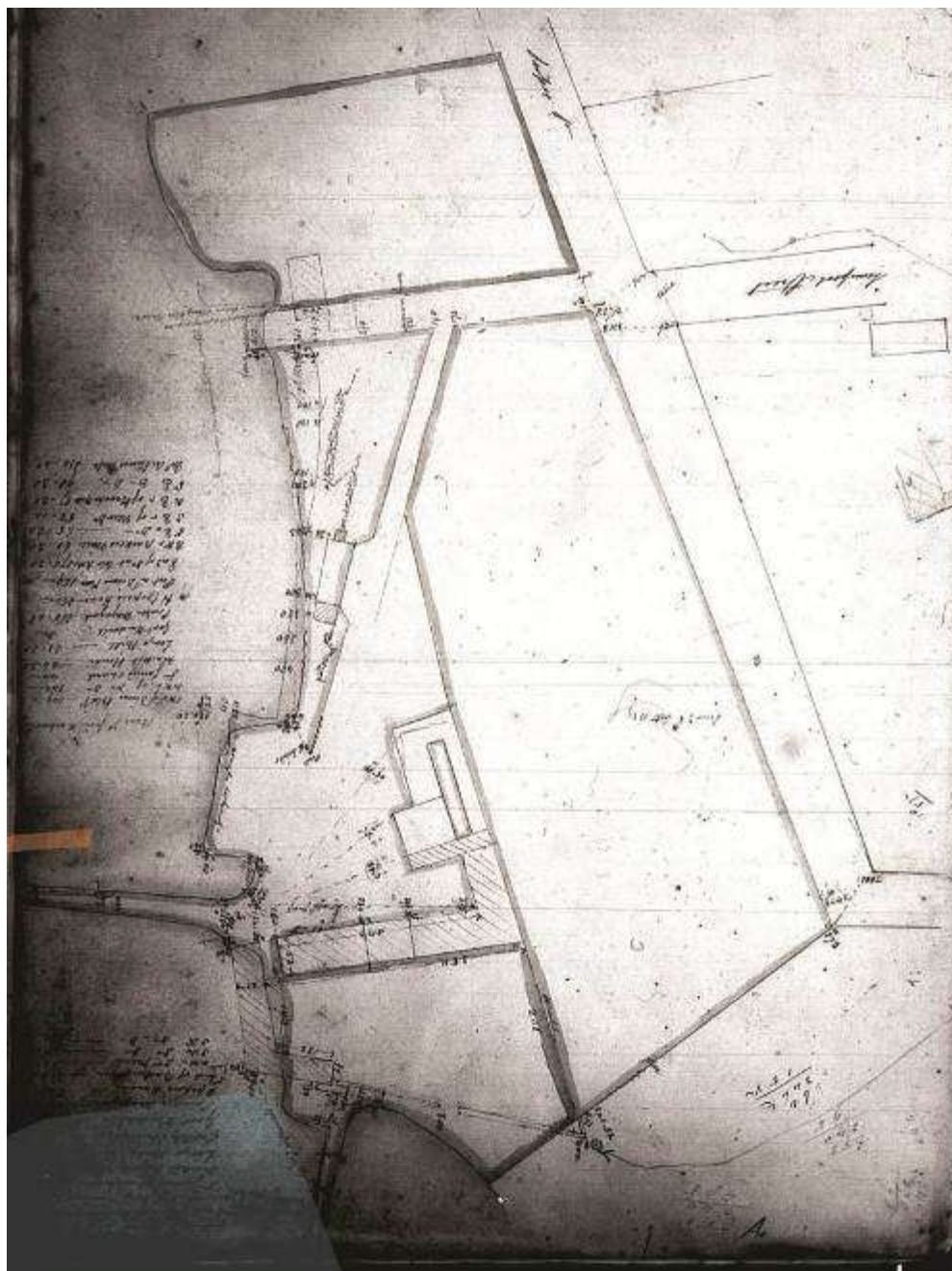


Figure 2.6: Plan in Surveyor Hallen's c1831 field book showing a new building extending beyond the original shoreline, north at the top. The Haymarket study area is shown in blue and SICEEP North & Central is in orange. Study areas are indicative on this sketch plan. Field Book No 347 p2, Reel 2628, SRNSW.

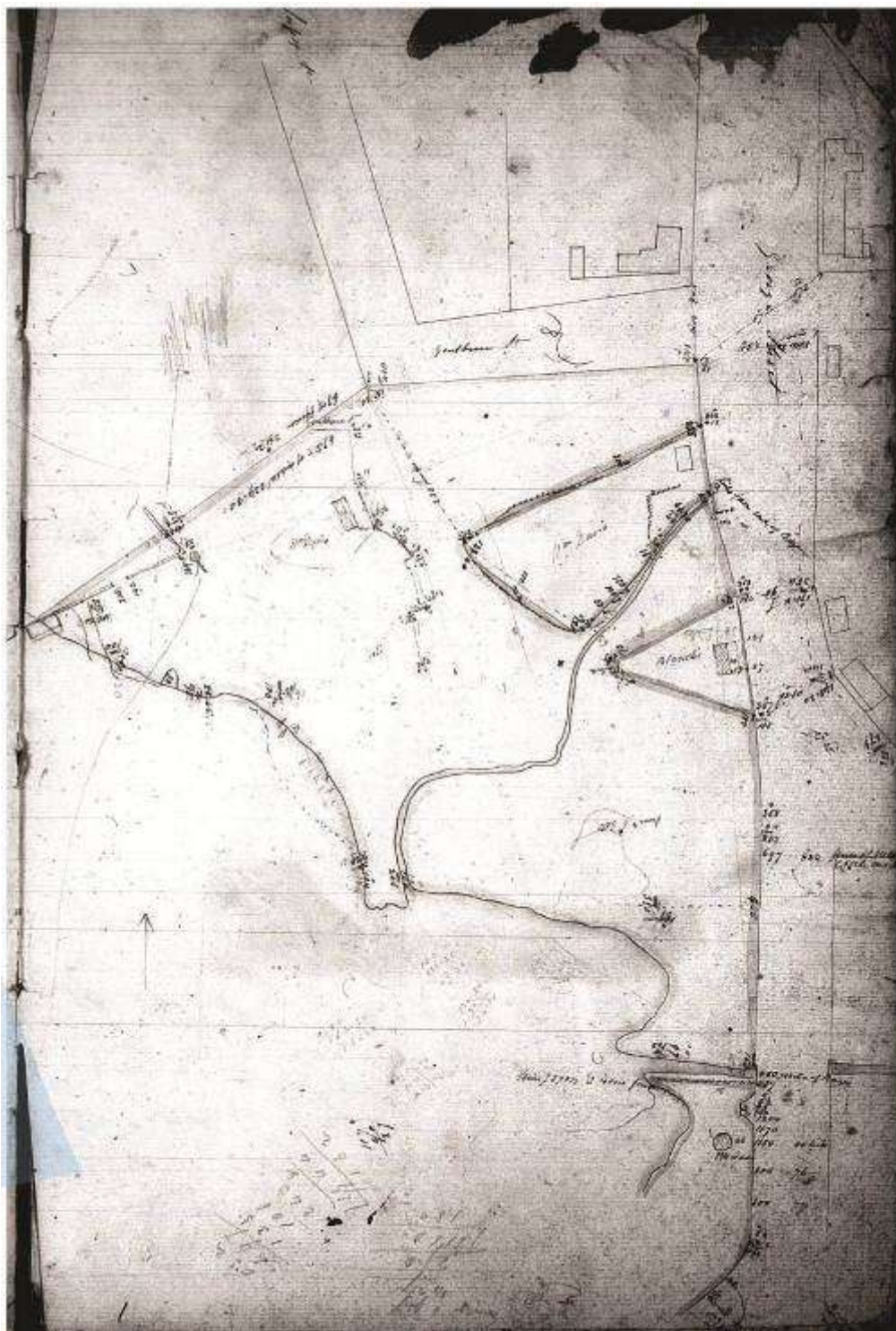


Figure 2.7: Plan in Surveyor Hallen's c1831 field book showing that little development had occurred to the south of the millpond embankment between 1813 and c1831. The dam wall is to the west of this plan. Field Book No 347 p2 Reel 2628 SRNSW.

Having dissolved his partnership with Mackie, Dickson identified new commercial opportunities. By October 1829 prime salted beef from Dickson's own herds was for sale at the 'Steam Engine'.²⁵ Around this time some allotments to the north of the mill were sold, possibly to finance another

²⁵ *Sydney Gazette* 29 Oct 1829: 4.

boiler manufactured onsite in 1831.²⁶ Dickson is thought to have installed a horse-wheel to use when the steam engine was out of service.²⁷

Dickson's brewery, Bonded Store and associated machinery and goods were offered for sale in July 1833. While the mill did not sell, some waterside and town allotments, and a variety of goods attracted buyers. Although no items were listed, the auction advertisement confirms the diverse nature of Dickson's business. Given the saw milling machinery for sale and quantities of timber it is possible that at some stage Dickson operated a steam sawmill in conjunction with other milling operations.²⁸

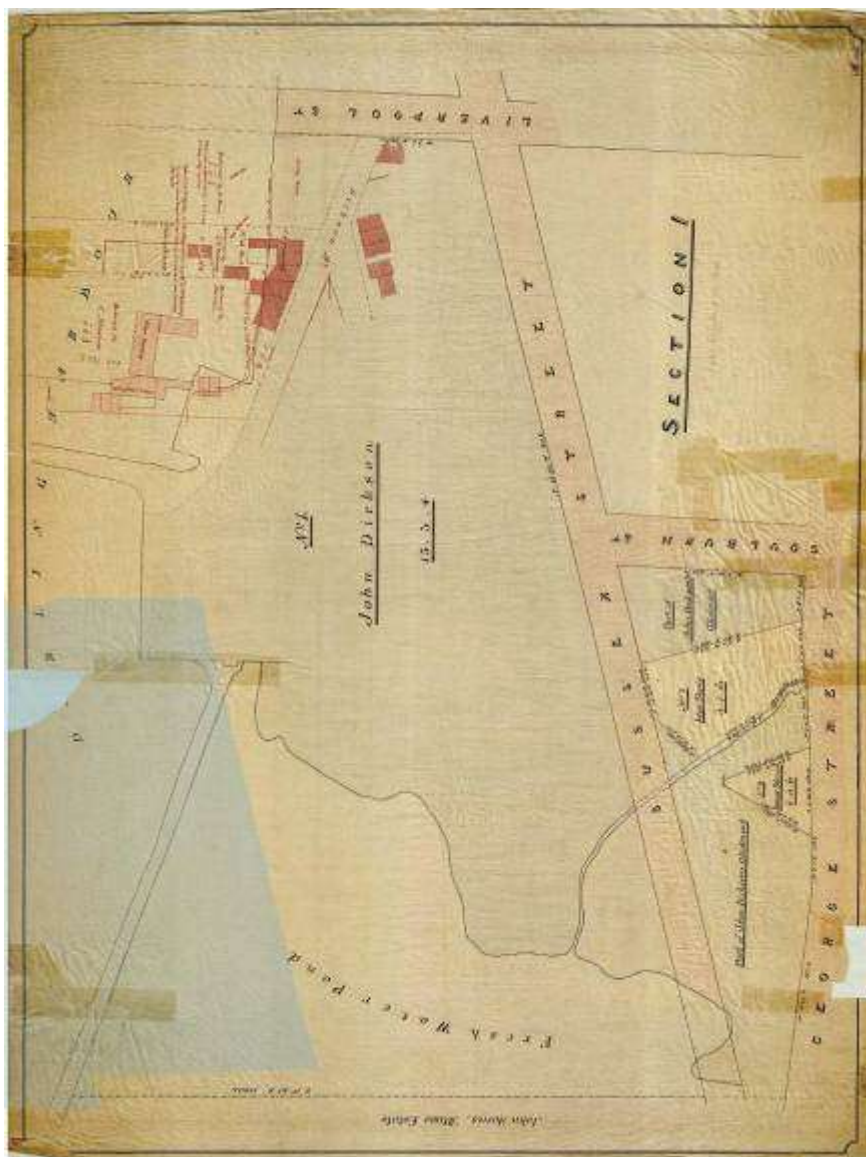


Figure 2.8: Plan showing John Dickson's land in 1833 with later development (1833-1849) outside his land to the north indicated in red. The Haymarket area is mostly outside Dickson's Mill except for part of the southern part of the mill building and reclaimed land. Features include subdivided allotments to the east and Dickson's Pier and Fresh Water Pond. City Section Survey Plan, Section 1, 1833, Historical Atlas of Sydney, City of Sydney Archives).

²⁶ PWD, [1984]: 22; *Sydney Herald* 19 Dec 1831: 4.

²⁷ Godden Mackay Pty Ltd, Oct 1992: 23.

²⁸ *Sydney Herald* 29 Jul 1833: 2.

In 1834 Dickson fled to England while on bail for alleged forgery and in the wake of a lost court case in 1833 for an outstanding debt. He entrusted Thomas Barker, his former protégé with the company's management.²⁹ The mill and other buildings were leased to tenants or managed by employees. It is thought that the first lessees of the mill may have been Dodds and Davies, while in 1834 Thomas Wilson, Joseph Williams and Alexander Knox were associated with the site. Ever the optimist, in 1841 Dickson was sending out a new steam engine for the mill and planning further 'fills and extensions'.³⁰

In January 1842 Henry Fisher, a Sydney distiller, signed a seven-year lease for part of the Dickson's Mill complex, including the building south of the wharf associated with the study area. It is described in the lease as land with houses, outhouses, stores & other buildings on the west side of Dickson's Steam Mills. Fisher & Co operated a 'store house and counting house' at the property, possibly in conjunction with the production and packaging of colonial wines in which he had an interest. Fisher left the premises suddenly in August 1843.³¹ A land titles schedule listing selected documents linked to the Dickson Mill Estate is included in Appendix 4.

2.3.2 Management and Lease of Dickson's Mill Estate (1843-1859)

Dickson died in England in 1843, aged 69 years.³² This part of his estate including the mill grant was left to his sons John, James and David Dickson and in their absence to be managed by trustees, Thomas Barker, Alexander Berry and George Muckle.³³ A plan drawn by E.J.H. Knapp in 1844 illustrates the extent of subdivided land to the east that had been sold, and buildings and land use in the remaining parts of the Dickson's Mill Estate (Figure 2.9).

In April 1844 the Sydney Salting Company took out a lease on the 'L-shaped' building between the dam embankment and Dickson's Pier.³⁴ The building is located in Block B9 of the of Dickson's Mill subdivision in 1859, the southern part of which is in the study area (Figure 2.10).

²⁹ Brown v. Dixon *Sydney Gazette* 13 Jul 1833; Walsh 1966, <http://adb.anu.edu.au>.

³⁰ Godden Mackay Pty Ltd, Oct 1992: 24, 25.

³¹ Bk 1 No 650 LPI; Godden Mackay Pty Ltd, Oct 1992: 9, 24-25; *SMH* 12 Aug 1843: 3.

³² Walsh 1966, <http://adb.anu.edu.au>.

³³ *Empire* 26 Jun 1852: 2; *Sydney Gazette* 22 Apr 1837: 3.

³⁴ Godden Mackay Pty Ltd, Oct 1992: 24-25.

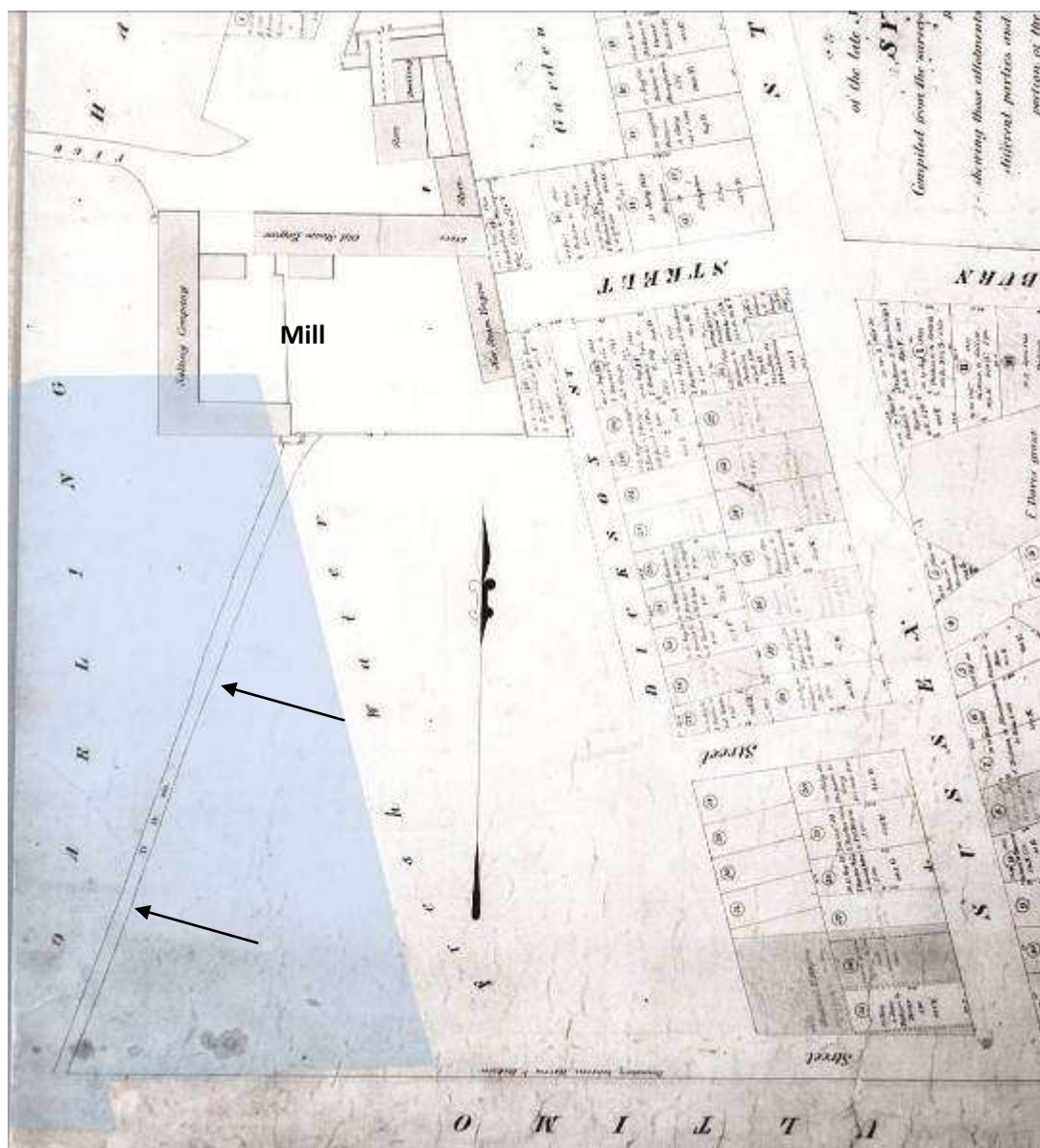


Figure 2.9: Part of the plan of the late John Dickson's grant showing the enclosed mill precinct, dam embankment (arrowed), and the fresh water millpond. Part of the millpond, the dam wall and southern portion of the 'Salting Company' building are within the study area. Knapp 27 Jul 1844, ML SLNSW.

2.3.2.1 Sydney Salting Company, Darling Harbour (1844-45) - Block B9 Dickson's Mill Estate

Formed by a group of pastoralists in 1842, the Sydney Salting Company processed and salted beef, lamb and ham for export. The company's committee included Thomas Barker (chairman and treasurer) and AB Spark. The salting company works were previously located at Albion Wharf. Barker's role as a trustee of Dickson's estate is likely to have had a bearing on the company's relocation here in April 1844. John Struth, an engineer, designed the work's steam generator and apparatus, and products prepared for export included tallow, hides, gelatine, mutton, hams, cured meat, salted beef, and sheepskins. The proximity to water ensured fresh water for the generators, while the wharf ensured access to shipping.³⁵

³⁵ SMH 22 Mar 1843:1; SMH 23 Apr 1844: 2; Godden Mackay Pty Ltd, Oct 1992: 25.

The introduction of Council by-law banning boiling down works near the city led to the removal of the Salting Company from Darling Harbour and the Sydney Salting Company commenced operations to Johnstones Bay in January 1845.³⁶

2.3.2.2 W B Allen's Soap Factory (1852-c1859-60) - Block B9 of the Study Area

A second plan for the partition of the Dickson's Mill Estate in 1859 shows W B Allen's Soap Factory as occupying the former Salting Company L-shaped building adjacent to Darling Harbour (Figure 2.10).³⁷ Allen moved to the site in early March 1852 and commenced candle and soap production, attracting the attention of the City Council as the melting of tallow contravened one part of the *Slaughtering Act* (1849). Records of the court case describe the manufacturing process used by Allen. He was fined and is likely to have carried out tallow melting elsewhere for soap manufacture. Had Allen's business been melting tallow on the site before 1849 he would have been granted permission to continue there until 1860.³⁸



Figure 2.10: Portion of a plan of Dickson's Estate dated 1859 showing Block B9 leased by WB Allen from at least 1855. It shows the reclamation and subdivision of the land within the former millpond to the east of the dam wall. Knapp 1859, ML SLNSW.

³⁶ SMH 11 Jul 1844: 2; SMH 15 Jan 1845: 1.

³⁷ Knapp 1859, M3 811.173.1733/1859/1 ML SLNSW.

³⁸ Empire 9 Apr 1852: 2, 3.

Rates and assessment records from 1855 show that Allen continued to lease the site, operating a candle factory and stores in what was then known as 'Dixon' Street. Soap was also manufactured and sold from the Sydney Soap Works. In 1858 the lease included the 3-storey manufactory building and a single-storey building, both of stone with shingle rooves. The single-storey building incorporated a melting house, home and office and is thought to be outside the study area. Allen operated from these premises up to c1859-60.³⁹

Artefacts relating to this period of occupation are documented in Godden Mackay Pty Ltd's 'Little Pier Street Precinct: Archaeological Investigation'. Artefacts also link the site to soda water manufacture.⁴⁰

2.4 Development on the Western Shore of Darling Harbour - Darling Harbour Railway Goods Line from 1853

In the first half of the 19th century, goods were transported to Darling Harbour wharves on bullock carts. The construction of railways, however, brought great changes to communications, agriculture and industry. The site of the former railway goods line is aligned the western edge of the study area. Its construction and location is influential in the development of the study area and therefore will be discussed briefly.

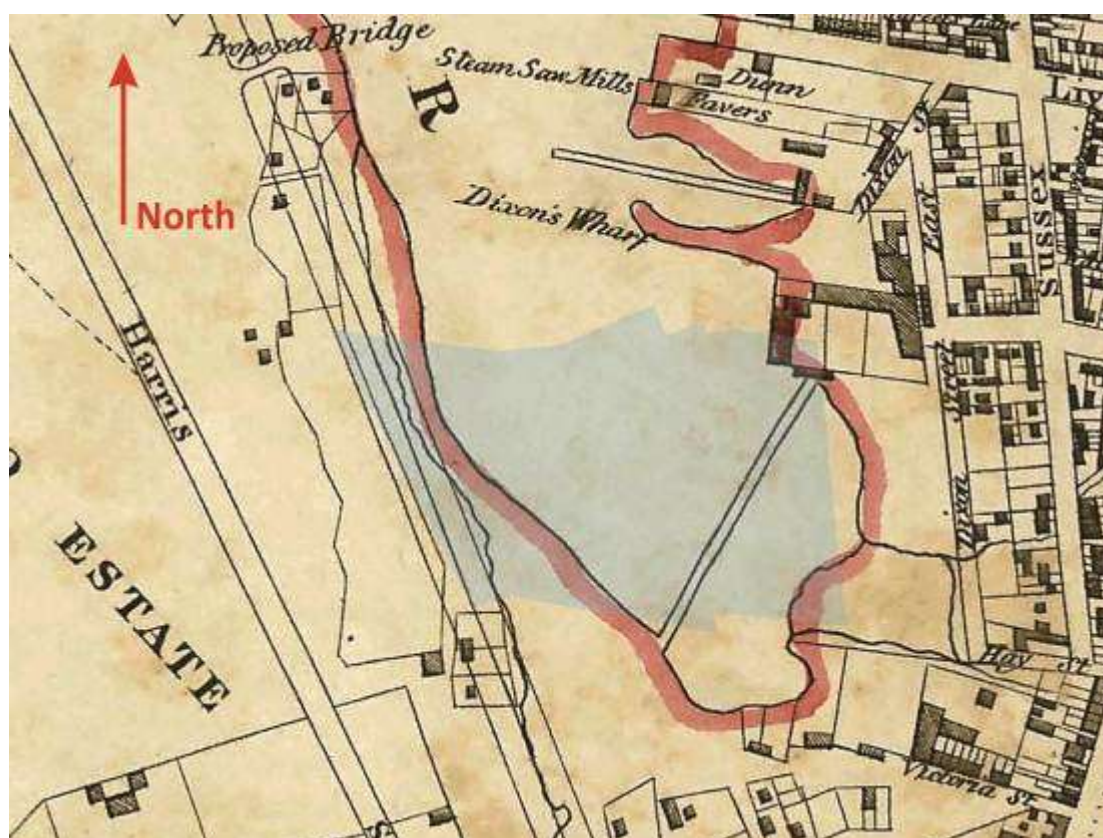


Figure 2.11: Plan from 1854 illustrating that most of the Haymarket study area is within Darling Harbour except for the western foreshore, some of the reclaimed land to the east of Dickson's millpond dam wall and the southern section of Dickson's mill buildings and reclaimed land Woolcott and Clark, Historical Atlas of Sydney, City of Sydney Archives.

³⁹ Rates and Assessments Records, City of Sydney Council Archives; SMH 31 Jan 1854: 1; Sands Sydney & Suburban Directory, John Sands, Sydney; Plan in Old Systems Title Bk 65 No 128 LPI. In 1864 Allen purchased Block A10 of Dickson's Mill Subdivision outside the study area.

⁴⁰ Godden Mackay Pty Ltd, Oct 1992: 26.

The economic growth of the colony and development of industries outside of Sydney led to demand for better access to ports such as Darling Harbour, and in 1853 the Sydney Railway Company (formed in 1849) resumed a 7-acre strip of land (2.83ha) from the trustees of Harris's Ultimo Estate (Figure 2.11). The strip of land connecting the Sydney Railway Terminus (Central Station) to proposed wharfs on the western shore of Darling Harbour lies along the western boundary of the study area.⁴¹ By 1854 the NSW Government took over the financially troubled Sydney Railway Company, realising the potential of the railway project to stimulate the economy and businesses based around Darling Harbour.⁴² The Branch Line opened c1859 and around the same time John Dickson's heirs, James and David Dickson, partitioned what was left of the Mill Estate.⁴³

2.5 Dickson's Mill Subdivision - Reclamation, Partition, Subdivision and Initial Development (1855-1890s)

The availability of reticulated water in the city from 1844, and the expansion of the water supply system between 1854 and 1858, led to the redundancy of freshwater ponds and reservoirs and plans were made to fill them.⁴⁴ The reclamation of Dickson's millpond between 1855 and 1857 allowed for the creation of land for subdivision.⁴⁵ It coincided with community debate with Sydney City Council and the government about health and safety, specifically the deleterious effects of increasing pollution and sewage, as well as the management of stormwater. The council considered improved sewerage and drainage in conjunction with land reclamation as a matter of urgency.⁴⁶ A number of proposals were made in the 1857 *Report of the City of Sydney Council's Special Committee for the Reclamation of Land in Darling Harbour and Woolloomooloo*. Along with a new sewer and stormwater system, the formation of new streets and wharves around Darling Harbour were included in the report. It was presented to the Legislative Assembly but no action was taken at this time.⁴⁷

By 1857 the filling of Dickson's millpond was almost complete. The railway goods line under construction had the potential to increase land values around Darling Harbour and James and David Dickson proceeded with plans for subdivision. Figure 2.12 shows the former harbour shoreline, the railway land and proposed roadways joining the Ultimo and Dickson Estates around this time.⁴⁸

The Dickson Estate beneficiaries or trustees are likely to have funded the reclamation of the millpond, to the east of the dam wall. The city council constructed the Hay Street combined sewer and drainage channel on the southern boundary of Dickson's subdivision by January 1863.⁴⁹ See Section 2.9: Hay Street Sewer and Stormwater Channel.

⁴¹ 'Darling Harbour Rail Corridor,' SHFA Heritage Register, 31 May 2010; 'Plan of Darling Harbour Branch of the Sydney Railway,' c.1853, SRNSW, AO Map No 6381; Fitzgerald & Golder, *Pyrmont & Ultimo Under Siege*, Halstead Press, Ultimo, 2007: 45.

⁴² 'Darling Harbour Rail Corridor,' SHFA Heritage Register, 31 May 2010.

⁴³ *SMH* 27 Sep 1855: 4. 'Four-fifths' of the branch line was completed by November 1859. *SMH* 27 Sep 1859: 4. *SMH* 27 Dec 1859: 6.

⁴⁴ WV Aird, *The Water Supply, Sewerage and Drainage of Sydney*, MWS & DB, Sydney, 1961: 5-6.

⁴⁵ 'Head of Darling Harbour,' 1855 (alt 1857), Plan No AO X 1053 SRNSW.

⁴⁶ *SMH*, 22 Dec 1857: 4; *SMH* 16 Mar 1858: 4.

⁴⁷ *SMH* 22 Dec 1857: 4; *SMH* 16 Mar 1858: 4; *SMH* 30 Apr 1858: 3.

⁴⁸ 'Head of Darling Harbour,' 1855 (alt 1857), Plan No AO X 1053 SRNSW.

⁴⁹ *SMH* 21 Jan 1863: 5.

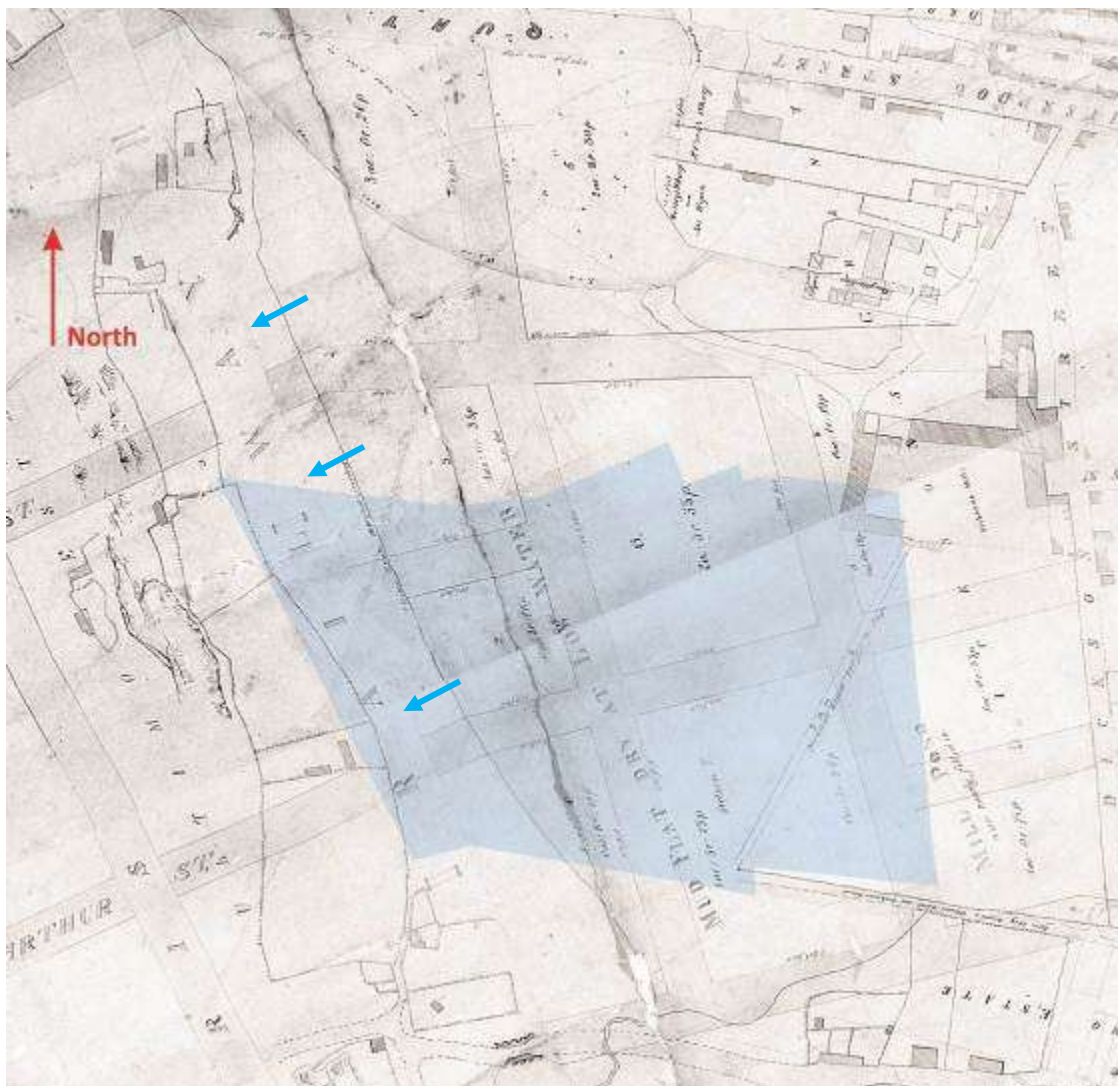


Figure 2.12: Part of a plan titled ‘Head of Darling Harbour Port Jackson’ dated 1855 and 1857 showing the almost complete reclamation to the east of the proposed railway goods line (blue arrows). 1855-1857, AO X1053 part 3, SRNSW.

In September 1858 David Dickson mortgaged the soap works and associated buildings for £1000, possibly to fund the proposed subdivision of the estate and in 1859 brothers, James and David Dickson prepared a plan of 62 building allotments in Dickson’s Estate which was to be divided between them. A deed was drawn up in 1860 for the distribution of 31 of the building allotments (Figure 2.13).⁵⁰

Blocks marked ‘A’ were transferred to David Dickson, and ‘B’ to James Dickson. Blocks in the study area include Blocks A1 (35½p), A2 (21p), A3 (23p), A8 (26p), A9 (35¼p), B1 (21p), B2 (23p), B7 (26p), B8 (16¼p) & B9 (2r 7 ½p). The development of blocks in Dickson’s subdivision in the study area will be discussed briefly. The following sections should be read in conjunction with schedules in Appendix 4: Land Titles - Dickson Mill Estate, Appendix D: City of Sydney Council’s Rates and Assessments, and Appendix E: *Sands Directory*. The plan in Figure 2.13 above shows the location of each block.

⁵⁰ Knapp 1859 ML; Bk 65 No 128 LPI; See Land Titles Schedule Appendix A.

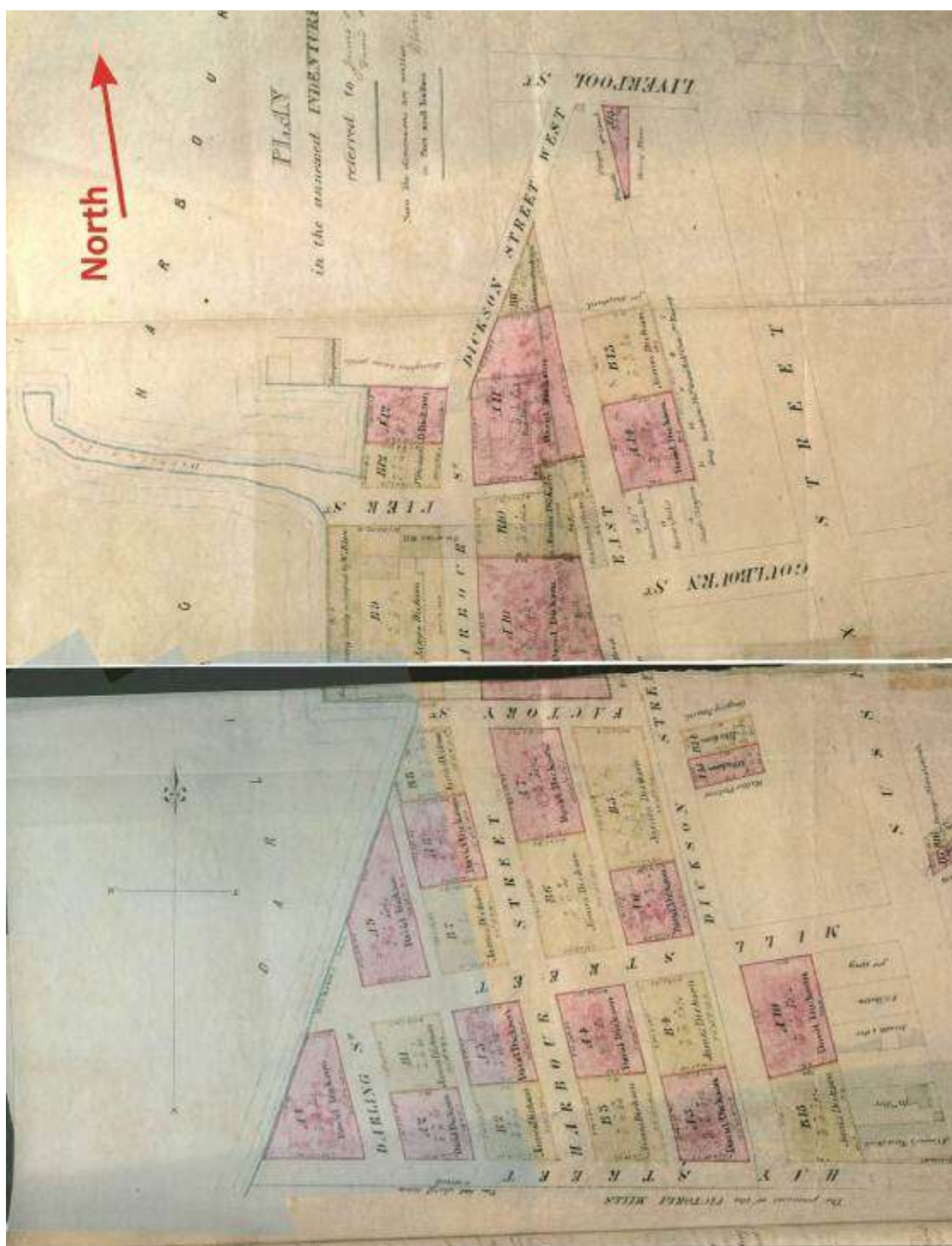


Figure 2.13: Part of a plan of the partition of Dickson's Mill Estate made between David and James Dickson in 1860. Allotments in the study area are bounded by Harbour Street, Hay Street and the dam wall, also including part of Block B9 between Pier Street, Factory Street and the harbour. Old Systems Deed Bk 65 No 128 LPI.

2.5.1 Block B9 (2r 7 ½ p)⁵¹

In 1860 James Dickson mortgaged Blocks B9 and B10 for £2000. The southern part of B9 near Factory Street is within the study area (Figure 2.16, Figure 2.17). The plan attached to the mortgage shows the building nearest the harbour as a soap factory and is similar to the plan in Figure 2.13. Joseph Spyer, a merchant of Wynyard, purchased Block B9 including the soap factory in December 1864, paying £1175. By 1866 Spyer was insolvent and the land was sold to Sydney butcher Henry Bell for a reduced price of £1000. Rawson, Curran, White and Stokes were leasing part, or all, of the site in 1868 when Simon Zollner, a manufacturer, took over the lease.

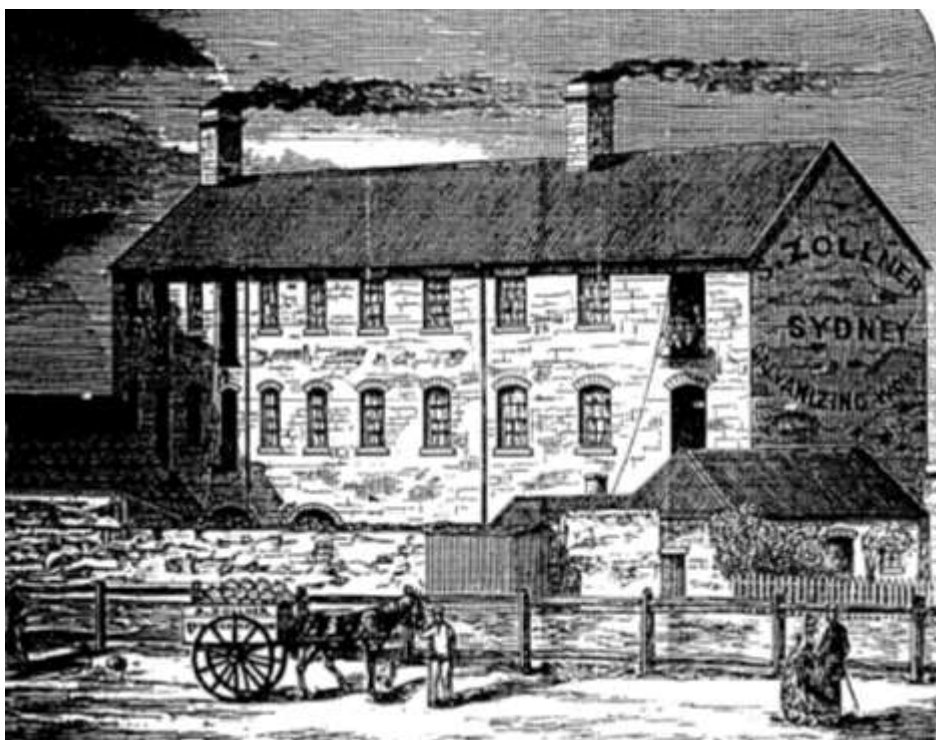


Figure 2.14: View of S Zollner's galvanizing works published in the *Australian Town & Country Journal* on 30 Mar 1872. Parts of the 3-storey and single-storey buildings on the left hand side of the image are in the study area.

Simon Zollner, a metalworker and galvaniser, established a business in Sydney in the early 1850s, operating from 381 George Street during 1855-59 and from York Street c1860. He worked with brass, tin, zinc and galvanised iron. Zollner's Harbour Street workshop in the former soap factory is significant as it is thought to be the first factory for metal galvanising in Australia. Products manufactured in the Darling Harbour premises included galvanised washing tubs, roofing and guttering, and miscellaneous tinware articles.⁵² The building described in 1872 was of 'undressed freestone, about 200 feet long, by 40 feet broad, and 80 feet high'. Entered from Harbour Street, there was a large building with several kinds of galvanising baths. The southern end of the main building (adjacent to Factory Street) was a room of 80 x 30 feet used for receiving 'black iron sheet'. About 30 men and boys were employed at the factory producing wiring, piping, and buckets to be galvanised. About 14 or 15 people were employed in the room above making bellows for domestic and blacksmiths' use. On the top storey was a tin plate workers' shop with 20 men and boys employed a variety of tin plate work. An article published in the *Empire* detailed the operations and products produced at Zollner's workshop. Views of Zollner's workshop in 1872 and c1876 are reproduced in Figure 2.14, Figure 2.15.

⁵¹ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices 7, 8.

⁵² Godden Mackay Pty Ltd, Oct 1992: 28; *Empire* 27 Jul 1868: 2.

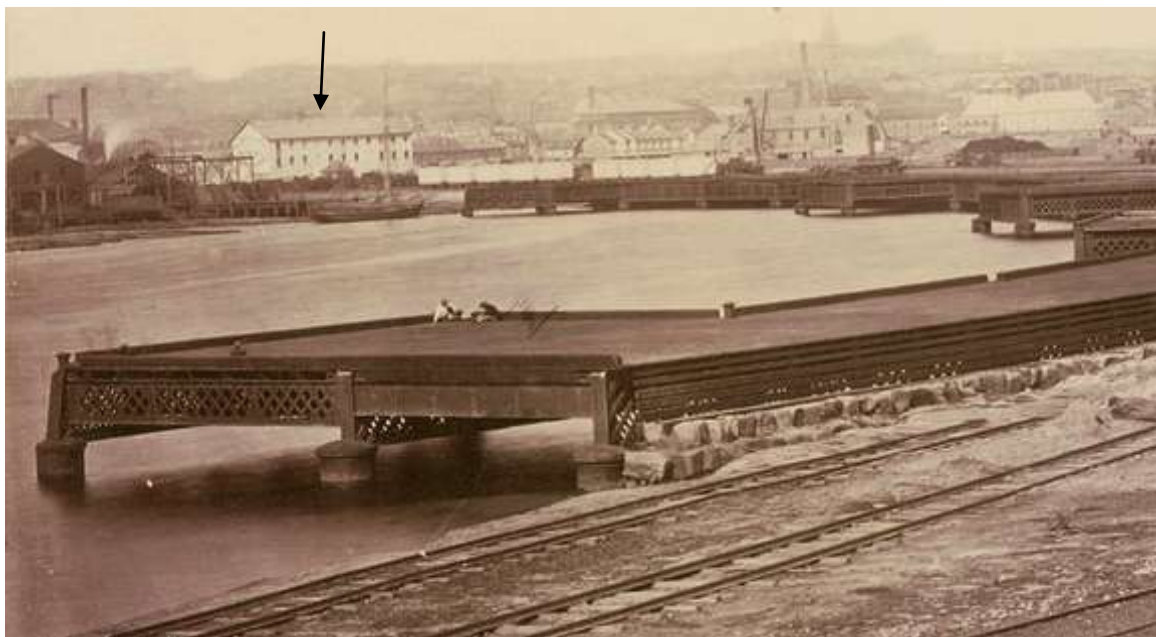


Figure 2.15: View of Zollner's works (arrowed) in the background with the newly constructed Iron Wharf in the foreground c1876. Houses and possibly Biddell Brothers confectionery factory in the study area to the southwest of Zollner's are visible in the background. SPF 944 ML SLNSW.

Zollner died on 17 November 1880 and tenders were advertised in December 1880 for the sale of Zollner's stock and plant. The business remained at the same location and is shown in Dove's 1880 plan (Figure 2.16, Figure 2.17 **Error! Reference source not found.**).⁵³ In comparison with the earlier plan of the site, buildings have been demolished to make way for Harbour Street on the eastern side of the property. The plan shows a single-storey buildings, timber buildings coloured in brown, stone or brick masonry structures in pink, and iron structures in blue.

⁵³ Godden Mackay Pty Ltd, Oct 1992: 28; *SMH* 2 Dec 1880: 11.

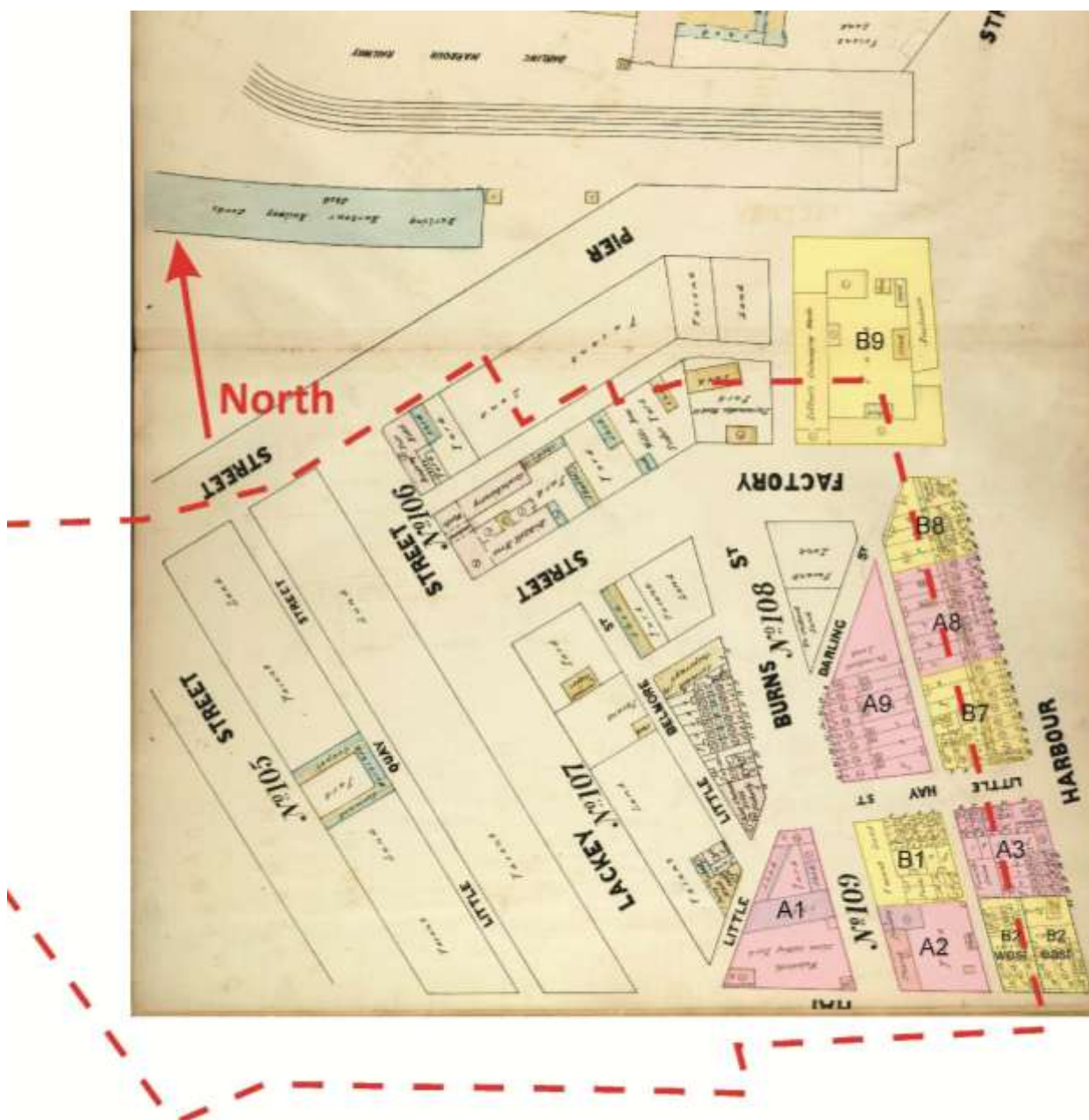


Figure 2.16: Extent of building and subdivision by 1880 included land between Harbour Street and the western edge of Hay Street. The block names from the 1860 subdivision plan (Figure 2.13) are annotated on this map and are discussed below. Dove's *Plans of Sydney*, 1880, Blocks 104-109, , Historical Atlas of Sydney, City of Sydney Archives.

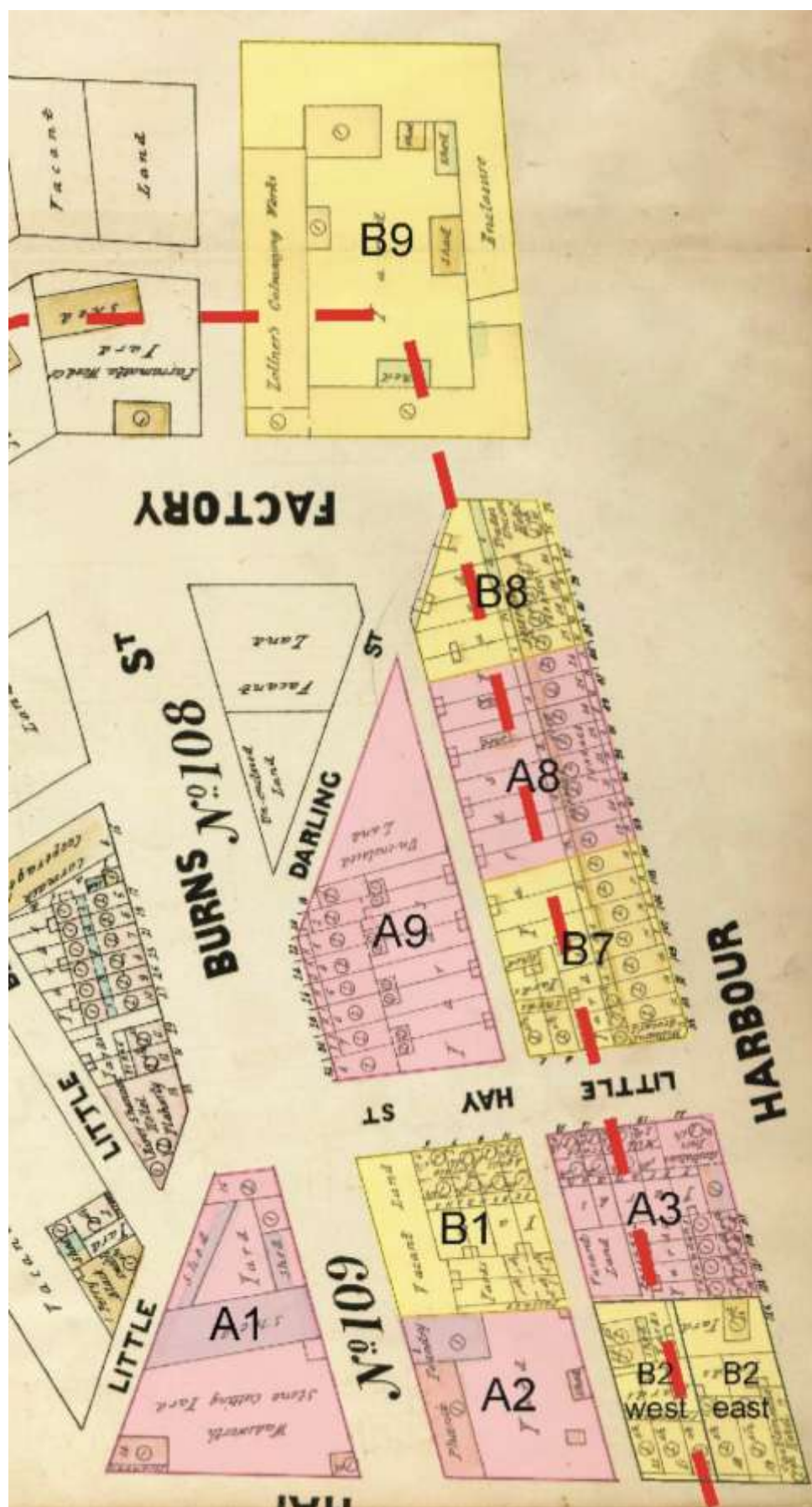


Figure 2.17: The land to the east of Little Darling Street formed the Dickson Estate. The line of Little Darling Street is above the alignment of the dam wall of Dickson's millpond (Figure 2.13). Dove's *Plans of Sydney 1880*, block plans 104-108, Historical Atlas of Sydney, City of Sydney Archives.

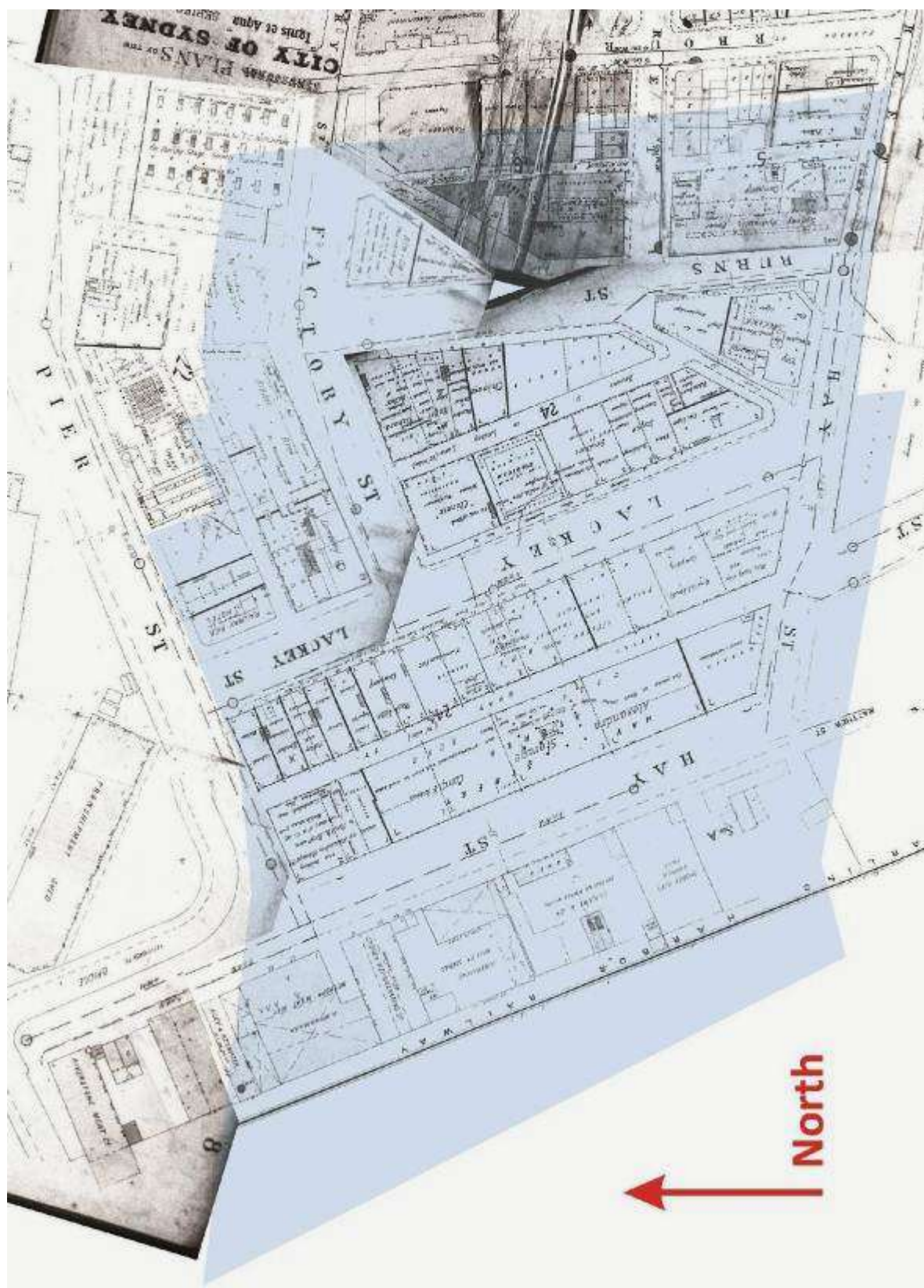


Figure 2.18: Early 20th century plan, *Ignis & Aqua* plan of the study area providing details of buildings erected during the 1890s. Structural plans of the City of Sydney (cartographic material)], *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW

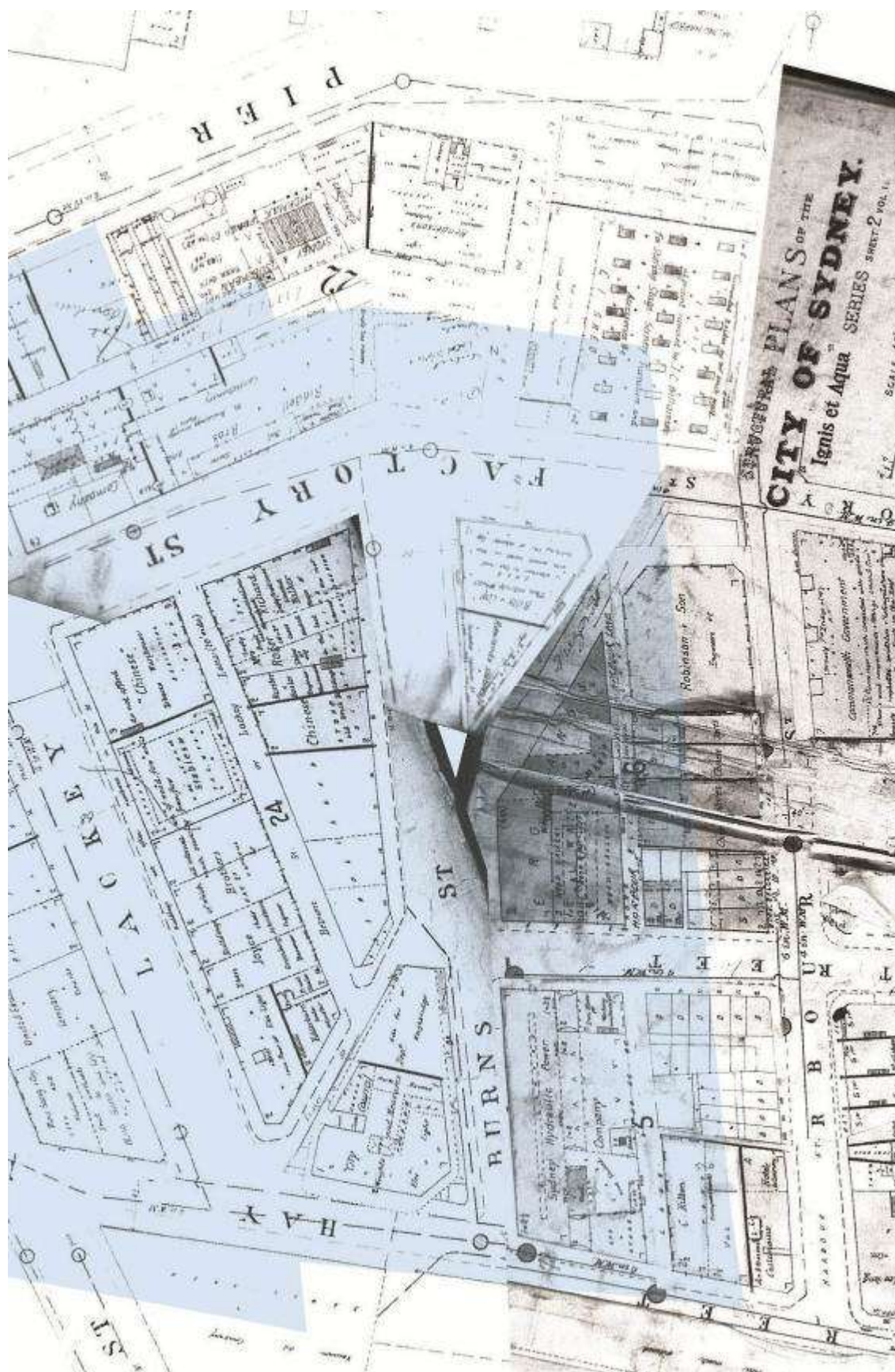


Figure 2.19: Detail of the eastern half of the Haymarket study area, between Harbour and Lackey Streets. North is at the top. *Structural plans of the City of Sydney* (cartographic material), Ignis et Aqua series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW

In October 1884 the buildings at 53 Harbour Street, now the property of the Bell Estate administered by Mrs Bell, were damaged by fire. Much of Zollner's stock and equipment on the top two floors was destroyed but the ground floor was mainly water damaged.⁵⁴ It is thought that the works moved to other premises after the fire. Archaeological investigations of the Pier Street Precinct by Gooden Mackay Pty Ltd in 1992 uncovered evidence of Zollner's Works included lumps of zinc slag and partly galvanised wares.⁵⁵ Simon Zollner is significant for galvanising imported sheet steel as early as 1870 and recognised as a pioneer in the field. It is thought that in 1878 Zollner's Galvanising Works was the only one in NSW.⁵⁶

Circa 1883-84 the northern end of Block B9 (outside the study area) was redeveloped and a row of eight stores built on the site of the 'Old Steam Engine' building (Figure 2.19). R Chalmers & Co was leasing the property in 1886 and from 1889-90 the site was purchased and occupied by McLean Brothers & Rigg, a wholesale and retail ironmongery, general hardware and machinery importing business (63-73 Harbour Street). By 1896 Wood, Payton & Co had acquired the property and in 1910 Stewart & Lloyd occupied the site.⁵⁷ The stores at the northern end of the site were demolished in 1931-32, and between this date and 1939 the structures at the southern end of the site in the study area were demolished. They were replaced by the City Markets No 6 Building demolished in the early 1980s for the construction of the Sydney Entertainment Centre complex.⁵⁸

2.5.2 Block A1 (35 ½ p)⁵⁹

Dickson's dam embankment (Little Darling Street and later Frazer Street), Darling Street (later Burns Street) and Hay Street, formed the boundaries of Block A1, a roughly triangular site at the southwest corner of Dickson's Mill Estate (Figure 2.13). In May 1870 Henry Reynolds, a Sydney hairdresser, and Andrew Wadsworth, a contractor of Pyrmont, purchased the 35½ perch site for £660. Andrew and Joseph Wadsworth established a steam stone-dressing works there c1874-1880. The Wadsworths were highly respected in their field and the company featured in the *Australian Town & Country Journal* in 1872 (Figure 2.17Figure 2.20).⁶⁰

Wadsworth's works dressed a ton of stone at one time and their stone paving was notably used outside the museum, public library and other city buildings.⁶¹ Rates and assessment records for 1877 record a brick, stone and timber factory with an iron roof on the site. Trading as Wadsworth Brothers in 1880, the building was single-storey and three-roomed. It was rated at a gross annual value of £130, compared to a previous valuation of £90. The extent of development on the site in 1880 is shown in Dove's plan (Figure 2.17).

In 1882 Wadsworth Brothers stone dressing works was recorded as 110A Hay Street with Joseph Wadsworth living in the house at 110 Hay Street. The three-room, single-storey house was timber with an iron roof. At this time the store or works was described as built of iron with an iron roof (single-storey, four-room), showing discrepancies with the description of the previous years' assessments. Joseph Wadsworth died in 1885 and from about this time Wilson Corben & Co, stone merchants, leased the factory.

⁵⁴ SMH 6 Oct 1884: 5.

⁵⁵ Gooden Mackay Pty Ltd, Oct 1992: 28.

⁵⁶ PWD [1984]: 46.

⁵⁷ Plan of the City of Sydney, 1910, CCSA.

⁵⁸ Gooden Mackay Pty Ltd, Oct 1992: 22, 24, 28, 69-70, & Figure 3.18; *Sands Directory*; Rates & Assessments Records, 1891, CCSA; Parsons 'William McLean (1845-1905),' ADB, 1974.

⁵⁹ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁶⁰ AT&CJ, 19 Oct 1872: 13.

⁶¹ AT&CJ, 19 Oct 1872: 13.

By 1891, the house, now of two storeys (58 Hay Street) was leased by John Murphy (Figure 2.19). Loveridge & Hudson, stone merchants, leased the workshop (60-68 Hay Street) for steam stone dressing. Wadsworth Estate trustees managed the property in 1896. Assessment records show variations in the building descriptions. At this time it was described as a two-storey brick, two-room building, with an iron roof. The timber, iron-roofed house is recorded as single-storey with four rooms.

FA Wadsworth held the title to the Hay Street property in 1907. Thomas K Smith leased the house and yard. In 1911 the owner, Andrew Wadsworth, leased the house (56 Hay Street) to Michael McMahon and the workshop and stables (58 Hay Street) were leased to TK Smith, the lessee of the house in 1907.

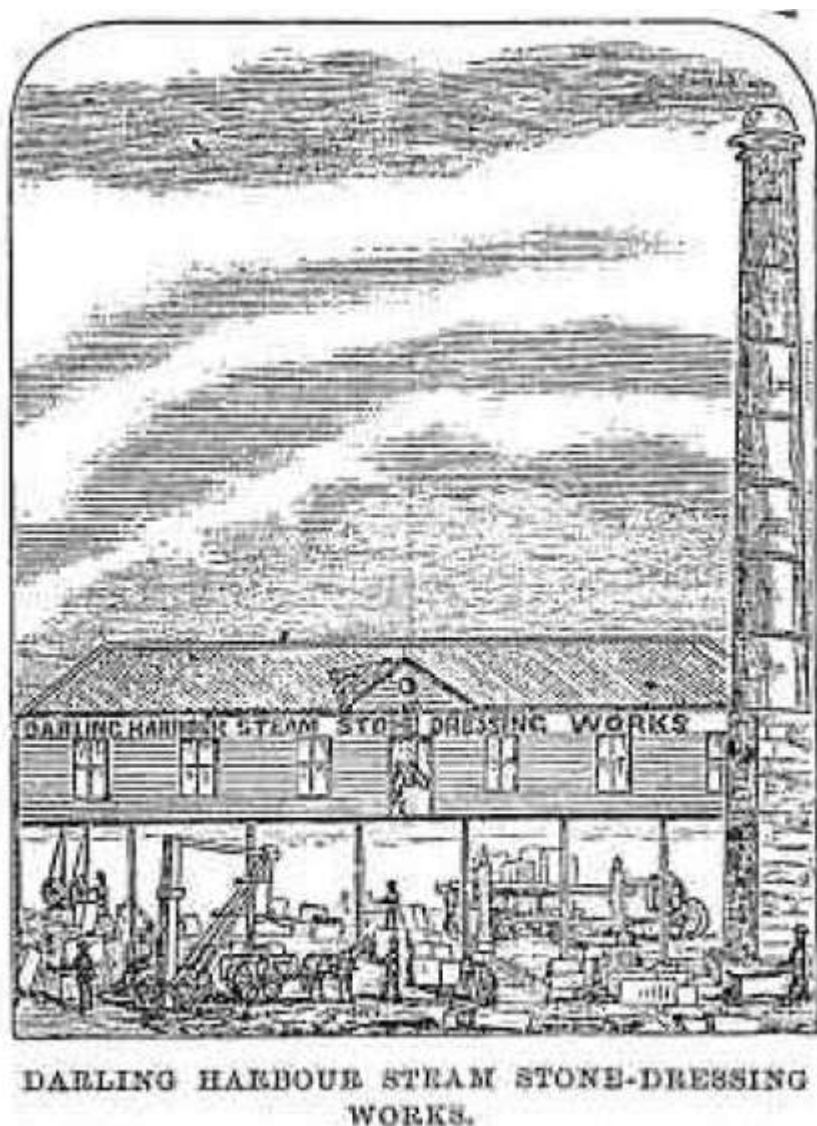


Figure 2.20: Wadsworth's stone dressing works at Darling Harbour was powered by a steam engine. A masonry chimneystack was a feature of this site and no doubt other Darling Harbour factory sites of the era. *AT&CJ* 19 Oct 1872:13.

2.5.3 Blocks A2 (21 p) and B1 (21 p) - eastern side of Burns Street⁶²

John Lutton⁶³ purchased Block A2 in April 1865 and Anthony O'Connell bought Block B1 in 1869 (Figure 2.13, Figure 2.16, Figure 2.17). The allotments were bounded by Hay Street, Darling Street (Burns Street), Mill Street (Little Hay Street) and Little Harbour Lane, with B1 located to the north. Lutton occupied the Hay Street allotment from 1871, having built two, single-storey timber sheds. In 1872 O'Connell sold his allotment to the north and they were conveyed in quick succession to William Bull and then Augustus Wenck. Henry Jacques purchased the allotment B1 in 1872. In 1877 the rates and assessment records show Mrs Jacques as the owner of four two-storey brick and stone residences, both tenanted. The terrace had a shingle roof and each residence had four rooms. Mrs Jacques owned two similar terraces facing Little Harbour Lane. It is not known if John Lutton or Mrs Jacques built the terraces on Block B1.

Dove's plan of Sydney in 1880 shows Lutton & Sons' Phoenix Foundry on Block A2 while Block B1 to the north was substantially developed for residential use (Figure 2.17). Agnes Terrace of four brick residences included 5, 7, 9, and 11 Little Hay Street, and a terrace of two dwellings was built at 1 and 2 Little Harbour Lane (Figure 2.17). The northern part of Block B1 facing Burns Street remained vacant.

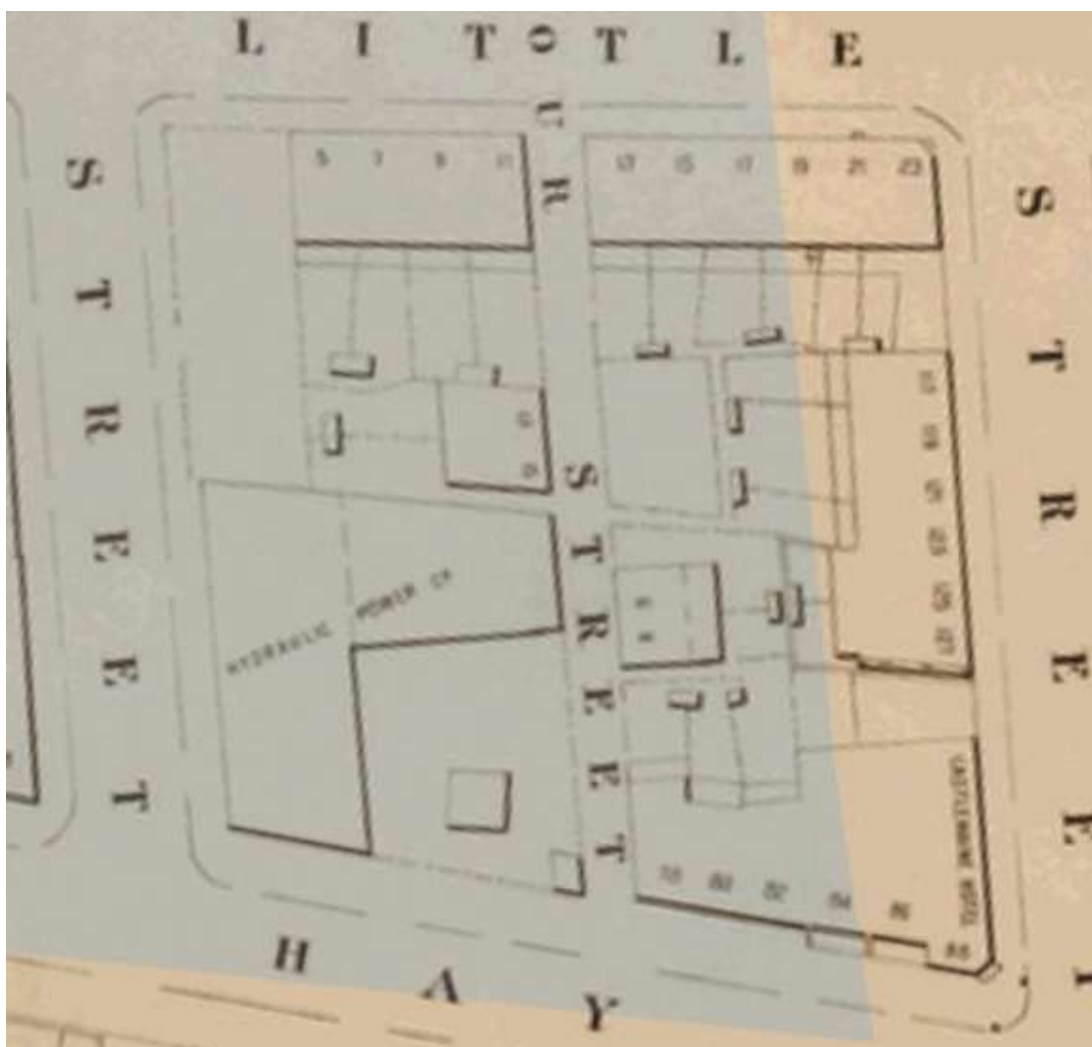


Figure 2.21: This plan shows the Block A2 occupied by the Hydraulic Power Co. but with the houses on B1 still standing. Detail from 1894 Metropolitan Detail Survey, Sheet 2, ML, SLNSW.

⁶² *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁶³ 'Lutton' is shown in some records as 'Sutton.'

John Lutton & Sons' premises at 112 Hay Street (A2) were described as a foundry in 1882. In 1890 the Sydney Suburban Hydraulic Co Ltd purchased Lutton's Block A2 and by 1896 an office and engineering workshops were built (Figure 2.19). The two-storey, brick building with an iron roof had four rooms. The workshops, managed by Tom Dickinson an engineer are linked to the company's pumping station established in Pier Street (Section 6.1.7).

In 1896 Ernest Jacques owned and was leasing the terraces on Block B1 but by 1900 the Sydney Suburban Hydraulic Co Ltd purchased them. By 1900 the company owned Blocks A2 and B1, changing the company name to Sydney Hydraulic General Engineering Company Ltd in 1901 (Figure 2.19). The *Sands Directory* did not list the houses in the Little Hay Street or Little Harbour Street terraces in 1902.

McDonald Hercules Ltd acquired the property in 1911 (70-76 Hay Street and possibly also 86-88 Hay Street). GA Stewart is thought to have managed the site. At times the rates and assessment records show the building as 70-84 Hay Street (1914, 1918). After a merger in 1913 with another company the title was transferred to Standard Waygood Hercules Ltd (Figure 2.22). In 1921 the company rated for the site was the English Electric Company of Australia although the ownership remained the same. In 1921 the Sydney Municipal Council resumed the sites for the development of markets.

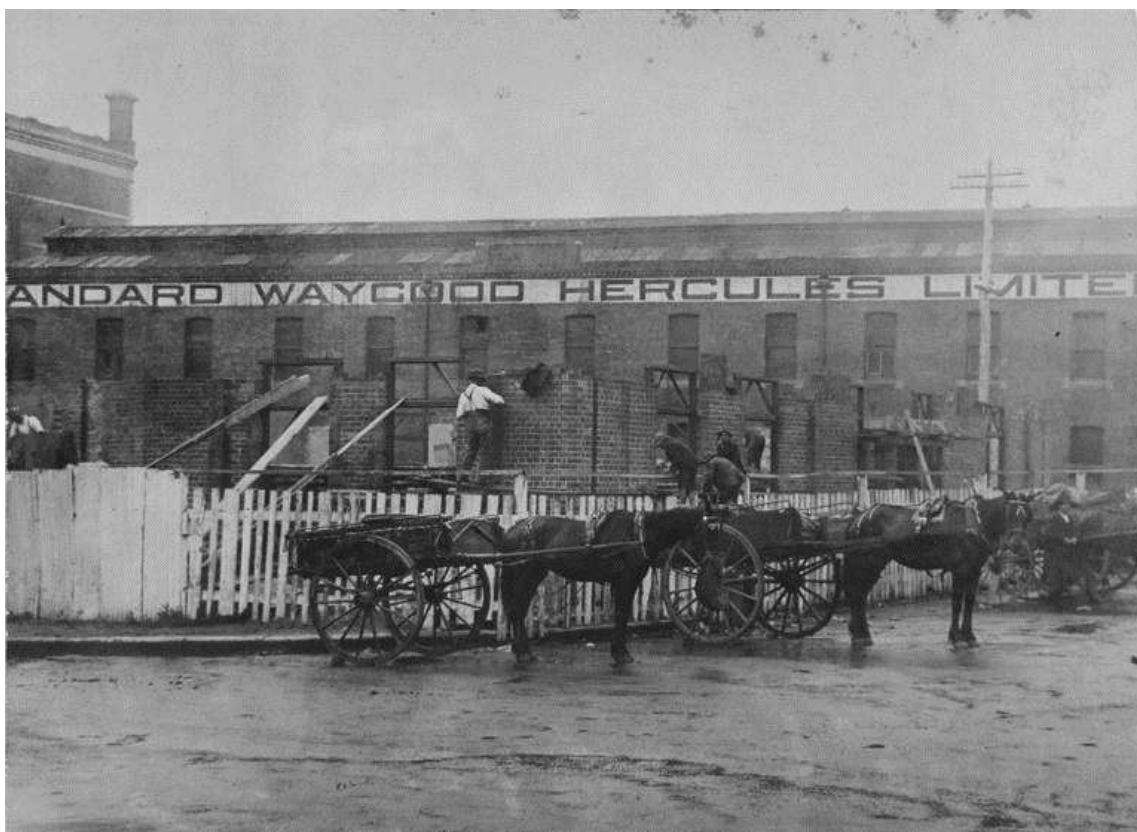


Figure 2.22: Partially-built Weights and Measures building with the Standard Waygood Hercules Limited building in the background, 7 January 1918. These are presumably the buildings erected for the Sydney Hydraulic General Engineering Company on Block A2. Looking east along Hay Street from Lackey Street corner. CRS 51, Demolition Books 1900-1949, NSCA CRS 51/3856, City of Sydney Archives.



Figure 2.23: Looking east along Hay Street from Lackey Street showing the surrounding buildings still standing in April 1918. The Sydney Hydraulic Power building is in the background on the corner of Burns and Hay Streets. NSCA CRS 51/3870, ArchivePix, City of Sydney Archives.

2.5.4 Block A3 (23 ¼ p)⁶⁴

In 1873 Augustus Monck purchased Block A3 bounded by Mill Street (Little Hay Street), Harbour Street, and Little Harbour Lane (Figure 2.17). Prior to 1865 a terrace of four, two-storey brick and stone residences (shingle roofed with three rooms each) had been built and were tenanted (Nos 2, 3, 4, 5 Little Hay Street) (Figure 2.24). Augustus Monck built a similar terrace of four dwellings on the Harbour Street side of his property (Mill Terrace - Nos 1, 2, 3, 4 Harbour Street). A two-storey, brick and stone, shingle-roofed hotel was constructed on the corner site. Named the Australian Inn, the seven-room hotel was managed by Margaret Crowe in 1877. In 1877 the title was transferred to Joseph Monk, a manufacturer of Woollahra. The extent of development of the site is recorded in the 1865 survey (Figure 2.24), Dove's 1880 plans of Sydney (Figure 2.16, Figure 2.17), and the Ignis et Aqua (Figure 2.19).

In 1880 the Little Hay Street terrace was numbered 13-21 and the Harbour Street terrace Nos 117-123. The Australian Inn at 21 Little Hay Street now had 10 rooms. Rates records and the *Sands Directory* record various licensees until 1882 when it was leased as a shop and managed by Lee Hong. All the buildings were reroofed in iron by 1891 and the shop had a new lessee. Subsequent changes in numbering and tenants are recorded in the rates records and *Sands Directory*. Margaret Maria Monk, a widow of Woollahra, inherited the properties in 1915 and in 1921 the Sydney Municipal Council resumed them (Figure 2.19). It appears that the Australia Inn and the houses

⁶⁴ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

along Harris Street are outside the study area due to the widening of Harbour Street in the 20th century. It is likely that the archaeology of these buildings survives within Harbour Street.

2.5.5 Block A8 (26 p), Block B7 (24 p) and Block B8 (16 ¾ p) – western side of Harbour Street⁶⁵

William Bull, a wheelwright of George Street Sydney purchased the northern part of Block B7 and all of Block B8 (15 perches) in April 1869 for £440/12/6 (Figure 2.17). John Simms of South Head Road, a carpenter and builder, purchased the southern portion of Block B7 (9 perches) for £70. By 1871 Simms had built two, two-storey brick terraces and one was already tenanted

In April 1871 William Bull added to his Harbour Street holdings with the purchase of Block A8 at a cost of £213/15/. The eastern boundary of the allotments was Harbour Street, recorded in 1871 as Dixon Street West. By this time Bull had built a row of six, two-storey brick terraces with shingle rooves. They had four rooms each but were unoccupied.

In block B7, to the south, Simms had four, two-storey brick and stone terrace houses at 19, 20, 21 and an unnumbered house on his Harbour Street property in 1877 (Figure 2.17). Maximising his investment he subdivided the allotments and purchased part of Bull's No 107 in order to build a terrace at Nos 2 and 4 Little Hay Street (Figure 2.25). By 1877 Bull had built a row of 18 brick and stone terrace houses. Nos 1-7 were named Josephine Terrace and those to the south named Harbour View Terrace. No 107 Harbour Street was subdivided and the west end amalgamated with an allotment facing Little Hay Street. All of Bull's terraces had verandahs facing the street and outhouses and sheds in the yards (Figure 2.24). Simms' terraces were built to the street alignment.

Owned by LH Roberts, in 1880 the two-storey brick Trades Union Hotel occupied the northeast corner of the Harbour Street block. The corner grocery store, like that leased by Walter N Williams at 115 Harbour Street at the south end of the block, was typical of residential developments of this era. The rates records show that the terraces were gradually reroofed in iron but largely very little changed except the tenants. By 1891 Bull's properties were transferred to SW Bull and the properties continued to be leased, as did Simms' properties.

By c1907 William Bull's estate managed the Harbour Street properties and Caleb Terrey had purchased Simms' terraces. In 1910 parts of Bull's estate were sold to Sam Warley⁶⁶ and Tarr Long (thought to be linked to War Hing & Co), Fielding and Dwyer, and Havelock Hunter Cormack. Most of the terraces were leased to tenants, with an increasing number of owners and tenants being of Chinese descent.

Dr Caleb Terrey's properties continued to be leased after his death in 1912. The terraces at 75-91 Harbour Street were demolished c1914 and replaced with Thomas Robinson & Co's warehouse. It is possible that the other terraces at Nos 93-107 were altered or replaced by combined stores and residences but the rates and assessment records are not clear.

The Sydney Municipal Council resumed the entirety of Blocks B7, A8 and B8 from c1921 for the development of the city produce markets.

⁶⁵ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁶⁶ Shown in some records as 'Wah Lee'.



Figure 2.24: Only a small section of The Haymarket land was built on by 1865 (study area in blue). This was on blocks B1, A3 and B2; compare Figure 2.17. The lower section is a detail from the top plan. The pencil annotations to the north indicate later development. Dickson's 1830s mill buildings are just within the northeast corner of the study area. North at the top. Trigonometrical Survey, 1865, Historical Atlas of Sydney, City of Sydney Archives.

2.5.6 Block A9 (35 ¼ p)⁶⁷

John Richard Clerke of Bourke Street, Sydney, purchased the southern part of Block A9 for £400 in April 1873 (Figure 2.17). Edwin Daintrey of Sydney, a solicitor involved with the sale of the Dickson Mill Estate, purchased the triangular-shaped residue from this sale in October 1876 for £110. The land was bounded by Mill Street (later Little Hay Street), Little Harbour Lane and Little Darling Street (later Fraser Street).

By 1877 Clerke (or Clarke) had built a terrace of eight, brick and stone, two-storey residences with slate rooves, each with four rooms along the eastern side of Burns Street. Like most terraces in the neighbourhood they were tenanted. In 1880 the terrace houses were numbered 20-30 Burns Street and Nos 1 and 2 *off* Burns Street, although numbering varies. Rates and assessment records for the year show a second entry for Nos 1 and 2 *off* Burns Street possibly linked to Daintrey's land and the owner listed as 'Mrs Canhain' (or possibly Canham). John Hogan leased the two-storey, brick, five-room, iron-roofed house at No 1; and John Perry leased a single-storey brick blacksmith's workshop at No 2.

John Perry purchased Nos 1 and 2 *off* Burns Street at some time before 1882, occupying the blacksmith's shop at No 2 and leasing the house at No 1 to Catherine Golston. The Clerke's houses, now numbered 16-30 Burns Street, and others around them were later demolished in the 1880s.

Evan Rowlands (1824-94), a mineral water manufacturer, acquired Clerke's property in 1886 and built an impressive factory building on the large site (Figure 2.25, Figure 2.26).⁶⁸ An adjacent allotment to the north of Little Darling Street (later Fraser Street) was purchased by the company in 1901 for a second premises, a stables for their delivery horses and carts (Figure 2.26).⁶⁹ A short history of Evan Rowlands' aerated water and cordial business to 1914 is recorded in a *Souvenir of the Diamond Jubilee of E Rowlands Pty Ltd* and other material in David Jones' *Thirsty Work: The Story of Sydney's Soft Drink Manufacturers*.⁷⁰

Originally in partnership with Robert Lewis from 1854-76, Rowlands began manufacturing aerated water in Ballarat, later expanding into NSW. The factory at Burns Street was completed in October 1887.⁷¹ The classically-styled, two to three-storey factory on the east side of Burns Street featured a castellated parapet and its design and scale differed vastly from the more modest Darling Harbour houses and workshops around it. The stuccoed brickwork was finished to imitate coursed ashlar, while the two-storey brick building, the stables, later constructed on the west side of Burns Street, was smaller in scale and less detailed.

Twentieth-century rates records show Rowlands Pty Ltd at 2-8 Little Hay Street as a cordial factory and office, and a house and 14-stall stables at the Burns Street address. The main factory building was refurbished in 1911 but a fire in 1913 caused £5000-6000 of damage to the factory, stables, wagons and stock at the rear. Rowlands closed the Darling Harbour factory in November 1930 and Sydney Municipal Council resumed it c1930 for the development of the city produce markets.⁷²

Rowlands Pty Ltd is significant for its pioneering development of the production of aerated water from the mid 19th century and the development of other products including cordials in Victoria and

⁶⁷ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁶⁸ David Jones, *Thirsty Work: The Story of Sydney's Soft Drink Manufacturers*, David Jones, Glebe, NSW, 2009: 696-7.

⁶⁹ Lot 1 Section 4, Vol 1369 Fol 130, LPI.

⁷⁰ *Souvenir ... E Rowlands Pty Ltd*, Grosser, 1914, ML SLNSW.

⁷¹ Jones 2009: 693, 697.

⁷² Jones 2009: 693, 697, 702-3; *SMH* 13 Jan 1913: 9.

NSW. The water bottled at the Darling Harbour factory, thought to be one of the finest in Australia, came from a spring in the Blue Mountains leased from the government.⁷³

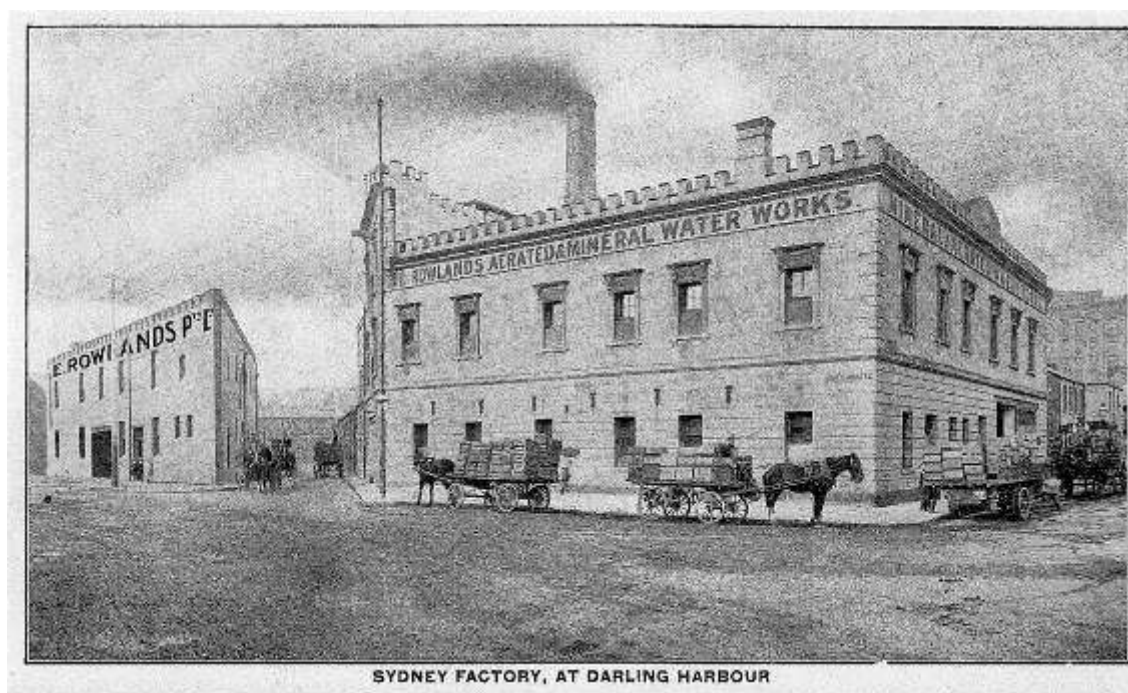


Figure 2.25: Rowlands Aerated and Mineral Water Works in Burns Street c1901-14. Looking east with Little Darling Street between the two Rowlands buildings, the stables is on the left (north). The horse drawn carts are loaded to distribute the aerated waters. Terraces on Little Hay Street (Block B7) are visible at right. *Souvenir [of] E Rowlands Pty Ltd*, 1914: 16, ML SLNSW.

⁷³ WF Morrison (Ed), *Aldine Centennial History of NSW, Queensland and South Australia*, Aldine, Sydney, 1888 [2]: np [Appendix: Biographical Sketches: E Rowlands].

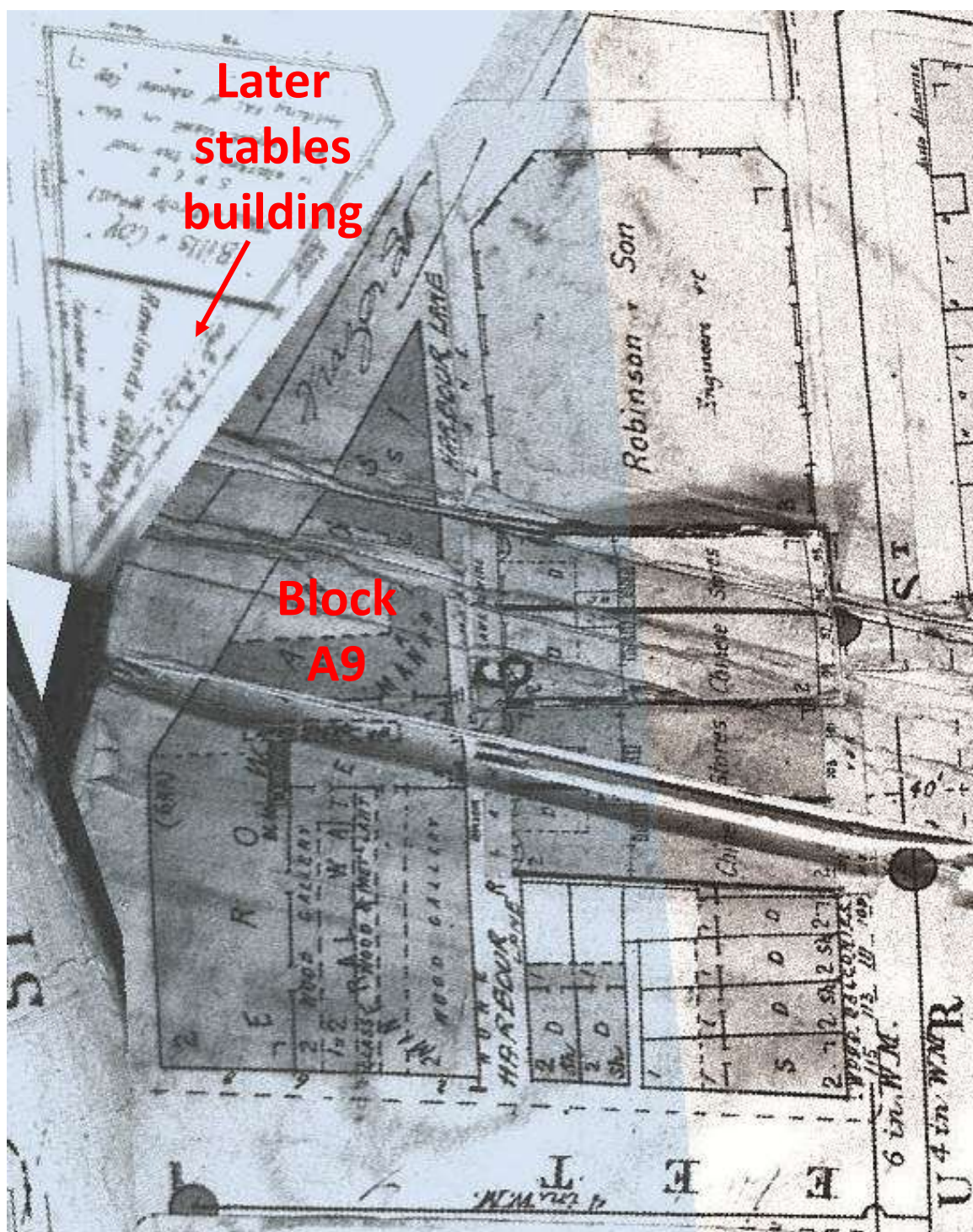


Figure 2.26: Detail of Block A9 in the early 20th century showing the Rowlands Aerated and Mineral Water Works in Burns Street. North is at the top; study area is shaded blue. *Structural plans of the City of Sydney* (cartographic material), *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW.

2.5.7 Block B2 West (10 ¾ p)⁷⁴

Frederick George Candish purchased the western part of Block B2 of Dickson's Mill Subdivision on 11 April 1865 (Figure 2.17, Figure 2.24). The site located on the southwest corner of Hay Street and Little Harbour Lane adjoined Block A3 on the north. By 1867 Candish had built a two-storey, brick house in Hay Street. By 1871 two more houses with shingled rooves were built with the address of the group shown in records as 44, 46 and 48 Hay Street. Candish lived in No 46 and the other two were unoccupied at the time of the 1871 rates assessment.

In 1871 Mary Ann Mannix purchased the allotment followed by John McEvoy and William John Hickey in June 1875. Entries in the *Sands Directory* indicate that the houses were leased to tenants including two boilermakers and a tailor. Rates records for 1877 show James Liddy as the landlord of 44-48 Hay Street, and after further subdivision of the site, two dwellings were built off Hay Street in Little Harbour Lane. Liddy is thought to have acquired the property through inheritance or acting as manager.

Mrs Liddy leased the Hay Street houses (now 120-124 Hay Street) in 1880. A high turnover of tenancy was characteristic of development in the inner city suburb and by 1880 the tenants had changed. The increasing density of development on the allotment between 1865 and 1880 is illustrated in Figure 2.27 showing the subdivision of the site and construction of a small, two-storey terrace of two dwellings facing Little Harbour Lane. The *Sands Directory* records the tenants in subsequent years with sailmaker Charles Kingsmill living in 122 Hay Street from c1880-1885.

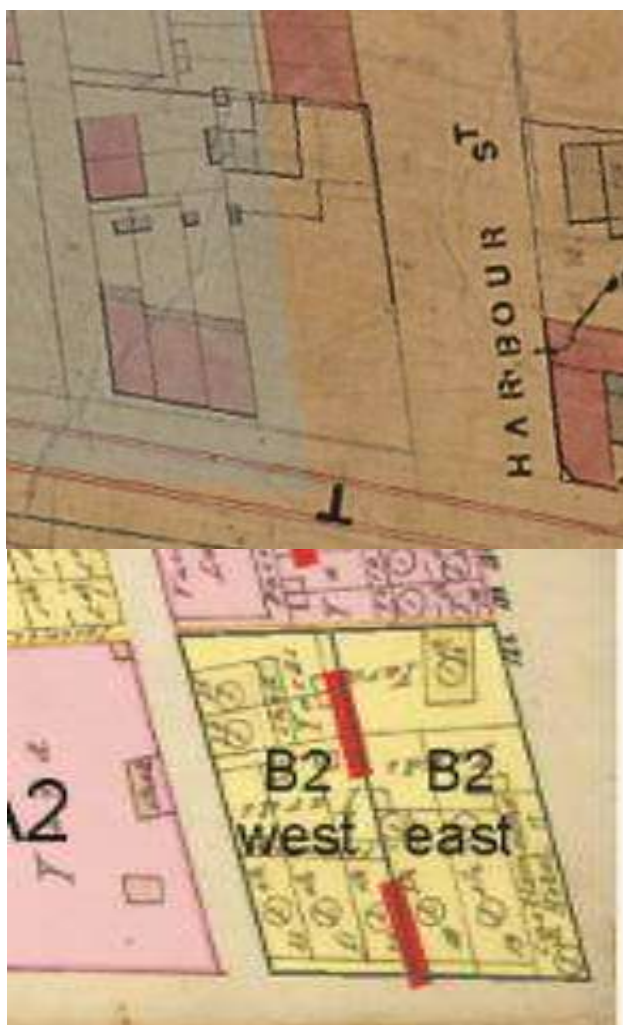


Figure 2.27: Block B2 West and East in 1865 (above) and 1880 (below). Harbour Street to the east and Little Harbour Lane is to the west and Hay Street to the south. North is at the top. Trigonometrical Survey, 1865 and *Plans of Sydney*, Blocks 104-109, Dove, 1880, Historical Atlas of Sydney, City of Sydney Archives.

⁷⁴ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

James Liddy was the landlord or owner of the Little Harbour Lane terrace in 1891 (Nos 6 and 8 off Hay Street). In 1896 Liddy was still leasing the five residences now recorded as 78-82 Hay Street and 2 and 4 off Hay Street (Figure 2.21). William John, Hickey, Mary Ann Liddy and others sold the property to Sydney Hydraulic & General Engineering Co Ltd in August 1906. In 1907 the company owned a number of sites in the locality and had built their company's brick, two-storey works on land at No 70-96 Hay Street incorporating the site where Liddy's terraces had formerly been. The company is also associated with land in Pier Street.

The title to the land was transferred to MacDonald Hercules Ltd in June 1911 and then to Standard Waygood Hercules Ltd in October 1913. The Municipal Council of Sydney resumed the site on 4 August 1921 for the proposed produce market development.

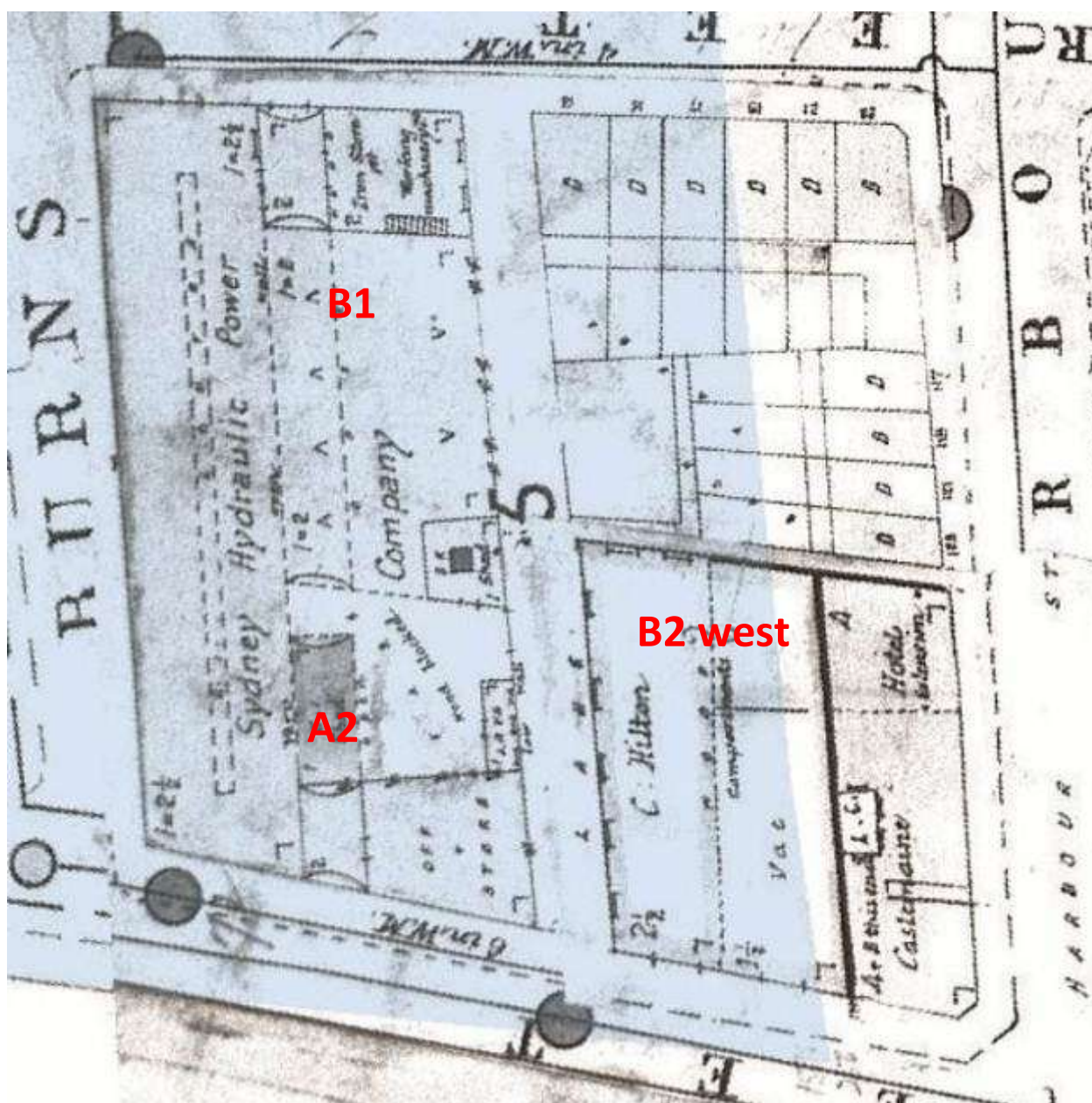


Figure 2.28: Plan showing the second phase of buildings on the Hay Street properties, Blocks B2 west and A2. North is at the top. *Structural plans of the City of Sydney* (cartographic material), Ignis et Aqua series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW.

2.5.8 Block B2 East (12 ¼ p)⁷⁵

Joseph Bennett purchased the eastern portion of Block B2 on 21 December 1865 (Figure 2.27, Figure 2.28). By 1867 a single-storey, shingle-roofed, timber cottage was built at 52 Hay Street on the corner of Dixon Street West (later Harbour Street). Bennett was one of few owner-occupiers in the locality. Like other landowners had done, multiple dwellings were built on the site and rates records for 1871 list a two-storey brick terrace of two residences with a shingled roof (50 & 52 Hay Street). Thomas Bennett is recorded as the owner of the terrace, one of which was leased. Joseph Bennett built a 'public house' on the corner allotment, 58 Hay Street. The two-storey building had six rooms and a shingle roof like many other buildings in the locality. Bennett further subdivided the allotments then built and leased a single-storey timber, shingle-roofed cottage facing Dixon Street West (later Harbour Street).

Bennett used 52 Hay Street as a combined shop and residence in 1877 and leased 50 Hay Street. The brick cottage in Harbour Street was tenanted, as was the former public house that was now used as a residence. The extent of development of Bennett's properties by 1880 is illustrated in Figure 2.27. With changes in street numbering the rates records list the leased properties as 126-130 Hay Street, including the Castlemaine Hotel (See Section 5.8.2), and 125 Harbour Street.

Circa 1881 the Castlemaine Hotel expanded into the adjoining property now incorporating 128 Hay Street. It is not known if it was rebuilt. Part of Bennett's property was sold to John Ahern by mortgagee sale in September 1885. Michael Perry and Thomas Bull purchased the property in 1886, selling it on to Thomas J Small in 1888. In 1891 it was transferred to the Intercolonial Land Company, of which Small was a director.

Thompson Brothers Agents managed the Hay and Harbour Street rental properties in 1891. A second two-storey brick house was built on the Harbour Street frontage by this time (127 Harbour Street). John Sulman, an architect of George Street, purchased the property in 1894, continuing to lease the houses and hotel.⁷⁶ Sulman subdivided the site leaving the Castlemaine Hotel (86 & 88 Hay Street) on the corner site and creating an L-shaped portion (84 Hay Street and 125 & 127 Harbour Street) with frontages on both streets. He converted the latter to Torrens Title in 1903.

2.5.8.1 84 Hay Street and 125 & 127 Harbour Street (6 ½ p)⁷⁷

The Sydney Hydraulic and General Engineering Co Ltd purchased the allotment in 1906, adding to their Darling Harbour landholdings. The title was transferred to McDonald Hercules Ltd in 1911 and to Standard Waygood Hercules Ltd in 1913. The Municipal Council of Sydney resumed the site on 4 August 1921 for the proposed produce market development.

⁷⁵ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁷⁶ Sir John Sulman (1849-1934) was a noted Sydney architect with an interest in town planning. The Darling Harbour property appears to be an investment and not linked to his architectural practice. Sulman gave evidence before the Royal Commission for the Improvement of the City of Sydney and its Suburbs in 1908-09. R E Apperley & P Reynolds, 'Sulman, Sir John (1849-1934)', *Australian Dictionary of Biography*, ANU, 1990, www.adb.anu.edu.au.

⁷⁷ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

2.5.8.2 Castlemaine Hotel, 86 & 88 Hay Street (5 ¾ p)78

Tooth & Co Ltd purchased the Castlemaine Hotel in March 1903 and it was leased to a series of publicans who managed the hotel (Figure 2.29). The Municipal Council of Sydney resumed the site on 4 October 1955 for the produce market.



Figure 2.29: The modestly scaled but carefully detailed Castlemaine Hotel and adjoining terrace in Hay Street, Haymarket c1920s. Sydney Water Series A photograph, A1009, in CCSA image No 067/067134.

2.6 Government Reclamation of Darling Harbour from 1864

In February 1864 a Select Committee of the Legislative Council was appointed to investigate and report on the reclamation and improvement of Darling Harbour and Blackwattle Bay. The Chief for Harbours and Rivers, Edward Orpen Moriarty, and the City Council's Engineer, Edward Bell gave evidence. Two reclamation proposals were presented, with one extending to Bathurst Street and the other to Liverpool Street. Proposals for commercial and public land use were presented. The main problems identified at Darling Harbour included changes in the channel due to successive reclamation, diminished tidal flow and ongoing silting. Increasing problems were experienced with sewage, drainage and pollution at the head of the bay. Outflow from the Hay Street Sewer was identified as the cause of health problems in the community. Reclamation was identified as having public health and economic advantages, while the increased wharfage would contribute to better coordination of ships and railway for the transport of goods and produce.⁷⁹

Reclamation at the head of Darling Harbour went ahead in August 1864 with plans to reclaim about 18 acres (7.28 ha) with the boundary line to curve round from the foot of Liverpool Street to a point near the end of the Darling Harbour Branch Line. Martin Gibbens was contracted to excavate spoil excavated from the railway terminus yard, then transport it down the branch line and tip into Darling Harbour northwest of Dickson's Mill subdivision.⁸⁰ A thousand yards of soil and debris were deposited a day. By February 1865 the stone dyke, built by 'Mr Mayes' (Robert Maze) to contain the fill, was completed at a cost of £1526. The 750 feet (228.6 m) long retaining wall averaged nine feet (2.74 m) in height and was 3 ½ feet (1.07 m) above the high water mark.⁸¹ With the potential

⁷⁸ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁷⁹ 'Progress Report from the Select Committee on Darling Harbour & Blackwattle Bay: Minutes of Evidence, 1863-4,' NSW V & PLA, Sydney, 1864: 1089-1099.

⁸⁰ *SMH* 20 Aug 1864: 8; NRS 16348 Item 1864/39 SRNSW.

⁸¹ *SMH* 18 Feb 1865: 8; *SMH* 21 Mar 1865: 10; NRS 12419 No 2/896A (part), SRNSW; NSW Statistical Register 1865 cited in PWD [1984]: 65.

to reduce the quantity of fill required, it is likely that old wharf and pier structures in the reclamation area were incorporated in the fill. An 1865 City of Sydney Trigonometrical Survey documents the extent of reclamation at the head of the harbour (Figure 2.30).

Temporary open channels through the reclamation area funnelled wastewater from the Hay Street sewer and other drains to the harbour shore. The extension of the Hay Street Sewer was to be undertaken after the proposed reclamation work (Section 2.9).⁸²

A plan commissioned by the Harbour Commissioners in 1866 (Figure 2.31) illustrates the extent of the reclamation ultimately carried out, and the position of the stone sea wall in relation to former landmarks such as Dickson's pier and dam wall, and the millpond reclaimed for the subdivision of the Dickson's Mill Estate discussed in Section 5.0.



Figure 2.30: Part of the 1865 survey showing the reclamation of land at the head of Darling Harbour and the line of sewerage and stormwater channels draining into the harbour. The Hay Street sewer extension is the channel running approximately north-south and left open for a period of time. Note the pencil markings indicating the Council annotations of later buildings and streets. The former creekline and proposed drain along Hay Street to the south is visible. Trig Survey: Section T, 1865, Historical Atlas of Sydney, City of Sydney Archives.

⁸² Aird 1961: 128-9.

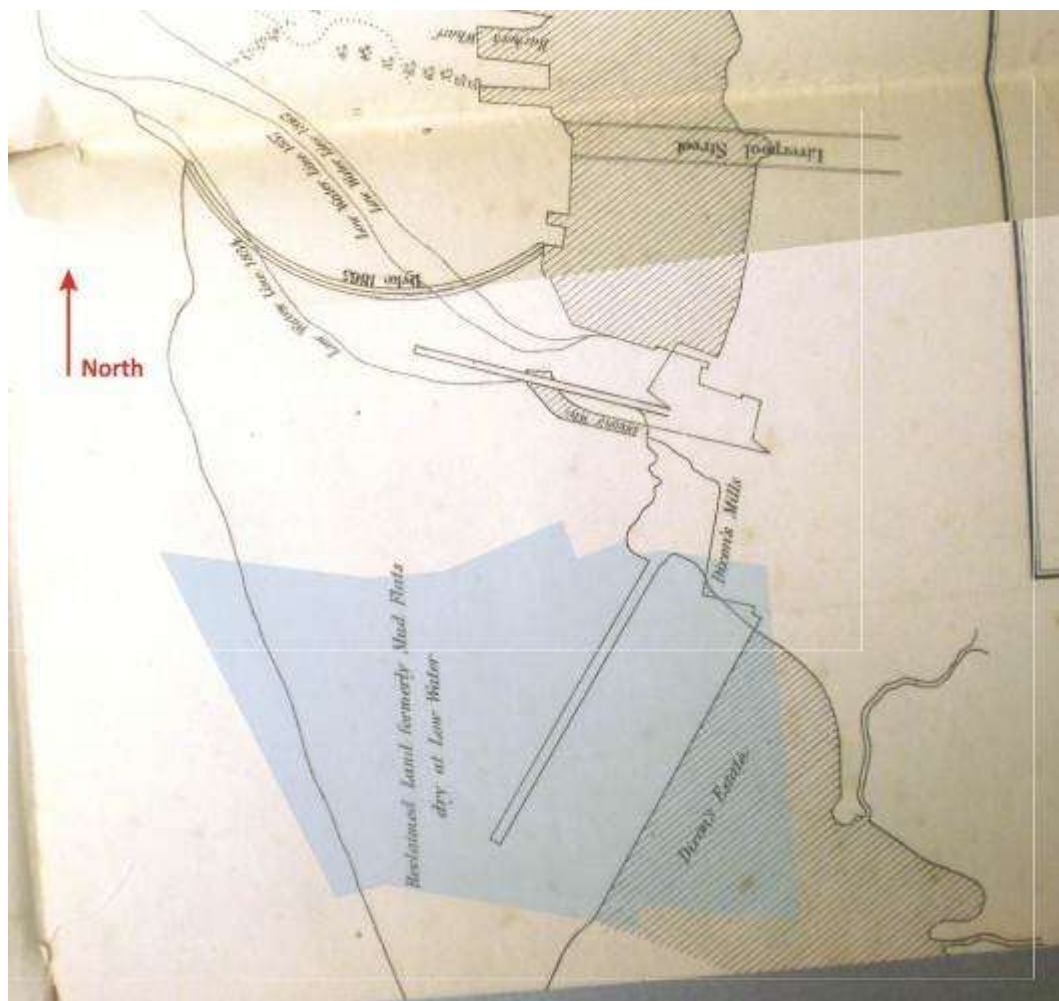


Figure 2.31: Portion of the Sydney Harbour Commissioner's plan of Darling Harbour dated 1866 and incorporating the study area. Surveyor General, Sydney, June 1866, ML SLNSW.

A report by the Harbour Commissioners in April 1866 concluded that rapid and serious shoaling or silting was still taking place. It was agreed that it was largely due to silt and rubbish washed down from the streets, either directly or from the sewers. The City Council was criticised for using the harbour as an easy and cheap method of rubbish disposal at the expense of public health and the environment.⁸³

The 1870s panorama from the Town Hall illustrates the gradual subdivision of the reclaimed land (Figure 2.32). The western section of the study area, south of Pier and north of Macarthur Street, had few buildings by this time. The total cost of the scheme including reclamation, construction of stormwater sewers, timber wharf, stone seawall and overbridge (excluding land resumptions) was estimated at £178,000.⁸⁴ Ultimately the reclamation terminated just south of Liverpool Street; a total of 14 ½ acres (5.87 ha) exclusive of wharfage. The expense as well as warnings about the environmental impact might have influenced the decision to limit the extent of reclamation at this time.⁸⁵

⁸³ Broadbent 2010 (5): 506.

⁸⁴ Royal Commission for the Improvement of the City of Sydney: Final Report, 1909: xxiv, xii, CCSA.

⁸⁵ PWD [1984]: 66.

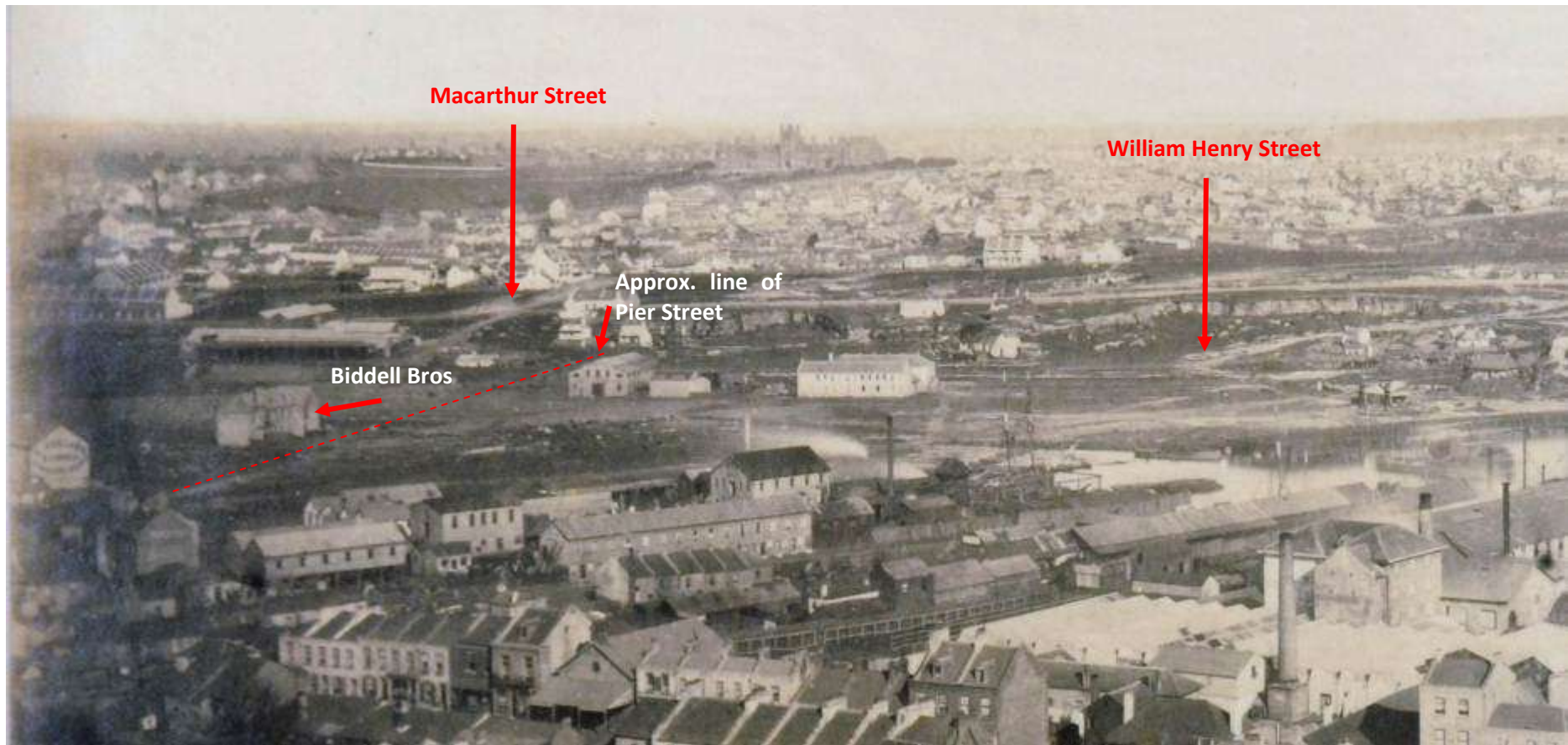


Figure 2.32: Panorama from Town Hall, 1870s, looking southwest over the reclaimed land at the southern end of Darling Harbour. The line of Hay Street, not yet properly made, is slightly to the south of the line of Macarthur Street, Pyrmont. William Henry Street is to the north of Pier Street and to the south of the Iron Wharf. By the 1870s there was a gradual uptake of the newly reclaimed land. All of the western half of The Haymarket study area is within this image and some of the eastern part. This shows the reclamation further to the north associated with the 1870s Iron Wharf and new seawall. The Biddell Bros confectionery factory is arrowed; compare Figure 2.42. City of Sydney.

2.6.1 Government Subdivision and Sale of Reclaimed Land at Darling Harbour from 1870

A portion of reclaimed land was reserved for railway purposes while an area bounded by extensions of Pier Street and Hay Street, and Little Darling Street (Fraser Street), Factory Street, and Little Harbour Street was released for public auction (Figure 2.33).



Figure 2.33: Plan dated 1870 showing the government subdivision on reclaimed land at the head of Darling Harbour adjacent to Dickson's Mill Subdivision. M2 811.1733/1870/1 ML SLNSW.

The government auction at Darling Harbour, run by Richardson & Wrench on 12 and 13 December 1870, was well attended. Allotments in the four sections ranged from five to 11 perches (0.01-0.03 ha) with a starting price of £2 per foot. Bidding was fierce and sale results on the second day were higher than the first. As an example, Lot 11, Section 2 sold for £7/2/6 per foot compared to the average price of £3 to £4 per foot.⁸⁶ Buyers ranged from saddlers, dairymen and carters, to share brokers, investors and merchants. Despite the competition to purchase sites, some remained undeveloped until the late 19th and early 20th centuries, in particular those between Hay and Lackey Streets and also sites on Pier Street (Figure 2.32).

⁸⁶ SMH 12 Dec 1870: 7, 13 Dec 1870: 5 & 7, 14 Dec 1870: 5.

A brief history of the development of the government subdivision is provided through examination of some of the businesses established. Due to the size of the subdivision and the number of land titles transactions it is not possible to discuss each site individually. The following sections in the report should be read in conjunction with schedules in Appendix 5: Land Titles - Government Subdivision, 1870, Appendix 7: City of Sydney Council's Rates and Assessments, and Appendix 8: *Sands Directory*. The plan in Figure 2.33 should be referred to for the location of allotments.⁸⁷

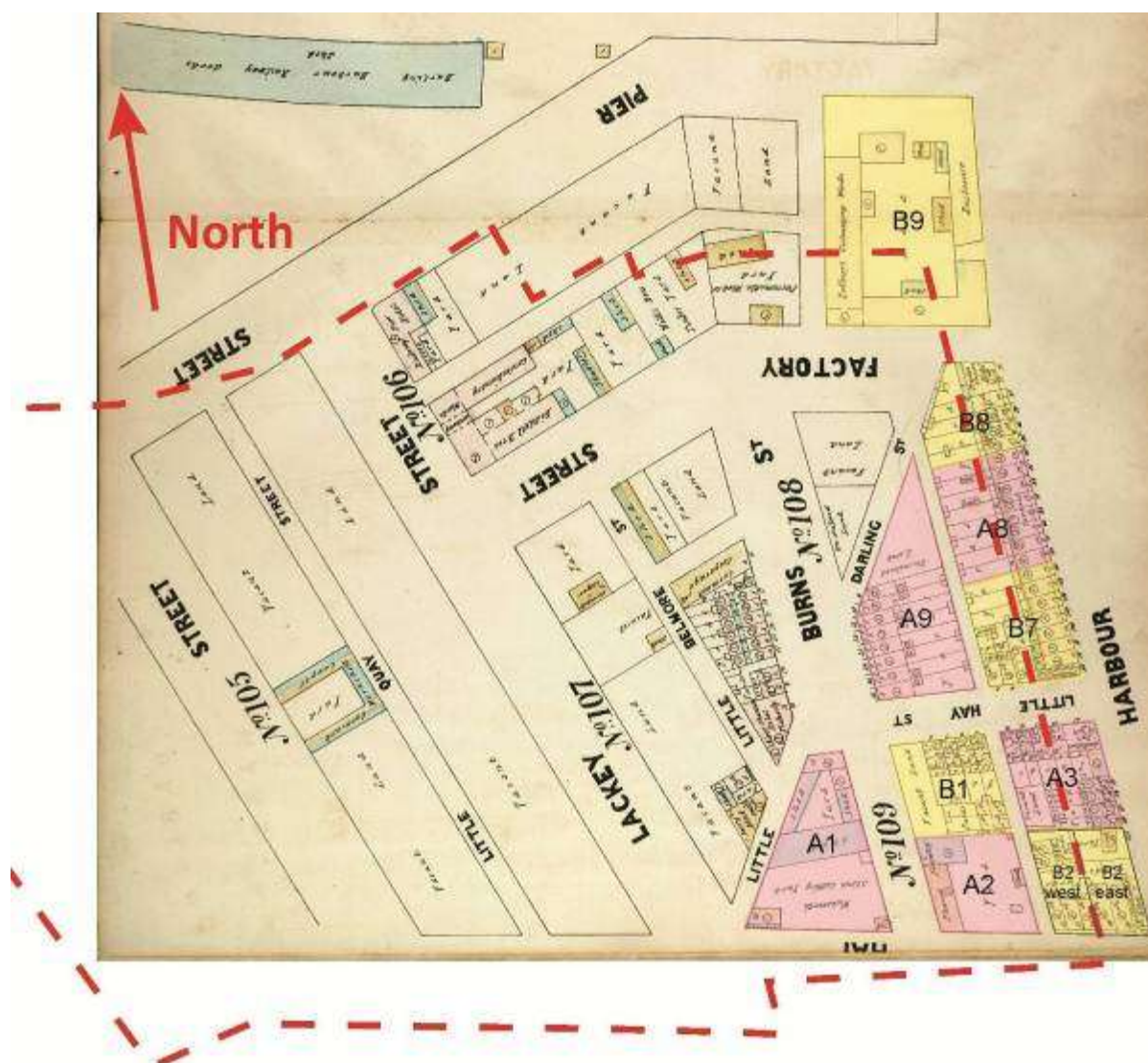


Figure 2.34: There was some development to the west of Dickson's Mill estate, west of Little Darling Street, by 1880. There was development of northeastern side of Lackey Street with the Railway Pier Hotel and the Biddell Bros confectionery works and two timber yards. There were houses along the western side of Burns Street and the River Shannon Hotel and Cormack Cooperage at either end of the block, and a nearby blacksmith. Land to the west of Lackey Street was relatively undeveloped by 1880 except for the cooperage. North at top. Dove, 1880 plan, Historical Atlas of Sydney, City of Sydney Archives.

⁸⁷ Note: Further information about some of the buildings discussed is documented in Sydney Water's Surveyors' Field Books including No: 1973 (Oct 1926) and No: 1923 (Jan-Apr 1927). Similarly Sydney Water's Blackwattle sheets could also prove useful although they are in poor condition and not dated. These sources should be consulted should further research be required.



Figure 2.35: By the early 20th century most of the western half of the study area was developed. North at top. *Structural plans of the City of Sydney* (cartographic material), *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW.

2.6.1.1 Alexander William Cormack (d1909), Master Cooper of Cormack's Cooperage⁸⁸

Alexander William Cormack of Bullanaming Street, Redfern purchased Lot 3 Section 3 (5 p in Darling Street, later Burns Street) at the government auction in December 1870 (Figure 2.36). It was one of a number of pieces of land that he acquired or leased in the subdivision over the next two decades. The majority of Cormack's landholdings were in Section 3 with frontages to Burns Street, Factory Street and Belmore Street, with others in Section 1 facing Belmore Street and Hay Street (Figure 2.38).

Purchasing land from another successful bidder at the government auction, Cormack added Lots 24 and 25 Section 1 to his landholdings in 1871. Cormack's cooperage began operations at Darling Harbour in 1872 and in 1873 he purchased Lots 4 to 8 in Section 3 to the east. The extent of Messrs Cormack Brothers cooperage in 1874 is illustrated in Figure 2.37.⁸⁹

⁸⁸ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA. See Schedules in Appendices.

⁸⁹ AT&CJ 26 Sep 1874: 501.



Figure 2.36: Detail of 1870 plan showing the government subdivision on reclaimed land at the head of Darling Harbour adjacent to Dickson's Mill Subdivision. M2 811.1733/1870/1 ML SLNSW.



Figure 2.37:
Cormack
Brothers
Cooperage with
the Darling
Harbour Branch
line in the
background.
AT&CJ 26 Sep
1874: 501.

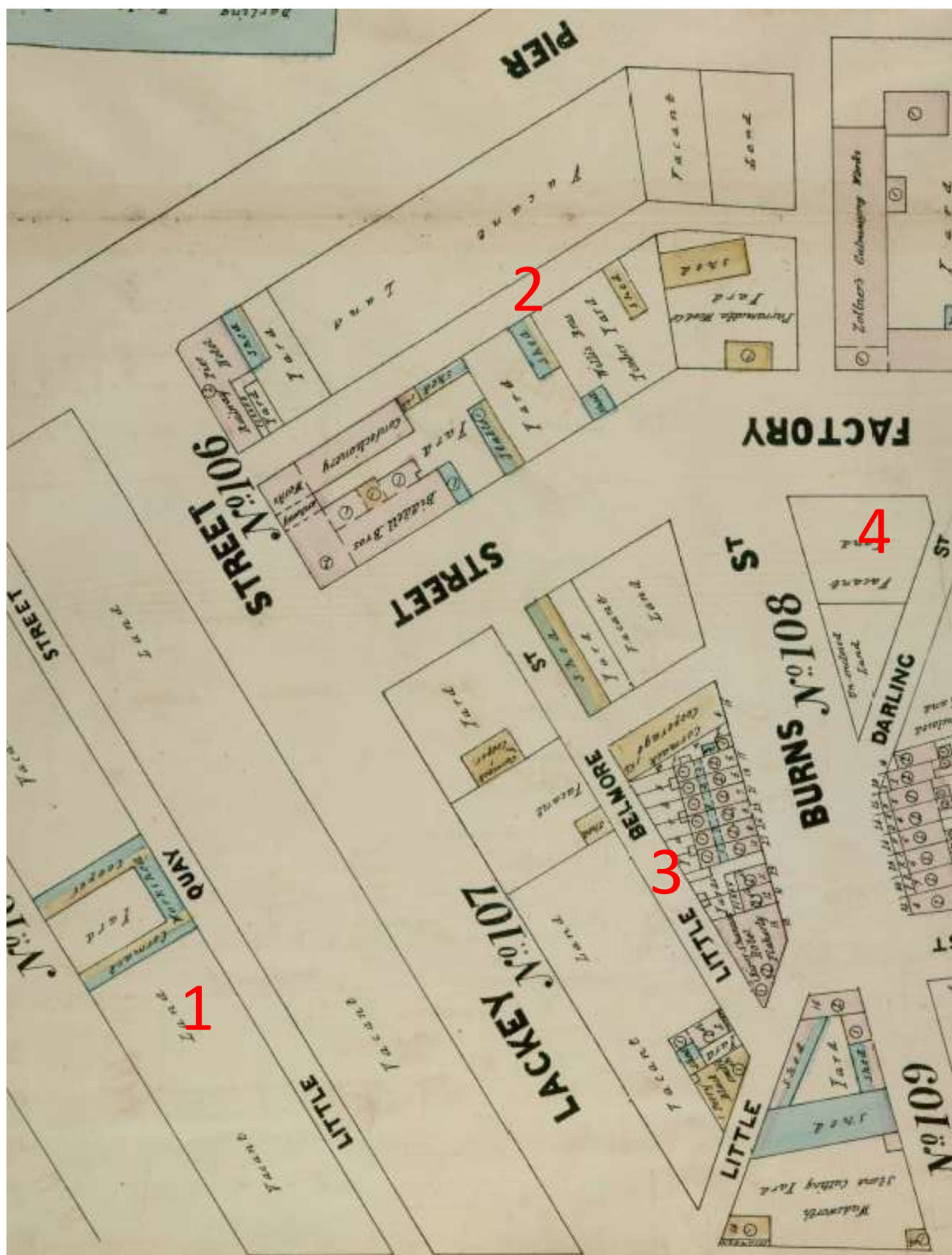


Figure 2.38: Detail from Dove's 1880 plan showing structures within Sections 1, 2, 3 and 4 of the government subdivision. Multiple sites on this plan were linked to Cormack's cooperage. North at top. Dove, 1880 plan, Historical Atlas of Sydney, City of Sydney Archives.

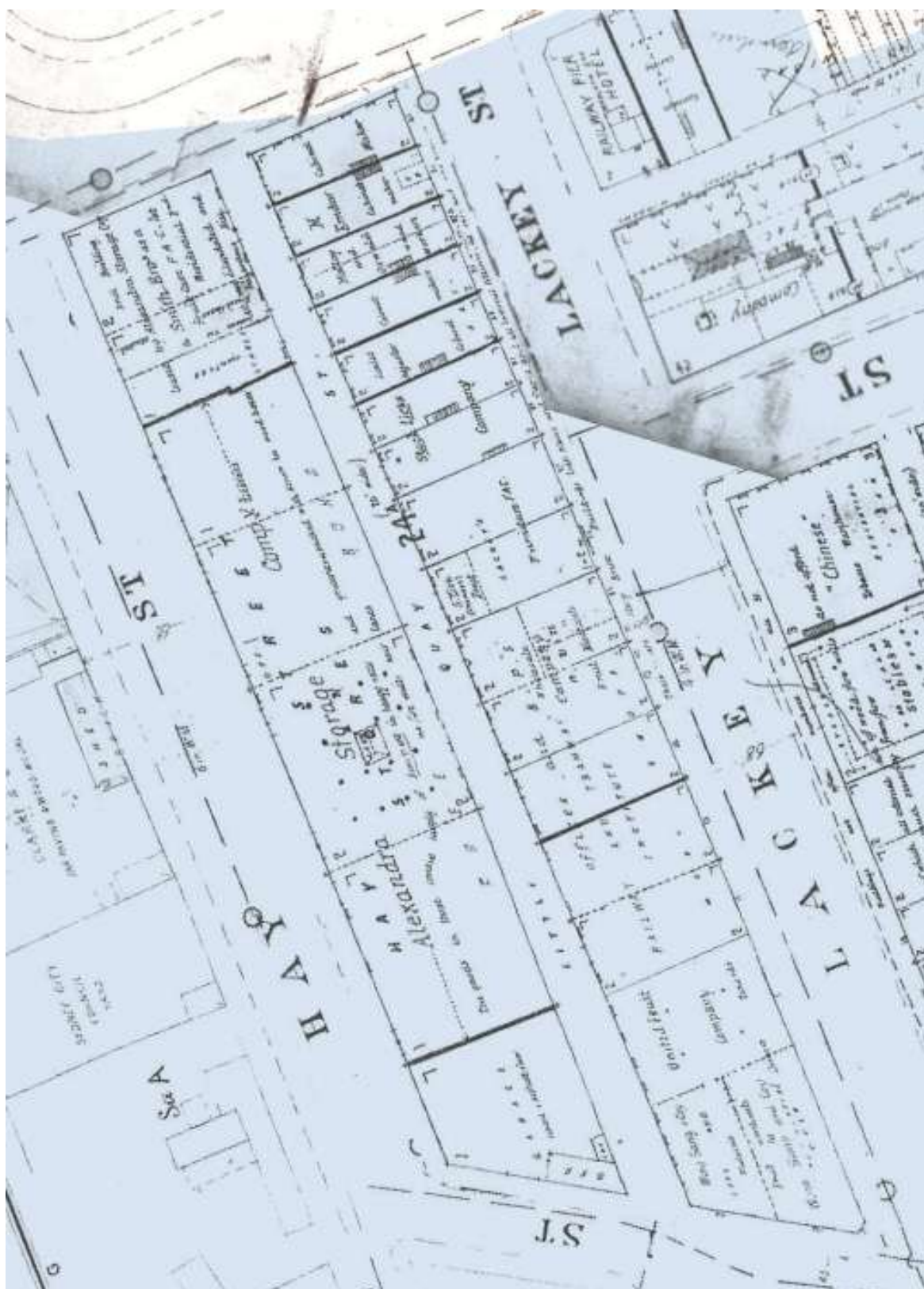


Figure 2.40: Section 1 of the government subdivision of the western section of the study area. North at top. *Structural plans of the City of Sydney* (cartographic material), *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW.



Figure 2.41: Section 2 of the government subdivision of the western section of the study area. This shows the extent of the Biddell Bros confectionery factory and the location of the Railway Hotel on the corner of Pier and Lackey Streets. North at top. *Structural plans of the City of Sydney* (cartographic material), *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW.

The successful steam cooperage was reported on in the *Australian Town & Country Journal*, as were the plans for its expansion. Thirty men were employed building brewers' casks, oil and tallow casks, wine and butter kegs, other storage containers and related equipment. Due to the lack of suitable timber, Quebec oak was imported for the purpose. Clayton and Shuttleworth 10 hp portable engines powered the saws.⁹⁰ Rates assessment for 1877 record the Hay Street cooperage as constructed of timber with an iron roof. The 'off Burns St' cooperage was constructed of brick, timber and iron and assessment records noted plans for the construction of six houses on the site.

In 1880 the company acquired Lots 6 and 9 Section 1, however Lot 9 was quickly resold. Rates assessments for 1880 record the cooperage at 6 Lackey Street and 15 Burns Street, while a brick, two-storey terraced housing owned and leased by Alexander Cormack was recorded at 15-27 Burns Street. The house numbers and address of the cooperage differ from year to year. The cooperage was demolished in 1882.

Lot 14 Section 3 was leased from 1885 until 1898 and Lots 17 and 18 Section 3, closer to the main part of the cooperage were purchased in 1886. In 1902 the company adopted the name the 'Centennial Cooperage'.⁹¹ At some stage the business diversified into timber sales carried on at Darling Harbour and other locations. Alexander Cormack died in 1909 and one of his sons, Havelock Hunter Cormack, managed the estate until his replacement by the Perpetual Trustee Company of

⁹⁰ *AT&CJ* 26 Sep 1874: 501.

⁹¹ *SMH* 6 Nov 1902: 5.

NSW. HH Cormack purchased the business in 1910 and is associated with a number of other Darling Harbour sites.⁹²

2.6.1.2 Biddell Brothers Wholesale Confectioners - Rowland and Mary Ann Biddell⁹³

Rowland Biddell and Mary Ann Biddell, confectioners and partners in Biddell Brothers, purchased Lots 5 to 10 Section 2 at Darling Harbour in 1871 from the winning bidders after the auction. They purchased Lots 3 and 4 Section 2 in 1872 and 1874 respectively. Like Rowland Biddell, Mary Ann Biddell's profession is shown on land titles as a confectioner however her role in the company is not credited in the business name, 'Biddell Brothers', or in reports about the company. As one of few women found to be involved in running a large business in Darling Harbour at this time it warrants investigation.

The firm of Biddell Brothers was established in Sydney as early as 1857 with the owners having trained in London. The first store was in George Street in Brickfield Hill and by 1872 a factory was established at Darling Harbour (Figure 2.42).

Lots 17 and 18 Section 3 were purchased in 1874. Previous owners of Lot 3 include Frederick Boyce Palmer, a Sydney draper (1870-1871), and Henry Zions, also a draper (1871-1872). John Thomas Toohey, a Sydney brewer, was the first owner of Lot 4 (1870-1874).

In 1878 an illustration of the Biddell premises at Darling Harbour shows that the older building had been remodelled, extended or rebuilt (Figure 2.43). Employing 75 hands, the plant and machinery housed at Lackey Street was estimated to have a value of more than £7000. In 1891 the factory's address was Lackey Street and the Factory Street allotments are shown in rates records as being used as an office, and situated adjacent to their wood and coal yards. The street numbering in the rates records vary from year to year.

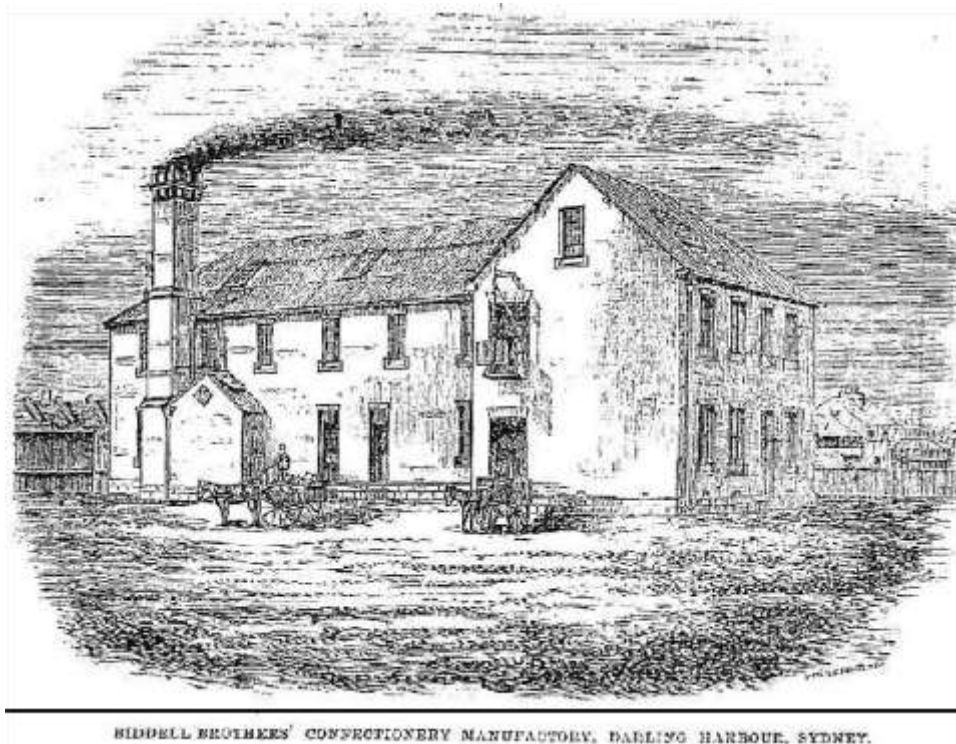


Figure 2.42: An illustration of Biddell Brothers' Confectionery Manufactory at Darling Harbour in 1872. The building faced west towards Ultimo. AT&CJ 14 Sep 1872: 17.

⁹² SMH 13 Aug 1910: 3.

⁹³ Sands Directory, Sydney; Rates & Assessments Records, CCSA; Land Titles LPI. See Schedules in Appendices.

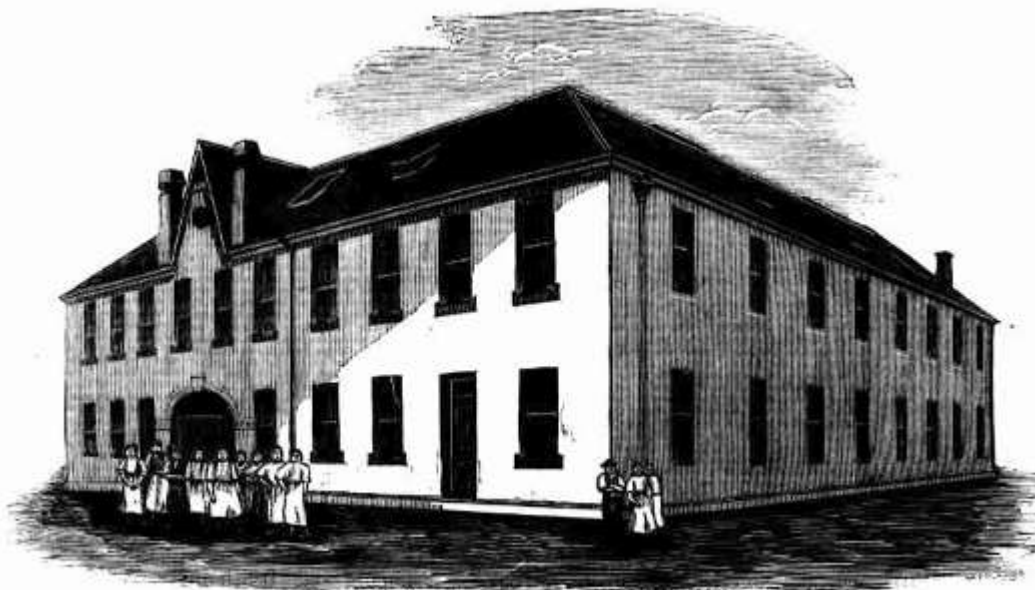


Figure 2.43: Biddell Brothers confectionery factory depicted in an illustration in 1878. Most of the staff illustrated in this image appear to be women with aprons. *AT&CJ* 18 May 1878: 32.

An article on Biddell Brothers accompanied the illustration in the *Australian Town & Country Journal* in 1878. The three-storey brick building built on a stone foundation measured 90 ft by 70 ft (27.43m x 21.34m) was divided into wings. The extensive works included engines made by the Atlas Engineering Works and the office was connected to the telegraph for communication with the George Street store. The popular confectionery was sold locally and exported.⁹⁴ James Loudon, whose name appears on some land titles, was admitted as a partner in the firm in 1872 but the arrangement was dissolved in 1880.⁹⁵ From at least 1880 Biddell's leased Lot 3 and 4 at 26 Factory Street (later No 6) to George Willis for a timber yard. The extent of Biddell Brother's confectionery factory on Section 2 in 1880 and then by the early 20th century was extensive (Figure 2.38, Figure 2.41).

2.6.1.3 Henry Lee, Carpenter and Licensed Victualler - Railway Pier Hotel⁹⁶

Henry Lee, a carpenter of Plunkett Street, Woolloomooloo, was the successful bidder for Lot 11 Section 2 at the government auction in December 1870 (Figure 2.36, Figure 2.38). The site lay at the corner of Belmore Street (Lackey Street) and Pier Street, Darling Harbour. In September 1882 Lee, now a licensed victualler, purchased Lot 12 to the east, in Pier Street. In 1901 Lee opportunistically purchased further land to the east including Lots 13-15 but quickly resold it to the Sydney Suburban Hydraulic Power Co Ltd that was establishing their works in Pier Street (Figure 2.41).

Lee built the Railway Pier Hotel by May 1879. Originally single storey and of brick, it was later recorded in the rates records as two storey with at least 12 rooms. The address at 2 or 4 Lackey Street was later changed to 13 or 15 Pier Street and is shown in Figure 2.38 to the north of Biddell Brothers. Between 1891 and 1896 Lee built a two-storey brick store on the adjoining Pier Street allotment (15 & 17 Pier Street) (Figure 2.41). The hotel was renamed the Central Markets Hotel by c1902-3. Sydney architects Nixon & Adam drew up the plans for the proposed alterations for the hotel in 1902 and it was remodelled in 1910 (Figure 2.44).⁹⁷

⁹⁴ *AT&CJ* 18 May 1878: 32.

⁹⁵ *SMH* 21 Jan 1873: 10; *SMH* 3 Jul 1880: 15.

⁹⁶ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA; Land Titles LPI. See Schedules in Appendices.

⁹⁷ Plans of Licensed Premises: Hotel Plans, SRNSW; *SMH* 2 May 1879: 8.



Figure 2.44: Looking northeast along Pier Street from corner of Lackey Street, with the Central Markets Hotel on the corner to the right, and the surviving Pumphouse in the middle ground. 31 August, 1932, SRC9999. Originally CRS 57/489. City of Sydney Archives.



Figure 2.45: Looking southeast to Central Markets Hotel, corner Pier and Lackey Streets, with the small building to the left and the surviving pump house building in the middle ground. Prior to the construction of the Entertainment Centre. NSCA CRS 700/086, 1979, City of Sydney Archives.

2.6.1.4 Patrick Minehan, Victoria Street, Ultimo labourer, and Margaret Minehan - River Shannon Hotel, 33 Burns Street (Lot 1 Section 3), and terraces at 29-31 Burns Street (Lot 2 Section 3)⁹⁸

Patrick Minehan, a labourer of Victoria Street, Ultimo, was the successful bidder for Lot 1 Section 3 (4 p) at the government auction in December 1870. The land bounded by Little Darling Lane and Burns Street was adjacent to land owned by Cormack's Cooperage. In 1877 the title was transferred to Michael Healey, a Sydney freeholder. The River Shannon Hotel built on the site was up for sale in March 1877 and is likely to have been sold with the land.⁹⁹ Dove's 1880 plan shows Lot 1 or 33 Burns Street as the site of Healey's River Shannon Hotel managed by Edward M Flaherty (Figure 2.38).

In 1882 Margaret Minehan, Patrick Minehan's wife, repurchased 33 Burns Street and Margaret Minehan managed the hotel. The brick hotel was described in 1891 rates as two storey, with a slate roof and 12 rooms. By 1896 it was no longer operating as a hotel and the rates records show the landlord as the St Joseph Building Society. It was demolished during the early 20th century (Figure 2.39).

William Nunn purchased Lot 2 Section 3 to the north of the River Shannon Hotel in the 1870 government auction. George Barden of Cooks River acquired the property in 1876. Rates and assessment records for 1877 show William Minehan listed as the owner or landlord of the two, two-storey residences on Lot 2. The slate-roofed, brick terraces had four rooms and it is thought that the Minehans were tenants rather than owners. Figure 2.38 shows the location and extent of the terraces to the south of Cormack's Cooperage.

William Alexander Manning, solicitor, purchased Lot 2 in 1881, and resold it to Benjamin Bragg in 1885. Margaret Minehan of the River Shannon Hotel purchased the property in 1887. Minehan leased the houses in 1891, and was living in and operating the hotel next door. Minehan formally acquired the title in 1925 (houses at 29 & 31 Burns Street) but ownership was short-lived and both Lots 1 and 2 were sold by mortgagee sale to George Chew & Co Ltd in the same year. The terraces, along with the hotel were not demolished until the 1920s (Figure 2.39, Figure 3.6).

2.6.1.5 William Goodin, tollkeeper of Camperdown¹⁰⁰

William Goodin, a Camperdown tollkeeper, purchased Lots 1 and 2 Section 2 in 1870 (Figure 2.36, Figure 2.38). The land on the corner of Factory Street and Little Harbour Street was to the west of Zollner's Galvanizing Factory. Goodin established a wood and coal yard at 28 Factory Street and by 1880 had built a single-storey, timber and iron building. Dove's 1880 plan of the area shows the Parramatta Wood Co yard which Goodin is thought to have operated (Figure 2.38). By 1882 the property was leased to George Taylor. Other tenants associated with the site include Cowell & Co fuel and produce merchants (c1887-1891). Mary W Paterson purchased Lots 1 and 2 in 1901 and the title was transferred to Sydney Wholesale Druggists and a large building was erected to cover the property (Figure 2.41).

2.6.1.6 Mort & Co and Goldsborough Mort & Co¹⁰¹

Mort & Co gradually acquired Lots 9 to 17 Section 1 west of Lackey Street from 1884 (Figure 2.36).¹⁰² This land is the northern half of the property on the western side of Lackey Street (Figure 2.40). Rates and assessment records for 1882 show Mort & Co had established stores on the site (1, 3 & 5 Lackey Street at this time). The two-storey iron buildings with iron roofs were valued at the

⁹⁸ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA; Land Titles LPI. See Schedules in Appendices.

⁹⁹ *SMH* 4 May 1877: 13.

¹⁰⁰ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA; Land Titles LPI. See Schedules in Appendices.

¹⁰¹ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA; Land Titles LPI. See Schedules in Appendices.

¹⁰² *Plans of Sydney*, Blocks 104-109, Dove, 1880, CCSA.

substantial sum of £1,000, although later valuations differ markedly. In 1888 the titles were transferred to Goldsbrough Mort & Co. In 1896 Goldsbrough Mort & Co were leasing the property to P Chauvel & Co although they were occupying it again in 1907. The Railway Commissioners acquired the site in c1913-14. A brick single-storey building survived into the 1930s (Figure 2.46, Figure 2.47).

2.6.1.7 Messrs Gilchrist & Watt and the Sydney & Suburban Hydraulic Power Co¹⁰³

William Oswald Gilchrist (d1920) and John Brown Watt, merchants of Market Street, purchased Lots 13-19 Section 2 at the government auction at Darling Harbour in 1870 (Figure 2.36). The Pier Street site extended from Little Harbour Street to Lackey Street. Gilchrist and Watt also acquired other land in Harbour Street to the east. Lots 13 to 16 and part of 17 are thought to be associated with the study area. Purchased for its investment potential or later use, the land remained vacant until c1880-1881 when 41 Pier Street, a small part of Gilchrist and Watt's land, was leased to William Nelson for a turner's shop that was demolished by 1882. The rest of the vacant land was fenced.

The titles to all allotments were transferred to Gilchrist in 1886. The Sydney & Suburban Hydraulic Power Co purchased Lots 16 to 19 in 1889, taking out a mortgage with Gilchrist. The company established a hydraulic pumping station on the site around this time. The company acquired Lots 13, 14 and 15 in 1901 (Figure 2.41). In the 20th century part of the company's land in Pier Street remained vacant while other parts such as 19 Pier Street were built upon. The company is associated with Blocks A2, B1 and B7 of the Dickson Mill Subdivision to the east.

Part or all of buildings thought to be located in the study area include workshops at 17 Pier Street built in the 1920s (Figure 2.41, Figure 2.44, Figure 2.45). A view of Pier Street looking west is reproduced in Figure 2.48, showing the westernmost part of the site in November 1932 (Figure 2.48). The building was demolished c1962 and replaced by a tyre business (Figure 2.49).¹⁰⁴



Figure 2.46: View from the corner of Hay and Lackey Street, looking northwest along Lackey Street. The Mort & Co stores are in the background of the photo, along Lackey Street; compare Figure 2.40. Note the Wing Sang & Co importers building on the northwest corner of Lackey Street. 7 September, 1937, NSCA CRS 51/3605, City of Sydney Archives.

¹⁰³ *Sands Directory*, Sydney; Rates & Assessments Records, CCSA; Land Titles LPI. See Schedules in Appendices.

¹⁰⁴ AHMS Pty Ltd, 'Former Hydraulic Pumping Station No 1 Darling Harbour CMP,' SHFA, May 2009: 22,23, 28.



Figure 2.47: View to southwest from Pier Street along Lackey Street with the stores buildings in the foreground. 7 September, 1937, NSCA 51/4659, City of Sydney Archives.



Figure 2.48: Photograph of road works in Pier Street in November 1932 with the parapeted, single-storey pumping station workshop (C), adjacent to the study area, to the right of the main pumping station building (B). CCSA 036372.



Figure 2.49: The workshop being demolished and yard at 17 Pier Street (linked to the study area) in 1962. CCSA 036394.

An aerial photograph of the site in 1949 illustrates the footprint of the buildings on the site at this time (Figure 2.50).



Figure 2.50: Aerial view of Pier Street in 1949 and the Sydney & Suburban Hydraulic Power Co's buildings at this time. Aerial Survey AO037, 15 Dec 1949, Historical Atlas of Sydney, City of Sydney Archives.

Hydraulic Power Station No 1 closed down in 1975 with parts of the office, boiler house, coal store, stack and workshops demolished prior to this time.¹⁰⁵ The surviving pumping station building is outside the study area and is in use for other purposes. The site is of technological significance for its link to the Sydney & Suburban Hydraulic Power Co. The pumping station played a pivotal role in the industrial and commercial development of Sydney and the company was the first major public provider of hydraulic power in Sydney.¹⁰⁶

It is thought that Lots 13-14 are in the study area but the nature of the company's buildings or infrastructure in this area is unclear. If further research is required in this part of the study area, Godden & Associates' report, 'Heritage Significance of the Sydney and Suburban Hydraulic Power Co Building, Pier Street, Sydney', should be consulted.¹⁰⁷

2.7 John Harris' Ultimo Estate and the Study Area (1872-1907)

Ultimo Farm was partitioned among the beneficiaries of Harris Estate in 1860.¹⁰⁸ A Crown plan documents the westernmost part of the study area at the time of its resumption by the Railway Commissioners in 1907 (Figure 2.51). The section of the report should be read in conjunction with the schedule in Appendix 6: Land Titles - Harris' Ultimo Estate - Select documents.

¹⁰⁵ AHMS Pty Ltd, May 2009: 22.

¹⁰⁶ 'Hydraulic Pumping Station (former)', NSW Heritage Office Inventory, Database No 5045579, last updated 6 Feb 2003.

¹⁰⁷ Godden & Associates, 1982, SHFA Archives.

¹⁰⁸ A number of deeds relate to the partitioning of the estate, for example Bk 62 No 705 & Bk 66 No 189 LPI. Not all Blocks are identified.

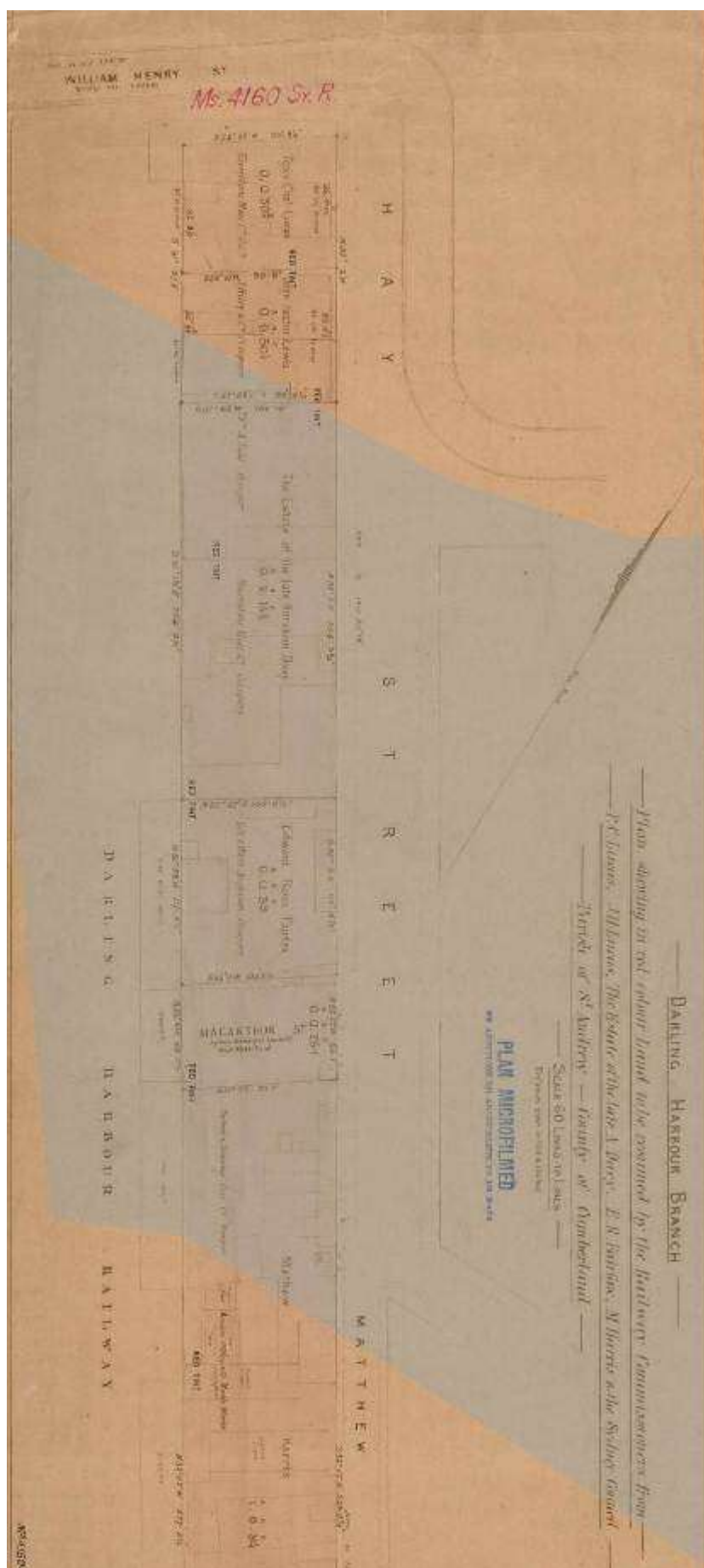


Figure 2.51: Part of a 1907 Crown plan showing land in the Harris Estate linked to the study area (Ms 4159Sy LPI).

The land in Figure 2.51 is associated with Block 22 of the Ultimo Estate's, inherited by John Harris of Shanes Park, and Block 21, inherited by Matthew Harris. Prior to the reclamation at the head of Darling Harbour the low-lying land was swampy and possibly affected by tides.

In 1 May 1872 John Harris (a beneficiary of the estate of the grantee John Harris) leased the northernmost part of Block 22 to Abraham Davy of Harrington Park, Narellan, for the term of 33 years. An unusual aspect of the deed was detailed instructions for the construction of 'building or engineering huts' of stone, brick and hardwood to the value of not less than £500 and the appropriate upkeep of 'all buildings of every description'. It is not known if the structures were built.

Davy died in April 1874 and in September 1882 the land (2 r 13 ¾ p) was conveyed to Thomas Robert Allt 'upon trusts of Abraham Davy'. The land was bounded on the west by the Darling Harbour Branch Line, on the north by William Henry Street and on the east by Hay Street (Figure 2.52). Thomas A Field and the Riverstone Meat Company leased the property at the time of its resumption by the Railway Commissioners in 1907 (Figure 2.53).¹⁰⁹

In 1907 Edward Ross Fairfax, a mortgagee, Sir James Reading Fairfax, newspaper proprietor, and Thomas Pratt of Sydney, an accountant, held the title to Lots 2 and 3 of Block 22 (39 p) of the Ultimo Estate at the time of its resumption by the Railway Commissioners. The site lay to the south of Davy's land, and was bounded by Hay Street on the east and the Darling Harbour Branch Line on the west. Bell & White, an asphalting company, leased the site.



Figure 2.52: Detail from 1890s Metropolitan Detail Series plan showing a range of large buildings immediately to the west of Hay Street and the railway line. ML, SLNSW

¹⁰⁹ Old System Deeds Bk 256 No 247, Bk 770 No 752, Bk 840 No 980 LPI; Crown Plan Ms4159Sy LPI.



Figure 2.53: Western edge of the Haymarket study area after 1901 with the Darling Harbour Goods Line to the west and Hay Street to the east. *Structural plans of the City of Sydney* (cartographic material), *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW

The Sydney Council occupied about 25 perches of land to the south of Fairfax's property. Aligned with Macarthur Street, Ultimo, it is thought to have been a road reserve for the possible extension of the street. It was being used as a council road metal yard (Figure 2.53). Both the City Council and Bell & White, on the adjacent site, maintained road metal shoots adjacent to the railway line.¹¹⁰

In 1907 the title to Block 21 of the Ultimo Estate (1a 0r 31¼p) was still in the name of Matthew Harris, and the part in the study area was leased to the Sydney & Suburban Coal Co.¹¹¹

¹¹⁰ Old System Deed Bk 832 No 869 LPI; Crown Plan Ms4159Sy LPI.

¹¹¹ Crown Plan Ms4159Sy LPI.



Figure 2.54: Hay Street adjacent to Darling Harbour Railway looking northwest, 7 September, 1937. NSCA 51/4657, City of Sydney Archives.

2.8 Resumptions of land by the Railways and Sydney City Council in the 20th century¹¹²

In 1907 the Commissioners for Railways and Tramways resumed land associated with the study area to the north of Hay Street, formerly Harris Estate land and adjacent to the Darling Harbour Goods Line. Resumptions by the Railways Commissioners at Darling Harbour continued in the following decade with allotments in Section 1 of the Government subdivision acquired from 1913 to 1919 (Figure 2.55). The Council of the City of Sydney acquired Section 1 from the Railways Department in 1949, adding it to other land acquired in Darling Harbour from 1917. The extent of land acquisition by the council by 1935 is illustrated in Figure 2.55 and constitutes most of the study area.

In the 1930s Council erected a market building on the eastern half of the study area, on part of the resumed land, bounded by Harbour, Hay, Lackey and Little Pier Streets (Figure 2.55, Figure 2.56, Figure 2.57, Figure 2.58). This involved the demolition of all buildings within its footprint. In addition, Harbour Street was straightened and widened at this time to improve access to the extensive range of markets now within the Haymarket area.

In 1973 part of the site bounded by Hay Street, Lackey Street, Little Pier Street and Harbour Street, totalling 1.762 ha, was transferred to the Sydney Farm Produce Market Authority. This area was leased to the Sydney Entertainment Centre in 1980.¹¹³ Land on the west side of the study area bounded by Lackey, Pier and Hay Streets was transferred to the Crown c1980. The Darling Harbour Authority resumed it in 1986.¹¹⁴

¹¹² Land Titles LPI. See Schedules in Appendices A, B & C.

¹¹³ Vol 12285 Fol 147 LPI.

¹¹⁴ Vol 14308 Fol 153 LPI.

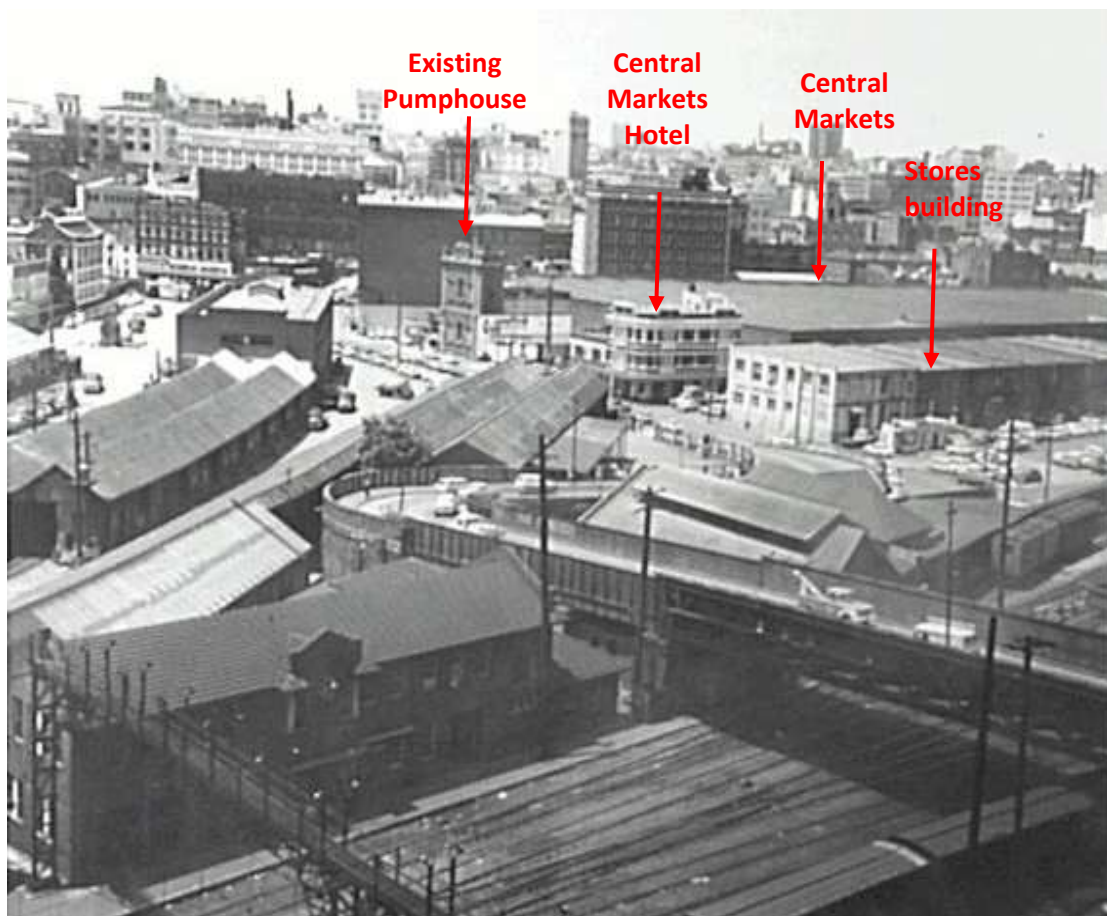


Figure 2.57: View from above Darling Harbour Goods Railway Line in foreground. Buildings include Central Markets Hotel (13 Pier Street), PMG Stores Branch (64 Harbour Street), the City Markets behind the hotel and Pumphouse, former Sydney Hydraulic Company; 6 November 1964. SRC10584. Originally CRS 268/6985. Archive Pix, City of Sydney Archives.

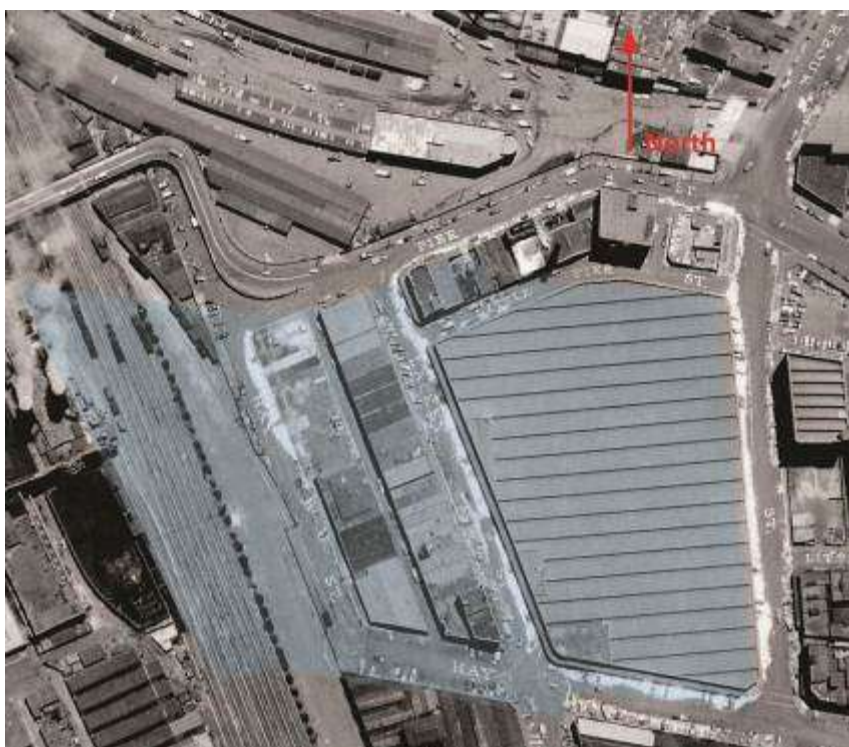


Figure 2.58: Aerial Survey AO037, 15 Dec 1949, Historical Atlas of Sydney, City of Sydney Archives.

2.9 Hay Street Sewer and Stormwater Channel

The earliest part of the stone-built Hay Street Stormwater Channel (Parker Street to Darling Harbour) was constructed between April 1862 and January 1863 as a combined sewer and stormwater line. It lies to the south of the study area with a portion of it extending within its boundary.¹¹⁵ The stone-arched section of the line ran from Parker Street along Hay Street to the intersection of what was once Little Darling Street or Fraser Street. Following the reclamation of land completed by the government in 1870, the channel was extended to the new shoreline via Lackey Street (formerly Belmore Street) and within the study area. Most of this part of the line was replaced in 1927. In 1888-9 the Metropolitan Water Sewerage and Drainage Board took over the management of water and sewerage services and a number of modifications were made to the line from the late 19th century to the present time. The line is now solely used for stormwater, and stabilisation and remediation was carried out in 2008. Research into the Hay Street Sewer reveals many anomalies between records and it is suggested that further primary source research be carried out. It is possible that some primary source records relating to the early history of the Hay Street Sewer have not survived. A list of sources for further investigation is listed in Appendix 9.

2.9.1 Construction of the Hay Street Sewer

From 1854 Commissioners appointed to manage the affairs of the city council began the construction of a combined stormwater and sewerage system in the city, funded by a £200,000 loan from Government. The reformed city council took over construction in 1857 and major parts of the city sewer infrastructure were completed by 1859.¹¹⁶ Drawings for the Hay Street Sewer dated 1861 and 1862 indicate that this line was constructed at a later date (Figure 2.59).¹¹⁷ The sewer took the place of drains emptying into a ditch that in wet weather overflowed into adjacent properties.¹¹⁸

The tender for the construction of the Hay Street sewer was won by William Watkins, a contractor of Cleveland Street, with work valued at £4500. Newspaper reports compared the size and shape of the new stone tunnel to the one recently built along the old Tank Stream. The tunnel was estimated to be 1300 feet in length, 10 feet high and 6 ½ feet wide (396m x 3m x 2m).¹¹⁹ Watkins carried out other work associated with the sewer including its extension from Parker Street to Elizabeth Street.¹²⁰ The contract for the stone sewer tunnel from Parker Street to Darling Harbour, including the Hay Street section, was reported to be complete in January 1863.¹²¹

The stone channel running along Hay Street adjacent to the study area was described in a 1939 report as 7ft by 10ft (2.1m x 3m) with a semi-elliptical roof. The channel carrying stormwater, surface drainage and sewage discharged into Darling Harbour. The old city council sewers were 'laid for the most part at an effective depth of about 9 feet (3m)' although it is not clear whether this reference is to the Hay Street Sewer (Council Sewer Line No 66) or other sewer infrastructure built by the council.¹²²

¹¹⁵ *SMH* 19 Apr 1862: 7; *SMH* 21 Jan 1863: 6; *SMH* 20 Jun 1863: 6. Additional connections were made to the sewer at later dates.

¹¹⁶ FJJ Henry, *Water Supply & Sewerage of Sydney*, Sydney, 1939: 157.

¹¹⁷ Sydney Sewerage Works: Contract No 19: Dwg No 1, 14 Aug 1861, OCP 134, No 0088890, Sydney Water; Sydney Sewerage Works, 6 Oct 1862, OCP 67, No 0088890, Sydney Water.

¹¹⁸ *SMH* 19 Apr 1862: 7.

¹¹⁹ *SMH* 19 Apr 1862: 7.

¹²⁰ *SMH* 20 Dec 1862: 5.

¹²¹ *SMH* 21 Jan 1863: 5; Contract No 19, Item 65/0269 Container 5, Series: Contracts, CCSA; Letters, Item 26/60/024 Container 78236, Series: Letters Received, CCSA.

¹²² Henry 1939: 157.

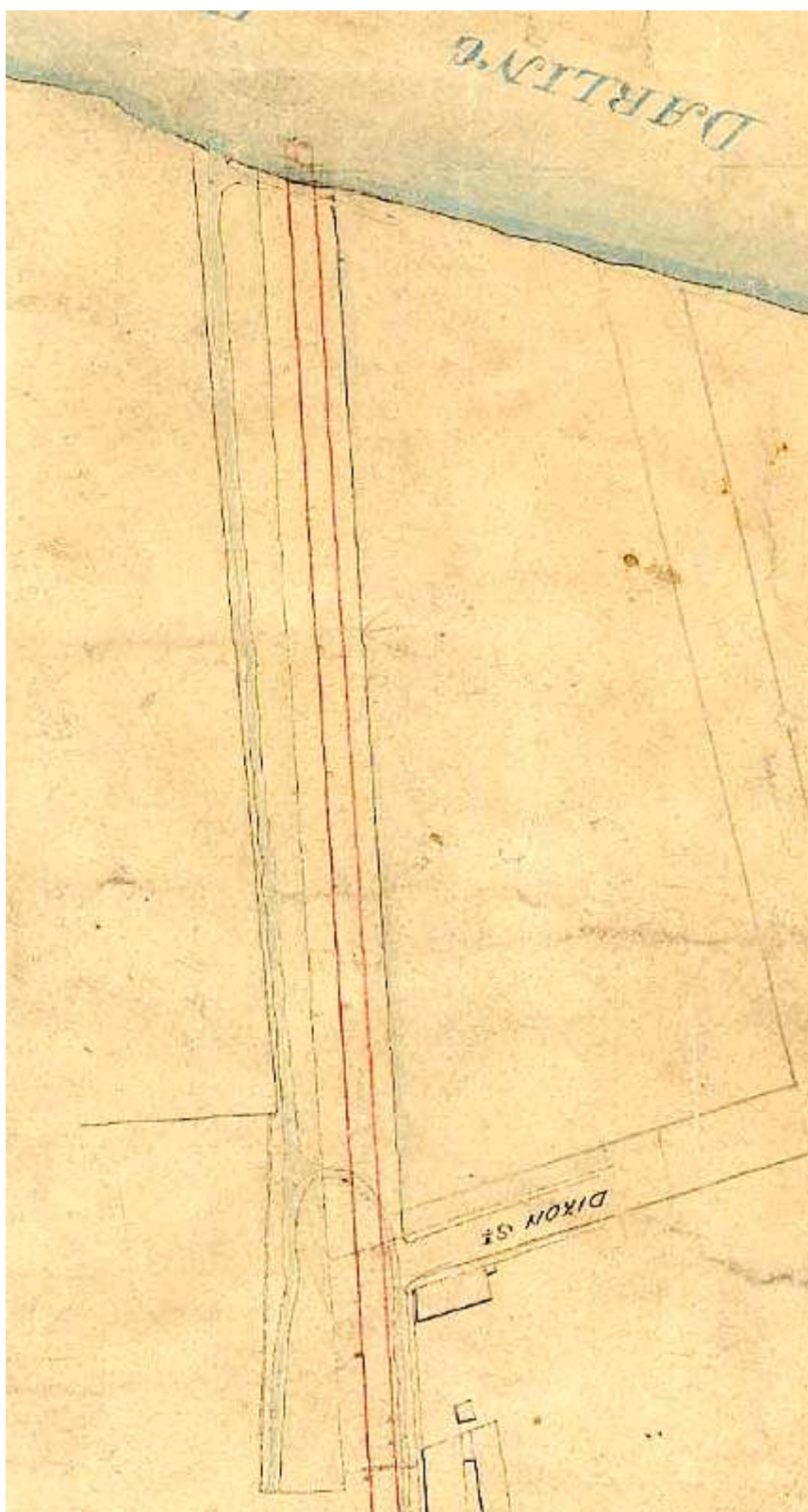


Figure 2.59: Plan of the Hay Street Sewer prepared in 1862 by Edward Bell, the City Council Engineer. The sewer ran south of Dickson's subdivision and parallel to the creek, both discharging into Darling Harbour. OCP 67, Plan No 0088890, Sydney Water.

2.9.2 Hay Street Sewer Extension to Darling Harbour

During the 1860s the government reclaimed land at Darling Harbour, with areas allocated for sale and other parts reserved for the railways and development of new wharf facilities. The extension of the Hay Street sewer did not occur for a number of years after the land had been subdivided and sold. The channel was one of three main sewer lines in the city of Sydney and considered to be the largest, serving the southeast part of the city. In 1873 it was reported that the outlet of the very important piece of city infrastructure was defective due to the lack of fall in much of the channel between Darling Harbour and Elizabeth Street south. It terminated in a 'fetid, open ditch on the newly formed flat'. The gradient of the existing part of the Hay Street sewer was shallow, and in combination with the effect of the tide, was prone to the accumulation of deposits. Six men were constantly employed by the council to clear the mouth of the Hay Street and Blackwattle Swamp sewers.¹²³

Plans were prepared in 1874 to extend the Hay Street sewer with the construction a line under Lackey Street and a concrete and steel silt pit at the junction of Pier and Lackey Streets. 'Creeks' are noted on the plan but they could only have been improvised storm and wastewater drains running across the reclaimed land along Pier Street and adjacent to the Lackey Street sewer. The contract drawings provide a record of the sewer at this time, showing alterations to the base of the sewer to optimise draining.¹²⁴ Areas coloured pink indicate the use of cement or mortar of some kind. A few sections are reproduced in Figure 2.60, Figure 2.61,

Figure 2.62.

William Watkins, in partnership with Richard Warren and others, was contracted in July 1874 to extend the Hay Street Sewer into Darling Harbour.¹²⁵ An 1880 council plan documents additional connections to the Lackey Street section of the Hay Street Sewer. An oviform brick line joining the main sewer south of the silt pit is thought to be the Darling Harbour Railway brick channel described in secondary sources as 5ft by 4ft (1.5m x 1.2m).¹²⁶ The plan shows the main branch of the brick sewer as 4 ft 6 inches (1.37m) with one of two subsidiary branches crossing Hay Street as 3 ft 6 inches (1.07m) (Figure 44). Parts of both lines are associated with study area.

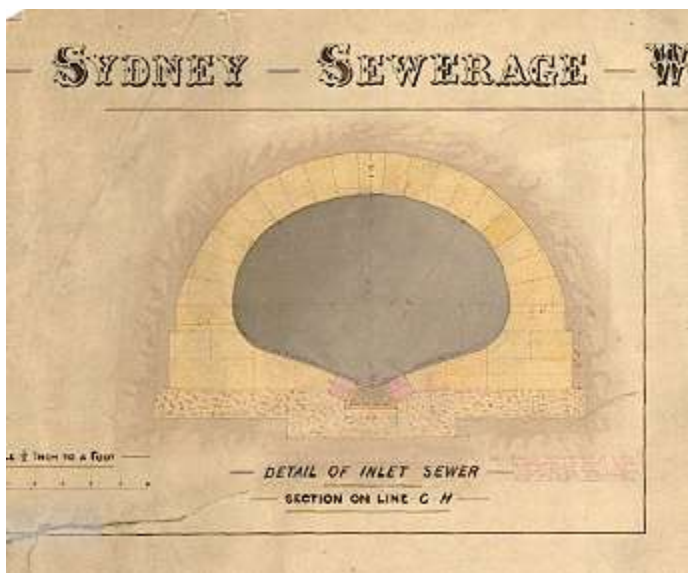


Figure 2.60: Section through the inlet sewer south of the silt pit. OCP 66 Dwg No 2-3-74, 1874, Sydney Water.

¹²³ SMH 8 Jan 1873: 6; SMH 11 Jan 1873: 8.

¹²⁴ Sydney Sewerage Works, 5 Jun 1874, OCP 66, No 088887, Sydney Water; Sydney Sewerage Works, OCP 66, No 088888, Sydney Water.

¹²⁵ Contract: Sewerage Work No. 74, Item 65/1114, Container 17, Series: Contracts, CCSA; Letter: Re copy of specification and contract, sewer and silt pits at Darling Harbour, contracted to Watkins & Warren, Item 26/132/140, Container 81097, Series: Letters received, CCSA.

¹²⁶ Henry 1939: 157.

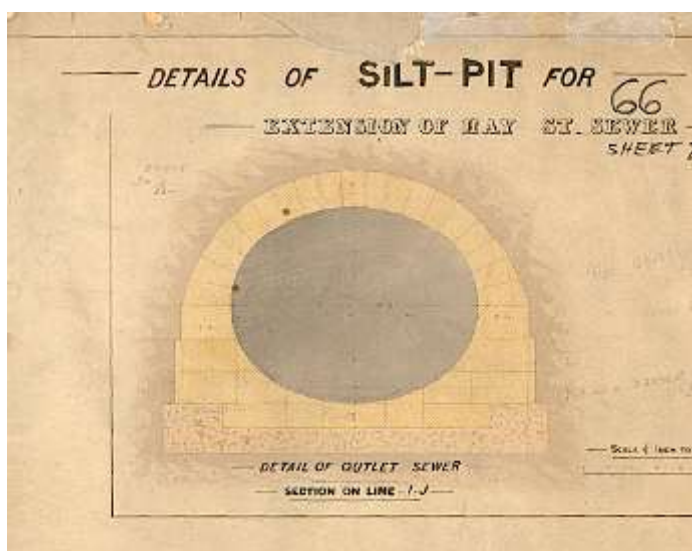


Figure 2.61: Section through the outlet sewer north of the silt pit (OCP 66 Dwg No 2-3-74, 1874, Sydney Water).

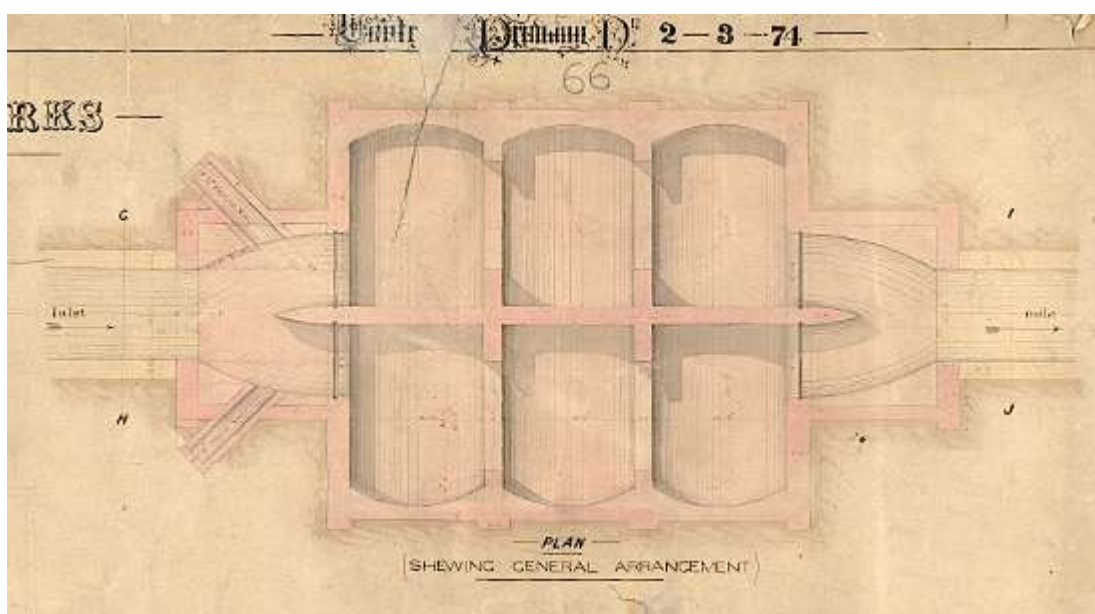


Figure 2.62: Section through the silt pit proposed at the junction of Lackey Street and Pier Street in 1874 (OCP 66 Dwg No 2-3-74, 1874, Sydney Water).

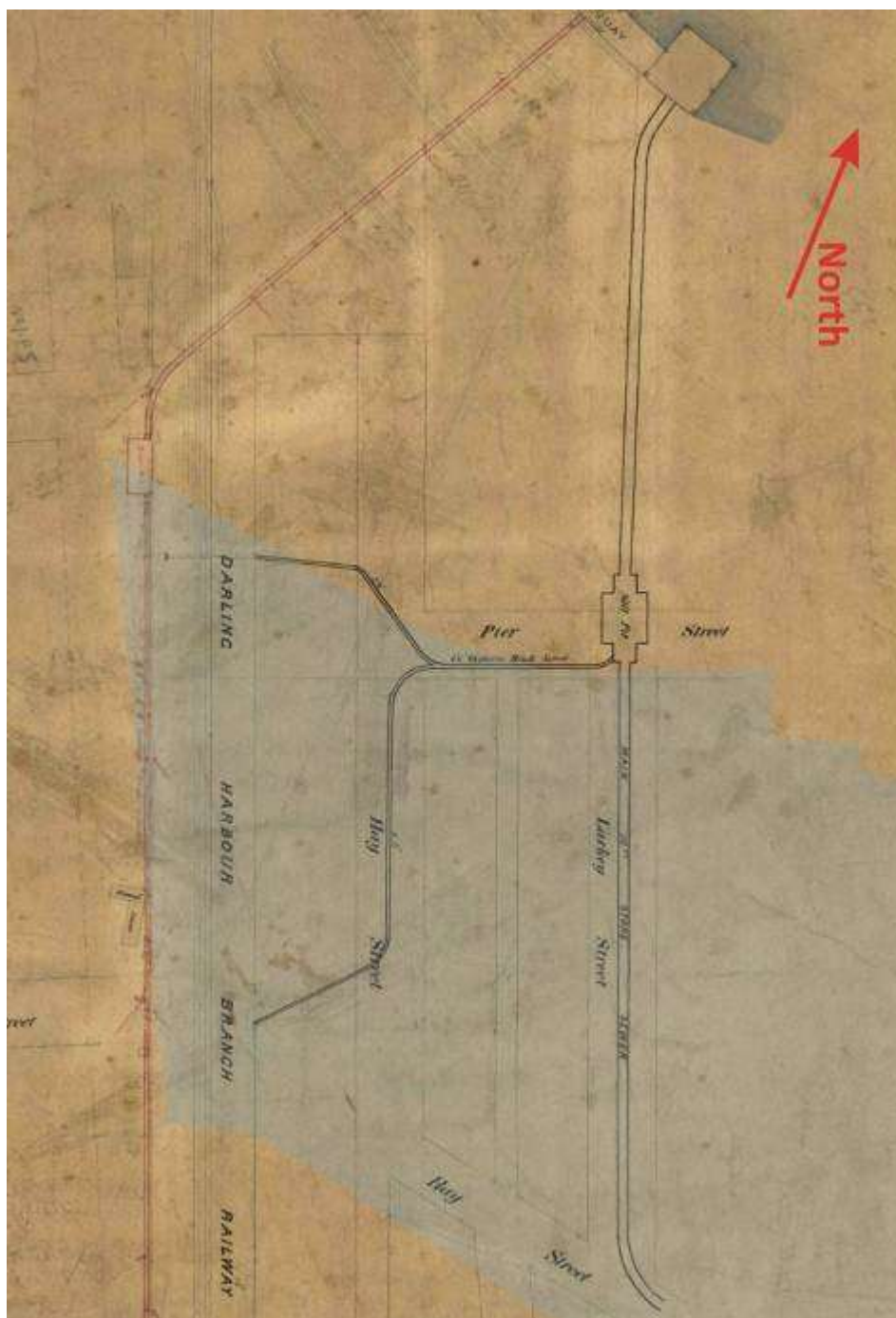


Figure 2.63: Plan of the Lackey Street branch of the Hay Street stone sewer in 1880. The channel outlet is located under a pier of the Iron Wharf. OCP 276, 23 Sep 1880, Sydney Water.

2.9.3 MWS & DB Management of the Hay Street Sewer and connection to the Bondi Ocean Outfall

Sydney City Council officially relinquished control of the water supply and drainage to the Metropolitan Water Sewerage and Drainage Board (MWS & DB) in 1888-89. Most of the sewerage lines were diverted to the Bondi Ocean Outfall at this time, however, the diversion of the city's low-level sewers did not commence until c1904 despite preparations for the project being made as early as 1892. A plan prepared in October 1892 and attributed to the Public Works Department documents the existing sewer and stormwater lines at Darling Harbour and proposed works for the connection of low-level sewers to the Bondi ocean outfall. An air compressing station (a rising main or lifting station for sewage) is shown at the intersection of Pier Street and Lackey Street (Figure 2.64).

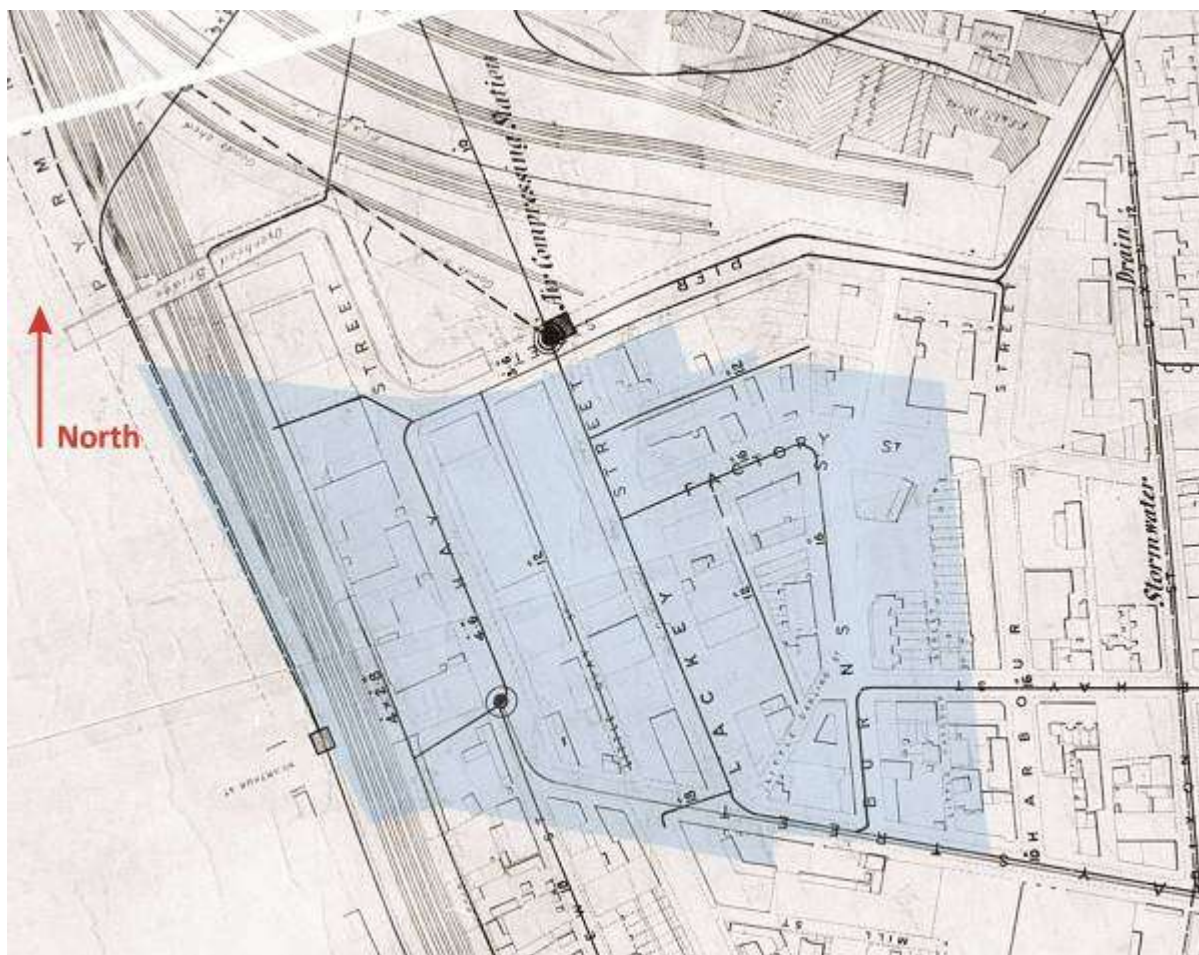


Figure 2.64: Part of a plan of Darling Harbour recording the stormwater and sewer system in 1892, and proposed works. The Hay Street sewer runs along on the southern boundary of the study area turning into Lackey Street. AO X1055 Oct 1892, SRNSW.

Pumping stations were constructed at points as close as possible to the harbour foreshores to intercept lines below the sewage system's 'gravitable limits'. Sewage from low-level mains was collected in pumping station wells where it was pumped up rising mains and diverted to the gravitation-intercepting sewer connected to the Bondi Ocean Outfall line. The pumping stations were constructed by the Public Works Department and transferred to the Board in 1904. The Hay Street system was connected in 1901, and from 1902 Pumping Station No 1 on the corner of Pymont Street and William Henry Street, Ultimo, serviced the area at the head of Darling Harbour as far as Belmore Park. Sewage Pumping Station No 12 in Harbour Street was connected to the system in 1904. The separation of some combined stormwater and sewerage lines was still being carried out in 1939.¹²⁷

2.9.4 Modification of the Hay Street Channel from the early 20th Century

In 1928 plans were made to enlarge the Lackey Street section of the Hay Street channel to a 11ft 3 inch x 7ft 3 inch (3.43m x 2.21m) covered concrete section. A section and plan of the channel are shown in Figure 2.65 and Figure 2.66. If able to be located, Public Works Department plans and specifications might confirm whether the stone from the old council channel was completely

¹²⁷ Henry 1939: 157-158, 165, 166, 168; 'Hay St Stormwater Channel No 30P1', S170 Register, No: 4574216, Sydney Water; 'Sewage Pumping Station No 1 (SP0001)', S170 Register, No: 4571699, Sydney Water; 'Sewage Pumping Station No 12 (SP0012)', S170 Register, No: 4571746, Sydney Water.

removed prior to the installation of the new channel but the drawings do suggest that this is what happened to the section which turned northwards into Lackey Street (Figure 2.65).¹²⁸ The junction between the old and new work was at the southern end of Lackey Street a short distance from Hay Street. As noted on Figure 2.66, all connections with non-stormwater or 'foul-water' lines were to be disconnected.¹²⁹

The surviving stone section of the Hay Street Channel (228m) runs east-west under Hay Street, between Sussex Street and the western boundary of the Entertainment Centre, turning in a northerly direction under the former line of Lackey Street (Figure 2.67). It is listed on Sydney Water's S170 Register and retains its use as a stormwater channel discharging into Darling Harbour. The Hay Street Stormwater Channel is significant as one of five sewers constructed in Sydney for the disposal of sewage and stormwater in the 1850s and 1860s to assist in improving public health. The surviving section of the stone channel is a rare example of mid 19th-century engineering.¹³⁰ Other aspects of its significance are detailed in the S170 register's significance assessment.

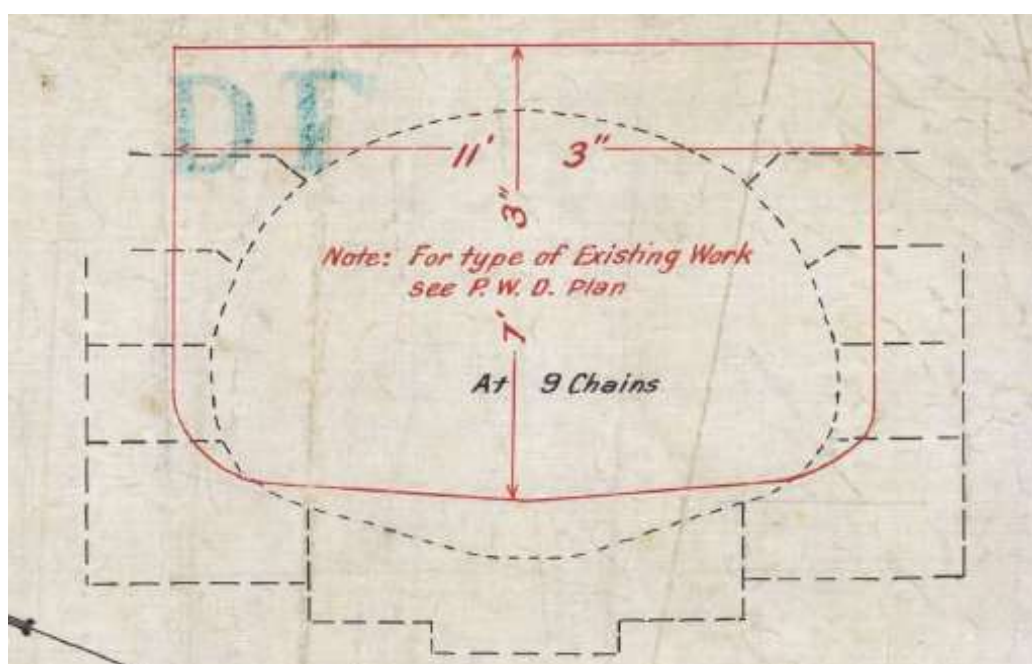


Figure 2.65: Section through the old stone channel illustrating its relative size and depth in relation to the new channel (DL 2614 Sheet 1, 13 Jun 1927, Sydney Water).

The channel was described in 2004 as constructed of sandstone blocks in a regular stretcher bond pattern with its cross section being symmetrical. The blocks appeared to bear directly on the next one, although mortar was evident in some joints. The base of the channel had a 'v'-shaped profile with a small centrally positioned 'scupper' designed for low-flow locations.¹³¹

In 2004 the channel was reported to have become dilapidated in places due to shifting and subsidence. Remediation work in 2008 included the installation of sections of a 'structural liner',

¹²⁸ DL 2614 Sheet 1, 13 Jun 1927, Sydney Water.

¹²⁹ DL 2614 Sheet 1, 13 Jun 1927, Sydney Water.

¹³⁰ 'Hay St Stormwater Channel No 30P1', S170 Register, No: 4574216, Sydney Water; 'Hay Street Stormwater Channel (former Hay St Sewer), Statement of Heritage Impact', Sydney Water, Sep 2004.

¹³¹ 'Hay Street Stormwater Channel: Statement of Heritage Impact', Sydney Water, Sep 2004.

independent of the sandstone channel, ensuring reversibility if required. A dismantling procedure for the lining was submitted to the NSW Heritage Office.¹³²

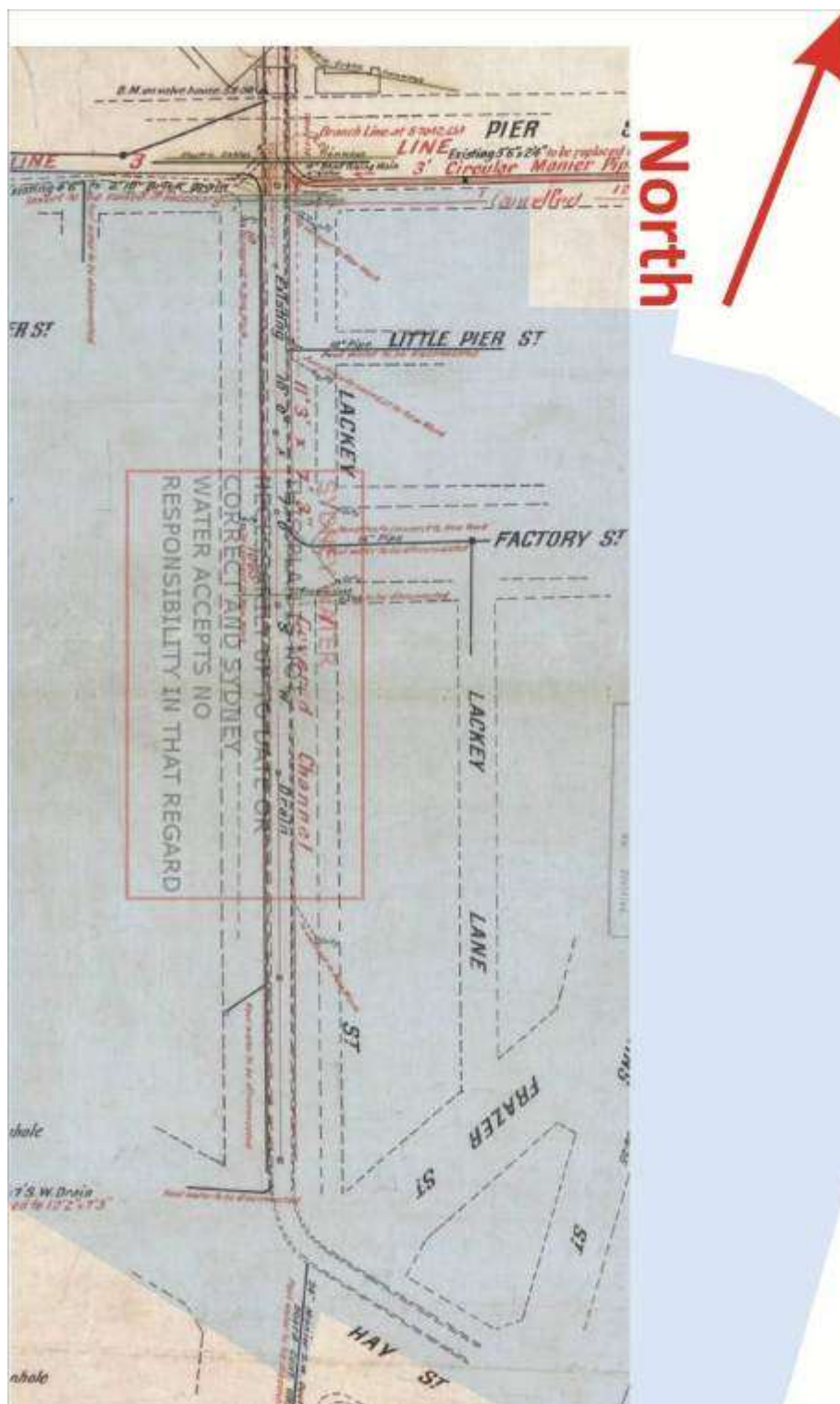


Figure 2.66: A plan of the proposed enlargement of the Lackey Street section of the Hay Street channel. DL 2614 Sheet 1, 13 Jun 1927, Sydney Water.

¹³² 'Hay Street Chanel Relining', Water Infrastructure Group, wigroup.com.au.

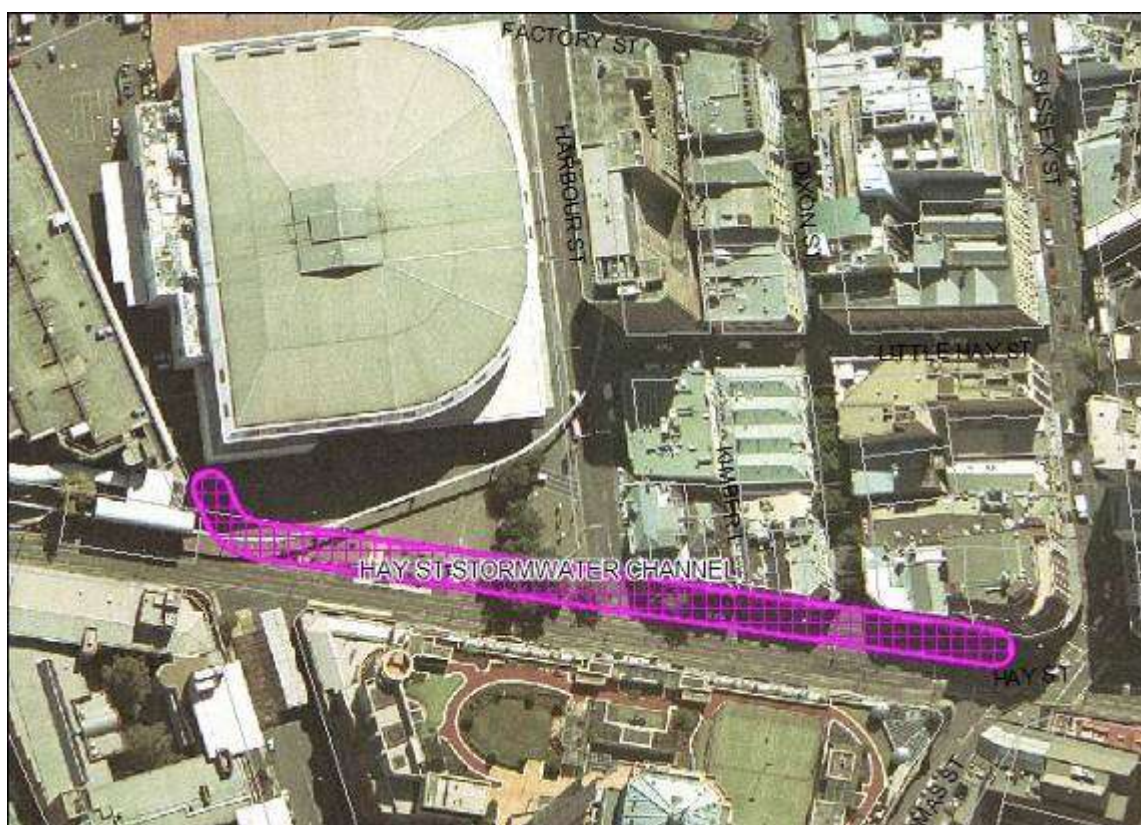


Figure 2.67: Aerial photograph of Haymarket showing the location and extent of the Hay Street Channel curtilage as listed in Sydney Water's S170 register (S170 Register No: 4574216, Sydney Water).



Figure 2.68: Looking north over Haymarket up Quay Street towards Darling Harbour. The southern side of the Entertainment Centre sits on Hay Street. The buildings to the west have not been demolished for the Entertainment Centre Carpark. This also shows the extent of the Darling Harbour Goods Yard prior to the 1980s redevelopment. SRC 2236, City of Sydney Archives.

3.0 Archaeological Potential

3.1 Understanding the Archaeological Potential of the Study Area

There is potential for archaeological remains to survive within The Haymarket study area. This analysis is based on the above historical research and analysis of historic plans, the study area plan, plan of proposed buildings, and the overlays produced for this report. In addition there is a 2012 report by CityPlan (updated February 2013) which has been used as well as Casey & Lowe *Archaeological Impact Statement* August 2012. In addition, Casey & Lowe have completed extensive archaeological programs at Darling Quarter (Walk) (2008-2009) and Barangaroo South which have provided us with a clear understanding of the nature of the archaeological resource within the study area. The potential archaeological resource within the study area is discussed below. A summary table of this potential archaeological resource is provided (Table 3.2).

3.2 Impacts from existing buildings and services

Our understanding of the Entertainment Centre (EC) and the EC carpark is that they are built on concrete slabs at approximately RL 2.5m with piles into bedrock. Archaeological excavation at Darling Quarter (Walk) identified that two sets of piles can have impacts but still leave a considerable amount of archaeology surviving within an area (Figure 3.1, Figure 3.2). A concentration of piles in any single area can make recovery of archaeological information in the future very difficult. It is considered likely that a third set of piles would mean that the archaeology would be too impacted and that prior open area excavation would be required. Currently there is only one set of piles from a modern building although there will be some pile bases associated with the Market Building.

The relative levels for archaeology along the foreshore at Darling Quarter (Walk) (2008-2009), and borne out by the results at Barangaroo South, is that the upper RLs for historical archaeology on reclaimed land is likely to be approximately RL 2m with natural landscapes and intertidal zone levels being found at RL -0.5 to RL 1 to 1.4m (Table 3.1). Research included in Section 4.3 on the RLs from Paddys Market and Little Pier Street excavations indicates that RLs on the top of significant archaeology is higher than at Darling Quarter and Barangaroo South, between RL 2.2m and RL 2.5m.

Table 3.1: Identified RLs for archaeology at the Darling Quarter (Walk) site. Casey & Lowe

Area	Natural landscape RL	1800s to 1840s RL	1840s to 1900 RL
7	-0.5m to 0.2m	-0.5m to 0.5m	1.2m to 1.8m
6	-0.3m to 0.5m	0.2m to 0.9m	0.9m to 1.8m
5	0.5m to 1m	0.5m to 1.2m	1.2m to 1.8m
8	0.4m to 0.7m	0.5m to 1.4m	1.4m to 1.8m
8 CT	0.6m	0.6m to 1.2m	1.2m to 1.6m top of archaeology removed by modern activity
9	0.4m to 1.4m	1.4m to 1.6m	1.6m to 1.9m

Understanding the RLs is important for predicting the level at which archaeology will be present, and how much fill is likely to be burying it throughout the study area. One of the most surprising examples was that when the large pond associated with the Sega building was removed (2009), which preceded Darling Quarter and the creation of the children's park, the floor of the State-significant Peter Nichol Russell foundry survived immediately beneath it. In addition, extensive phases of 1820s to 1900s archaeology survived across the whole of the site, much of it buried beneath 2m of fill.

Table 3.2: Historical archaeological remains within specific areas of the project.

Archaeological Phases	The Haymarket south of Pier Street
Phase 1: 1788-1813	▪ Eastern area underwater, no known uses. ▪ Western foreshore part of Harris Estate but swampy ground with no known historic-period uses.
1813-1850s	
Phase 2: Dickson's mill and mill pond, 1813-1850s	▪ Dickson's dam wall and mill pond (1815-1850s) ▪ Some remains (1830s) associated with Dickson's mill in the small park to north of Entertainment Centre. ▪ Western area continues to be swampy ground until reclaimed.
1850s-1880s	
Railways 1850s-1880	▪ Darling Harbour goods line (1855) western edge. ▪ Some housing along western edge until removed/buried by railway expansion.
Resumptions, 1850s-1880s Housing subdivision Sewers Industrial	▪ Infilling of Dickson's mill pond (c. 1845-1854). ▪ Reclamation of southern part of Darling Harbour (1850s-c1863) and construction of stone sea wall (1864). ▪ Housing established in the area by 1865. – Hay Street – 3 houses, 4 around the corner in laneway. – Little Hay Street – 8 houses and Australian Inn hotel. ▪ Additional housing and small-scale industries by 1880. – Railway Pier Hotel (1879) – Trades Union Hotel (c1880) – Biddell Bros Confectionery (cnr factory & Lackey St) – Zollner's Galvanizing Works (B9) – Phoenix Foundry (A1)(c1880) – Harbour Street – 23 houses (A3, B7, A8 and B8). – Castlemaine Hotel (B2) (c1880) – Hay Street – 5 houses (B2) – Little Hay Street – 8 houses – Burns Street – 17 houses – River Shannon Hotel (Burns St W) – Blacksmith – Cormack cooperage, 2+ locations ▪ Hay Street stormwater (1863) and Lackey Street stormwater lines.
1880s-1920s	
	▪ Demolition of houses on Sections B1, B2W, north B7 A8, B8 and B9. ▪ Continued occupation and expansion of the above buildings and houses. ▪ Construction of Rowlands Aerated Water works and stables (A9). ▪ Sydney Hydraulic Power (A2, B1). ▪ Light industrial buildings in carpark area, 1890s-1900s. ▪ Construction of hydraulic pumping station (1891), Pier Street. While this site is just outside the study area there may be below-ground remains of a workshop, associated with the northwest park area.
1930s-1980s	
	▪ Council establishes markets in the eastern half of this area (1937) and widens Harbour Street. Demolished all housing and other surviving buildings to south of Little Pier Street. ▪ The streetscape was removed at this time. ▪ Upgrading of Lackey Street part of Hay/Lackey stormwater.
1980s – Darling Harbour Redevelopment	
	▪ Entertainment Centre built, 1982. ▪ Stormwater culverts crisscrossing the area. ▪ Other large services laid throughout the site.



Figure 3.1: Piles in the area of Barker's Jetty (c1826) and the early timber slip (1810s), Darling Walk. This area was a focus of many piles. If there had been many more then the archaeology in this area would have been seriously compromised or destroyed. Looking west. Casey & Lowe 2009.



Figure 3.2: View to south with the stone walling of Barker's Jetty (c1826) in the middle ground, Darling Walk. There were many piles in this area from the two sets of building, making access to the archaeology quite difficult. Casey & Lowe 2009

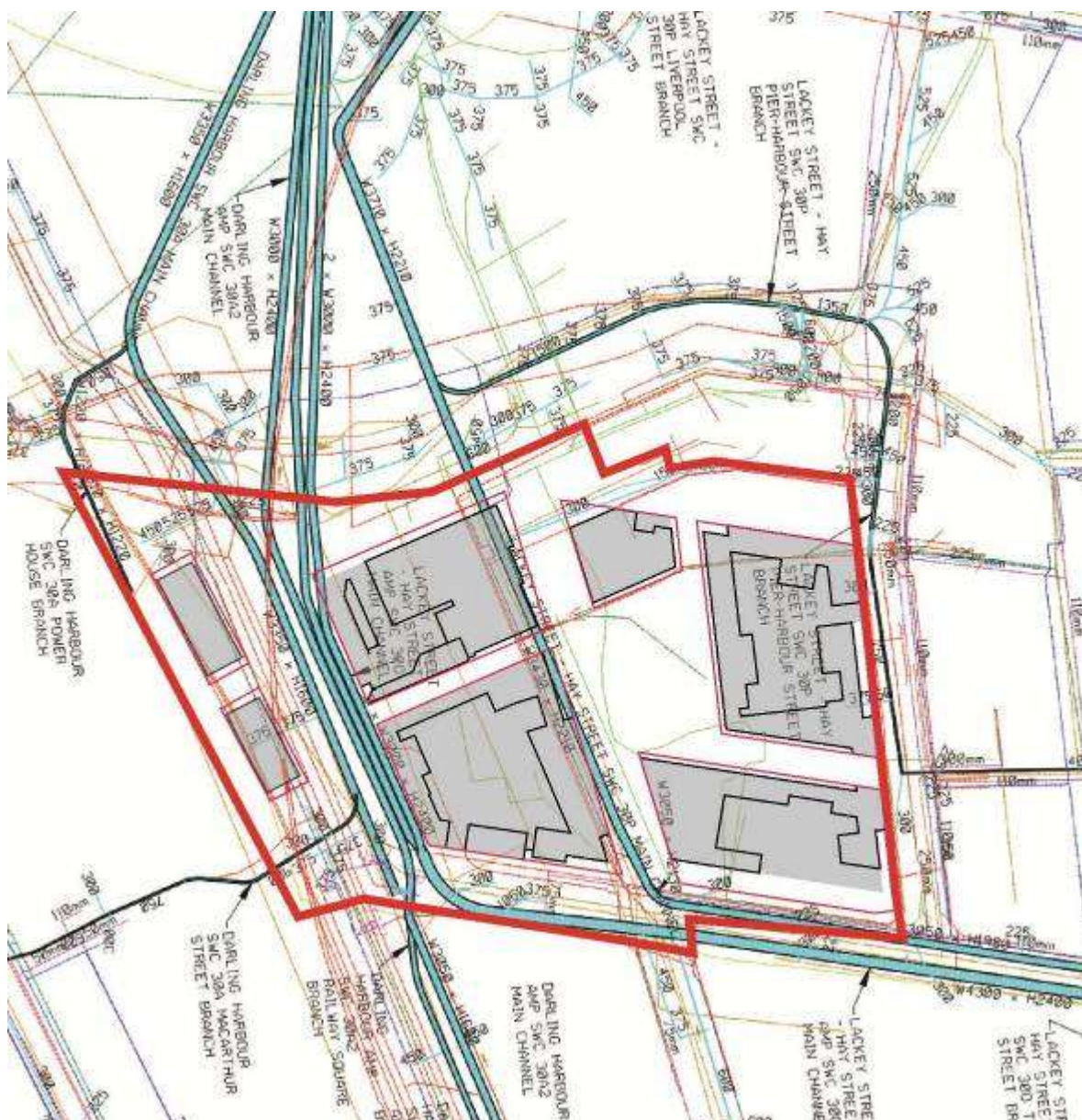


Figure 3.3: Plan of stormwater culverts and other services within The Haymarket precinct. The culverts were installed in the 1980s redevelopment and the other services at different times. These services have had extensive impacts in the western part of the study area. Rygate's February 2013

3.2.1 Services Stormwater Culverts – 1980s

In the 1980s a series for large stormwater culverts were built, running north-south, along the western side of the Haymarket study area, to the east of the surviving railway lines used by the light rail. These will have had substantial impacts along the western side of the study area (Figure 3.3). There are also a series of at least seven other services within this corridor. Another large culvert was placed east-west along Hay Street. The proposed buildings are located on either side of these major culverts.



Figure 3.4: The north-south culverts running along the western boundary have had considerable impact on the early 20th-century buildings. Rygate's overlay onto 1903 plan.

3.3 Archaeological Potential for Key Areas

3.3.1 Dickson's Dam Wall

Dickson's c1815 dam wall is expected to be a substantial earthen and stone embankment of approximately 200m in length, of uncertain construction, built to dam the fresh water from the Hay Street creeks and separate it from the salt water of the harbour (Figure 4.10). The millpond to the east of the dam wall was backfilled between 1855-57 to reclaim the land that was then subdivided for new housing and commercial development (Figure 2.10, Figure 2.13). It is expected that the dam wall was retained as part of the reclamation process and it then formed the western edge of this new land. The harbour to the west of the dam was not reclaimed until 1865. It is assumed that when the land to the west was reclaimed, the dam wall was completely buried with only the alignment of Little Darling Street, as the line between two separate subdivisions, as the marker of its location (Figure 2.24). It is therefore considered likely that during this process of burial that the dam wall survived substantially intact. There may have been some impacts from the 1930s market buildings system of footings and piling but this is considered to be quite limited. It has been predicted that the dam wall was not impacted by the Entertainment Centre piles but this has not been confirmed.¹³³

Modern services in Hay Street will have impacted on the southern section of the dam wall, and therefore only isolated elements may survive within Hay Street (Figure 3.5). Likely impacts in Hay Street include the c1865 Hay Street stormwater and a 1980s stormwater culvert. The extent of known impacts in the northern area, near former Factory Street and south of Little Pier Street, are limited to modern services, such as the high voltage cable which will need to be relocated. Based

¹³³ CityPlan 2012a:110

on current understanding of impacts it is likely that the dam wall survives substantially intact to the north of Hay Street, except where it was cut by deeper services. The nature of impacts on a substantial structure such as the dam wall may have disturbed the upper 2 to 3m only and deeper intact sections of the wall may survive below these services. Clearly where deep services like the modern concrete culverts have been excavated these impacts may have caused major damage to the dam wall.



Figure 3.5: Overlay of services onto the 1854 plan showing dam wall (red arrows) to Dickson's millpond. Two large culverts cross through it along Hay Street. It is also likely that the high voltage cable near the northern red arrow has also cut through it. Rygate's overlay onto Woolcott & Clark's 1854 plan.

3.3.2 Dickson Mill

The archaeological work on this site in 1991 by Godden Mackay described in the 1992 excavation report and outlined in Section 4.2 below, indicates a high degree of survival across the mill area, which includes the Novotel hotel building and the ground to the south, within the northeast corner of the study area. Archaeology has been found at RL 2.2m and RL 2.3m within the park area. The extent of the mill within the study area is isolated to the northeast corner. Substantial remains of the 1830s mill buildings are considered to survive within the Dickson's mill precinct (Figure 4.5).

3.3.3 Pre-1880 development the study area

The 1880 plan illustrates how most of the original subdivision and building was to the east of Lackey Street and west of Harbour Street (Figure 3.6). It consisted of a mixture of housing, pubs and early commercial enterprises built between late 1857 and 1870s (Table 3.2). Between 1880, 1894 and 1910s most of the houses within the study area were demolished and replaced by commercial buildings and activities, i.e. the Rowlands Aerated Water works, the Sydney Hydraulic Power company and numerous 'stores'. Following the resumption of the land to the east of Lackey Street many of these later buildings, and surviving housing, were demolished for the council's 1937 market building (Figure 2.56, Figure 2.58). The market building was then demolished prior to the construction of the Entertainment Centre in the 1983. The construction of new buildings on this site will be the fifth phase of buildings following its reclamation between 1855-57.

As Figure 3.6 illustrates, the 1880s Harbour Street housing is mostly to the east of the study area. This is because Harbour Street was widened in the 1930s and these houses are beneath Harbour Street and footpath. It is noted that we have not been able to find the detailed plans for the widening but there are clear indications from a range of sources that this happened in association with the establishment of the market building. Therefore, in relation to the 25 houses, the Trades Union hotel, William's grocery shop, Australian Inn, and the Castlemaine hotel, the footings of these structures are outside the current study area. Within the study area are the backyards of these houses, which will include sheds, additions, yard surfaces and cesspits. Cesspits have frequently been found to contain quantities of artefacts but this depends upon the date at which the cesspits were sewered. If they were sewered in the 20th century then they probably have a sterile clean backfill. If they were backfilled prior to 1900 it is quite likely each cesspit may contain 100s of artefacts. Many of the Harbour Street houses were still standing in the 1890s (Figure 3.9).

Along the other street frontages there is potential for about 33 houses - the archaeology of many of these will survive to a moderate degree. The potential archaeological remains of these houses includes: demolition deposits, footings of houses and other structures, yard surfaces, kitchen underfloor deposits which can contain 100s of small artefacts, and cesspit deposits some of which may contain 100s of artefacts; as well as other pits, features and artefact-bearing deposits. Many of the tenants of these houses probably worked in the area, in the manufacturing works within the study area or on the wharves. In addition, a number of the operators of the various works also appeared to have lived next door to their business - eg. Joseph Wadsworth who operated the stone dressing works at 110A Hay Street lived at 110 Hay Street.

Aside from residential there are a few other early types of occupation within the study area. These are predicted to have a moderate degree of potential to survive and include:

- **Cormack cooperage**, established 1872-73, used a number of properties. The main cooperage occupied a couple of lots with a cooperage workshop and yard between the northern end of Hay Street and Little Quay Street (Figure 3.6). By the late 1880s the cooperage, by then the Centennial Cooperage, was occupying four separate properties (Figure 3.8). Another cooperage building on the western side of Burns Street survived into the 20th century (Figure 3.6, Figure 3.13). This was a steam cooperage. It continued to

operate until the early 20th century. Potential archaeological evidence could include building footings, layout of the works, base of steam engine, changes in technology, activity areas and artefacts associated with the works, notably evidence of barrels and hoops. One of these buildings was still standing into the early 20th century.

- **Biddell Brothers confectionery factory** on the northeast corner of Lackey and Factory Streets. The operated their main factory on a number lots between c1872 and into the early 20th century (Figure 3.6, Figure 3.8). The potential archaeology for this site would relate to the original building and the refurbished building (Figure 2.42, Figure 2.43). The remains of this site may include phases of building, evidence for the layout of the buildings and factory, and changes made to them. As this appears to be a site where women may have worked it may provide evidence of female employment and ownership during the later 19th and early 20th century.
- **Wadsworth's** steam stone cutting yard on Hay Street, Block A1 (Figure 2.17, Figure 3.6), between c1874-1880. The potential archaeology of this site appears to be related to yards and sheds. The steam engine was presumably located on a base within the shed. Wadsworth lived in the adjacent house. The stone cutting yard continued to operate under different tenants/owners into the early 20th century. It was demolished and replaced by council's weights and measures building.
- Two timber yards on Factory Street, one later taken over Biddell Bros and the other had a larger building erected on it. Limited archaeological potential in these areas.
- The Phoenix foundry on Hay Street and a small blacksmiths on Little Darling Street. Considerable evidence of foundry technology may include evidence of the layout of the foundry, the location of the cupola, which could be compared to the Bulwarra Road site.
- Two pubs, the River Shannon Hotel and the Railway Pier hotel.

The potential archaeology of these industrial premises, some of which operated steam engines, is quite different to the residential housing. Their deposits are likely to include evidence of masonry or timber buildings, timber floors, open work spaces, timber posts supporting the roofing structures, and some limited potential for artefact deposits associated with workers' activities on the sites. Where these sites involved semi-industrial activities such as a foundry, confectionery factory and aerated water works then there may be evidence of steam engines and bases, weighing machines, and other works. The timber yards are expected to have little archaeological potential. At other archaeological nearby archaeological sites, Barangaroo South, Darling Quarter, Little Pier Street and Bulwarra Road, Pyrmont, considerable evidence of these types of structures, industry, technology and deposits survived. Archaeological remains of the pubs are similar to the above houses but the archaeological deposits and artefacts represent quite a different range of activities, such as a the workplace, consumption of alcohol, smoking, gambling, and political activities and meetings.¹³⁴

Other archaeological potential from this period also includes the two phases of reclamation within the study area. The first reclamation was to make the Dickson's Mill Estate, to the east of the dam wall, and then the 1860s government reclamation to the west of the dam wall, extending northwards beyond the study area. Samples of the archaeology from these deposits should provide a model of how the reclamation was undertaken.

¹³⁴ At 710-722 George Street, Haymarket we found tokens and such that were evidence of political meetings and affiliations. Casey & Lowe 2011, <http://www.caseyandlowe.com.au/site710.htm>.

3.3.4 Late 19th and early 20th-century redevelopment

During the 1890s the following buildings were located within the study area:

- **Sydney Hydraulic Power** buildings on Burns Street and the main building and works associated with the Pumphouse established on Pier Street in 1889 (Figure 2.21, Figure 2.22, Figure 2.41). Hydraulic Power Station No. 1 continued to be used until 1975.¹³⁵ The Burns Street building required the demolition of six houses and the Phoenix foundry, Blocks A2 and B1 (Figure 2.17, Figure 3.6). There were no buildings on the Pier Street property prior to the erection of the main powerhouse. The archaeology of the Pier Street complex within the study area extends to the west of the Pumphouse building, into the proposed Public Domain (Figure 3.11, Figure 3.12). The potential archaeology of the hydraulic power in this area appears to consist of a workshop built in the 1920s and demolished by 1962 (Figure 2.48, Figure 2.49).

According to the AHMS (2009) *CMP Hydraulic Pumping Station*, this precinct also includes the Hydraulic Pumping Station archaeology although it does not mention that archaeology from this site which survives outside the standing building. The CMP does not address the potential archaeological resources outside the footprint of the surviving building (see below) nor does the history for this S170 listing mention the pumping station archaeology.

- **Rowland's Aerated & Mineral Water Works** opened in 1887, located eastern side of Burns Street (Figure 2.25, Figure 2.26). Its construction required the demolition of eight houses on Block A9 (Figure 2.17, Figure 3.6). The nearby stables was built on vacant land. In the early 20th century it was a cordial factory. Refurbished in 1911 and then fire damaged in 1913. It continued to operate until late 1930 when it was resumed by council for the new markets.
- During the 1880s and 1890s a few Chinese names began to appear in the Council rate assessments and Sands Directories. By the 1920s there were many Chinese residents in Harbour and Little Hay Streets, as well as in Lackey Street and Burns Street (Appendix 3). In 1911 nine Chinese names were listed in Harbour Street, mostly they appear to be residents but the War Hing & Co store was operating at 93 to 99 Harbour Street. These street numbers are labelled 'Chinese stores' on the *Ignis et Aqua* plan (Figure 3.13). By 1914 C S Warley (Sam Wah Lee) had established stores next door at 101 to 107 Harbour Street. Four of the adjoining houses, nos 109 to 115 were occupied by Chinese tenants, including a shop at no 115. By 1914 there were Chinese four residents in Little Hay Street, nos 21-23 and 10-12. Three were listed as houses and no. 23 as a house and workshop. By 1918 there were six Chinese tenants in Little Hay Street, meaning that only one of the seven houses in this street was not obviously occupied by a Chinese resident. There was a Chinese tobacco stores on the corner of Lackey and Factory Streets (1911) (Figure 3.13). Wing Sang & Co stores were established on Hay Street by 1914 and were recorded in Lackey Street, around the corner in 1933 when the land was resumed (Figure 2.46). It is acknowledged that a lot of the Chinese occupation within the study area (Appendix 3). While a lot of the Chinese occupation is 20th century most of the residential occupation is within terrace houses built prior to 1880. There is some limited archaeological potential for deposits to be associated with the Chinese occupation of a number of the houses and some of whom operated business within the study area.
- The *Ignis et Aqua* plan, made in the early 20th century, and many of the historic photos, indicates that the many new storage buildings were erected across the study area (Figure 3.13, Figure 2.39, Figure 2.40, Figure 2.41, Figure 2.46, Figure 2.47). Most of the area west of Lackey Street were stores. These buildings typically are brick with concrete floors. There is very little opportunity for significant archaeological deposits to accumulate on these types of sites. The remains of these types of buildings are not considered to be significant

¹³⁵ AHMS 2009: 22.

because the limited nature of these potential remains do not address substantive research questions.

- West Hay Street, eastern side between Pier and Hay Streets has some buildings completed by the late 1890s and early 20th century (Figure 3.9). On the eastern side these include a slate yard, farrier and wool and hide stores (Sands 1902). By 1913 in addition to the farrier and wool stores is an asphalters and paint manufacturer (Sands 1913). The *Ignis et Aqua* plan shows the northern half of this block occupied by Alexandria Stores and a garage at the southern end of this block (Figure 3.13).
- The west side of west Hay Street, next to the former Darling Harbour goods line, had a number of buildings erected by 1894 (Figure 3.9). The following were within the study area according to the 1902 and 1913 Sands Directory, from north to south:
 - Macnamara Henry, carcase butcher and meat preserver
 - Riverstone Meat Company stables
 - Bell & White tar paving works
 - Sydney Metropolitan Depot
 - Metropolitan Coal agency
 - South Clifton coal agency
 - Caledonian Coal agency
 - Bulli Coal and Coke agency
 - Mackenzie James

By 1913 only the Riverstone Meat Company is listed as well as the City Fruit Markets. These were all demolished for the westward expansion of the railway lines (Figure 2.54, Figure 2.56, Figure 2.58). Then as part of the 1980s Darling Harbour redevelopment four major stormwater culverts were excavated along the eastern half of this former city block (Figure 3.4). As late 19th and early 20th century commercial buildings these are considered to have limited archaeological potential because of the use of concrete floors and the raising of health and hygiene standards. There is some archaeological potential for the stables buildings in terms of layout but the archaeological potential of the other structures is likely to be building footings, hard floors and yard surfaces. Therefore the culverts are considered likely to have removed half the archaeological potential of the study area. The remaining half is considered to have low research potential.

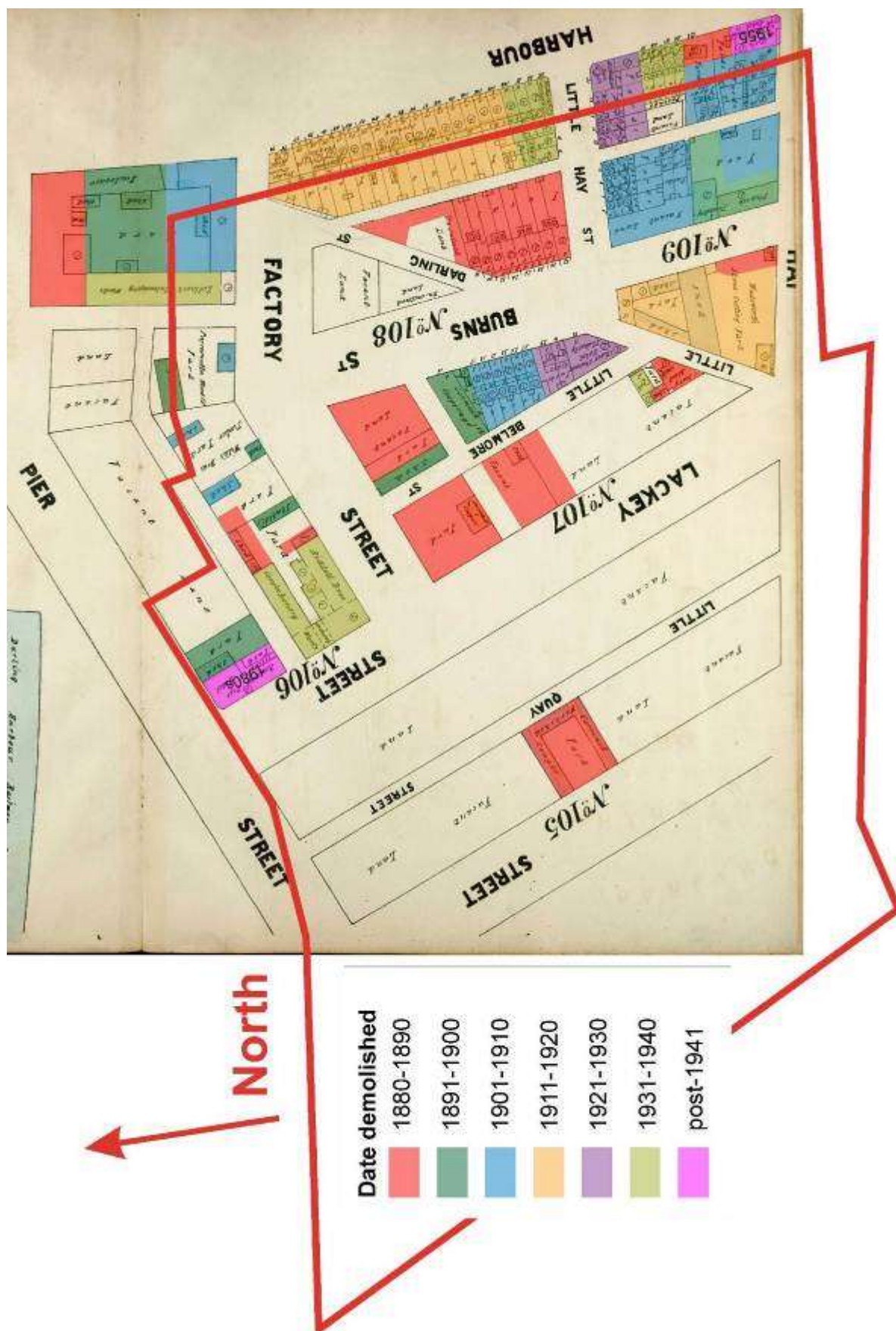


Figure 3.6: Dove's 1880 plan illustrating the extent of housing and commercial enterprises erected between 1857 and 1880. The various colours indicate the decade in which various structures were demolished. The red dashed line is the study area.



Figure 3.7: Tracing of council plan showing the widening of Harbour Street in 1936. Road reconstruction plan: Widening and reconstruction Harbour Street from Hay Street to Pier Street, 21 Feb 1936, Item E1-452/4, Series 473, City of Sydney Council Archives.

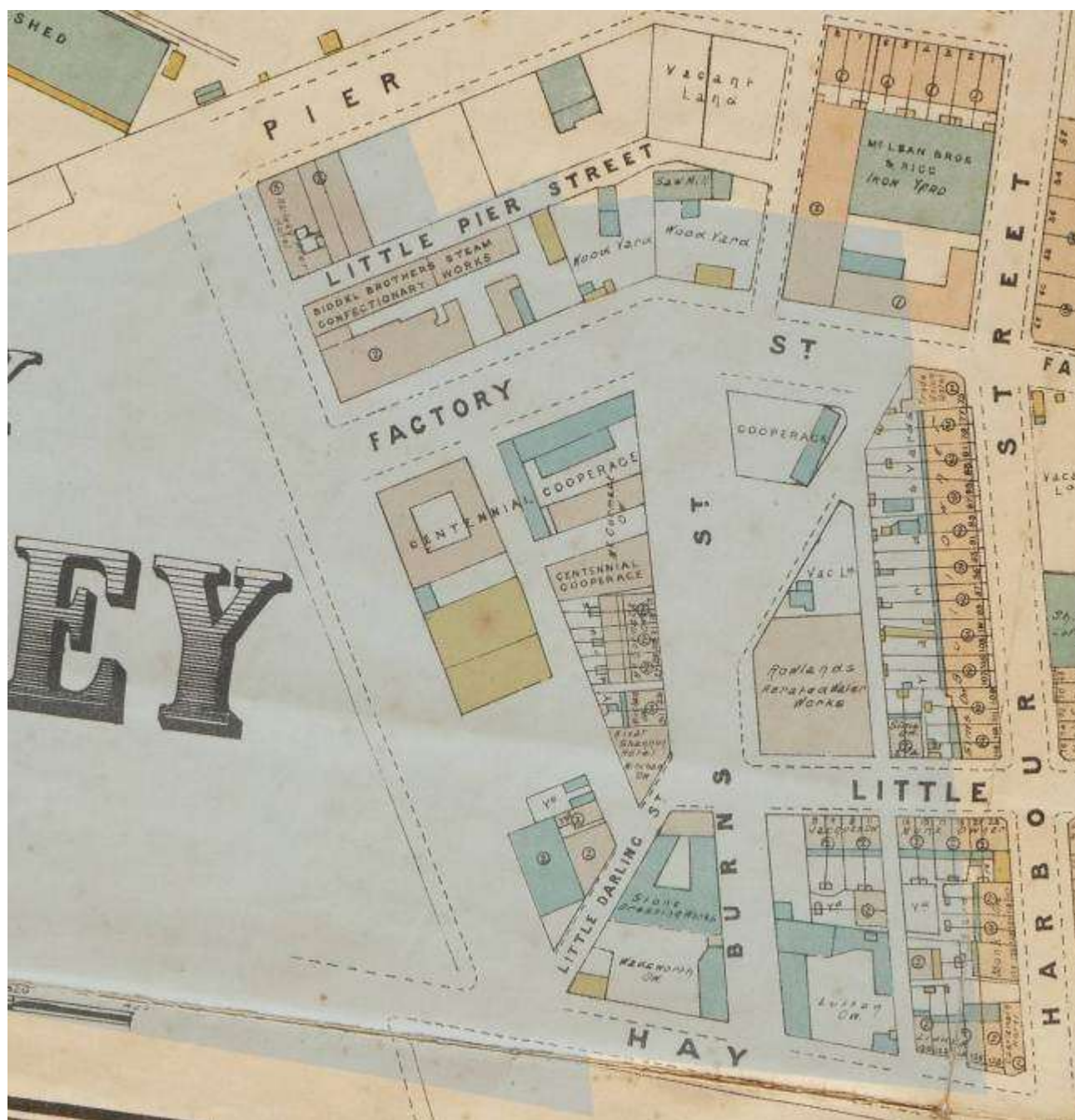


Figure 3.8: Plan showing the expansion of the cooperage to the east of Lackey Street, the location of Rowlands water works. Newly digitised map Collection of Subdivision plans for City of Sydney, 1888-1889. F981.11/C ML, SLNSW

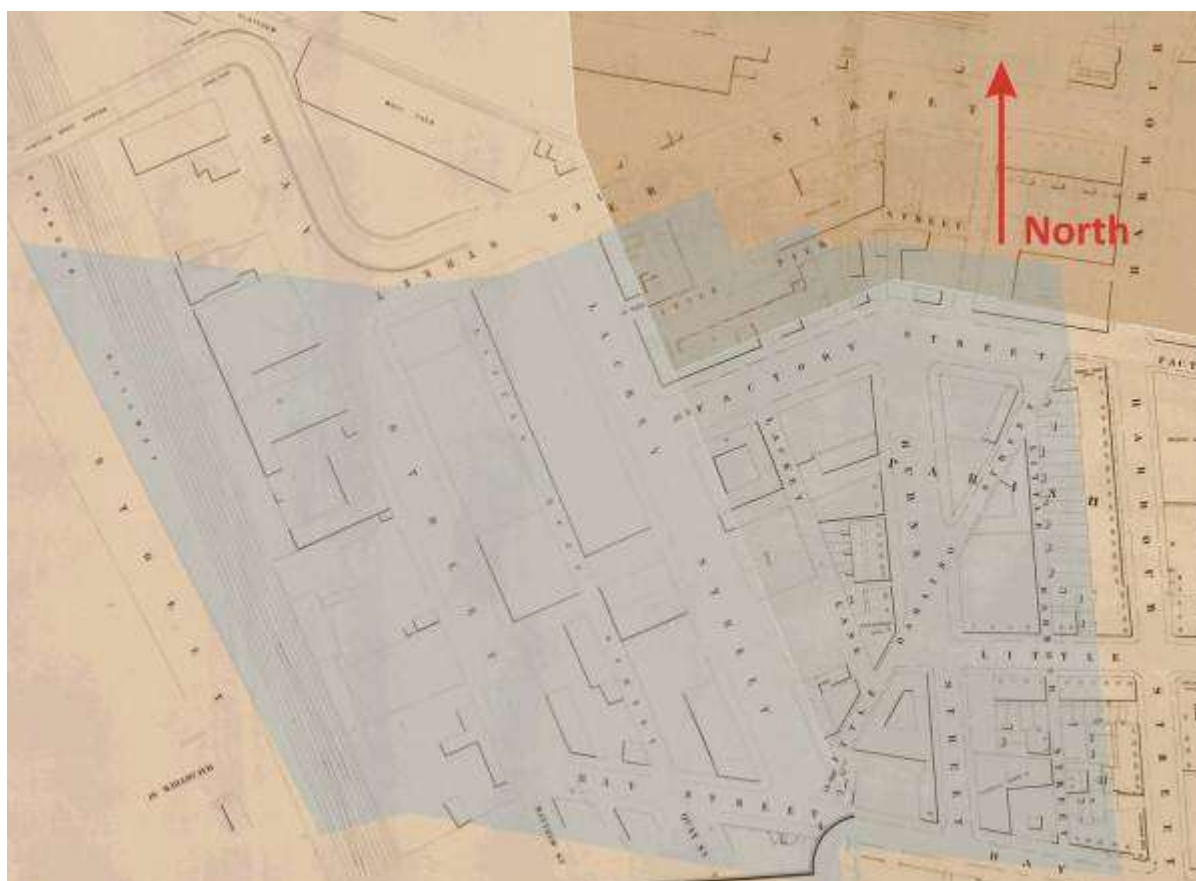


Figure 3.9: Metropolitan Detail Series plan of the 1890s showing that all of the houses along Harbour Street had survived into 1894. Compare with Figure 3.8 for names of items. ML, SLNSW.

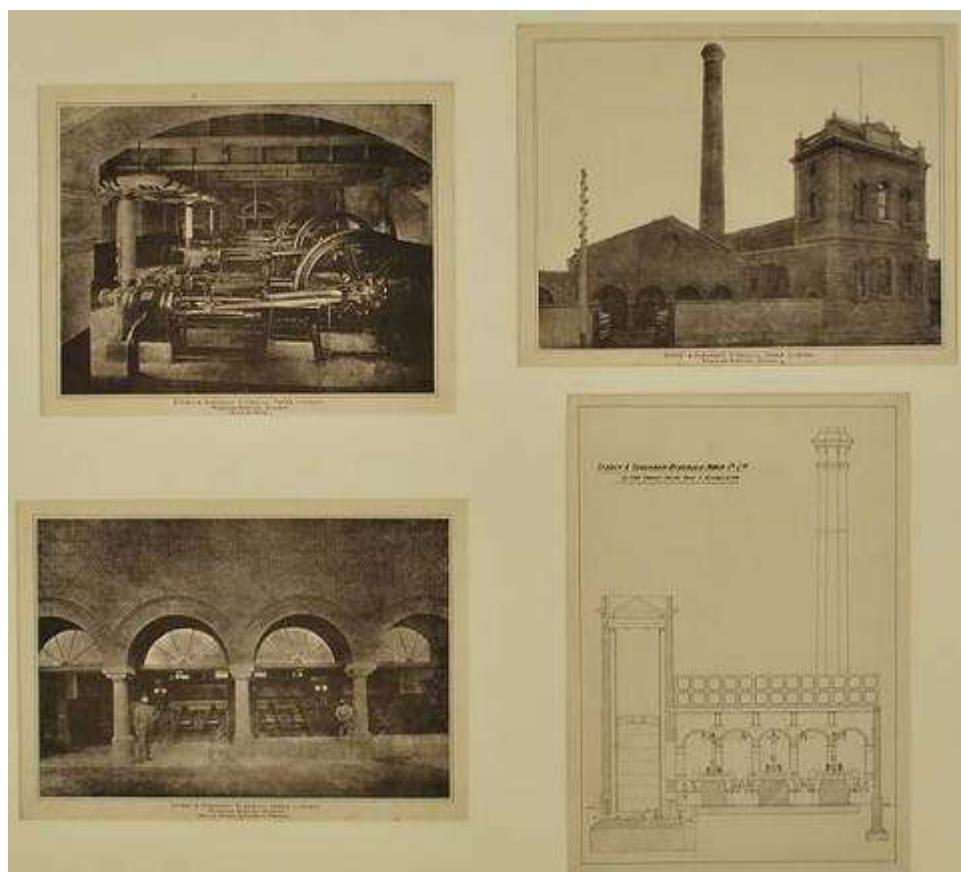


Figure 3.10: 'Pumping Station, Sydney; Engine Room; Boiler House Automatic Feeder; and Engine House and Accumulator', c1898.

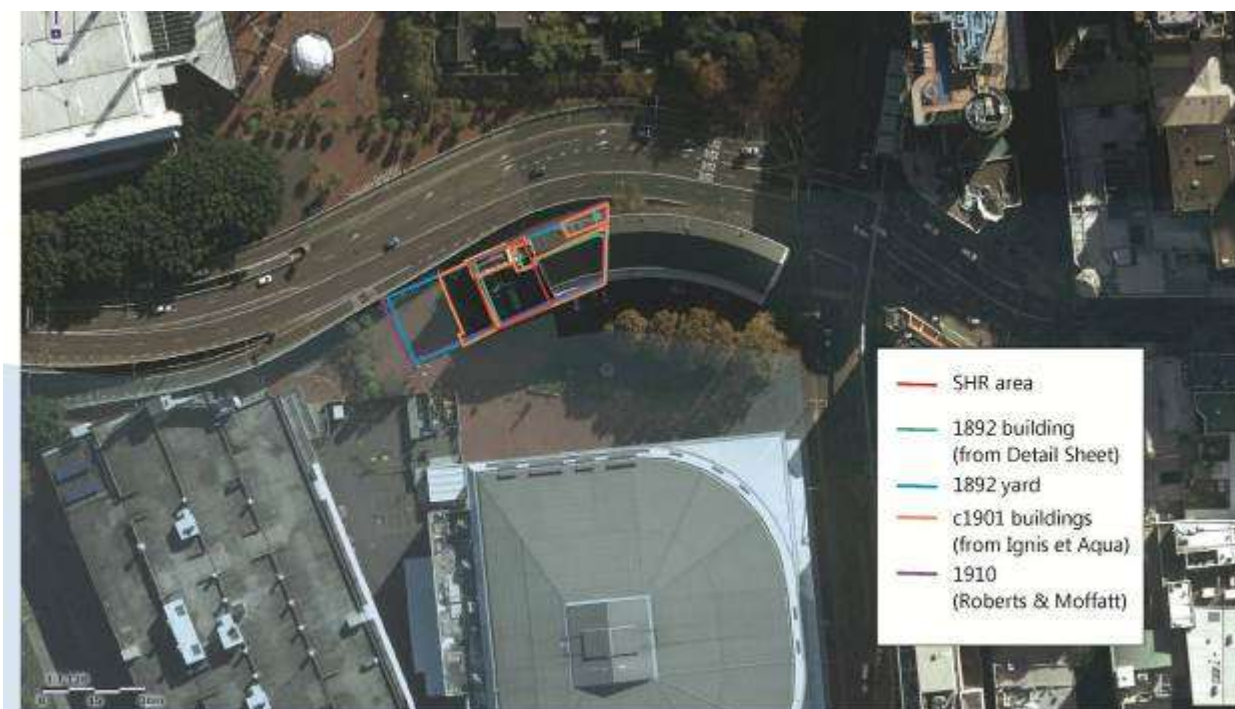


Figure 3.11: Outline of the footprint of the Sydney Hydraulic Power Company buildings and land within the study area.

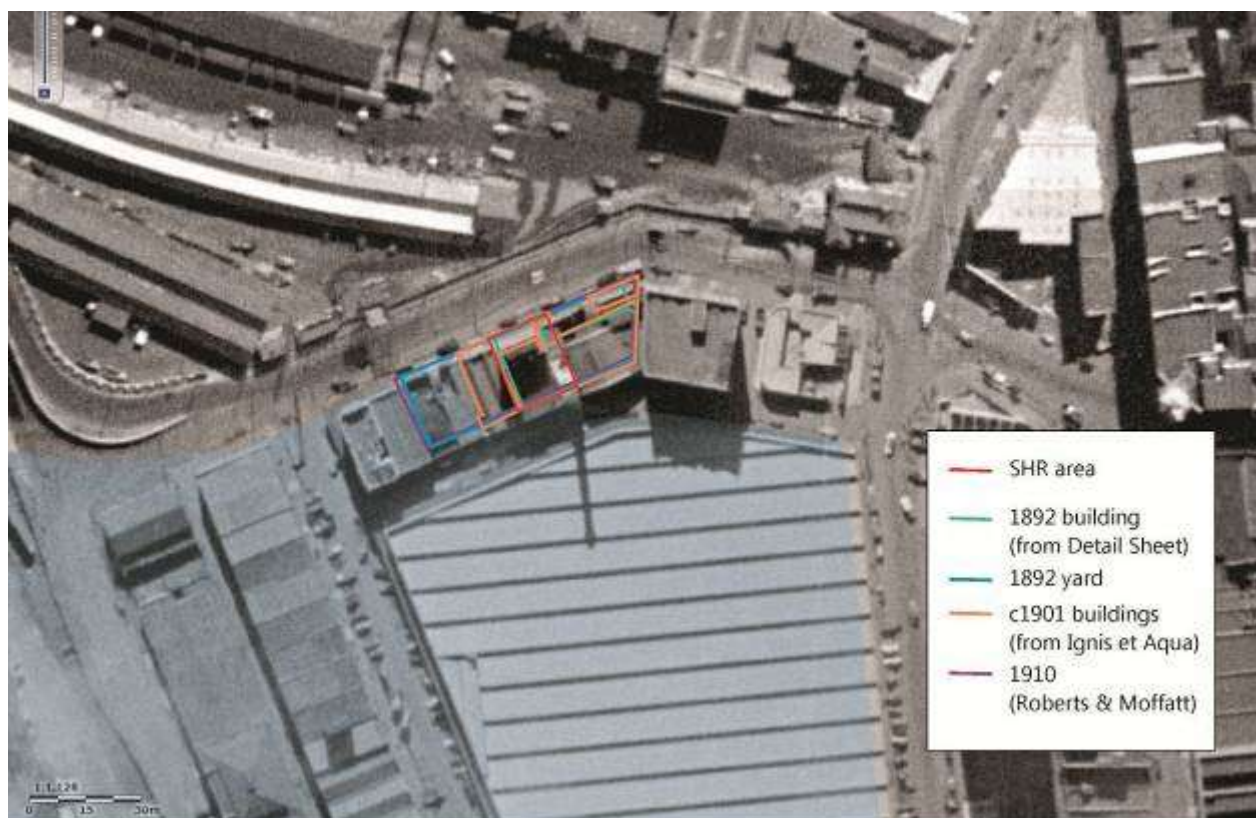


Figure 3.12: Outline of development of the Sydney Hydraulic Power Company buildings and land within the study area and on the 1943 aerial photo. (c) Lands Department, SIX viewer.



Figure 3.13: Early 20th-century plan, *Ignis & Aqua* plan of the study area providing details of buildings erected during the 1890s. Structural plans of the City of Sydney (cartographic material), *Ignis et Aqua* series, vol.1 / by F. Oliver Jones, Civil Engineer & Surveyor. ML, SLNSW.

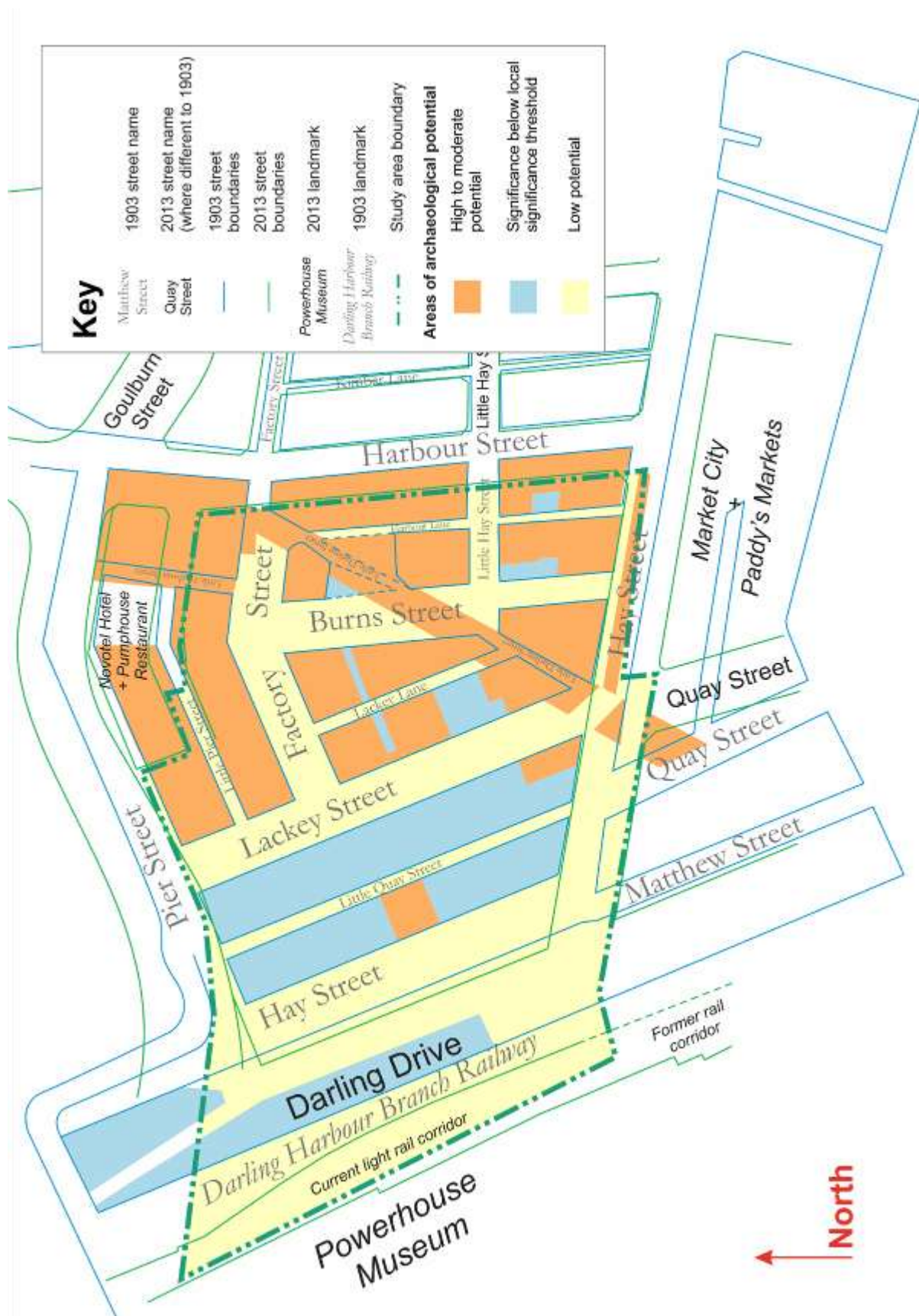


Figure 3.14: Plan showing the degree of archaeological potential throughout the study area.