Godden Mackay Logan
Heritage Consultants

Australian Technology Park

Conservation Management Plan

Volume 1

Report prepared for Australian Technology Park Sydney Ltd

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Report Register

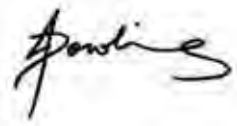
The following report register documents the development and issue of the report entitled Australian Technology Park—Conservation Management Plan, undertaken by GML Heritage in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
09-0250	1	Draft Report	June 2010
09-0250	2	Revised Draft Report	July 2011
09-0250	3	Revised Draft Report	November 2011
09-0250	4	Revised Draft Report	March 2012
13-0056	5	Final Report	October 2013
13-0056	6	Final Report (incorporating Heritage Division comments)	December 2013

Quality Assurance

GML Heritage operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Julia Dowling	**Project Director & Reviewer:**	Richard Mackay
Issue No.	6	**Issue No.**	6
Signature		**Signature**	
Position:	Senior Consultant	**Position:**	Partner
Date:	20 December 2013	**Date:**	20 December 2013

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Executive Summary

The Eveleigh Locomotive Workshops operated between 1885 and 1986. The Locomotive Workshop together with North Eveleigh Carriage Works, located across the Main Western Railway line, formed the Eveleigh Railway Workshops.

The historic buildings, structures and machinery now within Australian Technology Park (ATP) are an eloquent testament to the huge nineteenth-century public enterprise that the Eveleigh Railway Workshops represents. It is within these buildings that complete steam locomotives were manufactured and assembled, as were the tools to make them.

ATP is currently managed by Australian Technology Park Sydney Ltd (ATPSL), a government-owned company. ATPSL have developed the following Conservation Vision Statement that provides an overarching direction and vision for the conservation and management of the ATP site.

ATP is a workplace which has always been characterised by technical achievement and contemporary best practice. Today ATP is a site of State heritage significance which combines the rich and evocative history of more than a century of rail industry with inspiring adaptation of historic buildings, innovative new development and cutting-edge technology. While retaining links with the past and social value to former workers, ATP also has strong connections with the current community of workers, residents and visitors.

ATP will be managed to:

- deliver high quality **custodianship** of a major public asset;
- facilitate ongoing **evolution** of the place itself and ever-changing technology through new uses and appropriate development while retaining the heritage values of the ATP site and the Eveleigh Railway Workshops site as a whole;
- **engage** with workers both past and present, local people and the wider community; and
- **present** the old and new Eveleigh/ATP stories in an engaging way—both on and off site.

Custodianship

ATP will be managed, conserved and developed in a way which retains and adds value—both the heritage value of the site and the economic and social value of the asset.

All heritage management actions and decisions will comply with ATPSL's constitution, relevant legislation, the Burra Charter, the policies of the ATP Conservation Management Plan and the NSW Government policy, as appropriate.

Evolution

ATP will continue to develop in a manner which respects and conserves the existing heritage values of the place, but which encourages exciting new development that is of sympathetic design.

Innovative commercial uses which use new technologies and deliver good heritage outcomes—in relation to both physical conservation and interpretation—will be encouraged.

Engagement

Interested people, including current or former workers, residents, special interest groups and the wider public, will be encouraged to connect with ATP both on and off site.

Engagement will continue to occur through on-site interpretation, publications, access to common areas, events and direct delivery of information.

Presentation

The history and heritage of ATP will be presented on and off site to inform and inspire workers and visitors.

Interpretation will embrace the concepts contained in the ERW Interpretation Plan and will use the historic fabric of the place itself, landscape elements, artwork and signs, as well as electronic media. Tenants will be encouraged to communicate and celebrate the special nature of this extraordinary place.



(Source: All photographs by GML 2010)

1.0 Introduction

1.1 The Purpose of this CMP

Australian Technology Park Sydney Ltd (ATPSL), a government-owned company, has commissioned Godden Mackay Logan Pty Ltd (GML) to prepare a Conservation Management Plan (CMP) for the Australian Technology Park (ATP). This CMP reviews and replaces the 1995 CMP and the Draft 2002 CMP for the Locomotive Workshops to reflect the changes that have occurred to the site since then.

The CMP is the principal conservation management document for ATP and provides the guiding conservation policies for the site. Other conservation documents, such as the S170 Heritage and Conservation Register and the Interpretation Strategy, provide additional information for managing the heritage significance of ATP and are supporting documents for the CMP.

The CMP should also be used in the development consent process for the site. As the ATP is part of a broader area listed on the State Heritage Register (SHR), the NSW Heritage Council must be consulted prior to approval being given to any alterations to the site. The Heritage Council would expect to see a CMP prepared to guide any substantial works. This CMP provides guidance for ATPSL and the Heritage Council in making decisions about matters that may affect the heritage values of ATP.

The CMP has been prepared as a high-level policy document to guide future planning for the site with regard to its heritage value and to provide clarity on future heritage requirements.

1.2 Overview

The area of land now known as ATP is the amalgamation of two parcels of land that originally contained the Eveleigh locomotive workshops and the Alexandria goods yard. The border of the ATP site does not correspond exactly to the boundaries of either, but rather reflects the areas of land where the original use had become obsolete. Consequently, the area of the Eveleigh Railway Workshops that contained the engine running sheds and the Large Erecting Shed are on railway land still owned and operated by Rail Corporation New South Wales (RailCorp). Part of the land used for the Alexandria Goods Yard was transferred to the Housing Commission of NSW (now Housing NSW) in the 1980s for the development of medium- and low-density public housing.

The ATP site is also the result of the physical and operational division of the Eveleigh railway workshops. The workshops were designed as a binary site with the carriage workshops on the northern side of the western rail line and the locomotive workshops on the southern side. In recent years, this division has been reinforced by the division of management of the two workshops areas. Both parts of Eveleigh today are vastly different to the railway workshops of the past, with new buildings, new uses and new owners.

This CMP must therefore address the difference between the site in the past (the Eveleigh locomotive workshops and other railway functions) and the site as it is today (ATP) as well as acknowledging that ATP is part of a broader area of related land listed on the SHR.

1.3 Site Identification

The ATP site is located on land south of Redfern railway station, approximately 3.6km southwest of Sydney CBD. The site is bounded by Garden and Cornwallis Streets to the east, Henderson Road to the south, Rowley Street and RailCorp land to the west and the western railway to the north. The ATP site is located within the boundary of the Redfern-Waterloo Authority operational area. The location of the site and its boundary is shown in Figures 1.1 and 1.2.

1.4 Heritage Listings

The site is listed as a whole and in part on a number of statutory and non-statutory heritage registers. These listings are outlined below and discussed in detail in Section 7.0 of this report.

1.4.1 Statutory Listings

The Eveleigh Railway Workshops and Eveleigh Railway Workshops Machinery are listed on the following heritage registers under the *Heritage Act 1977 (NSW)* (the Heritage Act):

- State Heritage Register; and
- Australian Technology Park S170 Heritage and Conservation Register (ATP S170 Register).

The Eveleigh Railway Workshops and its components, such as the machinery, were listed on Regional Environmental Plan No. 26—City West and South Sydney Local Environmental Plan 1998. Due to changes to the statutory context of the site, outlined in Section 8.0 of this report, these listings no longer apply.

The following items are also listed on the ATP S170 Register:

- Eveleigh Locomotive Workshops Precinct
- Eveleigh Locomotive Workshops Machinery Collection
- Engine Shop (former)
- Locomotive Workshops Building
- Works Managers' Office (former)
- Water Tower

1.4.2 Non-Statutory Listings

Eveleigh Railway Workshops and Eveleigh Railway Workshops Machinery are also listed on the Register of the National Estate and on the National Trust of Australia Register.

1.5 Methodology and Terminology

This CMP builds significantly on previous heritage plans prepared for only part of the site by addressing all heritage elements included on the ATP Heritage and Conservation Register (ATP s170 Register), including movable items. It also responds to the current planning framework for the site.

Because the history and fabric of the site reflects two strongly different phases before and after the creation of ATP, this report is also structured to reflect those two phases, as follows:

- Part A describes the operational aspects of the Locomotive Workshops within the context of the broader Eveleigh Railway Workshops operations.
- Part B addresses all aspects of the site as ATP today.
- Part C of the report brings together the previous parts in a significance assessment, including a review of existing heritage listings.
- Part D describes the constraints and opportunities on policy development and states conservation policy.

Preparation of the CMP has involved consultation with a range of external and internal stakeholders who are integral to future planning for the site. The consultation included a specific workshop held on 7 December 2010 to discuss the significance of the site and issues affecting its management. The following reports have been prepared previously for the Eveleigh Railway Workshops:

- Eveleigh Railway Workshops Heritage Study, prepared by Don Godden & Associates for the State Rail Authority of NSW, 1986.
- Eveleigh Railway Yards Locomotive Workshops Conservation Management Plan, prepared by Heritage Group, State Projects, NSW Department of Public Works, for the City West Development Corporation, June 1995.
- Eveleigh Workshops Management Plan for Movable Items and Social History, prepared by Godden Mackay for City West Development Corporation, State Rail Authority and Department of Urban Affairs and Planning, July 1996.
- Eveleigh Locomotive Workshops Conservation Management Plan (draft), prepared by Otto Cserhalmi and Partners for the Sydney Harbour Foreshore Authority, September 2002.
- Section 170 Heritage and Conservation Register—Australian Technology Park, Eveleigh—Overview Report and Inventory, prepared by Futurepast Heritage Consulting for ATPSL, June 2008.

Additional reports referred to in the preparation of this CMP are listed in Section 10.0 of this report.

This CMP has been prepared with regard to the methodology outlined in the *NSW Heritage Manual* (Heritage Council of NSW, November 1996, as amended July 2002). It is consistent with the relevant principles and guidelines of *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 1999* (the Burra Charter). The report has also been prepared in accordance with the requirements of *the Heritage Act 1977 (NSW).* The terminology used in this report is consistent with the NSW Heritage Manual and the Burra Charter.

1.6 Limitations

The historical overview has been limited to previous reports and the vast collection of photographs and plans of the site available. Little additional primary research was conducted for this report.

1.7 Authorship

This CMP has been prepared by the following consultants:

- Geoff Ashley, Senior Associate, who was the Project Manager and co-ordinated the preparation of the report;
- Julia Dowling, Consultant, who prepared the historical overview, significance assessment, constraints and opportunities and policies;
- Lyndon Patterson, Archaeologist, who prepared the preliminary archaeological assessment, Aboriginal cultural values assessment and led the Aboriginal stakeholder consultation;
- Randa Cotterell, Research Assistant, who prepared the site analysis and assisted with all aspects of the report;
- Tony Brassil, Associate, who contributed to the assessment of movable heritage; and
- Prof. Richard Mackay, AM, Partner, who led the stakeholder consultation process and reviewed and edited the report.

1.8 Acknowledgements

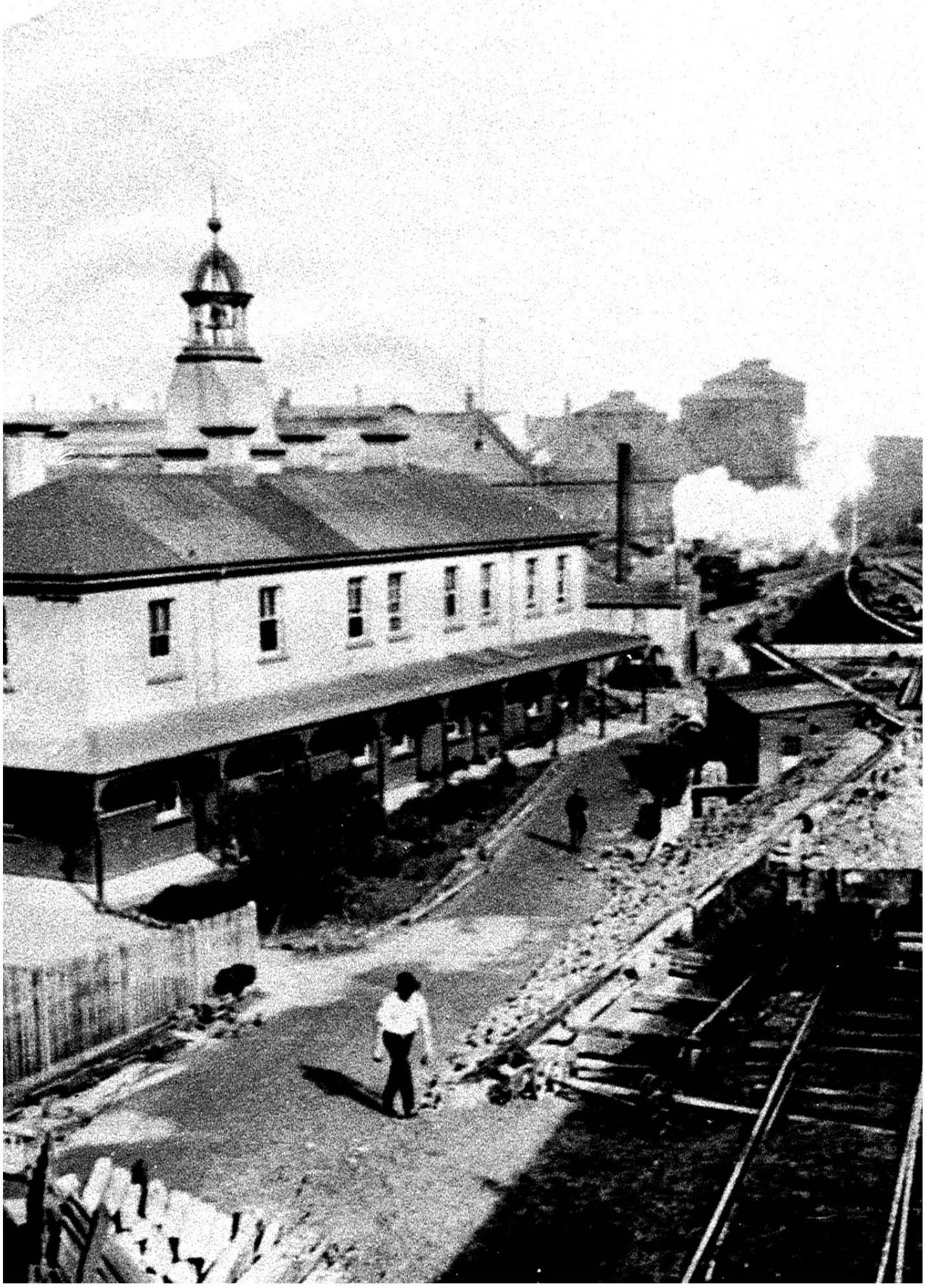
GML gratefully acknowledges the assistance provided by the following people:

- Roy Wakelin-King, Managing Director, Australian Technology Park Sydney Limited
- Chris Saunders, General Manager, Australian Technology Park Sydney Limited;
- Graham Stevens, Director, Property Services, Australian Technology Park Sydney Limited;
- Kathy Tilbury, Property Manager, Australian Technology Park Sydney Limited;
- The staff of the (then) Redfern–Waterloo Authority who participated in the community consultation workshop, including Juliet Suich;
- Maclaren North, Futurepast Heritage Consulting;
- Lucy Taksa, Historian;
- Geoff Turnbull, REDWatch; and
- Guido Gouverneur and Wendie McCaffley, Wrought Artworks.

Figure 1.1 Site location plan. The boundary of the site is shown in Figure 1.2, on the following page. (Source: Google Maps 2009 with GML overlay)

Figure 1.2 Site plan. (Source: Google Maps 2009 with GML overlay)

PART A: HISTORICAL OVERVIEW



2.0 Historical Overview

2.1 Introduction

The current ATP site was occupied by a large complex of rail workshops and yards throughout the late nineteenth and most of the twentieth century. The northern part of the ATP site, next to the western rail lines, was occupied by the Eveleigh Locomotive Workshops, while the southern part of the site was occupied by the Alexandria Goods Yard.

The industrial processes of the Eveleigh Locomotive Workshops are revealed in its physical form and the ability to understand its history is intertwined with the history of the railway workshops as a whole. However, the relationship of the locomotive workshops to the carriage workshops has been severed, at least for management purposes, and this historical overview focuses on the locomotive workshops and the goods yard.

Detailed historical overviews of the Eveleigh Railway Workshops can be found in previous heritage reports, particularly the heritage study prepared by Don Godden & Associates in 1986 while the workshops were still in operation, and the management plan for movable items and social history prepared by Godden Mackay Heritage Consultants in 1996. The purpose of this historical overview is to examine the role of the Eveleigh Railway Workshops and the Alexandria goods yard in their local and regional context, including their effect on the surrounding area (both in terms of population and physical form), and more broadly, on NSW.

The site as it is today will be examined in Part B Section 3.0–6.0 of this report.

2.2 Pre-European Occupation and Use

More than thirty different Aboriginal groups are recorded as having occupied the Sydney region prior to contact. Estimates of the number of Aboriginal people living along the coast between Broken Bay and Botany Bay at the time of contact place the number at approximately 1,500 people. Similar estimates have been made for the inland groups occupying the Cumberland Plain to the west.[1] However it is difficult to make any certain estimate of population numbers, with researchers placing the total pre-contact number of Aboriginal people within the Sydney region anywhere between 4,000 and 8,000.[2]

The available evidence suggests that the area of Redfern today forms part of a wider expanse of land traditionally occupied by the Cadigal (or Gadi, Gadigal) people. Historic accounts suggest these people lived in the area from South Head along the southern side of Sydney Harbour to the cove adjoining this settlement (Long Cove).[3] To the west of the Cadigal were the Wangal people and to south, on the shores of Botany Bay, lived the Gameygal people.

The boundary between the Cadigal and neighbouring Wangal remains unclear, with considerable ambiguity in the historical records. Thus it will probably never be possible to say for certain where the physical boundary between these two groups was. The Cadigal and Wangal clans had strong associations with the harbour landscape, and the available evidence indicates that the study area may have been part of an area which formed the border between these two groups. For example, records by Phillip Gidley King in 1793 state:

> *The tribe of Cadi inhabit the south site, extending from the south head to Long-Cove; at which place the district of Wanne, and the tribe of Wangal, commences, extending as far as Par-ra-matta, or Rose-Hill.*[4]

However this is contrasted by records made by Governor Arthur Phillip in 1790, which describe a different common boundary between the two groups:

> *From the entrance of the harbour, along the south shore, to the cove adjoining this settlement the district is called Cadi, and the tribe Cadigal; the women, Cadigalleon. The south site of the harbour from the above-mentioned cove to Rose Hill, which the natives call Parramatta, the district is called Wann, and the tribe Wanngal.*[5]

King's account would place the tribal boundary at Long Cove (Iron Cove), probably along the ridgeline which forms the eastern watershed of Iron Cove, in which case the study area would be within Cadigal land. In some contrast, Phillip's account would place the boundary along the ridgeline of Darling Harbour or Blackwattle Bay (assuming the 'cove adjoining settlement', which he refers to, is Darling Harbour). In this case the study area would lie close to the western boundary of the Cadigal. Cadigal country extended across most of the Sydney peninsula, and today is generally defined as taking in the land between Darling Harbour and South Head and including Port Jackson, Botany Bay and Port Hacking.[6]

Records from 1790-92 state the Gameygal people were said to occupy the area around *Ka-may*, the local name for Botany Bay[7]. At the time of arrival of Europeans in the Sydney region, the area between Redfern and Botany Bay was said to be covered by huge swamps, tea tree country and sand dunes, this area characterised by the Botany Lowlands physiographic region today.

Archaeological and ethnohistoric information provides many details of Aboriginal life in the Sydney basin prior to contact with European settlers. The Cadigal subsisted on the wide resource base of the local area, including terrestrial, estuarine and marine resources, although archaeological and ethnohistorical evidence indicates that the Sydney Aboriginal economy is likely to have been predominantly marine-oriented. Food was obtained through fishing, shellfish collection, hunting and gathering of small plants and animals. These activities would have been conducted in the vicinity of the study area; indeed it is likely that the nearby swamps, estuarine mud flats and bays would have provided a relatively reliable, predictable and concentrated range of fish, shellfish and crustacean resources. Fishing was conducted either with lines or spears, although traps and stone weirs may also have been used.[8] As well as the range of plant and animal foods, the landscape would have provided a range of medicinal plants, as well as raw materials used for the manufacture of tools, weapons and shelters and for ceremonial purposes including body decoration.[9]

The Cadigal were the earliest Aboriginal people to be impacted physically and socially by the European colonisation of Sydney. Early contact started on a relatively positive note, with a range of historic accounts detailing the friendly relations between European and Aboriginal people during this period. Governor Phillip had been instructed 'by every possible means to open an intercourse with the natives and conciliate their affections'.[10] Phillip's policy in dealing with the Aboriginal people was to treat them with the greatest humanity and attention, ensuring that every precaution be made to prevent them from receiving insults.[11]

However, these intentions of peaceful cohabitation were difficult to enforce, and friendly relations did not last. Many of the early settlers did not share the sentiments of the governor, being less morally inclined than him in relation to the local Aboriginal population. Incidents of conflict soon emerged and this, combined with European expansion and land and resource use, placed pressure on traditional Aboriginal practices. The local Aboriginal population became increasingly dispossessed of their traditional lands and food and plant resources, leading to inter-tribal conflict, starvation and the breakdown of traditional cultural practices.[12]

The Aboriginal population of the Sydney region declined significantly following the arrival of Europeans, as they brought with them diseases to which the Indigenous inhabitants had little or no resistance. The smallpox epidemic of 1789 was particularly deadly and spread throughout the Aboriginal population. The Governor of New South Wales, Arthur Phillip was reported to note dead Aboriginal elderly people and children around Sydney Harbour in 1789.[13] Smallpox had quickly spread west to the Cumberland Plain by the time of Governor Phillip's expedition to the Hawkesbury–Nepean River in April 1791. The smallpox epidemic is thought to have caused the death of well over half of the Aboriginal population of the Sydney region within one year.[14] Butlin argued that prior to the 1780s Aboriginal people in southeastern Australia had not been exposed to smallpox and estimated that 80 percent of them died.[15] The widespread death from smallpox would have had an enormous impact on the social life of Aboriginal people in the Sydney region at the time, including mourning the family members who perished, the loss of elders' knowledge, the survivors fleeing inland to escape the disease and the depopulation of some areas.

Despite these pressures on the local Aboriginal population, there is historical and archaeological evidence that Aboriginal people maintained a continued presence within the Sydney region following European settlement. For instance, four shards of blue and white ceramic transfer ware found in association with flaked stone within Aboriginal occupation layers at a site in East Darling Harbour provide evidence that Aboriginal use of this area continued well into the historic period.[16] Historical records of blanket distribution lists of the 1830s show that:

> *apart from a group living in government boatsheds at Circular Quay, few people identified as Aboriginal were living in Sydney. Many had moved to places such as La Perouse on Botany Bay, south of the city.*[17]

Places such as Happy Valley at La Perouse continued to be a focus for Aboriginal people through the nineteenth century and into the twentieth century. From the 1930s, Aboriginal people were attracted to working class suburbs like Redfern, Glebe, Pyrmont, Balmain and Rozelle where they could find work on the nearby railways, including Eveleigh Railway Workshops and factories. Many Aboriginal people migrated from northern and western New South Wales into these suburbs for new work opportunities.[18] Particularly Redfern and Glebe became communities with sizable Aboriginal populations and many organisations developed to service the needs of these communities. Today, the Redfern area is the home of many Aboriginal organisations including the Metropolitan Local Aboriginal Land Council, Native Title Services and Redfern Aboriginal Corporation.

2.3 The Chisholm Estate

The site of the Eveleigh Railway Workshops was formerly an area of land granted to James Chisholm in 1835, and subsequently known as the Chisholm Estate. The grant comprised 60 acres of land on the southwestern side of Chippendale's grant.[19] Chisholm, a former member of the NSW Corps, built a house in the northeastern area of the site and named it Calder House after his birthplace in Scotland. Parts of the estate were farmed. Chisholm died in 1837 and his widow remained at Calder House. The estate was bisected by the western rail line to Parramatta in 1855 and the Calder House was leased for a school. Plans from c1875 indicate that the estate was undeveloped, containing only Calder House, a cottage in the estate's northwestern area and a group of stables in its southeastern corner (Figure 2.3). The group of stables were located in what is now the ATP site (see Section 5.0 Archaeological Assessment).

2.4 The Role of Eveleigh Railway Workshops

2.4.1 Background

The Eveleigh Railway Workshops were established in response to the rapid growth of rail transport during the second half of the nineteenth century and the need for a local, government-owned maintenance facility for the many locomotives that serviced the new railways. Prior to 1855, private enterprises had been relied on to establish a rail network in NSW. Due to the significant costs involved in railway and locomotive construction, reliance on private companies failed to establish any comprehensive railway network for NSW. Following an enquiry in 1854 which revealed the need for a rail system for the state, the NSW government took control of the state's railways in 1855.

The first government-constructed rail line opened in 1855 and linked the first Redfern station (located on Devonshire Street to the south of the present Central Station) to Parramatta. A small group of government-owned rail workshops was established at the southwestern end of the old Sydney railway yards to service the locomotives (Figure 2.11), but the manufacture of rolling stock and much of the locomotive repair and overhaul work continued to be carried out by private companies. Demand for rolling stock soon outstripped supply and it became apparent that the NSW government would need to expand its own repair and maintenance operations to keep up with demand. An 1871 proposal to expand and upgrade the established government-owned rail workshops was initially carried out, but the workshops were swiftly outgrown. A larger site that could accommodate foreseeable future expansion was required.

Chisholm Estate, located southwest of the old Sydney railway yards, was selected as the site for the new railway yards in 1875. The estate was already bisected by the western rail line to Parramatta and mainly undeveloped. The NSW government resumed 64.5 acres of the estate for the construction of the new railway workshops in 1878.[20] Land clearing and building construction commenced in 1882.

2.4.2 The Eveleigh Railway Workshops

The Eveleigh Railway Workshops were separated into two main functional areas—the carriage and wagon workshops on the northern side of the western rail line and the locomotive workshops on the southern side (Figure 2.4). This arrangement enabled each side to communicate with the main lines without interfering with each other or interrupting traffic.[21] The operations of the Locomotive Workshops area was then divided into two main sections—the locomotive workshops and the running sheds, as were the Carriage Workshops—the carriage and wagon shops, and the paint shop and stores. Each of these sections operated quite separately with little crossover of workers or tasks.

Locomotive Workshops

The engine running shed was the first building to be constructed, and was put into operation in 1885 (Figures 2.12 and 2.13). Bays 1–4 of the locomotive workshops soon followed. Demand for locomotive repairs was so high that Bays 1–4 were put into operation as soon as they were completed and while Bays 5–15 were still under construction. The locomotive workshops were constructed of English bond brickwork with sandstone details (Figure 2.17). Each bay was supported by cast-iron columns laid out in double rows. Bays 1–4 and 5–15 were separated by an annex which contained tinsmiths and coppersmiths, a sand store and core stoves for the foundry.

The intended function of each workshop bay was part of the design of the building. Bay 1 contained the steam hammer shop, Bay 2 the blacksmith's shop, Bay 3 the boiler shop and Bay 4 the foundry. As for Bays 5–15:

> *Bay 5 was the tender repair shop and had a 25 ton overhead crane installed. Bays 6, 7 and 8 contained the engine repair or erecting shop, with the traverser in Bay 7 distributing locomotives to the bays on either side, each of these having a 25 ton overhead crane. Bay 9 contained the wheel shop and the machine and fitting shop occupied Bays 10 and 11. Each of these bays had a 5 ton overhead crane installed. Bays 12 and 13 contained the paint shop with the traverser in Bay 13 to move locomotives in and out. Brick walls inserted instead of columns at the junctions with either adjacent bay isolated the Paint shop from the rest of the workshops and, in the absence of any overhead crane, only a single row of columns divided the two bays. Bay 14 contained the pattern and joiners shop and a brick wall also separated this from Bay 15 containing the locomotive store which supplied all manner of parts and tools used in the workshops. Two annexes were built at the rear of Bays 9 and 10, one being the cleaning shop and the other a second boiler house*[22]

A works manager's and timekeeper's office was constructed to the northeast of the locomotive workshops. Originally a small masonry building with sandstone lintels and wrought iron balconies, the office was marked by a bell tower at the top of the building which called the beginning and end of each working day (Figures 2.19–2.20). The works manager's and timekeeper's office handled the payroll for all areas of Eveleigh.

Carriage and Wagon Workshops

On the northern side of Eveleigh, construction of the Carriage and Wagon Workshops commenced in 1885 and eventually opened late 1887. The workshops consisted of 10 bays, numbered 16–25, almost identical in overall design and materials to the locomotive workshops. Similarly, bays or groups of bays of the carriage workshops were allocated to specific functions. The workshops were put into operation straight away, constructing new carriages and wagons as well as carrying out repairs. The carriage workshops site also contained the chief mechanical engineer's office, 'under whose supervision the whole workshops operated'.[23]

2.4.3 The Effect of the Eveleigh Railway Workshops on the NSW Railways

The size and capacity of the Eveleigh workshops allowed the centralisation of maintenance and overhauls of locomotive engines and carriages in Sydney and its establishment led to a period of sustained growth in rail transport in NSW. Eveleigh became the central repair facility for New South Wales for both locomotives and carriages. The workshops had always built new carriages, but locomotives were generally imported from England or America and assembled at Eveleigh. Eventually, from 1915–1924 and again from 1945–1952, the workshops at Eveleigh manufactured new locomotives.

By the end of the nineteenth century approximately 1500 men were employed at the Eveleigh Railway Workshops.[24] By 1900 the Eveleigh Railway Workshops was one of the biggest employers in the state, counting for 10% of the total rail workforce in NSW. A total of 3,720 workers were employed at Eveleigh by 1912. At its peak, the Eveleigh Railway Workshops employed more than 7000 workers on site.[25]

2.4.4 Early Expansion

The Locomotive Workshops expanded greatly throughout the 25 years following its opening and experienced almost constant growth. During the same period the Carriage Workshops experienced

sustained work, but did not expand at the same rate. Figure 2.2 provides a graphical summary of the changes to the Locomotive Workshops during the period 1887–1984.

The demand for locomotives continued to rise and a new erecting shop (known as the 'Large Erecting Shed') was constructed by 1899 to augment the works of the existing erecting shop in Bays 6–8 of the Locomotive Workshops. The Large Erecting Shed is shown in Figure 2.14. A new foundry was constructed first on land adjacent to the site of the Large Erecting Shed (Figure 2.5) and the paint shop was removed from Bays 12 and 13. The Large Erecting Shed was extended from 1900–1906 and the traverser from Bay 13 was moved outside Bay 15 to serve it.

Increasing demand for locomotives and repairs continued to push growth of the Locomotive Workshops. Expansion was accommodated by reconfiguring the internal arrangement of the workshops as well as adding new buildings and annexes. Each expansion and reconfiguration had a 'domino effect' on the workshops, as the function of each bay was carefully arranged in relation to the adjacent bays and to the workshops as a whole. An example of the effects of expansion occurred when the capacity of the blacksmiths and boiler shop had to be increased in 1905. The blacksmiths shop was expanded from Bay 2 to fill both Bays 1 and 2 of the Locomotive Workshops. The annex between Bays 4 and 5 was roofed over and walled in to accommodate the expanded boiler shop, which filled Bays 3 and 4 and this new section, named Bay 4a. A new coppersmiths and tinsmiths shops were erected subsequently on the southern side of Bays 5–9 and a new spring shop and steam hammer shop (which formerly occupied Bay 1), erected to the east of Bay 1 in the area now known as Innovation Plaza. Many of these new annexes and shops were constructed quickly using corrugated iron.

The process of electrification of the workshop machinery began in 1901 (due to the new AC power supply provided by the Ultimo Power Station) and was carried out gradually over the next 15 years.[26] A major advancement was the conversion of the original rope-driven cranes to electric motor drives and the electrification of the ground traversers in 1907. The electrification process was a major undertaking of the years 1914–1916, when the machinery in Bays 8, 9 and 14 were electrified. All boilers were replaced or refurbished from 1908–1910.

2.4.5 Manufacturing Locomotives 1908–1925 and 1945–1952

Local manufacturers of locomotives could not keep up with the demand for new rolling stock, nor compete in price with imported stock. The NSW Government decided in 1907 that new locomotives should be manufactured at the Eveleigh Railway Workshops due to its size and established workforce, which could be 'effectively adapted to the task.'[27] The Locomotive Workshops were already operating at capacity at this time, so new workshops had to be constructed to accommodate the additional workload. The New Locomotive Shop was completed by the end of 1908 and, for the first time, locomotives were manufactured at Eveleigh.

The New Locomotive Shop was extended in 1914, six years after it opened (Figure 2.22). A new foundry and a pattern shop were erected on the southern side of the Locomotive Workshops by 1919, requiring the resumption of two acres of land at the southwestern end of the site to allow construction of a new rail siding that connected to the foundry and pattern shop. The steel foundry was extended in 1922, only three years after it began operation (Figure 2.6). The old foundry adjacent to the Large Erecting Shed was converted for use as a boiler repair shop.[28]

The Eveleigh Railway Workshops were working at capacity and further expansion could not be accommodated. After 153 locomotives had come out of Eveleigh, the manufacture of new

locomotives ceased in 1925. The New Locomotive Shop was subsequently used for repairs. New railway workshops opened in the western Sydney suburb of Chullora in 1927. The inability of Eveleigh to keep up with the demand for locomotive repair works saw boiler repair work transferred from Eveleigh to Chullora in 1927, but this alleviated only a little of the pressure on the Locomotive Workshops.

It was intended that Chullora would eventually take the place of Eveleigh. While the new Chullora workshops gradually took on much of the repair work undertaken at Eveleigh (a new locomotive repair shop opened there in 1937)[29], there continued to be enough work for both workshops to remain in operation.

2.4.6 Progress at the Eveleigh Locomotive Workshops

Eveleigh saw little expansion during the Depression, but the New South Wales rail system continued to grow. Rail lines in NSW were gradually electrified during the mid-1920s and diesel trains were introduced in 1935. The diesel engines were made overseas and maintained locally. The change in technology had a long-term impact on the workshops, seeing a shift in technology and a need to retrain workers. Overhauling diesel engines was a much simpler process than overhauling locomotives. A diesel engine could be overhauled and back in operation within five days, while it took up to 12 weeks to overhaul a locomotive.[30]

Demand for locomotive repairs still outstripped supply during the 1930s and as a result an increasing number of contracts were given to private companies. The ideology of government-owned industries was losing ground.

2.4.7 Eveleigh and the War Effort

An attempt was made during World War I to manufacture field gun shells at Eveleigh on its machinery, but the process was deemed unsatisfactory for the army and the railways alike. The war had not reduced the demand for locomotive repairs and it was difficult to accommodate the additional work required to produce ammunition for the army. Modification of machinery at Eveleigh to make it suitable for use in ammunition manufacturing was found to be difficult and costly.

The Eveleigh Railway Workshops were again used for manufacturing for World War II from 1941. This time the Department of Defence supplied its own machinery for the manufacture of 25lb field-gun shells. The machinery was installed in Bays 5 and 6, which were temporarily cleared of railway machinery, and a timber mezzanine level constructed in Bay 5. Bay 8 was used as a munitions annexe and, for a short time, tanks were assembled in the New Locomotive Workshop. The workshops at Eveleigh also produced the machinery needed for the manufacture of Bren guns. Concrete air raid shelters were added to both sides of the Eveleigh Railway Workshops in 1942-43 and some Department of Defence workers were accommodated at the Carriage Workshops. The Defence machinery was removed from the Locomotive Workshops in 1945 at the end of the war and the workshops resumed normal operations.[31]

2.4.8 Decline and Closure

Locomotives were again manufactured at Eveleigh from 1945 to 1952, this time in the Large Erecting Shed. The pattern of combining repairs and maintenance with manufacturing and assembly was drawing to a close during the 1950s. Contracts continued to be granted to private companies and Eveleigh lost large numbers of experienced workers to the better wages offered by private companies. This resulted in labour shortages that in turn led to further contracting.[32]

Attempts were made throughout the second half of the twentieth century to keep the Eveleigh Railway Workshops in operation. Machinery was updated and workers retrained in repairing and overhauling diesel engines. In 1968 a cleaning and servicing shed was added to the Locomotive Workshops on the site of the Engine Running Sheds.

The Locomotive Workshops closed on 27 June 1986 and the entire Eveleigh Railway Workshops closed for good in February 1989. Paddy's Market occupied the Locomotive Workshops for a short period before the creation of Australian Technology Park was announced in 1991. This was a joint venture between the University of NSW, University of Sydney and University of Technology, Sydney. More information about this change is provided in Section 3.0.

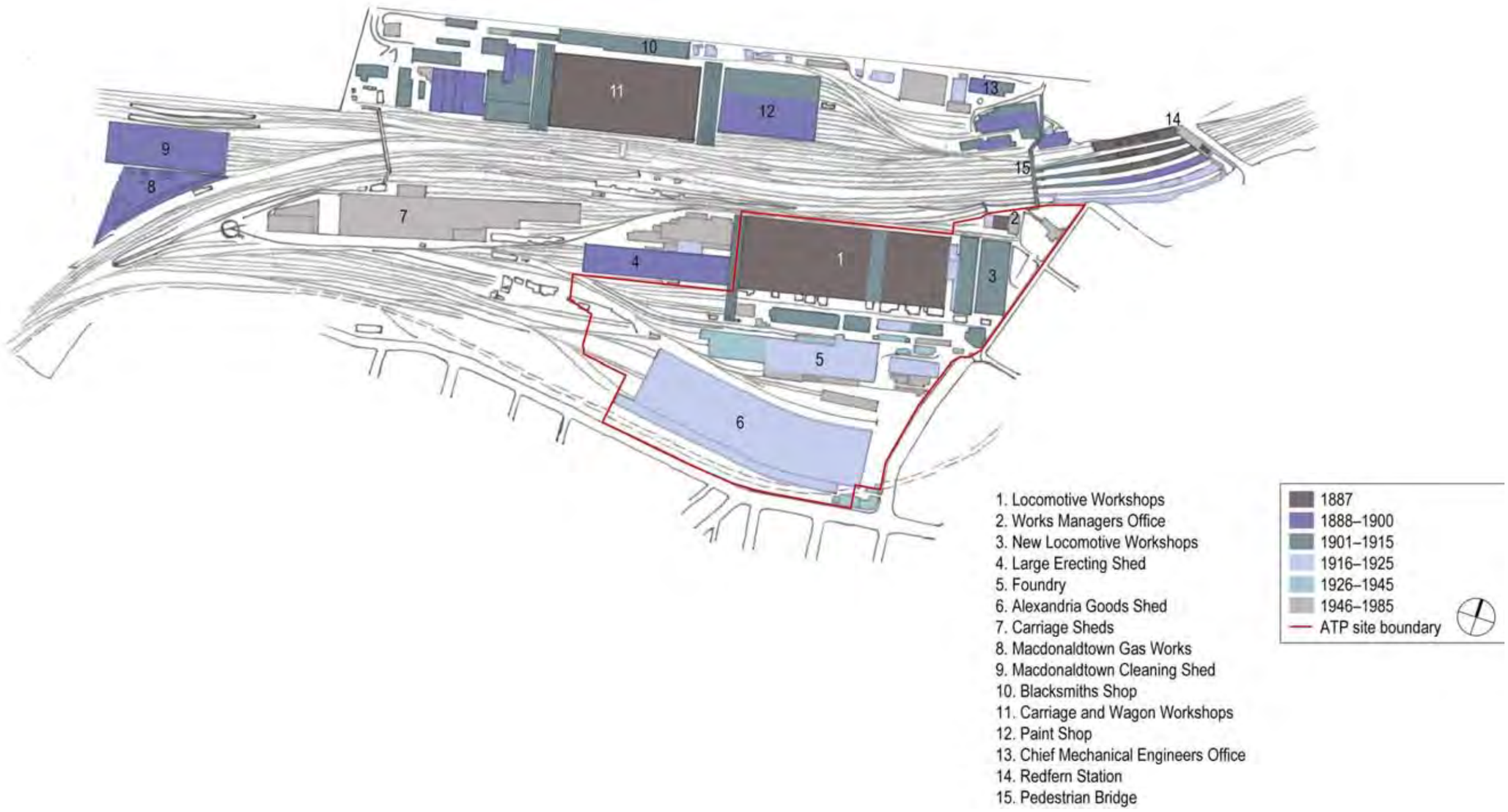


Figure 2.1 Plan of the entire Eveleigh Railway Workshops and associated places when fully operational c1970. The plan indicates the evolution of the area and the sheer scale of the Eveleigh Railway Workshops. The current ATP site boundary is also included to demonstrate the railway land and uses that were amalgamated when the ATP site boundary was set. (Source: GML 2010)

2.5 Operations of the Locomotive Workshops

2.5.1 Functional Divisions

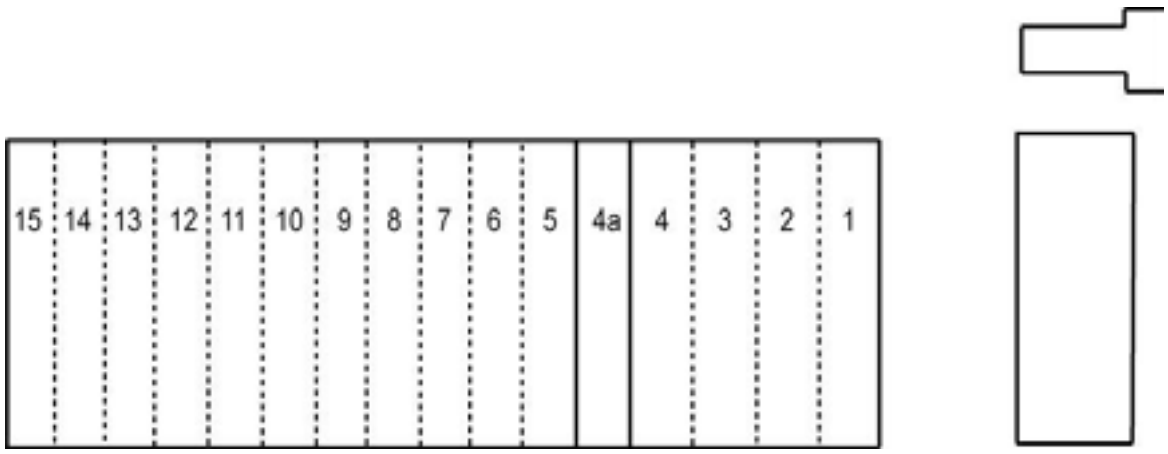
As mentioned in Section 2.2.2, the Eveleigh Railway Workshops were separated into two main functional areas—the Carriage and Wagon Workshops on the northern side of the rail line and the Locomotive Workshops on the southern side—and four main sections: the locomotive workshops, the running sheds, the carriage and wagon shops, and the paint shop and stores.[33]

The Locomotive Workshops operated in the following way:

- Locomotive Workshops: Manufacture and repair of parts were carried out in the Locomotive Workshops. Engines were put together in Bays 6–8 of the workshops.
- Large Erecting Shed: After 1899 engines were also put together in the Large Erecting Shop.
- Engine Running Sheds: Locomotive servicing, cleaning and repairs were carried out in the engine running sheds. The sheds were capable of holding 126 engines at any one time.[34]
- New Locomotive Shop: Locomotives were manufactured in the New Locomotive Shop from 1908.

The four main buildings were supported by a range of ancillary operations carried out in other buildings around the site. At its peak, the locomotive workshops contained the engine running sheds, locomotive workshops, the large erecting shed and the new locomotive shop, iron, steel and copper foundries, a spring shop (which manufactured all springs used in the workshops), an oliver shop for the oliver hammers (used to manufacture tools and brake keys), a boiler shop, tinsmiths, coppersmiths, a pattern shop, plumbers shop and the works manager's office (see Figure 2.2 evolution diagram).

Table 2.1 Functions of the Locomotive Workshops buildings remaining on the ATP site since 1887.

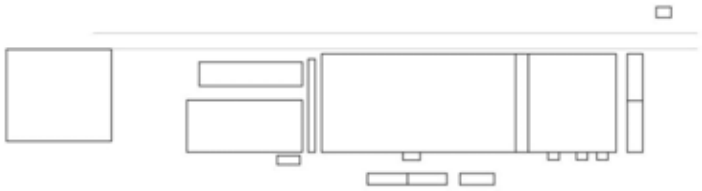


Building	Bay	1887	1905	1924	1984	2009
Locomotive Workshops	1	Steam hammer and spring shop	Blacksmiths shop	Blacksmiths shop	Blacksmiths shop	Blacksmiths workshop
	2	Blacksmiths shop	Blacksmiths shop	Blacksmiths shop	Blacksmiths shop	Blacksmiths workshop

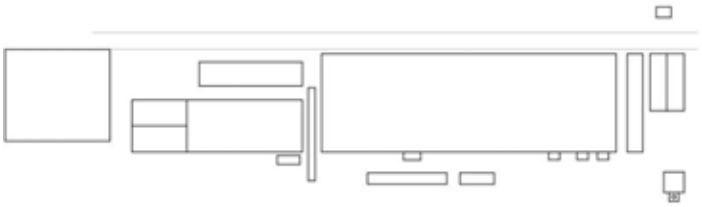
Building	Bay	1887	1905	1924	1984	2009
	3	Boiler shop	Boiler shop	Boiler shop	New spring shop/Heat treatment	Offices
	4	Foundry	Boiler shop	Boiler shop	Fabrication shop	Main entry
	4a	Annex containing tinsmiths and coppersmiths, sand store and core stoves for the foundry	Boiler shop	Boiler shop	Fabrication shop	Offices
	5	Tender repair shop	Erecting shop	Tender shop	Canteen (south) /Fitting shop (north)	Offices
	6	Erecting shop	Erecting shop	Tender shop	Millwrights shop/Bar store	Offices
	7	Erecting shop and traverser	Erecting shop	Wheel shop and traverser	Fitting shop	Offices
	8	Erecting shop	Erecting shop	Tender shop	Fitting shop	Offices
	9	Wheel shop	Wheel shop	Machine shop	Axle and wheel shop	Offices
	10	Machine and fitting shop	Machine and fitting shop	Machine shop	Machine shop	Exhibition space
	11	Machine and fitting shop	Machine and fitting shop	Machine shop	Machine shop	Exhibition space
	12	Paint shop	Paint shop	Machine shop	Machine shop	Exhibition space
	13	Paint shop and traverser	Paint shop and traverser	Machine shop	Machine shop	Exhibition space
	14	Pattern and joinery shop	Pattern and joinery shop	Tool room/Brass finishers	Tool room/Air brakes	Offices
	15	Locomotive store	Locomotive store	Millwrights	Store/Rail motor test room	Offices
New Locomotive Shop		N/A	New locomotive manufacture	New locomotive manufacture (until 1925, then locomotive repairs)	Rail motor engine maintenance	National Innovation Centre
Works Managers Office		Works managers, timekeepers, cost estimators	Works managers, timekeepers, cost estimators	Extended 1922 and again in 1940s	Works managers, timekeepers, cost estimators	International Business Centre

1889 Locomotive Workshops amd Engine Running Sheds (ERS) to the east.

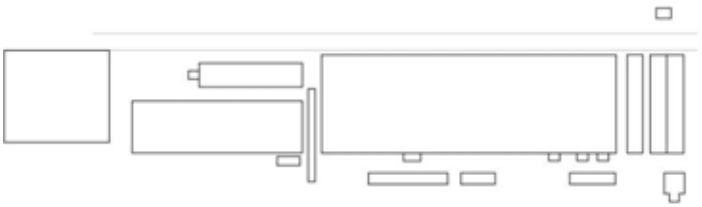
1900 Large Erecting Shop (LES) to the east of the Loco Workshop. New Foundry north of the LES and new Laundry south of the LES.



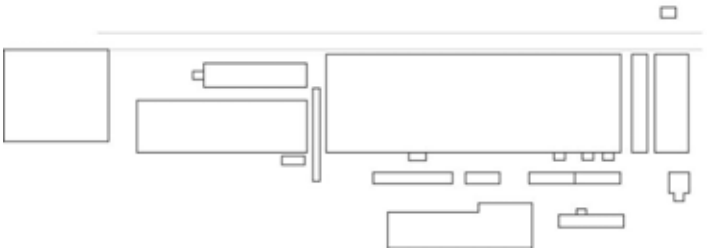
1905 Bay 4a has been enclosed. The new Tinsmiths and Coppersmiths Shops constructed south of the Loco Workshop. The Steam Hammer and Spring Shop established on the eastern side of Bay 1.



1910 The New Loco Shop to the east and Compressor House to the south east have been constructed. The LES and its Traverser to the west, extended.



1915 The New Loco Shop has been extended on the southern end. The new Oliver Shop has been established south east of the Loco Workshop. The Compressor House has been added to the western side of the Foundry.



1920 New Foundry and Pattern Shop constructed to the south of the workshops.

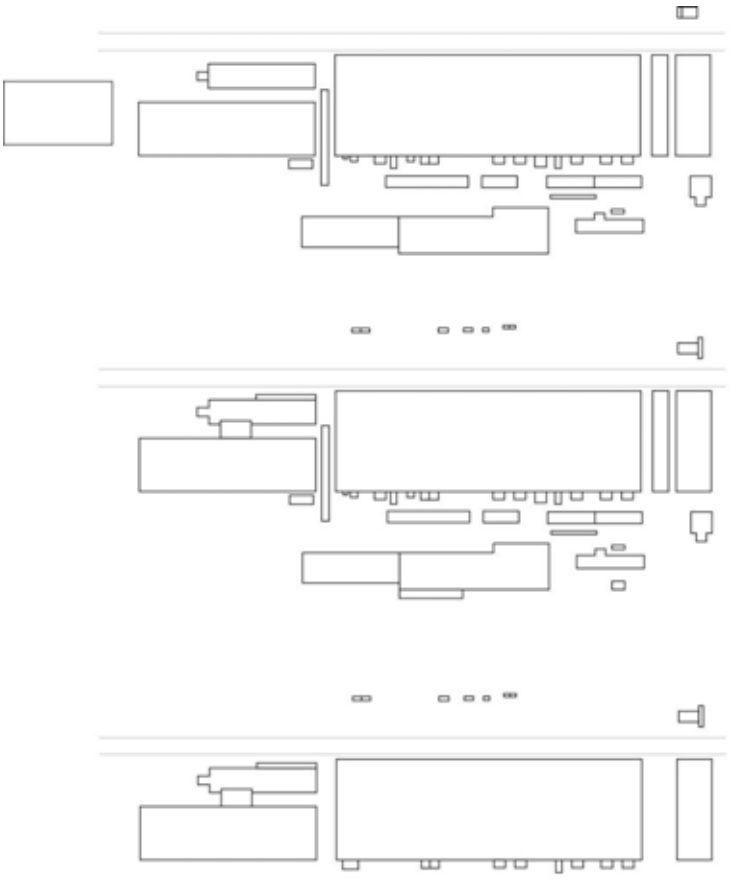


Figure 2.2 Locomotive Workshops site plan showing the evolution of the site from 1889 to 2010.

2.5.2 Machinery

Machinery and equipment necessary to undertake the repair and maintenance of railway track, buildings, structures and rolling stock was installed in the workshops from their opening. Individual items of machinery and equipment were maintained, removed or replaced and new items acquired over the ensuing years of operation.

The term 'machinery and equipment' covers a wide range of items, each specific to performing a task or range of tasks needed to keep the railway system in operation. Machinery and equipment can be grouped by a number of characteristics but the most important distinguishing characteristic for the type of items installed in a large workshop complex is the nature of the power delivery system by which the machine is actuated. The power delivery system and the machine itself form an operational group of related artefacts or structures that rely on each other to function effectively.[35]

Three main types of machinery power systems operated in the Eveleigh Locomotive Workshops. These systems include hydraulic, steam and belt-drive from lineshafts and counter shafts. Lineshafts at Eveleigh were originally driven by steam engines but were converted to electric motor drive in the early twentieth century.[36] In the latter half of the twentieth century, many belt-driven machines were converted to being driven by their own dedicated electric motor and new machines were designed and built according to this approach.

Hydraulic System

Hydraulic power in the Locomotive Workshops is evident today in the spring buckling presses, spring stripper and Ryerson spring formers in Bay 1.[37] The hydraulic power generating system is located in Annex 6, south of Bay 3. The Hydraulic Power system was originally driven by steam supply from the steam system but was later converted to electric power.

The Hydraulic Power annex contains a steam engine direct-connected to a pressure pump and an electric motor driven pressure pump, both supplied with water from an overhead riveted steel tank[38] which is speculated to date from 1887.[39] The reservoir supplies water to the pumps by receiving water through a low pressure return pipe and supplying water through a 4 inch diameter low pressure pipe. The reservoir is constructed of a three piece cast iron unit placed on a timber platform and supported by columns. It is also fitted with a volume indicator for determining the supply of water.[40]

Located to the west of Annex 6 are two hydraulic accumulators which form an integral part of the hydraulic system. These are comprised of large boiler sections filled with scrap iron and sandstone, supported by heavy vertical guide-frames and contain valves and safety override equipment.[41]

Steam System

Steam played an important role in the function of the workshops, powering a large number of machines such as hammers, presses and punches.[42] The C36 locomotive steam boilers now located outside Bay 2 in close proximity to the reservoir were the main source of steam.[43] They were installed at some time between 1924 and 1927. The boilers generated high pressure steam which was sent to the machinery which required steam to operate via the various steam lines and valves. The steam was then released in the atmosphere rather than being returned to the system.[44]

The boilers have 4m high steel stacks and large steel locomotive front plates and were originally fed coal to the grates from the rear. They were later adjusted to be fired by force fed oil.[45] It is the third boiler set in place since the opening of the workshops and it is thought that it is able to operate at a higher pressure than the previous sets. It is also believed that the steam lines were replaced when the new boilers were put in place.[46]

One of the most notable machines that operated with steam was the Davy Press located in Bay 1 north. The 1500 ton Davy Press was installed in the Blacksmiths Shop in 1925. The press stands at 5m tall and 3m wide and includes ancillary equipment, such as two steam reservoirs, a steam intensifier, a hydraulic unit and a number of large balanced tongs, dies, anvils, fullers ad swages. An oil-fired furnace served the Davy Press located in Bay 1 North within the northeast corner and an overhead crane was used to carry material that needed to be forged.[47] The Davy Press originally utilised its own two dedicated boilers installed nearby, which were removed during the 1990s and later, was connected directly to boiler No 4 in the Boilerhouse Annex.

A number of powered hammers were served by the steam system including the 40 cwt arch steam hammer, the 20 cwt steam hammer and the 8 ½ cwt steam hammers. All three types of hammers include an assemblage which contributes to their operation, comprised of items such as tongs, fullers, swages and anvils.[48]

The 40 cwt arch steam hammer is over 4m high and 2m wide at the base. Two vertical guide rails are cast into the main frame and it has a single vertical cylinder. The operating lever determines how much steam is passed to the cylinder, controlling the strength and speed of the hammer blow.[49]

The 20 cwt steam hammer is 3.5 metres high with a stroke of 1m. It sits on top of and is bolted to a brick and concrete plinth. This hammer was built for the NSW Government and the initials NSWG are cast into the iron casing. There are four 8 ½ cwt general purpose hammers made by Davis and Primrose, also with the initials NSWG cast into the iron casing.[50]

The two surviving Oliver Hammers are powered by compressed air and emulate the work of a human striker. Pedal-operated by the blacksmith, they were used for small forging jobs and for sharpening various tools.[51]

The steam-driven Rootes Blowers are located against the southern wall of Bay 1 south. They produced large volumes of low pressure air circulated in underground pipes to the forges that were located within Bays 1 - 4.[52]

Line Shafts and Counter Shafts

Line shafts and counter shafts were situated between each bay along the row of double columns. A number of machines operated from this system including the electric shears, the impact punch, the continuous forging machine and the overhead and wall cranes.[53] Many of the items that operated under this system have already been (or have the potential to be) converted to unit electric-motor drive.

The Bretts impact punch dating from 1899 located at Bay 1 South, was originally operated via an overhead line shaft and was later converted to electric-motor drive. The electric motor is mounted on top of the machine and operates a flywheel through a pulley. The punch is operated via pedals that provide alternating blows to the working tables alongside the machine.[54] Similar to the impact punch, the De Burg electric shears were also converted to electricity with a dedicated electric motor. It is believed that both of these machines were relocated to Bay 1 from the old boiler shop.[55] The Ajax Continuous Forging Machine was operated by a belt and also is provided with a separate electric motor.[56]

Integral to the operations in the workshop were the overhead and wall cranes. These had a part in manoeuvring items in the workshops, as well as acting in an ancillary capacity for various machines, such as the use of the overhead crane with the Davy press. The wall cranes also assisted in the movement of material from furnaces to hammers and to other machines or onto trolleys for transport around the workshop.[57]

2.6 The Surrounding Area

2.6.1 Character of the Surrounding Area

Before the railway workshops were established at Eveleigh, the area was known as Chisholm's Estate. This estate and neighbouring estates were undeveloped farmland until the late nineteenth century. The effect of the new railway workshops was to transform the area dramatically—a previously pastoral area of land[58] (at that time a dairy) became a site of heavy industry.

When the Eveleigh Railway Workshops were established, the surrounding land was gradually subdivided and developed into one- and two-storey terraces and cottages, shops and small warehouses (Figures 2.8–2.9 and 2.35–2.36). The suburb of Redfern was already one of Sydney's highest-density areas by the 1880s. By the 1940s, three quarters of Sydney factory workers worked within a three-mile radius of Redfern Station, and many commuted to work by train.[59]

The Eveleigh Railway Workshops dominated the area, physically and socially. Surrounding areas, such as Darlington (Golden Grove), Chippendale and Erskineville filled with workers' housing and boarding houses. As Lucy Taksa and Joan Kent explain in their social and oral history of the workshops, it was common for Eveleigh's workers to live in the surrounding area in close proximity to the workshops.[60] Many boarding houses were established nearby and were common lodgings for workers, particularly those who moved from the country to find work at Eveleigh. Golden Grove estate, located on Wilson Street to the north of the Eveleigh Carriage and Wagon Workshops, was the result of a subdivision of Hutchinson's Estate for workers' dwellings in 1881. Similarly, land immediately south of the Locomotive Workshops filled with streets of terrace houses and shops during the late nineteenth century[61] (see Figure 2.9).

As the workshops expanded, land to the south and southeast of the original workshop boundary was resumed. A large area was further resumed for the Alexandria Goods Yard in 1917, but a row of houses and shops remained along the northern side of Henderson Road, with their backyards abutting the southern boundary of the goods yard[62] (see the 1943 aerial photograph of the site in Figure 2.10). These houses and shops remained until the late 1940s, when they were demolished for the construction of the Eastern Suburbs railway line. The only early building that remains along the this section of Henderson Road is the Alexandria Hotel at the corner of Garden Street.

Rosemary Annable and Kenneth Cable (1995) note that the area around Eveleigh was dominated by two main activities—residential and rail.[63] As the workshops declined and many of its functions were relocated west to the workshops in Chullora, a corresponding decline occurred in the population and relative prosperity of the surrounding area.

2.6.2 Alexandria Goods Yard

In 1913,a long strip of land along the southern border of the Eveleigh Locomotive Workshops was resumed to establish the Alexandria Goods Yard. This area, which stretched from Garden Street to west to the western rail line, was occupied by about four blocks of terrace houses, cottages and shops (see Figures 2.8 and 2.9 showing the areas of housing removed). Most were resumed and demolished for the yards—approximately 230 buildings in total[64]—except for the single row of houses and shops noted in Section 2.6.1 above.

The Alexandria Goods Yard opened in 1917 and consisted of two long corrugated-iron sheds with a gable roof and a series of small ancillary buildings (Figures 2.7 and 2.10).[65] The yard was served by rail lines that connected to the Bankstown suburban rail line north of Erskineville Station. Freight services to Melbourne were loaded at the Alexandria Goods Yard and travelled along the Bankstown suburban rail line before heading south. Many trains used for moving goods for the war effort were loaded at Alexandria during World War II. The yard closed in 1980 and the western part of the site was transferred to the Housing Commission of NSW to redevelop as public housing. The eastern part of the site, near Garden Street, was turned into a carpark for Paddy's Markets in 1988. This land was incorporated into ATP land in 1991.

2.6.3 Redfern Station

Redfern Station was originally known as Eveleigh Station and was established in 1884 to serve the new railway workshops. The original station consisted of three island platforms serving four lines (Figure 2.4). The ticket office was located on the corner of Lawson Street and Rosehill Street, with stairs down to each individual platform. Rosehill Street was demolished to make way for the later expansion of Redfern Station to the east, while the ticket office survived and was later extended.

The construction of Redfern Station was overseen by the office of John Whitton, engineer-in-chief of the NSW Railways. Whitton had been appointed in 1856 at the beginning of the NSW railway development and remained in the position until 1890, overseeing the establishment of the main body of the NSW system.

The station was extended to accommodate the quadruplication of the main suburban lines not long after it opened in 1891-92. Platforms 5, 6 and 7 were built during this period. Platforms 8 and 9 were added in 1919 and platform 10 in 1924/25. Further extensions occurred in the mid-twentieth century for the Eastern Suburbs Railway and Illawarra line. Construction of these underground platforms began in the late 1940s but subsequently stopped as the program came to a halt, but were partly rebuilt from 1967 as the Eastern Suburbs Railway was restarted, and completed in 1979.

The two sides of the Eveleigh Railway Workshops were connected in 1913 by a narrow metal pedestrian bridge that stretched over the rail lines and connected via stairs to each of the platforms of Redfern Station, providing the workers direct access to their place of work[66] (Figures 2.23 and 2.34). The bridge entered the Locomotive Workshops at their northeastern corner, near the Works Manager's Office. This bridge was demolished c1994[67] and, as a result, the strong connection between the Eveleigh Railway Workshops and Redfern Station has been lost.

An engine dive was constructed to take locomotives under the suburban rail lines to the Locomotive Workshops. A series of brick chimneys were constructed near the ends of the Redfern Station platforms to ventilate the dive, which comes to the surface just to the north of the Works Manager's Office.

2.6.4 Macdonaldtown Gas Works

The Macdonaldtown Gas Works (also known as the Eveleigh Gas Works) were constructed in 1891–1892 to serve the Eveleigh Railway Workshops. Gas from the works was used for lighting in carriages and in the railway workshops themselves. The Macdonaldtown Gas Works were established between the Bankstown and Inner West lines, just south of Macdonaldtown Station (Figure 2.1).

The gas works produced two types of gas: one plant manufactured gas from coal for general lighting use and the second plant produced gas from shale for use in carriage lighting. The shale-based gas provided a much brighter illumination than the coal-based gas. The works consisted of two gas holders, a retort house, a coal store and a purifier shed. Gas was conveyed to the Eveleigh Railway Workshops in underground pipes.[68]

On-site production of gas ceased in the 1950s and the gas producing plant was demolished in 1958.[69] The gas holders continued use to store gas from the Mortlake Central Distribution Plant. After the 1950s, the works were used as a pumping and gas equalisation plant until the mid-1970s. Only one of the two original gas-holders is extant.[70]

2.7 Labour and Community History

2.7.1 Eveleigh as a Place of Work

In 1996, a series of oral histories of former Eveleigh workers were recorded by Lucy Taksa and Joan Kent for Godden Mackay. The social history prepared as a result and the interview transcripts have informed this section of the historical overview.

By all accounts, the Eveleigh Railway Workshops was a difficult and dangerous place to work. The intense heat generated by the machines and forges in the workshops, not to mention the constant noise, dirt and dust, made working at Eveleigh a tough job. Figures 2.28–2.30 show workers in the Locomotive Workshops in 1938 and 1945. Workers' conditions were not deemed a priority and many battles fought at Eveleigh by its workers and associated unions over its 100-year history were for improved conditions, such as breakfast breaks, and basic amenities, such as indoor toilets and proper facilities for washing.

Due to the highly technical nature of the work at Eveleigh, the need to employ and keep highly skilled workers meant that the workshops were a place of long-term employment. Many workers were employed as apprentices and learnt their trade at Eveleigh, then remained at the workshops for their entire working lives. The workshops also tended to employ relatives of workers, so in many cases entire families were employed at Eveleigh.

Social divisions between different sections were marked, even between the running sheds and the locomotive workshops, to the extent that social events were held separately for the different sections of Eveleigh.[71] Management of the workshops was shaped by the desires of the NSW Railways Department.

2.7.2 Unions and Eveleigh Railway Workshops

Due to the pattern of long-term employment at the workshops and unity within craft divisions, trade union membership at Eveleigh was high. The first trade union action at Eveleigh occurred in 1882, when the Boilermakers Union made claims for overtime on behalf of workers in the Locomotive Workshops.[72] The All-Grades Railway and Tramway Union was formed in 1886. Industrial action such as strikes occurred at the workshops since the early years of their operation. The industrial action and work by the union resulted in many improvements in working conditions: the workshops closed on Saturdays from 1892 following union negotiations and indoor toilets were eventually provided for workers in 1910. The Eveleigh Railway Workshops were the site of approximately 21 strikes between 1915 and 1917.

During World War II the NSW Department of Railways made moves to introduce new ways of managing labour in the workshops. The Taylor system, which had been imported from factories in the US, was touted as a means of improving worker efficiency. The system involved standardising the methods by which workers performed each task by providing standardised tools and instruction cards to workers. Surveillance of workers was also increased by hiring additional sub-foremen to supervise the workshops. The sub-foremen also recorded the time taken for each task performed by a worker, replacing the established system at Eveleigh that allowed workers to record this information themselves on timesheets.

The introduction of this last measure sparked a general strike, which commenced 2 August 1917, with a total of 5780 workers downing tools to protest the introduction of the Taylor system. By the end of the week, 10,000 workers were involved in the strike and by 22 October, after other unions became involved, 77,350 workers were on strike in NSW, representing an astonishing 14% of the State's total workforce. Of 48,000 workers employed by the NSW Railways and Tramways Department, only 15,000 did not strike.[73] Large protests were held in Sydney throughout the strike. Figure 2.29 shows idle locomotives outside the Engine Running Sheds during the strike and Figures 2.32 and 2.33 show the empty workshops.

The All-Grades Railway and Tramway Union strike ended officially on 10 September 1917, though other workers such as coalminers remained on strike. The general strike had a profound effect on workers at Eveleigh. The Taylor system was retained and many strikers lost their jobs or were reinstated on lower pay levels or with reduced responsibility.

Union membership in the workshops remained high after the strike and throughout the next 70 years until the workshops closed. The unions maintained a strong presence in the workshops and were instrumental in providing work and social services, including language classes, as detailed in Section 2.74 below, to advocacy for the improvement of working conditions and workers' rights.

2.7.3 Aboriginal Workers at Eveleigh

The Eveleigh Railway Workshops was a major employer of Aboriginal workers. Due to government policies that restricted Aboriginal people's access to education and training, Aboriginal workers in the city were generally employed as unskilled labourers in factories and workshops and as fettlers and labourers for the railways.[74] Aboriginal workers at the Eveleigh Locomotive Workshops were generally employed in the foundry and boiler shops and also at the Alexandria Goods Yard in unskilled labouring jobs such as loading crates and kegs into goods train carriages.[75] Aboriginal workers were also paid less than their white co-workers at Eveleigh and elsewhere.[76] Interviews held in 1996 with former Eveleigh workers revealed a number of memories of Aboriginal workers in the locomotive workshops and that the unions and shop committees were active in supporting them.

2.7.4 Migrant Workers at Eveleigh

The number of migrant workers employed at Eveleigh rose sharply after World War II. These workers moved into the neighbouring suburbs of Alexandria, Redfern and Newtown, taking the place of local workers who had moved to suburbs further out of the city centre over the previous 20 years. Through the efforts of the Australian Railway Union, the railway workshops worked hard to integrate the new migrant workers. English language classes were provided at Eveleigh from 1969.[77]

2.8 Key Historical Figures

2.8.1 John Whitton and George Cowdery

The founding of the Eveleigh Railway Yards was driven by two important figures in the history of New South Wales: John Whitton and George Cowdery. Whitton was the Engineer-In-Chief of the Railways and Cowdery the Deputy Engineer for Existing Lines.

John Whitton arrived in Australia from England to take up the position of Engineer-In-Chief of the Railways in 1856. His task was to oversee the expansion of the NSW rail system. Despite his task, many of Whitton's proposals for the improvement of NSW rail were denied, including extension of the railway to Hyde Park from its then terminating station at Redfern, and adoption of the same railway gauge as Victoria and South Australia.[78] Whitton fought for the establishment of new railway workshops for many years and recommended the purchase of the Chisholm Estate for this purpose in 1875. Other sites were suggested by the government, including an area of land that later became the Chullora workshops, but Whitton insisted on the Chisholm Estate. Whitton was responsible for the construction of the southern railway to Goulburn, the Blue Mountains railway and completing the connection between Queensland, NSW, Victoria and South Australia's railways. He retired in 1890.

George Cowdery also came to Australia from England in 1856. Cowdery first worked on surveying new railway lines in Victoria and was appointed District Engineer of the Great Southern Railway in NSW in 1863 by Whitton, whom Cowdery had met previously in England. Cowdery was made Deputy Engineer for Existing Lines in 1878 and Chief Engineer for Existing Lines in 1880. He was responsible for the detailed design of the Eveleigh Railway Workshops including the engine running sheds, for which he used an arched truss roof, reputedly the first use of such a system for an engine shed.[79] Whitton and Cowdery were often in conflict, with Whitton considering the engine running sheds extravagant.

2.8.2 NSW Premiers JJ Cahill and James McGowen

John Joseph (JJ) Cahill worked at the Eveleigh Locomotive Workshops as a fitter. He grew up in the railway community around the workshops and was hired as an apprentice fitter in 1907. Cahill was heavily involved in the trade unions at Eveleigh and was an officer of the Amalgamated Society of Engineers. Cahill lost his job at Eveleigh as a result of his involvement in the General Strike of 1917, where he was seen as one of the main agitators and instigators of the strike. He was re-employed on the railways in 1922 following five hard years without permanent work. Cahill was elected to NSW parliament in 1925 as the member for St George and served as premier from 1952 to 1959.[80]

James McGowen was the first Labour Premier of the state of NSW. He worked at the Eveleigh Railway Workshops as a boilermaker until 1891. During his time at Eveleigh, McGowen became an active member of the trade union, serving on the executive of the New South Wales Trades and Labour Council from 1888–1891. McGowen was the president of the Eight Hours Demonstration Committee in NSW. As a member of the Trades and Labour Council, McGowen joined the Labor Party and won a seat in Redfern, which he held until 1917. He became leader of the NSW Labor Party in 1894 and Premier of NSW when the party won the 1910 State elections. He was replaced in 1913 following friction with trade unions and members in the party and was expelled from the Labor Party in 1916 because of his support for conscription in World War I.[81]

2.9 Comparative Analysis

The comparative analysis below compares the historical form and operation of the Eveleigh Locomotive Workshop area with other railway workshops in Australia from the same period. This comparative analysis focuses on sites that have contributed to the Australian industrial landscape historically. Section 3.8 provides a comparison of the current form and condition of the Locomotive Workshops and other relevant former industrial sites, including former railway workshops.

2.9.1 Newport Railway Workshops, Victoria

Initially built to solely service rolling stock, the Newport Railway workshops were immediately involved in the actual construction of rolling stock. They were constructed between the Geelong Railway and the Williamstown Railway in the mid1880s and were the principle construction and maintenance workshops in Victoria before ceasing operation in 1992.[82]

The workshops design was based on British railway workshops with a central clock tower and masonry main wings with a steel internal structure. The collection of buildings are sprawled across the site and like Eveleigh were the main construction and maintenance workshops for the state. Unlike Eveleigh, the workshops are associated with the use of timber with timber used in trusses and roof purlins. The site also contains a significant timber shed that was part of the original Carriage Workshops in Williamstown. The site also contained a large tarpaulin shop which was

constructed with a high roof to allow for the tarpaulins to be hung inside and has an extensive amount of internal timber.

2.9.2 Inveresk (Launceston) Railway Workshops, Tasmania

The Inveresk (Launceston) railway workshops were established in the 1870s to service locomotives and the construction of wagons and carriages. The workshops were integral to the evolution of Tasmania's industrial environments, in particular demonstrating the beginning of wartime industries for the state, and were closed in 1993. Initially containing an engine shed and a blacksmith shop, the site expanded over time as the demand for rail increased and addition buildings were added. Post World War II, the workshops played a role in the increasing demand of defence and produced items to accommodate this change, such as shells.[83]

Similar to Eveleigh, the workshops demonstrate technological innovation with a large reinforced concrete building constructed by E.G. Stone in 1923 to house the main workshops. They were also the first in Australia to be converted to diesel power in the 1950s with the construction of the Diesel Workshops group to service new locomotives.[84] As with Eveleigh, the workshops became redundant in the 1990s and were subsequently shut down. Currently, they house the Queen Victoria Museum and Art Gallery discussed in Section 3.7.1 of this report.

2.9.3 North Ipswich Railway Workshops, Queensland

The North Ipswich railway workshops in Queensland operated from 1864 to 1995 and were the first railway workshops in Queensland, built to serve the State's first railway line. Like Eveleigh, the initial task of the workshops was to assemble and maintain locomotives and parts imported from England and later began manufacturing its own locomotives for use on Queensland's railways.[85]

The workshops initially consisted of two cast-iron, pre-fabricated erecting shops, both imported from England. These buildings were later replaced with brick workshops. As the North Ipswich railway workshops carried out similar functions to Eveleigh, the site retains a range of buildings of similar use, including locomotive workshops, carriage and wagon workshops, a boiler house, pump house, administration buildings and a Chief Mechanical Engineer's Office, as well as a range of equipment such as a traverser and turntable.

The workshops were shut down in 1995 following the transfer of remaining functions to the railway workshops in Redbank. The North Ipswich Railway Workshops now house the Workshops Rail Museum.

2.10 Figures

The figures below have been oriented with north up the page for consistency with current ATP plans. Many of the historical plans for the area have been oriented with north down the page and so are presented upside-down in this section.

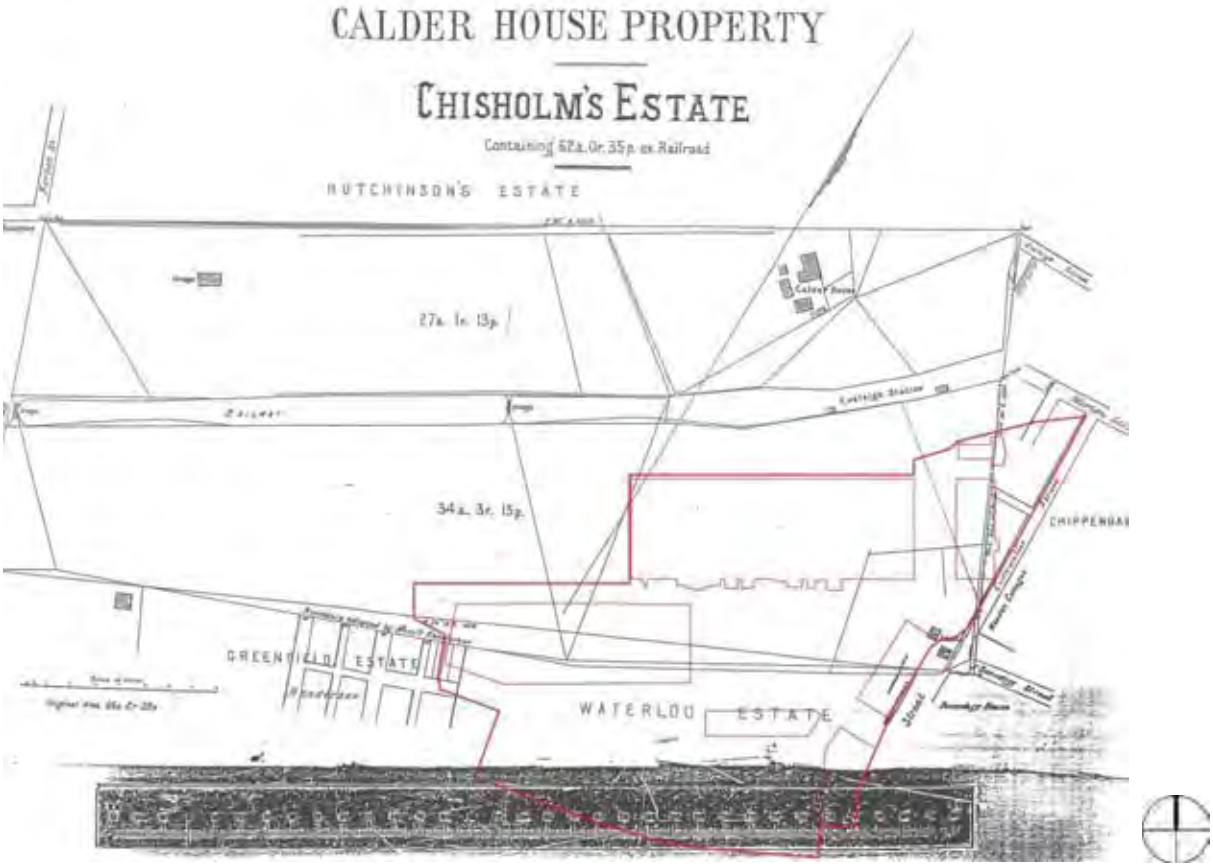


Figure 2.3 Plan of the Chisholm Estate c1875 with an overlay of the current ATP site boundary and buildings. (Source: State Rail Authority Archives)

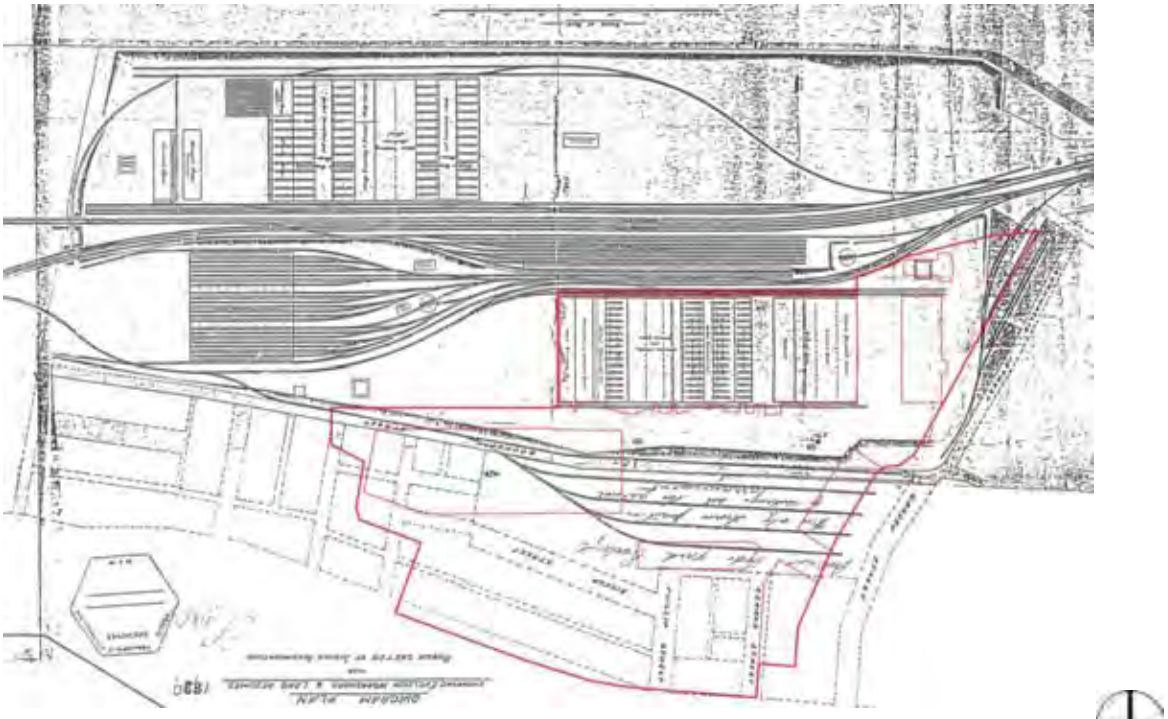


Figure 2.4 'Diagram plan of Eveleigh Workshops & land resumed. Also rough sketch of siding accommodation', possibly from The sketch south of the workshops is labelled 'Proposed goods yard Eveleigh'. Streets of housing that had been constructed around the same time as the establishment of the workshops is shown dotted south of the goods yard sketch. (Source: State Rail Authority Archives)

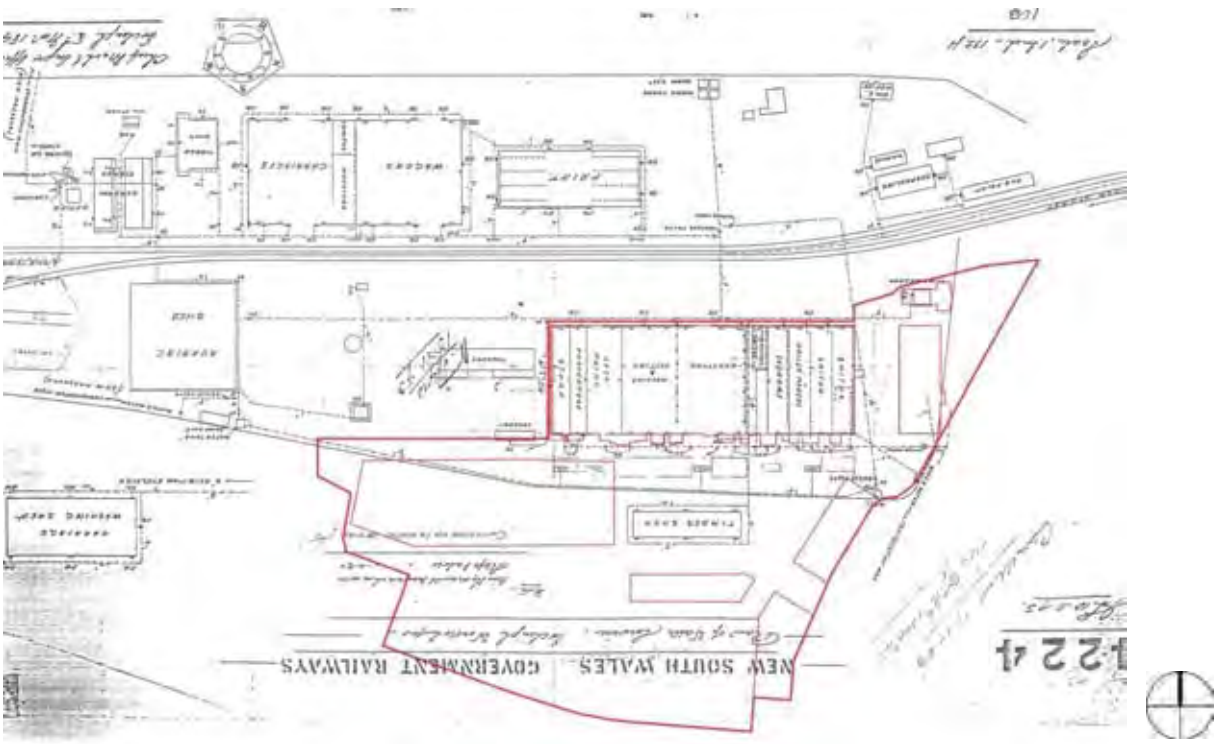


Figure 2.5 'New South Wales Government Railways: Plan of water service Eveleigh Workshops' from 1898. The new foundry building can be seen to the west of the Locomotive Workshops. (Source: State Rail Authority Archives)

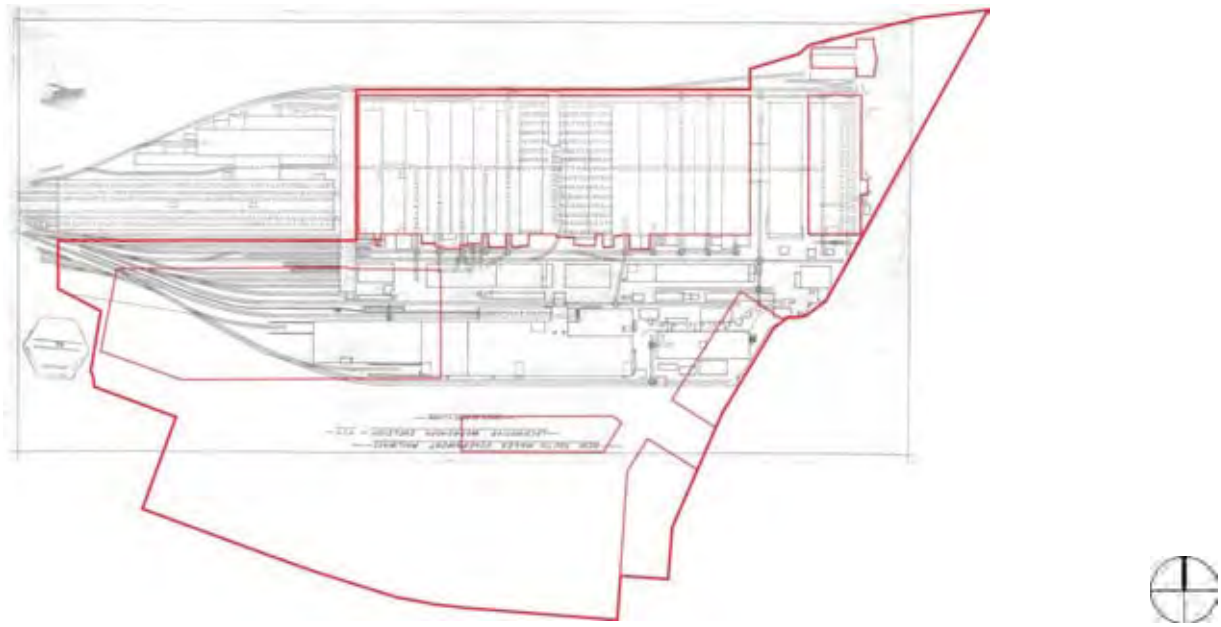


Figure 2.6 'New South Wales Government Railways: Locomotive Workshops Eveleigh', undated, but most likely 1930s. Comparison of this plan with Figure 2.3 shows the immense growth of the workshops over 30 years. The Large Erecting Shed and New Locomotive Shops are both shown. (Source: State Rail Authority Archives)

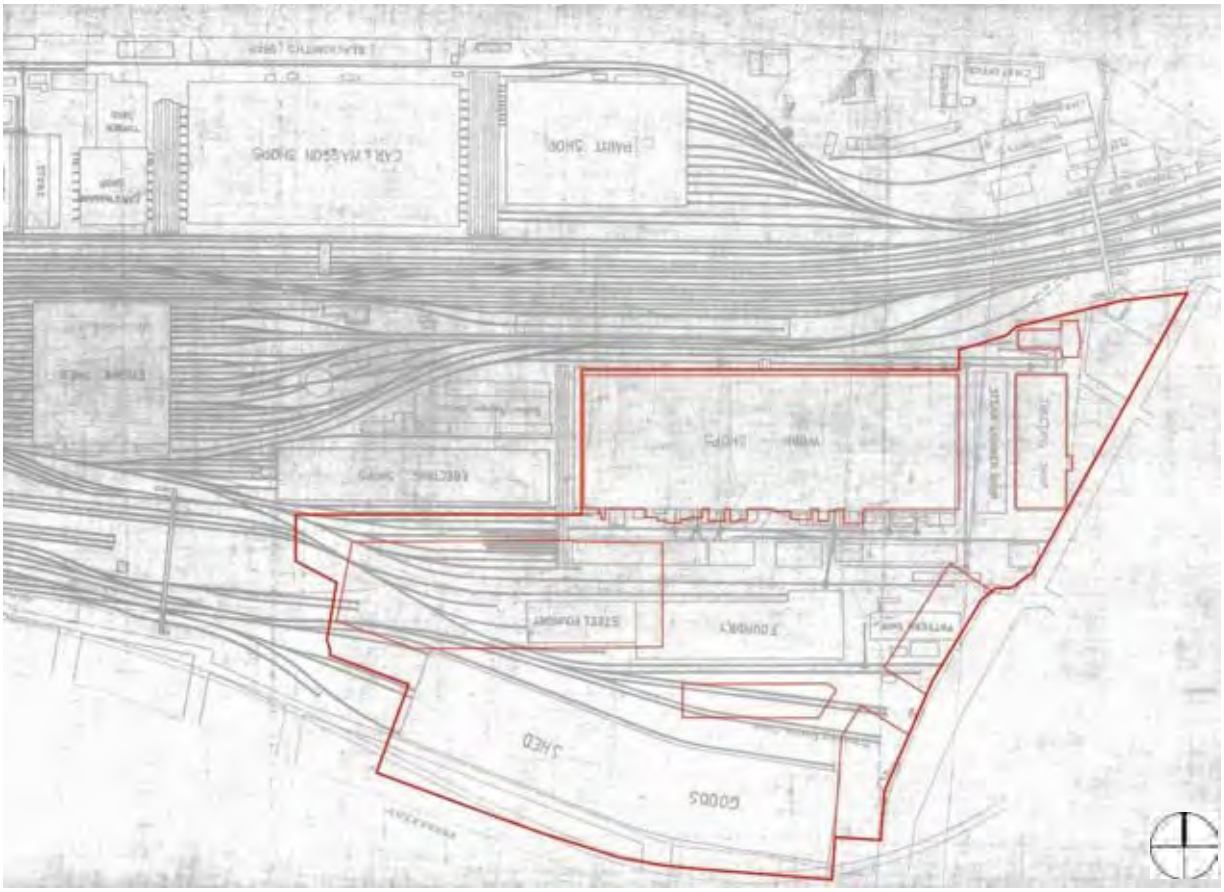


Figure 2.7 Detail of a plan of the Eveleigh Railway Workshops and Alexandria Goods Yard, undated but probably the 1940s. The course of the Eastern Suburbs Railway is shown curving along the base of the image. (Source: State Rail Authority Archives)

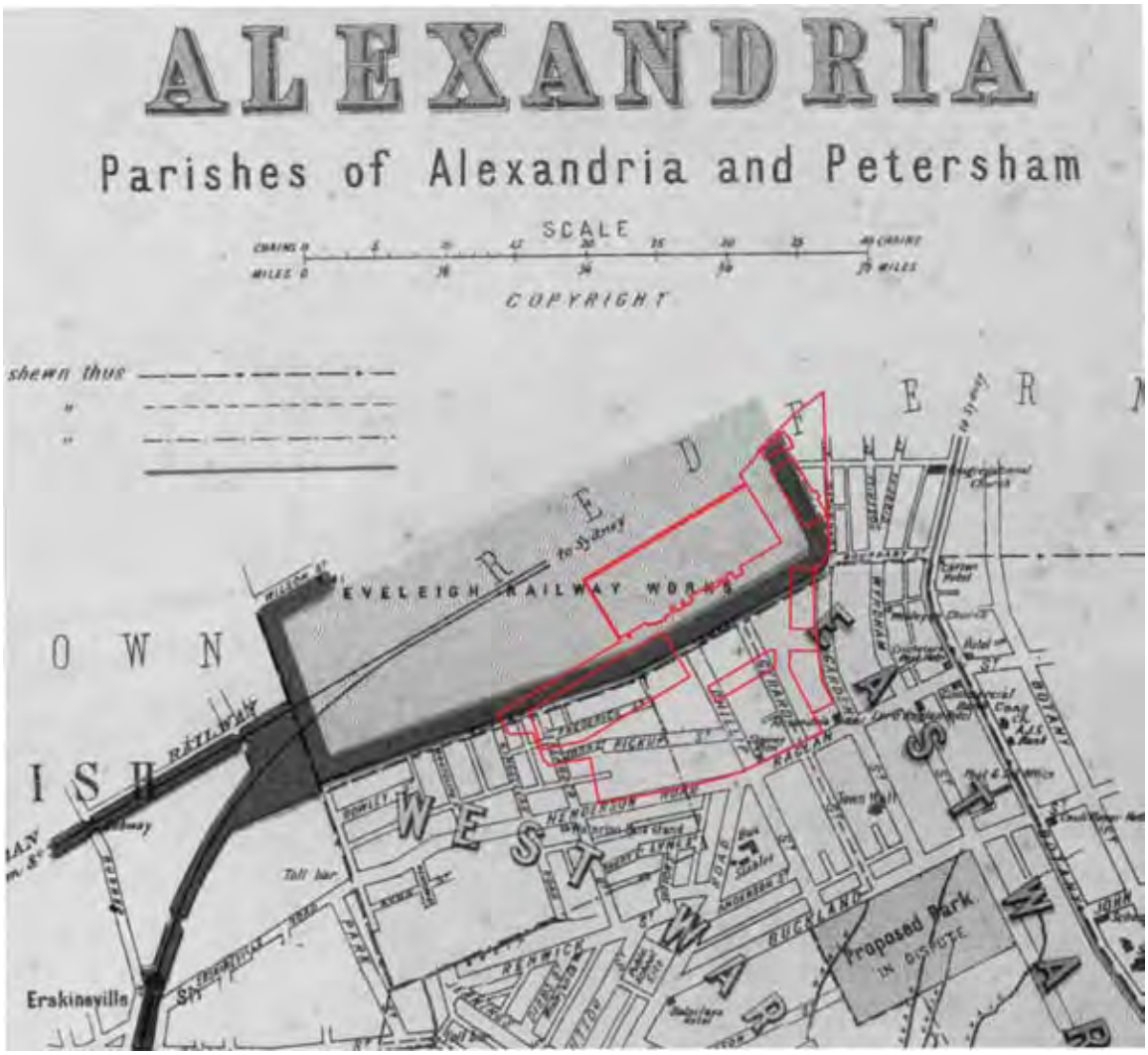


Figure 2.8 The present boundary and extant buildings of the ATP site (outlined in red) overlaid on the c1890 Atlas of Suburbs plan of Alexandria, Parishes of Alexandria and Petersham. This image shows the streets of housing that were resumed. (Source: Atlas of Suburbs, Alexandria 1890, with GML additions in red outline)

Figure 2.9 The present boundary and buildings of the ATP site (outlined in red) overlaid on three Metropolitan Detail Series–Alexandria Sheet 11 Plans dating from 1889, 1893 and 1895. The area inside the red boundary shows in detail the areas of housing that were resumed for the expansion of the Eveleigh Locomotive Workshops and Alexandria Goods Yard in 1917. (Source: Metropolitan Detail Series–Alexandria Sheet 11 Plans dating from 1889, 1893 and 1895, with GML additions in red outline)

Figure 2.10 The Locomotive Workshops and Alexandria Goods Yard in 1943, showing the row of housing along the northern side of Henderson Road that was demolished during construction of the Eastern Suburbs Railway line. (Source: NSW Land and Property Management Authority)

Figure 2.11 The first Sydney yard, which was located further towards the current location of Central Station. (Source: State Rail Authority Archives)

Figure 2.12 The original Engine Running Sheds at Eveleigh. (Source: State Rail Authority Archives)

Figure 2.13 Interior of the Engine Running Sheds. (Source: State Rail Authority Archives)

Figure 2.14 The Large Erecting Shed in 1910. (Source: Government Printing Office collection, State Library of NSW)

Figure 2.15 Interior of the locomotive workshops, date unknown. (Source: Government Printing Office collection, State Library of NSW)

2.16 Outside the Large Erecting Shed in 1938. (Source: Hood Collection, State Library of NSW)

Figure 2.17 View of the locomotive workshops before 1910, looking southwest. The curved rooves of the Engine Running Sheds can be seen in the distance. (Source: State Rail Authority Archives)

Figure 2.18 View of the locomotive workshops in 1910. The inscription on the image claims that it is a view of the New Locomotive Shop, but it appears to be a view of the Locomotive Workshops, with what was the Spring Shop on the left. (Source: Government Printing Office collection, State Library of NSW)

Figure 2.19 View of the works manager's office and the locomotive workshops some time between 1905 and 1922. The New Locomotive Shop has been constructed, but the Works Manager's Office has not yet been extended. (Source: State Rail Authority Archives)

Figure 2.20 View of the works manager's office and the locomotive workshops pre-1940s. The locomotive dive has been constructed. (Source: State Rail Authority Archives)

Figure 2.21 View of the Works Manager's Office in the late 1940s. (Source: State Rail Authority Archives)

Figure 2.22 The locomotive workshops c1940s. The building in the centre of the image is the New Locomotive Shop. The long sheds of the Alexandria Goods Yard can be seen in the background. (Source: State Rail Authority Archives)

Figure 2.23 The locomotive workshops in c1940s, showing the workmen's bridge connecting the two sides of the Eveleigh Railway Workshops and Redfern station. (Source: State Rail Authority Archives)

Figure 2.24 The locomotive workshops in 1986, showing the traverser between the locomotive workshops and the large erecting shed. The building just visible on the right was the old Wheel Press Shop. (Source: Don Godden & Associates)

Figure 2.25 The locomotive workshops in 1986. The New Locomotive Shop can be seen in the distance. (Source: Don Godden & Associates)

Figure 2.26 The locomotive workshops from Garden Street in 1986. The oliver smiths shop is the building on the left. (Source: Don Godden & Associates)

Figure 2.27 Entrance to the Locomotive Workshops from Cornwallis Street in 1986, showing the New Locomotive Workshops in the background. (Source: Don Godden & Associates)

Figure 2.28 Workers in the locomotive workshops in 1938. This photograph is one of a series of Eveleigh workers at work taken by Sam Hood for the *Century* newspaper. (Source: State Library of NSW)

Figure 2.29 Workers in the locomotive workshops in 1938. This photograph is one of a series of Eveleigh workers at work taken by Sam Hood for the *Century* newspaper. (Source: State Library of NSW)

Figure 2.30 Construction of a C3806 locomotive at the Eveleigh Locomotive Workshops in April 1945, most likely in the Large Erecting Shed. (Source: State Records NSW)

Figure 2.31 Idle locomotives in front of the engine running sheds during the General Strike in 1917. (Source: State Library of NSW)

Figure 2.32 The locomotive workshops in 1917 during the General Strike. (Source: State Library of NSW)

Figure 2.33 The locomotive workshops in 1917 during the General Strike. (Source: State Library of NSW)

Figure 2.34 View of Redfern Station from the workmen's bridge connecting both sides of Eveleigh in 1954. (Source: State Records NSW)

Figure 2.35 A resumed property on the corner of Wyndham Street and Henderson Road in 1926. (Source: State Library of NSW)

Figure 2.36 View along Henderson Road in 1938, showing the Alexandria Hotel on the right. (Source: State Library of NSW)

Figure 2.37 View west along Henderson Road in 1927, showing the railway sheds of the Alexandria Goods Yard to the right, adjacent to the Alexandria Hotel. (Source: State Library of NSW)

Figure 2.38 'First passenger express train to run on the new standard gauge line from Sydney-Melbourne ready in Alexandria Goods Yard' in 1962. Other sources have indicated that this may be a freight train. (Source: State Library of NSW)

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PART B: THE ATP SITE TODAY

3.0 Australian Technology Park Today

3.1 Overview

The ATP site reflects an amalgamation of railway land gradually resumed since 1878. Areas of land once occupied by the Alexandria Goods Yard and resumed for the construction of the Eastern Suburbs Railway tunnels and extensions of the Eveleigh locomotive workshops are contained within the ATP site in addition to the land initially resumed for the locomotive workshops. The site boundary does not correspond with the boundary of the Eveleigh Locomotive Workshops nor does it reflect any particular historical management area. Figure 3.1 shows the site today.

The ATP site excludes some buildings and areas of land that have historically been part of the Eveleigh Railway Workshops, including some previously intrinsic to its function. For example, the Large Erecting Shop, which is still in use by RailCorp, is not within the ATP site boundary. The full extent of the Alexandria Goods Yard is not reflected in the boundary of the ATP site either—a large portion of the goods yard land to the east was redeveloped by the Housing Commission of NSW in the 1980s and some land was turned into a park. The area of the goods yard contained within the ATP site has been redeveloped into a sports oval, landscaping, tennis courts, carparks and landscaped verges, as well as the site for the Biomedical and RTA buildings.

Three of the four most significant buildings of the Eveleigh Locomotive Workshops have been retained within the ATP site—the locomotive workshops, the new locomotive shop and the works manager's office. The location of the foundry is still evident from the high retaining wall that cuts across much of the site from west to east. Most of the ancillary buildings that occupied the Eveleigh Locomotive Workshops have been demolished. These buildings comprised a range of small and large sheds of various materials which would have provided a sense what the workshops were really like when they were functioning, but would have been difficult to adapt to a new use.

Eveleigh was formerly surrounded by a boundary wall that separated the workshops from the surrounding streets. This has been removed and replaced by building form and landscaping. The pedestrian overbridge that connected the two sides of the Eveleigh Railway Workshops was demolished c1994. The historical physical connection that existed between the workshops and Redfern Station has been lost through the removal of this bridge.

The adaptive re-use of the workshops has been carried out sensitively, but inevitably with such a substantial change in use—railway workshops to technology park—the character of the site as a whole has changed. Physical remnants of past use is generally confined to the workshops buildings remaining and the machinery collections contained within, with some machinery and rail lines located throughout the site. Existing interpretation at the site is a product of its time and does not give a coherent story about the site as a whole. However, the significant elements that remain within ATP offer great potential for the powerful and important social history of Eveleigh to be communicated and remembered.

An Interpretation Plan for the entire former Eveleigh Railway Workshops site has been recently prepared and its implementation will communicate the powerful story of Eveleigh. Details of the plan, including proposals to reinstate former pedestrian connections between the two former sides of Eveleigh, are included in Section 8.0 Constraints and Opportunities.

3.2 Built Heritage and Management Context

ATP began as a joint venture between the University of New South Wales, the University of Sydney and the University of Technology, Sydney, supported by the NSW State Government and the Commonwealth Government. In July 2000, the site was transferred to and managed by the Sydney Harbour Foreshore Authority and in January 2005 ownership was transferred to the Redfern-Waterloo Authority (RWA) (now UrbanGrowth NSW Development Corporation (UGDC)). As a result, the ATP is a wholly owned subsidiary of UGDC. The RWA managed land and property as well as infrastructure in the Redfern-Waterloo area and promoted commercial growth for local businesses. The ATP is one of the state significant sites that forms part of the RWA development strategy.[1]

The ATPSL have developed comprehensive criteria for tenants of the ATP based on the Constitution for ATPSL, prepared in 2000. The RWA (now UGDC) has also prepared the Redfern Waterloo Built Environment Plan (Stage one) 2006, to assist with planning for the future of the site. This plan is discussed further in section 8.4.5 of this report.

The Eveleigh site as it stands today has undergone significant change with the addition of new commercial and educational buildings; however, the original buildings that remain are largely intact externally. The site comprises of the Eveleigh Locomotive Workshop building, the National Innovation Centre (the formerly the New Locomotive Workshops), the International Business Centre (former Works Manager's Office), the new Global Television and Pacific Magazines building, the National Innovation and Communications Technology Australia (NICTA) building and the Biomedical building. These are shown in context of each other in Figure 3.2.

Internally, there has been a series of office fitouts that are largely reversible and do not impact significantly on the original structure. Spatial volumes are retained in a number of internal plaza areas and circulation spaces (Figure 3.3).

3.3 Original Buildings

There are three original buildings in the precinct which are situated around the Innovation Plaza. The Innovation Plaza connects the National Innovation Centre with the Locomotive Workshops, and with the International Business Centre (see Figure 3.4). The plaza is lined with trees and is paved with brickwork. Parts of the old rail lines are visible and have been maintained to express what was once the function of the area with an old carriage displayed on one of the tracks as an interpretive element.

3.3.1 Locomotive Workshop

The most prominent building on the site is the Locomotive Workshop, a two storey sandstone brick structure of Neo Classical form consisting of 16 equally sized bays, internal hollow cast iron columns and wrought iron trusses, and corrugated iron roofing. Initially, it was built as two structures with Bays 1-4 being one structure and Bays 5-15 a second structure with the space in between acting as a laneway. This was later filled in and the two buildings were connected with a new Bay, 4a. Later, the numbering system changed to Bays 1-16 converting Bay 4a to Bay 5 and the internal wall was demolished. Externally, arched openings pierce through the 460mm thick brick walls which once allowed for trains and machinery to exit and enter the building. The openings are now solid, glazed or operable.

Together with the internal trusses, columns and internal downpipes, the roof acts as a system working as one unit. It is clad with a mixture of original and new corrugated iron sheeting, with original sheeting largely in place in Bays 1 and 2. Each bay has a clerestory window in the centre of the roof with a curvilinear profile, also clad in corrugated iron. Original louvers have remained on the sides with added glazing allowing for natural light throughout the building.

The building remains predominately intact and in a fair to good condition with each bay expressing its long period of intensive use with a certain degree of weathering that has occurred over time. The eastern Bays 1 and 2 communicate of the original condition of the building with the addition of very little new fabric. These bays house 'Wrought Artworks', a private blacksmith workshop at the southern end and a large number of movable heritage items at the north end, including the Davy Press.

Within Bays 3, 4 and 5 are new infill offices that house the ATP Office as well as other tenants and a lecture theatre at the southern end of Bay 5. These bays act as a whole, with a large atrium space in the middle at Bay 4 and offices built around the edge in a u-shape at the northern end. They have been built into three levels to utilise the height, with stairs exposed to the central atrium and the floor lined with carpet throughout. Each floor has a mezzanine walkway that looks over the open space, with the first floor walkway being the widest and extending out the furthest as shown in Figure 3.5. Two large openings, which have been infilled with glass, form an access point at the southern end of Bay 4. This southern end has remained open with a mezzanine walkway for the upper level shown in Figure 3.6 and the public is able to walk through and view the new use of the space, then continue to Bay 6-9.

The centre of the Locomotive Workshop building houses further office space and a thick brick wall with a large opening that divides the space between Bay 5 and 6 shown in Figure 3.7. On either side are two levels of infill offices leaving a corridor of open space through Bays 6 and 7. Within this corridor is another overhead travelling crane and a new lift shaft. The office spaces are lined with plasterboard and contain some openings made up of glass and a steel frame. The corridor then leads to Bay 8 which is of a similar design to Bay 4, having the central space open with a cafe and two levels of office space around the edges at the northern end. There is also a large glass opening at the southern end forming another access point from the south (Figure 3.8). Similarly to Bay 6 and 7, Bay 9 contains two levels of office space and a ticket window (Figure 3.9) on the ground floor where it leads into the exhibition space of Bay 10-14.

An open hall is set up in Bays 10–14 (Figure 3.10) leaving the large space of the Locomotive Workshop open with some machinery grouped as an interpretive display at the northern end of Bay 10 (Figure 3.11). The original structure is left exposed expressing the cast iron columns and wrought iron roof trusses and each bay has two sets of columns joined together by steel girders (Figure 3.12). It is envisaged by ATP that this space will remain an exhibition space for the public to view the movable heritage items. These are the only bays that have not been retrofitted and the entire structure is exposed.

Originally Bays 15-16 were separated by a brick wall which has remained. They have now been infilled with three and two levels of new office space respectively. Centrally, the original structure is exposed with the new structures on either side. These are connected by walking bridges on level two and three (Figure 3.13 and 3.14). Most of the new infill areas are lined with timber or plasterboard and constructed of steel and timber while the floor is lined with carpet.

A series of annexes once lined the southern wall of the building, consisting of 21 annexes of brick, timber and corrugated iron. Today, there are nine original annexes remaining and three new that have been constructed of contemporary material. Annexes 1 to 6 are original and currently house (from 1 to 6): a machinery/workshop area, blacksmith shop, blacksmith shop access and fuel tanks, boilers (Figure 3.15), commercial kitchen access and pump room. Annex 8a is an original structure with heavy modifications and currently houses the ATP security office, while 9a is an external space with air conditioning fan coil units on a platform. Annex 10a houses office space within a modified original structure. Annexes 12, 13 and 20a are new structures clad with corrugated iron and house the plant room.

As noted above, Annex 6 houses the pump room. Comprising of a brick and stone structure with a lantern roof, it has been recently restored and interpreted. The hydraulic pump inside has been repainted in its original colours and the room itself has been kept in its original form with various hand tools and other machinery in place as it would have been originally. This interpretation of the pump room allows the visitor to have a sense of how it once operated (Figure 3.16).

3.3.2 National Innovation Centre

To the east of the Locomotive Workshops is the National Innovation Centre which was once known as the New Locomotive Workshops, where locomotives were constructed on site. This building is also of masonry construction and contains a frame of steel columns, roof truss structure and corrugated iron roof. The building consists of two long bays and is considerably smaller than the locomotive workshops. The northern section was built first, in 1907. This comprised of two long bays running north south with openings on either end to allow the locomotives in and out of the building and divided into eight bays east west. In 1914 an extension was constructed which extended the building to the south with a further seven bays running east west and a sawtooth roof facing south.

The majority of the building has been retrofitted internally with three levels of office space and a central atrium, which exposes the original structure. Within the central space, a row of old wash basins remain as interpretation of the working conditions of the past and suspended above is an overhead travelling crane (shown in Figure 3.17). The retrofit allows for much of the structure to be exposed throughout as the new design is integrated with the old (Figure 3.18).

3.3.3 International Business Centre

The old Works Manager's Office, now known as the International Business Centre, is situated opposite the National Innovation Centre. Externally, it is largely intact with major internal modifications that have changed the configuration to house small offices and meeting rooms. The building forms a T-shape in plan and is constructed of masonry, rendered and painted an off-white colour with maroon trimmings (Figure 3.19). Although it has been heavily modified internally, externally it retains its original form of the 1940s.

3.4 New Buildings

3.4.1 Biomedical Building

Following the closure of the workshops in 1988, one of the initial new buildings built on the site was the Biomedical Building (Figure 3.20), completed in 2000. It is a purpose-built scientific facility and was designed by TGP Architects & Planners Pty Ltd. The facility is situated opposite the Locomotive Workshops on the southern end of the site and is four storeys high with a reinforced

concrete structure and external stainless steel walkways.[2] The wedge-shaped building is split into two facades, the western laboratories are shaded with sunscreens at the steel walkways and the eastern façade houses the offices. In keeping with the industrial nature of the site, the air handling equipment is exposed on the roof of the building.[3]

3.4.2 National Information & Communications Technology Australia (NICTA)

Construction began in 2007 for the NICTA research facility following a design by Cox Richardson Architects and was completed in 2008 (Figure 3.21). The building is located south of the locomotive workshop building in close proximity to the Biomedical Building. Externally, there are six service cores on the western and eastern facades expressing the internal mechanics and vertical ventilation system while providing shade from the low angle sun. Internally, the building adopts a large open plan and allows for flexibility in workspace arrangements. The materiality of the building responds to the historical and industrial context with the use of weathered steel cladding on the service cores and off-form concrete throughout the building, along with recycled hardwood and polished concrete floors internally.[4]

3.4.3 Channel 7, Global Television and Pacific Magazines (Media City)

A new media complex, designed by PTW Architects, has recently been completed to the southwest of the Eveleigh site in the vicinity of the Biomedical Building. The new media complex will house the Seven Network, Pacific Magazines and Global Television. The building is broken up into eleven storeys of office space and four separate studios externally, shown in Figure 3.22. In response to the nearby NSW Department of Housing apartments, the southwest wing of building is four storeys high to minimise impact.[5] The building is of reinforced concrete frame construction and curtain wall glazing, particularly the expansive southern side, as can be seen in Figure 3.23. The northern side consists of smaller coloured window bays with shading devices.

3.4.4 Sydney Ambulance Centre and the NSW Transport Management Centre

The building housing the Sydney Ambulance Centre and the NSW Transport Management Centre was conceived in 1997 and subsequently built and is one of the first buildings built on the site since the closure of the Workshops. It is a three–storey brick building that fronts onto Garden Street south of NICTA and to the east of the biomedical building. A pub is located to the south, on the corner of Garden Street and Henderson Road, but does not form part of the ATP site.

3.5 Water Tower

The Water Tower is a wrought iron and steel structure with a square, open-topped elevated reservoir that once supplied water for the site (Figure 3.28). It is located opposite the International Business Centre on the boundary of Cornwallis Street and acts a landmark for the area. Figure 3.29 shows the Water Tower in context to the street and to the railway line.

3.6 Landscaping

Landscaping is a major component of the site with various planned hard and soft landscaping areas. The entry point from Cornwallis Street closest to Redfern Station is a landscaped area with grass and trees lining the edges. A large staircase leads down to the Innovation Plaza and past the Water Tower which is discussed in section 3.8. The Innovation Plaza is lined with two rows of deciduous trees, while the ground comprises diagonal brickwork with intact remnants of the old rail lines. A number of movable planter boxes and benches constructed of steel and timber, (originating

on the site) are set out in the plaza. The path along Locomotive Street and the edge around the various carparks are lined with trees and shrubs. A paved area in front of the NICTA building also contains trees. Paved areas lead down into the southern end of the site and past the media complex and the biomedical building. A large grassed area with trees lining the edge defines the southern edge of the site.

3.7 Heritage Interpretation

The ATP lends itself to be interpreted for its past use with the aid of machinery displayed throughout the site. To this end, there is interpretation scattered across the site, generally in the form of panels and signs in front of the workshops buildings or next to items of machinery that have been restored and put on display.

There are 44 interpretive panels throughout the site with 12 external signs and 18 in the internal circulation spaces, with the remainder being in Bay 10. Most of the panels accompanying the machinery displayed describe the item and its historical use, while some cover more general historical themes such as the original blacksmiths shop. Figure 3.26 shows the Davy Press on display and Figure 3.27 shows an original external urinal with an interpretive panel.

Public access is available to most of the site with access to the exterior unrestricted and the interior restricted to areas that are unoccupied by tenants. Bays 3 through to 9 and 15–16 are accessible and Bays 10-14 are available for functions.

The site interpretation is informative, but it is a product of its time—interpretation philosophy and methods have developed greatly over the past decade. For example, the placing of machinery does not appear to have been organised with any overarching strategy that would allow the items to be understood in a meaningful way. Each item is displayed with an interpretive panel that describes the original use of the machine and its history, but does not provide a connection with the social history of the Eveleigh Locomotive Workshops or a sense of how it operated within the site as a whole.

There are a number of more successful examples of interpretation at the site. The display of the overhead traveling cranes throughout the locomotive workshops building, the restoration of the pump room and the machinery in the blacksmith shop (Figure 3.24), are good examples of interpretation which provide a representation of how the machines would have once operated, rather than being displayed in isolation as seen in Figure 3.25. Original rail lines have been interpreted through the use of lines marked on the carpet within the locomotive workshop building from Bay 3 to Bay 9, continuing the line from the blacksmith shop in Bay 1 and Bay 2. As noted in Section 3.1, an Interpretation Plan for the entire former Eveleigh Railway Workshops site has been recently approved (see Section 8.0 for more details) and some measures have been implemented or are underway, including the ATP Open Day and Eveleigh Railway Film Festival, fit-out of Bays 1 and 2 north for interpretation, new interpretation signage and a walking guide and window graphics to Innovation Plaza.

3.8 Planning For Future Development

The approved subdivision plan for ATP allows a number of further development lots on the site. The planning context for the site is described further in Section 8.0 Constraints and Opportunities.

A Concept Plan for the former Carriage and Wagon Workshops (now known as North Eveleigh) was approved in 2009 and allows for a mix of residential and commercial development. Redfern Station will be redeveloped with funds from the sale of the North Eveleigh.

3.9 Comparative Analysis—Contemporary Adaptive Reuse

The Eveleigh Locomotive Workshop area is an industrial site that has been transformed and given a new purpose. A comparative analysis is provided here of adaptively re-used buildings and sites which share key features, characteristics and historic themes including railway sites that have been adaptively re-used and industrial sites that have been given a new use. The purpose of this comparative analysis is to provide a better understanding of a site's significance, in accordance with the NSW Heritage Council document *Conservation Management Plan (CMP) Assessment Checklist September 2003*.

3.9.1 Queen Victoria Museum and Art Gallery—Launceston Railway Workshops

The evolution of Eveleigh as railway workshops is similar to the story of other railways around Australia. The Launceston Railway Workshops are no exception. Established in the 1870s, they ceased operation in 1993 and have since been reactivated as a cultural precinct for Inveresk, Tasmania.[6] The workshops were key to the evolution of Tasmania's industrial environments, in particular demonstrating the beginning of wartime industries for the state. Today they house the Queen Victoria Museum and Art Gallery, where the original buildings have been retrofitted with new uses while maintaining the distinction between the old and the new (see Figure 3.30). The new works take advantage of current technology and allow the museum to maintain a stable environment through the use of double glazing and an air conditioning system with geothermal heat exchange. Similar to Eveleigh, the blacksmith workshop has been retained as an interpretation of the past use of the site along with the Weighbridge.[7]

3.9.2 Canberra Glassworks

Industrial sites such as the Kingston Power House demonstrate that they can be successfully adapted into a new use. This particular site is now a glass art workshop and production centre and while the new use of the site is quite different to the original, the industrial character of heat, sound and light remains (see Figure 3.31). Originally, the Power House and the Fitters Workshop were the first to provide power to Canberra in 1915 and demonstrate the beginning of electricity generation for the city. Unlike Eveleigh, the life of the Power House was short and shut down in 1929, with reactivation occurring in short periods between 1936 and 1942.[8]

3.9.3 North Eveleigh CarriageWorks

North of the Eveleigh workshops is the CarriageWorks, which has been converted into a performance centre for the arts. A 'raw' approach has been taken with this similarly historic site, with a simple take on adaptive re-use (Figure 3.32). Here, the building has been left in its state of weathering, with the original structure and materials remaining exposed. The space has been divided into two flexible theatre spaces, training rooms, office space and large workshops.[9] Situated within the open space of the foyer are new structures which have been placed to house amenities. The new structures do not touch the original fabric, but simply exist within it and are constructed of raw materials. There is also a weekend market, managed by ATPSL, which is held for the community and visitors. Future residential development has been incorporated into the masterplan design of the overall site to respond to demand in the area. Overall, the site has retained its industrial character despite it now housing performing arts.

3.9.4 Cockatoo Island

Cockatoo Island is a prime example where an industrial site has been taken the 'keep as found' approach while making use of the site as a stage for concerts and events. Although the site holds a maritime history, it is similar to Eveleigh in its industrial nature and ceased operation in 1997. The island was an imperial prison, industrial school and reformatory gaol and during the twentieth century it was Australia's largest shipyard which was built by convicts in 1857. With this substantial industrial history behind it, the original buildings remain on the site with accommodation available in Federation period houses on the island. It is also a popular camping ground, where visitors have the opportunity to camp and take heritage tours of the site or conduct their own tour (see Figure 3.33). There are no permanent activities aside from regular guided tours by knowledgeable tour guides and a regular school programme.[10]

3.9.5 Civic Railway Workshops—Honeysuckle, Newcastle

The Civic Railway Workshops are relatively smaller in scale to the Eveleigh Locomotive workshops and were constructed between 1874 and 1886. They are integral to the historical evolution of railway in the area having allowed for separation from the Great Northern Lines in the main rail system. Currently they have been transformed into a new social centre for the area with a mixture of restaurants, cafes, culture and public space and will soon house the Newcastle Regional Museum. As the site is situated near the water, this has been used as an advantage to allow for tourists to visit a historical setting with contemporary activities (see Figure 3.34). The boiler house and machine shop are currently occupied by the Hunter Valley Wine Society while the blacksmith's shop and wheel shop are occupied by tenants, all of which have been restored.[11] In a similar way to ATP, new office buildings have been added within the Honeysuckle site.

3.9.6 The Workshops Rail Museum Queensland—North Ipswich Railway Workshops

Established in 1864, the north Ipswich railway workshops were the first in Queensland and hence are important in documenting the transport development of Queensland.[12] With funding from the Queensland Heritage Trail Network, the workshops have been redeveloped into a 'living history' experience for the visitor, including interactive interpretation detailing the history of rail in the state, the workers and their stories as well as looking into the future of rail technology with simulations (see Figure 3.33). The museum includes close up exhibitions of rolling stock and a model railway as well as the chance for visitors to watch workers restore parts of steam locomotives.[13]

3.9.7 Midland Atelier—Midland Railway Workshops

The workshops were built in 1904 and were the largest industrial workshops in Western Australia. The old Pattern Shop and Foundry have been converted into a creative industries centre, the Midland Atelier (Figure 3.36). The Atelier utilises modern technology and is environmentally friendly, powered by 201 solar panels. This innovation continues one of the original uses of the workshops which once had a power house that assisted in the repair of locomotives and provided electivity to Perth's east. Like Eveleigh, the workshops are evolving as technology evolves, now with a contemporary use.

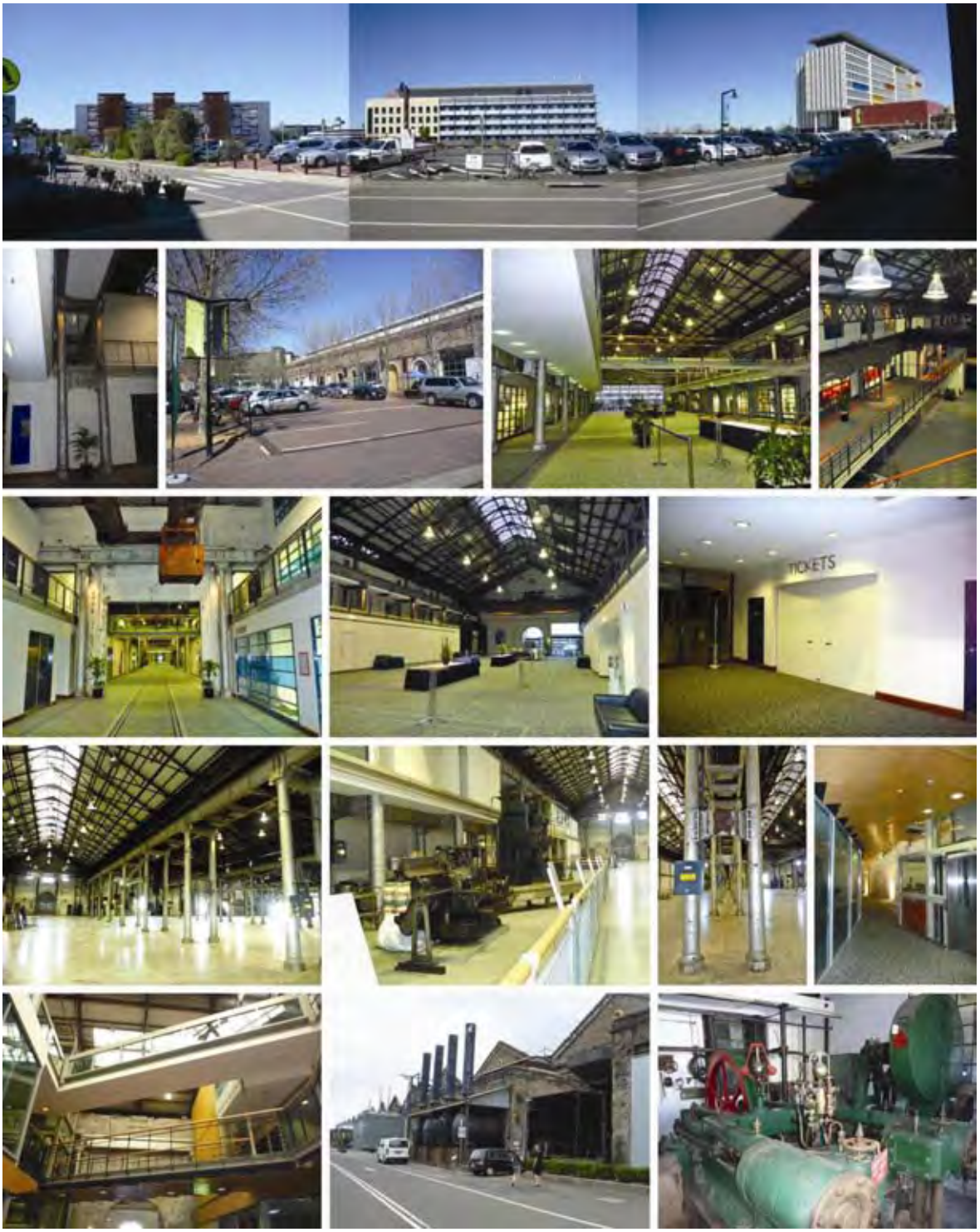
KEY

1. Locomotive Workshop
2. International Business Centre (IBC)
3. National Innovation Centre (NIC)
4. Innovation Plaza

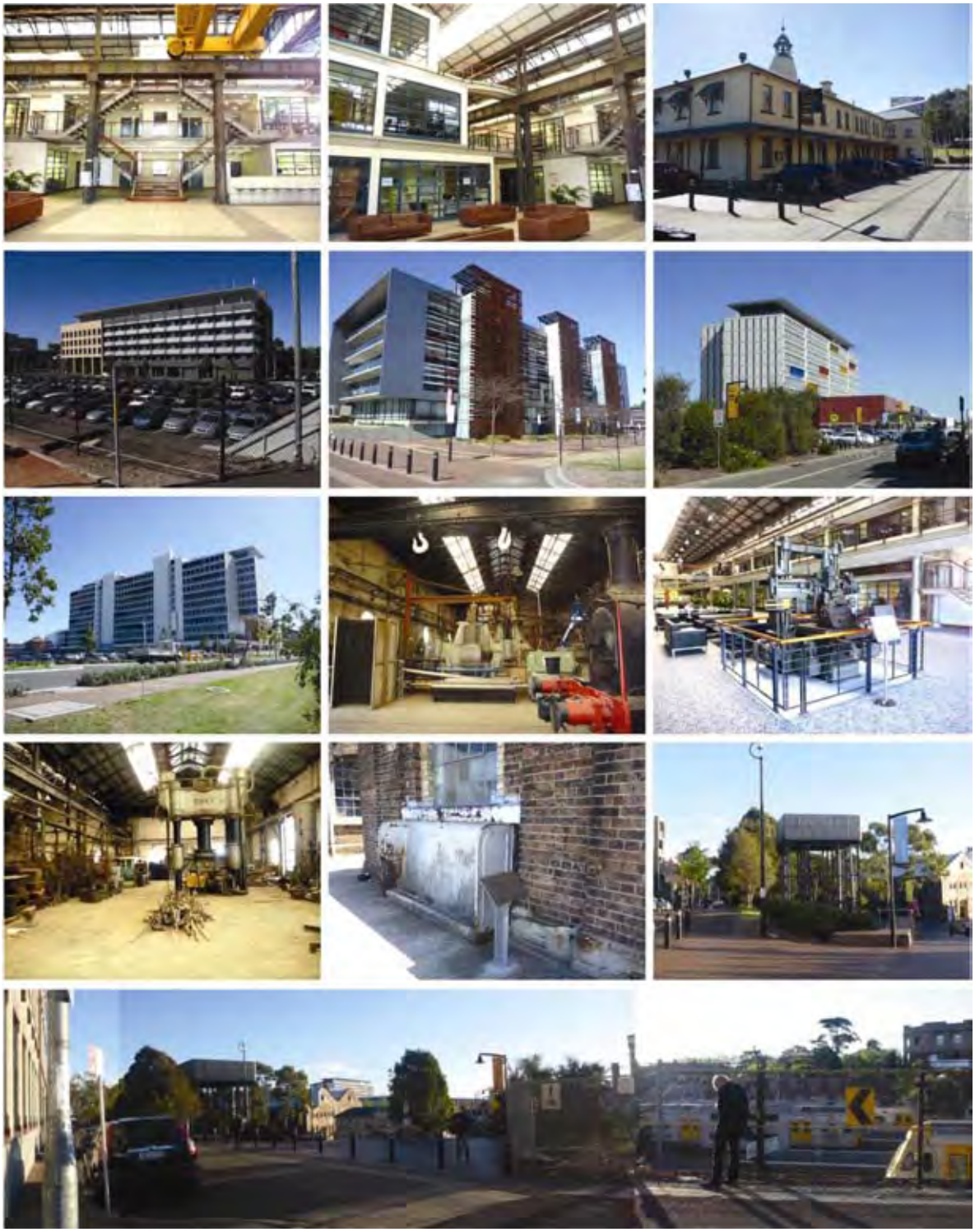
5. National Innovation and Communications Technology Australia (NICTA)
6. Sydney Ambulance Officers Centre and RTA Transport Centre
7. Biomedical Building
8. Media Complex
9. Southern Carpark
10. Central Carpark

11. Carriageworks
12. Redfern Station

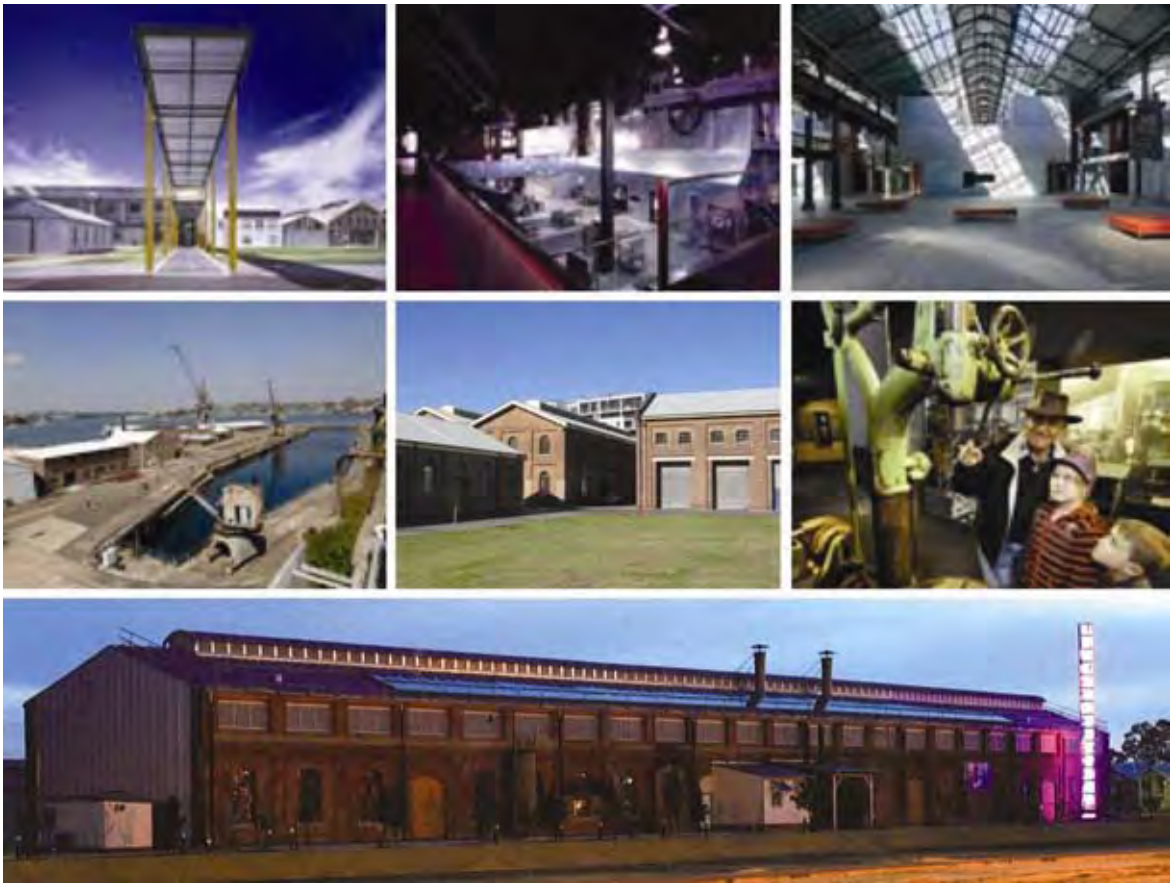
Figure 3.1 The ATP Site today showing the new and existing buildings. The railway tracks are to the north and Redfern Station is to the north east. The ATP is outlined in red. (Source: ATP base plan with additions by GML May 2010)



Figures (left to right) **3.2** Panorama of new buildings, NICTA, Biomedical Building and the Media Complex; **3.3** Internal circulation space; **3.4** Innovation Plaza; **3.5** Mezzanine Walkway; **3.6** View from top Mezzanine level; **3.7** Brick dividing wall and overhead crane; **3.8** Internal space and southern glazed opening; **3.9** Ticket window**; 3.10** Bays 10-14 open hall; **3.11** Interpretive display at northern end of Bay 10; **3.12** Steel Columns**; 3.13** Internal fit out; **3.14** Bays 15-16 connected by walkways; **3.15** Boilers on the southern wall of the Locomotive Workshop; **3.16** The Pump Room;



Figures (left to right) **3.17** Internal space with overhead crane and washbasins to the right; **3.18** Exposed structure with new fit out to the left; **3.19** External view of the IBC; **3.20** External view of the Biomedical Building**; 3.21** External view of NICTA**; 3.22** Media complex with four separate studios to the right**; 3.23** Media Complex with curtain wall glazing to the south; **3.24** Blacksmith Shop machinery; **3.25** Machinery Display; **3.26** The Davy Press; **3.27** External urinal with interpretation panel; **3.28** Water Tower; **3.29** Entry to the ATP from Gibbons Street with the Water Tower to the left and the railway to the right.



Figures (left to right) 3.30 Queen Victoria Museum and Art Gallery, former Launceston Railway Workshops (Source: Department of the Environment and Heritage, Adaptive Reuse, The Queen Victoria Museum and Art Gallery, 2004); **3.31** Canberra Glassworks; **3.32** CarriageWorks, North Eveleigh (Source: Architecture Australia, CarriageWorks, John De Mannicor, Jul/Aug 2007); **3.33** Cockatoo Island (Source: Sydney Harbour Federation Trust, <http://www.cockatooisland.gov.au/>); **3.34** Civic Railway Workshops, Honeysuckle (Source: GML 2008); **3.35** The workshops rail museum Queensland, North Ipswich (Source: Queensland Museum <http://www.theworkshops.qm.qld.gov.au>); **3.36** Midlands Atelier (Source: Heritage Matters brochure, Heritage Council of Western Australia, 2010)

3.10 Endnotes

1 Australian Technology Park Annual Report, 2008
2 AW Edwards <http://www.awedwards.com.au/projects/australian-technology-park-biomedical-resear.php?filter=clients>
3 Architecture Australia <http://www.archmedia.com.au/aa/aaissue.php?article=5&issueid=200001&typeon=1>
4 AIA <http://www.architecture.com.au/awards_search?option=showaward&entryno=2008023833>
5 Planning NSW <http://www.planning.nsw.gov.au/asp/pdf/06_0149_atp_seven_concept_plan.pdf>
6 Australian Heritage Places Inventory
7 Department of the Environment and Heritage, Adaptive Reuse, The Queen Victoria Museum and Art Gallery, 2004
8 ACT Heritage Register <http://www.act.gov.au>
9 Architecture Australia, CarriageWorks, John De Mannicor, July/August 2007
10 Sydney Harbour Federation Trust <http://www.cockatooisland.gov.au/ >
11 Heritage Council of New South Wales. < http://www.visit.heritage.nsw.gov.au>
12 The Queensland heritage Register, Department of Environment and Resource Management <http://www.epa.qld.gov.au>
13 Queensland Heritage Trail Network <http://www.heritagetrails.qld.gov.au/attractions/ipswich2.html>

4.0 Movable Heritage

4.1 Introduction

The Eveleigh Locomotive Workshops Machinery Collection is listed in the State Heritage Register for the contribution it makes to the significance of Eveleigh Locomotive Workshops. The Collection comprises selected examples of the machines and equipment installed in the Workshops at the time that it closed and includes individual items dating from the late nineteenth century through to the mid-twentieth century. An overview of the systems in place and the machinery used when the workshops were operating is given in Section 2.5.2.

Many machines evolved during their lifetime at the workshops with changing technology. Conversion of fuel and drive mechanisms was a common process for many of the machines. The steam boilers which once powered large numbers of machines within the workshops articulate this evolution in technology, having been switched from coal to fuel-oil to natural-gas firing during the middle of the twentieth century.

When the workshops first shut down in the late 1980s, a small number of movable items from the workshops were deemed to be of high cultural or historical value and were put into the railways memorabilia collection or donated to organisations such as the Powerhouse Museum. Consequently, these have not been included in any of the subsequent machinery inventories associated with Eveleigh Railway Workshops and are not documented (outside of their museum records) in relation to their role in the Locomotive Workshops. At the same time, large numbers of other machines were deemed to be of little heritage value and were sold or discarded and their role in the operations of the workshops is also unrecorded. The machinery and equipment remaining in the Workshops is what is now known as the Eveleigh Locomotive Workshops Machinery Collection.

Some of the machinery is still being used today at the blacksmiths workshop which operates in Bays 1 and 2 of the locomotive workshop building. Other machinery is displayed throughout the site with various interpretation panels. In particular, a number of machines are displayed in the northern part of Bay 10.

A number of the remaining machines played a significant role in the operations of the workshops, including the Davy Press in Bay 1 North, blacksmith's hammers, presses, associated hand tools and other small items in both Bays 1 and 2, milling and planing machines in Bay 10, the four boilers in Annex 2 and the hydraulic pumping machines in Annex 6.

ATPSL have completed a Heritage and Conservation Register for the site, which includes an inventory of the machinery collection, listing all the machinery and movable heritage items that are of heritage significance which are either located on-site, off-site or have been disposed of since the early 1990s. These lists do not contain much information on the current condition and integrity of the items and additionally, where the list does mention whether they are operational or not, it does not provide any details of the circumstances.

4.2 Management Plan for Movable Items 1996

The primary management policy document in relation to the management of the movable heritage collection at Eveleigh Locomotive Workshops prior to the ATP S170 Register has been the *Eveleigh Workshops Management Plan for Movable Items and Social History*, prepared by Godden Mackay Pty Ltd for City West Development Corporation, State Rail Authority and Department of Urban

Affairs and Planning in July 1996. This report provided important background information and policies for the collection and is noted as a reference document in the movable collection's S170 Register listing. Section 7.0 of the management plan established a set of management policies for the movable items. The primary relevant policies identified for management of the movable items are set out in Policy 7.6: Conservation Approach. This section states, inter alia:

- *The collection of significant equipment and machinery, the majority of which is currently in Bays 1-4A of the Locomotive Workshop, should be conserved in ways which protect and enhance its cultural significance, continue its useful life and contribute to the activities at Eveleigh as both an engineering and educational resource. Long term conservation of the outstanding cultural significance of the Eveleigh machinery collection should be an important component of the future use and management strategies.*
- *Future developments should take into account the need to integrate the retention and conservation of the machinery within the development of the site as a whole.*
- *The Eveleigh Locomotive Workshops should house machinery and relics provenanced to the site or judged appropriate for inclusion in the collection on site by this report, but should not become a repository for 'antique' railway machinery.*
- *The machinery and associated tools should remain together on site as assemblages, collections or systems.*
- *No part of an assemblage should be removed from the parent relic. This includes all tools, stands and operating equipment.*

Other sections within Section 7.0 provide policies to cover a range of potential issues, including possible restoration and operation of the machinery. Policies relevant to the current management environment include:

- NSW Government responsibility for management and costs associated with Eveleigh Machinery Collection (Policy 7.3)
- Responsibility to Interpret the Eveleigh Machinery Collection (Policy 7.4)
- The appointment of a specialist Machinery Supervisor to oversee the management of the Eveleigh Machinery Collection (Policy 7.5)

While the last of these policies has not been implemented, ATPSL funds the management and maintenance of the movable heritage collection and seeks expert advice where required.

4.3 Development between 1996 and the Present

4.3.1 General

Since 1996, the Locomotive Workshops buildings have been substantially redeveloped as commercial office space, with associated support activities, such as coffee shops and conference rooms. Bays 10–14 have been developed as a large flexible function space.

In this context, individual machines have been cleaned and put on display, particularly in the central corridor, with interpretation signage providing identification and historical information about the item. Most of the machinery on display has been given some preservative treatment and is in relatively

good condition. The operation of any individual machine is not (or, only superficially) explained, nor is the display of any machine given any dimension in terms of the input and output materials, power systems, peripheral elements or operator actions. This context could be provided through interpretation.

Two recently completed works are the conservation of the hydraulic pumping plant in the Bay 3 South Annex (Figure 4.1) and the conservation, reassembly and display of a steam crane and the Wheel Shop Pivot Crane in Innovation Plaza. The Bay 3 South Annex containing the hydraulic pumping plant is normally locked and available to the public only by prior arrangement or as part of specific tours. This protects the authenticity of the display, wherein the tools, maintenance materials and normal machine conditions have been kept in place. The proposed Bays 1 and 2 North interpretation display and implementation of the Interpretation Plan generally will communicate to the public the significance of the movable collection.

While recommendations in the 1996 Management Plan regarding the creation of a management committee and specialist supervisor have not been implemented, the recent increased involvement of stakeholders through such avenues such as the Redfern Waterloo Heritage Taskforce and the Eveleigh Steering Committee and through the Eveleigh Interpretation Plan process, as well as the volunteer program, provides opportunities to access specialist knowledge through a specialist reference committee, or similar—see Policy Section 9.0 in this regard.

4.3.2 Heritage Operator in Bays 1 and 2 South

The retention of a use within Bays 1 and 2 South that conserves the historical use of the space has been adopted by ATPSL. A heritage operator, Wrought Artworks, has been operating from Bays 1 and 2 South, part of the former Blacksmiths Shop within the Railway Workshops complex, continuously since 1996. Wrought Artworks is a small blacksmithing and decorative iron works specialising in repair and replacement of architectural ironwork.

Some machines have been maintained continuously since the closure of the workshops through the involvement of Wrought Artworks, while others were static for many years before being refurbished and brought back into use by the company. ATPSL recently sponsored a grant application by Wrought Artworks to recommission a Covmac horizontal upsetting machine. Wrought Artworks has also brought several items of machinery and equipment of their own into the workshops, including, for example, a substantial metalworking lathe (a machine that would never have been co-located with blacksmithing machinery in the railway workshops).

Wrought Artworks operate in a semi-public environment, with passing visitors to the ATP also able to look over the low fence to observe the blacksmithing operations. As with many industrial activities, many of the day-to-day actions carried out within this area are mundane and present little spectacle to an audience. As the business operates primarily as a commercial operation, the staff and the nature of the work are not specifically chosen for their display value, hence, with a few notable exceptions, most activities occur with little engagement or interaction with the audience. Nonetheless, it is generally regarded as a positive and interesting experience to observe the smiths at work within their area, with occasional moments ‘when sparks fly’. Community engagement through blacksmithing displays is currently being incorporated in appropriate events at ATP.

Wrought Artworks has operated a successful commercial business in the former railway workshop context, from a heritage perspective. It has set out to fit its activities into the existing workshop

environment. This has required a range of compromises to their operations, which are (seen to be) offset against the advantages of location, equipment and beneficial tenancy arrangements.

The current heritage operator is, to a large degree, a business centred on the personalities of the owners, whose individual personal commitments to the successful marriage of their business to its 'railway workshop' context has been central to the acceptability of their operation within the heritage environment.

4.4 Current Situation

Machinery has been displayed in various ways throughout the site. For the purpose of this report, they have been divided into the following categories: In Place (Part of original fabric); In use; On display and Relocated. Refer to Table 1.1 for further details of items on display in public or private areas.

4.4.1 In Place

Most of the machines in Bays 1 and 2 are in the same place in which they were when last used before the closure of the Locomotive Workshops in 1989. The 12 overhead cranes that remain are in their original places throughout the locomotive workshops building (Figure 4.2), although some others have been removed, and one remains in the New Locomotive Shop (now the NIC). The overhead crane in the NIC has been located above the entrance foyer as can be seen in Figure 4.3, allowing an interpretation of the space in which it once operated.

The machinery and equipment in the Boilerhouse Annex and the Hydraulic Pumphouse Annex is all in place and relatively undisturbed, as are several externally mounted ancillary facilities, including the hydraulic accumulators, the compressed-air reservoir and the fuel-oil tanks.

Similarly, there are a number of toilet facilities which have remained throughout the site, such as an external urinal on the southern wall of the locomotive workshop building and a line of wash basins inside the NIC foyer (Figures 4.4 and 4.5).

4.4.2 In Use

Wrought Artworks Pty Ltd is a tenant of Bays 1 and 2 South, operating a commercial metal fabrication business. Wrought Artworks are permitted to use machinery located within these bays for the purposes of their business, in return for the care, maintenance (in certain circumstances) and public display of these machines. Machines within Bays 1 and 2 South which are in use include the De Burgue electric shears, the Ajax Continuous Forging Machine, the Massey electro-pneumatic hammer and the arch hammer. See Figure 4.6 for an overall view of Bays 1 and 2.

4.4.3 Items on display in Public Areas

Some individual items of machinery are on public display in Bays 3, 4, 5, 8 and 10 (Figure 4.7). These are generally displayed as individual machines, disconnected from power sources and lacking in operating components such as drill bits, cutting heads or examples of work (Figure 4.8).

4.4.4 Items on display in Private (Tenant) Areas

Some individual items of machinery are on public display in private (tenanted) areas in Bays 5, 15 and 16. These are generally displayed as individual machines, disconnected from power sources and lacking in operating components such as drill bits, cutting heads or examples of work.

4.4.5 Relocated Items

This category relates to items of machinery and equipment which have been removed from their original location but which are not permanently located anywhere at present, or are currently dissociated from the workshops. The majority of such items are stored at ATP, with some items remaining off site.

Table 1.1 Items that are on display in public and private areas and items that have been relocated.

Items on display in Public Areas			
Bay	**Item**	**Bay**	**Item**
		3	Ryerson Spring Forming Machine (1) Ryerson Spring Forming Machine (2)
4	Smith & Coventry Spring Coiler (1) Smith & Coventry Spring Coiler (2) Fielding & Platt Spring Buckling Press Hydraulic Press and Spring Tester Rice & Co. Hydraulic Spring Buckling Press Craven Brothers Spring Disassembler	**8**	Societe Genevoise Drilling and Boring Machine 1929 Societe Genevoise Drilling and Boring Machine 1938
10	Richards' Vertical Borer with Dual Heads Craven Axle and Journal Lathe Stirk Planer Timber work bench Herbert Tool and Cutter Grinder Herbert Twin Drill and Borer Bolt Rack Ormerod Vertical Shaper Department Double Floor Grinder Ward Hexagon Turret Lathe Department Lathe Churchill Grinder Spring Shop Rack, Coils and Tools Spring Shop Rack and Mandrels	**10**	Webster & Bennett 60" Single Vertical Borer Denham Centre Lathe Traverser Whitham Spring Coiler Furnace Wheel Trolley Spring Shop Rack and Mandrels Height – setting table British Electrical Vehicle (BEV) Hoist Hoist Hoist Tangye 48" wheel lathe Rack associated with Tangye Wheel Lathe
Innovation Plaza	Wheel Shop Pivot Crane Stephenson Loco Crane 1083		
Items on display in Private (Tenant) Areas			
5	Lang & Sons Spring Coiler	**15**	Departmental Grinder BSA Centreless Grinder Cylindrical Grinder Craven Brothers Pedestal Drill Brown & Sharpe Universal Grinder
16	Grinder		

Relocated Items			
Compound/ Container	Massey Flange Press Wheel Press White Twin Head Vertical Borer Pattern moulds Bleeder Valve for Fielding and Pratt Pump	BioMed Building Lobby	Robey Smith Bevel Wheel Planer

4.5 ATP S170 Heritage and Conservation Register 2008

ATPSL, as part of its management procedures and on behalf of the RWA (now UGDC) in fulfilment of its statutory obligations as a government instrumentality under Section 170 of the *Heritage Act 1977*, has a Heritage and Conservation Register survey and assessment of the machinery collection. This study made some key findings regarding the collection:

- *The vast majority of items identified in the 1996 study of the site are still present and, generally, in good condition. A few smaller items cannot be located and some items of machinery appear to have been disposed of previously.*
- *The smaller items, such as racks of hand tools, have never been catalogued in detail and that level of cataloguing has not been undertaken as a part of this exercise.*
- *In total, 482 items, structures or collections of smaller items were assessed by the project, with 403 items recommended for listing on the S170 Register. Of these 403 items, 5 were recommended for listing as items of State heritage significance and 398 as items of local heritage significance.*
- *The remaining 79 items include items identified in the 1996 study which could not be located, or items of no heritage significance which are recommended for disposal.*

The ATP S170 Register report also reviewed and made an assessment of the general condition and situation of each item and made comments with regard to the overall circumstances of the machinery collection.

These comments may be summarised as:

- Most items of machinery are not in operable condition, save for those still in use by the tenants of Bays 1 and 2.
- Those items in use by the tenants of Bays 1 and 2 appear to be in operationally sound condition, although the frequency and nature of maintenance to these items is not known.
- Many of the items in use have had safety guards added, to meet OHS Legislation and Regulations.
- Equipment in Bays 1 and 2 not in use by the tenants has not been used for nearly 2 decades and its suitability for any future operation is not known.
- Many items have been set up for static display purposes around the Loco Workshops, particularly in Bay 4 and Bay 10. This precludes these items being placed into service.

The ATP S170 Register report identifies 37 items which could not be found or identified in the ATP collection. Although no further search has been initiated, it became clear during the course of this

CMP that several of these items remain at Eveleigh but are not presently located within the ATP site area and are therefore not under the ownership and control of ATPSL. For example, the four air compressors identified in the 1996 report as part of the collection are located in the old compressor house within the RailCorp lands west of ATP. It is possible that several of the other items not located in the ATP S170 Register report may also be located elsewhere on the larger Eveleigh Railway Workshops site, again not under the ownership and control of ATPSL. The management of these items is the responsibility of their respective owners.

The ATP S170 Register report also analyses the contents of the machinery collection and makes recommendations regarding its future management. In particular, it makes recommendations for disposal of some items from the collection based upon, variously, their low significance, their poor condition or their lack of direct association with the Locomotive Workshops. Some of these are clearly of low significance and do not have any heritage value. Some of those would, on the other hand, have value as supporting props as part of any museum or period display relating to the workshop machinery (eg old metal lockers). Others might be useful as spare or replacement parts (eg small electric motors). Another group of items relates to machines removed from the Eveleigh Carriage and Wagon Workshops, which the Futurepast report identifies as unrelated to the Locomotive Workshops Machinery Collection and thus recommends that these should be removed from the Collection. The ATP S170 Register report by also includes a Disposal Procedure that would, in the first instance, offer items to collecting institutions including the Powerhouse Museum, Office of Rail Heritage and the Thirlmere Railway Museum.

The key constraint identified in the ATP S170 Register report is that the current situation of static display of the majority of the collection will continue.

4.6 Future Plans

Consultants were engaged by ATPSL to review the present display situation in Bays 1 and 2 and propose a public display interpretation strategy for this area, in accordance with the broad intentions of the 1996 Management Plan. It is understood that a controlled pathway through the Bays is proposed, with static displays and interpretation signage to guide the visitor and explain the machinery collection.

The interpretation proposal is largely focused on Bays 1 & 2 North, with no additional proposals affecting the Wrought Artworks area in Bays 1 and 2 South.

4.7 Issues

A range of specific issues relating to the future management of the Machinery Collection have been identified during the course of this project. These issues provide both constraints and opportunities for the future management of the collection. The primary, overarching issues are:

NSW Occupational Health and Safety Act 2000 Standards

The potential for reinstating some of the machinery to operational condition and use has been proposed in the past and it remains theoretically possible. However, in a number of significant cases, this course of action can be problematic. Much of the machinery does not meet current OH & S safety standards and achieving compliance can be both costly and have a significant impact upon the fabric of the machine itself. These issues were present in the workshops at the time that they closed and were a consideration in the closure of the workshops. Many of the surviving machines had additional safety screens and guards added in their final years of use, some of which

have been subsequently removed as part of their conservation works. Wrought Artworks have had the need to add safety screens to several of the machines that they have kept in use in Bays 1 & 2 South.

Skills

Most of the machinery relies upon skilled operators to function effectively and, particularly for several of the larger items, were of a size and type rarely found in other workplaces. The Railway Workshops were, in their day, a centre of skills training and machine operators were trained on the job by the previous generation of workers. Consequently, the pool of available skilled workers in the community able to operate the machinery is small and is shrinking further, as new machines are typically automated and computer-controlled, producing a different set of skills in the workforce.

Subdivision of ownership of the collection

The original machinery collection was, in 1996, all part of the Eveleigh Railway Workshops. Since that time, the site has been subdivided into areas of different ownership, with different activities carried out in each. The majority of the Locomotive Workshops have been leased to ATPSL, whilst the Carriage Workshops have been redeveloped as an arts and performance precinct. RailCorp retain responsibility for the Large Erecting Shop and a series of minor shops attached to this building, including the Air Compressor House that originally supplied air to the Locomotive Workshops. The Large Erecting Shop has been retained by RailCorp to house repair and maintenance activities associated with its heritage rail vehicle fleet, an activity not dissimilar to that formerly carried out within the Locomotive and Carriage Workshops, though on a much limited scale.

Power Supplies

As described in Section 2.0, machinery at Eveleigh Workshops was powered by one of four power sources: steam, hydraulic, pneumatic or electric. The steam generation plant, being the boilers in Bay 2 South Annex, have not been operated in over two decades and probably no longer are able to be operated without major reconstruction (Figure 4.9). The Hydraulic Power plant in Bay 3 South Annex has been restored but not to operational condition. More significantly though, little of the high-pressure piping remains throughout the workshops and reticulation of this power supply would be a major undertaking. Similarly, the pneumatic reticulation pipework also has only fragmentary remains and the air-compressors are located under a separate ownership.

Ancillaries and Tools

Although many of the blacksmiths' handtools exist within the collection in Bays 1 & 2 North and South, most of the other machines in the collection are missing their ancillary components and peripherals which are essential for their operation. For example, lathes require a wide range of cutters and shaping heads which fit the machine, depending upon the nature of the material being works and the intended outcome. Cranes require a wide range of slings, hooks and beams that provide the flexibility to undertake the range of tasks that they perform. Instruments were required to measure tolerances and temperatures. Every machine also had its specific operating and maintenance tools, most of which are now missing. Not only are these items difficult to replace, it is unlikely that, in the absence of any original documentation, it will be possible to identify what these should be even if the task of reinstatement was contemplated.

Figures (left to right): **4.1** Hydraulic pumping plant; **4.2** One of the twelve overhead cranes that remains in its original place in the locomotive workshops building; **4.3** The overhead crane in the NIC; **4.4** External urinal on the southern wall of the locomotive workshop building; **4.5** Wash basins inside the NIC foyer; **4.6** Overall view of Bays 1 and 2; **4.7** Item on public display; **4.8** Items on display in Bay 10; **4.9** Boilers

5.0 Preliminary Archaeological Assessment

5.1 Introduction

5.1.1 Preamble

This section presents a desktop summary on the known historical and Aboriginal heritage values of the ATP site. An analysis of the historical and Aboriginal archaeological potential of the site is also presented in this section. The archaeological significance of the site is discussed in Section 7.0. The legislative requirements relating to archaeological are outline din Section 8.0. Policy relating to archaeology on the ATP site is detailed in Policy Objective 6, Section 9.0.

5.1.2 Scope

The preliminary archaeological assessment has been prepared in accordance with the *NSW Heritage Manual's* 'Archaeological Assessment' and the 'Aboriginal Cultural Heritage Standards & Guidelines Kit' of the Department of Environment, Climate Change and Water (DECCW)) (now the Office of Environment and Heritage), in response to the requirements of the *Heritage Act 1977* and the *National Parks and Wildlife Act 1974* (NSW) (NPW Act) respectively. The scope for the preliminary archaeological assessment comprised:

- a search of heritage registers to identify known non-Indigenous archaeological sites;
- analysis of the historical research for the subject site, to determine the locations of any former or existing structures and buildings;
- a search of the Aboriginal Heritage Information Management System (AHIMS) for known Aboriginal objects, sites and places within the vicinity of the study area;
- a review of previous archaeological assessments undertaken in the general area to provide context for the current assessment;
- inspection of the ATP site to identify visible archaeological relics/objects/sites and/or heritage items, sites and places and areas of potential archaeology; and
- preparation of a report that complies with Heritage Council of NSW and DECCW guidelines.

5.2 Historical Archaeological Resource

5.2.1 Site Inspection

The site inspection for historical archaeological sites was undertaken on 2 December 2010 by Lyndon Patterson and Seana Trehy, both archaeologists with GML.

The only archaeological remains that are currently visible on the site are brick footings of most of the northern wall of the foundry and sawn off steel uprights from this building and a shorter section of footings of the eastern and southern wall of the foundry. These footings can be seen in Figures 5.2–5.4.

5.2.2 Historical Archaeological Potential

Chisholm Estate (c1820s–1882)

Based on the analysis of the historical research there were two stable buildings marked on a plan of the Chisholm estate c1875 in the area on or very near to the eastern edge of the current subject land. These buildings were probably simple timber structures which typified agricultural/pastoral buildings of the time. Figure 2.1 shows the present buildings and boundary of the ATP site overlaid on the c1875 plan of the Chisholm Estate. One of the stables appears to be located at the northern edge of the present NICTA building. The other stable lies just east of the ATP area under the present Garden Street. Given the location of these stables, adjacent to the large scale new development, the archaeological potential of these structures remains low. It is unlikely that remnants of either the building foundations or occupational deposits relating to them would have survived.

Residential Development in Eveleigh (c1880s–c1917)

Housing stock constructed c1880s was once present in two areas of the ATP site; in the area north of Henderson Road and the area west of Cornwallis Street. Figure 2.8 shows the present boundary and buildings of the ATP site overlaid on the c1890 Litho Plan of Alexandria, Parishes of Alexandria and Petersham. This image shows the large amount of housing stock that was resumed. This housing stock is shown in detail on three Met Detail Series – Alexandria Sheet 11 Plans dating from 1889, 1893 and 1895, with individual houses visible, shown in Figure 2.9.

The area west of Cornwallis Street has had substantial excavation and landscaping and shown in Figure 5.1. Given this area has been subject to substantial excavation and landscaping, there is low potential for occupational deposits and structures relating to the rows of housing stock dating c1880s west of Cornwallis Street. There is low potential for remains of fences, gardens and yard surfaces to exist at the rear of these buildings. Due to the potential depth of such features, there is moderate potential for wells and cellars to survive in this area.

For the area of former housing north of Henderson Road, two phases of history have impacted on former potential archaeological relics and deposits. Firstly the housing in this area was demolished when resumed by the railways for the Alexandria Goods Yard c1913. The Goods Yard too was demolished and today this area now contains a sports oval, open carpark and basketball and tennis courts. Given this area has been subject to substantial excavation and landscaping, there is low potential for occupational deposits and structures relating to the rows of housing stock dating c1880s north of Henderson Road. There is low potential for remains of fences, gardens and yard surfaces to exist at the rear of these buildings. Due to the potential depth of such features, there is moderate potential for wells and cellars to survive in this area.

Eveleigh Railway Workshops (1882–present)

As mentioned above, only three buildings from the Eveleigh Railway Workshops survive on the ATP land. The remainder of the buildings were demolished or removed from the site. Some of the foundations of the foundry building are clearly visible on the surface in the centre of the ATP site. There is moderate potential for remains of the foundations of the Pattern Shop, Goods Shed, Steam Hammer Shop and small stall buildings to remain buried on site where they have not been impacted by the construction of the modern buildings including the new media complex, NICTA building and the Biomedical building. These buildings would have had steel frames with dirt floors; as such there is moderate potential for deposits and relics relating to these buildings. There is high potential for

rail stock to be present across the site in the locations that are shown on a plan of the site dating to c1940s (see Figure 2.7).

Figure 2.7 shows the present boundary and buildings of the ATP site overlaid on a plan of the maximum extent of the Eveleigh Locomotive Workshops and Alexandria Goods Yard dating to c1940s. This overlay shows the Channel 7 building covers the smaller steel foundry building in the west of the ATP site. The deep foundations of the media complex would have removed any archaeological potential for this building.

The modern NICTA building covers approximately the eastern half of the former Pattern Shop. Any archaeological remains from the eastern side of the former Pattern Shop would have been removed during the construction of the modern building.

The historical archaeological potential of the ATP site is shown in Figure 5.5.

A summary of the potential for historical archaeology from the different phases to exist is shown in Table 5.1 below.

Table 5.1 Summary of the potential for historical archaeology from the different phases of the subject land to exist.

Phase	Historical Archaeological Potential
1. Chisholm Estate c1820s–1882	Two buildings are shown, with the word stables next to them on an early undated plan of the area. There is very low potential for occupation deposits and structures relating to these two buildings given the extensive later development of the site for railway use, the construction of the NICTA building and excavation for and paving of Garden Street.
2. Residential Development in Eveleigh c1880s–c1917	Low potential for occupational deposits and structures relating to the rows of housing stock dating c1880s north of Eastern Suburbs Railway tunnel and also west of Cornwallis Street. Low potential for remains of fences, gardens and yard surfaces to exist at the rear of these buildings. Moderate potential for wells or cellars associated with the housing stock.
3. Eveleigh Railway Workshops 1882–present	Moderate potential for structures and occupation deposits relating to the former buildings on the site in areas where there are no modern buildings. High potential for rail stock to be present beneath the ground across the site.
4. Modern Development of the ATP Site 1988–present	Phase relates to the modern and present buildings on site.

5.2.3 Impact of Later Buildings on Earlier Features

The clearing of the land for railway use and the construction of the goods shed, foundries and other buildings would have had considerable impact on the survival of the two buildings likely to be stables from the Chisholm Estate period, and as such the remains of these buildings are unlikely to have survived.

The survival of remnants of the housing stock would have also been impacted by the later industrial and rail use of the site. The archaeological resource of the housing stock immediately to the north of Henderson Road would have been removed when the eastern railway line tunnel was put in during the 1970s. The method used for the eastern railway tunnel in this section would have been cut and fill, thus removing all potential archaeology in this location.

The leveling of land for the two carparks, the creation of the recreational oval in the south east of the subject and the construction of modern buildings including the media complex building in the most recent decade would have all had an impact on the survival of potential earlier archaeology that may have once existed on the site including the housing stock and the rail buildings and rail lines.

The survival of potential archaeology on the site cannot be ascertained without further archaeological investigation such as excavation.

5.2.4 Research Potential

The potential archaeological resources of the ATP site are assessed here primarily in terms of their archaeological research potential, that is, their ability to contribute to knowledge of an aspect of New South Wales and the Redfern and Eveleigh area's local history and the railway history of the state. The identified research potential is further discussed in Section 7.5 under the NSW Heritage Branch criteria.

Methods for determining the research potential of historical archaeological resources were considered in an influential paper by Bickford and Sullivan, published in 1984.[1] In this paper, Bickford and Sullivan draw attention to the dilemma faced by archaeologists and developers alike regarding sites that are to be destroyed or modified as a result of development, and discuss effective means of assessing their potential archaeological research value. Bickford and Sullivan proposed three questions that can be used as a guide for assessing the research potential and, hence, significance of an archaeological site within a relative framework.

The three questions designed by Bickford and Sullivan are now accepted as standard questions, and the ability of the ATP site to demonstrate archaeological research potential is addressed below.

Can the site contribute knowledge that no other resource can?

The layout of former buildings including the foundry, smaller workshops and rail stock and the site history is contained in the historical record of the site, including historic plans, photographs, site records and social histories, many of which have been researched in the preparation of this document. Information on the fabric and form of the former buildings is available from historic photos, plans and site histories.

The value of archaeology at this site would be its ability to confirm construction methods and fabrics described in the historic record. Further, archaeological deposits and artefacts at the site may be able to yield new information on the types of activities undertaken at the Eveleigh Locomotive Workshops or the types of people, including the different ethnic groups that worked there.

Little information is known on the Chisholm Estate, so if archaeological deposits exist from this period, including, but not limited to the stables marked on c1875 plan, these would be significant.

If archaeological remains of the Eveleigh Housing Stock remain these deposits may yield information on the types of people living there and confirm whether these were working class neighbourhoods based on the material culture.

Can the site contribute knowledge that no other site can?

The Eveleigh Railway Workshops at their peak during the late nineteenth and early twentieth century were the largest and most important railway workshops in New South Wales, if not

Australia. Because of this, few other sites in the country could yield similar archaeological material of this size, nature and age. Within the ATP site was the area for the construction of locomotives.

The Chisholm Estate stables, if surviving, while not altogether common, would not be the only example of such stables within New South Wales from this period.

The former Alexandria Housing Stock, dating from the 1880s, and demolished to make way for the expansion of the Locomotive Workshops and Alexandria Goods Yard is not the only example of such housing in Sydney. Indeed, large parts of surrounding suburbs, including Redfern, Camperdown, Newtown and Surry Hills contain similar examples of such housing dating to the same time period. The major cities of Australia, including Sydney, experienced a housing boom in the 1880s. This expansion occurred across large parts of South Sydney, the Inner East and Inner West, where a lot of terrace housing and smaller one and two bedroom cottages were constructed to accommodate working class families.

Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

The Eveleigh Railway Workshops are significant at a state level, and potentially a national level for their industrial output of locomotives and carriages and the value of place in the social and economic history of New South Wales to thousands of workers and their families over a number of generations. As such, archaeological remains, if surviving would be significant in their ability to contribute to the story of the Eveleigh Railway Workshops.

5.2.5 Summary Preliminary Research Potential

The historical archaeological resource at the ATP site has moderate research potential relating to the functioning of the Eveleigh Locomotive Workshops and Alexandria Goods Yard. This potential resource includes structures and deposits relating to the former buildings on site and rail stock across the site.

There is moderate research potential relating to the areas of former housing stock to the north of Henderson Road and west of Cornwallis Street that were resumed by the railways in the early twentieth century. This former neighbourhood, dating to the 1880s, would have housed many of the railway workers and their families. This potential resource may include occupational deposits and structures relating to the rows of housing stock, fences, gardens and yard surfaces and wells or cellars. Artefacts from this resource, if they exist, may be able to yield information on the types of people, including social class, gender and ethnicity, living in these former neighbourhoods.

There is moderate research potential relating to two former stables from the Chisholm Estate period that predated the Eveleigh Locomotive Workshops and Alexandria Goods Yard use of the site. This potential resource may include remains of timber stables and associated deposits.

The archaeological significance of the ATP site cannot be confirmed without additional investigation such as excavation, recording and analysis. The preliminary historical archaeological significance of the ATP site is shown in Figure 5.6.

5.3 Aboriginal Archaeological Desktop Survey

5.3.1 Environmental Context

Geologically, the area of the ATP site lies at the boundary of two physiographic regions: the Cumberland Lowlands which extend to the north and west and the Botany Lowlands which extend to east to the Pacific Ocean and south to Botany Bay. The Cumberland Lowlands comprise plains and generally undulating low hills with the dominant geology being the Wiannamatta Group shale. The Botany Lowlands in contrast are an area of deep sand dunes with drainage running towards Botany Bay to the south.[2]

The dominant soil of the Botany Lowlands is the Tuggerah Soils which comprise of gently undulating rolling coastal dunefields that run north-south in orientation.[3] Rainfall run off collects in swamps, lagoons and depressions, an example of which was Shea's Creek which flowed to the south of the current subject land through present day Alexandria into Cooks River and Botany Bay. Shea's Creek has been modified as the whole area has been heavily development for industrial and residential uses over the past 200 years for European land uses.

The original vegetation has been cleared from the area but would have consisted of dry sclerophyll eucalypt and apple woodland or forest. Tree species would have included Smooth-Barked Apple (*Angophora costata*), Sydney Peppermint (*Eucalyptus piperita*) and Old Man Banksia (*Banksia aemula*) with a variety of bracken and mosses forming the understorey.[4] This environment would have been a rich area for Aboriginal people to exploit and would have contained a variety of terrestrial resources including plant and animals for food and medicinal purposes. Coastal resources would have been available in Sydney Harbour two kilometres to the north, as well as the Pacific Coastline and Botany Bay.

5.3.2 Archaeological Context

AHIMS Sites

A search of the AHIMS Register revealed there are no previously recorded Aboriginal objects/sites or gazetted places on the ATP subject land. The search revealed there were four previously recorded Aboriginal objects/sites within a 2km x 2km search area surrounding the subject land. These objects/sites are summarised by site type and site features in Table 5.2 below.

Table 5.2 AHIMS registered sites within a 2km x 2km search area surrounding the subject land.

Site Type	Site Feature	Frequency
Midden	Artefact, Shell and Earth Mound	1
None	Artefact	1
None	Potential Archaeological Deposit (PAD)	1
None	Aboriginal Resource and Gathering	1
TOTAL		**4**

Table 4.1 above shows there are only four sites located in the surrounding area of the ATP. The number of sites is quite low for a 4km^2 area and demonstrates three things—that the area is highly developed, there are few surviving natural landforms in this part of inner Sydney and that there

have been relatively few Aboriginal heritage assessments undertaken in this area. This last point is refection that this is an old part of Sydney and was already developed well before the introduction of the NPW Act was implemented in 1974, and the corresponding growth of heritage assessments in recent decades following the creation of this act.

A breakdown of the Aboriginal sites from the AHIMS search comprise one midden containing stone artefacts, shell and an earth mound, one artefact scatter, a PAD and an Aboriginal Resource and Gathering site.

Mapping these sites using a geographical information system (GIS) program provides information as to the distribution of these site types within the various surrounding environments. The isolated artefact, PAD and Aboriginal Resource and Gathering were located on the grounds of Sydney University, while the heavily disturbed midden site was recorded in a small park to the east of the ATP site.

Given the long history of urban development and landscape modification within the City of Sydney and surrounding inner suburbs, other site types such as stone quarries, grinding grooves, rock art, modified trees or human burials would be considered extremely unlikely for the study area.

Previous Archaeological Research

Previous archaeological research in the Sydney region has taken two forms: academic-driven research begun in the 1960s, and consultant reports which have responded to the urban development of Sydney, following the gazettal of the NPW Act. As the Eveleigh and Redfern areas are old parts of Sydney, they were already built up with many layers of European industrial, transport and residential history prior to the introduction of the NPW Act. As such, there have been few Aboriginal heritage assessments undertaken in the local area.

Aboriginal occupation of the Sydney region extends into the Pleistocene, 10,000 years before present (BP). Currently the oldest accepted date in the Sydney region is from the Shaws Creek rockshelter, located on the Nepean River at Cranebrook, dating to 17,800 years BP.[5] Pleistocene dates have also been recorded for the lower occupation levels at Regentville near Penrith, dating to 12,100 years BP.[6]

The earliest scientific archaeological investigations in the Sydney region were undertaken by Robert Etheridge Jr in the 1880s. Etheridge and his colleague TW Edgeworth David excavated a site along Shea's Creek in Alexandria, approximately one kilometre south of the current study area. Here dugong bones and ground edge hatchet heads were excavated and cut marks and scars on the bones suggest the animals were butchered, killed and eaten for food.[7] This shows that this area was used as a camp place and that in the past a dugong had been brought inland to be eaten.

A review of AHIMS register for previous archaeological consulting reports undertaken in the surrounding area reveals only two such assessments. This was an archaeological assessment undertaken by Jo McDonald Cultural Heritage Management at Sydney University as part of the Campus 2010 development program. No Aboriginal sites or objects were recorded during this assessment; however, it recommended a test excavation program on Geology Lawn and Maze Green. The test excavation was undertaken under a S87 Preliminary Research Permit in 2006. The programme involved the hand excavation of 11 test pits. No intact archaeological deposits were located during the test excavation. Only one flaked tuff artefact was recovered during the excavation and the area was found to be considerably disturbed.[8]

5.3.3 Site Types Considered in the Study Area

A wide range of site types can be encountered during archaeological investigations in New South Wales, and these reflect the range of activities carried out by Aboriginal people in the past. The AHIMS sets out 20 site types which are defined by the cultural activities associated with the use of a place. These site types reflect the diverse range of evidence that may be encountered relating to past Aboriginal activity. It is important to note that one site may comprise a number of different site types or attributes, indicating the diverse range of cultural activities that can be undertaken in one place.

Given the long urban and rail yard history of the study area and the lack of previously recorded Aboriginal objects and places recorded in the surrounding area, only artefact scatters/isolated artefacts and potential archaeological deposits are considered possible for the subject land. Other site types such as shell middens or human burials would not likely occur in this environment. The potential site types that may occur in the local area are described below.

Artefact Scatters and Isolated Artefacts

Stone artefacts occur across much of the New South Wales landscape in varying densities and are typically classified as artefact scatters, open camp sites or isolated occurrences of individual artefacts. These sites provide a record of past Aboriginal occupation and activity across the landscape. Artefact scatters comprise visible concentrations of artefacts (although these sites often have a significant subsurface element) and typically reflect areas of concentrated Aboriginal activity and occupation in the past, either as campsites or more transient places of activity. Artefact scatters or open camp sites are typically defined as the presence of two or more artefacts within 50 metres of each other. These contrast with isolated artefacts, which occur in much lower densities and are generally considered a 'background scatter' across the landscape in many areas of New South Wales, and may represent casual discard of lithic material. Thus, an artefact scatter or open camp site can be defined as a concentration of artefacts that occur in a greater density than the surrounding low-density 'background scatter'.

Potential Archaeological Deposits

Potential Archaeological Deposits or PADs are sites where archaeological deposits such as buried artefact scatters or shell midden accumulations are likely to occur based on sensitive landforms and locations in the landscape. Although it cannot be certain without excavation that an area contains buried Aboriginal objects, nonetheless, this site type can be registered on the AHIMS database with the DECCW.

5.3.4 Predictive Modelling on the Subject Land

Potential Impact of Former Land Uses

Land uses can have a substantial impact on Aboriginal archaeological resource that may have been once present. This section of the report aims to present a summary of the historic impact on the subject land. The large scale residential and rail yard expansion in the area in the nineteenth and into the twentieth century has severely impacted on the potential for survival of intact Aboriginal archaeological sites. The site was cut and levelled for the industrial and rail use during this period and areas were later excavated for carparks and the sports oval in the southeast of the current site thus removing top soil in these areas.

Aboriginal Archaeological Potential on the Subject Land

The European history of the site shows there has been much earth disturbance in the past, for the construction of the railway, the Eveleigh Railway Workshops and the Alexandria Goods Yard, roads for vehicle access, modern buildings including the new media complex, carparks, and landscaping. Given the impacts of these past land uses on the site and the removal of top soil where sites are frequently located, Aboriginal sites and objects that may have once existed on the site are likely to have been disturbed and/or removed off site following excavation for the various buildings, roads and carparks. Any Aboriginal objects, if they exist, are likely to be in a disturbed context and may comprise isolated artefacts. The Aboriginal archaeological potential for the subject site is considered low.

There has been much cut and fill and levelling on the site over the past 150 years and many buildings have been erected on the site and the open areas in the south of the site have been used for a goods yard. The heavy industrial use of the northern part of the ATP site including the construction of buildings and the excavation and laying of rail stock has removed the potential of intact Aboriginal archaeological sites in these areas.

In the central part of the ATP site, the analysis of the historic section reveals that this area was used for two foundry buildings and a pattern shop all constructed c1919-1922 and the laying of rail stock that ran to the west connecting up with the existing rail stock servicing the Eveleigh Railway Workshops. This period of the site would have likely removed any potential for intact Aboriginal sites that may have once existed in this area. Following the demolition of these buildings, this area today is home to a large carpark, the new media complex and the NICTA building. The excavation for the foundation of these buildings would have removed any original soil that may have remained. The levelling of the land for the carpark would have had impacted on the original soil in these areas as well.

In the southern part of the site, the area to the north of Henderson Street was used for workers housing during the 1880s pre expansion of the railway workshops. The construction of the workers houses at this time would have impacted on any Aboriginal sites that may once has existed in these areas. The more recent excavation for the sports oval in the southeast of the subject land has removed any potential for intact Aboriginal archaeological sites in this area. The area immediately north of Henderson Road was subject to cut and fill for the eastern rail line which went through c1960s and would have removed all remaining natural soil from this area. A summary of the Aboriginal archaeological potential for the subject land can be seen below in Table 5.3.

Table 5.3 Summary of the potential for Aboriginal archaeological resources in the different parts of the ATP site.

Part of ATP Site	Aboriginal Archaeological Potential
1. Northern part of the ATP Site: includes Locomotive Workshop Building, New Locomotive Shop and Work Managers Building	Intact Aboriginal archaeological sites are unlikely to exist due to heavy earth disturbance including cut and fill, construction of buildings and laying of rail stock. Low potential for lithic or shell material in a disturbed context.
2. Central part of the ATP Site: includes Channel 7 building, carpark north of Central Avenue, NICTA building.	Intact Aboriginal archaeological sites are unlikely to exist due to heavy earth disturbance including cut and fill, construction of buildings in the past including the foundries in this area and laying of rail stock. The excavation for and construction of the Channel 7 building and the NICTA building have severely disturbed the soil in these areas. Low potential for lithic or shell material in a disturbed context.

Part of ATP Site	Aboriginal Archaeological Potential
3. Southern part of the ATP site: includes Biomedical Building, RTA offices, Ambulance building sports oval, tennis and basketball courts and carparks.	Intact Aboriginal archaeological sites are unlikely to exist due to heavy earth disturbance including cut and fill, construction of buildings in the past including the foundries in this area and laying of rail stock. The excavation for and construction of the Biomedical Building, the RTA offices, the sports oval and the area north and adjacent to Henderson Road for the Eastern Railway have removed the soil in these areas. Low potential for lithic or shell material in a disturbed context.

5.3.5 Discussion of Aboriginal Archaeology at ATP

Given the considerable disturbance to the original natural environment in the historical period from the housing stock in the southern and far east part of the site and the subsequent development of the Eveleigh Railway Workshops and its associated industrial site use including the foundry and locomotive buildings and laying of rail stock, to the modern development of the site with the construction of the new media complex, NICTA Building, Biomedical Building, RTA offices, Ambulance building, sport facilities and cut and fill for the Eastern Suburbs Railway there is low to none potential for intact Aboriginal archaeological sites such as artefact scatters. Any Aboriginal objects, if they exist, are likely to be in a disturbed context and may comprise of isolated artefacts. The Aboriginal archaeological potential for the subject site is considered low.

Figure 5.1 Photograph of land at the rear of the New Locomotive Workshop that was resumed by the railways. This area was formerly housing as shown in the plan in Figure 5.5 dating to 1889 although has since been significantly landscaped. (Source: GML 2010)

Figure 5.2 Remains of the lower brick walls of the eastern wall of the former foundry. (Source: GML 2010)

Figure 5.3 Brick footings from the northern wall of the former foundry. (Source: GML 2010)

Figure 5.4 Brick footings from the southern wall of the former foundry. (Source: GML 2010)

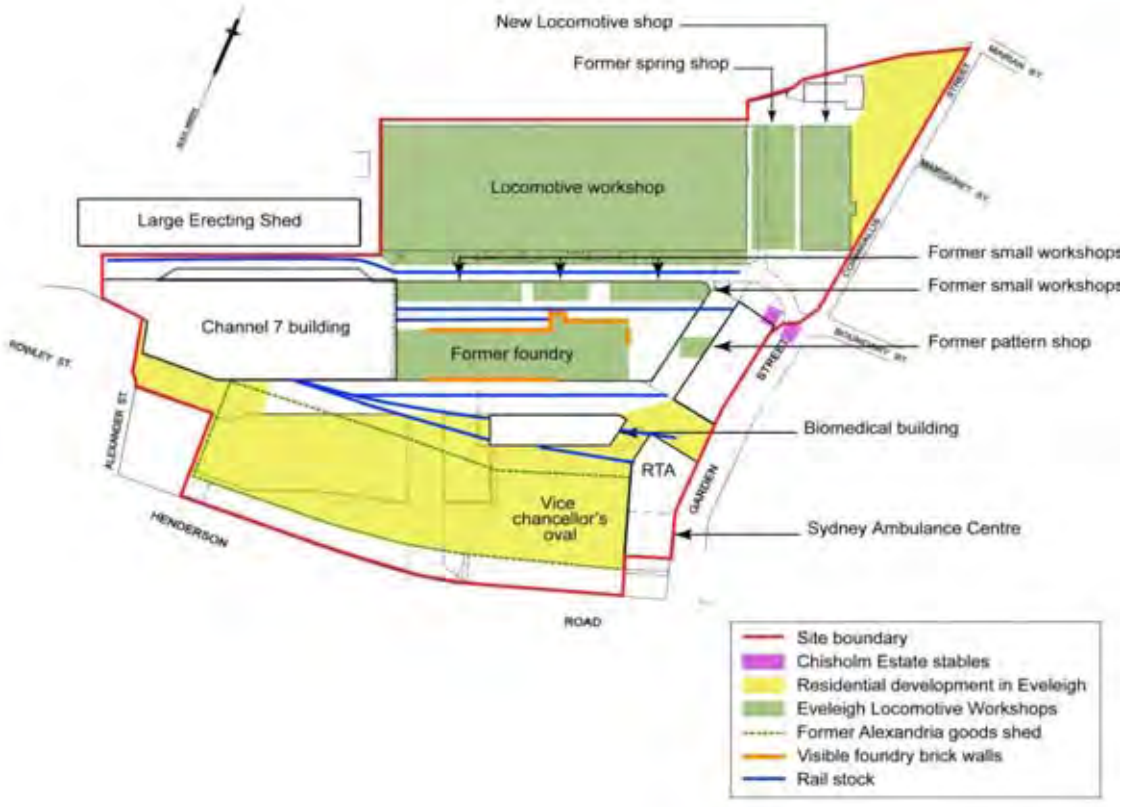


Figure 5.5 Plan showing historical archaeological potential at ATP. (Source: GML 2010)

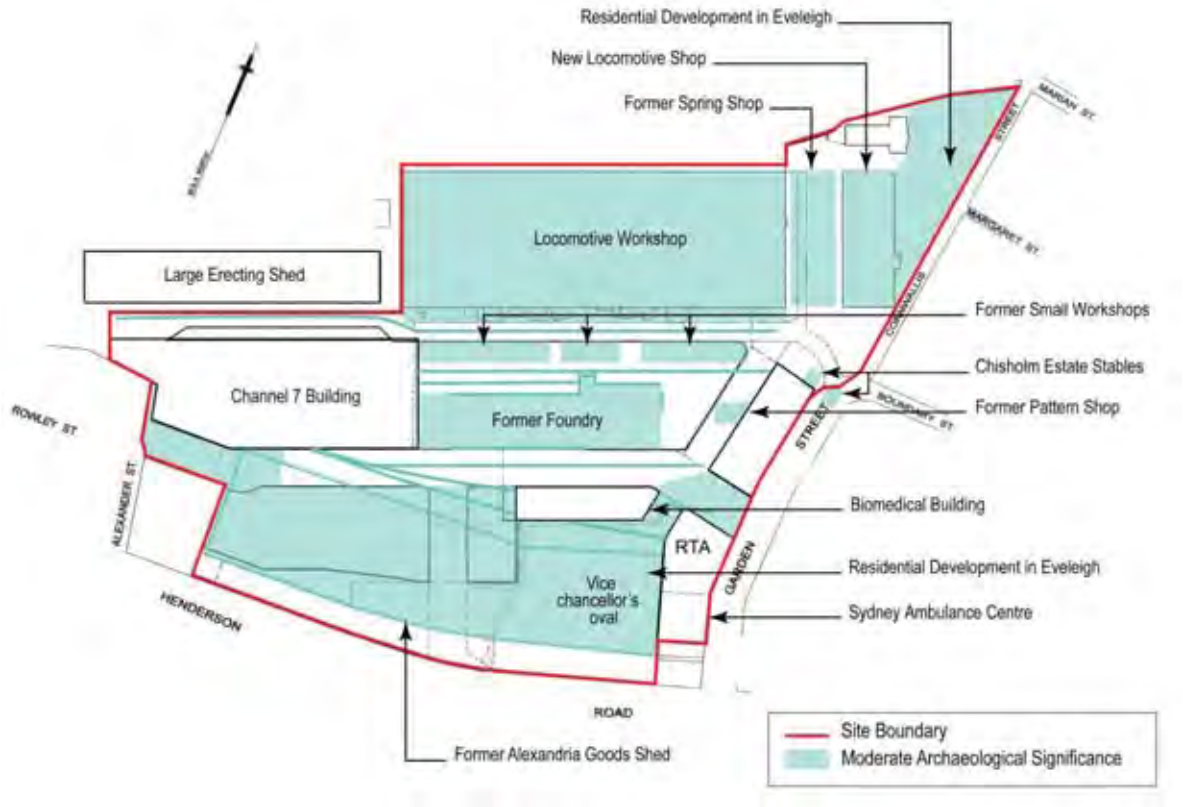


Figure 5.6 Plan showing the preliminary historical archaeological significance at ATP. (Source: GML 2011)

5.4 Endnotes

1 Bickford, A and Sullivan, 1984, 'Assessing and Research Significance of Historic Sites', in Sullivan S and S Bowdler (eds) *Site Survey and Significance Assessment in Australian Archaeology* (Proceedings of the 1981 Springwood Conference on Australian Prehistory), Department of Prehistory, Research School of Pacific Studies, The Australian National University, Canberra, pp 19-26.

2 Chapman, GA & Murphy CL, 1989, Soil Landscapes of the Sydney 1:100 000 Sheet, Soil Conservation Service of NSW, Sydney, pp 1-2.

3 Chapman, GA & Murphy CL, 1989, Soil Landscapes of the Sydney 1:100 000 Sheet, Soil Conservation Service of NSW, Sydney, p 94.

4 Chapman, GA & Murphy CL, 1989, Soil Landscapes of the Sydney 1:100 000 Sheet, Soil Conservation Service of NSW, Sydney, p 95.

5 Attenbrow, V, 2010, *Sydney's Aboriginal Past*, UNSW Press, Sydney, p 153.

6 McDonald, J, Mitchell, P and Rich, E 1996, A Further Investigation of Site RS1 (45-5-892) at Regentville, Mulgoa Creek, Western Sydney, unpublished report, Sydney, p 33.

7 Attenbrow, V, 2002, *Sydney's Aboriginal Past*, UNSW Press, Sydney, pp 6, 66.

8 Jo McDonald Cultural Heritage Management, 2006, Archaeological Test Excavation at Sydney University: Central Site, pp 1-4.

6.0 Community Consultation

6.1 Preamble

This section provides details of a community consultation session held at ATP in December 2009, during the preparation of the draft CMP. In the almost 4 years that have passed since the consultation took place, a number of initiatives for involving the local community have been completed by ATPSL and the RWA (now UGDC), including the creation of the Redfern-Waterloo Heritage Taskforce and a volunteer group engaged to promote the heritage significance of the ATP. The views expressed in this section represent the views of members of the local community at the time of the workshop.

6.2 Consultation Strategy

The preparation of this CMP has included consultation with Government agencies, local Aboriginal groups, community organisations and individuals that have an interest or special attachment to the site of the Eveleigh Locomotive Workshops.

During the preparation of this CMP on 7 December 2009, a community consultation session was held at ATP and facilitated by ATPSL and GML.

The aims of the community consultation were to:

- outline the objectives and scope of the CMP;
- to gather information and knowledge held by members of the community to assist in identifying and refining the understanding of the potential social heritage values of the Eveleigh Locomotive workshops as a whole;
- seek stakeholder accord from ATPSL and the local community in relation to the identified heritage values and ongoing statutory protection of the heritage values of the Eveleigh Locomotive Workshops as a whole; and
- help formulate conservation management policies that respect and help maintain community values and identify opportunities to develop them.

Discussed below are the views raised in the community consultation session in terms of the social heritage values identified as well as the elements, attributes and components that were identified as contributing to Eveleigh's significance. The Indigenous consultation strategy is also discussed in section 6.3.

6.3 Social Heritage Values

6.3.1 Introduction

The NSW Heritage Office publication *Assessing Heritage Significance* provides guidelines for assessing the social significance of a place. Social significance should be attributed to the following places or items:

- *items which are esteemed by the community for their cultural values;*
- *items which if damaged or destroyed would cause the community a sense of loss; and/or*

- *items which contribute to a community's sense of identity.*

A strong theme that came through the consultation session was that participants thought of the significance of ATP in terms of the history of the Eveleigh Railway Workshops as a whole, with a strong focus on the remaining buildings and machinery at the former Locomotive Workshops.

The following analysis of the results is set out as a summary of the views expressed during the consultation session, with specific views quoted in italics.

6.3.2 Analysis of Results—Themes of Social Heritage Value

Theme 1—The continuing significance of the Eveleigh Workshops

Although the character of the Eveleigh Locomotive Workshops has changed greatly since ATP was established, the workshop participants saw the Eveleigh Locomotive Workshops as a living thing with a significant history and strong tradition that should be conserved. The ATP site, with its remnant workshop buildings and machinery, represents the lives of thousands of workers and their families. The activities and history of the former locomotive workshop is central to the participants' perception of ATP, particularly expressed as 'Eveleigh Loco'. The blacksmith's workshop in Bay 1 and the volunteers in the Large Erecting Shed are seen by the workshop participants as integral to the ongoing conservation of the historical significance and heritage value of the site. The workshop participants expressed a strong desire to keep the stories and experiences of those who worked at Eveleigh very much in the present, primarily by retaining the railway and industrial use of the site. The current owners and managers of ATP are seen as the custodians of this history and continuing story, and have associated responsibilities—'a duty'—to conserve and communicate the history of the place.

> *The site represents a component of the working life and social context of many Australians. It reflects upon not only those who lived and worked at Eveleigh, but all those who worked on the railway systems throughout the country—at Bathurst, Cootamundra etc, from the 1860s through to the 1980s. It is probably a reflection on the industrial nature of the worker up to the 1980s. It will not occur again!*

Theme 2—The importance of Eveleigh to the history of NSW

The former Eveleigh Railway Workshops, particularly Eveleigh Loco, were seen by workshop participants as important in the history of NSW. Eveleigh is the place from which the NSW rail system developed and to be employed in the workshops was to be a part of a place of great innovation and prestige in NSW—'Eveleigh No. 1'.

> *Eveleigh No. 1: the name given to the locomotive workshop and the large erecting shop. To work at Eveleigh was a prestige and an honour. Even with government interference Eveleigh won't go away, it is ingrained in the soul of every railway man and woman throughout Australia and is world renowned.*

Workshop participants stressed that Eveleigh Loco had strong links to the union movement and industrial relations and was a significant state-owned industry, the likes of which are rapidly disappearing.

> *The workshops were supporting the entire state-owned rail industry, not only the locomotives.*

Workshop participants also noted that the Eveleigh Railway Workshops were an important place where Aboriginal workers could find employment and one of the places where they struggled to gain equal pay.

Theme 3—The significance of Eveleigh as a place of work

The Eveleigh Railway Workshops were a place of life-long hard work. Workshop participants noted that the type of industrial labour performed at Eveleigh is no longer common in Australia, but was once a significant source of employment. Participants see the remnant workshops and machinery at ATP as representative of the type of work that was significant to earlier generations.

The site represents the social and cultural lives from cradle to grave of thousands of workers and families.

The site provides valuable insight into the work done by previous generations.

Dominant male workplace culture—pain, grime, injury, death, noise, workers' creative efforts.

Participants felt that this theme, which held a lot of meaning to the community, was not sufficiently acknowledged by the existing statement of significance for the Eveleigh Railway Workshops SHR listing and not currently reflected at the ATP site itself.

Theme 4—The connection between ATP and the Surrounding Area

Workshop participants identified strong links between ATP and the surrounding area. The operation of the Eveleigh Railway Workshops had significant physical and intangible effects on the surrounding suburbs. The workshops influenced the growth of the surrounding area, which resulted in a large local population of workers employed at the workshops. Many former Eveleigh workers still live in the area.

The suburbs around were not just low cost housing; the workforce was skilled and housing was built for the social spectrum and the area included businesses and shops etc.

The site has custody of remnants of livelihood and lifestyle of the neighbourhood.

The significance of the Eveleigh Railway Workshops to the community goes beyond the ATP site. The former locomotive workshops are only one part of a much larger site including North Eveleigh and the Large Erecting Shed.

Only part of a whole area of lifestyle/work/living.

With the workshops came a whole area unified by work and lifestyle. Participants found it important to remember that the significance of the former Eveleigh Railway Workshops is tied to the surrounding area and vice-versa.

Theme 5—Eveleigh as a site of technological innovation

Eveleigh Loco was the site of great technological innovation and progress. Workshop participants felt that due to changes in technology, much of the important advances in technology made at Eveleigh and the highly technical skills many of the workers possessed have now been lost. Workshop participants expressed sorrow for what had been lost since the workshops closed and expressed great pride in the significance of Eveleigh as a world-class railway workshop with associated collection of machinery.

The blacksmiths workshop contains the largest assemblages of machinery [in] the South Hemisphere according to the Smithsonian Institution.

6.3.3 Analysis of Results—Elements/Attributes/Components

Participants were asked to identify elements, attributes and components (tangible and intangible) of the ATP site they thought contributed to its significance. While mainly intangible attributes were identified in this discussion, later questions regarding issues at the site revealed the machinery collection at the Eveleigh Locomotive Workshops to be a very important element of the ATP site to the workshop participants.

> *View of long low shed out of which came the development of a state.*
>
> *Tangible elements/attributes/components; symmetry and beautification of buildings/brickwork; scale of site and of buildings; and industrial heritage 'gateway' to train travellers approaching central.*

The connection of ATP to the surrounding area was recognised in the community workshop as an important attribute of the site and entailed tangible qualities, such as particular buildings and landscapes, and intangible qualities, like viewlines, distinctive sounds and connections to the other components of the Eveleigh Railway Workshops.

> *Connections to stations—movement of people on and off site. Surrounding places—corner shops; pubs; key places including ancillary industry; visual corridors between places that can be lost by new buildings; map the networks; oral histories—need attachment to place; sound and smells of the place.*

Participants saw the former Eveleigh Railway Workshops as a whole as a place of great potential.

6.3.4 Analysis of Results—Concerns Raised

The main issues raised in the workshop fit within four main themes: movable heritage; community involvement, education and tourism opportunities; planning and access; and communication and interpretation. A fifth area of general concerns is detailed at the end of this section.

Movable Heritage

The collection of machinery at ATP is an important attribute of the place. Concerns were raised regarding the current and future management of this significant movable heritage collection. Participants were concerned that a large proportion of the workshop machinery had been removed from the site over the past 20 years. The continuing operation of the blacksmiths workshop was seen as an important way of protecting machinery at the site and ensuring its continuing significance. Participants felt this workshop should continue even when the existing tenant leaves. The success of previous management plans for the site's movable heritage was questioned, particularly in relationship to the new CMP and the updated ATP s170 Register.

Community Involvement, Education and Tourism Opportunities

Concerns were raised by the workshop participants that the many opportunities for keeping the legacy of the Locomotive Workshops current and relevant were going unrecognised and unexploited. Workshop participants felt that the knowledge and memories of former workers was a valuable and untapped resource and that these memories and stories should be used to make the history of the site come alive—the Locomotive Workshops could be a tourist destination and a place for school excursions and tours. Workshop participants felt that the blacksmiths workshop within Bays 1 and 2 could continue to be used to develop and maintain blacksmithing skills.

Planning and Access

The former Eveleigh Locomotive Workshops as part of the Eveleigh Railway Workshops is a State-significant site. Participants raised concerns about the ongoing commitment of the RWA in protecting heritage. The physical 'severance' between North Eveleigh and ATP is seen as an impediment to conservation of the heritage value of the place.

General improvements, including more and better public space, were recommended. Participants also sought a guarantee from the RWA and ATPSL that ATP will remain a technology park and not become 'just another business park'.

Communication and Interpretation

Participants felt that they were not adequately informed about what was going on at ATP and requested more frequent and more detailed communication with the local community. Workshop participants found that the lack of clarity regarding the roles and responsibilities of stakeholders, particularly RWA, ATPSL and the Heritage Branch, made finding information about what was going on at ATP difficult.

Transparency of instruments—S170/CMP/Heritage Act etc so that people are aware and can act.

The community workshop felt strongly that the history and significance of the former Eveleigh Locomotive Workshops should be celebrated and communicated to visitors to ATP. Interpretation of the site's history received a great deal of support and one participant expressed the urgency of capturing the stories of those who had worked at the workshops. Various ways of interpreting the site's history were suggested throughout the workshop, including walking tours of ATP and Redfern and documentation of social history.

Capture stories and develop interpretive material to bring meaning to the site.

Other Issues

What is ATP becoming? Workshop participants wondered about the future direction of ATP. When ATP was formed, it was designated as a place for technological research and businesses, but the new Media City building seemed to indicate to the workshop participants that this focus is being lost. Therefore, participants asked what is intended for the ATP site in the future. (Section 8.5 includes the key policy principles that ATPSL have identified to guide the future direction of ATP.)

6.4 Indigenous Consultation Strategy

This report includes an Aboriginal archaeological desktop survey. No field survey or impact assessment was undertaken since there is no current development proposal for the ATP site. Indigenous consultation as per the Department of Environment, Climate Change and Water's *Interim Community Consultation Requirements for Applicants* was not required as no Aboriginal objects, sites or places have been proposed to be disturbed at the ATP site as part of the CMP.

The following organisations and individuals were found to have a connection to the Eveleigh Railway Workshops:

- Metropolitan Local Aboriginal Land Council;
- New South Wales Native Title Service;

- Aboriginal Housing Company, Redfern;
- Wyanga Aboriginal Aged Care Program, Redfern; and
- Aboriginal Education and Training Unit, Open Training & Education Network.

These organisations were invited to attend the consultation session and contribute to the CMP process through the session and feedback forms. None of the organisations sent representatives to the consultation session and no feedback forms have been received from these organisations.

As noted in Section 2.0, Aboriginal people did work on the railways in Sydney in the twentieth century, including the Eveleigh Railway Workshops and the Alexandria Goods Yard. There is also a general historical association between the movement of Aboriginal people to live in Redfern to take advantage of the work opportunities that this area provided, particularly on the railways.

6.5 Summary and Update

While a range of concerns were raised by the workshop participants, particularly in relation to the future of the site's significant machinery and the communication of the history of the place, the community workshop also provided a valuable insight into the importance of ATP and North Eveleigh to the local community.

Workshop participants were enthusiastic about different ways to conserve and communicate the important history of the site and the way its development affected the surrounding area. The community workshop revealed that members of the local community and others, such as those who work or volunteer in rail heritage, were very keen to see the history of the place interpreted and to be more heavily involved in its interpretation.

Since the community consultation was undertaken for this report in December 2009, ATPSL has been active in its engagement with the community over its planning and implementation of a range of heritage works (see Section 8.5.1 for details). This is in addition to providing opportunities for community participation through the Redfern Waterloo Heritage Taskforce and Eveleigh Steering Committee (now both disbanded) and through the establishment of the ATP volunteer group (who are directly engaged with the conservation and promotion of heritage at the Park).

PART C: SIGNIFICANCE ASSESSMENT

7.0 Significance Assessment

7.1 Introduction

7.1.1 Existing Heritage Listings

The Eveleigh Railway Workshops and its component elements, including the Locomotive Workshops, have been subject to numerous heritage assessments since it closed in 1986. The ATP site is included within a number of statutory heritage listings, outlined below.

- State Heritage Register (SHR):
  - Eveleigh Railway Workshops
  - Eveleigh Railway Workshops Machinery

The SHR also includes separate listings for the Chief Mechanical Engineer's Office and the Chief Mechanical Engineer's Office Movable Relics at North Eveleigh.

- ATP S170 Register:
  - Eveleigh Locomotive Workshops Precinct
  - Eveleigh Locomotive Workshops Machinery Collection
  - Locomotive Workshops Building
  - Engine Shop (former) (the New Locomotive Shop)
  - Works Manager's Office
  - Water Tower

The ATP S170 Register also includes separate listings for the Carriage Works at Eveleigh (the former carriage workshops) and the Chief Mechanical Engineer's Office at North Eveleigh.

7.1.2 Significance Assessment Methodology

The numerous heritage assessments and listings for Eveleigh Railway Workshops, Locomotive Workshops and other items were reviewed as part of assessing the significance of the ATP site.

The significance assessment is set out in the following manner:

- Review and commentary on the State Heritage Register listing for the Eveleigh Railway Workshops and Eveleigh Railway Workshops Machinery Collection.
- Assessment of the ATP site against NSW heritage criteria.
- Statement of significance for the ATP site.
- Assessment of integrity and intactness of the ATP site.
- Curtilage assessment for the ATP site.

No Aboriginal archaeological objects or sites are known to exist within the ATP site (see Section 5.0). No significance assessment of Aboriginal sites has been undertaken.

7.2 New South Wales Heritage Assessment Guidelines

7.2.1 Introduction

The NSW Heritage Manual guidelines, prepared by the NSW Heritage Office and Department of Urban Affairs and Planning (as amended July 2002), provide the framework for the following assessment and statement of significance for ATP. These guidelines incorporate the five types of cultural heritage values identified in *The Burra Charter: The Australia ICOMOS Charter for the Places of Cultural Significance 1999* into a specifically structured framework which is currently accepted as the required format by heritage authorities in New South Wales.

Under these guidelines, items (or places to use Burra Charter terminology) are assessed in accordance with a specific set of criteria, as set out below:

a) An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).

b) An item has strong or special association with the life or works of a person, or group of persons, of importance in the cultural or natural history of NSW (or the cultural or natural history of the local area).

c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).

d) An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

e) An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).

f) An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).

g) An item is important in demonstrating the principal characteristics of a class of NSW's:

- *cultural or natural places; or*
- *cultural or natural environments*
    - *(or a class of the local areas' cultural or natural places; or*
    - *cultural or natural environments).*

In applying the assessment criteria, both the nature and degree of significance of the place need to be identified, with items varying in the extent to which they embody or reflect key values and the relative importance of their evidence or associations.

The assessment also needs to relate the item's values to its relevant geographical and social context, usually identified as either Local or State contexts. Items may have both Local and State significance for similar or different values/criteria.

Statutory protection of heritage places (ie by local and/or state governments) is usually related to the identified level of significance. Items of State significance may be considered by the Heritage Council of NSW for inclusion on the State Heritage Register.

7.2.2 State Historical Themes

The NSW Heritage Manual identifies a specific set of 'Historical Themes relevant to New South Wales' within which the heritage values of the place can be examined. Relevant themes for the ATP site are outlined in the table below.

Table 7.1 NSW Historical Themes

Australian Historical Theme	NSW Historical Theme	Australian Technology Park
Developing local, regional and national economies	Industry—Activities associated with the manufacture, production and distribution of goods	The locomotive workshops manufactured parts for and assembled imported locomotives for the NSW railways. For two periods during the first half of the twentieth century, the workshops also manufactured Australian-designed locomotives.
Developing local, regional and national economies	Technology—Activities and process associated with the knowledge or use of mechanical arts and applied sciences	The locomotive workshops were a site of much innovation, with many machines and locomotives designed and built at Eveleigh.
Developing local, regional and national economies	Transport—Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	The Eveleigh Railway Workshops manufactured parts for locomotives that served the entire NSW rail system. The Alexandria Goods Yard was one of the starting points for goods services to Melbourne.
Working	Labour—Activities associated with work practices and organised and unorganised labour	Eveleigh was the site of many important disputes seeking better working conditions and had significant union membership among its workers.
Governing	Government and administration—Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs	The Eveleigh Railway Workshops were a significant State-owned industry which supported the expansion of the NSW rail system.
Governing	Defence—Activities associated with defending places from hostile takeover and occupation	The Locomotive Workshops played a significant role in manufacturing ammunition and tank parts during World War II.
Developing Australia's cultural life	Social institutions—Activities and organisational arrangements for the provision of social activities	Unions and social clubs were an important part of the working life of Eveleigh, with significant membership of the NSW Railway Institute and the Railways Ambulance Corp among Eveleigh workers.
Marking the phases of life	Persons—Activities of, and associations with, identifiable individuals, families and communal groups	The Eveleigh Railway Workshops represent a significant achievement by John Whitton, Engineer-In-Chief, and George Cowdery, Deputy Engineer for Existing Lines.

Australian Historical Theme	NSW Historical Theme	Australian Technology Park
Peopling Australia	Migration—Activities and places associated with the resettling of people from one place to another and the impacts of such movements	The Eveleigh Railway Workshops employed a significant number of post-World War II migrants and provided English language classes to assist their integration into the workplace.

7.3 State Heritage Register Listing

The ATP site comprises only a portion of the SHR listing for the Eveleigh Railway Workshops and the machinery. The statement of significance provided by the SHR listing is outlined below as a guiding statement for the assessment of significance of the ATP site. The curtilage of the SHR listing is provided as Figure 7.1.

7.3.1 Eveleigh Railway Workshops

Statement of Significance

The Eveleigh Railway Yards are some of the finest historic railway engineering workshops in the world and Eveleigh contains one of the most complete late 19th century and early 20th century forge installations, collection of cranes and power systems, in particular the hydraulic system. The place is of international significance and is one of Australia's finest industrial heritage items. The value of the place is increased by the fact that it is comprised of assemblages, collections and operational systems rather than individual items. Conversely, the significance has been reduced by its closure, relocation of some machinery and its disassociation from the operating rail network. (State Projects 1995: 109)[1]

7.3.2 Eveleigh Railway Workshops Machinery

The SHR citation for the Eveleigh Railway Workshops machinery does not include a statement of significance or assessment against criteria. The citation describes the items listed as 'Machinery associated with Locomotive Workshops'. A comprehensive assessment of the remaining machinery was prepared for the ATP S170 Register. This assessment, which is included as Appendix A, has been reviewed for this report.

7.4 ATP S170 Register Assessments

The ATP S170 Register assessments have been reviewed for this report. Copies of the inventory sheets for the Eveleigh Locomotive Workshops Precinct, the Locomotive Workshops Building, the Engine Shop (former) AKA the New Locomotive Shop, the Works Managers Office (former), the Water Tower and the Eveleigh Locomotive Workshops Machinery Collection are provided in Appendix A. The inventory for the Eveleigh Locomotive Workshops Precinct contained in the S170 Register provides the most recent and relevant assessment of significance. This listing has been reviewed in the process of preparing this CMP in the context of further consultation and examination of existing site elements and fabric.

7.5 ATP Site Assessment Against Criteria

The existing heritage listings for the site provide a basis for the assessment of significance of the ATP site as a whole. The assessment against the NSW Heritage criteria, below, culminates in a statement of significance for the ATP site as a whole in Section 7.6.

7.5.1 Criterion A (Historical Significance)

An item is important in the course, or pattern, of NSW's cultural or natural history.

- The ATP site as a whole reflects an amalgam of land gradually resumed for railway use during the nineteenth and twentieth centuries. The land was resumed for a number of expansions of the Locomotive Workshops, establishment of the Alexandria Goods Yard and construction of the Eastern Suburbs Railway connection to the Illawarra line, and involved demolition of an area of housing north of Henderson Road.
- The Locomotive Workshops were a key site in the development of the union movement in NSW and saw the beginning of significant workers' strikes and protests during the early twentieth century, including the General Strike of 1917. Many basic working conditions were gained at Eveleigh through union action, including Saturdays off.
- The locomotive repairs and manufacturing at the Eveleigh Locomotive Workshops supported the expansion of the NSW rail system in the late nineteenth and early twentieth centuries.
- The founding and operation of the railway workshops at Eveleigh greatly influenced the growth of the surrounding suburbs, with much of the local area developed to support the workshops and its workers.
- The Locomotive Workshops played a significant role in war-time manufacturing, producing ammunition and tank parts for the Australian forces during World War II.

7.5.2 Criterion B (Historical Association)

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history

- The Locomotive Workshops component of the ATP site represents a significant achievement by John Whitton, Engineer-in-Chief for the Railways, and George Cowdery, Deputy Engineer for Existing Lines at the NSW Railways Department.
- The Locomotive Workshops component of the ATP site is associated with the early careers of figures prominent in the history of NSW, including former NSW Premiers James McGowen (who worked as a boilermaker at the workshops), JJ Cahill (who worked as a fitter) and former Federal Member for Sydney, Eddie Ward.

7.5.3 Criterion C (Aesthetic/Technical Significance)

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW

- The ATP site represents one part of the technologically significant Eveleigh Railway Workshops. The separation of the two workshops (locomotive and carriage) on either side of the western railway allowed each to communicate with the main railway lines without interfering with operation of the other.
- The combination of the Locomotive Workshops and the Carriage and Wagon Workshops (North Eveleigh) provide an industrial gateway to the city when travelling by train. The

distinctive long, low, brick buildings on either side of the railway lines is a landmark along the western rail lines.

- The relationships and connections between the former workshops buildings demonstrate how the Eveleigh Locomotive Workshops operated. Rail lines to move machines and locomotives, turntables, the monorail, the pathway up to former pedestrian bridge over the Redfern Station platforms, the foundry wall and dramatic change in level where the foundry used to be, all contribute to the understanding of how the workshops functioned.
- The Machinery Collection, while still significant as a collection, has lost its original integrity as an integrated part of the operating workshops. At the time the Workshops closed, it retained the vast majority of its traditional equipment intact and in place and the Eveleigh Locomotive Workshops was a rare surviving example of an evolved nineteenth-century railway workshop. Following adaptive reuse of the Locomotive Workshops, with its associated dismantling of the interiors and relocation of much of the machinery, the original collection has been reduced to a significant degree, to a large group of related but discrete artefacts. The exception is the Blacksmiths Shop (Bays 1 and 2 North and South) component of the collection, which remains relatively complete.
- Individual items of machinery remain significant as significant items of technical achievement. These range from the Davy Press, a unique machine in Australia and rare in a world context, to the Departmental Lathe, a precision machine built locally.

7.5.4 Criterion D (Social Significance)

An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons

- The ATP site holds great significance for people in the local community, particularly those involved in the NSW railways. The locomotive workshops are emblematic of hard work of the type no longer common in NSW and are seen as a testament to the many thousands of workers and their families that made their living within its walls.
- The history and significance of the ATP site is central to many local community members' connection with the Redfern/Darlington area. As the former site of the Eveleigh Locomotive Workshops, ATP holds great significance as a social and historical landmark for the surrounding community.
- The history of the Eveleigh Locomotive Workshops and the many social and technological achievements that occurred there are a source of pride for former workers, current employees and volunteers and the local community alike. This pride is evident through the dedication of the many volunteers that continue to work in the Large Erecting Shed, the blacksmithing operation in Bay 1 and the 'Back to Eveleigh' days led by former workers, as well as the many views expressed during the community consultation process for this CMP.

7.5.5 Criterion E (Research Potential)

An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history

- The historical archaeological resource at the ATP site has moderate research potential relating to the functioning of the Eveleigh Locomotive Workshops and Alexandria Goods Yard. This potential resource includes structures and deposits relating to the former buildings on site and rail stock across the site.
- There is moderate research potential relating to the areas of former housing stock to the north of Henderson Road and west of Cornwallis Street that were resumed by the railways in the early twentieth century. This former neighbourhood, dating to the 1880s, would have housed many of the railway workers and their families. This potential resource may include occupational deposits and structures relating to the rows of housing stock, fences, gardens and yard surfaces and wells or cellars. Artefacts from this resource, if they exist, may be able to yield information on the types of people, including social class, gender and ethnicity, living in these former neighbourhoods.
- There is moderate research potential relating to two former stables from the Chisholm Estate period that predated the Eveleigh Locomotive Workshops and Alexandria Goods Yard use of the site. This potential resource may include remains of timber stables and associated deposits.
- The Machinery Collection has some value as a resource for skills development in traditional and mechanical trades, where these skills are disappearing in the community at large, and the equipment platforms for carrying out this form of work are rapidly becoming rare.

7.5.6 Criterion F (Rarity)

An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history

- The Eveleigh Railway Workshops as a whole, including its component parts within the ATP site, provide a rare expression of an ambitious late nineteenth-century public endeavour of a scale and intensity not reflected elsewhere in NSW.
- The blacksmiths workshop in the Locomotive Workshops building is one of the few remaining functional railway blacksmiths workshops in Australia, although the workshop no longer produces rail-related items.
- Many of the individual items in the Machinery Collection have no comparisons outside of large heavy engineering workshops associated with railways and shipyards, as they are specific to the manufacture of very large, complicated items. Although some similar machines may exist in traditional railway workshops in other Australian states, no detailed comparative analysis has been undertaken to determine the overall survival of such machines in Australia. Owing to the age and size of Eveleigh in comparison to railway workshops in other states, some elements of the Eveleigh Locomotive Workshops Machinery Collection are likely to be unique.
- The Davy Press is a unique machine in Australia, for its size, age and mode of operation and is a rare survivor in the world context. Other machines of rarity include items such as the

Tangye 48 inch wheel lathe (for its size and layout), the Societe Genevoise Drilling and Boring Machine, a rare surviving example of a machine that was the cutting-edge of precision machinery of its day and the 1888 Fielding & Platt two-cylinder compound steam engine direct coupled to the hydraulic pressure pump, a purpose-built machine from the 1880s.

- ATP and North Eveleigh comprise the largest group of railway workshops buildings and machinery remaining in NSW. The sites of other railway workshops in NSW, such as the Civic Railway Workshops at Newcastle and the Cardiff Railway Workshops at Glendale, were smaller workshops than Eveleigh and retain fewer buildings.

7.5.7 Criterion G (Representativeness)

An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments

- The Locomotive Workshops component of the ATP site is representative of late nineteenth-century railway workshops in New South Wales and Australia. Similar workshops of this era can be found in Newcastle (NSW), Launceston (Tasmania), Midland (Western Australia), Ipswich (Queensland), Islington (South Australia) and Newport (Victoria). The Eveleigh Locomotive Workshops were the largest in NSW.

- The Machinery Collection is broadly representative of the equipment typically associated with a large steam railway workshops complex of the late nineteenth and early twentieth century, in its range, size and technology. Individual machines and assemblages are representative of their particular application, function or technology, such as the blacksmith's assemblages or various lathes or cranes.

7.6 Australian Technology Park—Statement of Significance

ATP provides important evidence of the founding and gradual expansion of the largest railway workshops in NSW over a period of 100 years. The Eveleigh Railway Workshops was a highly significant and ambitious public endeavour of a type that rarely occurs today. Eveleigh was a government-established and government-run industrial workshop designed to provide self-sufficiency for the Sydney and NSW railways, without reliance on private operators who did not possess the funds or workforce to cope with demand during the nineteenth century. It employed and developed the best technology available at the time and continued to innovate in response to changes in the NSW railways system and management policy throughout its years of operation.

The ATP site contains an amalgam of land gradually resumed for railway use during the nineteenth and twentieth centuries. The land was resumed for a number of expansions of the Locomotive Workshops, establishment of the Alexandria Goods Yard and construction of the Eastern Suburbs Railway connection to the Illawarra line, and involved demolition of an area of housing north of Henderson Road. At its peak, the area was the most important rail precinct in NSW.

Three of four remaining buildings and a significant machinery collection from the State-significant Eveleigh Locomotive Workshops are contained within the ATP site. The Locomotive Workshops building, New Locomotive Shop and Works Manager's Office form a historically and aesthetically significant group that demonstrates the scale and importance of the Eveleigh Locomotive Workshops and are a landmark along the western railway. The distinctive, highly detailed industrial

buildings provide powerful evidence of the importance of the workshops as a major industrial undertaking in NSW during the late nineteenth century.

Individual items of the Locomotive Workshops Machinery Collection remain significant items of technical achievement. These range from the Davy Press, a unique machine in Australia and rare in a world context, to the Departmental Lathe, a precision machine built locally. While the Machinery Collection is not entirely intact, it retains a high level of significance and the collection within the blacksmiths workshop is relatively complete.

The ATP site holds great significance for members of the local community and current and former workers within the NSW railways and is central to many local community members' connection with the Redfern/Darlington area. As the site of the former Eveleigh Locomotive Workshops, ATP is emblematic of a type of work no longer common in NSW and the remaining buildings are seen as a testament to the many thousands of workers and their families that made their living within its walls. The pride in the history of the Eveleigh Locomotive Workshops is evident through the dedication of the many volunteers that continue to work in the Large Erecting Shed, the blacksmith business in Bays 1 and 2 South and the open days and tours led by former workers, as well as the many views expressed during the community consultation process.

The ATP site has strong historical connections with the surrounding area, including North Eveleigh and Redfern Station, as well as a historical connection with the expansion, pattern and type of development that occurred in adjacent suburbs. While the former Eveleigh Locomotive Workshops are significant in their own right, this significance is increased by their relationship to the Eveleigh Railway Workshops as a whole, including the former Carriage and Wagon Workshops at North Eveleigh and the former Macdonaldtown Gas Works.

7.7 Curtilage and Setting

7.7.1 Curtilage Assessment Principles

Heritage curtilage is defined in the NSW Heritage Office publication Heritage Curtilages as 'the area of land (including land covered by water) surrounding an item or area of heritage significance which is essential for retaining and interpreting its heritage significance.'

The Burra Charter places increased emphasis on the importance of the settings of heritage places:

> *Conservation requires the retention of an appropriate visual setting and other relationships that contribute to the cultural significance of the place. New construction, demolition, intrusions, or other changes that would adversely affect the setting or relationship are not appropriate. (Article 8)*

This means that care must be taken in the development and management of the surroundings of a significant heritage place.

7.7.2 Curtilage Assessment

The SHR curtilage for the Eveleigh Railway Workshops includes the entirety of the ATP site as well as North Eveleigh, the former Macdonaldtown Gas Works, RailCorp's property to the west of ATP and a section of the Great Western Railway between the two sides of Eveleigh.

The SHR curtilage is considered appropriate for the ongoing conservation of the significance of the ATP site as it includes the elements that have significant historical associations with the former Eveleigh Locomotive Workshops and the Alexandria Goods Yard.

The SHR curtilage is included as Figure 7.1. The curtilage is described as follows:

> *The listing boundary is formed by Wilson St to the north west, Redfern Station to the north east, Cornwallis and Garden Sts to the south east and the property boundary to the new development fronting Henderson Rd to the south.*[2]

7.7.3 The Setting of the ATP Site

While the Eveleigh Locomotive Workshops are significant in their own right, this significance is greatly increased when considered as part of the entire former Eveleigh Railway Workshops, including the former Carriage and Wagon Workshops at North Eveleigh and the former Macdonaldtown Gas Works. The workshops also have a significant relationship with the foundation and expansion of Redfern Station (originally named 'Eveleigh Station').

The current and likely future management and development of the now disparate parts of the former Eveleigh Railway Workshops will see these historical and operational relationships further obscured.

The setting of the ATP site should reflect the SHR listing boundary and include Redfern Station. The setting includes significant view lines between the various elements of the former Eveleigh Railway Workshops and ATP as well as significant view lines within the ATP site itself. The assessment of significant view lines (shown in Figure 7.2 and listed in Table 7.2) has taken into account the historical layout of the workshops and does not include views that can be obtained currently due to building demolitions but which did not exist in the past.

The setting recognises the significance of the former Eveleigh Railway Workshops as a whole and includes integral components that are currently excluded from consideration. Changes to ATP should not be considered without consideration of the heritage impact on the former railway workshops as a whole, and understanding of the sheer size of the Eveleigh Railway Workshops and the scope of functions that occurred within them should not be compromised by treating each component as a separate entity that does not relate to the whole.

7.8 Significance of Components

7.8.1 Grades of Significance

Different components of a place may make a different relative contribution to its heritage value. Loss of integrity or poor condition may also diminish significance. Specifying the relative contribution of an item or its components to overall significance provides a useful framework for decision-making about the conservation of and/or changes to the place. The following table sets out terms used to describe the grades of significance for different components of the place and is taken from the NSW Heritage Office publication *Assessing Heritage Significance* (2001).

Table 7.2 Standard Grades of Significance.

Grade	Justification
Exceptional	Rare or outstanding element directly contributing to an item's local and State significance.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.

Grade	Justification
Little	Alterations detract from significance. Difficult to interpret.
Intrusive	Damaging to the item's heritage significance.

The NSW Heritage Office publication also suggests that the standard table may need to be modified to suit particular applications and specific items. In Table 7.3, below, the standard grades of significance of Table 7.2 are applied to the particular layout, elements and fabric of the ATP site.

As part of this process Table 7.3 seeks to reflect the extent to which particular components of the place retain and/or provide meaningful evidence of the original site, as well as the relative importance of later layering and overall physical condition.

The preliminary assessment of the historical archaeological significance of the ATP site is shown on Figure 5.6.

Table 7.3 Grades of significance and application to ATP.

Grade	Application to ATP	Elements/Attributes
Exceptional	Major elements within ATP and visual connections within ATP and the former Eveleigh Railway Workshops. These may include some alterations which are of a minor nature and/or do not detract from significance.	Locomotive Workshops building including original annexes New Locomotive Shop Works Managers Office Turntables throughout site General visual connections that reflect former functional relationships and context between the elements within ATP and with the former Carriage and Wagon Workshops, Paint Shop and Chief Mechanical Engineers Office at North Eveleigh and railway lines.
High	Major elements within ATP and specific views within ATP and the former Eveleigh Railway Workshops which provide evidence of key attributes of the item's significance. These generally include alterations of a more substantial nature than Exceptional elements, but do not obscure significance.	Water tower Specific views (see Figure 7.2): • Along the northern and southern elevations of the Locomotive Workshops building. • Into the site from the northeastern entrance (Marian Street), the entrance near Margaret Street and the entrance near Boundary Street. • The three former Eveleigh Locomotive Workshops buildings from the railway lines. • View from the northern end of Innovation Plaza across to the Chief Mechanical Engineers Office at North Eveleigh. • View of the two sides of the Eveleigh Railway Workshops and Redfern Station from the entrance to ATP at Marian Street.
Moderate	Remnants of the Eveleigh Locomotive Workshops within the ATP site which have historic, associational and/or aesthetic values and contribute to overall significance. May also include sites of archaeological potential relating to former structures and landscape features.	Remnant brick walls from foundry Remnant rail tracks throughout the site Change in level between Locomotive Workshops building and foundry site

Grade	Application to ATP	Elements/Attributes
Little	Added or altered elements which detract from significance and/or may obscure more significant attributes.	NICTA Media Central (8 Central Avenue) Biomedical Building RTA and NSW Ambulance buildings
Intrusive	Added or altered elements which damage the item's significance.	No elements identified.

Table 7.4 Grades of significance and application to building fabric.

Grade	Application to ATP	Elements/Attributes
Exceptional	Major spaces, elements and fabric of the early/original buildings remaining from the Eveleigh Locomotive Workshops. These may include some alterations which are of a minor nature and/or do not detract from significance.	Locomotive Workshops building: • External walls, including all original openings • Blacksmiths workshop (Bays 1 and 2), including intact machinery collection • Original annexes to Bays 3–1 • Roof lanterns • Original internal layout of the building, including arrangement of bays divided by double rows of cast-iron columns • Rail tracks and services remaining in the slab • Turntables south of Bays 3, 4a and 12 • Overhead travelling cranes throughout • Urinal against southern wall New Locomotive Shop: • External walls, including all original openings • Roof form, which demonstrates two phases of construction • Rail tracks in slab • Wash basins in foyer Works Managers Office: • External form, including bell tower • Original openings in the eastern portion of the building • Railing outside southern entrance • Remaining original interior fixtures and finishes, including fire places.
High (H)	Major spaces, elements and fabric of early/original buildings remaining from the Eveleigh Locomotive Workshops which provide evidence of key attributes of the item's significance. These generally include alterations of a more substantial nature than Exceptional but do not obscure significance.	Locomotive Workshops building: • Machinery displayed throughout, except in Bays 1 and 2 • Traverser New Locomotive Shop: • Overhead travelling crane (moved from original location)
Moderate (M)	Additions/alterations to the early/original buildings remaining from the Eveleigh Locomotive Workshops which have	No fabric identified.

Grade	Application to ATP	Elements/Attributes
	historic, associational and/or aesthetic values which contribute to overall significance.	
Little (L)	Added or altered spaces, elements and fabric which detract from significance and/or may obscure more significant attributes.	Locomotive Workshops building: • Office fit-out in Bays 3–9 and 14–15 (new numbering: 3–10 and 15–16) • New annexes to Bays 14–15, 10–8, and 6–4 (new numbering Bays 15–16, 11–9 and 7–5) • Modern glass doors • Carpet throughout Bays 3–9 and 14–15 (new numbering: 15–16) New Locomotive Shop: • Office fit-out • Modern glass doors Works Managers Office: • Recent internal fit-out and finishes • Aluminium window frames
Intrusive (I)	Added or altered spaces, elements and fabric which damage the item's significance.	No fabric identified.

Figure 7.1 The SHR curtilage for the Eveleigh Railway Workshops. (Source: NSW Heritage Branch)

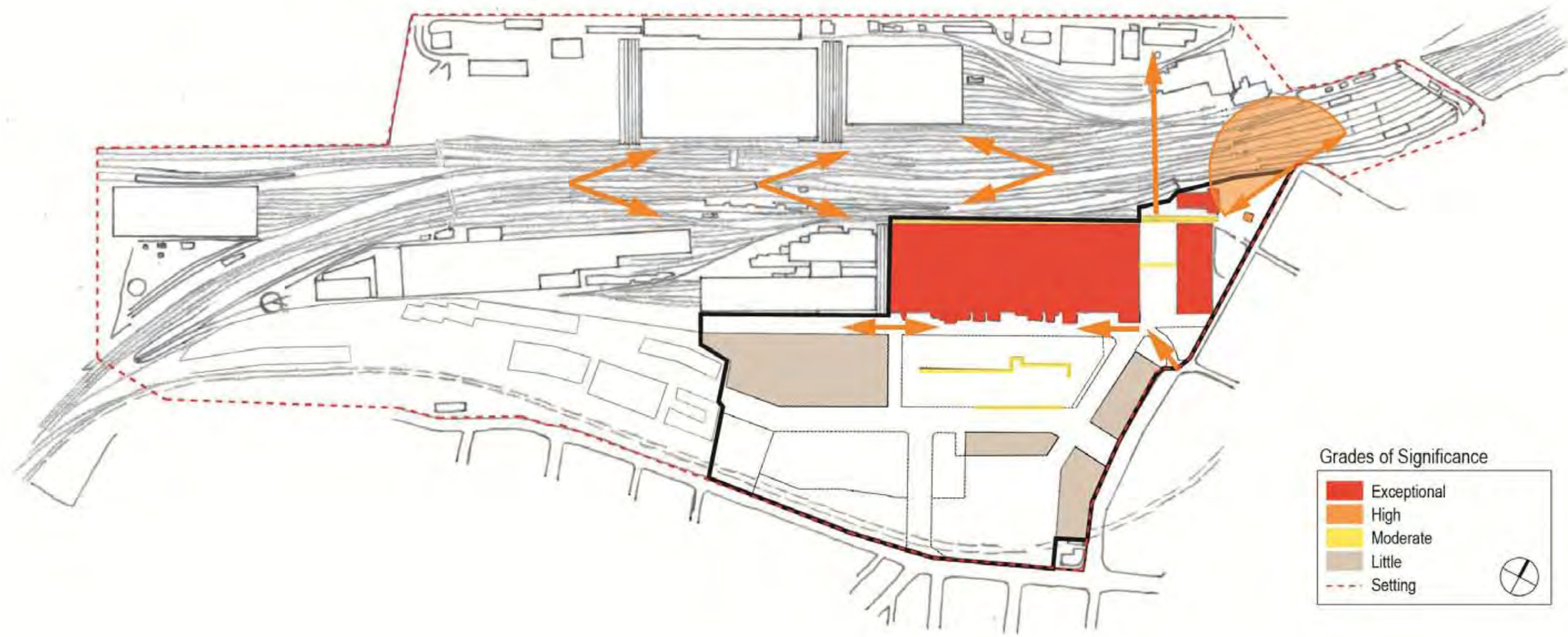


Figure 7.2 Significance plan showing grades of significance of elements within the ATP site. The plan also shows significant specific views within the site and to and from the site (High Significance). The boundary of ATP and the broader setting of the site is also indicated. (Source: GML 2011)

7.9 Endnotes

1 NSW Heritage Branch, Parramatta NSW, State Heritage Inventory, 'Eveleigh Railway Workshops', viewed 21 August 2009 <http://www.heritage.nsw.gov.au/07_subnav_01_2.cfm?itemid=5045103>

2 NSW Heritage Branch, Parramatta NSW, State Heritage Inventory, 'Eveleigh Railway Workshops', viewed 21 August 2009 <http://www.heritage.nsw.gov.au/07_subnav_01_2.cfm?itemid=5045103>

PART D: CONSTRAINTS OPPORTUNITIES AND POLICY

8.0 Constraints and Opportunities

8.1 Introduction

The role of the conservation policies in this report is to provide specific guidelines for the conservation, ongoing care, development and use of ATP and its component parts so that its cultural significance is appropriately maintained, enhanced and interpreted.

Development of conservation policies requires consideration of a range of issues which are generally divided into the following categories:

- the constraints on, and opportunities for, use and development of the site arising from the statement of significance;
- the physical condition and degree of integrity of the fabric of the place;
- requirements imposed by external factors and agencies including statutory authorities; and
- the requirements of the site users and owners, including consideration of available resources and appropriate uses.

8.2 Constraints and Opportunities Arising from Significance

8.2.1 Generally

Establishing requirements for retaining the heritage significance of the place is the essential first step in the development of conservation policies. These requirements are based on the aspects of significance identified in the statement of significance and accompanying assessment of the significance of components in Sections 7.7 and 7.8.

The future conservation, development and ongoing management of the place should take into account constraints arising from the identified heritage values of the site and its setting. Opportunities to reinstate the heritage values (where lost) and interpret the history (where not communicated) of the place should also be investigated and implemented, particularly where these can be integrated into the daily use and ongoing care of the site.

Aspects of significance of the ATP site identified in the statement of significance relevant to these concerns include:

- The need to conserve the significance of the Locomotive Workshops (within the ATP site) as an integral part of a rare surviving example of a nineteenth-century railway workshops, including its highly significant Machinery Collection and intact early buildings, which was the largest in the state and highly significant in the history of NSW.
- Opportunities to communicate this significance through appropriate uses and interpretation.
- Opportunities to conserve the significance of items of the Machinery Collection by returning them to use, taking into account relevant WHS, operational and amenity considerations.
- The need to maintain and enhance the connection between the Locomotive Workshops components within the ATP site (both buildings and machinery) and significant components of the workshops outside, particularly the Large Erecting Shed and the machinery within.

- The opportunity to enhance and engage with the social significance of the site through harnessing community interest and enthusiasm.
- The opportunity to enhance the significant relationship between the ATP site (as the former Locomotive Workshops) and North Eveleigh (as the former Carriage and Wagon Workshops) as two halves of the Eveleigh Railway Workshops.
- The opportunity to engage with and enhance relationships with other significant NSW railway sites, including the Rail Heritage Centre in Thirlmere, the former Chullora Railway Workshops and the former Civic Railway Workshops in Newcastle.
- The opportunity to recognise and enhance the importance of the ATP site as part of the larger railway industrial precinct which includes North Eveleigh, the former Macdonaldtown Gas Works, Redfern Station, the Large Erecting Shed and Macdonaldtown Stabling Yards and the boundary of the Alexandria Goods Yard and the western railway.
- The ability of the site to provide evidence of 100 years of engineering processes and equipment, including significant technological innovation, through remaining machinery and building design. The amount and type of machinery remaining on site provides many opportunities to interpret the history of the workshops.
- The powerful social significance of the site to its former workers, current volunteers and tenants, the local community and the NSW railway community, for whom the Eveleigh Railway Workshops and the Locomotive Workshops in particular represent a pinnacle of industrial achievement in NSW. This social significance provides a range of opportunities to communicate the significance of the site and to maintain significant moveable items in the Machinery Collection. The broader public is a valuable means of communicating and interpreting the significance of the site over coming generations.
- The need to communicate the social significance of the site for former workers and the local community as a testament to the lives of thousands of workers and as a site of struggle for workers' rights and improved working conditions.
- The evidence provided by the site of the workshop beginnings and expansion over 100 years, including buildings and other structures, landscape features and archaeological remains.
- The need to conserve and enhance the aesthetic and landmark qualities of the site in views from the main western railway lines, Redfern Station and the surrounding area.

The treatment of existing site components, fabric, and visual and functional relationships should be related to the assessed level of significance, as set out in Section 7.7 (Significance of Components).

8.2.2 Aboriginal Cultural Heritage

As part of the Indigenous consultation strategy, a number of organisations and individuals were found to have a connection to the Eveleigh Railway Workshops, including the Metropolitan Local Aboriginal Land Council, Aboriginal Housing Company, Redfern, New South Wales Native Title Service, Wyanga Aboriginal Aged Care Program, Redfern, and Aboriginal Education and Training Unit, Open Training & Education Network.

None of the organisations sent representatives to the consultation session and no feedback forms were received from these organisations. However, a number of sources (including oral history interviews conducted by Lucy Taksa and Joan Kent for Godden Mackay in 1996) indicate that Aboriginal people did work at the Eveleigh Railway Workshops and the Alexandria Goods Yard. The Aboriginal community in Redfern was well-established when the workshops were in operation. Opportunities exist to engage the local Aboriginal community in specific programs to identify and interpret cultural heritage in the future and to conduct detailed research that investigates the historical links to the workshops and the local area.

8.2.3 Guiding Principles

The future conservation and development of the place should be carried out in accordance with the principles of The Burra Charter:

- *The maximum amount of significant fabric, uses, associations and meanings should be preserved and conserved.* (Article 3, Burra Charter)
- *Conservation is based on a respect for the existing fabric, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible.* (Article 3.1, Burra Charter)
- *Uses should, if possible, be related to the cultural significance rather than uses that do not take advantage of the interpretative potential of the place.* (Article 7, Burra Charter)
- *Conservation requires the retention of an appropriate visual setting and other relationships that contribute to the cultural significance of the place.* (Article 8, Burra Charter)
- *The contribution which related places and related objects make to the cultural significance of the place should be retained.* (Article 11, Burra Charter)
- *Conservation, interpretation and management of a place should provide for the participation of people for whom the place has special associations and meanings, or who have social, spiritual or other cultural responsibilities for the place.* (Article 12, Burra Charter)
- *Significant associations between people and a place should be respected, retained and not obscured. Opportunities for the interpretation, commemoration and celebration of these associations should be investigated and implemented.* (Article 24.1, Burra Charter)
- *Significant meanings, including spiritual values, of a place should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.* (Article 24.2, Burra Charter)

8.3 Constraints and Opportunities Arising from Condition and Integrity

8.3.1 Significant Buildings

Generally, the original buildings remaining on the site (the Locomotive Workshops, the New Locomotive Shop and the Works Managers Office) retain a moderate to high level of intactness and integrity, as noted in Section 3.0 of this CMP. The Locomotive Workshops and New Locomotive Shop clearly demonstrate their history as industrial buildings. Both workshop buildings are highly intact externally and relatively intact internally. The alterations to the internal spaces of both buildings could be reversible and the original open spatial character restored.

The buildings are maintained by ATPSL and are generally in good condition. Recent works to the buildings include re-pointing and repair of cracks to brickwork (completed July 2010) and conservation works to the Pump Room. Facade repairs, including repairs to cornices and coping are planned to take place in 2011.

The former Works Managers Office retains a moderate level of intactness. The flexibility of this type of small administration building has been embraced through adaptive re-use that retains much of the original character of the building, though interior finishes have been modified heavily. The building's form (including the bell tower) and location near the railway lines and station provides opportunities to enhance the connection between the Works Manager's Office and the entrance to ATP as an interpretation of the building's historical role as the administrative hub of the Locomotive Workshops.

Overall, the architectural language of the three original workshops buildings creates a tangible industrial heart of the ATP site, clearly visible from the rail lines, that provides a range of opportunities for interpretation of the site's history and distinctive branding for ATP. ATPSL has recognised this potential by using the space between the buildings (Innovation Plaza) for interpretation of some significant machinery.

8.3.2 Machinery

The survey of the condition of the major site components carried out for this CMP identified a number of key issues relating to the physical condition and degree of intactness/integrity (see Section 4.0):

- the loss of context for the industrial components of the site, particularly the Machinery Collection. Much of the remaining machinery does not have an obvious connection to its location. The relationship between the machinery and the layout of the workshops and how the two worked together has been obscured through relocation of most machinery;
- the incompleteness of the Machinery Collection overall, as result of various decisions about the collection made by various owners over the past 20 years, as outlined in Section 4.0. The notable exception is the blacksmiths workshop collection in Bays 1 and 2 North and South; and
- loss of knowledge due to the closing of the workshops and few workshops of its type remaining in operation.

Despite these three issues, a fair proportion of the significant Machinery Collection remains within the ATP site and remain relatively intact as individual items. There is great potential to interpret the Machinery Collection, engage with former workers and integrate the machinery into identity and use of the ATP site.

8.3.3 Site and Setting

Generally

Overall, a great deal of thought and effort has been put into ensuring that the connections between the remaining Eveleigh Locomotive Workshops buildings remain evident, with tracks, turntables and such being retained in situ as part of the site landscape. Portions of the foundry walls, some elements of the original layout and the change in level that runs east–west across site have also been substantially retained.

However, as is inevitable with the conversion of a densely occupied industrial site to a modern commercial precinct, much of the distinctive industrial landscape has been lost. The overall appearance of the ATP site reflects its new role as a technology-focused business park, despite the evident efforts to retain and embrace its industrial components. In some key views of the site, particularly from the western railway lines, the industrial character of the place is still clearly evident and opportunities exist to make more of this distinctive character.

The historical connection between the former Carriage and Wagon Workshops at North Eveleigh and the ATP site is clearly expressed through the architectural language of the workshops buildings on either side of the western railway. While much of the physical separation of the two areas was part of the original design of the Eveleigh Railway Workshops, as the areas functioned as two halves of the one railway workshops, this separation has been reinforced since the workshops closed. The removal of important physical links, particularly the Redfern Station pedestrian bridge, and the separation of management, with the Locomotive Workshops being given a new use quite quickly after closing while the Carriage and Wagon Workshops languished for many years before being gradually redeveloped, has resulted in the loss of links between the two areas.

Both ATP and North Eveleigh will be changing over the coming years, as the full development of the ATP site, the North Eveleigh Concept Plan and the Eveleigh Railway Workshops Interpretation Plan are realised. Opportunities to reinstate and interpret connections between the two sites should be investigated as part of these projects.

Archaeological Remains

The heritage significance of the site extends beyond the extant structures. Appropriate management measures should also be taken to ensure the archaeological resource is appropriately investigated and recorded prior to any action which may disturb or remove it. Appropriate management requires the archaeological investigation of areas of sensitivity, and the documentation of relics removed or disturbed. Excavation permits under the Heritage Act are required to disturb 'relics'.

The likelihood of the survival of the potential archaeological resource on the site is discussed in detail in Section 5.0. Future development of these areas would need to accommodate the timely management and investigation of identified archaeological resources. Specific policies for managing the site's archaeological resource are included in Section 9.0.

Aboriginal Heritage Values Assessment

Given the considerable disturbance to the original natural environment over the past 120 years from industrial and residential development, railway construction and more recently commercial development, the Aboriginal archaeological potential for the subject site is considered low. This does not preclude the existence of relics within the study area, however it is predicted that these would be highly disturbed, reworked deposits in a secondary context. Regardless of the context, all Aboriginal artefacts are afforded protection under the NPW Act.

Although the likelihood of encountering Aboriginal artefacts is considered low, should any Aboriginal relics be identified during excavation at this site, all works should cease and the area containing the relics be made secure (any artefacts must be left in situ). The OEH (formerly National Parks and Wildlife Service) Aboriginal Cultural Heritage Unit should be notified of any such find. An archaeologist should be called in at this time to assess the site and provide management

recommendations in conjunction with the Local Aboriginal Land Council, any other identified Aboriginal stakeholders and OEH.

8.4 Statutory Requirements

8.4.1 Heritage Act 1977 (NSW)

The *Heritage Act 1977* (NSW) (the Heritage Act) is a statutory tool designed to conserve the environmental heritage of New South Wales. The Heritage Act defines a heritage item as 'a place, building, work, relic, moveable object or precinct'.

Specific for archaeology, 'relic' means any deposit, object or material evidence:

(a) that 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.

State Heritage Register Listing and Heritage Council of NSW Approvals

As outlined in Section 7.0, the ATP site is included within the State Heritage Register (SHR) listing for the Eveleigh Railway Workshops (item number 01140, gazetted 2 April 1999). The SHR is established under Section 22 of the Heritage Act. Pursuant to Section 57(1), the approval of the Heritage Council of NSW is required for any proposed development within the site including subdivision, works to the grounds or structures or disturbance of archaeological 'relics'.

The provisions of Section 170 and Section 170A regarding heritage management by government instrumentalities and the creation of heritage and conservation registers still apply, as do the notification provisions of Section 146 and Section 146A regarding discovery of relics.

Exemptions from Heritage Act Approval

Section 57(2) of the Heritage Act provides for a number of Exemptions to Section 57(1) approval requirements. Exempted development does not require prior Heritage Council of NSW approval. Exemptions are of two types, Standard and Specific. Standard Exemptions which apply to all items on the SHR generally include minor and non-intrusive works and are subject to some qualifications in some instances. Typical exempted works include maintenance (to buildings and gardens), minor repairs and repainting in approved colours. The NSW Heritage Council of NSW's current Standard Exemptions are attached at Appendix B. Standard Exemptions do not apply to the disturbance, destruction, removal or exposure of archaeological 'relics'.

Minimum Standards of Maintenance and Repair

Section 118 of the Heritage Act provides for the regulation of minimum standards for the maintenance and repair of State Heritage Register items. These standards were regulated in 1999 and apply to all State Heritage Register items. The minimum standards cover the following areas:

- weatherproofing;
- fire protection;
- security; and
- essential maintenance.

An inspection to ensure that the item is being managed in accordance with the minimum standards must be conducted at least once every year (or at least once every three years for essential maintenance and repair standards).

Failure to meet the minimum standards may result in an order from the Heritage Council to do or refrain from doing any works necessary to ensure the standards are met. Failure to comply with an order can result in the resumption of land, a prohibition on development, or fines and imprisonment.

8.4.2 State Environmental Planning Policy (Urban Renewal) 2010

The SMDA was created by the *Growth Centres (Development Corporations) Act 1974* (NSW) (Growth Centres Act) and commenced on 17 December 2010. It was renamed UGDC, which commenced operating 1 January 2013.[1] The UGDC uses existing provisions of the Growth Centres Act and has assumed the functions and continues the work of the SMDA.

The *State Environmental Planning Policy (Urban Renewal) 2010* (NSW) (Urban Renewal SEPP) came into operation in December 2010. The Urban Renewal SEPP identifies Granville, Redfern-Waterloo and Newcastle as potential urban renewal precincts and requires the preparation of Urban Renewal Studies. The UGDC is focusing on the two potential urban renewal areas of Granville (including Auto Alley) and Redfern-Waterloo.

8.4.3 State Environmental Planning Policy (Major Development) 2005

The ATP site is included within an area deemed a 'state significant site' under the *State Environmental Planning Policy (Major Development) 2005* (NSW) (SEPP Major Development). This area is listed as The Redfern-Waterloo Authority Sites (Part 5, Schedule 3). These sites are subject to State environmental planning policies only.[2] Other environmental planning instruments for the area, such as the *South Sydney Local Environmental Plan 1998* (SSLEP) and *Sydney Regional Environmental Plan 26—City West* (SREP 26), do not apply.

The Minister for Planning is the consent authority for state significant sites in the Redfern-Waterloo area. Where development is less than $10 million in investment value, the City of Sydney Council is the consent authority.

Under SEPP Major Development minor works to heritage items may not require consent, provided the consent authority is notified and has advised the applicant in writing that it is satisfied that the work is of a minor nature (including maintenance) and would not adversely affect the significance of the heritage item (Clause 27(2) Part 5 Schedule 3).

Clause 27 Part 5 Schedule 3 of the SEPP Major Development provides provisions for heritage conservation, including relics, as follows:

> *(1) A person must not, in respect of a building, work, relic, tree or place that is a heritage item:*
>
> *(a) demolish, dismantle, move or alter the building, work, relic, tree or place, or*
>
> *(b) damage or remove the relic, or*
>
> *(c) excavate land for the purpose of discovering, exposing or moving the relic, or*
>
> *(d) damage or despoil the tree or place, or*
>
> *(e) erect a building on, or subdivide, land on which the building, work or relic is situated or that comprises the place, or*

(f) damage any tree or land on which the building, work or relic is situated on or on the land which comprises the place, or

(g) make structural changes to the interior of the building or work,

except with the consent of the consent authority.[3]

A map of heritage items within the state significant sites in the Redfern-Waterloo area is also included in SEPP Major Development.

8.4.4 National Parks and Wildlife Act

The NPW Act provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Indigenous occupation of New South Wales) under Section 90 and for 'Aboriginal places' (areas of cultural significance to the Aboriginal community) under Section 84. Aboriginal objects and places are afforded automatic statutory protection in New South Wales whereby it is an offence (without the Minister's consent) to:

Damage, deface or destroy Aboriginal sites without the prior consent of the Director-General of the National Parks and Wildlife Service (now the Chief Executive of the Office of Environment and Heritage).

The NPW Act defines an Aboriginal object as:

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.[4]

Under Section 84, the Act defines an 'Aboriginal place' as:

any place specified or described in the order, being a place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture.[5]

Under Section 90 of the Act, it is an offence to destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of an Aboriginal object or place without first obtaining consent from the Chief Executive of the OEH (sometimes called a consent to destroy). Under Section 90, consent can only be granted by applying for a Heritage Impact Permit, which must be approved by the Chief Executive.

Section 91 requires anyone who discovers an Aboriginal object to notify the Chief Executive of the OEH of the discovery. Identified objects and sites are registered on the Aboriginal Heritage Information Management System (AHIMS), which is managed and maintained by the OEH.

The protection provided to Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Any development on the ATP site should be undertaken with due regard to the requirements of the NPW Act in relation to Aboriginal heritage.

8.4.5 Redfern-Waterloo Authority Built Environment Plan (Stage One), August 2006

The *Redfern Waterloo Authority Built Environment Plan (Stage One)*, August 2006, (BEP 1) has been prepared to encourage the urban and social revitalisation of the Redfern-Waterloo area. Stage One focuses on the Redfern-Waterloo area's 'strategic sites', which includes the entire former Eveleigh Railway Workshops (including ATP and RailCorp land to the south) and Redfern Railway Station.[6] BEP 1 replaces the previous ATP master plans (which were prepared as a

requirement of *Sydney Regional Environmental Plan 26—City West* (SREP 26), since revoked for the Redfern-Waterloo area) as the guiding planning document for the ATP site.

Part 3 (Strategies for Revitalising Redfern Waterloo) of BEP 1 includes a heritage strategy for the Redfern-Waterloo area. Section 3.5 recognises that the Redfern-Waterloo area's 'strategic sites' contain a number of heritage items listed on *South Sydney Local Environmental Plan 1998* and SREP 26 and proposes five more (all within North Eveleigh) for inclusion in SEPP Major Development. The heritage strategy also identifies a need to review existing CMPs and heritage inventories to guide development controls and acknowledges opportunities for adaptive re-use of heritage items.

Part 4 (Land Use and Design Concepts for Redfern-Waterloo area's Strategic Sites) of BEP 1 addresses ATP in Section 4.1.[7] Land uses include those established (technology and research) and a proposal to allow serviced apartments and hotel/motel accommodation. The proposed design concept for ATP is based on the existing subdivision plan, with building heights from three to 11 storeys permitted on the site. Section 4.1 also notes that a Development Control Plan will be prepared to replace the ATP Master Plan 2005.[8]

Stage Two of the Built Environment Plan will address the areas of social housing in the Redfern-Waterloo area and is unlikely to directly have an impact on ATP.

8.5 Owner Requirements and Proposed Uses

8.5.1 Generally

ATPSL has provided the following statement regarding management of the heritage values of ATP:

> *ATPSL recognises its role and responsibility as custodian of the ATP, part of the former Eveleigh Railway Workshops which is listed on the State Heritage Register. The heritage of the site is evident through a number of show case heritage buildings, a large collection of historic industrial machinery and the social significance and influence of the site on the local community over time.*
>
> *Heritage is a major theme of the site and the ATPSL Board of Directors, management and staff are committed to ensuring the valuable heritage significance of the ATP is appropriately preserved, maintained and promoted. The ATPSL Board has overseen the development of a range of plans and capital works relating to this issue, including:*
>
> - *Preparation of this new CMP for the site;*
> - *The Section 170 Register that was approved by the Heritage Council in November 2008 and is available on the ATPPML website;*
> - *The development, implementation and ongoing review of the Heritage Asset Management Strategy (HAMS);*
> - *The ongoing implementation of the capital works and maintenance expenditure programs for heritage at the ATP, now totalling more than $4.4m over the past 5 years, this work includes:*
>   - *Pump Room refurbishment,*
>   - *Innovation Plaza upgrade, Pivot crane restoration and steam crane display*
>   - *Locomotive Workshop building façade works and structural repairs;*

- *Heritage interpretation infrastructure in Bays 1 and 2 North;*

- *Active participation in the former Redfern Waterloo Heritage Taskforce and Eveleigh Steering Committee;*
- *Establishment of the ATP volunteer group who are directly engaged with the conservation and promotion of heritage at the Park;*
- *Conduct of an ATP Open Day on 25 February 2012, with a strong heritage focus.*

8.5.2 CMP Policy Objectives

ATPSL and UGDC have identified the following objectives that are sought through the implementation of the CMP conservation policies:

1) *To achieve compliance with relevant heritage legislation and policy;*
2) *To achieve conservation, maintenance and interpretation of the heritage significance of the former Eveleigh Railway Workshops it relates to the Australian Technology Park (ATP) and associated moveable collection, in a commercial setting;*
3) *To facilitate and enable high quality development, adaptive reuse and heritage interpretation that responds to the heritage significance of the site and contributes to the creation of a vibrant and diverse place with a distinct identity;*
4) *Achieve enhanced public understanding and engagement in the role of the former workshops at ATP and their significance;*
5) *To help strengthen and create linkages with the heritage significance of the broader Redfern Waterloo area as well as the wider railway network;*
6) *To enhance ATPSL through the adaptive reuse of heritage on the site;*
7) *To improve ATPSL's business opportunities through its heritage assets;*
8) *To contribute to ATPSL's Corporate Social Responsibility program;*
9) *To enhance ATPSL's public reputation as a responsible business entity who has custodial responsibilities of important heritage assets;*
10) *To enhance, where possible in the constraints of the operational requirements of ATPSL, public access to the heritage assets at ATP;*
11) *To contribute to the public's awareness of the heritage value of ATP and the former Eveleigh Workshops more broadly.*

8.5.3 ATP Constitution and Entry Criteria

A Memorandum of Association (now constitution) for ATPSL was set out in 1993. The constitution states that the first object of the establishment of ATPSL is to:

a) establish, maintain and operate a facility of an international standard for the promotion, development and application of sciences and technologies;

Entry criteria for ATP have been formulated by ATPSL based on the constitution. The entry criteria specifically note the need for companies who wish to occupy ATP to be involved in the research, development and commercialisation of new technology.

The constitution and entry criteria place restrictions of the type and range of uses ATP can support in the future, but also provide the basis for the continued development of a technology-focused business park.

8.5.4 Redfern Waterloo Heritage Taskforce and Eveleigh Steering Committee

The Redfern Waterloo Heritage Taskforce was established in 2009 to ensure that the significant heritage places within the Redfern-Waterloo area were 'conserved and promoted as the area undergoes significant revitalisation'.[9] Membership of the taskforce comprised six State and Local Government representatives and four representatives from the local community, with specialists invited to attend and contribute to the taskforce's quarterly meetings. The taskforce was administered by SMDA (now UGDC).

The purpose of the taskforce was to

> *identify opportunities for the active conservation, interpretation and, where appropriate, the adaptive reuse of the cultural, natural and archaeological heritage of the Redfern Waterloo area in tandem with the revitalisation and renewal of the area.*[10]

The taskforce was involved in identifying interpretation, tourism, education and recreation opportunities that would communicate the history of the area and its heritage items to the community.

A steering committee was established within the taskforce to focus solely on the Eveleigh Railway Workshops. The Eveleigh Steering Committee met in May 2010 and identified the following key issues and considerations for the former railway workshops:

- the interpretation of Eveleigh generally, including links to other rail heritage places such as the Chullora Railway Workshops and the NSW Rail Transport Museum at Thirlmere;
- collections management;
- a workers' wall;
- interpretation of the intact collection in Bays 1 and 2 north;
- workers and social and cultural history of the site; and
- railway arts.

8.5.5 Eveleigh Railway Workshops Interpretation Plan

An Interpretation Plan and Implementation Strategy was prepared for the former Eveleigh Railway Workshops by 3-D Projects with Artscape and Only Human in February 2012. The Interpretation Plan sets out strategies to communicate the significance and history of the site for future visitors and residents, in particular social history.

The Interpretation Plan proposes the division of the site into five interpretive zones and the replacement of existing signage with new signage and seating clusters to be located within the five

interpretive zones, including one cluster on a proposed link between North Eveleigh and the Locomotive Workshops that would also provide for a visual appreciation of the relationship between the two parts of Eveleigh. A number of strategies to enhance interpretation have been suggested in the interpretation plan, including a large-scale installation in Bay 2. The artwork would be an artefact and audio-visual installation which conveys the stories of the site and former workers. The Interpretation Plan also proposes the installation of portraits of former workers reflecting diversity of the working environment.

Creation of a publicly accessible interpretation path within Bays 1 & 2 North has been approved and recently completed. ATPSL has also installed the Stevenson Locomotive Crane and the Wheel Shop Pivot Crane within Innovation Plaza.

8.6 Opportunities Arising from Analysis of Constraints

This section has brought to light a range of key issues and opportunities for the future conservation and use of the ATP site and its significant components. While these issues place some constraints on the future use and development of the place, the condition, location and significance of individual buildings and the site as a whole also provide great opportunities to make the most of the heritage significance of ATP. These opportunities will allow ATP to better demonstrate and communicate its industrial past, and respond to key related places in the area also undergoing considerable change.

- Making Eveleigh whole: The former Locomotive Workshops buildings within the site demonstrate a place of heritage significance that goes beyond the boundaries of the ATP site. Interpretation and use of the former workshops buildings have the ability to connect to the former Carriage and Wagon Workshops at North Eveleigh and to related places such as Redfern Station to interpret the historical scale and importance of the Eveleigh Railway Workshops.

- The Machinery Collection: The context of the significant amount of remaining machinery is now limited with little human or operational connection. However, much of the Machinery Collection remains on site and is intact within Bays 1 and 2. The Machinery Collection provides a great deal of potential for creating engaging interpretation and providing new use for the place.

- Future development sites: The development of the ATP site is currently guided by the subdivision plan and BEP 1 and has followed the path set down following the creation of ATP in 1993. The development and chosen direction for the site has had and will continue to shape the setting and use of significant buildings and machinery within the ATP site.

- Retaining the Site Character: The ATP site has a unique character resulting from the juxtaposition of new and old (eg computer technology and blacksmithing, and contemporary architecture and nineteenth-century workshops). There is an opportunity to emphasise this juxtaposition and enhance the site's unique character through the implementation of the interpretation plan.

- Opportunities: This CMP has identified some areas of real opportunity. The community consultation process revealed a range of opportunities to harness community passion to conserve and communicate the heritage significance of the place. The site is also an ideal place to interpret broader NSW and Eveleigh Railway Workshops stories, through the remaining significant buildings and machinery and through the evident community interest.

There is also great potential to retain some of the industrial character of the place in future uses and to retain those industrial uses already in place.

8.7 Endnotes

1 UrbanGrowth NSW, 'About us: Overview', UrbanGrowth NSW, Parramatta NSW, viewed 17 September 2013, <http://www.urbangrowthnsw.com.au/about-us/overview.aspx>

2 *State Environmental Planning Policy (Major Developments) 2005*, Clause 3 Part 5 Schedule 3.

3 *State Environmental Planning Policy (Major Developments) 2005*, Clause 27 Part 5 Schedule 3.

4 NSW legislation website <http://www.legislation.nsw.gov.au/viewtop/inforce/act+80+1974+first+0+N> Accessed on 22/10/2009.

5 NSW legislation website <http://www.legislation.nsw.gov.au/viewtop/inforce/act+80+1974+first+0+N> Accessed on 22/10/2009.

6 Redfern-Waterloo Authority, *Redfern-Waterloo Built Environment Plan (Stage One)*, August 2006, p 4.

7 Redfern-Waterloo Authority, *Redfern-Waterloo Built Environment Plan (Stage One)*, August 2006, p 46.

8 Redfern-Waterloo Authority, *Redfern-Waterloo Built Environment Plan (Stage One)*, August 2006, p 47.

9 Redfern Waterloo Heritage Taskforce, Terms of Reference, June 2010.

10 Redfern Waterloo Heritage Taskforce, Terms of Reference, June 2010.

9.0 Conservation Policy

9.1 Introduction

This conservation policy section has two key parts. The first part is an ATP Conservation Vision Statement that provides an overarching direction and vision for the conservation and management of the ATP site. The second part is a series of policy objectives and individual policies to match these objectives. Where a policy generates a specific action, this is listed directly underneath that policy.

The policy recommendations are all based on the assumption that they should be implemented at the first available opportunity but recognising that in practice this is dependent on a range of regulatory, financial and logistical factors relevant at the time and in relation to other organisational responsibilities.

9.2 ATP Conservation Vision Statement

ATP is a workplace which has always been characterised by technical achievement and contemporary best practice. Today ATP is a site of State heritage significance which combines the rich and evocative history of more than a century of rail industry with inspiring adaptation of historic buildings, innovative new development and cutting-edge technology. While retaining links with the past and social value to former workers, ATP also has strong connections with the current community of workers, residents and visitors.

ATP will be managed to:

- deliver high quality **custodianship** of a major public asset;
- facilitate ongoing **evolution** of the place itself and ever-changing technology through new uses and appropriate development while retaining the heritage values of the ATP site and the Eveleigh Railway Workshops site as a whole;
- **engage** with workers both past and present, local people and the wider community; and
- **present** the old and new Eveleigh / ATP stories in an engaging way - both on and off site.

Custodianship

ATP will be managed, conserved and developed in a way which retains and adds value – both the heritage value of the site and the economic and social value of the asset.

All heritage management actions and decisions will comply with ATPSL's constitution, relevant legislation, the Burra Charter, the policies of the ATP CMP and the NSW Government policy, as appropriate.

Evolution

ATP will continue to develop in a manner which respects and conserves the existing heritage values of the place, but which encourages exciting new development that is of sympathetic design.

Innovative commercial uses which use new technologies and deliver good heritage outcomes—in relation to both physical conservation and interpretation—will be encouraged.

Engagement

Interested people, including current or former workers, residents, special interest groups and the wider public, will be encouraged to connect with ATP both on and off site.

Engagement will continue to occur through on-site interpretation, publications, access to common areas, events and direct delivery of information.

Presentation

The history and heritage of ATP will be presented on and off site to inform and inspire workers and visitors.

Interpretation will embrace the concepts contained in the ERW Interpretation Plan and will use the historic fabric of the place itself, landscape elements, artwork and signs, as well as electronic media. Tenants will be encouraged to communicate and celebrate the special nature of this extraordinary place.

9.3 Conservation Policy

Conservation policy is organised according to the following areas:

1 Conservation planning—these policies provide a framework for the adoption and implementation of the CMP and include essential policies for the conservation of ATP.

2 Conserving heritage significance—these policies outline the approach to the conservation of the heritage significance of the site, including conservation of individual elements.

3 Conserving the heritage curtilage and setting—these policies guide the conservation of the heritage curtilage and broader setting of ATP.

4 Physical conservation and maintenance of buildings—these policies outline the approach to the conservation of fabric and maintenance of the significant buildings within ATP.

5 Physical conservation and maintenance of the machinery collection—these policies guide the conservation of the machinery collection.

6 Managing the archaeological resource—these policies provide a framework for the management of the archaeological potential within ATP.

7 Future use—these policies establish principles for future uses of the site and its components, as well as public use and access.

8 Future development—these policies establish principles for new development of the site and its components, including adaptation of existing structures.

9 Community involvement and consultation—these policies guide engagement with the local community and interested groups in matters that affect the heritage significance of ATP.

10 Interpretation—these policies acknowledge the need for a detailed interpretation plan to be prepared and implemented to communicate the significance of ATP and related places.

Policy Objective 1—Conservation Planning

The aim of these policies is to ensure that conservation planning continues to be an integral part of the management of ATP. There are a range of conservation processes with which current and future owners will need to comply. Conservation of heritage significance should be central to future decisions about the place. This section sets out policies for establishing and maintaining suitable conservation planning processes for ATP.

1.1 This CMP should be the principal guiding document for the conservation and management of the heritage significance of ATP.

Action: This CMP should be adopted by ATPSL and UGDC.

Action: This CMP should be submitted to the NSW Heritage Council for final endorsement.

Action: The SHR listings for the Eveleigh Railway Workshops and the Eveleigh Railway Workshops Machinery Collection should be updated by the Heritage Branch to reflect the findings of this CMP.

1.2 The analysis and recommendations of this CMP should be co-ordinated with other planning documents for the place, including:

- ATP S170 Heritage and Conservation Register 2008;
- Eveleigh Workshops Management Plan for Moveable Items and Social History 1996 (or as revised);
- Eveleigh Railway Yards Locomotive Workshops Conservation Management Plan 1995;
- Eveleigh Railway Workshops Interpretation Plan and Implementation Strategy 2012;
- Draft Eveleigh Locomotive Workshops Conservation Management Plan 2002; and
- RWA Built Environment Plan Stage One 2006.

In the event of any inconsistencies, the CMP should prevail.

Heritage and planning aspects of future documents should be prepared to be consistent with this CMP.

1.3 The S170 Heritage and Conservation Register and the Management Plan for Movable Items should be updated to reflect changes to the Machinery Collection and to guide its future conservation.

Action: The S170 Register and Management Plan for Movable Items review should include a review of existing conservation and disposal policies, with a view to reducing the number of elements held at ATP which are not relevant to the site. Conservation actions should be prioritised to ensure resources are targeted to higher conservation priorities first.

1.4 If parts of ATP are sold or leased on long-term basis, adequate provisions should be included within the sale/lease contracts to ensure conservation and maintenance of heritage assets on the site in accordance with the endorsed CMP and the Management Plan for Movable Items (as revised). A copy of the endorsed CMP and the Management Plan for Movable Items (as revised) should be included as part of the sale/lease contract.

1.5 This CMP should be a widely accessible document.

Action: A copy of this CMP should be provided to RailCorp, City of Sydney Council and other relevant agencies with an interest in the property.

Action: This CMP should be made available electronically to the public, preferably through the ATP and UGDC websites.

Action: If ownership of the property is transferred, a copy of the CMP should be included as part of any sale documents and provided to the new owner.

Action: Copies of the ATP Conservation Vision Statement should be provided to lessees of the site. The full CMP should be made available as a web resource.

1.6 The effectiveness of the CMP should be monitored on an ongoing basis.

Action: The owner of the site should review and update this CMP every five years.

Action: Specific policies within the CMP should be reviewed and updated in light of new circumstances, including changes to the management or ownership of ATP.

1.7 The strong community attachment to the heritage significance of the ATP site should be acknowledged through regular consultation on changes to the site and its management. (Specific policies for community involvement and consultation are contained in Policy Objective 9.)

1.8 All proposed activities should be in accordance with this CMP and relevant approvals identified in the Heritage Act.

1.9 The following process should be followed prior to approving any changes or works to the place:

- Assess the proposed works against the policies in this CMP.
- Prepare a Heritage Impact Statement for works with the potential to have an impact on the heritage significance of ATP, including works not permitted under the Standard Exemptions. The HIS should assess impacts and propose appropriate mitigation measures.
- Prepare an Archival Recording (for changes to site elements of Moderate or above significance (as per Section 7.8 of this CMP), in accordance with NSW Heritage Branch guidelines. (See *Guidelines for Photographic Recording of Heritage Sites, Buildings, Structures and Moveable Items* (1998), prepared by the Heritage Office.)

1.10 Maintenance works and minor repairs should be undertaken in compliance with the Standard Exemptions under Section 57(2) of the Heritage Act. The standard exemptions are included as Appendix B. ATP is not subject to any site-specific exemptions.

1.11 All personnel engaged in works with the potential to have an impact on the site's heritage significance should have proven experience and qualifications in the relevant field of heritage conservation. This includes both professionals and tradespeople.

1.12 The management of unforeseen discoveries or new information should comply with the policies in this CMP.

> **Action:** The heritage value of newly discovered physical evidence, such as unforseen survival of early building fabric, should be assessed prior to making decisions about its future management.

1.13 Systematic recording should be maintained as part of the management of the site's heritage significance.

1.14 Decisions about the place should be documented and records kept for future reference.

1.15 Records relating to works undertaken at the site should be safely stored for future reference, both at the site and elsewhere.

1.16 Planning for all projects that have a heritage component should be in accordance with the ATPSL Heritage Project Management Policy, July 2011, or as amended.

1.17 Copies of historical information and reports should be made publically available in a public repository, such as the City of Sydney Archives or the Mitchell Library.

Policy Objective 2—Conserving Heritage Significance

Conservation of the heritage significance of ATP and its significant buildings, structures and machinery should be an integral part of the management of the place. The identity of the place as the former Eveleigh Locomotive Workshops and Alexandria Goods Yard should be reinforced through appropriate conservation and interpretation.

2.1 ATP is a place of State heritage significance as one half of the former Eveleigh Railway Workshops and should be conserved.

2.2 The Machinery Collection is of State significance and should be conserved.

2.3 Conservation of ATP and the Machinery Collection should be in accordance with the definitions and principles of *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 1999.*

2.4 Management of heritage significance must also take into account the broader SHR curtilage for the Eveleigh Railway Workshops, which includes the entirety of ATP.

2.5 Conservation of heritage significance of the former Eveleigh Locomotive Workshops, the Machinery Collection and Eveleigh Railway Workshops as a whole should be central to future decisions about the place including its interpretation.

2.6 Management of the Large Erecting Shed (on RailCorp land) and the Locomotive Workshops buildings within ATP and the machinery within each should be co-ordinated between ATPSL and RailCorp (or future owners) if ownership remains separate. Changes to either should be considered and assessed in light of the heritage significance of the other.

2.7 All current and future owners and managers responsible for the care and management of ATP, its significant machinery collection and its setting should be advised of and be jointly responsible for the conservation of the heritage significance of the place.

2.8 The authenticity of the former Locomotive Workshops as an industrial place should be respected and embraced. This includes tangible (structures, machinery, etc.) and intangible (social significance, etc.) aspects. (See also Policy Objective 4—Physical Conservation of Buildings, Policy Objective 5—Physical Conservation of the Machinery Collection, Policy Objective 9—Community Consultation and Policy Objective 10—Interpretation.)

2.9 Key aspects of the site that demonstrate the former use of the Locomotive Workshops should be retained and interpreted, including movable heritage, building components, power sources and use of Bays 1 and 2 for blacksmithing.

2.10 The relative significance of individual elements will determine the appropriate conservation process:

- **Exceptional**—should be preserved, restored or reconstructed.
- **High**—should be preserved, restored, reconstructed or adapted.
- **Moderate**—retention and adaptation is desirable but not essential; removal may be acceptable (following archival recording).
- **Little**—may be retained, adapted or removed as necessary.
- **Intrusive**—should be removed or adapted to reduce adverse heritage impact.

The specific views of High significance (shown in Figure 7.2) should be preserved, subject to the conditions contained in Policy 3.6. Reinstatement of highly significant views is desirable if an opportunity arises.

An assessment of significance of components is contained in Section 7.8 of this CMP. Refer to the ATP S170 Register for significance of individual items of the machinery collection.

The Burra Charter definitions (Appendix D) explain the conservation processes noted here. Often conservation involves a combination of these processes. Reconstruction is generally only used in limited circumstances to replace a missing part of an element and where good documentation exists—often reconstruction is used to allow for recovery of a historic use, but is limited to avoid an impact on authenticity.

2.11 Adverse impacts on components, fabric or other aspects of significance (including use) should only be permitted where:

- it makes possible the recovery of aspects of greater significance;
- it helps ensure the security and viability of the place;
- there is no feasible alternative (eg to meet safety and/or legal requirements);
- the area, element, fabric or other aspect of significance is adequately recorded; and
- full assessment of alternative options has been undertaken to minimise adverse impacts.

Action: When assessing proposed actions that may have an impact on the site, the significance assessment (Section 7.0 of the CMP) should be used to identify the contribution that individual elements make to the significance of the site. Individual elements should not be assessed in isolation.

2.12 The social significance of the place to the local community, former workers and the NSW railways community should be acknowledged. The considerable resource provided by community interest in the place should be used to interpret the significance of the place. (See Policy Objective 9—Community Consultation and Policy Objective 10—Interpretation for detailed policies.)

2.13 The highly significant Machinery Collection at ATP should be conserved as an integral part of the site's identity.

2.14 The obligations of and opportunities for owners in relation to heritage conservation should be defined. These obligations and opportunities could include:

- retention of the operating blacksmiths workshop or similar heritage operation;
- publicly accessible interpretation areas;
- annual financial contributions towards conservation (repair and maintenance); and
- an interpretation strategy and implementation.

Policy Objective 3—Conserving the Heritage Curtilage and Setting

The entire ATP site has significance and is included within the SHR curtilage for the Eveleigh Railway Workshops. A broad setting was also identified in Section 7.7 that includes significant view lines between the significant elements of the SHR curtilage and within the ATP site. This section sets out policies for conserving the heritage curtilage and broader setting of ATP. Policies for the physical conservation of buildings and machinery are contained in Policy Objectives 4 and 5.

3.1 The SHR curtilage is the minimum area required to conserve the heritage significance of former Locomotive Workshops (see Figure 7.1).

3.2 The industrial character of ATP should be conserved where evident, and interpreted where lost. This character is demonstrated by the remaining workshops buildings, structures and machinery and their industrial patina (which reveals wear, long-term intensive use and age). (See also Policy Objective 4—Physical Conservation of Buildings, Policy Objective 5—Physical Conservation of the Machinery Collection and Policy Objective 10—Interpretation)

3.3 The visual and other relationships, such as physical connection or a use connection, between significant elements within the heritage curtilage should be conserved, where possible, including remaining physical connections such as rail tracks.

3.4 An appropriate broad setting that describes the historical context of ATP must be retained to conserve the heritage significance of the place. The key elements of the setting of ATP are:

- the former Carriage and Wagon Workshops at North Eveleigh;
- Redfern Station;
- the former Macdonaldtown Gas Works;
- remaining RailCorp property to the west next to the western railway, including that now occupied by the Macdonaldtown stabling yards;
- the area of public housing to the west (as formerly part of the historic ERW site); and
- significant view lines within the ATP site and between it and other elements of the SHR curtilage.

The majority of this setting (excluding the area of public housing) is contained within the SHR listing boundary. (A copy of the SHR boundary is shown as Figure 7.1 in Section 7.0.)

Action: ATPSL should follow up on opportunities to comment on development or other proposals in the broader setting of ATP that may have an impact on the heritage values of ATP or its setting (being the former Eveleigh Railway Workshops).

3.5 Changes within ATP should take into account the impact on the heritage significance of the former Eveleigh Locomotive Workshops buildings.

3.6 Significant visual connections and specific views within the site, to and from ATP and to related places, should not be obscured (see Figure 7.2 for the specific views of High significance). Significant views include views into the site from the Great Western Railway.

Where removal or obstruction of significant specific views is required for essential operation or development reasons, or if they are subject to existing approvals which would result in their loss or obstruction, other locations that provide the same type of view line could be identified as a replacement. (For example, if the proposed development at North Eveleigh will obscure the significant specific view between Innovation Plaza and the Chief Mechanical Engineer's Office, a similar view might be obtained from the proposed pedestrian and cycle bridges over the Great Western Railway.)

Retention of existing significant specific views or their replacement by alternative views is preferred. However, if significant specific views must be removed or obstructed, other mitigative measures should be undertaken, including retention of modified/slot views or implementing interpretive measures (such as representation of former views in building design, installation of public art which reflects former views and relationships, interpretive signs or other interpretive media).

3.7 The connection between ATP and North Eveleigh should be enhanced and reinforced as an opportunity for future growth and interpretation. (See Policy Objective 10–Interpretation for further details.)

3.8 Subject to future funding and in association with other owners and the development of adjacent sites a physical connection between ATP and North Eveleigh should ideally be reinstated, preferably through a bridge that connects to Redfern Station, as per the original pedestrian bridge. This bridge could provide opportunities to interpret the workshops as a whole and link the two developing areas on either side of the railway. (See Policy Objective 10–Interpretation for further details.)

3.9 The role of the Marian Street entrance to ATP and its relationship to Redfern Station should be strengthened, both to reflect the historical importance of this entrance and to respond to the current and future needs of those entering the site from Redfern Station. This could be achieved through in the short term through signage or landscaping and in the longer-term through the potential redevelopment of Redfern Station and the proposed pedestrian and cycle bridges over the rail lines.

3.10 Plantings within ATP should be hard-edged and sparse to suit the industrial character of the site and should not obscure key view lines.

3.11 Both sides of the Eveleigh Railway Workshops provide an industrial heritage 'gateway' to the city. This should be conserved and enhanced.

Policy Objective 4—Physical Conservation and Maintenance of Buildings

Conserving the former Eveleigh Locomotive Workshops buildings is integral to conserving the heritage significance of the place. Conservation of buildings includes repair works, regular maintenance and inspection of building fabric and appropriate adaptations that respond to the significance of the place.

4.1 Significant buildings and fabric within ATP should be conserved. (Refer to Section 7.8 of this CMP for a table of significant buildings and fabric.)

4.2 The authentic industrial character of the former Locomotive Workshops buildings should be conserved. Worn features, cracked paint, etc. should be conserved unless its poses a threat to the physical condition of the buildings or in the case of an OH&S issue.

4.3 Conservation of fabric should be appropriate to the grades of significance identified in Tables 7.2–7.3 and Figure 7.2, as per Policy 2.5 (above).

4.4 Conservation works identified in draft Eveleigh Locomotive Workshops CMP 2002 not yet carried out should be completed to arrest any material conservation issues.

Action: A building conservation specialist should be engaged to identify any further conservation works needed.

4.5 Regular maintenance should take place to conserve the significant fabric of the place, as per the *Minimum Standards of Maintenance and Repair* (NSW Heritage Branch Guidelines 2006).

Action: A Cyclic Maintenance Plan should be prepared to guide regular maintenance of significant structures within ATP in accordance with NSW Heritage Branch guidelines.

Action: The Cyclic Maintenance Plan should be updated following works to the site and/or buildings, ie. following reconstruction or adaptation works.

4.6 Maintenance work should be prioritised according to the heritage significance and vulnerability to deterioration of individual elements.

4.7 The condition of elements and fabric should be monitored on an ongoing basis through regular inspections.

Action: A regular inspection program should be established to identify maintenance and rectification works. Areas of particular importance include roofs, brick and stonework, water ingress, gutters and downpipes, site drainage and general security.

4.8 Where possible replacement or repair of significant fabric should be carried out on a like-for-like basis. For example, a damaged timber window frame should be replaced with one of matching details and similar timber.

Action: Where significant fabric is proposed to be removed, a representative sample of the fabric should recorded, catalogued and stored on site, and interpreted where appropriate.

4.9 Hazardous materials and materials causing physical damage (such as rusting reinforcing bars) should be replaced with modern materials of similar finish, including fabric of high or exceptional significance.

4.10 The distinctive industrial character of the former Eveleigh Locomotive Workshops buildings should be conserved through use of appropriate materials and finishes.

4.11 As much original fabric as possible should be retained in situ. Removal of original fabric should only take place where it has deteriorated to a condition beyond feasible retention.

Policy Objective 5—Physical Conservation and Maintenance of the Machinery Collection

Conservation of the Machinery Collection is an integral part of conserving the heritage significance of the place. The policies in this section guide physical conservation and maintenance works for the Machinery Collections. Recommendations for future use and display are contained in Policy Objectives 7 and 10.

5.1 The remaining Machinery Collection should be managed in accordance with the general recommendations of this CMP and the item specific recommendations contained in the s170 and HAMS reports (current or as revised) and the Management Plan for Movable Items (as revised). (Refer to the ATP S170 Register for an assessment of significance for each item of the Machinery Collection.)

5.2 In managing the Machinery Collection within its available resources ATPSL will continue to look for opportunities to obtain advice and assistance from a range of appropriate sources.

Action: ATPSL should continue to engage relevant experts on a case-by-case basis to advise on conservation actions including, where appropriate, use and interpretation, and consult with appropriate stakeholders prior to the implementation of these conservation actions in accordance with the ATPSL Heritage Project Management Policy.

5.3 Liaison with RailCorp, 3801 Ltd, the Powerhouse Museum and the heritage operator in Bays 1 and 2 (currently Wrought Artworks) regarding ongoing management of the Machinery Collection by ATPSL should continue.

5.4 Conservation of the machinery collection should aim to retain authenticity in appearance and use. The approach for conserving the machinery fabric should be one of minimal intervention.

5.5 Although the use of machinery in the movable collection may not generally be feasible given the constraints relating to safety concerns, loss of power supplies and difficulty in finding uses for the machinery, the opportunity to restore items of the Machinery Collection to operational use should be considered. This is not intended to place on obligation on ATPSL to find uses for the Machinery Collection.

Action: A flexible conservation approach should be taken to machinery where a viable operational use is proposed. Minor alterations may be required to allow for new uses.

Action: The impact of new uses on the significance of the Machinery Collection should be assessed on a case-by-case basis. Some items in the Machinery Collection should not be altered owing to rarity and level of significance.

5.6 Machinery may be made to look as though it has been recently overhauled, but should not be made to look 'new'. All external surfaces should be treated to prevent rust, but oiling and waxing is preferred to repainting.

5.7 Regular maintenance should take place to conserve the significant items in use and on display.

Action: Maintenance should be carried out in accordance with the general and item-specific conservation recommendations made in the ATP S170 Register and any specific maintenance plans, such as those for individual items in Bays 1 and 2 prepared by Heritech Consulting.

Action: Maintenance should be carried out by personnel with proven qualifications and experience in the conservation of machinery. (Refer to Policy 1.10)

Action: WorkCover health and safety requirements must be taken into account for machinery in use and on display.

5.8 If a viable operational use can be identified, including for use or interpretation by a lessee, for the machinery on site (eg in fabricating or in a craft workshop use), consideration should be given to allowing the machinery continue its working life, subject to adequate maintenance levels being met.

Action: The blacksmithing use currently in operation in Bays 1 and 2 (or a similar operation) is consistent with this policy and should be retained.

5.9 Remaining evidence of former machinery, including remains of pits and machine footings, should be retained where possible.

Policy Objective 6—Managing the Archaeological Resource

6.1 Any redevelopment of ATP should be preceded by an Archaeological Impact Assessment, specific to the particular area being redeveloped, to mitigate any proposed development on the known and potential archaeological resource. Depending on the potential significance of deposits in an area proposed for redevelopment, detailed on-site archaeological investigations may be required such as excavation, monitoring and recording of site features, and the collection, analysis and interpretation of remains and artefacts.

6.2 The discovery of any relic, and its location should be reported to the Heritage Council of NSW, regardless of whether an excavation permit has been issued, as per Section 146 of the Heritage Act.

6.3 If evidence of underground infrastructure or evidence of former machinery is uncovered during construction excavations, the advice of an industrial archaeologist should be sought.

6.4 The archaeological resource of ATP, including in situ rail lines and evidence of former machinery inside and outside the workshops buildings has great potential for interpretation of the historical use of the site. Refer to Policy Objective 10 for specific interpretation policies.

6.5 This assessment has determined that intact Aboriginal sites are unlikely to exist within ATP owing to heavy earth disturbance including cut and fill, construction of buildings and laying of rail stock. There remains low potential for lithic or shell material in a disturbed context. Should Aboriginal objects be identified during redevelopment of ATP, works must stop and a suitably qualified archaeologist should be called in to document and assess the finds. The Chief Executive of the OEH must be notified of the discovery of Aboriginal objects under Section 91 of the NPW Act.

6.6 In the unlikely event of human remains being discovered during any redevelopment works within ATP, the finding should immediately be reported to the New South Wales Coroner's office and/or the New South Wales Police. If the remains are suspected to be Aboriginal, the OEH should also be contacted and a specialist should be consulted to determine the nature of the remains.

Policy Objective 7—Future Use

The current use of ATP as a technology park, which is guided by the ATP Memorandum of Association, has facilitated adaptive re-use of the former workshops buildings and provided for the gradual redevelopment of the site. This section sets out policies for the future use for the significant buildings and machinery within ATP.

7.1 Use of ATP should continue to embrace the industrial past of the place through the adaptive reuse of the site and its constituent elements and heritage fabric.

7.2 Future uses of ATP should provide for the ongoing conservation of the historical associations, meaning and fabric of its significant components, including the Machinery Collection.

> **Action:** While ATPSL has overall responsibility in regard to its statutory obligations, explore opportunities through the leasing process to make ongoing maintenance and conservation works to significant components a requirement of new lessees.

7.3 Proposals for new uses should not be approved without consideration of the conservation of the heritage significance of the place as a whole.

7.4 Proposals for active uses that take advantage of the form and spatial volumes of the remaining Eveleigh Locomotive Workshops buildings should be considered Use of the Locomotive Workshops building that provides for increased public access also should be considered

7.5 New uses should communicate the heritage significance of ATP and its components workers, visitors and the broader community.

7.6 Accommodation of new uses should be accompanied by a willingness to adapt and evolve as the Locomotive Workshops once did and be based on consideration of the potential impact of the new use on the heritage significance of the place. For example, if a new use of the New Locomotive Shop requires a different floor covering, this could be accommodated following consideration of the heritage impact on the building overall.

7.7 The potential to reinforce significant historical relationships between ATP and North Eveleigh through related uses should be considered investigated.

7.8 New uses should continue to encourage public access to the site. Further access should be encouraged, particularly into remaining workshops buildings.

7.9 Use of the Bays 1 and 2 as a blacksmiths workshop should be retained as an active interpretation of the history of the place and its significant machinery collection.

Policy Objective 8—New Development Opportunities

New development possible within ATP is set out in the approved subdivision plan and BEP 1. The development opportunities identified in this section and the new development lots allowed in the subdivision plan are shown in Figure 9.1.

8.1 Proposals for new development should take into account the potential heritage impact on ATP and its significant components. New development should be sympathetic in terms of scale, siting, materials and details to the significant former Locomotive Workshops building at ATP. New development should be sited and designed so that significant view lines within the site and into the site are conserved (see Figure 7.2).

8.2 Proposals for new development should be in accordance with the heritage provisions contained in BEP 1.

8.3 The form and materials of new development should respond to the industrial character of ATP wherever possible. The palette for future design works should be complementary to the existing heritage structures. New buildings should have a character sympathetic to the heritage structures and buildings on the site.

8.4 New development should respond to (but not mimic) the architectural character of the former Locomotive Workshops buildings, as per the recommendations of the BEP1.

8.5 New adaptive reuse projects should be encouraged to incorporate components of or make use of the Machinery Collection, primarily to assist site interpretation the character of the site.

8.6 New development on the site of the former foundry should creatively interpret the historical use of this part of the ATP site and may include conservation and presentation of archaeological features.

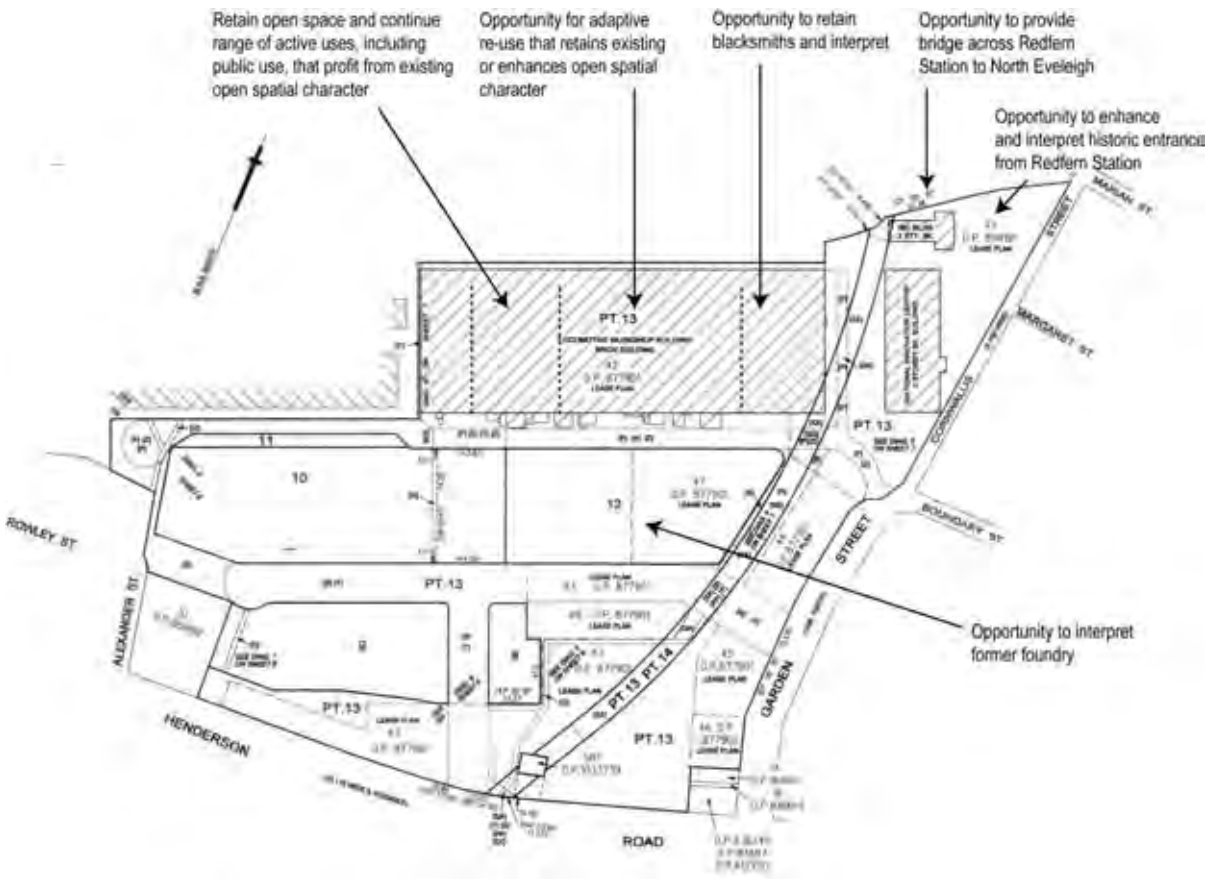


Figure 9.1 Plan showing key development opportunities at the ATP site and development parcels defined in the approved ATP subdivision plan. (Source: ATPSL, with GML additions 2010)

Policy Objective 9—Community Involvement and Consultation

The consultation strategy of ATPSL, which supported the consultation process for this CMP and the interest in the Redfern-Waterloo Heritage Taskforce, has reinforced substantial community interest in the ATP site and the former Eveleigh Railway Workshops as a whole. This community interest should be harnessed to help in the future conservation and interpretation of the place. The Eveleigh Railway Workshops Interpretation Plan and Implementation Strategy, February 2012, supports this policy objective.

9.1 The strong community attachment to the heritage significance of the ATP site should be retained recognised.

9.2 Regular consultation with the local community and interested groups regarding changes, new works and/or new plans should become part of the future planning for the place.

9.3 Community interest should be engaged as a resource for the conservation and interpretation of the ATP site and its significant components. Continuation of activities already underway such as open days and the work carried out by volunteers should be encouraged.

The establishment of a volunteer program proposed by ATPSL is a positive step in fostering community involvement in conserving the place.

9.4 Community involvement and consultation should consider co-ordination with other rail heritage places and organisations, including the NSW Rail Transport Museum at Thirlmere, the former Chullora Railway Workshops and RailCorp.

9.5 Former workers should be encouraged to contribute to the ongoing conservation and interpretation of the place, where it is possible for them to do so.

Policy Objective 10—Interpretation

The important history of the ATP site as the location of the Locomotive Workshops and the Alexandria Goods Yard should be celebrated and interpreted. It is vital that the whole story of the place is told. This is a place where locomotives were made, where thousands of people (mainly men) worked in a dirty, noisy and dangerous environment, where great innovations took place and from where the NSW railway system was developed. The story of the Eveleigh Locomotive Workshops (and the Eveleigh Railway Workshops as a whole) is a great Australian story.

10.1 Interpretation should be adopted as a method of communicating the historical significance of the entire ATP site, including areas where the historical use is no longer visible (eg. former Alexandria Goods Yard land).

10.2 Interpretation of ATP should be co-ordinated with interpretation of the entire former Eveleigh Railway Workshops site. Consistency across the area will help communicate the historical links between the different places that comprised the railway workshops.

Action: The Eveleigh Railway Workshops Interpretation Plan and Implementation Strategy prepared in February 2012 is consistent with this policy and should be adopted as a whole and implemented where feasible and where funding permits. The Interpretation Plan provides an interpretation strategy for ATP as part of a comprehensive interpretation strategy for the entire former Eveleigh Railway Workshops.

10.3 Interpretation should seek to re-engage ATP with the historical purpose of the workshops (to repair, assemble and manufacture locomotives) and the goods yard.

10.4 The full story of the place, its former workers and its component parts should be told and should engage with the remaining significant elements within ATP. The full story of the place includes any significance it may have to the local Aboriginal community and the history of the place prior to the establishment of the workshops.

Action: Interpretation should make use of the array of remaining elements of the workshops, including machinery, buildings and remnant rail tracks.

Action: Interpretation should communicate the social aspect of site's history.

Action: Oral histories of former workers and managers should be recorded to inform interpretation of the history of the place, with a focus on understanding the use of items within the Machinery Collection, and the operations of the Eveleigh Locomotive Workshops in general.

10.5 Interpretation should encourage better understanding of the use of the different types of machinery, including what they produced, and relationships between items in the collection.

Action: While broad scale reconstruction of power sources such as steam is not feasible, reconstructing examples of assemblages and systems of machinery should be considered where and when appropriate, including for interpretation. For example, an assemblage would include an overhead travelling crane, a group of related machines for demonstration purposes and the associated power system, and a collection of hand tools and moulds used in operating the machinery, and an example of what particular machines produced.

10.6 The functional relationships between the Machinery Collection and the workshops buildings should be interpreted. This could be communicated through recreation of an assemblage, as per Policy 10.5. Consider recreation of an assemblage, with power system, cranes, tools and moulds. The interpretation should also demonstrate what was actually manufactured in the workshops (wheel sets, springs, etc.) and by which machines.

10.7 The archaeological resource of the ATP site, which includes former residential areas, has potential for interpretation. Display of archaeological finds should be part of the interpretation strategy for the place.

10.8 The local community and broader NSW railways community should be involved in future interpretation, eg through heritage walks, open days, a workers' wall, recording oral histories.

10.9 Innovation should be encouraged in developing interpretation methods. Interpretation should go beyond signage to re-capture the dynamic, noisy, busy industrial place that the workshops once were. The industrial history of the site would lend itself to the following interpretation methods:

- video installations;
- sound scapes;
- podcasts;
- re-creations of machinery assemblages and uses; and
- an actual locomotive.

10.10 Eveleigh Locomotive Workshops imagery should be adopted as part of ATP branding and signs.

10.11 Names and titles historically associated with the Eveleigh Locomotive Workshops and the Alexandria Goods Yard should be considered in naming new buildings, roads and parks within ATP.

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