

ETHOS URBAN

State Significant Development

Application SSDA 8517

Environmental Impact Statement

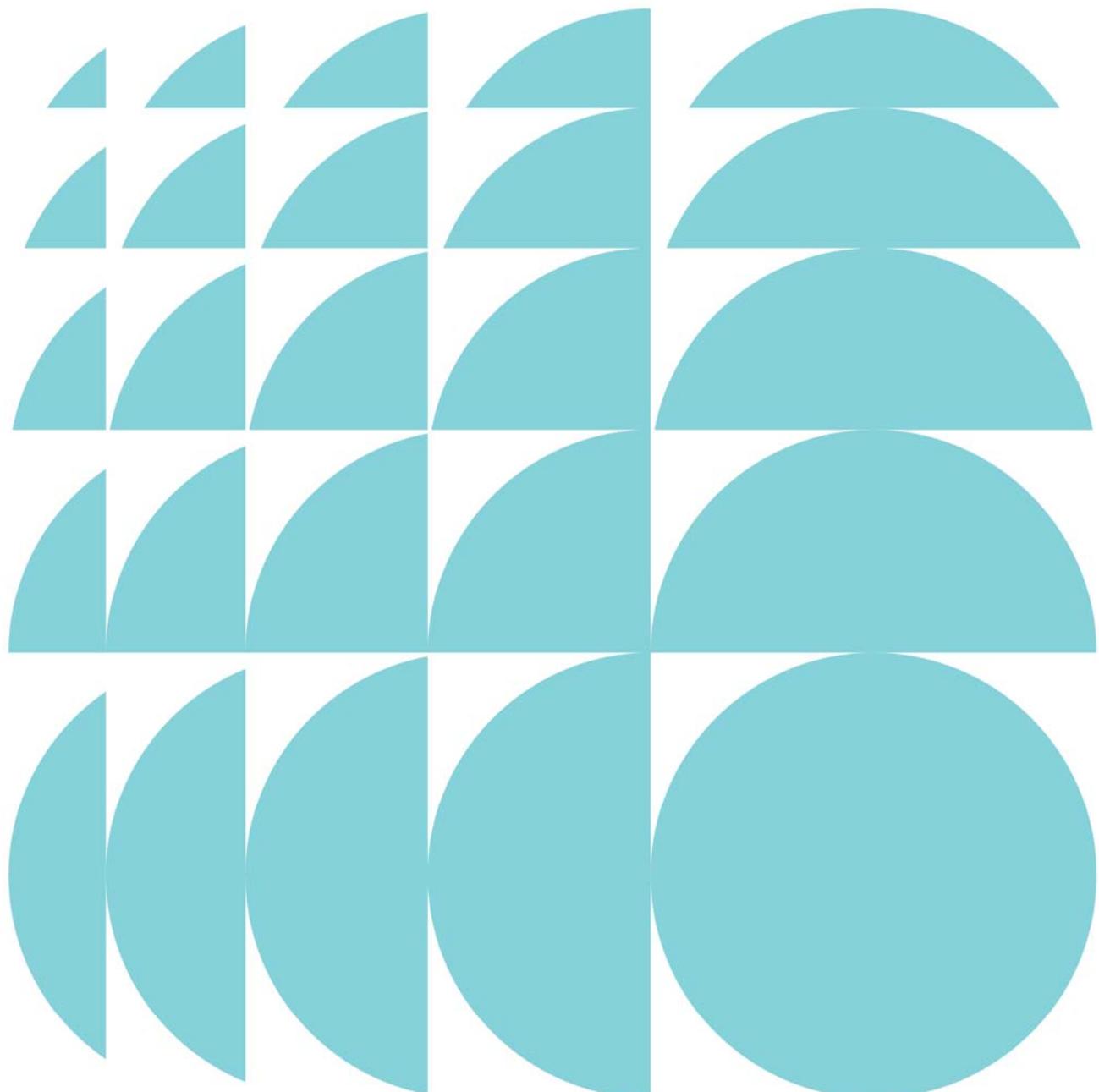
Locomotive Street,

Australian Technology Park, Eveleigh

Bays 1-4a, Locomotive Workshop

Submitted to Department of Planning and
Environment on behalf of Mirvac Projects
Pty Ltd

13 November 2017 | 17068



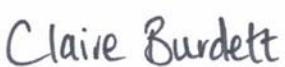
Ethos Urban
ACN 615 087 931 Pty Ltd.
www.ethosurban.com
173 Sussex Street, Sydney
NSW 2000 t 61 2 9956 6952

CONTACT

Andrew Duggan Director aduggan@ethosurban.com 02 9956 6962

Reproduction of this document or any part thereof is not permitted without prior written permission of ACN 615 087 931 Pty Ltd.

This document has been prepared by:

 
Prugya Maini & Claire Burdett



Prugya Maini & Claire Burdett 13/11/2017

Andrew Duggan

13/11/2017

Reproduction of this document or any part thereof is not permitted without prior written permission of Ethos Urban Pty Ltd. Ethos Urban operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

VERSION NO.	DATE OF ISSUE	REVISION BY	APPROVED BY
1	06/11/2017	Prugya Maini	Claire Burdett
2	9/11/2017	Prugya Maini	Claire Burdett
3. FINAL	13/11/2017	Prugya Maini	Claire Burdett

Contents

Statement of Validity	2
<hr/>	
1.0 Executive Summary	3
1.1 Purpose of this Report	3
1.2 The Site	3
1.3 Background	3
1.4 Overview of the Project	4
1.5 Planning Context	4
1.6 Environmental Impacts and Mitigation	
Measures	4
1.7 Conclusion and Justification	5
<hr/>	
2.0 Introduction	6
2.1 Overview of Proposed Development	6
2.2 Historic Background	7
2.3 State Significant Development Applications within the ATP	8
2.4 Applicant	9
2.5 Objectives of the Development	10
2.6 Analysis of Alternatives	10
2.7 Secretary's Requirements	13
<hr/>	
3.0 Site Analysis	21
3.1 Site Location and Context	21
3.2 Site Description	22
3.3 Existing Development	23
3.4 Public Domain	31
3.5 Access and Parking	32
3.6 Bus	36
3.7 Heritage	37
3.8 Topography	37
3.9 Geotechnical Conditions	37
3.10 Utilities & Infrastructure	38
3.11 Surrounding Development	38
<hr/>	
4.0 Description of the Development	44
4.1 Overview of the Proposal	44
4.2 Approval Strategy	47
4.3 Numerical Overview	47
4.4 Proposed Land Use and Operations Flexibility	48
4.5 Renaming the Bays	49

Contents

4.6	Design Principles	49
4.7	Demolition	50
4.8	Structural Works	51
4.9	Bays 1-4a Design	52
4.10	Loading Dock	55
4.11	Heritage Interpretation and Exhibition Space	57
4.12	Travelator	58
4.13	Blacksmith	59
4.14	Corner Retail Pavilion	60
4.15	Retail Pods in Bays 1 and 2	60
4.16	Enlargement of the internal opening between Bay 2 and Bay 3	61
4.17	Intertenancy Walls	61
4.18	Roof Works	62
4.19	Roof Plant and Platforms	62
4.20	Building Entrances and Windows	63
4.21	Exterior Material Palette	63
4.22	Public Access & Circulation	64
4.23	Heritage Interpretation	64
4.24	Signage	67
4.25	Illumination Strategy	68
4.26	Public Domain	69
4.27	Vehicle Access, Loading and Car Parking	70
4.28	Operational Management	72
4.29	Environmentally Sustainable Development	73
4.30	Infrastructure and Services	73
<hr/>		
5.0	Consultation	75
5.1	Overview of Consultation	75
5.2	Consultation Outcomes	76
5.3	Project Responses to Key Issues	83
5.4	Post Lodgement Consultation	89
<hr/>		
6.0	Environmental Assessment	90
6.1	Environmental Planning and Assessment Act 1979	90
6.2	Compliance with Planning Policies	93
6.3	Compliance with Environmental Planning Instruments & Plans	95
6.4	Design Excellence	102
6.5	Built Form	105
6.6	Heritage Impacts	107

Contents

6.7	Economic Impacts	123
6.8	Traffic, Parking & Access	129
6.9	Public Access	132
6.10	Waste Management	132
6.11	Contamination	133
6.12	Noise and Vibration	135
6.13	Accessibility	138
6.14	Building Code of Australia	139
6.15	Services and Utilities Management	139
6.16	Water Cycle Management	139
6.17	Railway Infrastructure	139
6.18	Construction Management	140
6.19	Ecologically Sustainable Development	140
6.20	Development Contributions	142
6.21	Site Suitability	143
6.22	Public Interest	143
<hr/>		
7.0	Environmental Risk Assessment	144
8.0	Mitigation Measures	149
9.0	Conclusion	151

Figures

Figure 1 – ATP State Significant Development Applications	8
Figure 2 – Locational context of the ATP Buildings 1,2 & 3	9
Figure 3 – Location of the Australian Technology Park	21
Figure 4 – Aerial photograph of the ATP Precinct	22
Figure 5 – Site Plan	23
Figure 6 – Existing layout of the Locomotive Workshop	24
Figure 7 – Eastern elevation of the Locomotive Workshop looking north, from Innovation Plaza	25
Figure 8 – The south-eastern corner of Bay 1 and existing lean-to structure and Bay 1 annex	25
Figure 9 – Southern elevation of Bay 1 and the existing lean-to structure	25
Figure 10 – View of the Bay 1 annex between Bays 1 and 2 from Locomotive Street	25

Contents

Figure 11 – Southern elevation of Bays 2 & 3, and view of the existing heritage boilers	25
Figure 12 – View of the pump house annex from Locomotive Street	25
Figure 13 – View of Bay 4 existing entrances and heritage tanks	26
Figure 14 – View of the southern elevation of Bays 1-4	26
Figure 15 – View of existing plant annex located on the southern elevation of Bays 4a and 5	26
Figure 16 – Northern elevation of the Locomotive Workshop and northern access way	26
Figure 17 – Look south to existing movable heritage collection, circulation space and in-situ heritage artefacts located within Bay 1	27
Figure 18 – Looking north to existing movable heritage collection and in-situ heritage artefacts located within Bays 1, including the Davy Press	27
Figure 19 – Existing heritage machinery located beneath the lean-to structure at the south eastern corner of adjoining Bay 1	27
Figure 20 – Existing Blacksmiths workshop (Eveleigh Works) within Bay 2	27
Figure 21 – Pedestrian entry/exit, for Bays 1 and 2, connecting to Innovation Plaza	28
Figure 22 – Existing movable heritage collection and in-situ heritage artefacts located within Bay 2 north	28
Figure 23 – View of the existing wall and doorway separating Bays 2 and 3 from Bay 2	28
Figure 24 – View of the existing wall and doorway separating Bays 2 and 3 from Bay 3	28
Figure 25 – Existing Bay 3 fit-out and circulation, including treatment of interface with heritage wall.	29
Figure 26 – Existing Bay 4 circulation space, including overhanging heritage gantry shown.	29
Figure 27 – Existing Doltone House event and circulation space within Bay 4, including entry/exit to Locomotive Street	29
Figure 28 – Existing northern portion of Bay 4 fit-out, containing three levels of commercial floorspace	29
Figure 29 – Existing Bay 4a circulation space and fit-out	30

Contents

Figure 30 – Circulation space and building amenities on ground level of Bay 4 north	30
Figure 31 – Commercial fit-out on the second floor of Bay 4	30
Figure 32 – Locomotive Street Base Build Principles	31
Figure 33 – Extract of existing primary pedestrian access points into Bays 1-4a	32
Figure 34 – ATP public access easement	33
Figure 35 – Surrounding bicycle network	35
Figure 36 – 400m radius from Redfern and Waterloo (future) Stations	36
Figure 37 – ATP Site and surrounding context	39
Figure 38 – Aerial Photograph of the site and immediate surrounds	40
Figure 39 – Location A:	41
Figure 40 – Location B:	41
Figure 41 – Location C:	41
Figure 42 – Location D:	41
Figure 43 – Location E:	41
Figure 44 – Location F:	41
Figure 45 – Location G:	42
Figure 46 – Location H:	42
Figure 47 – Location I:	42
Figure 48 – Location J:	42
Figure 49 – Location K:	42
Figure 50 – Location L:	42
Figure 51 – Location M:	43
Figure 52 – Location N:	43
Figure 53 – Location O:	43
Figure 54 – Location P:	43
Figure 55 – Location Q:	43
Figure 56 – Artist impression of internal retail space in Bays 3-4a looking north	45
Figure 57 – Artist impression of retail and heritage interpretation space in Bays 1 and 2 north	45
Figure 58 – Artistic impression of the new corner retail annex adjoined to Bay 1 south	46
Figure 59 – Artistic impression of the entrance into Bays - 4a from Locomotive Street	46
Figure 60 – Existing building Bay grouping arrangement	53
Figure 61 – Proposed ground floor plan for Bays 1-4a	54
Figure 62 – Loading Dock configuration	56

Contents

Figure 63 – Extract of 3D model, to show the relationship between the loading dock, mezzanine interpretation space, mesh wall, and heritage equipment	57
Figure 64 – Proposed travelator connecting to Bay 4.	58
Figure 65 – Extent of excavation for travelator	59
Figure 66 – Proposed Corner Retail Pavilion	60
Figure 67 - Proposed glazed intertenancy wall between Bays 2 and 3	61
Figure 68 – Proposed root platforms and plant	63
Figure 69 – Heritage interpretation design concept for in-situ heritage items	65
Figure 70 – Design concepts and inspiration for the Heritage Exhibition Space	66
Figure 71 – Visual example of touchscreen interpretation facing the Blacksmith area	67
Figure 72 – Proposed public domain works for Locomotive Street frontage	70
Figure 73 – Preferred service vehicle ingress and egress route	71
Figure 74 – Proposed Ground Floor of the Locomotive Workshop	106
Figure 75 – Proposed First Floor level of the Locomotive Workshop	107
Figure 76 – Residential trade area	124
Figure 77 – Worker trade area	126
Figure 78 – Surrounding receivers and measurement locations	135
Figure 79 – Risk Assessment Matrix	144

Tables

Table 1- Secretary's Requirements	13
Table 2 – Parking locations within ATP precinct	34
Table 3 – Key Development Information	47
Table 4 – Description of proposed demolition	50
Table 5 – Summary of proposed physical works	55
Table 6 - Summary of issues raised by relevant authorities, agencies and organisations and project response	77
Table 7 – Objects of the EP&A Act 1979	90

Contents

Table 8 – Assessment of matters for consideration in Section 79C of the EP&A Act	92
Table 9 – Consistency with relevant strategies, policies and guidelines	93
Table 10 – Summary of consistency with Schedule 3, Part 5 of SEPP SRD	95
Table 11 – Summary of consistency with relevant Strategies, EPIs, Polices and Guidelines	98
Table 12 – Compliance with Schedule 1 Assessment Criteria of SEPP 64	100
Table 13 – Compliance with Design Excellence Criteria	105
Table 14 – Key conclusions of the Heritage and Archaeological Impact Statement	109
Table 15 – Retail waste generation estimates, including the supermarket	132
Table 16 – Project noise criteria	136
Table 17 - Assigned values and significance of environmental impacts	145
Table 18 – Mitigation Measures	149

Appendices

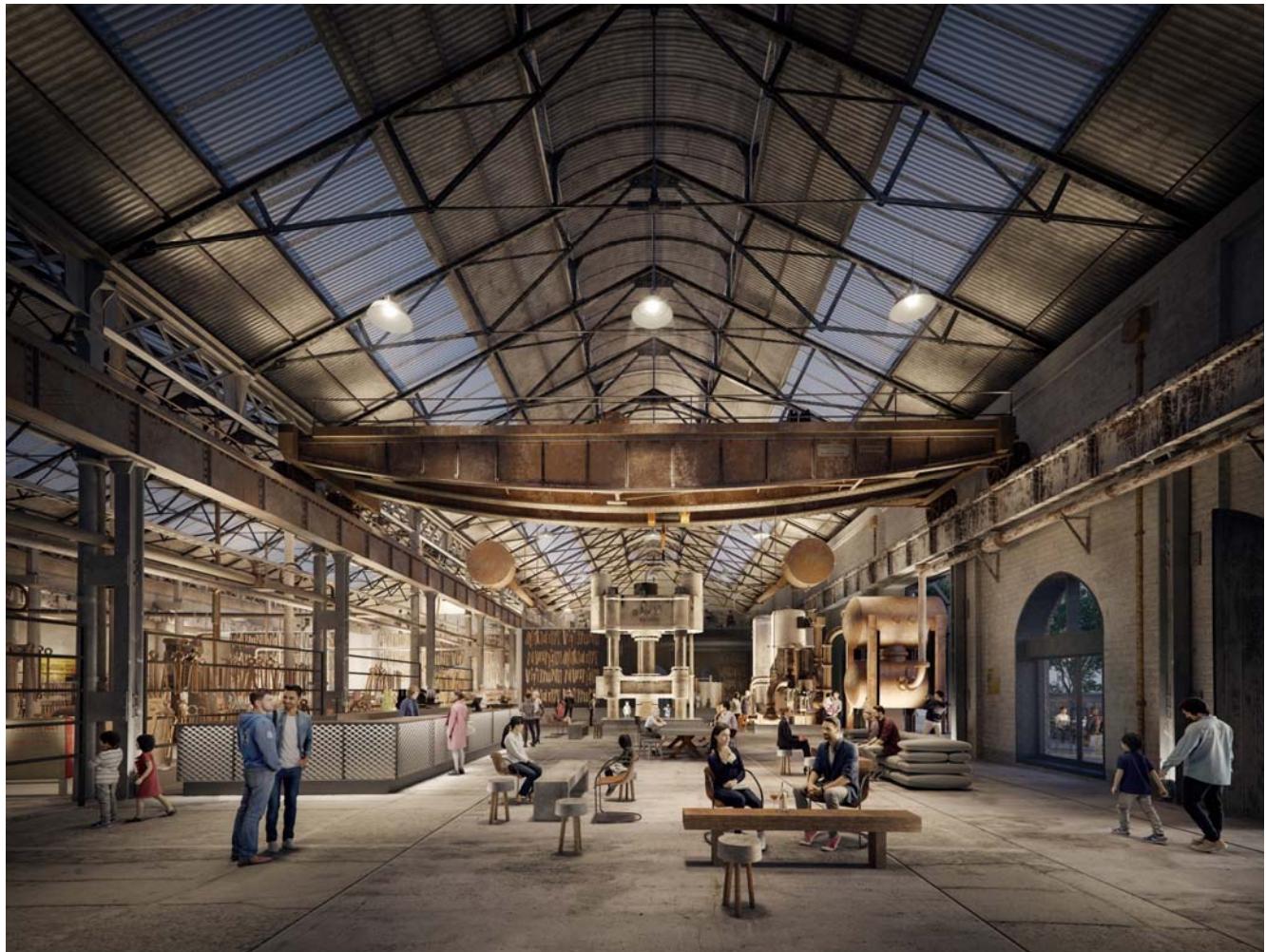
- A** Secretary Environmental Assessment Requirements
Department of Planning and Environment
- B** Architectural Plans
Sissons
- C** Architectural Design Report
Sissons
- D** Economic Impact Assessment
MacroPlan Dimasi
- E** Retail Factors to Success
MacroPlan Dimasi
- F** Quantity Surveyors Report
Mirvac
- G** Site Survey Plan
Linker Surveying

Contents

- H** Preliminary Geotechnical Report
Douglas and Partners
- I** Stormwater & Hydraulic Infrastructure Services Report
NDY
- J** Electrical Services Report
IGS
- K** Hazardous Materials Assessment
JBS&G
- L** Structural Design Report
Arcadis
- M** Heritage and Archaeological Impact Statement
Curio Projects
- N** Illumination Strategy & Lighting Report
Point of View
- O** Landscape Design Report
Sissons
- P** Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment
GTA Consultants
- Q** Operational Plan of Management
Ethos Urban
- R** Operational Waste Management Plan
Waste Audit
- S** Ecological Sustainable Development Report
NDY
- T** Stakeholder and Community Engagement Report
Ethos Urban
- U** Acoustic Assessment
ARUP
- V** Remedial Action Plan
JBS&G
- W** Rail Corridor Impact Statement
Arcadis

Contents

- X** Preliminary Construction Environmental Management Plan & Waste, Air Quality and Water and Wastewater Management Plans
Mirvac Constructions and JBS&G
- Y** Access Review
Morris Goding
- Z** BCA Statement
Philip Chun
- AA** Fire Safety Engineering Statement
Fire Engineering Professionals



**“Great world class design of
the space and exhibits will
make it a destination for
visitors, workers and locals”**

Lindsay Turner

Statement of Validity

Development Application Details

Applicant name	Mirvac Projects Pty Ltd
Applicant address	Level 28, 200 George Street, Sydney, NSW, 2000
Land to be developed	Bays 1-4a, Locomotive Workshop, Australian Technology Park, Eveleigh
Proposed development	Adaptive reuse and redevelopment of the eastern portion of the Locomotive Workshop

Prepared by

Name	Claire Burdett
Qualifications	BSc (Hons) City & Regional Planning, Dip TP, MRTPI
Address	173 Sussex Street, Sydney
In respect of	State Significant Development - Development Application

Certification

I certify that I have prepared the content of this EIS and to the best of my knowledge:

it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;

all available information that is relevant to the environmental assessment of the development to which the statement relates; and

the information contained in the statement is neither false nor misleading.

Signature



Name

Claire Burdett

Date

13 November 2017

1.0 Executive Summary

1.1 Purpose of this Report

This submission to the Department of Planning and Environment (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP& A Act). It relates to the adaptive reuse and redevelopment of the eastern portion of the Locomotive Workshop (being Bays 1-4a) within the Australian Technology Park (ATP) Eveleigh.

Redfern-Waterloo is identified as a State Significant Development 'specified site' in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*. Development with a capital investment value (CIV) of more than \$10 million on the site is SSD for the purposes of the EP&A Act.

Given the proposed development has a capital investment value (CIV) of \$48,440,000 and is in excess of \$10 million (ex. GST), the proposal is declared to be SSD.

On 29th May 2017 a request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought by Mirvac, and the SEARs were issued on 26 June 2017.

This submission is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

1.2 The Site

The Australian Technology Park (ATP) precinct is located within the suburb of Eveleigh on the southern side of the railway line. It is situated approximately 5km south of the Sydney CBD, 8km north of Sydney airport and within 200m of Redfern Railway Station. It has an overall area of approximately 13.2 hectares.

The Locomotive Workshop building is located within the northern portion of the ATP precinct. It is legally described at Lot 4000 in DP1194309, and has a site area of 26,984m². Bays 1-4a has a footprint area of approximately 9,870m² and the proposed development includes public domain works to land within Lot 4007 in DP 1194309. The Locomotive Workshop is listed, along with all its machinery collection on the NSW State Heritage Register. The Site is also included as part of the Eveleigh Railway Workshops listing on the NSW State Heritage Register.

1.3 Background

Historically, the ATP precinct was used in conjunction with the Carriageworks precinct located to the north of the railway line, for railway maintenance, storage and other associated industries. Use of the site as marshalling yards and workshops formed part of a large railway-based precinct on both sides of the main railway line, dating from 1882 and growing in size until its closure in 1989. Since this time, the precinct has been progressively redeveloped and repurposed.

In 2014, the NSW Government resolved to offer development sites within the ATP for sale through a selective tender process conducted by Urban Growth NSW Development Corporation (UGDC). In November 2015 Mirvac Projects Pty Ltd (Mirvac) was named as the successful party and ownership and development rights of the precinct were subsequently transferred.

In December 2015, an SSDA (SSDA 7317) was submitted to the Department of Planning & Environment for a multi-building redevelopment (i.e. Buildings 1, 2 and 3) of the ATP to provide new commercial office, retail and community uses and a significant upgrade to the ATP public domain. Following public exhibition, and the submission of additional information, the development was approved by the Planning Assessment Commission on 20 December 2016. The construction of this development is currently underway.

The redevelopment of the Locomotive Workshop is also part of Mirvac's redevelopment strategy for the ATP. The Locomotive Workshop building is to be redeveloped in its entirety, however planning approvals are sought through the submission of two separate SSDAs. This Application relates to the eastern portion of the Building and is envisaged to be the next phase of urban regeneration within the ATP.

1.4 Overview of the Project

This EIS accompanies an SSD application, which seeks consent for the following:

- demolition of existing 'modern' infill fit-out elements to Bays 3-4a, including display barriers in Bays 1 & 2;
- adaptive reuse of the Bays 1-4a and two annex structures for a mix of retail premises uses, function centre uses, information and education facility uses, general industrial uses, recreation facility (indoor) uses and associated back of house facilities;
- construction of internal and external alterations to Bays 1-4a;
- construction of a travelator between the Locomotive Workshop and Building 2;
- establishment of maximum quantum of 11,358m² GFA to be provided within Bays 1-4a;
- relocation of moveable heritage items;
- heritage interpretation and conservation works;
- public domain improvements within the curtilage of Bays 1-4a;
- provision of an external building illumination system;
- signage; and
- associated utilities and infrastructure.

1.5 Planning Context

Section 5.4 of the EIS considers all applicable legislation in detail. The site is zoned Business Zone - Business Park under the *State Environmental Planning Policy (State Significant Precincts) 2005* and the proposal is permissible with consent, meets the objectives of the zone and is consistent with all relevant planning controls.

1.6 Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by Mirvac Projects Pty Ltd to manage and minimise potential impacts arising from the development.

1.7 Conclusion and Justification

The EIS addresses the SEARs, and the proposal provides for the adaptive reuse and redevelopment of the eastern portion of the Locomotive Workshop building (being Bays 1-4a and the pump house annex) and the construction of a new corner annex, to provide a maximum of gross floor area of 11,358m² that may be used for a mix of retail premises, function centre uses, information and education facility uses, recreation facility (indoor) and general industrial uses.

The potential impacts of the development are acceptable and can be managed. Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning and Environment or his delegate.

2.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the NSW Department of Planning and Environment (the Department) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This EIS supports a State Significant Development (SSD) application, for the adaptive reuse and redevelopment of the eastern portion of the Locomotive Workshop (being Bays 1-4a) within the Australian Technology Park (ATP), Eveleigh.

The ATP is located within the Redfern-Waterloo precinct which is identified as a State Significant Development 'specified site' in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*. Development with a capital investment value (CIV) of more than \$10 million within the Redfern-Waterloo precinct is deemed SSD for the purposes of the EP&A Act.

Given the proposed development has a CIV of \$48,440,000 (exc GST), the proposal is declared to be SSD for the purposes of the EP&A Act.

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of this EIS (**Appendix A**). This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

This report has been prepared by Ethos Urban on behalf of Mirvac Projects Pty Ltd (Mirvac), and is based on the Architectural Plans and Architectural Design Report provided by Sissons Architects (Sissons) (see **Appendices B and C**) and other supporting technical information appended to the report (see Table of Contents).

2.1 Overview of Proposed Development

This SSDA seeks approval for the following:

- demolition of existing 'modern' infill fit-out elements to Bays 3-4a, including display barriers in Bays 1 & 2;
- adaptive reuse of the Bays 1-4a and two annex structures for a mix of retail premises uses, function centre uses, information and education facility uses, general industrial uses, recreation facility (indoor) uses and associated back of house facilities;
- construction of internal and external alterations to Bays 1-4a;
- construction of a travelator between the Locomotive Workshop and Building 2;
- establishment of maximum quantum of 11,358m² GFA to be provided within Bays 1-4a;
- relocation of moveable heritage items;
- heritage interpretation and conservation works;
- public domain improvements within the curtilage of Bays 1-4a;
- provision of an external building illumination system;
- signage; and
- associated utilities and infrastructure.

2.2 Historic Background

Historically, the ATP was used for railway maintenance, storage and other associated industries. Use of the site as marshalling yards and workshops formed part of a large railway-based precinct located on both sides of the main railway line, dating from 1882 and growing in size until its closure in 1989. Since this time, the ATP precinct has been progressively redeveloped and repurposed.

The Locomotive Workshops are identified as having State heritage significance and are identified on the NSW State Heritage Register as part of the former Eveleigh Railway Workshops (Item. No. 01140). The Locomotive Workshop consists of a two-storey sandstone brick Neo Classical structure, with 16 equally sized bays running north-south that are characterised by internal hollow cast iron columns, 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.

It is noted however, that Mirvac seek to reinstate the original numbering of the Bays and numbering references have been amended to all documentation throughout this report and supporting plans and sub-consultant reports accordingly.

Construction of the workshops commenced in 1887 and as noted above, was originally built in two parts. Bays 1 to 4, at the eastern end, contained the 'dirty' trades such as blacksmithing and boiler making, while the original Bays 5 to 15 contained the machining, tooling and assembly areas. Bay 4a was used as an annex to Bay 4, including additional 'dirty' trades such as smithing and boiler making. Each bay was originally used for one or more trades required for the repair or manufacture of locomotives and their components. The workshops were the hub of locomotive manufacturing from the 1880s to the 1930s, when many functions were progressively relocated to the newly-constructed Chullora Workshops. The workshops employed vast numbers of employees in these trades and many lived nearby in working class suburbs such as Redfern and Erskineville. By the 1960s, the workshops had begun to wind down as the NSW Railways changed technology to diesel from steam. The workshops finally shut in 1988 and were converted to the ATP in the mid-1990s.

Since 1996, the Locomotive Workshops have been substantially redeveloped as commercial office space, with associated support activities such as coffee shops and conference rooms. Overall, the building fabric remains predominantly intact.

The machinery and tool collection is afforded statutory heritage protection (under the Heritage Act, 1977), and includes examples of the machines and equipment installed in the workshops at the time that it closed. The collection is listed on the NSW State Heritage Register as State Heritage Register Item no. 01141. Currently, the majority of the collection is housed in Bays 1 and 2, however additional heritage-listed industrial items are on display and are interpreted throughout the remainder of the Locomotive Workshop building and ATP precinct.

2.3 State Significant Development Applications within the ATP

Three State Significant Development Applications (SSDAs) currently apply to the ATP Precinct. Their site boundaries and application numbers are illustrated in **Figure 1**.

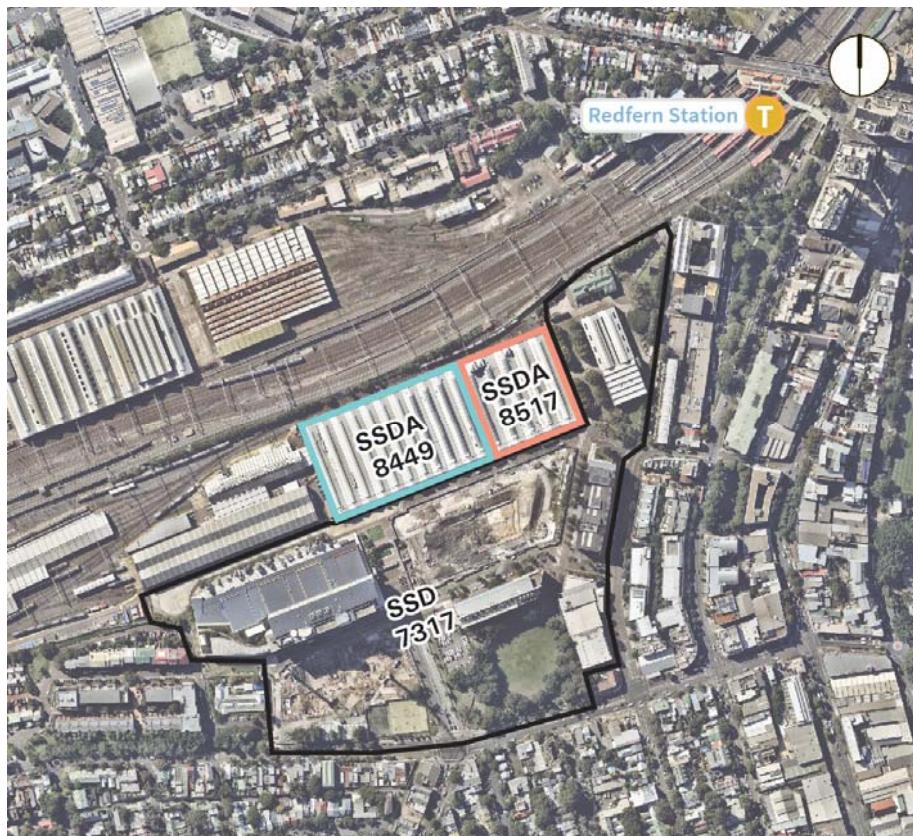


Figure 1 – ATP State Significant Development Applications

Source: Ethos Urban

2.3.1 State Significant Development Application 7317 (SSDA 7317)

In 2014, the NSW Government resolved to offer development sites within the ATP for sale through a selective tender process conducted by Urban Growth NSW Development Corporation (UGDC). In November 2015 Mirvac was named as the successful party and ownership and development rights of the precinct were subsequently transferred.

In December 2015, an SSDA was submitted to the Department for a multi-building redevelopment (i.e. Buildings 1, 2 and 3 identified in **Figure 2**) of the ATP to provide new commercial office, retail and community uses and a significant upgrade to the ATP public domain. Following public exhibition, and the submission of additional information, the development was approved by the Planning Assessment Commission on 20 December 2016. The construction of this development is currently underway.

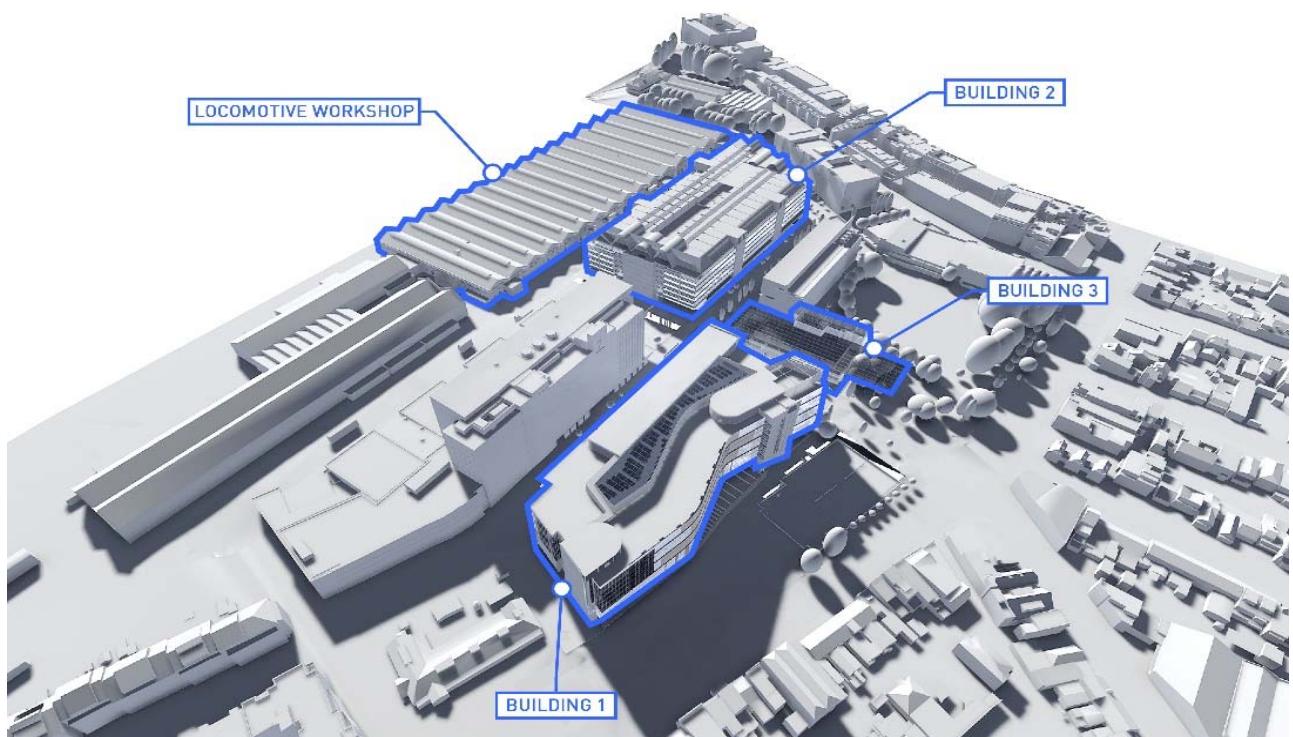


Figure 2 – Locational context of the ATP Buildings 1,2 & 3

Source: Sissons

2.3.2 Locomotive Workshop Redevelopment

The redevelopment of the Locomotive Workshop is the next phase of Mirvac's redevelopment strategy for the ATP. The Locomotive Workshop is to be redeveloped in its entirety and planning approvals for the proposed works are sought through the submission of two separate State Significant Development Applications. The principal reason for preparing and submitting two separate SSDAs is to facilitate an orderly construction program for the proposed redevelopment and to ensure that relevant assessment matters are considered in light of the separable uses and areas they relate to.

2.3.3 State Significant Development Application 8517 (SSDA 8517)

This SSDA application relates to the eastern portion of the Locomotive Workshop being Bays 1-4a. On 29th May 2017 a request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was issued by Mirvac and the SEARs were issued on 26 June 2017.

2.3.4 State Significant Development Application 8449 (SSDA 8449)

SSDA 8449 relates to the western portion of the Locomotive Workshop being Bays 5-15 and is submitted concurrently with this SSD Application.

2.4 Applicant

Mirvac Projects Pty Ltd is the applicant for the purposes of this SSD application.

2.5 Objectives of the Development

Mirvac's vision for the ATP is to create a vibrant new precinct that combines world class work, retail and community spaces. In line with this, Mirvac has committed to conserving, interpreting and celebrating the precinct's rich and significant heritage assets and stories.

With specific reference to Mirvac's future vision for the Locomotive Workshop, the key objectives for the proposed development are as follows:

- celebrate the rich history of the site;
- create an exceptional place to work, and lifestyle destination that welcomes, celebrates and enriches the lives of its communities;
- foster a technology and innovation hub; and
- enrich the public experience.

More specifically, the Architectural Design Report at **Appendix C** outlines a number of design principles (refer to **Section 4.6**), however the key objective for the design approach to Bay 1-4a has been taken from the Conservation Management Plan evolution principle:

"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"

2.6 Analysis of Alternatives

2.6.1 Strategic need for the proposal

The proposed development represents a unique opportunity for the Locomotive Workshop to enter the next phase of its life. The revitalisation and adaptive re-use of the under-utilised spaces and the revitalisation of this State significant heritage building will provide an exceptional experience for the future workers and visitors within the ATP, local Eveleigh and Redfern communities as well as the wider Sydney population.

Following extensive research and analysis of the existing and future Eveleigh demographics, (as discussed in **Section 6.7**), and coupled with Mirvac's desire to truly activate the ATP precinct, break the business park atmosphere, and draw people to appreciate the significance of its heritage, as well as provide the necessary facilities to service the new commercial development within the ATP and the future surrounding local residential population, there was a need to provide a critical mass of retail floorspace, that was not provided by the development included within SSDA 7317. Mirvac therefore determined that the Locomotive Workshop provided the best opportunity to deliver this 'critical mass' whilst creating a unique and significant point of difference in the market, which could incorporate a range of retail services and facilities that include production, education, manufacturing, wholesaling and dining experiences.

Critical factors of success were then researched, and as justified by MacroPlan Dimasi in the Economic Impact Assessment at **Appendix D** and Retail Factors to Success at **Appendix E**, it was determined that in order to generate significant and frequent visitation, a key established anchor and everyday offer such as a supermarket, would be fundamental to attracting other speciality retailers, including food and beverage type retailers and bespoke make/ seller operations. The provision of a supermarket,

along with the retention of the Blacksmith and a need to provide effective and dynamic interpretation of the heritage of the Site and its in-situ and moveable heritage collections have therefore been the key factors considered in formulating the proposed design.

The proposed development therefore represents the next phase of a long term strategic planning process that, in part responds to the NSW Government's requirement to unlock the social and economic benefits that the ATP has held, as well as providing a range of goods and services for the local community. It represents Mirvac's vision for the Locomotive Workshop to be the 'jewel in the crown' for the ATP precinct, that celebrates and enhances its heritage significance, provides significant opportunities for enhanced cultural heritage tourism and public activation, and establishes a new retail and social hub for the benefit of the ATP community and the surrounding existing and future residential community.

2.6.2 Alternative Options

Three options are available to Mirvac in responding to the need to revitalise and adaptively re-use Bays 1-4a of the Locomotive Workshop.

Option 1: Do Nothing

The 'do nothing' option would result in the Locomotive Workshop and associated facilities remaining unchanged. No redevelopment or building works would be undertaken to the Bays 1-4a or surrounding public realm. The Locomotive Workshop will then continue to be rarely visited by the general public and include a static and uninformative display of the moveable heritage collection.

This option undermines the strategic importance of the Site within Central to Eveleigh Global Sydney Precinct. Further, the Locomotive Workshop will stagnate and not align with the wider vision and objectives identified for ATP, in *A Plan for Growing Sydney, the Draft Greater Sydney Region Plan and the draft Eastern City District Plan* that desires that ATP be a world class technology and innovation hub. As demonstrated in **Section 6.7**, for the ATP to achieve this vision, be successful, integrate with the surrounding local resident population and for its long-term longevity, there is a requirement and demand to provide supporting uses (i.e. retail, wellness, community etc) in a sufficient and effective concentration to service the worker and wider populations.

The 'do nothing' option fails to capture the significant opportunity to increase employment opportunities and integrate and activate the Locomotive Workshop with the wider community population to realise its full potential. If nothing is changed within the Building, overtime it will become further outdated, cease to positively contribute to the ATP precinct and contribute to the failure of the ATP as a world class workplace. Accordingly, this option is not considered to be a viable proposition.

Option 2: Provide a different design concept

Option 2 would involve the redevelopment of Bays 1-4a being undertaken in an alternative manner than proposed as part of this SSDA. As noted in the Architectural Design Report (**Appendix C**) a number of alternative layouts were explored in devising the overall organisation system of the Locomotive Workshop along with the option of making minor improvements to the existing fit-outs within Bays 3-4a and leaving Bays 1 and 2 untouched.

The intent for the development is to drive activation of the precinct and avoid ATP becoming a business park confined to business hours. The intent for the development is to contribute the ATPs vision to transform into world class workplace that is integrated with the surrounding local community. As such, the option of making minor improvements to the existing fit-out was discounted. Sissons also explains in detail in its Architectural Design Report (**Appendix C**) the reasons why the alternative layout options were discounted and why the proposed design was chosen.

The option of proposing additional commercial floorspace, in line with that which is proposed in SSD 8449, within Bays 3-4a was also explored. However, as discussed in **Section 2.6.1**, and noted above, for the ATP to effectively integrate with the surrounding local community and meet the needs of the new worker population that will come on-site when Buildings 1 and 2 are occupied, a need for an effective quantum and concentration of retail floorspace was identified. The option of utilising Bays 3-4a for additional commercial/ office based uses was then discounted. Furthermore, the proposition of establishing a retail/ food and beverage based hub within Bays 1-4a was viewed as a positive by the City of Sydney planning officers at the initial consultation meeting held on 1st May 2017.

In addition, over the course of the evolution of the design and due to the input from the Government agencies (i.e. NSW Heritage Division and City of Sydney planning and heritage officers) and consultation groups that have been involved in the project since its inception, alternative options to the general layout of the proposed tenancies and uses have been tabled and discounted for various reasons as discussed in the Architectural Design Report (**Appendix C**). Mirvac is therefore confident that the proposal is the best possible option.

Option 3: The Proposal

Option 3 involves the redevelopment and adaptive reuse of Bays 1-4a as proposed within this SSDA (described in **Section 4.0**). The repurposing of Bays 1-4a, has been the focus of the majority of the extensive consultation sessions that have been undertaken over the past 6 months. The proposal is considered to be the best possible outcome and will ensure that the Locomotive Workshop will be refurbished in a sensitive manner that responds to a strategic need for retail uses, provides a base and home for the high quality cultural heritage tourism experience that will be implemented throughout the ATP precinct, and revitalises and prolongs the life of the existing heritage exhibition spaces.

As noted above, the proposed design for Bays 1-4a has evolved over many months and has been the subject of detailed and extensive consultation exercises with the City of Sydney Council, the Heritage Division, the various local action groups, and the wider community.

Mirvac has worked closely with its expert consultant team to develop a design response that respects and enhances the history and heritage of the Locomotive Workshop, and meets Mirvac's strategic vision. Whilst it is likely that there may be minor changes to the design made as part of the natural development of the design, the proposed development, as described in **Section 4.0** is considered to provide the best outcome for the Site.

2.7 Secretary's Requirements

As noted in **Section 2.3.3** in accordance with section 89G of the EP&A Act and Schedule 2 of the EP&A Regulations, the Secretary of the Department of Planning and Environment issued the SEARs on 26th June 2017. A copy of the SEARs is included at **Appendix A**.

Table 1 provides a detailed summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1- Secretary's Requirements

Requirement	Location in Environmental Assessment	
General		
The Environmental Impact Statement (EIS) must address the <i>Environmental Planning and Assessment Act 1979</i> and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000.	Environmental Impact Statement	
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	Section 7.0	
Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: <ul style="list-style-type: none"> • adequate baseline data; • consideration of potential cumulative impacts due to other –development in the vicinity; and • measures to avoid, minimise and if necessary, offset the – predicted impacts, including detailed contingency plans for managing any significant risks to the environment. 	Section 6.0	
<ul style="list-style-type: none"> • The EIS must be accompanied by a report from a qualified quantity surveyor providing: • A detailed calculation of the capital investment value (CIV) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. • An estimate of the jobs that will be created by the future development during the construction and operational phases of the development 	Appendix F	
Certification that the information provided is accurate at the date of preparation.	Page i	
Key Issues	EIS Section	Technical Study
Statutory and Strategic Context		
EIS must address Statutory provisions applying to the site within the following Environmental Planning Instruments: <ul style="list-style-type: none"> • Environmental Planning and Assessment Act 1979 	Section 6.0	

Requirement	Location in Environmental Assessment
<ul style="list-style-type: none"> State Environmental Planning Policy (State and Regional Development) 2011 	Section 6.0
<ul style="list-style-type: none"> State Environmental Planning Policy (State Significant Precincts) 2005 	Section 6.3.1
<ul style="list-style-type: none"> State Environmental Planning Policy No. 64 – Advertising and Signage 	Section 6.3.2
<ul style="list-style-type: none"> State Environmental Planning Policy No. 55 – Remediation of Land. <p>The EIS shall address the relevant planning provisions, goals and strategic planning objectives in the following:</p>	Section 6.3.4 Remedial Action Plan – Appendix V
<ul style="list-style-type: none"> A Plan for Growing Sydney 	Section 6.3
<ul style="list-style-type: none"> Draft Central District Plan 	Section 6.3
<ul style="list-style-type: none"> Sustainable Sydney 2030 	Section 6.3 Landscape Design Report – Appendix O
<ul style="list-style-type: none"> City of Sydney Public Domain Manual 	Landscape Design Report – Appendix O
<ul style="list-style-type: none"> Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics Conservation Management Plan for the Locomotive Workshop building Heritage Council Guideline on Heritage Curtilages 1996 	Heritage and Archaeological Impact Statement – Appendix M
Built Form and Public Domain	
<p>The EIS shall:</p> <ul style="list-style-type: none"> address the principles outlined in the Conservation Management Plan for the Locomotive Workshop building 	Section 6.6 Heritage and Archaeological Impact Statement - Appendix M
<ul style="list-style-type: none"> demonstrate how the existing building will be adaptively reused, including process for removing intrusive fabric, whilst maintaining the heritage significance of the building 	Section 4.0 and Section 6.6 Appendices B, X and M
<ul style="list-style-type: none"> provide details of the public domain works and landscaping adjacent to the site, and address how the proposal retains and promotes the existing and future built form character and fabric of the Australian Technology Park (ATP) 	Section 4.26 Landscape Design Report– Appendix O
<ul style="list-style-type: none"> demonstrate consistency with the Public Access Covenant as it outlines the requirements of maintaining public access throughout ATP 	Section 3.7.2

Requirement	Location in Environmental Assessment	
<ul style="list-style-type: none"> • demonstrate how the proposal relates to the future plans for Bays 6-16 (as existing numbering), including consideration of changed spatial character, location of mezzanine levels, continuity of design, and holistic heritage impact management 	Section 6.5	Architectural Design Report – Appendix C Heritage and Archaeological Impact Statement – Appendix M
<ul style="list-style-type: none"> • address the relationship with the New Intercity Fleet Eveleigh Facility Project, including any land within the site to be acquired by Transport for NSW 	Section 6.17.1	Architectural Design Report – Appendix C
Land Use		
<p>The EIS shall:</p> <ul style="list-style-type: none"> • demonstrate how the proposed retail uses are consistent with the objectives of the Business Park Zone which seeks to provide retail uses that primarily serve the needs of the working population and local community; 	Section 6.3	
<ul style="list-style-type: none"> • provide a retail market demand and impact analysis to support the proposed quantum and type of retail uses in the context of the ATP and the surrounding area; and 	Section 6.7	Economic Impact Assessment – Appendix D
<ul style="list-style-type: none"> • detail how ongoing Blacksmith's activities can be accommodated within the proposal (if proposed). 	Section 4.13	Architectural Design Report – Appendix C

Requirement	Location in Environmental Assessment
<p>Heritage</p> <p>The EIS shall include a Heritage Impact Assessment, prepared in accordance with the NSW Heritage Office publication Statement of Heritage Impact, and in accordance with the guidelines in the NSW Heritage Manual, that:</p> <ul style="list-style-type: none"> • addresses the impacts of the proposal on the heritage significance of the Locomotive Workshops and Eveleigh Railway Workshops • addresses the cumulative heritage impacts of this proposal on the Eveleigh Railway Workshops considering the other projects occurring in the ATP component of this State Heritage Register site • demonstrates consistency with the Heritage Public Positive Covenant, including the Conservation Management Plan for the Locomotive Workshop building and ATP • assesses the impact of the proposal on any aboriginal and non-aboriginal archaeology and outline any proposed management and conservation measures to protect and preserve archaeology; • addresses the impact to moveable heritage items and in-situ machinery, and conservation and management measures to ensure protection of significant objects • addresses the impact to the industrial character of the building • demonstrates how the proposal relates to the future plans for Bays 6-16; and 	Section 6.6 Heritage and Archaeological Impact Statement - Appendix M
<ul style="list-style-type: none"> • considers opportunities for heritage interpretation within the public domain, including the relationship with and any updates required to the Interpretation Strategy for the ATP. 	Section 4.20 Heritage and Archaeological Impact Statement - Appendix M

Requirement	Location in Environmental Assessment
<p>Traffic & Parking and Accessibility (construction and operation)</p> <ul style="list-style-type: none"> • The EIS shall include a Traffic and Transport Impact Assessment that: • demonstrates that the demand for car parking generated by the development will be accommodated within the existing and approved car parking spaces provided across the ATP site; • demonstrate how the development will support Government strategies in promoting sustainable travel choices, and determine the adequacy of pedestrian and cycle facilities to meet the likely future demand of the proposed development and give consideration of measures to be implemented • outlines the measures to be implemented to encourage users of the development, including workers and visitors, to make sustainable travel choices, including walking, cycling, public transport and car sharing, particularly the provision of end-of-trip facilities, and wayfinding strategies • details the traffic and transport impacts (including bus services and infrastructure) during construction and how these will be mitigated including the preparation of a Construction Traffic Management Plan and consideration of cumulative impacts with any other construction activities within the ATP site; • details daily and peak traffic movements likely to be generated by the proposed development, the cumulative traffic impacts on the surrounding road network due to other developments within the ATP, and the impact on the surrounding road network and key intersections; • assesses road and pedestrian safety adjacent to the proposed development and measures to mitigate any identified issues; • details of existing and proposed access arrangements for cars, emergency vehicles, bicycles and point-to-point transport, including compliance with relevant Australian Standards; and • how any servicing and delivery access and loading requirements for the commercial uses will be provided (including vehicle types, the likely arrival and departure times and swept paths). 	<p>Section 6.7</p> <p>Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix P</p>

Requirement	Location in Environmental Assessment
<p>Noise (construction and operational)</p> <p>The EIS shall:</p> <ul style="list-style-type: none"> identify the main noise generating sources and activities at all stages of construction identify any noise sources during operation, and potential impacts on the surrounding occupiers of land outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land during construction and operation. 	<p>Section 6.12</p> <p>Acoustic Assessment – Appendix U</p>
<p>Hazardous Materials and Contamination</p> <p>The EIS shall address the potential for hazardous materials and contamination to be present on the site and demonstrate that the site can be made suitable for development.</p>	<p>Section 6.11</p> <p>Hazardous Materials Assessment – Appendix K</p>
<p>Ecologically Sustainable Development (ESD)</p> <p>The EIS shall:</p> <ul style="list-style-type: none"> detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the <i>EP&A Regulation 2000</i>) will be incorporated in the design, construction and ongoing operation of the development; include a framework for how the proposed development will reflect best practice sustainable building principles to improve environmental performance, including energy and water efficient design and technology, and use of renewable energy outline any sustainability initiatives that will reduce the demand for drinking water including any proposed alternative water supply, proposed end uses of drinking and non-drinking water, demonstration of water sensitive urban design and any proposed water conservation measures. 	<p>Section 6.19</p> <p>Ecological Sustainable Development Report – Appendix S</p>
<p>Utilities & Railway Infrastructure</p> <p>The EIS shall:</p> <ul style="list-style-type: none"> in consultation with relevant agencies, address the existing capacity and any augmentation requirements of the development for the provision of utilities provide details of how infrastructure assets of various utility stakeholders, will be protected or relocated during the construction of the project 	<p>Section 6.15</p> <p>Electrical Services Report – Appendix J</p>

Requirement		Location in Environmental Assessment
<ul style="list-style-type: none"> • demonstrate demands and satisfactory servicing and arrangements for drinking water, wastewater and recycled water (if required) • demonstrate that the proposed development does not adversely impact on any existing water, wastewater or stormwater main, or Sydney Water asset, easement or property, including landscaping options 	Section 6.16	Stormwater & Hydraulic Infrastructure Services Report – Appendix I
<ul style="list-style-type: none"> • address any potential impacts on existing Sydney Train infrastructure, in particular the Illawarra Line Tunnels. 		Rail Corridor Impact Statement – Appendix W
Contributions and/or Voluntary Planning Agreement		
<ul style="list-style-type: none"> • The EIS shall address the contributions payable pursuant to the Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006 and the Redfern Waterloo Authority Contributions Plan 2006. 	Section 6.20	
Plans and Documents		
<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>EP&A Regulation 2000</i>. Provide these as part of the EIS rather than as separate documents.</p>	Section 6.19	
<p>In addition, the EIS must include the following:</p> <ul style="list-style-type: none"> • site title diagrams and survey plan, showing existing levels, location and height of existing and adjacent structures/buildings 		Architectural Plans – Appendix B
<ul style="list-style-type: none"> • site analysis plan 		Architectural Plans – Appendix B
<ul style="list-style-type: none"> • architectural drawings and perspectives (to a usable scale at A3) 		Architectural Plans – Appendix B
<ul style="list-style-type: none"> • photomontages / perspectives 		Architectural Plans – Appendix B
<ul style="list-style-type: none"> • structural engineer's report 		Structural Design Report – Appendix L
<ul style="list-style-type: none"> • green travel plan 		Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix P
<ul style="list-style-type: none"> • public domain and landscaping plans 		Landscape Design Report – Appendix O
<ul style="list-style-type: none"> • Architectural Design Report 		Architectural Design Report – Appendix C

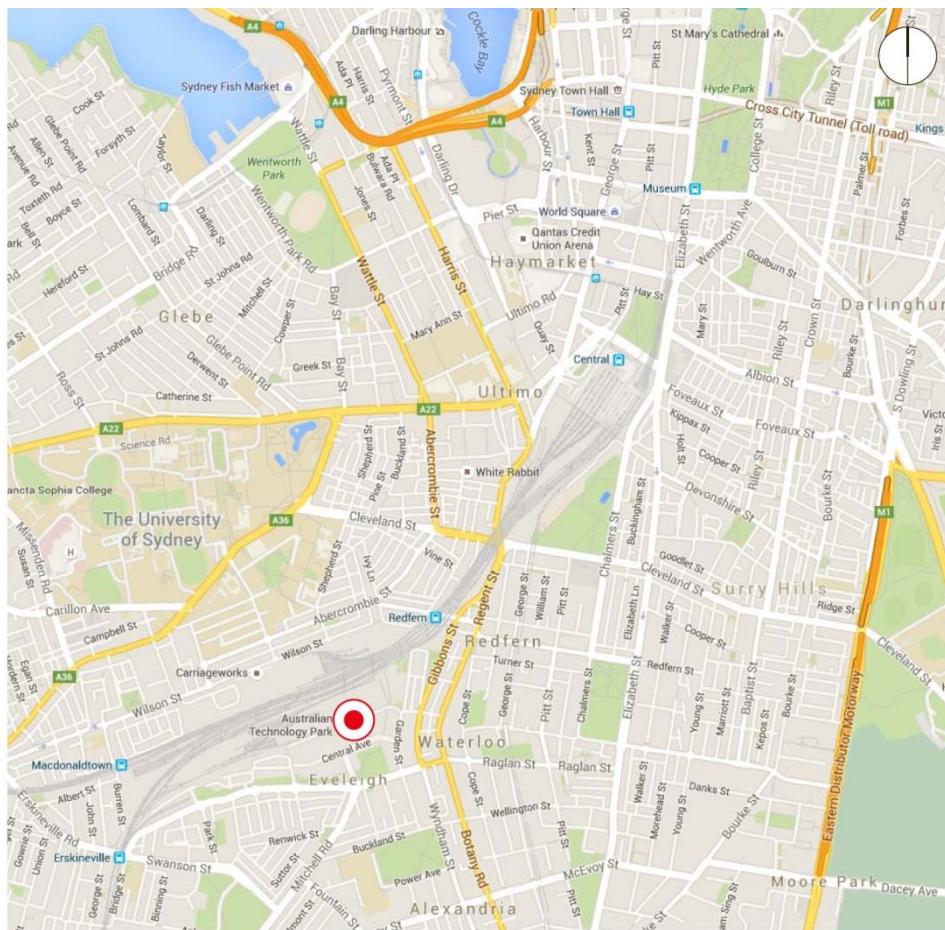
Requirement	Location in Environmental Assessment
• ESD statement (incorporating a sustainability framework)	Ecological Sustainable Development Report – Appendix S
• heritage impact assessment (including archaeological assessment)	Heritage and Archaeological Impact Statement - Appendix M
• access impact statement	Access Review – Appendix Y
• transport, traffic and parking assessment	Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix P
• services and utilities infrastructure report	Electrical Services Report – Appendix J Stormwater & Hydraulic Infrastructure Services Report – Appendix I
• BCA statement	BCA Statement – Appendix Z
• schedule of materials and finishes	Architectural Plans – Appendix B
• operational plan of management	Operational Plan of Management – Appendix Q
• noise impact assessment	Acoustic Assessment – Appendix U
• preliminary construction management statement	Preliminary Construction Management Statement – Appendix X
Consultation	
During the preparation of the EIS, you are required to consult with the relevant local, State or Commonwealth Government authorities, service providers, and the local community. In particular, you must consult with:	Section 5.0
<ul style="list-style-type: none"> - City of Sydney Council - Roads and Maritime Services - Transport for NSW - Sydney Water - Urban Growth NSW Development Corporation - Local Aboriginal and Community Groups 	Stakeholder and Community Engagement/Consultation Report – Appendix T
The EIS must describe the consultation process, issues raised and how the proposed development has been amended in response to these issues. A short explanation should be provided where amendments have not been made to address an issue.	

3.0 Site Analysis

3.1 Site Location and Context

The Locomotive Workshop is located at 2 Locomotive Street within the northern part of the ATP, Eveleigh.

The ATP precinct is situated within the City of Sydney Local Government Area and is strategically located 5km south of the Sydney CBD, 8km north of Sydney airport and within 200m of Redfern Railway Station. The precinct has an area of over 13.2 hectares, and is bounded by one of Sydney's primary railway arteries to the north, Cornwallis Street and Garden Street to the east, Henderson Road to the south, railway workshops and yards to the north-west and government owned community housing to the west. The ATP's locational context is shown at **Figure 3** and an aerial photograph of the ATP precinct is provided at **Figure 4**.



● The Site

Figure 3 – Location of the Australian Technology Park

Source: Google Maps



- The ATP Precinct
- Bays 1-4a of Locomotive Workshop

Figure 4 – Aerial photograph of the ATP Precinct

Source: Nearmap & Ethos Urban

3.2 Site Description

The Locomotive Workshop is rectangular in shape and extends to 26,984m² in area. It is owned by Mirvac Projects (Retail and Commercial) Pty Ltd and is legally described as Lot 4000 in DP 1194309. A site survey has been prepared and is included at **Appendix G**.

The Site, the subject of this SSDA comprises Bays 1-4a of the Locomotive Workshop and incorporates part of the Locomotive Street public domain. A Site Plan, prepared by Sissons Architects is included within the Architectural Plans at **Appendix B** and an extract is included at **Figure 4**.

The part of the Locomotive Street public domain that falls within the Site boundary is legally described as Lot 4007 in DP1194309 and is owned by Eveleigh Precinct Pty Ltd.

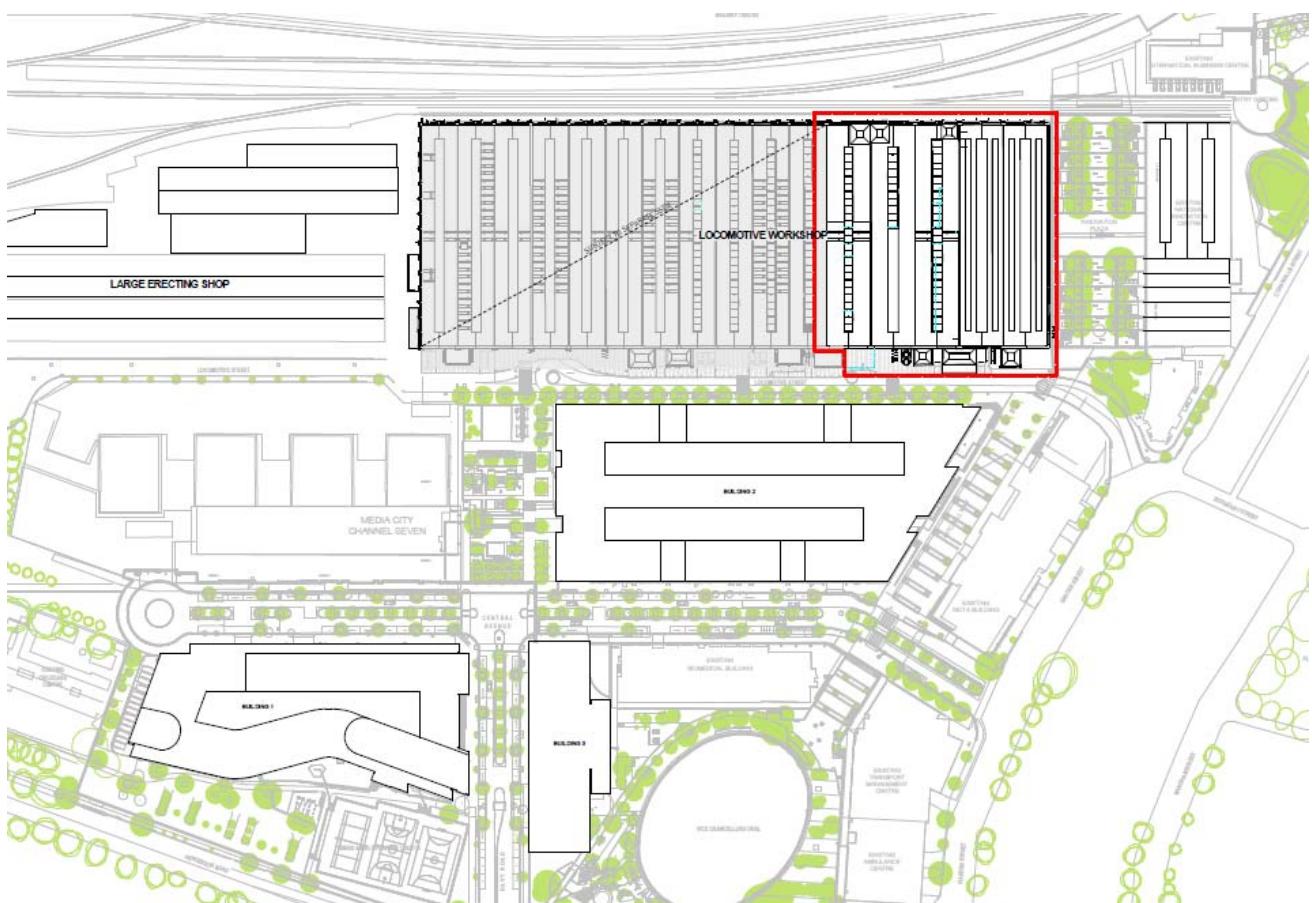


Figure 5 – Site Plan

Source: Sissons

3.3 Existing Development

The Locomotive Workshop is a large brick building, with a sheet metal roof, that is divided into 16 'Bays' that run north-south. It presents as a two-storey structure, and as illustrated in **Figure 6**, comprises a mix of single, two and three storey internal spaces. Bays 1-4a have a footprint area of approximately 9,870m², and currently incorporates the following:

- a Blacksmith workshop area (Bays 1 &2);
- heritage interpretation space (Bays 1 & 2) housing the majority of the Eveleigh movable heritage collection;
- a theatre and dining room/atrium within the southern half of Bays 3 - 4a;
- commercial office accommodation within the northern half of Bays 3 – 4a; and
- circulation and entertaining space.

The Locomotive Workshop also incorporates a lean-to structure at the south eastern corner of Bay 1 and three annexes along the southern side of Bays 1-4a comprising:

- a brick annex adjoined to Bay 1;
- a heritage pump house annex at Bay 3; and
- new plant annex between Bays 4a & 5.

Photographs of the external appearance of the Locomotive Workshop Building and the interiors within Bays 1 - 4a are included at **Figure 7 to Figure 16**.

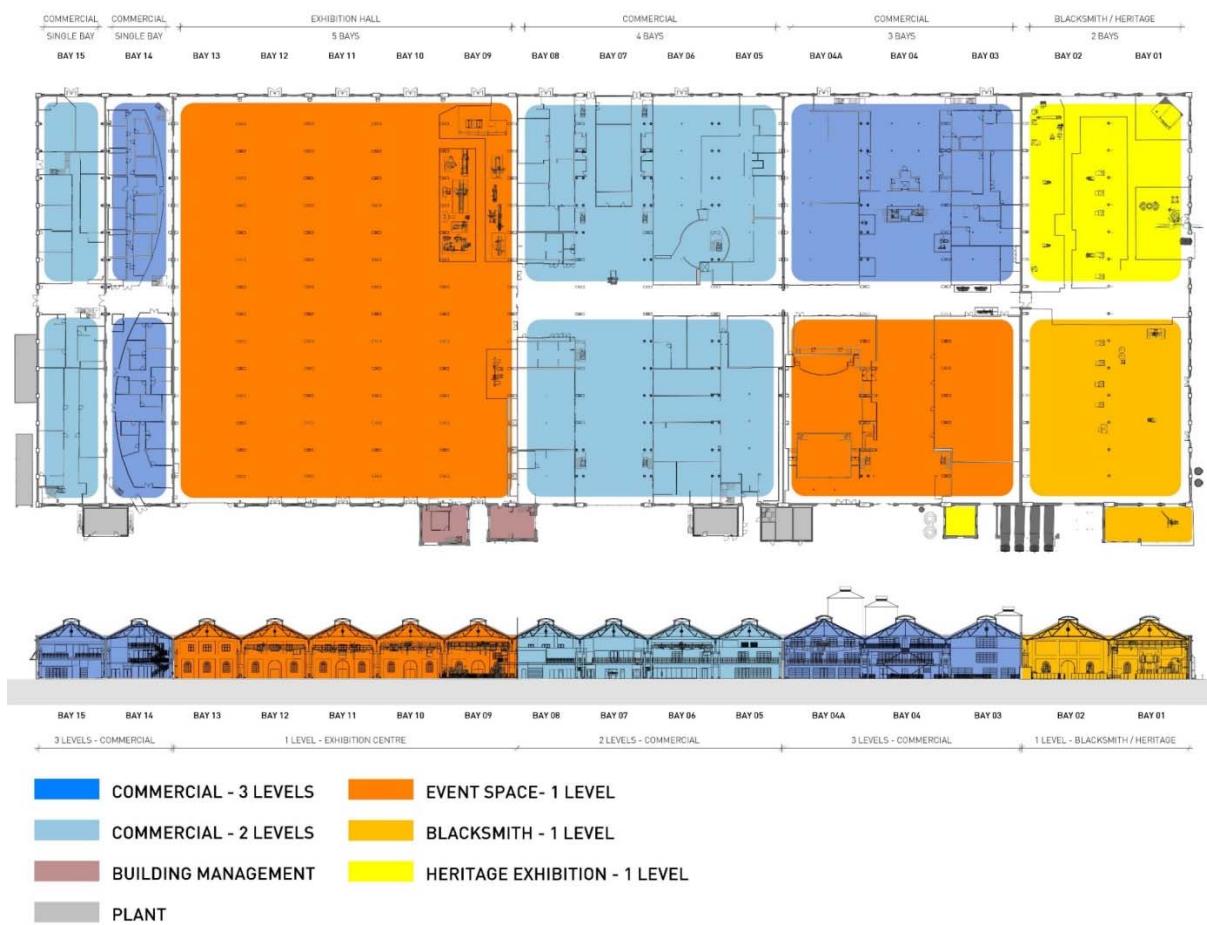


Figure 6 – Existing layout of the Locomotive Workshop

Source: Sissons

Bay 1 – 4a External Appearance

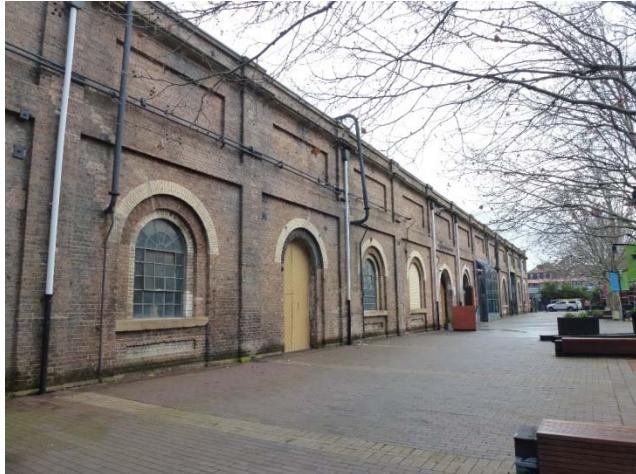


Figure 7 – Eastern elevation of the Locomotive Workshop looking north, from Innovation Plaza



Figure 8 – The south-eastern corner of Bay 1 and existing lean-to structure and Bay 1 annex



Figure 9 – Southern elevation of Bay 1 and the existing lean-to structure



Figure 10 – View of the Bay 1 annex between Bays 1 and 2 from Locomotive Street



Figure 11 – Southern elevation of Bays 2 & 3, and view of the existing heritage boilers



Figure 12 – View of the pump house annex from Locomotive Street



Figure 13 – View of Bay 4 existing entrances and heritage tanks



Figure 14 – View of the southern elevation of Bays 1-4



Figure 15 – View of existing plant annex located on the southern elevation of Bays 4a and 5

Source: Ethos Urban



Figure 16 – Northern elevation of the Locomotive Workshop and northern access way

Bays 1-4a Interior



Figure 17 – Look south to existing movable heritage collection, circulation space and in-situ heritage artefacts located within Bay 1



Figure 18 – Looking north to existing movable heritage collection and in-situ heritage artefacts located within Bays 1, including the Davy Press



Figure 19 – Existing heritage machinery located beneath the lean-to structure at the south eastern corner of adjoining Bay 1

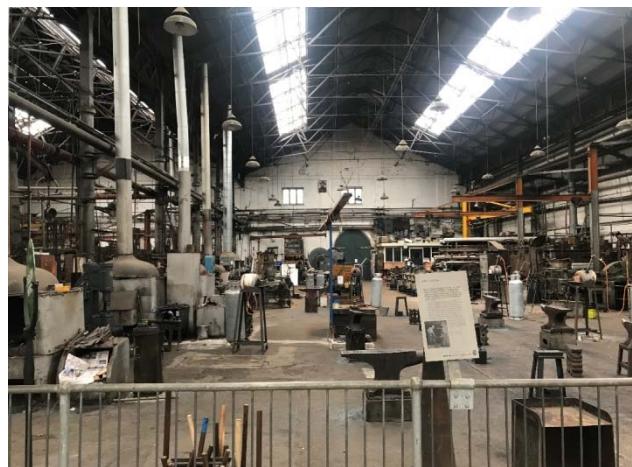


Figure 20 – Existing Blacksmiths workshop (Eveleigh Works) within Bay 2



Figure 21 – Pedestrian entry/exit, for Bays 1 and 2, connecting to Innovation Plaza



Figure 22 – Existing movable heritage collection and in-situ heritage artefacts located within Bay 2 north

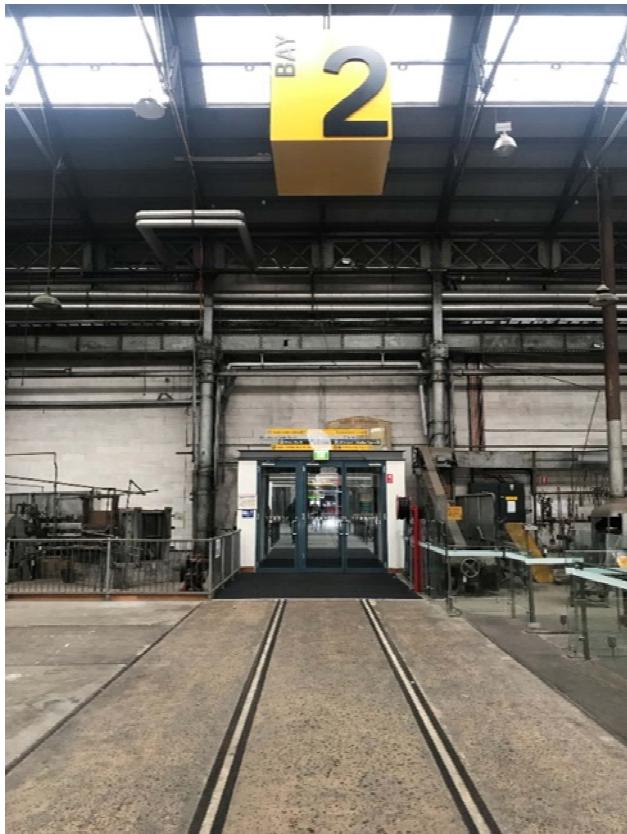


Figure 23 – View of the existing wall and doorway separating Bays 2 and 3 from Bay 2

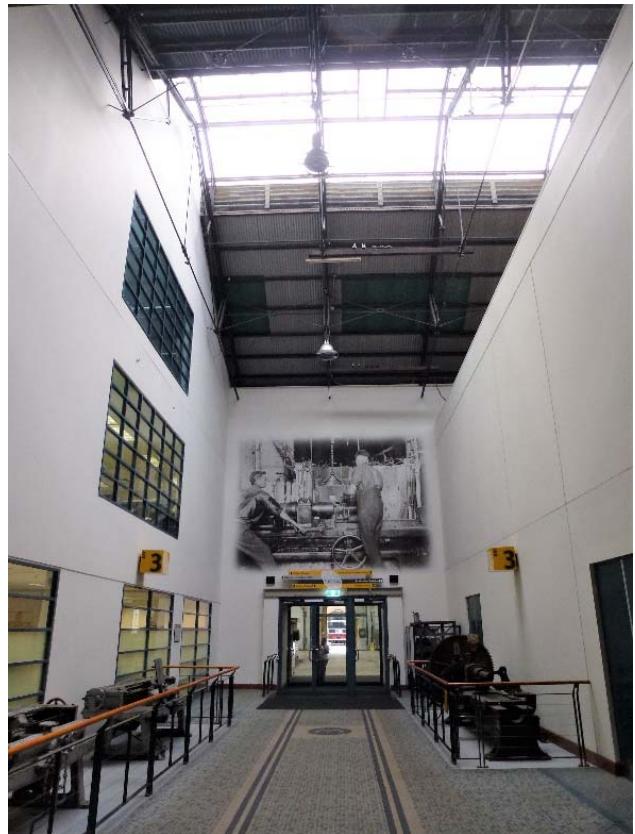


Figure 24 – View of the existing wall and doorway separating Bays 2 and 3 from Bay 3

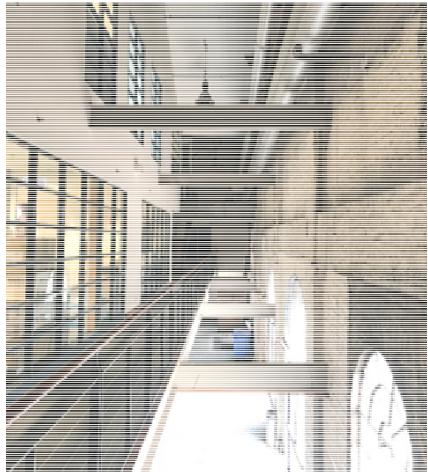


Figure 25 – Existing Bay 3 fit-out and circulation, including treatment of interface with heritage wall.



Figure 26 – Existing Bay 4 circulation space, including overhanging heritage gantry shown.

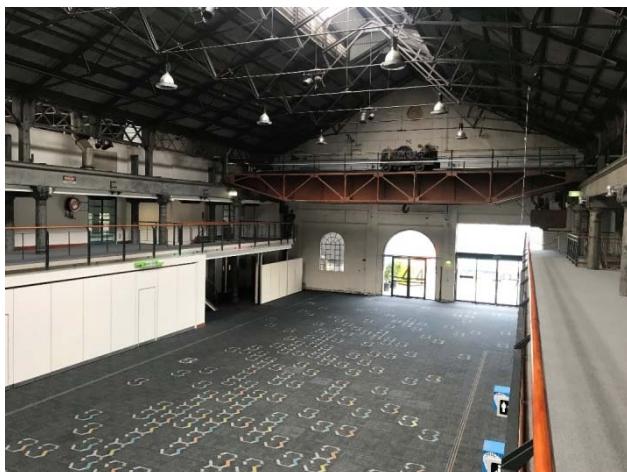


Figure 27 – Existing Dolton House event and circulation space within Bay 4, including entry/exit to Locomotive Street

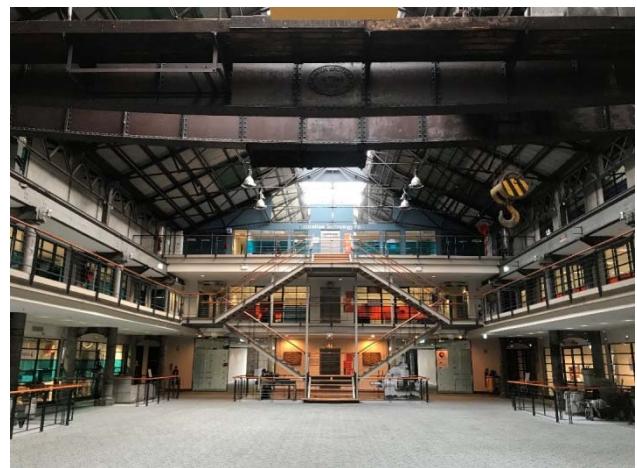


Figure 28 – Existing northern portion of Bay 4 fit-out, containing three levels of commercial floorspace

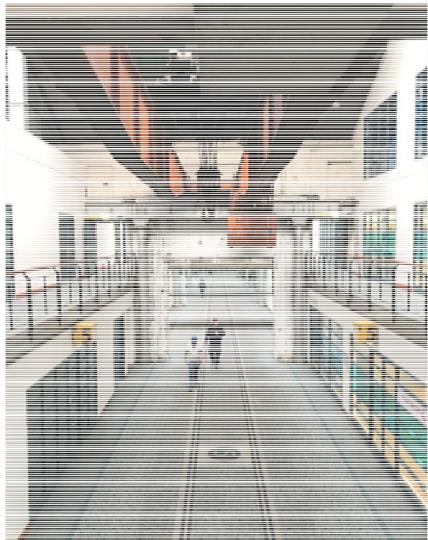


Figure 29 – Existing Bay 4a circulation space and fit-out



Figure 30 – Circulation space and building amenities on ground level of Bay 4 north



Figure 31 – Commercial fit-out on the second floor of Bay 4

3.4 Public Domain

Locomotive Street runs adjacent to the southern façade of Bays 1-4a. As illustrated in **Figure 5**, only a small portion of public domain is included within the Site area as the majority of the public domain area surrounding the Locomotive Workshop was included in the scope of works included in SSD 7317. The boundary line was established in order for Mirvac to achieve the required fall necessary to enable stormwater to be directed to a new strip drain that is being constructed along the northern side of Locomotive Street. The existing area of public domain that is included within the Site area comprises bitumen covered handstand that is generally used for loading and service vehicle parking, and pedestrian access.

Under SSD 7317 the detailed design for Locomotive Street is currently being developed, however it will comprise the following in accordance with the concept principles illustration at **Figure 32**:

- new brick pavement to the north of Locomotive Street to match existing surface treatment;
- aggregate concrete driveway;
- granite kerb;
- porphyry setts and steel edged along the southern side of Locomotive Street; and
- large format porphyry paving within the remainder of the southern pavement area.

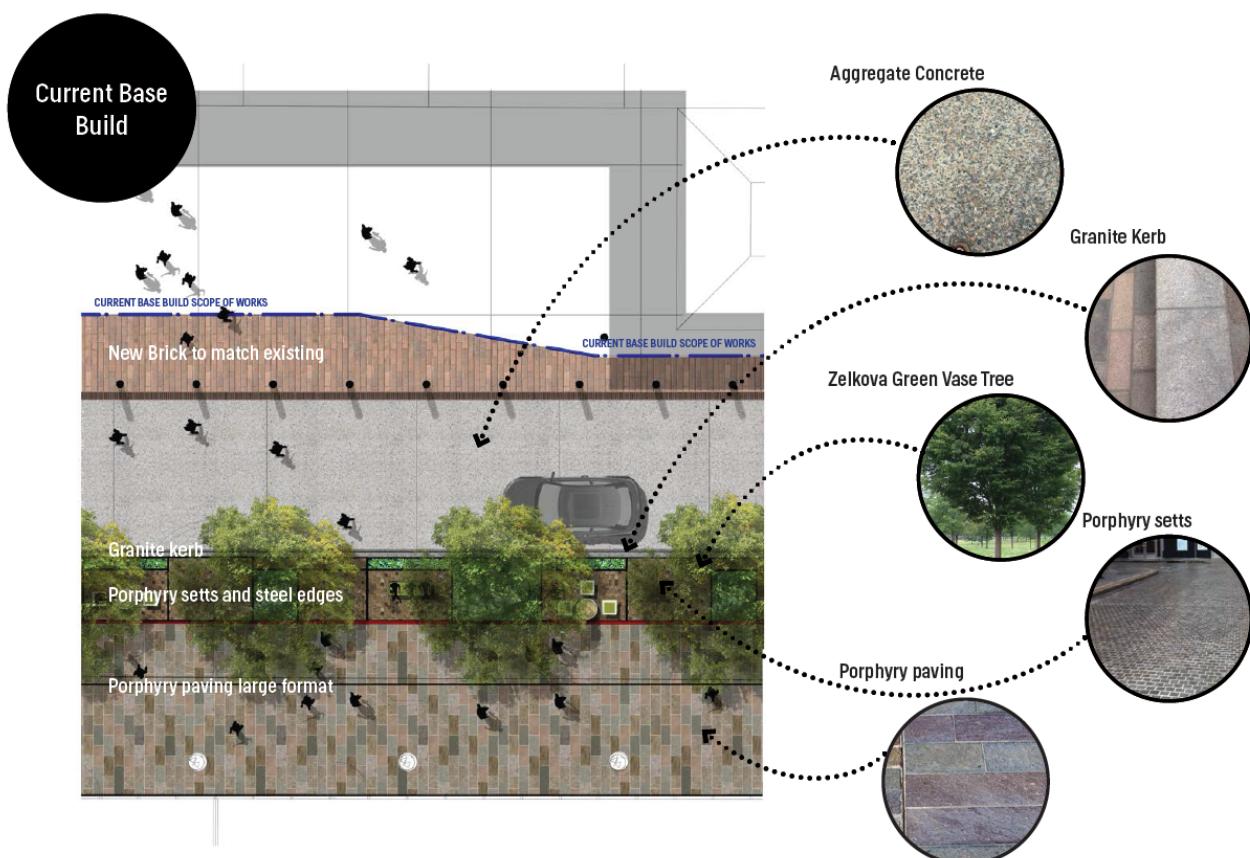


Figure 32 – Locomotive Street Base Build Principles

Source: Aspect

3.4.1 Vegetation

There is no vegetation present within the site boundary of Bays 1-4a, the subject of this SSD application. However trees are present on the Innovation Plaza, located to the east of the Locomotive Workshop building. This application does not propose any changes to or impact existing vegetation.

3.5 Access and Parking

3.5.1 Pedestrian Access

The primary pedestrian access points into Bays 1 - 4a, as shown in **Figure 33**, are:

- from Locomotive Street into the Doltone House event spaces located within Bays 4 and 4a south;
- from the northern access way into Bays 3 and 4a north;
- from Innovation Plaza into the central access spine of Bay 1; and
- from Bay 5 into the central access spine.

The pump house annex connected to the southern side Bay 3 has access directly from Locomotive Street, which is independent of the Locomotive Workshop Bays. Access to the Bay 1 annex and the area beneath the lean-to structure is provided from within Bay 1.

Whilst other heritage doorways exist along the southern, northern and western facades of the building, these are not in operation.

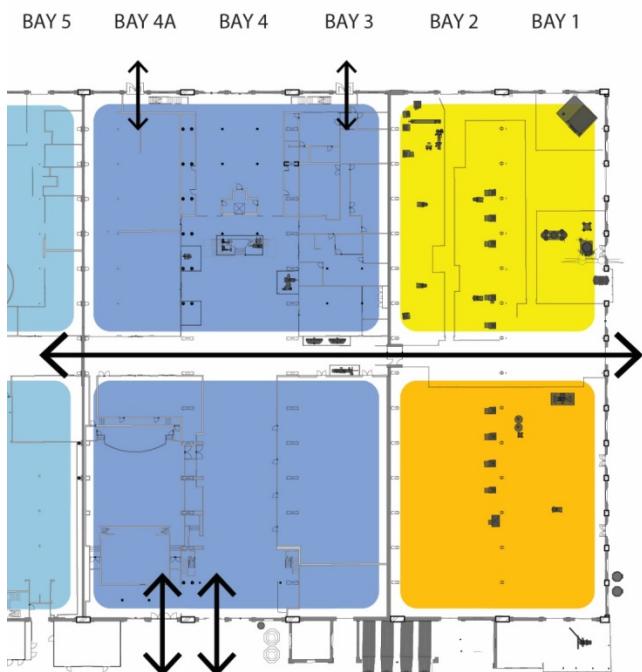


Figure 33 – Extract of existing primary pedestrian access points into Bays 1-4a

Source: Sissons & Ethos Urban

3.5.2 Public Access Easement

A public access easement (as shown highlighted green) is provided over the entirety of Lot 4007 in DP1194309, as identified in **Figure 34**.

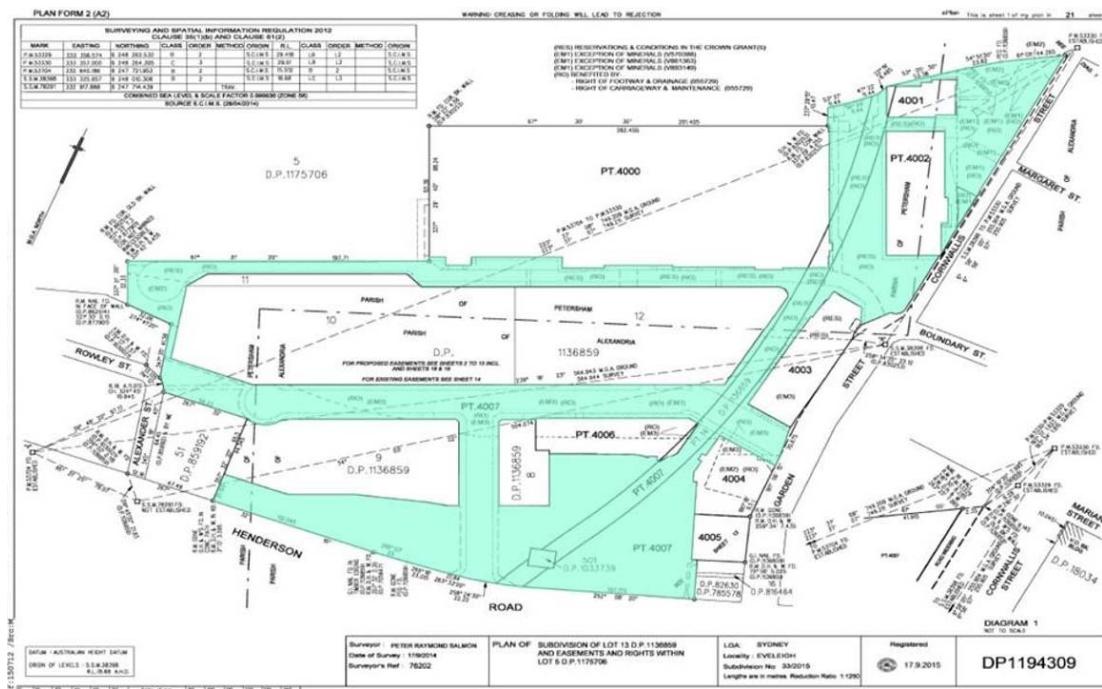


Figure 34 – ATP public access easement

Source: Peter Raymond Salmon

3.5.3 Vehicular Access

Vehicular access to the Locomotive Workshop is primarily provided from Locomotive Street, which is a private two-way road with a 6m carriageway, and is connected to Garden Street at its eastern end. It also provides access to the large Erecting Shop and the Channel 7 building to the west.

An existing access ramp, leading from Cornwallis Street at the Margaret Street intersection provides a secondary vehicular access into the north-eastern corner of the ATP precinct, between the IBC and NIC Buildings to the northern end of Innovation Plaza and north-eastern corner of the Locomotive Workshop.

3.5.4 Car Parking

The Locomotive Workshop does not contain off-street parking. However, Locomotive Street currently provides up to 15 on-street spaces that are located adjacent to the Locomotive Workshop and are used for servicing, accessible parking and loading purposes.

Once Buildings 1,2 and 3 are constructed at the ATP, as part of SSD 7317 approval, there will be a total of 1,564 car spaces across the entire precinct. **Table 2** provides a breakdown of the future car space allocations provided across the entire ATP precinct, once the current construction works are completed.

Table 2 – Parking locations within ATP precinct

Building/Location	Car space allocation
Channel 7 Building Staff Parking	363
Channel 7 Building Visitor Parking	339
Building 1	205
Building 2	500
Biomedical Building Staff Parking	33
Locomotive Workshop	4
Nicta Building	66
National Innovation Centre	4
International Business Centre	17
On-street Spaces	33
TOTAL	1,564

Source: GTA Consultants

It is also noted that pursuant to MP_0149, the Channel 7 Building visitor parking is for use by Mirvac (as the landowners) for uses associated with the other buildings at the ATP and visitors.

In addition, it is noted that SSDA 8449 proposes 4 new accessible car spaces, 8 loading spaces, 2 taxi spaces and 1 drop off space within the public domain area within the curtilage of the Locomotive Workshop.

3.5.5 Bicycle access and bicycle parking

The Locomotive Workshop is situated in close proximity to a number of formal cycle routes, including a shared path that runs through the ATP precinct via the Vice Chancellors Oval and Mitchell Way between Henderson Road and Cornwallis Street, as shown in **Figure 35**. Henderson Road is also classified as a bicycle friendly road.

The ATP provides bicycle parking facilities at the following locations and additional parking facilities will be provided under the works relating to SSD 7317:

- Cornwallis Street;
- Innovation Plaza;
- 8 Central Avenue;
- adjacent to the Biomedical Building; and
- Mitchell Way.

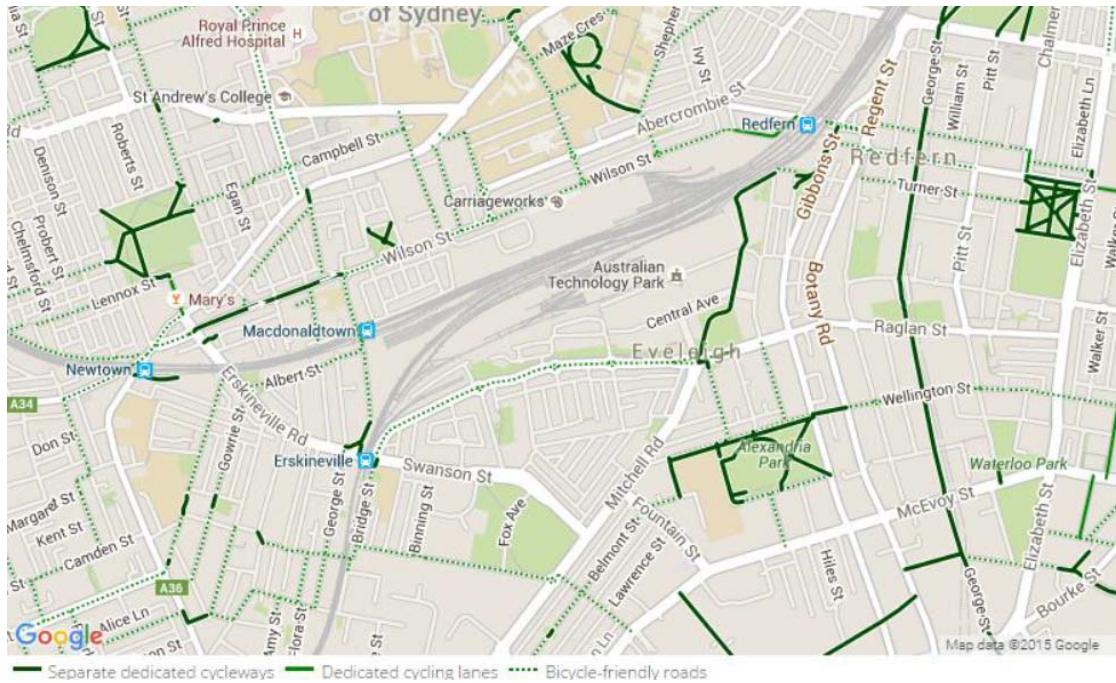


Figure 35 – Surrounding bicycle network

Source: GTA & www.sydneycycleways.net

3.5.6 Train and Rail

The Locomotive Workshop is approximately 300-400m from Redfern Railway Station (as shown in **Figure 36**) which is an approximate 4 minute walk. The station is a major stop in the Sydney Trains network, with frequent services on four rail lines, namely T1 North Shore, Northern & Western Line, T2 Airport, Inner West & South Line, T3 Bankstown Line, T4 Eastern Suburbs & Illawarra Line.

A future metro station will be provided at Waterloo as part of the Sydney Metro Project, linking Northwest to Bankstown, via the CBD, scheduled to be operational by the end of 2024. It is proposed to be located between Botany Road and Cope Street, Raglan Street and Wellington Street, which is approximately 500m from the Site. The new rail link will further connect the Site to the greater metropolitan Sydney area.



Figure 36 – 400m radius from Redfern and Waterloo (future) Stations

Source: Ethos Urban

3.6 Bus

A number of scheduled bus services are available in the local area. Bus stops are located within a 2-minute walking distance from the Site along Henderson road, Wyndham Street, Botany Road and Cope Street, and provide connections to:

- Sydney CBD
- Mascot
- Railway Square
- Marrickville Metro
- Port Botany
- Eastgardens; and
- Bondi Junction

3.7 Heritage

Under the NSW State Heritage Register and the Australian Technology Park S170 Heritage and Conservation Register (ATP S170 Register), the Locomotive Workshop is listed as a Stage Heritage Item.

In addition, the Locomotive Workshop along with the remainder of the ATP precinct, North Eveleigh west precinct, Carriageworks (i.e. North Eveleigh East precinct), South Eveleigh precinct and the Operational Rail precinct is included under the Eveleigh Railway Workshops listing on the State Heritage Register.

Furthermore, the existing machinery collection that is located within the Locomotive Workshop is included as part of the Eveleigh Locomotive Workshops Machinery Collection listing on the State Heritage Register.

In addition, the following State Significant Heritage items are also located within the vicinity of the site:

- Engine Shop (former)
- Works Managers' Office (former)
- Water Tower

3.8 Topography

The Locomotive Workshop site slopes gently from west to east, and has cross fall of approximately 0.2m, as shown in the Survey Plans at **Appendix G**. The surface elevation of the internal floor varies between RL21.7m in the west and RL21.5m in the east, relative to AHD.

3.9 Geotechnical Conditions

The Geotechnical Investigation Report, prepared by Douglas and Partners (**Appendix H**) confirms that the Site is underlain by Quaternary aged alluvial and estuarine sediments which typically comprise silty to peaty quartz sand, silt and clay with ferruginous and humic cementation in places. The unconsolidated sediments are underlain by the Ashfield Shale of Triassic age comprising siltstone, laminitic, mudstone and carbonaceous shale. Extensive filling is known to occur in the area.

The subsurface profile, based on borehole data from investigations, is summarised within the report.

3.9.1 Groundwater

The Geotechnical Investigation Report (see **Appendix H**) identified that groundwater was encountered at a depth of 9.0m below the existing ground surface.

3.10 Utilities & Infrastructure

NDY has provided a Stormwater and Hydraulic Infrastructure Services Report (**Appendix I**) and IGS has provided an Electrical Services Report (**Appendix J**). The two documents detail the existing utility infrastructure services that service the site. In summary:

- An existing Sydney Water 225mm VC sewer main is located immediately south of the Site in Locomotive Street. The sewer falls from west to east towards Garden Street.
- The Site is serviced by two Sydney Water, water mains that are located in Locomotive Street (200mm CICL) and Cornwallis Street (150mm CICL).
- An existing 110mm nylon high pressure Jemena gas main services the Site. It is located on the southern side of Locomotive Street adjacent to the Building 2 development site and runs eastwards towards mains infrastructure in Garden Street.
- The entire ATP precinct is serviced by diverse Telstra telecommunications feeders that are supplied by the Redfern and Newtown Exchanges, however there is only a single Building Distributor that is located within the plant annex that is situated on the southern side of the Locomotive Building between Bays 4A and 5.

Furthermore, NDY have confirmed that the existing stormwater drainage system is unknown, however the majority of the in-ground stormwater drainage system and downpipes attached to the Locomotive Workshop appear to discharge to a stormwater main positioned within Locomotive Street. Site investigations continue in developing this connection and discharge arrangement to the north.

3.11 Surrounding Development

Development surrounding the ATP precinct comprises a mix of residential, commercial office, retail and some light industrial uses. The Site is located within the context of the broader Central to Eveleigh urban renewal investigation corridor as shown in **Figure 37**, which includes parts of Waterloo, Redfern, North Eveleigh, Central Station and South Eveleigh. The Site is situated adjacent to the South Eveleigh investigation area which currently includes social housing owned by the Land and Housing Corporation. Whilst the Central to Eveleigh Urban Transformation Strategy states that “*no decision has been made to progress planning*”, it has the potential for 400-700 dwellings and the creation of between 50 and 150 jobs the transformation could create a new community hub with community facilities, neighbourhood shops and an upgraded park.

Within the ATP precinct, the National Innovation Centre, is located to the east of the Locomotive Workshop on the opposite side of the adjoining Innovation Plaza (see **Figure 44**). It is an historic brick building that presents as a two-storey structure. Similar in form and style to the Locomotive Workshop, it is currently used for commercial purposes and is occupied by Cicada Innovations.

To the south, on the opposite site of Locomotive Street is the construction site for the 7-storey commercial Building 2, that was approved under SSD 7317 (see **Figure 48**).

The existing 10-storey Channel 7 building, with underground parking is located to the south east (see **Figure 49**).

To the north of the Site, is the railway line and associated infrastructure, and to the west is further railway based infrastructure including operational railway maintenance workshops and stabling yards. To the immediate west of the Locomotive Workshop is the Large Erecting Shop. Further west is the site of the new proposed Intercity Fleet Eveleigh Facility.

The western boundary of the Site abuts the western building line of the Locomotive Workshop, with the adjacent land and rail infrastructure buildings being owned by RailCorp. As such, a portion of the western elevation of the Locomotive Workshop is currently fenced off, and access is restricted to Sydney Trains personnel associated with the railway maintenance buildings (see **Figure 53**).



Figure 37 – ATP Site and surrounding context

Source: Ethos Urban

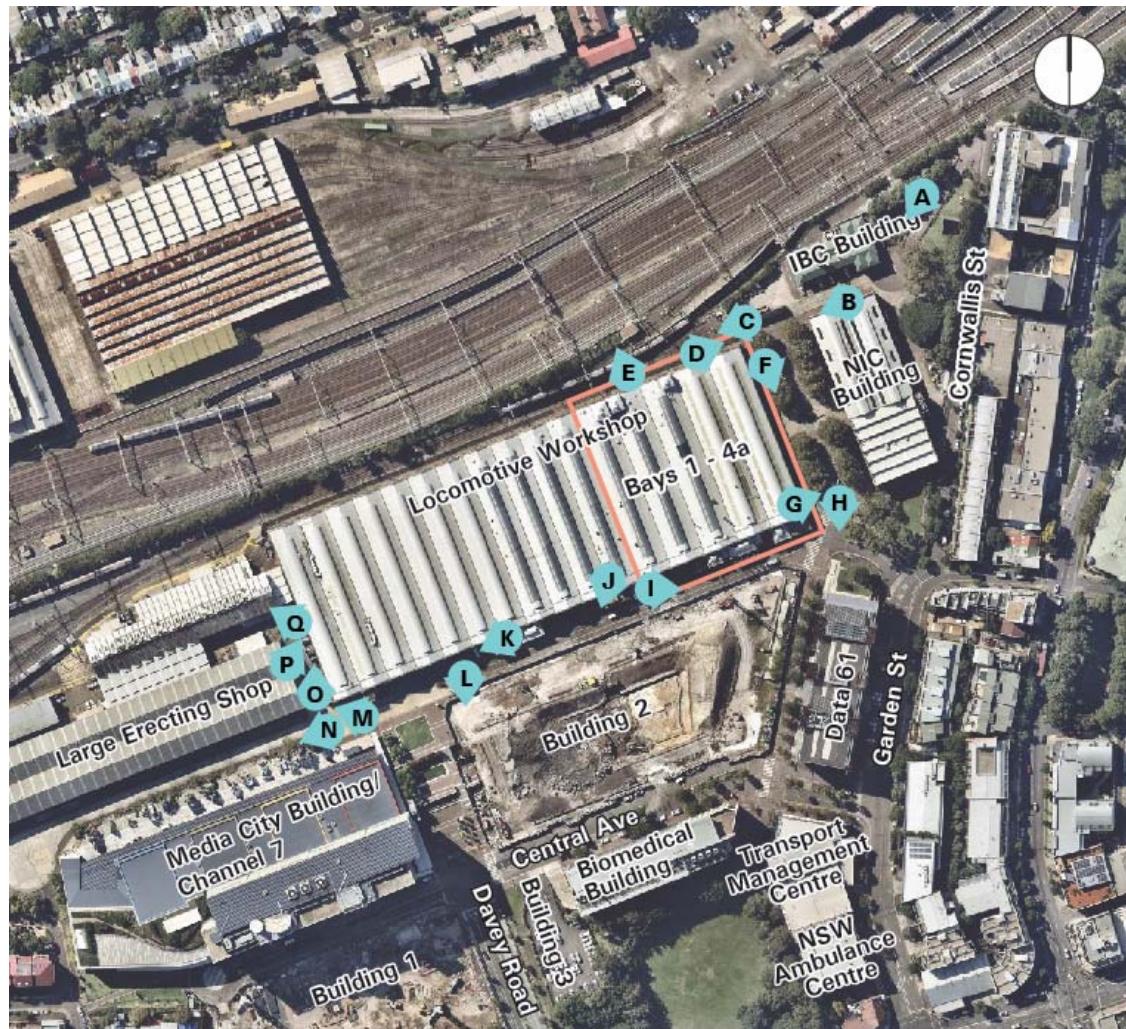


Figure 38 – Aerial Photograph of the site and immediate surrounds

Source: Nearmap & Ethos Urban



Figure 39 – Location A:

View of pedestrian entry into ATP looking south west from Redfern Station, National Innovation Centre and International Business Centre shown



Figure 40 – Location B:

View looking west towards the Locomotive Workshop, National Innovation Centre shown on the left, and International Business Centre shown on the right



Figure 41 – Location C:

View of access easement to the north of the Locomotive Workshop



Figure 42 – Location D:

View from the Locomotive Workshop looking north-east towards pedestrian pathway to Redfern Station, Innovation Plaza shown on the right



Figure 43 – Location E:

View of railway infrastructure to the north of the Locomotive Workshop



Figure 44 – Location F:

Looking south at Innovation Plaza, a pedestrian thoroughfare and gathering space



Figure 45 – Location G:

Looking east from Innovation Plaza towards Cornwallis Street (portion of National Innovation Building and public open space is shown)



Figure 47 – Location I:

View of Locomotive Street, looking south-east from the Locomotive Workshop



Figure 49 – Location K:

View from Locomotive Street, looking south-west towards the Chanel 7 building



Figure 46 – Location H:

View of NICTA building, looking south east from Locomotive Street



Figure 48 – Location J:

View from the second storey of the Locomotive Workshop, currently the construction site of Building 2 and, Channel 7 building to the south west



Figure 50 – Location L:

View of ATP site looking south, Channel 7 building shown on the right



Figure 51 – Location M:

Large Erecting Shop building located to the west of the Locomotive Workshop



Figure 52 – Location N:

View of Locomotive Street looking west, Large Erecting Shop building shown on the right



Figure 53 – Location O:

Eastern elevation of the Large Erecting Shop, and railway infrastructure to the immediate west of the Locomotive Workshop



Figure 54 – Location P:

Locomotive Workshop's western elevation, looking north-east



Figure 55 – Location Q:

View of railway infrastructure to the immediate west of the Locomotive Workshop

Source: Ethos Urban

4.0 Description of the Development

4.1 Overview of the Proposal

This SSDA seeks approval for the following:

- demolition of existing ‘modern’ infill fit-out elements to Bays 3-4a, including display barriers in Bays 1 & 2;
- adaptive reuse of the Bays 1-4a and two annex structures for a mix of retail premises uses, function centre uses, information and education facility uses, general industrial uses, recreation facility (indoor) uses and associated back of house facilities;
- construction of internal and external alterations to Bays 1-4a;
- construction of a travelator between the Locomotive Workshop and Building 2;
- establishment of maximum quantum of 11,358m² GFA to be provided within Bays 1-4a;
- relocation of moveable heritage items;
- heritage interpretation and conservation works;
- public domain improvements within the curtilage of Bays 1-4a;
- provision of an external building illumination system;
- signage; and
- associated utilities and infrastructure.

The following detailed description of the proposal is based on the Architectural Plans and Architectural Design Report, prepared by Sissons Architects (**Appendices B and C**)

Photomontages of the proposal are included at **Figure 56**, **Figure 57**, **Figure 58**, and **Figure 59** details are provided within the Architectural Design Report at **Appendix C**.

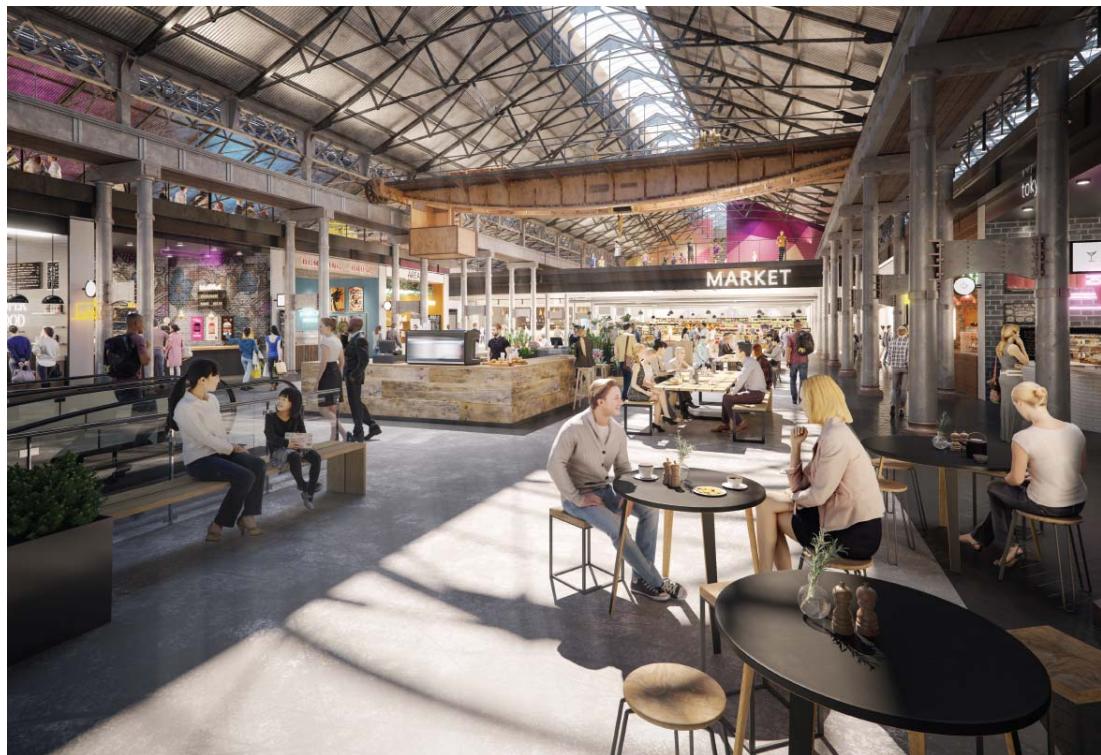


Figure 56 – Artist impression of internal retail space in Bays 3-4a looking north

Source: Sissons

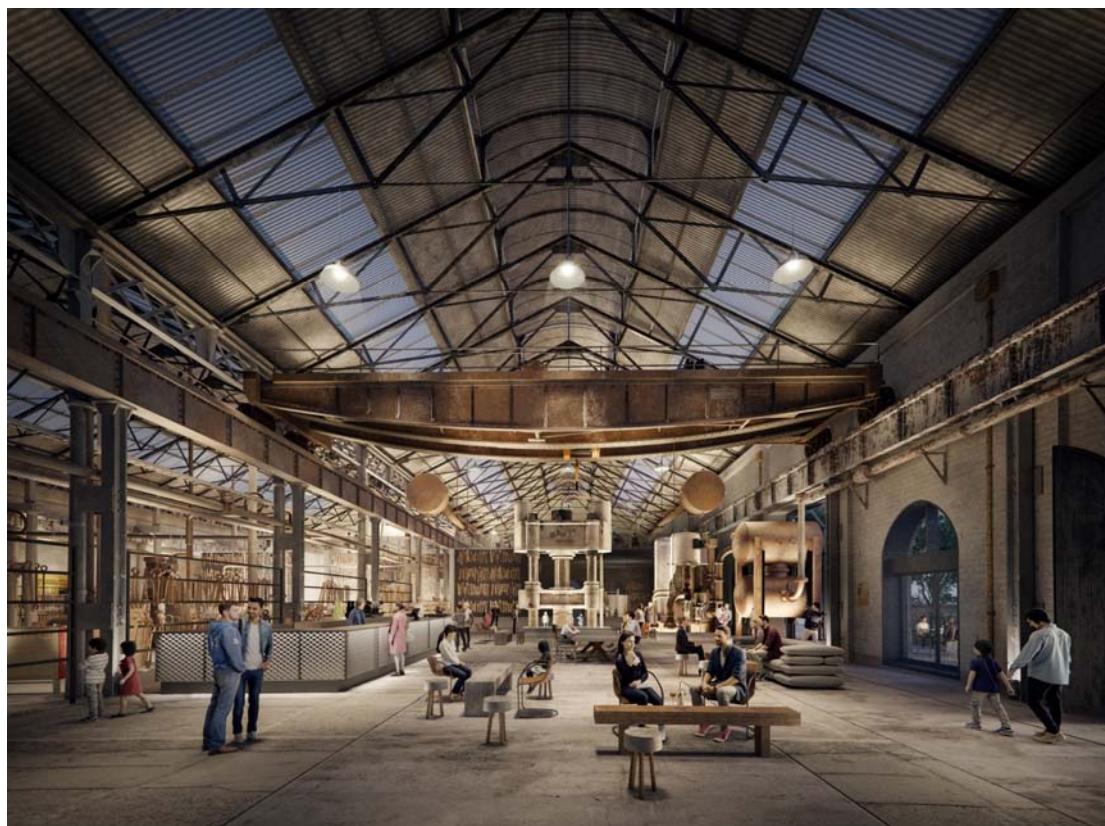


Figure 57 – Artist impression of retail and heritage interpretation space in Bays 1 and 2 north

Source: Sissons



Figure 58 – Artistic impression of the new corner retail annex adjoined to Bay 1 south

Source: Sissons



Figure 59 – Artistic impression of the entrance into Bays -4a from Locomotive Street

Source: Sissons

4.2 Approval Strategy

This application seeks consent for the base building alterations and works illustrated on the Architectural Plans (**Appendix B**), Architectural Design Report (**Appendix C**) and Landscape Design Report (**Appendix O**), prepared by Sissons.

Separate applications will be submitted for approval for the following:

- operation and fit out of tenancies in Bays 3-4a at ground floor and first floor;
- operation of tenancies within Bays 1 and 2 north at ground floor; and
- operation and fit out of the corner retail annex and pump house annex.

A separate development application will also be submitted for approval of the detailed signage within the signage zones proposed in this application.

In addition, as noted in **Section 4.23**, and in the Heritage and Archaeological Impact Statement (**Appendix M**), the Stage 2 Heritage Interpretation Plan for the Locomotive Workshop is currently being prepared and will be submitted to the Secretary for approval prior to the issue of the first Occupation Certificate.

4.3 Numerical Overview

The key numeric development information is summarised in **Table 3**.

Table 3 – Key Development Information

Component	Proposal
Footprint area (Bays 1-4a only)	9,870m ²
Existing GFA (Bays 1-4a only)	12,731m ²
Gross Floor Area Total • Ground Floor • First Floor	<ul style="list-style-type: none"> • 11,358m² • 7,557m² • 3,801m²
Maximum Height	RL 35.225 (existing height of the Building)
Car Parking	0
Bicycle Spaces	0

4.4 Proposed Land Use and Operations Flexibility

Approval is sought for a maximum quantum of 11,385m² GFA within Bays 1-4a. Whilst the Architectural Plans (**Appendix B**) identify tenancies or spaces within Bays 1 and 2 north, the new corner annex, and Bays 3-4a as being for retail uses, the future tenants of the majority of these spaces is unknown at present.

Accordingly, these spaces may be used for the following land uses:

- Retail premises (i.e. shops, food and beverage etc).
- Function centre uses (i.e. events space).
- Information and education facility uses (i.e. art gallery, library, visitor information centre etc).
- Recreation facility (indoor) (i.e. gymnasium).

Furthermore, the areas identified as 'heritage' 'heritage exhibition' or 'interpretation space' may be used for the following land uses:

- Function centre uses (i.e. events space).
- Information and education facility uses (i.e. art gallery, library, visitor information centre etc).

4.4.1 The Blacksmith

The Architectural Plans (**Appendix B**) identify the southern portion of Bays 1 and 2 as the Blacksmith/ Hard Arts area. Eveleigh Works, a working blacksmith is currently in operation within this area and it is intended that Eveleigh Works will continue to operate within area. It is considered that a Blacksmith is defined as a 'general industrial' use under the Standard Instrument – Principal Local Environmental Plan. Therefore Bays 1 and 2 south will continue to be used for 'general industrial' purposes.

4.4.2 Temporary Events

As part of the activation of the Locomotive Workshop, approval is sought for the opportunity to host various short term and temporary events within Bays 1-4a and well as potentially in Innovation Plaza. Potential event types may include small scale events such as cooking classes and soft arts workshops and larger convention type events such as International Blacksmithing conventions, larger meetings and social events as well as market type events in Innovation Plaza.

Whilst *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* (Exempt and Complying SEPP) specifies that temporary uses and structures are classified as exempt development under *Division 3 Temporary uses and Structures Exempt Development Code*, this is subject to the development meeting various criteria. In particular, we note that for temporary uses and structures to be undertaken and constructed on the Site and within Innovation Plaza, they can be classified as 'exempt development' if the development meets the various requirements and standards specified in the Exempt and Complying SEPP and has been granted an exemption under section 57(2) of the *Heritage Act 1977* or is subject to an exemption under section 57 (1A) or (3) of that Act.

It is noted that the site specific exemptions 16 and 24 listed in NSW Government Gazette No 22 of 13 March 2015 allow the following to be undertaken without a development consent or notification to the Heritage Council:

- Installation of temporary and reversible structures for the operation of special events and activities lasting less than one month duration (e.g. trade fairs, exhibitions etc.); and
- Removal and replacement of temporary (three months duration) internal signs and decorations, such as flags, rigging, banners, merchandising, holiday livery and associated decorations where works will have no adverse impact on heritage significance.

Furthermore, the Exempt and Complying SEPP requires an approval to be in place for the use of the land that relates to the purpose of a temporary structure. Accordingly, approval for temporary community events within Bays 1-4a and Innovation Plaza is sought, to enable Mirvac to exercise their ability to utilise the Exempt and Complying SEPP provisions.

4.5 Renaming the Bays

Until the 1990's the Bays within the Locomotive Workshop were numbered 1-4, 4a and 5-15. They are currently named Bays 1-16, however Mirvac wishes to re-instate the numbering of the Bays, back to their original sequence in order to provide the most historical and interpretative context for the Locomotive Workshop within its broader Eveleigh Railway Workshops Setting.

4.6 Design Principles

The proposed design for the adaptive re-use and redevelopment of Bays 1-4a within the Locomotive Workshop has undergone a detailed, robust and iterative design development from project inception. Notwithstanding this, from the outset, the proposed design has been based on the following principles:

- Contribute to an active and enlivened precinct through the revitalisation of a significant heritage building.
- Reimagine the Locomotive Workshop as a hub for contemporary technology and innovation that sensitively responds to the heritage elements which give the Building its unique character.
- Integrate the ATP with the surrounding local community and meet the needs of the new worker population.
- Use an independent, removable structure within the existing shell to provide transparency and openness to the Locomotive Workshops fabric.
- Conserve, celebrate and interpret the in-situ elements.
- Conserve the authentic industrial character.

As specifically set out in the Architectural Design Report (**Appendix C**) the concept design as described in this report and the future detailed design is based on the following architectural design principles:

- Remove existing barriers to the ATP, open its doors and reintegrate it with the surrounding neighbourhood.
- Create a social destination that celebrates its heritage significance and unique sense of place.
- Provide retail spaces that are sympathetic to the overall heritage fabric and that facilitate the opportunity to provide the theatre of on-site food manufacture and production display.
- Provide the opportunity to curate outdoor activities and local events in Innovation Plaza regularly throughout the year.

- Retain and integrate the existing Blacksmith operation and provide opportunities for heritage interpretation exhibitions.
- Maintain important physical aspects of the existing heritage building, including the inspiring sense and size of the internal volume and careful interpretation of the building's previous uses.
- Where possible ensure that new internal structures will be independent of the existing fabric and allow the new development to maintain a minimum impact on this significant heritage site.
- Ensure new building work is detailed in a contemporary manner but touches the building lightly.
- Provide for interaction and visual connectivity both within the existing heritage building fabric and the public domain for both building tenants and the wider community.
- Ensure the public is free to enter and circulate through the building.
- Provide open atria and a central access spine that incorporates an interpretation of the former railway tracks guiding pedestrians through the building along an east-west axis.
- Provide spaces that will foster interaction, transparency and flexibility within the interior design of spaces.
- Ensure all new materials introduced to the building take their lead from the existing elements and use glazing and other transparent materials to ensure legibility of heritage items and the scale of the building.

4.7 Demolition

Demolition plans are included within the Architectural Plans provided at **Appendix B**. As shown and outlined within **Table 4**, the proposed development will remove the following existing elements.

Table 4 – Description of proposed demolition

Floor Level	Proposed Demolition Works
Ground Floor	<ul style="list-style-type: none"> • Opening of heritage wall between Bay 4a and 5. • Removal of existing internal commercial fit-out within Bays 3 to 4a. • Removal of existing barrier surrounding existing heritage collection in Bays 1 & 2. • Removal of existing barriers surrounding Bay 1 verandah fronting Locomotive Street.
First Floor	<ul style="list-style-type: none"> • Opening of heritage wall between Bay 4a and 5. • Removal of existing internal non-heritage floors, partitions and ceilings fit-out within Bays 3 to 4a.
Second Floor	<ul style="list-style-type: none"> • Opening of heritage wall between Bay 4a and 5. • Removal of existing internal non-heritage floors, partitions and ceilings fit-out within Bays 3 to 4a.

Floor Level	Proposed Demolition Works
External	<ul style="list-style-type: none"> • Removal of existing cladding to substations fronting Locomotive Street. • Removal of existing external building signage. • Reinstatement of bricked up opening and window in 3 locations of the eastern elevation. • Removal of existing modern openings on the eastern elevation. • Removal of existing doorways fronting Locomotive Street into Bays 4 and 4a. • Removal of existing doorways into Bay 4 openings to the northern access way. • Removal of existing lean-to Bay 1 verandah fronting Locomotive Street.
Roof	<ul style="list-style-type: none"> • Removal of the existing polycarbonate, and portions of metal sheeting of the roof structure on Bays 3 to 4a. • Refurbish/upgrade existing roof as required for Bays 1 and 2.

4.7.1 Hazardous Materials Removal

A Hazardous Materials Survey has been prepared by JBS&G ([Appendix K](#)) which confirms the following materials are in existence within the Locomotive Workshop:

- lead based paint;
- lead dusts;
- asbestos containing materials; and
- synthetic mineral fibres.

During the demolition phase of the development all hazardous materials will be removed by suitably licenced contractors in accordance with the relevant legislative requirements, codes and practice guidelines, as recommended in the Hazardous Materials Report.

Furthermore, in line with the recommendations within the report, areas that are currently inaccessible will be inspected and surveyed for hazardous materials as the demolition progresses. If hazardous materials are observed, confirmation of the presence or absence of hazardous materials will be confirmed through laboratory testing.

4.8 Structural Works

The proposed development incorporates structural modifications to the Locomotive Workshop in the form of new built elements and potential upgrades to the existing structure. Structural design recommendations for the new build and existing structure upgrades as well as the works relating to the construction of the travelator between the Locomotive Workshop and Building 2, are specified within the Structural Design Report, prepared by Arcadis ([Appendix L](#)).

All structural systems proposed within the development will be designed to satisfy the provisions of relevant Australian Standards, City of Sydney Council standards, and the National Construction Code of Australia, and in accordance with the accepted practice and principles of structural engineering.

Where there is no relevant Australian Standard or Code, appropriate overseas standards or recognised methods of analysis, design or testing will be used.

4.9 Bays 1-4a Design

As explained in the Architectural Design Report (**Appendix C**), during the evolution of the design, Sissons Architects (Sissons) undertook multiple studies of the entire Locomotive Workshop. One of the studies involved an exercise whereby the grouping of the Bays for the entire Building were re-organised as illustrated in

Figure 60. The revised grouping then evolved to form the proposed layout arrangement as illustrated in **Figure 61**. The opportunity to integrate the Locomotive Workshop with the wider community by incorporating new retail uses, the existing Blacksmith operation and new heritage exhibition spaces led the next stage in the design evolution, which evolved further with the extensive consultation exercises that have taken place over the last six months.

The proposed design for Bays 1-4a therefore comprises:

- Heritage exhibition and interpretation space above the loading dock within the northern portion of Bays 1 and 2 north.
- Bays 1 and 2, which will be occupied at ground floor level by:
 - the existing Blacksmith operation and other complementary hard arts, the existing in-situ and moveable heritage items within Bays 1 and 2 south;
 - in-situ heritage items within the southern portion of Bays 1 and 2 north;
 - retail spaces/ tenancies integrated around the in-situ heritage items within the southern portion of Bays 1 and 2 north;
 - a loading dock, containing waste storage rooms, a compactor and 5 loading bays within the northern portion of Bays 1 and 2 north;
 - the Davy furnace and surrounding heritage exhibition space in the north-eastern corner of Bay 1;
 - a publicly accessible central spine that links to the central spine within Bays 3-7; and
 - a largely transparent, contemporary framed glass box in place of the existing lean-to canopy that incorporates the existing heritage Bay 1 annex located at the south-east corner of Bay 1.
- A group of three bays, being Bays 3-4a which will be occupied by:
 - a large tenancy within the northern portion of Bays 3-4a at ground floor, that is likely to be a supermarket;
 - a large tenancy within the northern portion of Bays 3-4a at first floor, that may potentially be a gymnasium;
 - six tenancies at ground floor and two tenancies on the first floor within the southern portion of Bays 3-4a;
 - a publicly accessible central spine that links to the central spine within the adjacent Bays 5-7 and Bays 1 and 2, and the publicly accessible double height atrium space located within the southern portion of Bay 4;

- back of house facilities and publicly access amenity and service pods, fire stairs and lifts; and
 - a travelator that runs from the central part of Bay 4, below Locomotive Street to link to the lower ground car parking level of Building 2.
- Heritage exhibition space within the pump house annex adjacent to the southern façade of Bay 3.

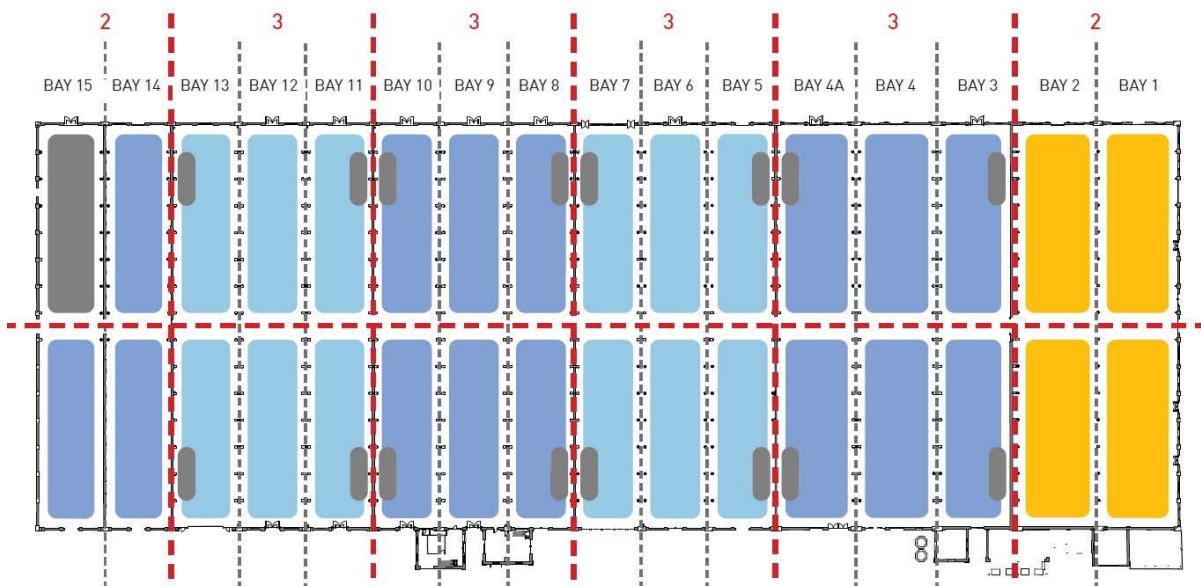


Figure 60 – Existing building Bay grouping arrangement

Source: Sissons



Figure 61 – Proposed ground floor plan for Bays 1-4a

Source: Sissons

A summary of the proposed physical works is outlined in **Figure 5** and details are provided in the Architectural Design Report at **Appendix C. Sections 4.10 to 4.26**, provide a brief description of the key elements.

Table 5 – Summary of proposed physical works

Bay	Proposed Development
Building Interior Bays 1-2	<ul style="list-style-type: none"> • Removal of existing display barriers • Heritage interpretation and conservation works • Relocation of moveable heritage items • Enhancements of entrances and openings including the enlargement of the opening between Bays 2 and 3 • Construction of a loading dock with new mezzanine heritage exhibition over and associated stairs • Construction of intertenancy walls to the Blacksmith/ Hard Arts area
Building Interior Bays 3-4a	<ul style="list-style-type: none"> • Removal of existing 'modern' infill features • Construction of tenancy divisions, mezzanine floors, plant and equipment rooms, amenities and services pods, fire stairs and lift cores • Construction of the travelator • Enhancements of entrances
Building Exterior Bays 1-4a	<ul style="list-style-type: none"> • Installation of external lighting to enhance the building façade • Public domain improvements to the paving and footpath network within the boundary of the site • Demolition of the existing lean-to at the south-east corner of Bay 1 and construction of new contemporary glass pavillion in its place
Roof	<ul style="list-style-type: none"> • Roof upgrade - installation of insulation, upgrade of existing conditions in Bays 1 and 2, insertion of natural daylight 'slots' in Bays 3-4a, incorporation of smoke attenuation louvres and construction of new plant platforms within the roof valleys of Bays 3-4a and 4-4a.
Pump House Annex	<ul style="list-style-type: none"> • Removal of modern infill features • Refurbishment of single level heritage space • Enhancement of entrances

4.10 Loading Dock

One of the critical success factors identified by MacroPlan Dimasi (**Appendix E**) in establishing a contemporary retail offer at the Locomotive Workshop and for the retail offer to trade efficiently, effectively and successfully was the appropriate provision of back of house facilities, a loading dock, access and functionality. The ability to load and service the retail tenancies and a functional back of house, that incorporates storage is imperative to a successful operation and is key to attracting retailers.

As detailed within the Architectural Design Report (**Appendix C**) there was a design challenge to find a suitable location for the loading dock that would have only minimal impact upon the original building and would be able to incorporate the waste management requirements for both the commercial and retail components of the overall Locomotive Workshop redevelopment. A wide number of alternatives for the loading dock location were considered, but after a thorough review of the existing equipment and machinery in Bays 1 and 2 and confirmation of the ability to utilise the existing large format opening located along the north-eastern façade of the building, the location for the loading dock was determined.

Practically, the loading dock will service the proposed retail uses within Bays 1-4a, as well as the commercial uses within Bays 5-15 (subject to separate SSDA 8449). As shown in **Figure 62** it will comprise:

- one (1) loading bay for a 12.5m heavy rigid vehicle (HRV); and
 - one (1) loading bay for an 8.8m medium rigid vehicle (MRV);
- OR
- three (3) bays for 6.4m small rigid vehicles (SRV),

Waste storage rooms and a compactor is also to be provided within the part that is situated within Bay 2. An opening in the block wall, to provide access directly from the back of house facilities in Bay 3 to the loading dock and waste storage area in Bays 1 and 2 north will also be constructed.



Figure A - Loading Dock Plan

No restrictions - SRVs only	HRV, garbage truck, service vehicle bays - limited hours of operation, refer to Traffic Report by GTA
Compactor	Heritage item

Figure 62 – Loading Dock configuration

Source: Sissons

4.10.1 Loading Dock Wall Treatment

The design of the loading dock and in particular its interface with the southern portion of Bays 1 and 2 and the significant collection of in-situ and moveable heritage machinery and tools has been the focus of many of the stakeholder engagement sessions that have been undertaken over the last six months. As detailed within the Architectural Design Report (**Appendix C**), the loading dock wall has been designed to be visually recessive, but allow views through to the Davy furnace that is located and will be retained within the north-eastern corner of Bay 1. The other solid portions of the wall are to be utilised as a backdrop to showcase the heritage equipment and structure within Bays 1 and 2. However it will incorporate a stair to access the heritage interpretation space above the loading dock.

The wall and stair will be clad in expanded mesh, to enhance the gritty and industrial feel of the bays and behind the mesh, the wall will vary in solidity, with solid walls concealing the back of house loading dock functions and glazing to provide views through to the Davy furnace.

4.11 Heritage Interpretation and Exhibition Space

Above the loading dock, heritage interpretation and exhibition space is proposed as illustrated in **Figure 63**. The design concept for this mezzanine area is to return the floor area occupied by the loading dock, back to the general public by elevating the floor level and creating the opportunity to provide views over the machinery in Bays 1 and 2 towards the south and also down to the Davy furnace. The intent is for people to understand the connections between the Davy furnace and the Davy Press as well provide never seen before views over the southern parts of Bays 1 and 2.

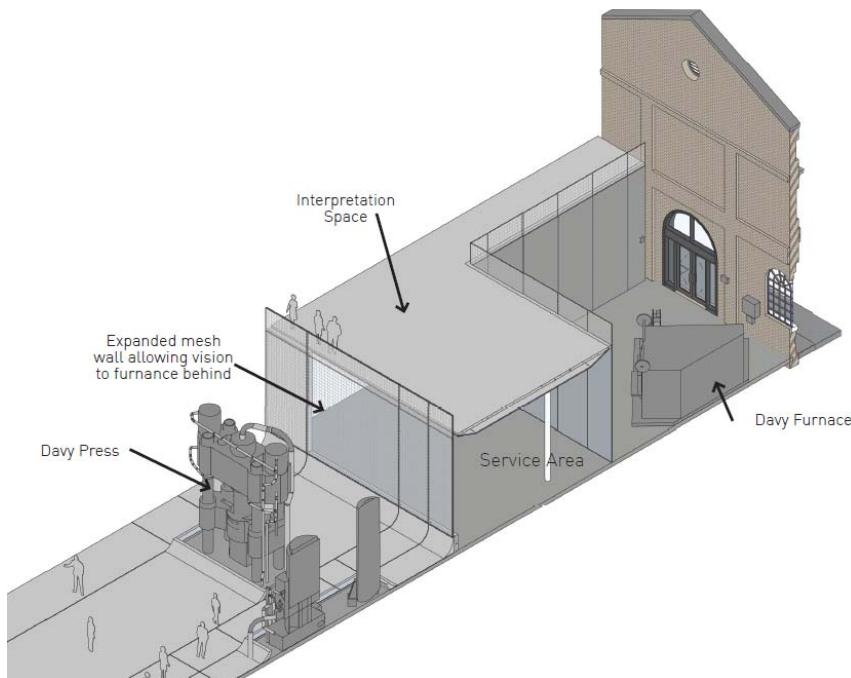


Figure 63 – Extract of 3D model, to show the relationship between the loading dock, mezzanine interpretation space, mesh wall, and heritage equipment

Source: Sissons

4.12 Travelator

Another of the critical success factors identified by MacroPlan Dimasi (**Appendix E**) was the need to provide connected car parking. Given the heritage constraints of the Site, and that the provision of car parking beneath the Locomotive Workshop would cause too many significant heritage impacts, the method with the least impact that would provide connected access to car parking was to adopt the following strategy:

- Allocate the car parking spaces at the lower ground level of Building 2 for use by visitors to the ATP and the Locomotive Workshop.
- Enable 230 car spaces currently provided within the Channel 7 Building for use by Mirvac and visitors to the ATP precinct to be utilised by the tenants of Buildings 1 and 2.
- Connect the Locomotive Workshop to the lower ground car parking level in Building 2 by the provision of a travelator.

Accordingly, this SSDA seeks approval for the construction of a travelator that will run between Bay 4 within the Locomotive Workshop, beneath Locomotive Street to Building 2¹ to provide direct, all weather, internal pedestrian access between the two buildings. The design of the travelator is illustrated in the Architectural Plans and Architectural Design Report, prepared by Sissons (**Appendices B and C**) and has been located to minimise the level of intervention to the existing fabric and retain the existing arched footing to the southern external wall.

The travelator tunnel will be an additional heritage interpretation space, which may feature elements from the former Foundry, which was once in the Building 2 footprint connected by the travelator, as well as visual and audio-visual displays, however the exact details will be determined within the Stage 2 Interpretation Strategy.

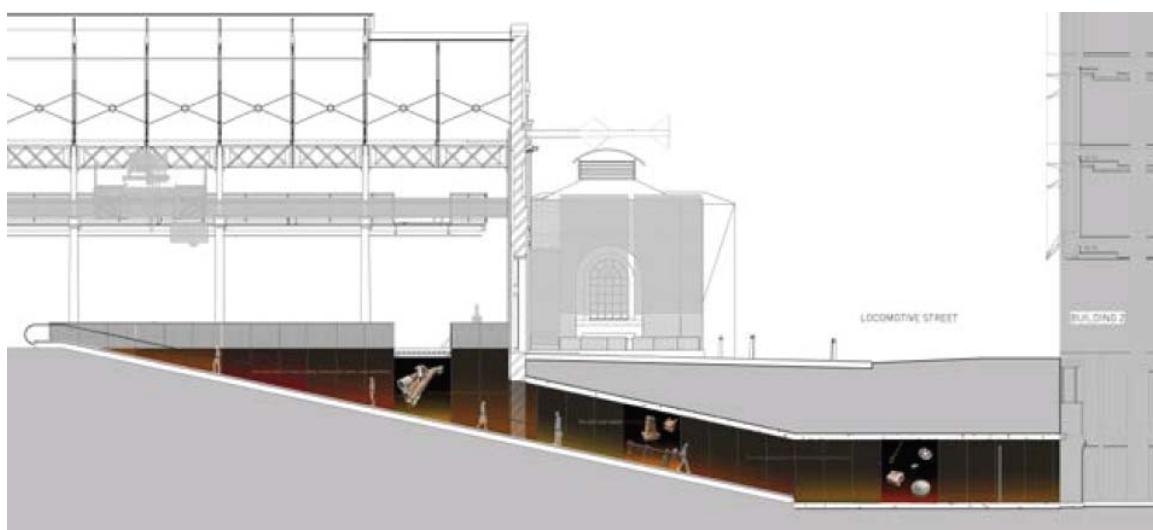


Figure 64 – Proposed travelator connecting to Bay 4.

Source: Trigger Design.

¹ It is noted that Mirvac has submitted an application pursuant to Section 96 (1a) of the EP&A Act to modify SSDA 7317 to enable Mirvac to construct the concrete shell to house the travelator between Building 2 and the edge of the SSDA 7417 site boundary that SSDA 7317.

As indicated in the Architectural Plans at **Appendix B** and **Figure 65**, the extent of excavation required for the travelator is shown in red.

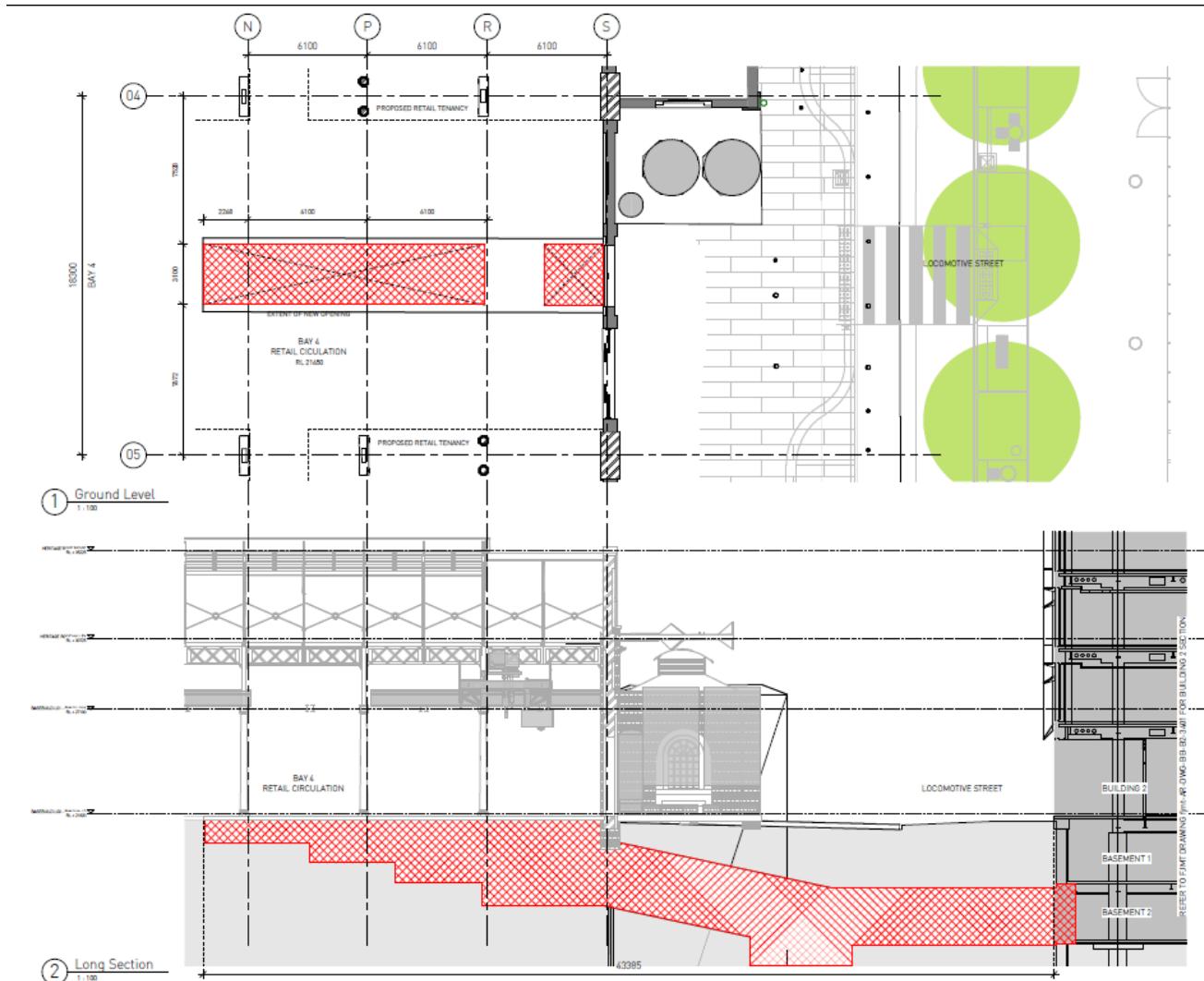


Figure 65 – Extent of excavation for travelator

Source: Sissons

4.13 Blacksmith

As noted in **Section 4.4.1**, the Blacksmith operation is to be retained as existing. A new edge however will be provided to the tenancy along the central spine. This will be designed as part of the heritage interpretation design in order to provide safe separation of the Blacksmith operation from the publicly accessible central spine, whilst simultaneously providing the opportunity for views into the Blacksmith/hard arts space for observation and interaction purposes. Furthermore, it is intended that three furnaces and other functioning equipment from within Bays 1 and 2 north will be relocated to the Blacksmith area to replace furnaces and equipment that is not working and beyond repair.

4.14 Corner Retail Pavilion

To facilitate activation and a vibrant public domain, the existing lean-to annex at the south-eastern corner of the Locomotive Sheds is proposed to be demolished and in its place Mirvac intends to construct a contemporary steel framed, glazed pavilion that will integrate with the existing brick Bay 1 annex. The guillotine currently located within this space is to be retained as a major feature of the space.

In association with the construction of the pavilion, the eastern wall of the existing brick Bay 1 annex will be opened to integrate with the new structure and a new steel framed large format glazed doorway will be provided on its southern façade. Figure 66 provides an illustration of the proposed design.

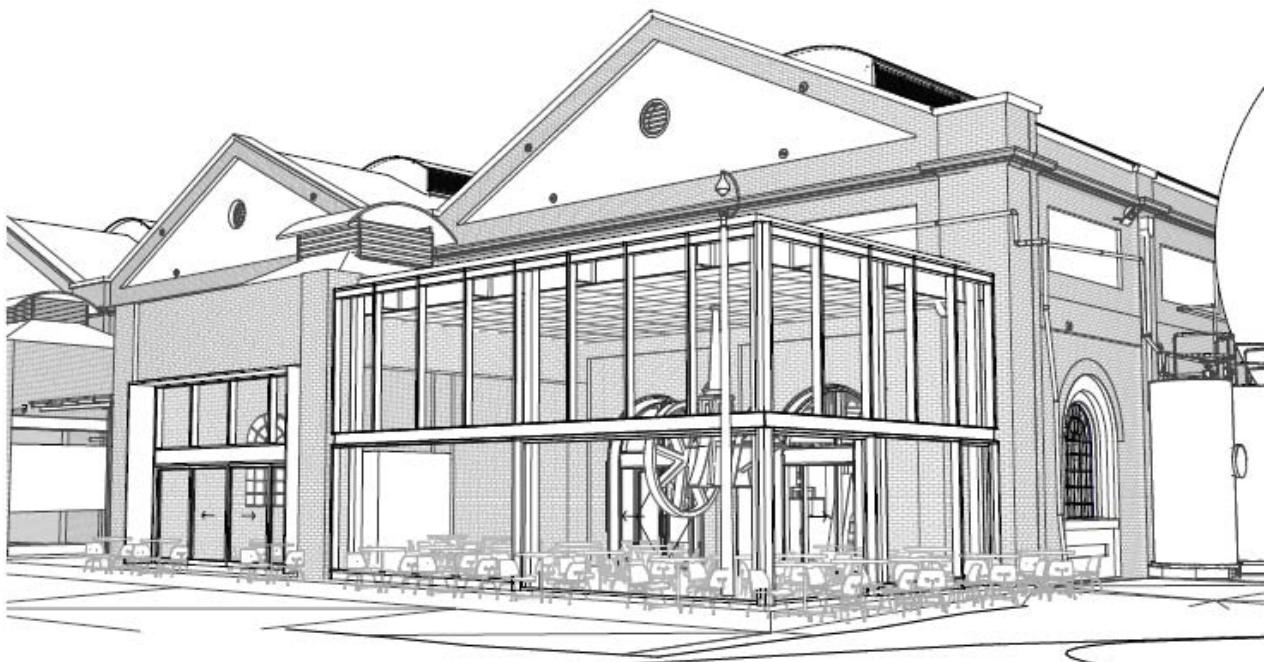


Figure 66 – Proposed Corner Retail Pavilion

Source: Sissons

4.15 Retail Pods in Bays 1 and 2

The Architectural Plans (**Appendix B**) illustrate retail tenancy spaces that are integrated with the existing in-situ heritage machinery items within Bays 1 and 2 north. As illustrated in the Architectural Design Report (**Appendix C**) within these spaces, small scale, low height, self-contained pods will be located and scattered informal seating provided in and around the in-situ machinery items. The pods are to be of steel construction and clad in expanded mesh to provide a visually recessive aesthetic that does not distract the focus from the heritage items.

4.16 Enlargement of the internal opening between Bay 2 and Bay 3

The existing opening within the block wall that currently exists between Bay 2 and Bay 3 is to be enlarged in order to enhance lines of site through the building to reveal more the heritage super structure beyond.

4.17 Intertenancy Walls

In line with the enlargement of the internal opening between Bays 2 and 3, and as noted in **Section 4.6**, one of the design principles established for the project is to open the publicly accessible central circulation spine that will run through the centre of Bays 1-7 to facilitate views to the industrial structure of the roof, the windows and cast-iron columns.

Accordingly, the intertenancy walls that line the central spine within Bays 1-4a will not provide any solid elements above 1200mm within the Visual Sight Line shown on the Ground Floor Plan (**Appendix B**) and any solid block-construction walls that rise above 1200mm will be retracted from the tenancy lines by 1800mm to create a broad visual corridor lined by the heritage columns and guided by a railway track interpretation inlay set into the floor. However, the retail tenancy walls are to comprise of simple glazing with minimal framing elements in order to be as open and transparent as possible.

The opening between Bays 2 and 3, whilst being expanded is required to include a physically separated for fire compartmentalisation purposes. Accordingly, the intertenancy wall within the new widened doorway will comprise framed, infill glazed elements that are general left in an open position to create clear view lines along the central access spine, that encourages the open aesthetic of the Locomotive Workshop as indicatively shown in **Figure 67**.

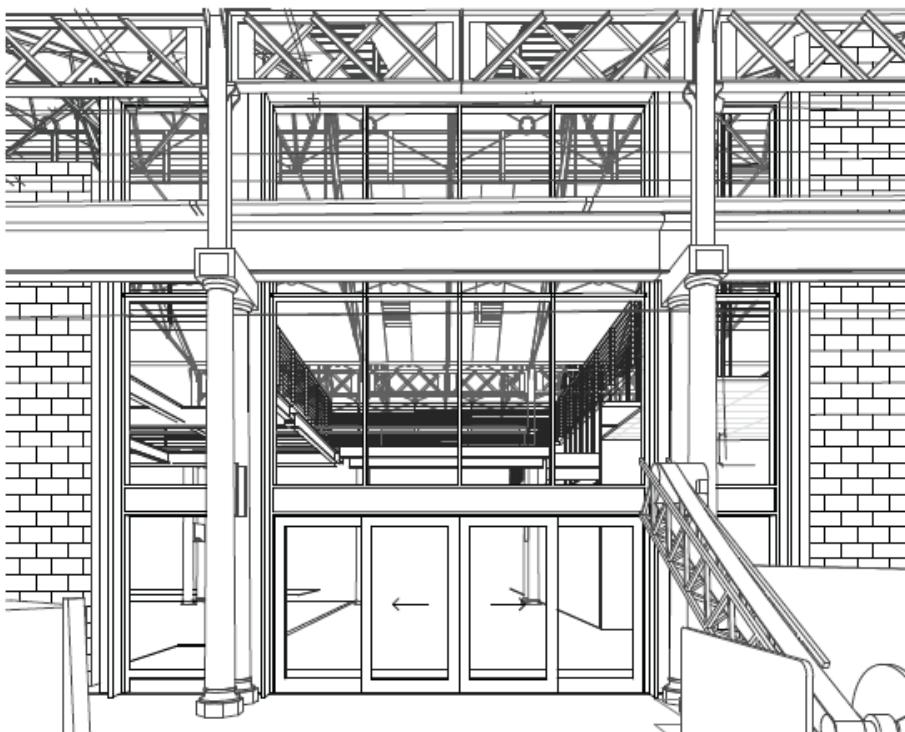


Figure 67 - Proposed glazed intertenancy wall between Bays 2 and 3

Source: Sissons

4.18 Roof Works

The current roof structure comprises two layers of sheet metal. The exterior comprises a contemporary layer of corrugated sheet metal and polycarbonate that was added in the 1990's and beneath this is the original roof trusses and other associated historic fabric which is visible internally.

The proposed roof works seek to improve the thermal and daylight performance and will include the following:

- retention of the original structure of the roof and its interior heritage fabric including trusses, soffits and other associated fabric, including the majority of the historic louvres;
- removal of the contemporary outer sheet metal layer in Bays 1-4a and modern polycarbonate cladding over the curved lanterns in Bays 3-4a to allow for the installation of new insulation and then the installation of a new outer layer of metal sheeting that has a consistent colour, fabric and profile to that of the existing external roof;
- insertion of skylight 'slots' within the new exterior cladding layer along the central spine within Bay 3 and 4a and replacement of the polycarbonate cladding over the curved lantern in Bays 4 to provide daylight penetration; and
- installation of operable smoke attenuation louvres to meet the BCA fire safety and smoke management regulations in bays 1-4a.

4.19 Roof Plant and Platforms

New platforms to support roof plant for the supermarket and retail tenants are proposed to be installed. The roof plant will be located within the existing roof valleys between Bays 3 and 4 and Bays 4 and 4a and sit on the new platforms. The platforms will be of steel construction and will penetrate the roof to allow columns to run to the ground, where they will be fixed to existing footings below as illustrated in **Figure 68**. Furthermore, they have been positioned on the roof in locations where they will not be visible from street level or from people on passing trains.



Figure 68 – Proposed roof platforms and plant

Source: Sissons

4.20 Building Entrances and Windows

The proposal seeks to remove and replace all modern glass doors fronting Locomotive Street and Innovation Plaza. However, the existing painted timber doors will be retained and fixed in an open position internally, in front of new contemporary lightweight glazed doorways. Furthermore, the large format modern roller door with glass panels in the north-eastern corner of Bay 1 that will be used as the loading dock entrance will be replaced with a contemporary glazed door, which is similar in design.

4.21 Exterior Material Palette

The material palette for any necessary works to the exterior of the proposed development will be determined as the detailed design progresses, will be in-keeping with the original appearance of the Locomotive Workshop and will retain all original features where possible. However, for any exterior or internal works, the detailed design may consider using the following:

- steel as the base construction material;
- black anodised aluminium for window and door frames;
- corrugated steel roof sheeting – Colourbond surfmist;
- alsynite or similar polycarbonate sheeting to roof lights;
- opaque aluminium smoke ventilation louvres;
- glass infill to new external openings; and
- masonry to new solid intertenancy walls.

4.22 Public Access & Circulation

The proposed primary pedestrian access points into Bays 1 to 4a are located off Locomotive Street into Bays 3, 4 and 4a, and Innovation Plaza into Bay 1. However, other doorways along the southern, eastern and northern facades of the Locomotive Workshop will be openable and be utilised according to the requirements of the tenants.

The corner retail and heritage exhibition annexes will have access independent of the Bays, and have access directly from Locomotive Street.

Bays 1 to 4a maintains the central circulation spine that runs from Bay 1 to Bay 7. This central spine will provide unimpeded access for the general public and future workers within hours of operation. The southern portion of Bay 4 acts as the key north-south pedestrian access and circulation space within Bays 3-4a. This will provide linkages with the key retail tenant offer in Bays 3-4a with Locomotive Street.

The proposed travelator within Bay 4 will also provide a direct weather protected pedestrian linkage to the lower ground car parking area in Building 2.

4.23 Heritage Interpretation

The Interpretation Strategy for the entire ATP was prepared by Curio Project in November 2016 and included the Locomotive Workshop (this is included at **Appendix M**). It was approved by the NSW Heritage Division in February 2017 provides an overarching framework in heritage interpretation at the ATP including the key themes, stories, interpretive products and opportunities. The Interpretation Strategy forms Stage 1 of a three-staged interpretive planning process.

As discussed in detail in the Heritage and Archaeological Impact Statement, prepared by Curio Projects (**Appendix M**) Trigger Design and Curio Projects have been commissioned by Mirvac to prepare the Stage 2 Interpretation Plan for the Locomotive Workshop and well as the Stage 2 Interpretation Plan for the broader ATP precinct.

Curio Project considers that the new heritage interpretation initiatives for the Locomotive Workshop and wider ATP precinct will create the opportunity for re-engagement with the key stakeholders and community in order that the stories reflect the intangible heritage values of the Site and begin to recreate the connections to the Site in a positive and meaningful way.

It is further noted that whilst the Stage 2 Interpretation Plan for the Locomotive Workshop is currently only at a preliminary design phase, it will be further refined and detailed as the detailed design of the proposal develops. Notwithstanding this, the key concepts that will be developed as part of the finalisation of the Stage 2 Interpretation Plan for the Locomotive Workshop include the following.

- **Provide a new, exciting arrival entry experience from Innovation Plaza into Bays 1 and 2**, by removing barriers and obstacles to the heritage collection. This will serve to make the appreciation of the in-situ machinery in Bays 1 and 2 more open, free and accessible while retaining the industrial character of the space. The aim is to create a vibrant, activated interpretive space.
- **Remove all the timber barriers** that prevent closer access to and interaction with the in-situ industrial machinery and its replace with alternate, less intrusive protection throughout Bays 3-4a.

- **Specially formed ‘foldup’ floors** to allow machinery to be protected without creating fences or barriers around the items as illustrated in **Figure 69**. This design will allow for specialist up-lighting and interpretive wording to be included in the display.



Figure 69 – Heritage interpretation design concept for in-situ heritage items

Source: Trigger

- **Relocation of non-provenanced moveable heritage items** to more relevant contextual locations, where possible.
- **The rotation of moveable heritage collections in Bays 1 and 2 and the provision of a display area** to allow for improved interpretation, to allow items to be conserved and ‘rested’ in protected storage locations, and importantly to provide returning visitors with new experiences.
- **Focus on cultural heritage tourism**, that will integrate Bays 1-4a and 5-15 within the Locomotive Workshop with each other, and integrate the Locomotive Workshop with the remainder of the ATP. Mirvac is working in partnership with the NSW State Government’s ‘Heritage Near Me’ program to develop a unique digital platform for the ATP to create closer connections with the community and to allow the key stakeholders to tell their stories, and the stories of the Site through virtual reality and augmented reality treatments. It will also form part of a key network of journeys both within the Locomotive Workshops and beyond to allow people to engage with and enjoy the significance of the Site using the latest digital technology and prototypes.
- **Improving the internal and external reading of the original function** of the Locomotive Workshop through the redevelopment and its associated improvements to the heritage ambience, external and internal lighting, revised bay numbering (i.e. returning to the original numbering), inlays throughout the internal central spine and on Locomotive Street and a clearer communication of the heritage significance of the Site using a variety of media and other techniques.

- **Creation of a formal heritage exhibition and interpretation** space with a rotating curatorial program rather than a static display. Mirvac is investigating partnerships with institutions and cultural heritage place managers for curation of the displays, the ensure the space is a rigorous interpretive focused facility, providing for a creative and exciting approach to interpretive design that is relevant and engaging.

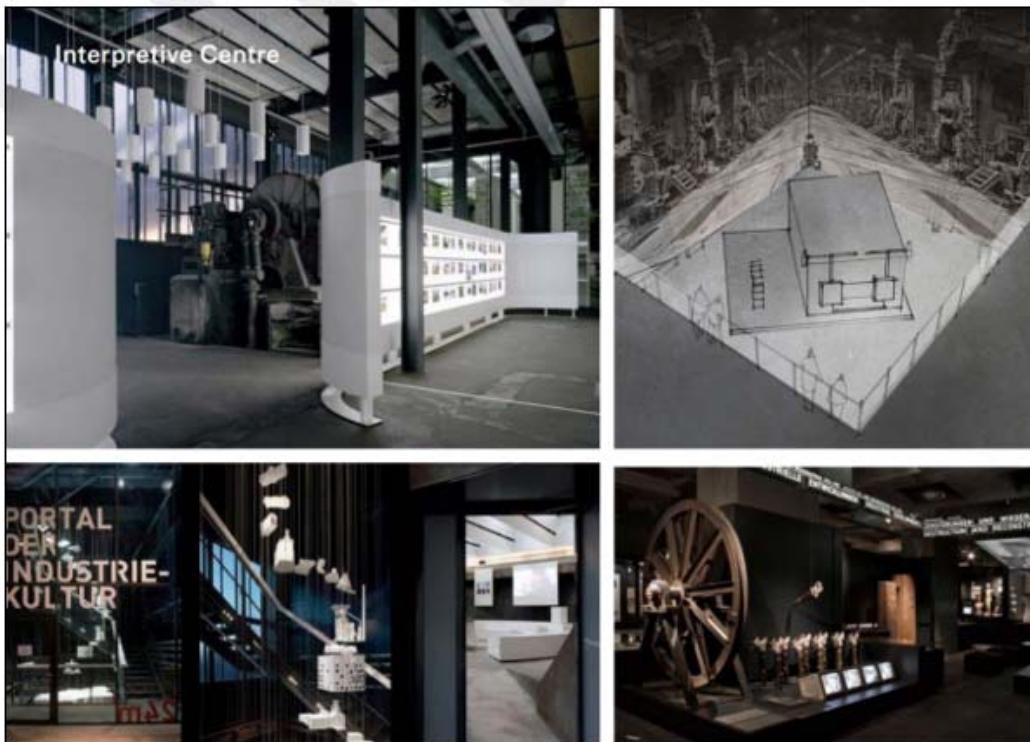


Figure 70 – Design concepts and inspiration for the Heritage Exhibition Space

Source: Trigger

- **Creation of a multi-functional interpretive surface and display along the loading dock wall** that frames views of heritage machinery.
- **Revitalisation of the interpretation of the key external elements along the Southern façade**, including the Pumphouse and the Boiler House.
- **Interpretation of the in-situ guillotine within the new corner retail annex.**
- **Telling key stories**, such as the continuity of 130 years of blacksmithing in Bays 1 and 2 south, other activities, people and uses of the Locomotive Workshop as well as iconic stories related to the Industrial Revolution, Aboriginal Activism, the role of the female worker, the migrant worker, War Efforts and the decline of Eveleigh.



Figure 71 – Visual example of touchscreen interpretation facing the Blacksmith area

Source: Trigger

4.24 Signage

As indicated on the Signage zone plan, included at **Appendix B**, approval is sought for signage zones behind the upper glazed panels of the entrance doorways along the eastern, southern and northern elevations of the Locomotive Workshop and behind the glazing line of the upper level of the corner retail annex on its eastern and southern elevations. These are to be supplemented by two signage zones on the high level roof structures on the northern elevation and totem signage where required.

Approval is also sought for a signage zone on the brick heritage fascia of the southern elevation of Bay 4 and a further signage zone on the brick heritage facia of the western elevation of Bay 1 above the main entrance. The signage in these two locations are to be restricted to 'Locomotive Workshop' signage only.

The signage zones of the heritage brick fascia will be above the large entrance doorways and will be 1.35m high and fit within the brick inlet features set in to the building. The tenant identification signage zones, behind the glazing will be 4.1m long and 1.62m wide above the modern entrances, and 2.78m long and 0.32m high above the heritage entrances.

The signage zones on the facade of the roof structures on the northern elevation, will be:

- 6.2m wide and 2.2m high on the Bay 4 structure; and

- 7m wide and 4.1m high on the Bay 4a structure.

Approval for the detailed signage design, materiality and illumination will be the subject of a separate application.

4.25 Illumination Strategy

A conceptual Lighting Design Strategy has been prepared by Point of View (refer to **Appendix N**) which sets out guiding principles, luminaire typology and design concepts for the external facades, elements and signage and interiors.

4.25.1 Exterior Lighting

The general approach that will be adopted for the southern façade of Bays 1-4a includes:

- linear in ground uplights to graze the pilasters;
- inground uplights to accent the doorways;
- luminaire mounted window ledges to light the window reveals;
- linear LEDs to uplight the façade pediment;
- signage with integrated lighting; and
- linear LEDs located above the entrance portals;
- uplighting to heritage artefacts and the corner retail annex;
- uplighting to heritage boiler house; and
- low glare and non-obtrusive signage lighting that is sympathetic to the heritage facades.

The general approach that will be adopted for the eastern façade of Bay 1 includes:

- linear in ground uplights to graze the pilasters;
- inground uplights to accent the doorways;
- luminaire mounted window ledges to light the window reveals;
- linear LEDs to uplight the façade parapet;
- wall lights located over the doorways;
- uplighting to heritage artefacts; and
- low glare and non-obtrusive signage lighting that is sympathetic to the heritage facades.

Along the northern façade, the strategy proposes linear LEDs to uplight the faced pediment and pendants suspended from the existing steel brackets.

4.25.2 Interior Lighting

The general interior lighting strategy proposes the following:

- in ground uplights with low glare to light the columns;
- track and spot lighting to light the gantry;
- a series of high bay luminaires within the high ceiling spaces to provide general lighting to the space below. The look and feel will be of traditional heritage style;
- surface mounted luminaires in areas where the ceilings are lower;
- track and spot lighting throughout to provide accent lighting to architectural elements and zones;
- floor mounted lighting, table lighting and localise task lighting in break-out areas;
- accent lighting to heritage artefacts.

It is noted however that as part of the construction certificate documentation for the internal construction works, that a consolidated and detailed lighting design for both the external facades and internal elements will be formulated for the entire Locomotive Workshop. In addition, in order to ensure that all specialist lighting provided by tenants is in keeping with Mirvac's proposed overall vision for the Locomotive Workshop and enhances the significant heritage fabric, tenants will also be required to submit their lighting scheme for review and comment by Mirvac's appointed design team as part of the land owners consent process.

4.26 Public Domain

As noted in **Section 3.4**, the public domain area, situated within the SSD 8517 Site boundary comprises only a very small area of land adjacent to the southern and northern facades of Bays 1-4a.

Sissons has prepared a Landscape Report (**Appendix O**) which provides details of the proposed public domain works within the curtilage of Bays 1-4a. In summary the following is proposed:

- ground treatment to include brick paving to integrate with the Locomotive Street design as illustrated in **Figure 72**;
- refreshment of line markings and make good any existing element along the northern accessway; and
- make good any area adjacent to the eastern building façade within Innovation Plaza that may be impacted.

It is noted, that whilst new bicycle parking is shown adjacent to Bay 4, this will be provided and is discussed within SSDA 8449.

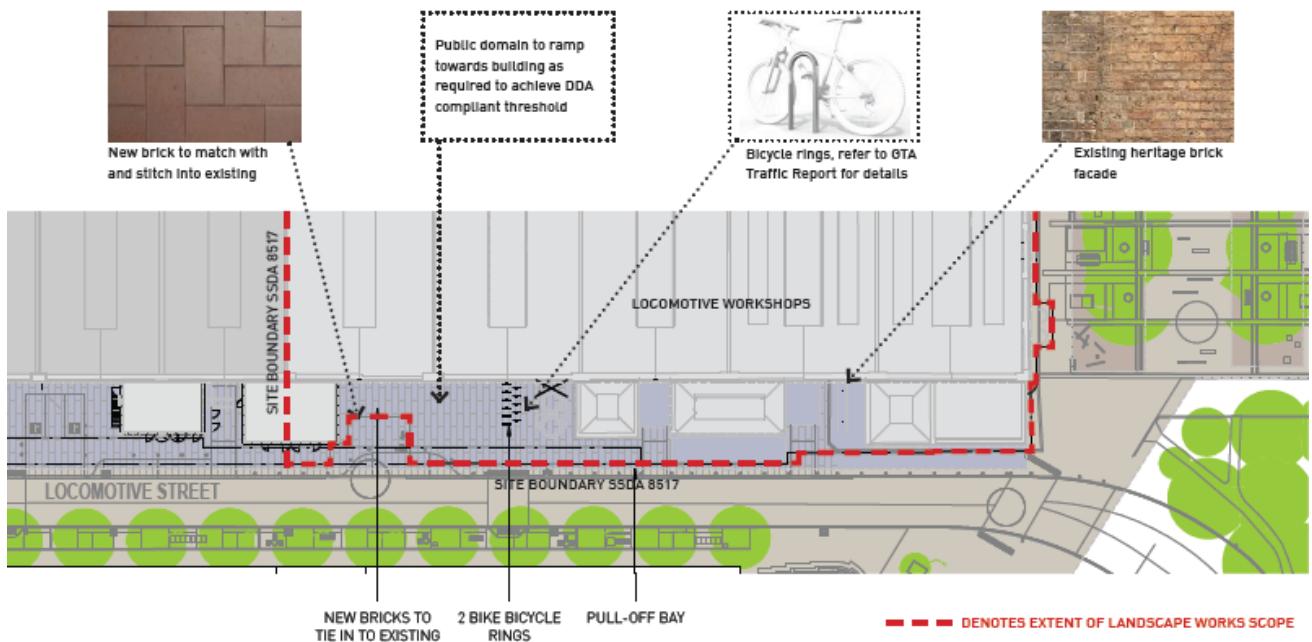


Figure 72 – Proposed public domain works for Locomotive Street frontage

Source: Sissons

4.27 Vehicle Access, Loading and Car Parking

4.27.1 Vehicle Access

Vehicular access to Bays 1-4a will continue to be provided via Locomotive Street.

4.27.2 Car Parking

No additional standard or accessible car parking is proposed as part of this development.

However, it is Mirvac's intention to allow 230 of the car spaces within the Channel 7 visitor car parking area to be used by the Commonwealth Bank of Australia, and in turn will provide visitor parking for the Locomotive Workshop and the wider ATP precinct at the lower ground floor of Building 2. It is intended that the lower ground floor of Building 2 will be connected to the Locomotive Workshop through the provision of the travellator as discussed in **Section 4.12**.

The reconfiguration of the lower ground floor of Building 2 to provide car parking spaces that meet the relevant Australian Standards for visitors will be the subject of a separate modification to SSDA 7317.

4.27.3 Bicycle Parking

No bicycle parking or end of trip facilities are included within Bays 1-4a. However as included within SSDA 8449, a total of 227 bicycles and end of trip facilities for all staff within the Locomotive Workshop will be provided in Bay 15.

In addition, as explained in SSDA 8449, a total of 46 spaces are proposed to be located within the public domain area adjacent to the southern façade of the Locomotive Workshop. Of these, 22 will be located adjacent to Bay 4 and the remainder located adjacent to Bays 10-13.

4.27.4 Loading and Servicing

Loading and servicing will be provided in two areas:

- within eight on-street loading bays provided along the northern side of Locomotive Street (as proposed in SSDA 8449); and
- within the loading dock that will be provided within the northern part of Bays 1 and 2.

On-street loading

The proposed on-street loading spaces (as part of SSDA 8449) will be principally used for small vehicle deliveries and couriers etc. They will be located strategically along the northern side of the Locomotive Street so as to not impact upon its future pedestrian friendly aesthetic.

Loading Dock

The proposed loading dock is proposed as part of this SSDA, as described in **Section 4.10**. It will service Bays 1-15 of the Locomotive Workshop and be used for major deliveries, and waste servicing. It is anticipated to contain 5 loading spaces, waste storage rooms and compactors.

Given the loading dock is separated from Bays 5-15, the northern accessway will be utilised to transport waste and/or major deliveries between the loading dock and the various tenancies.

As explained in **Section 6.8.3**, the preferred option for loading vehicle access is shown in **Figure 73**, noting that the green line represents the entry movement and the red line represents the exit movement. However, Mirvac understands that additional consultation and stakeholder engagement may be necessary to work through and agree on a final outcome.

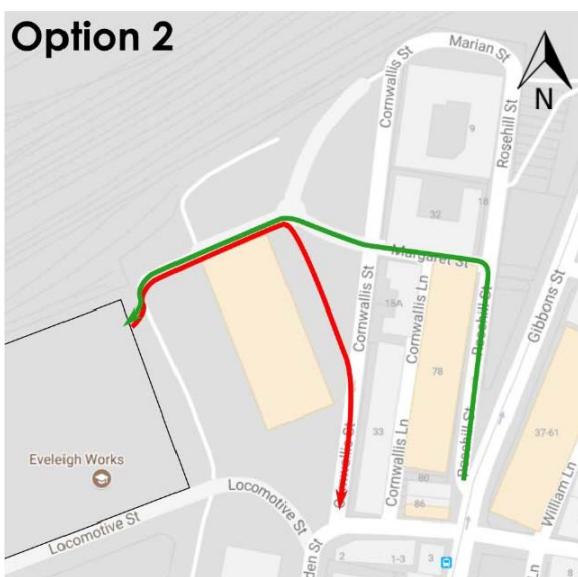


Figure 73 – Preferred service vehicle ingress and egress route

Source: GTA

4.28 Operational Management

An Operational Plan of Management (**Appendix Q**) has been prepared by Mirvac to explain how Bays 1-4a within the Locomotive Workshop will be operated to meet its obligations associated with Mirvac's management policies and other relevant requirements. Select details are summarised below. Hierarchy

4.28.1 Hours of Operation

Tenants will be able to access their offices and tenancies 24 hours, 7 days per week, however specific opening times for any future retail or other specific uses will be outlined in the relevant fit-out Development Applications.

4.28.2 Public Access

Public access within the public circulation areas, tenancies and the Heritage Exhibition spaces will be determined by Mirvac, however it will likely be open 18 hours a day, 7 day a week. General public access to the Blacksmith/ Hard Arts spaces will not be permitted unless by prior arrangement, however members of the inter-tenancy wall of the Blacksmith/ Hard Arts area is likely to be not higher than 1200mm and therefore the public will be able to view the activities that will be undertaken in this space.

4.28.3 Site Management

Mirvac's Site management team are currently located in Bay 7 within the Locomotive Workshop. However, during construction and following the redevelopment of Bays 5-15, the Site management offices will be located in Level 2 of Bay 15. They will be staffed Monday to Friday between 8am and 5pm. Out of these hours, on-site security personnel will be the point of contact. The Site Management team will be responsible for the management of the entire Locomotive Workshop building including Bays 1-4a.

Furthermore, Site management will be responsible for offering and managing the following services to tenants:

- Lost and Found; and
- End of Trip Facilities

Site management will also engage a private contractor to manage cleaning throughout the Locomotive Workshop, including all communal areas and individual tenancies, if specified under the leasing agreement.

4.28.4 Staff

The Site management team will comprise of approximately 4 staff. However, the total number of staff employed within Bays 1-4a across all tenancies will be approximately 250.

4.28.5 Waste Management

As noted in **Section 4.22.4**, the overall strategy for loading and servicing, including waste collection and storage within the Locomotive Workshop is based on the provision of a loading dock located within the north-eastern corner of Bays 1 and 2.

The loading dock will service the proposed retail uses within Bays 1-4a, as well as the commercial uses within Bays 5-15 (subject to separate SSDA 8449), and waste management will be undertaken in line with the management measures outlined in the Operational Waste Management Plan, prepared by Waste Audit (**Appendix R**).

4.29 Environmentally Sustainable Development

Mirvac is committed to redeveloping the Locomotive Workshop to maximise energy efficiency and create a sustainable working environment for future tenants and visitors. The proposed design is targeting the following sustainability benchmarks and certifications:

- 5 Star Green Star 'Design & As Built' v1.1 rating;
- 5 Star NABERS Office Energy (Base Building) rating;
- 4 Star NABERS Water (Whole Building) rating; and
- NCC Section J Compliance

In order to meet these benchmarks a number of ESD initiatives (as set out within the Ecologically Sustainable Development Report, prepared by NYD at **Appendix S**) will be considered and incorporated (where possible) into the detailed design and operation of the Locomotive Workshop. The compliance with the ecological sustainable design provisions identified within the City of Sydney DCP 2012, and the minimum requirements of the BCA and EP&A Act are addressed in **Section 6.19**.

4.30 Infrastructure and Services

A Stormwater and Hydraulic Infrastructure Report has been prepared by NDY (see **Appendix I**) and an Electrical Services Report has been prepared by IGS (see **Appendix J**). These reports assess whether the proposed development will require the upgrade or augmentation of the existing utility infrastructure that service the Site.

4.30.1 Sewer, Water and Gas

NDY's assessment of the proposed development against the general requirements of Sydney Water and Jemina confirm that the proposed development will not require augmentation of the existing sewer main infrastructure, water main infrastructure, or natural gas main infrastructure. However, this conclusion is subject to the receipt of the final Section 73 requirements from Sydney Water and the final Letter of Offer from Jemina.

4.30.2 Electricity

Ausgrid have confirmed that the existing substation (S.3512) that is proposed to feed the new development within Bays 1-4a does not have space to add an additional transformer to service the proposed development. As set out the Electrical Services Report, prepared by IGS (**Appendix J**) it is therefore envisaged that, subject to Ausgrid approval and final tenant loads, two new 1,000kVA kiosk substations will be provided on the grass verge adjacent to the National Innovation Centre to service the proposed development within Bays 1-4a and the new commercial development within Bays 5-15.

4.30.3 Telecommunications

The ATP precinct is already served by diverse telecommunications feeders from Redfern and Newtown Exchanges. The existing Building Distributor is already serviced via the National Innovation Centre with fibre tie cabling allowing services from a variety of services including Telstra, Optus, Vocus, Pipe networks and Nextgen. Subsequently, future incoming telecommunications services can cater for the proposed redevelopment of the site.

Additional upgrades to the pit and pipe infrastructure within ATP to facilitate any required diversity within the respective buildings will be required.

The new development will re-use the existing single central building distributor in its current location. Existing conduits and lead-in cabling will be re-used to cater for the new development.

4.30.4 Stormwater Management

The Locomotive Workshop's existing stormwater drainage and downpipe system will be retained.

4.30.5 Electrical and Mechanical Engineering

The existing electrical services infrastructure (such as main switch boards, distribution boards, cabling etc) within the Locomotive Workshop will be re-used or replaced as specified within Electrical Services Report (refer to **Appendix J**).

5.0 Consultation

5.1 Overview of Consultation

In accordance with the SEARs issued for this project, and in acknowledgement of the heritage significance of the Locomotive Workshop, consultation was undertaken with relevant authorities, stakeholders and the local community.

The consultation activities were designed to address the Secretary's Environmental Assessment Requirements and ensure that stakeholders were informed about the proposal and had the opportunity to provide feedback prior to the submission of the SSDA. The feedback received during the consultation process has been considered during the preparation of the SSDA.

Whilst communications and stakeholder engagement activities addressed both SSDAs together (i.e. SSDA 8449 and SSDA 8517), this summary and the detailed Stakeholder and Community Engagement Report, prepared by Ethos Urban (**Appendix T**) focus on the issues related to the adaptive reuse and redevelopment of the eastern portion of the Locomotive Workshop (being Bays 1-4a) herein referred to as the Retail SSDA. A subsequent report that will support SSDA 8449 will outline the issues related to the redevelopment of the western portion of the Locomotive Workshop (being Bays 5-15).

A summary of the key pre-lodgement consultation activities and meetings undertaken to-date with the relevant authorities, stakeholders and the local community is provided below, and further detailed within the Stakeholder and Community Engagement Report.

- Two (2) **Community Information Sessions** at ATP to provide an opportunity for interested local residents, stakeholders and businesses to view the plans, ask questions of the project team and provide feedback via feedback forms.
- An information stand at the **1917: The Great Strike Community Day** to provide an opportunity for the wider community to view the plans and provide feedback.
- Eight (8) meetings with the **Heritage Sub-Panel** which was established to collaborate on the development of the Locomotive Workshop plans with representatives from the Heritage Division of the Office of Environment and Heritage (OEH) and the City of Sydney.
- Two (2) meetings with the **ATP Advisory Panel** with representatives from key stakeholders including UrbanGrowth NSW Development Corporation, Jobs for NSW, the Land and Housing Corporation, Carriageworks, CBA, the University of Sydney, South Sydney Business Chamber, REDWatch, Eora College, Counterpoint Community Services, National Art School and Cicada Innovations.
- Two (2) dedicated **Heritage Stakeholder Meetings** with key stakeholders, representatives from heritage organisations and local heritage experts were held to provide an overview of the SSDAs, share information about the evolution of the design and gather important feedback about the plans.
- **Stakeholder meetings and correspondence** with relevant authorities, agencies and organisations including:
 - City of Sydney
 - UrbanGrowth NSW Development Corporation
 - Metropolitan Local Aboriginal Land Council

- Jenny Leong, Member for Newtown
 - Department of Planning and the Environment
 - Tim Smith, Director - Heritage Operations, Heritage Division NSW
 - Transport for NSW (including Transport Heritage division)
 - Heritage Division, Office of Environment and Heritage NSW
 - Heritage Council of NSW
 - Roads and Maritime Services
 - Ausgrid
 - Sydney Water
- Consultation with **existing Locomotive Workshop tenants** via email, phone, letterbox drop and direct face-to-face meetings to provide information about the redevelopment of the Locomotive Workshop and to provide a direct line of communication to discuss and resolve concerns.
 - Four (4) meetings with the established **Community Liaison Group**, comprising interested local residents and representatives from community groups including REDWatch and Alexandria Residents Action Group.
 - Publishing feature articles in the **ATP Newsletter** for the July-August and September-October editions to promote the information sessions and to provide updates on the plans for the redevelopment of the Locomotive Workshop and the evolution of the design.
 - **Public notices** in the South Sydney Herald and Central Sydney Courier on Monday 10 July 2017 and Wednesday 12 July 2017, to advertise the community information sessions and to provide the phone and email contact details for more information.
 - Production of eleven **AO information** boards for display at information sessions to illustrate the SSDA's and consultation activities.

5.2 Consultation Outcomes

Several consultants have undertaken additional consultation with relevant parties during the preparation of their reports, including consultation with Sydney Water and Ausgrid, as outlined in Stormwater & Hydraulic Infrastructure Services Report (**Appendix I**) and Electrical Services Report (**Appendix J**).

A summary of the main issues raised by relevant authorities, agencies and organisations relating to the Retail SSDA 8517, and how the proposal has responded to these is provided in **Table 6**.

Table 6 - Summary of issues raised by relevant authorities, agencies and organisations and project response

Key Issue	Response
City of Sydney Council (various departments)	
1. Intent to keep Locomotive Street as a shared space, and keep vehicular speed as slow as possible.	Mirvac's intent is to prioritise pedestrian movement along Locomotive Street by careful landscaping features and wayfinding mechanisms which will be detailed in the detailed landscaping plans that are proposed to be provided to the City of Sydney for comment under the Conditions of Consent for SSDA 7317. The proposed development proposes mainly internal works and only minor works to the Locomotive Street frontage of the Locomotive Workshop, but also proposes a new retail pavilion at the south-east corner of Bay 1. It is considered that the proposed development will therefore retain and enhance the vision for a vibrant public domain shared space for Locomotive Street.
2. Any loss of current on-street car parking is not supported.	The proposal does not include any loss of on street car parking within the vicinity of the ATP precinct.
3. The building should include sustainability features such as natural ventilation.	An Ecological Sustainability Development Report has been prepared by NDY (see Appendix S) which provides further details regarding sustainability initiatives and mitigation measures for the development.
4. Visual or physical permeability between commercial and retail spaces is encouraged.	The central publicly accessible spine that runs between Bays 1-7 is a key feature of the proposal, which will be enhanced and utilised for heritage interpretation. Furthermore, the central spine is conserved throughout all Bays within the Locomotive Workshop and Mirvac will endeavour to arrange controlled public access throughout the Locomotive Building during nomination times (such as the Great Strike Day) subject to agreement with the tenant and their security requirements. In addition, the interior designs for both the commercial and retail components will ensure that there is a flow and similar look and feel throughout.
5. Internal spaces should not be cluttered.	The proposal seeks to increase the width of the existing central spine opening and circulation space. The proposed tenancies are to be generally open, with minimal visual obstructions to the heritage building fabric and equipment on display. Further detail is provided within the Architectural Design Report included at Appendix C , which outlines guiding principles to ensure future fit-out development applications retain this design objective.

Key Issue	Response
6. Support for heritage machinery and items to be kept in-situ.	<p>The proposal and heritage interpretation strategy is consistent with this preference. Majority of the in-situ machinery will be retained within Bays 1 & 2, with the exception of three (3) furnaces and other functioning equipment, which will be relocated within the Blacksmithing area for its greater utilisation and to replace furnaces and equipment that are not working.</p> <p>The intended treatment for other elements of the Moveable Heritage Collection, proposed as part of the redevelopment is to help re-establish context where possible, and to improve the interpretation of an element individually, and as part of a process.</p> <p>Within Bays 3 to 4a the current SSDA proposes that the moveable heritage collection machinery will be relocated and integrated with the future fit-out design for the tenancies and public circulation space. Heritage items are to be relocated to their provenance, as part of the broader interpretation strategy. Further details are provided with the Heritage and Archaeological Impact Statement (Appendix M).</p>
7. The storage of Heritage machinery and items should be confirmed.	<p>The Architectural Design Report (see Appendix C) outlines guiding principles for the design of the future fit-out of the proposed supermarket within Bays 3 to 4a.</p> <p>The Stage 2 Interpretation Plan for the Locomotive Workshop is currently at a preliminary design phase, it will be further refined and detailed as the detailed design of the proposal develops and this will also include the mechanisms and processes for storage. Once complete it will be submitted to the Secretary for approval prior to the first Occupation Certificate.</p>
8. Support for new building features to be independent, with their own architectural style.	
9. Internal fit-out should be reversible and light touch.	
10. Illustrations should be provided for the proposed interpretation wall and treatment of loading dock.	

Heritage Division – Office of Environment and Heritage NSW

11. The Heritage Interpretation Plan needs to apply to the entire site.	Several heritage interpretation initiatives are proposed in conjunction with this SSDA, which will be further refined and detailed through future design stages of the Locomotive Workshop, as well as through the Stage 2 Heritage Interpretation Plans for the ATP and Locomotive Workshop (currently in preparation). These Plans are being prepared in conjunction with the Public Domain works and Public Art Strategy as required by Conditions of Consent for SSD 7317 to provide an integrated suite of documents for the entire ATP precinct.
---	--

Key Issue	Response	
12.	The industrial character of the Locomotive Workshop should be maintained and enhanced.	The proposed design aims to conserve the authentic industrial character of the Locomotive Workshop, showcasing the existing building on all scales, from the conservation of heritage structure and machinery, to windows and doors, and characteristic materials such as heritage face brick. All new materials introduced to the building will take their lead from what is existing, with use of glazing and other transparent materials a priority to ensure legibility of heritage items and the scale of the building. Further detail is provided within the Architectural Design Report at Appendix C .
13.	The volume of change in use should be considered and justified. The building should not lose its essence and history of usage.	The Heritage Impact Assessment at Appendix M , provides a robust analysis and justification for the change of use of Bays 1-4a.
14.	Bays 1 & 2 should be a vibrant and activated space. The use should aim to capture some noise and activity similar to its original industrial style.	Locomotive Workshop building in its entirety (including SSDA 8449) has been considered as the 'jewel in the crown', and has been designed accordingly to provide maximum opportunities for its appreciation. Currently is it underutilised and lacks the sense of noise and activity that it once had. The redevelopment of the Locomotive Workshop will enliven the ATP precinct and encourage further appreciation of the Blacksmith and heritage, more alike to the former busy industrial character that the Site once enjoyed.
15.	Provide detail about the relationship between roads, pedestrians and public domain.	Locomotive Street itself is subject to public domain works under Conditions of Consent for SSD 7317. This will transform Locomotive Street into a pedestrian shared zone. The proposed redevelopment, the subject of this application has integrated with these works, proposing key entries to Bays 1 - 4a opening onto Locomotive Street. The public will be free to enter the building and circulate through the central access path through from Bays 1-7. As part of the separate SSDA 8517 retail zones with Bays 1-4a will provide activation at street level throughout Locomotive Street and Innovation Plaza.
16.	Support for heritage items to be kept in-situ.	See Point 6 above.
17.	Provide detail about the location and storage of heritage items.	See Point 7 above.
18.	Internal spaces should not be cluttered.	See Point 5 above.
19.	Three mezzanine levels should not be an option.	This application proposes a maximum of two floors within Bays 1 – 4a.
20.	New building features should be independent and should have their own architectural style.	The proposal has incorporated these principles into the design considerations, proposing where possible, new elements to be independent, have a light touch, have a contemporary architectural style and be reversible and removable, to ensure minimal impact to the

Key Issue	Response
21. Light touch and reversibility of all heritage impacting elements is crucial. This includes the proposed signage over doors, for example. These elements should have less intrusive profiles.	heritage fabric of the building. Further detail is provided within the Architectural Design Report included at Appendix C and the Heritage and Archaeological Impact Statement at Appendix M .
22. Provide more detail of the proposed changes to the roof structure, including the addition of skylights. How is this different to its original structure, and what is the functional benefit of these changes.	Proposed changes to the roof structure have been indicated within the Architectural Plans (Appendix B), and further detailed within the Architectural Design Report (Appendix C) and at Section 4.11 .
23. External door and window treatments should be lightweight. These elements should not have intrusive profiles.	The proposal seeks to maintain existing openings and where original windows remain, restore and repair these as necessary. As such, the proposal is consistent with this preference, and has been further detailed within the Architectural Design Report (Appendix C) and assessed in the Heritage and Archaeological Impact Statement at Appendix M .
24. The preference is for moveable items to be relocated to areas of their provenance. Heritage Division would like further consultation regarding potential relocation of the Traverser.	The proposal and heritage interpretation strategy is consistent with this preference. Generally, machinery has been relocated to its providence, within Bays 1 & 2 particularly, as indicated on the Architectural Plans (see Appendix B). Mirvac is currently exploring a potential partnership with Transport Heritage NSW that may allow for key machinery to be loaned by Mirvac to Transport Heritage NSW for recommissioning and reuse in a proposed new apprenticeship training program for the repair and conservation of historic trains at Chullora.
25. Aboriginal heritage should be thoroughly considered, and included within the Heritage Interpretation.	The heritage interpretation concepts discussed at Section 6.3.3 , demonstrate the importance of telling the stories of the diverse communities that use the Site, including the importance of the Site for Aboriginal workers. The Stage 2 Interpretation Plans for the ATP precinct and Locomotive Workshop are currently only preliminary, however they will detail the importance of the Aboriginal heritage of the Site and will ensure that it is recognised.
26. Further details should be provided for the proposed interpretation wall and treatment of loading dock.	See Point 10 above.
Heritage Council of NSW	
27. Request for details on the proposed treatment of the movable heritage collection and items on display.	See Point 7 above. Further detailed has been provided and assessed in the Heritage and Archaeological Impact Statement at Appendix M .

Key Issue	Response	
28.	Concern that the collection would continue to be properly conserved, interpreted in a meaningful way throughout the development, particularly compared to present poor interpretation outcomes.	The proposal is consistent with a broader ATP and Locomotive Workshop Heritage Interpretation Strategy, as outlined within the Heritage and Archaeological Impact Statement (Appendix M). This strategy seeks to build upon and ensure more sustainable and thorough interpretation works/activities.
29.	Requests for details of storage of moveable heritage and machines not being display, and understanding of the proposed conservation measures long term.	See Point 7 above.

Local Aboriginal Community Groups, (including Metropolitan Local Aboriginal Land Council (MLALC))

	Previously, extensive and ongoing community consultation has been undertaken as part of this SSDA and the SEARs Requirements, as detailed in Section 5.0 . Further consultation will continue to be undertaken as part of the redevelopment of the ATP (SSD 7317), and as part of the development of the Stage 2 Interpretation Strategy. A detailed outline and summary of project responses for all issues raised by local aboriginal and community groups is provided within the Stakeholder and Community Engagement Report included at Appendix T , and a summary of the key issues raised by the community collectively is discussed in Section 5.3 .
--	--

UrbanGrowth NSW Development Corporation

30.	The storage and location of movable heritage items that are not on display needs to be identified.	See Point 7 above.
31.	Themes relating to diverse communities, including the working class, needs to be interpreted across the site.	The Heritage Interpretation Strategy seeks to deliver the Locomotive Workshop, and broader ATP site, as a sustainably activated precinct that has economic, environmental and social benefits for the site owners and occupants, the local community and key heritage stakeholders. Once completed it is envisaged that the ATP will become a hub for production, education, manufacturing and wholesale, as well as dining in a setting that is sympathetic to the heritage significance of the site. The Locomotive Workshop building in its entirety (including SSDA 8517) has been considered as the 'jewel in the crown', and has been designed accordingly to provide maximum opportunities for its appreciation. Furthermore, the heritage interpretation concepts discussed at Section 6.3.3 , demonstrate the importance of telling the stories of the diverse communities that use the Site.

Jenny Leong, MP for Newtown

32.	Concern about the perceived loss of public space.	Bays 1 & 2 under the proposed scheme will remain accessible as currently existing. It is considered that retail uses provide further encouragement for the public to appreciate and interact with the Locomotive Workshop and its heritage artefacts.
-----	---	---

Key Issue	Response
33. How public space feels and how welcome people feel within the proposed space, particularly for all members of the community, including social tenants.	See Point 31 above.
34. Recognition of Aboriginal heritage	See Point 25 above.
35. Upgrade of Redfern Station to accommodate additional workers and visitors to site and bridge across to Carriageworks	<p>This is outside the scope of this SSDA, however it is noted that Mirvac recognises the importance and requirement for both upgrades to existing Redfern Station, and a pedestrian/cycle bridge crossing connecting to Carriageworks on the opposite side of the railway tracks.</p> <p>As a first step, as part of the Conditions of Consent for the redevelopment of the ATP (SSD 7317), Mirvac are required to provide a concept for DDA compliant access from ATP to Redfern Station, and are working with Transport for NSW and other stakeholders to finalise a design.</p>

Transport for NSW (including Transport Heritage NSW)

36. Consideration should be given to the use of Locomotive Street by coaches and buses.	Coach and bus facilities will have access to the ATP precinct along Central Avenue. This is to ensure that Locomotive Street is maintained as a shared zone, with minimum vehicular usage.
37. Providing improved access to Redfern Station should be considered.	As part of the Conditions of Consent for SSD 7317, Mirvac are required to provide a concept for DDA compliant access from ATP to Redfern Station. Mirvac are currently working on the design of this upgrade, including regrading works to provide a ramp and lift. Mirvac are working with Transport for NSW and other stakeholders to finalise a design.
38. The impacts of traffic generated during construction on surrounding traffic networks should be cumulatively analysed and mitigated.	Cumulative traffic impacts have been analysed and further details are provided within the Traffic Impact Assessment at Appendix P .
39. Heritage items should be kept in-situ.	See Point 6 above.
40. Location and storage of heritage items should be detailed.	See Point 7 above.
41. The Heritage Interpretation Strategy should apply to the entire site.	See Point 11 above.
42. Coordinate with TfNSW Heritage on Heritage Interpretation.	TfNSW has been consulted during the pre-lodgement stage of this SSDA, and will continue to be consulted post lodgement, as part of the formal public submissions stage, and during the finalisation of the Stage 2 Heritage Interpretation Plans for the ATP and Locomotive Workshop.

Key Issue	Response	
Roads and Maritime Services		
43.	Provide accessibility for existing and future visitors.	<p>An Accessibility Review has been prepared by Morris Goding (see Appendix Y), and is further discussed in Section 6.11.</p> <p>In addition, as part of the Conditions of Consent for the redevelopment of the ATP (SSD 7317), Mirvac are required to provide a concept for DDA compliant access from ATP to Redfern Station. Mirvac are currently working on the design of this upgrade, including regrading works to provide a ramp and lift. Mirvac are working with Transport for NSW and other stakeholders to finalise a design.</p>
Sydney Water		
44.	Sydney Water were consulted by NDY. This is outlined with the Stormwater and Hydraulic Infrastructure Services Report by NDY included at Appendix I .	
Ausgrid		
45.	Ausgrid were consulted as part of the Electrical Services Report by IGS, and is further detailed at Appendix J .	

5.3 Project Responses to Key Issues

The feedback received during the pre-lodgement consultation activities has made a valuable contribution to the evolution of the design and plans for the redevelopment of the Locomotive Workshop.

The following summary sets out the main issues relating to the Retail SSDA 8517, that were collectively raised during all forms of consultation. A summary of how the project has responded to these issues is also provided.

Key Issue 1: The heritage of Bays 1 & 2 is unique and authentic. This needs to be celebrated, and must take precedence over other uses such as retail.

Project Response: The proposed design for Bays 1 and 2 is intended to preserve, accentuate and emphasise the exceptional physical and aesthetic heritage values of this significant space. This will be complimented by a bespoke retail offering focused on cultural heritage tourism to attract greater and more frequent visitation to the site. Greater visitation will ensure that the community continue to engage with the history and stories of the Locomotive Workshop for generations to come.

The interaction of heritage with retail in Bays 1 & 2 has evolved during the preparation of the SSDA as a direct result of a rigorous design and consultation process. It was important to find the synergies between activating the site with the objectives of celebrating and enhancing the unique heritage of the space. Consultation feedback around the importance of balancing any new use of Bays 1 & 2 with heritage considerations, which was supported by advice from Curio Projects, resulted in a significant reduction in the amount of retail included in the space, and a greater focus on cultural heritage tourism opportunities.

Bays 1 and 2 south will be retained for the operation of the Blacksmiths Workshop which will also share the space with other complimentary ‘hard arts’, whilst the northern section will be used as a loading

dock with a new heritage exhibition, events and interpretive space on a mezzanine level above. A permeable interpretive artefact wall will filter vision between the loading dock and the rest of the Bays, whilst playing with the link between the Davy Furnace and the Davy Press. This wall will also provide a canvass for the interpretive display of much of the tools collection currently located in Bays 1 and 2 in the static display.

Bespoke retail uses are proposed to integrate with the in-situ heritage items within Bays 1 and 2 north, and will be chosen for their alignment with the operation of the Blacksmith and the heritage value of the space. Retail pods have been designed for these spaces that will be reversible to ensure no long-term impacts to heritage significance. Please refer to the Heritage and Archaeological Impact Statement at **Appendix M**.

The evolution of the design for Bays 1 and 2 has been directly informed by the Heritage consultants and the feedback gathered during consultation activities. This process highlighted the importance of giving the existing heritage features, items and machinery precedence over new uses. These changes include:

- Original plans for Bays 1 and 2 included retail and the loading dock in three quarters of the space, with the southern corner of Bay 2 allocated to the ongoing operation of the Blacksmiths Workshop.
- Amendments to the design saw the proportion of retail reduced and the inclusion of small glass retail pods in the interface between the Locomotive Workshop and Innovation Plaza. These glass pods were later removed.
- Further amendments to the design have prioritised the Blacksmith and heritage of the bays, with the total amount of retail space reduced by 35%. This retail is proposed for the Bays 1 & 2 north, and will be smaller in scale, low-height, and disbursed among heritage items, allowing space for public circulation and visibility.

Key Issue 2: The Blacksmiths workshop should remain operational.

Project Response: Mirvac intend to facilitate growth in the current operation of the Blacksmith, Eveleigh Works. This was a key consideration in the development of the design for the Bays, and has been a significant factor in determining the appropriateness of other uses in this space. The development of the design has led to the creation of an internationally unique hybrid model that combines retail and cultural heritage tourism to activate and celebrate the heritage of the site.

Future uses within Bays 1 and 2 will complement and enhance the operation of the Blacksmiths Workshop by attracting greater visitation to Bays 1 and 2 and sharing the work of the Blacksmith with new audiences. Consultation with the existing Blacksmith and Blacksmithing community has helped to identify opportunities to improve the functionality of this space, by reorganising the space, reducing clutter and identifying ways to reuse or repurpose heritage equipment.

The proposed design includes retail spaces that will be complementary to the space. Prospective tenants will be chosen for their alignment with the compatibility with the heritage of the space. These retail spaces will be sensitively designed to enhance, rather than detract from the operation of the Blacksmiths Workshop and the heritage significance of the space.

Ongoing consultation with the current Blacksmith and Blacksmithing community has helped to determine operational requirements, such as space, machinery and operational hours. This information will help to improve the functionality of the space. For further detail please refer to the Architectural Design Report at **Appendix C**.

Key Issue 3: Demonstrate the requirements and justification for the location of the loading dock, supermarket and travelator.

Project Response: The redevelopment of Bays 1 and 2 intends to celebrate and enhance the internationally significant heritage space. This process will be guided by the approved Stage 1 Heritage Interpretation Strategy (relating to the entire ATP site), and the Stage 2 Heritage Interpretation Strategy (relating specifically to the Locomotive Workshop) which is currently being developed.

The intention of heritage interpretation is to guide the revitalisation of the entire precinct and to help the wider community connect with the origins, stories and history of ATP. The objectives of heritage interpretation will be strengthened by greater and more frequent visitation to the site. For this to be sustainable, extensive research and analysis (as discussed in **Section 6.7**), established that a critical mass of retail floorspace was needed to activate the precinct and the Locomotive Workshop, break the business park atmosphere, draw people to appreciate the significance of its heritage, as well service the needs of the target worker, resident, tourist and student populations.

Further research undertaken by MacroPlan Dimasi (refer to **Appendix D** and **Appendix E**) highlighted that in order to attract the bespoke retail offer that Mirvac was targeting, and draw people everyday to the Locomotive Workshop, it would need to be anchored by a more traditional style of retail offer, such as a supermarket. In addition, as discussed in **Sections 4.10** and **4.12**, critical success factors that were imperative for the establishment of a contemporary retail offer were to:

- provide appropriate back of house facilities that are functional and incorporate storage and loading facilities; and
- provide connected car parking.

Accordingly, the supermarket must be supported by two key features – the Travelator and the loading dock. The supermarket has several requirements to ensure feasibility, as detailed in the Economic Impact Assessment at **Appendix D**. Furthermore, as discussed in detail in the Architectural Design Report (**Appendix C**), a wide range of options for locating these elements were considered.

Notwithstanding this, the Travelator will support the supermarket by helping to draw the public directly into the building from the car park, and will be subject to heritage interpretation to ensure it is a memorable heritage experience. Underground elements such as original building features will be revealed to create a subterranean heritage experience. By drawing visitors into the supermarket, the Travelator will play an important role in exposing the heritage of the building to strengthen connections with the wider community.

The loading dock will service the supermarket and other retail and commercial tenants in the building, and is located within Bays 1 & 2 to reduce the impact of loading vehicular movement in the public domain, while providing the required proximity to the supermarket. Limited access to the rear of the Locomotive Workshop building has meant that the proposed location of the loading dock is most feasible. Heritage interpretation mechanisms will convert this constraint on the space into an industrial heritage feature. Lighting and a permeable mesh wall will play with the visibility of the loading dock, and will draw attention to the Davy Furnace and staircase leading to the mezzanine level which includes a heritage interpretation and events space.

Key Issue 4: New building elements should be reversible to have minimal physical impacts on the heritage building structure, and have a 'light touch' to reveal the heritage character of the original building.

Project Response: The proposed design has been based on the principle of 'reversibility', and acknowledges that the heritage of the building and site is a significant asset to be protected and celebrated.

The proposal has been sympathetically designed with celebration of the authentic heritage of the building a strong priority. The proposed internal design is much more sympathetic to the heritage fabric of the building than the current fit-out. The proposed internal design is intended to touch the existing building lightly by providing an independent, removable structure within the existing shell.

The transparency and openness of the new development creates structural clarity, whilst both conserving and highlighting the heritage value of the place. Lightweight external and internal materials will be used for majority of the lift core structure, which can be dismantled and removed in the future.

A Heritage and Archaeological Impact Statement, which includes other impacts such as archaeological and building impacts, has been prepared by Curio Projects (**Appendix M**)

Key Issue 5: Heritage items, machinery and interpretation works should be publicly accessible.

Project Response: The Stage 1 Heritage Interpretation Strategy for ATP (endorsed in 2016) has been prepared with close reference to, and consistency with, the ATP CMP and other Public Positive Covenant documents such as the *Moveable Collection Management Plan* (MCMP), and the *Heritage Asset Management Strategy 2013-2018* (HAMS), as well as broader NSW policies and guidelines, such as the *ICOMOS Burra Charter* (2013) and the joint NSW Heritage Council and The Royal Institute of Architects guidelines on *New Uses for Heritage Places: Guidelines for the Adaptation of Historic Buildings and Sites* (2008). Stage 2 of the Heritage Interpretation Strategy for the Locomotive Workshop is currently being prepared, and is focused on the detailed design content and specifications for implementation and realisation of the heritage interpretation concepts. For further detail, please refer to the Heritage and Archaeological Impact Statement at **Appendix M**.

The proposed use of Bays 1–4a seeks to facilitate greater access to and celebration of the heritage and historic artefacts present on site by opening the building to the public, providing dedicated heritage exhibition space, expanding the audience to the Blacksmith heritage space and providing a unique retail offer, while supporting the new and existing tenants and community with the ATP precinct and surrounds.

As a direct result of community consultation, the design for the Locomotive Workshop has transitioned from having a relatively high proportion of retail in Bays 1 and 2, to giving precedence to the Blacksmiths Workshop and the celebration of the heritage of the building. The Heritage Interpretation Strategy concepts have been developed to allow greater and more interactive access to the stories and heritage items of the site, encouraging greater awareness and stronger connections to this site.

Research and consultation has helped to identify the provenance of heritage machinery and items. Whilst a high proportion of the collection will remain in-situ, some movable heritage items and heritage machinery not in their original location, will be interpreted and displayed as part of a broader Heritage Interpretation Strategy elsewhere utilised and revitalised by Heritage Transport NSW, or stored on site. This will include the relocation of some heritage machinery from its existing location where the

loading dock is proposed, to the Blacksmiths Workshop in Bays 1 and 2 south. This will be a positive outcome, as this machinery will be rehabilitated to enable its renewed operation.

In addition, the proposed design provides a curated heritage and exhibition space on the mezzanine level of Bays 1 and 2 north, that will be open to the public. This space will interpret heritage items as talismans that tell the stories and history of this building in an interactive, accessible way.

Other interpretive principles to be used in developing interpretation on site are intended to strengthen the public's connection with the stories and history of the site. This will be achieved by:

- Storytelling from diverse voices and perspectives to reflect the significant heritage of the site.
- Seamless interpretation of both tangible and intangible heritage.
- Removal of barriers and obstacles to interpretation through subtle interfaces between heritage items and fabric, and the public.
- A central focus on the Locomotive Workshop as the 'Jewel in the Crown' of ATP.

For further detail regarding the Heritage Interpretation Strategy, please refer to Heritage and Archaeological Impact Statement at **Appendix M**.

Key Issue 6: The proposed heritage interpretation space on the mezzanine level of Bays 1 & 2 should be subject to long-term curation that is relevant to the heritage of the site.

As the long-term owners of the site, Mirvac want to ensure the long-term and sustainable activation of the site within a successful world class working precinct. This will be achieved through a hybrid model of retail and heritage cultural tourism that will set an international precedent for heritage activation. The ongoing relevancy of the site to the wider community is critical to the success of the redevelopment, and will require greater exposure to the heritage of the site, and more meaningful, accessible interpretation of its heritage.

The proposed heritage interpretation space will be an important element of the Heritage Interpretation Strategy. The collection will be managed by a specialist curator and overseen by Mirvac, and will provide an interactive heritage experience to tell the stories and history of the site in an accessible and welcoming way. The long term relevancy of this space will be an important way to activate the Locomotive Workshop and the wider precinct.

Key Issue 7: The display, relocation and storage of heritage items must be confirmed, and should be retained on site where possible.

Project Response: Plans for ATP intend to ensure that the site continues to be relevant to the wider community by developing greater connections to the stories and history of the site through interpretative, interactive experiences. This will be achieved by the careful interpretation and exhibition of the significant heritage collection in the Locomotive Workshop.

The interpretative initiatives for the Locomotive Workshop and wider ATP site aim to give a voice to the heritage machinery, to communicate their function and significance in a tangible and clear manner. Therefore, it is appropriate that any heritage machinery items within Bays 1 and 2 north that are not located in-situ, be relocated. In addition, working with the Blacksmith located in Bays 1 and 2 south, it has become apparent that there is the significant opportunity for the restoration and practical use of 3 forges and other items currently on display in Bays 1 and 2 north. Placing these heritage items back into the practical and functional use for which they were intended, is a very positive heritage outcome, consistent with the policies of the CMP. Mirvac and the heritage specialists for the project are working closely with the Blacksmith tenant to organise this. For further detail regarding the Heritage Interpretation Strategy, please refer to Heritage and Archaeological Impact Statement at **Appendix M**.

Key interpretive mechanisms detailed in the Heritage and Archaeological Impact Statement will activate the heritage of the site, and help to tell the stories and history of the collection:

- The Heritage exhibition and interpretation space on the mezzanine level will be home to a curated display of various heritage items and stories.
- The Interpretive artefact wall between the loading dock and the rest of the Bays will display the heritage collection in an accessible and engaging manner. The permeable mesh material of the wall will create a link between the Davy Furnace and the Davy Press.
- A vista from the mezzanine level to the ground floor will create vistas to the heritage machinery and provide an unprecedented perspective of the Bays.
- The Blacksmiths Workshop will continue to be operational, with ongoing consultation to help identify ways to make this space more functional. Heritage machinery in this space will be selected for their contribution to the operational requirements of the Workshop.

Key Issue 8: The interaction of loading vehicles and future increased pedestrian activation on Innovation Plaza must be appropriately managed

Project Response: The location of the loading dock in the north east corner has been chosen to avoid increasing vehicular usage along Locomotive Street and utilise an existing large format opening in the heritage façade, and the result of a considered approach that assessed a number of alternative options. Public domain works will use clever urban design techniques to give precedence to pedestrian movement, with seating, outdoor working spaces and landscaping to visually and physically prioritise pedestrians.

The impact upon the public domain in Innovation Plaza will be minimised by limiting the operation of the loading dock to early in the morning, prior to peak pedestrian movement times. The interaction of pedestrians and vehicles accessing the loading dock will also be regulated by operational management mechanisms.

Key Issue 9: The Heritage Interpretation Strategy, Public Art Strategy and Public Domain Works, should be integrated with each other for consistency, and across the whole ATP precinct.

Project Response: All strategies have been developed in conjunction with each other, with ongoing dialogue and objectives being developed concurrently to deliver a cohesive result. Mirvac's consultants have cooperated with each other to produce the following key strategies:

- Heritage Interpretation Strategy – Stage 1 (approved for the entire ATP Precinct) and Heritage Interpretation Strategy – Stage 2 (currently in the early stages of development, focused specifically on the Locomotive Workshop. This will be out for consultation late 2017/early 2018).
- Public Art Strategy (Developed for the entire ATP precinct, recently approved).
- Public Domain Works (Developed for the entire ATP precinct, to be completed in four (4) phases).

The Heritage of the site provides the foundation for public Heritage Interpretation, Public Art and Public Domain Works, ensuring that ATP continues to be strongly connected to the heritage of the site. Heritage Interpretation will be overlayed with Public Art and Public Domain works to activate the site and connect it to the wider precinct.

Key Issue 10: It is important that ATP is accessible and welcoming to a diverse range of visitors.

Project Response: The redevelopment of ATP is intended to create a sustainably activated precinct that has economic, environmental and social benefits for the site owners and occupants, the local community and key heritage stakeholders. The eastern part of the Locomotive Workshop will become a hub for production, education, manufacturing and wholesale, as well as dining in a setting that is sympathetic to the heritage significance of the site. It will be the driver of a successful ATP precinct.

Bays 1 & 2 will encourage greater activation of the heritage through heritage interpretation mechanisms and the proposed heritage exhibition and interpretation space on the mezzanine level. The interface between heritage items and the public will be softened to allow people to experience the heritage with fewer barriers, whilst heritage interpretation will illustrate the stories and history of the site in an interactive and engaging way.

The proposed anchor retail tenant in Bays 3-4a provide a key attraction for other more bespoke retailers to meet a significant demand for retail facilities in the surrounding area. It will also attract a greater amount and variety of visitors to the unique heritage of the site. This exposure will help to strengthen and sustain the community's awareness and engagement with the heritage of the site, ensuring that ATP continues to be an important and relevant community asset.

The proposed redevelopment will set an international precedent for a hybrid offering comprising retail and cultural heritage tourism opportunities that are deeply integrated with the heritage of the site.

5.4 Post Lodgement Consultation

The proposed development will be placed on public exhibition for 30 days in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project. In addition to this, ongoing consultation will occur during the development of the Stage 2 Interpretation Strategy, as detailed throughout **Section 5.0**.

6.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposed development as described in **Section 4**. It addresses the matters for consideration set out in the SEARs (refer to **Section 2.6.1**).

The mitigation measures at **Section 8.0** complement the findings of this section.

6.1 Environmental Planning and Assessment Act 1979

6.1.1 State Significant Development

The EP&A Act establishes a specific assessment system to consider projects classed as State Significant Development (SSD). SSD is development deemed to be of significance to the State and includes projects located in precincts regarded as important by the NSW Government, such as Eveleigh and the ATP. As noted in **Section 2.0**, the proposed development, the subject of this DA is classed as SSD as the development is located within the Redfern-Waterloo 'specified site' under the *State Environmental Planning Policy (State Significant Precincts) 2005* (SEPP SRD) and has a CIV of over \$10million.

This EIS has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment because of the proposed development. **Table 7** provides an assessment of the proposed development against the objects of the EP&A Act. **Table 8** provides an assessment of the proposal against the matters for consideration listed in section 79C of the EP&A Act.

Table 7 – Objects of the EP&A Act 1979

Object	Comment
5(a)(i) To encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.	The proposal responds positively to this objective by promoting the adaptive and ongoing use and conservation of this State significant heritage building. The proposal will create a high quality specialised social focus for the ATP encompasses, embraces and highlights the unique State heritage listed Eveleigh Locomotive Workshops Machinery Collection. This will create a range of broader public benefits, in the form of flow of benefits to the economic welfare of the local and wider community; provision of a range of tenant spaces and facilities to promote artisan and specialised retail focused spaces; and effective use of a currently under-utilised building within a high-quality environment.
5(a)(ii) To encourage the promotion and co-ordination of the orderly economic use and development of land.	The proposed development involves the orderly redevelopment of Bays 1-4a within the Locomotive Workshop to predominantly provide upgraded, reconfigured and repurposed spaces that will provide a central location of the social facilities that are required to support the ATP. The existing fit-outs within the Locomotive Workshop are approximately 20 years old and the current heritage interpretation displays are static and un-informative, therefore the proposal represents the next phase of its life. It therefore promotes the orderly economic and development of the site.

Object	Comment
5(a)(iii) To encourage the protection, provision and co-ordination of communication and utility services.	The Stormwater & Hydraulic Infrastructure Services Report (Appendix I), and Electrical Services Report (Appendix J) determines that the proposed development would not impact on the provision or coordination of communication and / or utility services. Relevant utility providers have been consulted during the development of the proposal.
5(a)(iv) To encourage the provision of land for public purposes.	The proposal will promote public access to Bays 1-4a during its hours of operation.
5(a)(v) To encourage the provision and co-ordination of community services and facilities.	The proposal supports the provision of community services and facilities. The proposed development and upgrade works within Bays 1-4a will provide a social focus and central activation area for the Locomotive Workshop, and wider ATP precinct. Further, the Locomotive Workshop is an integral and important part of the overall heritage interpretation strategy and public art strategy currently being developed for the ATP that will be implemented in line with the construction of Buildings 1,2 and 3.
5(a)(vi) To encourage the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats.	The Locomotive Workshop is located in a highly modified and disturbed urban environment, and the proposal will not impact on biodiversity values. The Locomotive Workshop does not have habitat suitable for any threatened flora and fauna.
5(a)(vii) To encourage ecologically sustainable development.	The proposed development accords with the principles of Ecologically Sustainable Development, as set out in Schedule 2 of the EP&A Regulation 2000. This is further considered in Section 6.19 of this EIS.
5(a)(viii) To encourage the provision and maintenance of affordable housing.	Mirvac recognises the important and social aims of the Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006. Refer to Section 6.20 .
5(b) To promote the sharing of the responsibility for environmental planning between different levels of government in the State.	Extensive consultation has been undertaken with various levels of government and government agencies during the preparation of this proposal, and all government agencies will be afforded the opportunity for further input into the development process during the public exhibition process. Details of the consultation undertaken during the preparation of this SSDA are included at Section 5.0 , and in Appendix T .
5(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.	The community consultation carried out has assisted the development of the proposal and is detailed in Section 5.0 . Further consultation will be carried out prior to the commencement of construction and throughout the construction period.

Table 8 – Assessment of matters for consideration in Section 79C of the EP&A Act

Matter for Consideration	Comment
In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:	The proposal is consistent with the relevant environmental planning instruments as set out in Section 6.0 .
(a) the provisions of:	
(i) any environmental planning instrument, and	
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	The proposal is consistent with all relevant proposed environmental planning instruments which have been the subject of public consultation as set out in Section 6.3 .
(iii) any development control plan, and	Not applicable.
(iiiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and	No planning agreement or draft planning agreement related to the proposed development and therefore this matter for consideration is not relevant.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and	The proposed SSDA is consistent with the relevant regulations, in particular Schedule 2 of the EP&A Regulation.
(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates,	No coastal zone management plan applies to the Site and therefore this matter for consideration is not relevant.
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	The proposal will not have any significant adverse environment, social or economic impacts which cannot be managed or mitigated. A full environmental assessment is provided throughout Section 6.0 and an environmental risk assessment is provided in Section 7.0 . A detailed list of mitigation measures is provided in Section 8.0 .
(c) the suitability of the site for the development,	The Site, being Bays 1-4a within the Locomotive Workshop is suitable for the proposed development as outlined in Section 6.21 .
(d) any submissions made in accordance with this Act or the regulations,	The proposal has not yet been publicly exhibited, and therefore no submissions have been made. Consultation has been undertaken and issues raised have been dealt with in the design of the proposal, as detailed within Section 5.0 .
(e) the public interest.	The proposal is in the public interest as it will provide benefits in regard to social, economic and environmental considerations. Further details of how the proposal is in the public interest are provided at Section 6.22 .

6.2 Compliance with Planning Policies

The proposal's consistency with the relevant strategies, policies and guidelines as set out in the SEARs is addressed in **Table 9**.

Table 9 – Consistency with relevant strategies, policies and guidelines

Instrument/Strategy	Comments
Strategic Plans	
A Plan for Growing Sydney	<p><i>A Plan for Growing Sydney</i> is the NSW Government's penultimate metropolitan strategy that establishes key goals and objectives to guide the development of Sydney over the next 20 years. The proposal is consistent with <i>A Plan for Growing Sydney</i> in that it:</p> <ul style="list-style-type: none"> - supports the delivery new high-technology commercial office floorspace within the Central to Eveleigh Corridor, which is earmarked for urban renewal and growth; - contributes to growing Sydney as an internationally competitive city by providing a unique heritage destination experience within the Global Economic Corridor and adjacent to a key transport corridor that also provides services to the daily commuter and surrounding local population; - supports the viability of ATP; and - assists in realising the vision for ATP as a key heritage destination integrated with high-technology industries within Sydney's Cultural Ribbon.
Draft Greater Sydney Region Plan	<p>In October 2017, the Greater Sydney Commission (GSC) released the draft Greater Sydney Region Plan. This plan seeks to reposition Sydney as a metropolis of three cities – the western parkland, central river and eastern harbor cities. Through this repositioning, Sydney will evolve to be a 30 minute city – a place where people live within 30 minutes of their jobs. The proposal is consistent with realising the vision for the Central District, as it:</p> <ul style="list-style-type: none"> • increases the number and diversity of jobs close to homes, in particular jobs that are suitable the service and retail sector; • facilitates walkable communities, through the provision of new employment and retail opportunities that is integrated with a surrounding residential community; • provides diversification to the type of activities proposed at ATP to date; and • provides a new social/ retail hub that is unique and incorporates innovative methods of integrating heritage interpretation and public activity.
Eastern City District Plan	<p>In October 2017, the Greater Sydney Commission (GSC) released the revised draft District Plans for the Greater Sydney Metropolitan Region. These plans give effect to the goals of the draft Greater Sydney Region Plan by setting out priorities and actions for each District. The revised draft Central District Plan seeks to escalate the role of the traditional CBD to a Harbour CBD that incorporates Central to Eveleigh and other areas with policy settings that support innovative and creative industries. The proposal is consistent with realising this vision for the Central District, as it:</p> <ul style="list-style-type: none"> • supports and is intrinsic to the success of the ATP which in itself will strengthen of the Innovation Corridor; • provides jobs with good access to public transport to assist in creating the '30-minute city'; and • enhances the role of the Eastern City as a global leader by creating a unique destination.

Instrument/Strategy	Comments
Sustainable Sydney 2030	<p>Sustainable Sydney 2030 is a Community Strategic Plan that outlines the City of Sydney's environmental, economic, social and cultural goals and sets out ten targets for 2030 and ten strategic directions to make the City more sustainable. The proposed development application is consistent with the targets and strategic directions in that:</p> <ul style="list-style-type: none"> • The Locomotive Workshop development within Bays 1-4a facilitates the provision of an additional 11,385m² of floorspace for predominant retail led-activities and that includes the existing Blacksmith operation providing approximately 250 new operational jobs and approximately 50 in-direct construction jobs, to contribute to Sydney's global role and identity as an innovative city. • The proposed development revitalises and utilises a unique State Significant Heritage Item. • The proposed development incorporates a number of ESD initiatives to provide the best environmental performance for the building as possible. • The proposed development promotes the use of public transport through the restricted provision of on-site car parking within the ATP and the implementation of the Green Travel plan initiatives (refer to Appendix P). • The Locomotive Workshop will be integrated with the improved pedestrian and cycle connection upgrades to the public domain across the ATP. • The operation of the Locomotive Workshop will integrate with and facilitate the promotion of cultural tourism within the building and throughout the ATP. • As discussed in Section 4.23, Curio Projects and Trigger Design have been engaged by Mirvac to prepare the Stage 2 Interpretation plan for the Locomotive Workshop and the Stage 2 Interpretation plan for the broader ATP precinct. Within these plans, one of the key concepts that will be developed is the 'Telling of Key Stories', such as how the Locomotive Workshops created a place of positive empowerment for the Aboriginal Community. In addition, the cultural heritage tourism initiatives that are also being developed, amongst other heritage interpretation concepts to celebrate the living cultural of Sydney's First Nations people.
City of Sydney Public Domain Manual	<p>The proposal includes minor works to public domain within the curtilage of Bays 1-4a. These works will integrate with the proposed upgrade to Locomotive Street (as approved under SSD 7317) and will generally be in accordance with the elements contained within the City of Sydney Public Domain Manual.</p>
Development Near Rail Corridors and Busy Roads-Interim Guideline	<p>The proposal has been assessed against the Development Near Rail Corridors and Busy Roads-Interim Guideline. This assessment is outlined in the Transport Impact Assessment (Appendix P), and the Acoustic Assessment (Appendix U). Potential impacts on Sydney Train Infrastructure (i.e. Illawarra Line Tunnels) is addressed in Section 6.17.</p>
Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics	<p>Refer to Section 6.6 and Appendix M.</p>

Instrument/Strategy	Comments
Conservation Management Plan for the Locomotive Workshop Building	Refer to Section 6.6 and Appendix M .
Heritage Council Guideline on Heritage Curtilages 1996.	Refer to Section 6.6 and Appendix M .

6.3 Compliance with Environmental Planning Instruments & Plans

6.3.1 State Environmental Planning Policy (State and Regional Development) 2011

The ATP is located within the Redfern-Waterloo precinct which is identified as a State Significant Development 'specified site' in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*. Development with a capital investment value (CIV) of more than \$10 million within the Redfern-Waterloo precinct is deemed State Significant. This EIS has accordingly been prepared in support of the SSDA.

6.3.2 State Environmental Planning Policy (State Significant Precincts) 2005

State Significant Planning Policy (State Significant Precincts) 2005 (SEPP SRD) is the principal planning instrument applying to the site. The development controls for the site are contained in Part 5 of Schedule 3 of SEPP SRD. An assessment of the proposed development against the relevant development controls is provided in **Table 10**.

Table 10 – Summary of consistency with Schedule 3, Part 5 of SEPP SRD

Relevant Provision	Consistency
Clause 7 – Land Use Zones	
The Locomotive Workshop is zoned Business Zone – Business Park.	The proposed development seeks approval for the adaptive reuse of the eastern portion of the Locomotive Workshop for a range of uses including retail premises, function centre uses, information and education facilities uses, recreation facility (indoor) and general industrial uses as described in detail in Section 4.4 . These uses are permissible with development consent.

Relevant Provision	Consistency
<p>Clause 8 – Business Zone – Business Park Objectives</p> <p>The objectives of the Business Zone – Business Park zone are as follows:</p> <ul style="list-style-type: none"> • to establish business and technology parks to encourage employment generating activities that provide for a wide range of business, technology, educational and entertainment facilities in the Zone, • to support development that is related or ancillary to business, technology or education, • to support development for retail uses that primarily serve the needs of the working population in the Zone and the local community, • to ensure the vitality and safety of the community and public domain, • to ensure buildings achieve design excellence, • to promote landscaped areas with strong visual and aesthetic values to enhance the amenity of the area. 	<p>The proposal is consistent with the objectives of the Business Park zone, in that:</p> <ul style="list-style-type: none"> • it will provide up to 11,385m² GFA of high quality retail and other supporting floorspace to support the needs of the local community, new worker population and drive the activation of the Locomotive Workshop building. • It will significantly lead to the success of the ATP precinct and revitalise a currently under-utilised State heritage listed building. Further it will naturally increase the level of safety of the community through the increase in footfall and activity up to 18 hours a day; and • it will integrate with the high-quality upgrade proposed for Locomotive Street and Innovation Plaza.
<p>Clause 21 (1) – Height</p> <p>The maximum permissible height is the of the Locomotive Workshop is the existing height of the building at the commencement of the SEPP SRD – i.e. 25 May 2005. This is essentially the current height of the building.</p>	<p>The Architectural Plans at Appendix B confirms that the top most part of the roof pitch is RL 35.225 with the valley of the roof at RL 30.725 across Bays 1-4a.</p> <p>The proposal does not exceed the maximum height of building.</p>
<p>Clause 21 (2) – Floor Space Ratio</p> <p>The Locomotive Workshop site does not have a maximum FSR control show on the Redfern-Waterloo Authority Sites – Floor Space Ratio map.</p>	<p>The proposal is consistent.</p>
<p>Clause 21 (2A) – Gross Floor Area</p> <p>The maximum Gross Floor Area of the Locomotive Workshop is 42,055m².</p>	<p>The proposed total GFA within Bays 1-4a is 11,358m². The existing GFA of Bays 5-15 is 23,229m².</p> <p>Should Bays 5-15 not be developed the total GFA within the Locomotive Workshop will be 34,587m², however if Bays 5-15 are developed as proposed in SSD 8449 then the total GFA across the Locomotive Workshop will comprise 38,595m².</p> <p>The above demonstrates that the proposed development will not result in the maximum GFA control being exceeded.</p>

Relevant Provision	Consistency
Clause 22 – Design Excellence <p>(2) In considering whether proposed development exhibits design excellence, the consent authority must have regard to the following matters:</p> <ul style="list-style-type: none"> a. whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved b. whether the form and external appearance of the building will improve the quality and amenity of the public domain c. whether the building meets sustainable design principles in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency 	<p>Section 6.4 discusses design excellence in greater detail, and demonstrates that the proposal is consistent with the criteria.</p>
Clause 23 – Car Parks <p>Clause 23 restricts the number of car spaces on land within the Business Zone – Business Park to a maximum of 1,600 spaces.</p>	<p>The proposed development does not seek to provide any additional parking on the site. Following the construction of Buildings 1,2, 3 and the proposed public domain works a total of 1,564 spaces on land within the Business Zone – Business Park. The proposed development is therefore consistent with this provision.</p>
Clause 26 – Notification of advertised development <p>Subject to the Act and the regulations, notice of a development application for consent to carry out development on land within the Redfern–Waterloo Authority Sites is to be given in accordance with the provisions of any applicable development control plan.</p>	<p>The SSDA will be placed on public exhibition in accordance with the requirements of the Department of Planning and Environment.</p>

Relevant Provision	Consistency
<p>Clause 27 – Heritage conservation</p> <p>Consent of the consent authority is required for any of the following in respect of a building, work, relic, tree or place that is a heritage item:</p> <ul style="list-style-type: none"> • demolish, dismantle, move or alter the building, work, relic, tree or place, or • damage or remove the relic, or • excavate land for the purpose of discovering, exposing or moving the relic, or • damage or despoil the tree or place, or • erect a building on, or subdivide, land on which the building, work or relic is situated on or on the land which comprises the place, or • damage any tree or land on which the building, work or relic is situated on or on the land which comprises the place, or • make structural changes to the interior of the building or work. 	<p>The proposal seeks consent for works that will demolish, move and alter elements within a State Heritage item. A detailed description of the proposed works are included in Section 4.0 and an assessment of the proposed heritage impacts are included in Section 6.6 and Appendix M.</p>
<p>Clause 28 – Preservation of trees or vegetation</p> <p>Various provisions relating to the preservation of certain trees and vegetation.</p>	<p>The proposal does not propose works that will impact upon any trees or vegetation.</p>

6.3.3 Other Relevant State Environmental Planning Policies

The proposed development's consistency with other relevant State Environmental Planning Policies (SEPPS) is addressed in **Table 11**.

Table 11 – Summary of consistency with relevant Strategies, EPIs, Polices and Guidelines

Instrument/Strategy	Comments
<p>SEPP 55 (Remediation of Land)</p> <p>Clause 7 of SEPP 55 specifies that a consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is/can be suitable for the proposed development</p>	<p>During the preparation of SSD 7317, Mirvac engaged JBS&G to prepare a standalone site-wide remedial action plan (RAP) for the ATP. The RAP includes the Locomotive Workshop within its scope and is included at Appendix V. JBS&G consider that the site is suitable for the proposed development subject to the implementation of a number of recommendations as discussed in Section 6.11.</p>

Instrument/Strategy	Comments
SEPP 64 (Advertising and Signage)	<p>A number of signage zones are proposed on the Locomotive Workshop. Approval is sought for the signage zones only. To ensure compliance with the aims and objectives of the SEPP (as required by clause 8), the finalised signage designs will ensure that they will be of a high-quality design and finish and be compatible with and not detract from the State heritage significance of the Locomotive Workshop. Furthermore, the assessment contained in Section 6.3.4 demonstrates that the signage will satisfy the assessment criteria contained in Schedule 1.</p>
SEPP (Infrastructure) 2007	<p>It is considered that the proposed development does not include any of the land identified in Clauses 85, 86 or 87 of State Environmental Planning Policy (Infrastructure) 2007 and therefore these clauses do not apply to the development.</p>
SEPP (Urban Renewal) 2010	<p>The Redfern-Waterloo precinct is identified as a 'potential precinct' under SEPP (Urban Renewal) 2010. Clause 10 of the SEPP requires development applications that have a CIV of more than \$5million to be consistent objective of developing the potential precinct for the purposes of urban renewal. Furthermore, the consent authority is required to take into account whether or not the proposed development is likely to restrict or prevent the following:</p> <ul style="list-style-type: none"> • development of the potential precinct for higher density housing or commercial or mixed development; • the future amalgamation of sites for the purpose of any such development within the potential precinct; and • access to or development of, infrastructure, other facilities and public domain areas associated with existing and future public transport in the potential precinct. <p>The proposed development is consistent with the objective of the SEPP in that it utilises and repurposes an existing State heritage item which is required to be conserved, but does not impact upon the ability of other parts of the Redfern-Waterloo precinct to be developed as part of the wider urban renewal strategy.</p> <p>In addition, the Department of Planning can be confident that the proposal will not restrict or prevent the development or amalgamation of sites for higher density housing elsewhere in the precinct, and in fact includes new forms of commercial and floorspace. Furthermore, as the proposal involves the adaptive reuse of an existing building and only minor external works, it will not restrict or prevent the access to or development of infrastructure, other facilities and public domain areas associated with existing and future public transport.</p>

6.3.4 State Environmental Planning Policy No. 64 – Advertising and Signage

State Environmental Planning Policy No 64- Advertising and Signage (SEPP 64) applies to all signage that under an environmental planning instrument can be displayed with or without development consent and is visible from any public place or public reserve.

As illustrated at **Appendix B**, signage zones are proposed to be established on the northern, southern and western facades of Bays 1-4a. It is noted that details of the exact content, materiality, and illumination etc. of signs within these zones will be the subject of approval by separate development application.

Under Clause 8 of SEPP 64, a consent authority must not grant consent for any signage application unless the consent authority is satisfied that the proposal is consistent with the objectives of the SEPP and with the assessment criteria which are contained in Schedule 1.

Table 12 below demonstrates the consistency of the proposed signage zones with the assessment criteria contained in Schedule 1 of SEPP 64.

Table 12 – Compliance with Schedule 1 Assessment Criteria of SEPP 64

Assessment Criteria	Comments	Compliance
1 Character of the area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed development is compatible with the existing and desired character for buildings within the ATP precinct and is sympathetic to the State Heritage significance of the Locomotive Workshop.	✓
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	The proposed signage zones are generally located above doorways or behind the exterior glazing. The proposed 'Locomotive Workshop' signs that are to be fixed to the heritage brick fascia are proposed in place of the existing 'Locomotive Workshop' building signage and is proposed to be more modest than the existing condition. The final design for the signage will be in-keeping with the type of advertising elsewhere in the ATP precinct.	✓
2 Special areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The future signage design will not detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, open space areas.	✓
3 Views and vistas		
Does the proposal obscure or compromise important views?	The majority of the future signage will be integrated with the doorway design of the Locomotive Workshop building and therefore will not result in any obstruction or compromise any views.	✓
Does the proposal dominate the skyline and reduce the quality of vistas?	The future signage will be integrated with the design of the doorways and set behind the glazing lines.	✓
Does the proposal respect the viewing rights of other advertisers?	The future signage will not impact upon the viewing rights of other advertisers. However other signage in and around the Locomotive Workshop will be limited.	✓

Assessment Criteria	Comments	Compliance
4 Streetscape, setting or landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The scale, proportion and form of the proposed signage zones are modest in scale and will ensure that it doesn't impact upon the setting and historical environment established within the ATP precinct.	✓
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The proposed signage zones will contribute to the visual interest of the Locomotive Workshop without impacting upon the significance of the heritage fabric.	✓
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	The removal of the existing Bay signage on the Locomotive Workshop and along Locomotive Street and the provision of modern and modest signage, on the heritage brick fascia and above the doorways will reduce clutter, and rationalise and improve the appearance of the signage in and around the building.	✓
Does the proposal screen unsightliness?	The proposed signage zones are generally integrated with the doorways of the Locomotive Workshop and will ensure the future signage is simple and modest in its character.	✓
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The proposed signage zones do not protrude above the roof line of the Locomotive Workshop.	✓
Does the proposal require ongoing vegetation management?	The future signage will not require ongoing vegetation management.	✓
5 Site and building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The extent and number of signage zones proposed ensure that it will be of a scale and proportion that is compatible and complimentary with architecture of the heritage building and its surrounds.	✓
Does the proposal respect important features of the site or building, or both?	The proposed signage has been located in the most architecturally appropriate locations to reduce any impact upon the heritage significance of the building.	✓
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	Approval is only sought for the location of signage zones. The future signage will be assessed by the heritage consultant to ensure it is in keeping and sympathetic with the heritage aesthetic and significance of the building.	✓
6 Associated devices and logos with advertisements and advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	All illumination of future signage will be integrated with the building structure.	✓

Assessment Criteria	Comments	Compliance
7 Illumination		
Would illumination result in unacceptable glare?	Any future illumination of signage will be designed to ensure it will not result in any unacceptable glare, or affect the safety of pedestrians, vehicles or aircraft.	✓
Would illumination affect safety for pedestrians, vehicles or aircraft?		
Would illumination detract from the amenity of any residence or other form of accommodation?	The location of the proposed signage zones is such that they will not impact on nearby residential receivers.	✓
Can the intensity of the illumination be adjusted, if necessary?	It is not considered necessary or appropriate to impose a curfew on the illumination of signage given	✓
Is the illumination subject to a curfew?	it is proposed to be located within a business and technology park. Illumination of signage, including and any dimming measures, will be incorporated in the detailed design.	
8 Safety		
Would the proposal reduce safety for any public road?	The proposed signage is of a nature that will avoid any impacts on public roads.	✓
Would the proposal reduce safety for pedestrians/cyclists?	The proposed signage zones are positioned to ensure that they will not distract from essential sight lines for pedestrian and cyclists, but rather contribute to the wayfinding in and around the building.	✓
Would the proposal reduce safety for pedestrians, particularly children, by obscuring sightlines from public areas?	The proposed signage will be integrated with the building and will not obscure sight lines from public areas.	✓

6.4 Design Excellence

The redevelopment of the Locomotive Workshops presents a significant opportunity to revitalise a historic landmark building within an important strategic location.

In accordance with SEPP ‘State Significant Precincts’, consent must not be granted to a new building or to external alterations to an existing building unless the consent authority has considered whether the proposed development exhibits design excellence.

As noted in **Section 6.3.2**, Clause 22 within Part 5 of Schedule 3 of the SEPP, requires the consent authority to have regard to the matters outlined in

Table 13 when assessing whether the proposed development exhibits design excellence. Accordingly, an assessment of the proposal against the relevant matters is included in

Table 13 and in the Architectural Design Report at **Appendix C**.

Table 13 – Compliance with Design Excellence Criteria

Requirement	Response
(a) Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	<p>The proposed design for the proposed works within Bays 1-4a within the Locomotive Workshops is of a high standard of architectural design, that has carefully been considered and evolved in conjunction with the extensive level of consultant that has occurred to date.</p> <p>The Architectural Design Report at Appendix C demonstrates that a high standard of architectural design will be delivered.</p>
(b) Whether the form and external appearance of the building will improve the quality and amenity of the public domain	<p>Modifications to the external appearance of the building will generally be modest in scale and nature and seek to simplify, declutter and enhance the existing heritage facades.</p> <p>The proposed retail corner annex, entrance and window treatments and removal of outdated signage will contribute to and enhance the appearance of the building. Furthermore, the plant platforms are positioned within the roof valleys and will not be able to be seen.</p> <p>New internal structures will be independent of the existing fabric and designed in such a way to ensure that the interface and edge of the mezzanine floor will be not be seen from the exterior.</p> <p>Future signage will be modest, in keeping with the character of the building and reflect a consistent and cohesive language that will incorporate materials and finishes to complement the brick façade. Furthermore, the improvements to the public domain will ensure that the curtilage of the Locomotive Workshop integrates with the high quality design that has been approved for Locomotive Street.</p>
(c) Whether the building meets sustainable design principles in terms of sunlight, natural ventilation, wind reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency	<p>As outlined in the ESD Report (refer to Appendix S), the proposal will incorporate a range of ESD initiatives into the detailed design to ensure that the redeveloped and repurposed Locomotive Workshop development meets its sustainable design targets.</p>

6.5 Built Form

The proposed works seek to unify a currently fragmented arrangement of spaces and uses into a logical sequence of spaces that are connected by open circulation spaces in an environment that celebrates its rich cultural history and heritage significance. The design for Bays 1 and 2 in particular has evolved through the consultation process to become the focus and central location for cultural heritage tourism within the entire ATP precinct.

The built form of the Locomotive Workshop is retained in its entirety and the proposed works seek to celebrate its unique heritage aesthetic rather than impact upon it. As demonstrated in **Section 6.6**, the potential impacts upon the heritage significance of the Locomotive Workshop have been scrutinised to the highest degree and the design has been driven by the necessity to conserve the building whilst providing a high-quality development.

Furthermore, as demonstrated in **Figure 74** and **Figure 75**, the designs for both the eastern and western parts of the Locomotive Workshop have been developed together to provide one integrated building which comprises a number of different functions. As noted in **Section 2.3.2**, the principal reason for proposing two separate SSDAs is simply to facilitate an orderly construction program, and therefore in order to enable separate assessments of the each SSDA, the description of works and environmental assessment of potential impacts only focuses on those that are relevant to Bays 1-4a within this EIS.

Notwithstanding this, the designs for both parts of the Locomotive Workshop are based on the same design principles and adopt the same/ or similar approach to the following:

- the intertenancy walls along the central spine between Bays 1-7;
- the provision of a central spine that will be provided throughout Bays 1-7, and a visual connection beyond;
- the provision of floor to ceiling atria within each of the 3 Bay groupings that are provided within Bays 3-13;
- the heritage interpretation design concepts;
- the spatial character of the building and the provision of only one upper level within Bays 3-13;
- the exterior opening treatments and proposed signage zones; and
- the illumination strategy.

Overall, the design quality of the proposal is to an extremely high standard and it seeks to carefully convert Bays 1-4a from an under visited area with a static in-situ and moveable heritage collection a vibrant and revitalised retail environment, that will become a destination for tourists, students, local residents and the worker population whilst retaining the significant heritage fabric and celebrating its massing and industrial history.



Figure 74 – Proposed Ground Floor of the Locomotive Workshop



Figure 75 – Proposed First Floor level of the Locomotive Workshop

6.6 Heritage Impacts

A detailed Heritage and Archaeological Impact Statement (HIS) has been prepared by Curio Projects ([Appendix M](#)). It addresses the proposal in terms of its impacts on the eastern portion of the Locomotive Workshop, being Bays 1-4a, but also addresses how the proposed works relate to any future works within Bays 5-15, the wider ATP precinct and the surrounding Eveleigh Railway Workshop precinct.

In particular the HIS provides an extensive and detailed assessment the following:

- proposed change of use;
- impacts to the significant built heritage fabric;
- moveable heritage items;
- impacts to intangible heritage values; and
- impacts on potential Aboriginal and historical archaeological resources.

Furthermore, Curio Projects confirms that the HIS has been prepared in accordance with, and the proposal has been assessed against or with reference to the following documents:

- The Australian Technology Park Conservation Management Plan Volume 1 and Appendices prepared by Godden Mackay Logan (December 2013);
- ATP Conservation Vision Statement, prepared by the Australian Technology Park, Sydney;
- Interpretation Strategy for Australian Technology Park, prepared by Curio Projects, November 2016;
- Draft Eveleigh Railway Workshops – Overview Report, commission by Urban Growth, proposed by OCP Architects 2016;

- Heritage and Archaeological Impact Statement, ATP Redevelopment, prepared by Curio Projects, December 2015;
- Heritage Asset Management Strategy 2013-2018;
- Draft Moveable Collections Management Plan, prepared by FuturePast, April 2015;
- Eveleigh Railway Workshops: Interpretation Plan & Implementation Strategy, prepared for Redfern-Waterloo Authority by 3-D project, Artscape & Only Human, February 2012; and
- Eveleigh Railway Yards Locomotive Workshops Conservation Management plan, prepared by Heritage Group State Projects NSW Public Works, June 1995;
- NSW Heritage Office 1996, revised 2002, *Statement of Heritage Impact*;
- *Australia ICOMOS Charter for places of Cultural Significance, The Burra Charter, 2012*;
- NSW Heritage Office 2001, *Assessing Heritage Impacts*;
- NSW Heritage Branch 2009, *Assessing significance for archaeological sites and 'relics'*;
- Department of Urban Affairs & Planning, 1996, Heritage Curtilages Heritage Council Guideline, Heritage Office; and
- NSW Heritage Office/ RAIA 2005, *Design in Context – guidelines for infill development in the Historic Environment*.

Overall, Curio Projects supports the proposal and considers that “*the proposed adaptive re-use of Bays 1-4a of the Locomotive Workshop, whilst requiring a major change of use in key spaces within the Locomotive Workshop, will have an exciting and positive long-term effect in protecting and celebrating the site’s iconic heritage fabric and stories. The actual impact on heritage fabric, resulting from the proposed adaptive reuse, has been minimised as much as possible through design, with the majority of impacts able to be fully reversed in the future. The redevelopment aims to preserve, accentuate and emphasise the exceptional physical and aesthetic heritage values of the building and its spaces, with an operational framework that will secure the long-term economic viability and activation of the Site. Mirvac has a vision to create a compelling ‘destination; like no other in Australia, where commercial, retail and cultural heritage tourism opportunities for ATP can be brought together and celebrated, with the Locomotive Workshop, front and centre.*”

Furthermore, the key conclusions relating to each of the potential impacts are set out in **Table 14**.

Table 14 – Key conclusions of the Heritage and Archaeological Impact Statement

Potential Impact	Conclusion
Change of Use - overall	<p>Since the 1990s, the majority of visitors to Bays 1-4a only use Bays 1 and 2 to transition through the site from east to west along the central corridor. The actual users of Bays 1 and 2 are generally the blacksmiths, and its customers. The display in Bay 1 north is rarely visited and has remained the same for years. There is no clear wayfinding signage across the ATP precinct to direct people to Bays 1 and 2, despite it being the most significant and intact of all workshop bays across the whole of Eveleigh Railway Workshops (ERW). The lack of visitation to the space not only relates to how the collection is interpreted but more broadly because of public activation within the ATP precinct. With the transfer of the whole of ATP from Government ownership to private ownership, there is a greater impetus to ensure that the site is self-sufficient and economically visible in the long term. Mirvac intend to remain the long-term landowner of the site and in order to ensure it is activated 7 days a week seeks (via this SSDA and SSDA 8446) to invite the community in and implement:</p> <ul style="list-style-type: none"> • focused retail public activation strategies; • a new layering of cultural heritage tourism initiatives; • heritage interpretation and exhibitions that tie the Locomotive Workshop to the rest of the ATP precinct and Eveleigh Railway Workshops; and • the continuation of Blacksmithing in Bays 1 and 2. <p>Of the Eveleigh Railway landholdings, Carriageworks has built a prominent public profile and experiences high levels of repeat visitation. The ATP precinct and the Locomotive Workshop on the other hand is not well known and is not, generally, considered to be an inviting public destination. The intention of Mirvac is to create an equally successful, activated destination, that compliments rather than competes with the suite of offerings at Carriageworks.</p> <p>As a result of the proposed development, the Locomotive Workshop s are proposed to undergo its most extensive network of changes since Eveleigh Workshops closed in the 1980s and ATP was created in the 1990s.</p>
Blacksmith Workshop	<p>The Blacksmithing workshop in Bays 1 and 2 south will be retained and forms a significant part of the site-wide activation program. The existing tenant, Eveleigh Works, will continue to utilise the original blacksmithing tools and machinery from the ERW in a controlled and engaging environment, providing a unique opportunity for an original trade to function in its original location. The key change of use relates to providing a unique mix of light retail and cultural heritage interpretation in Bays 1 and 2 north whilst supporting activities and functional operations of Bays 1and 2 south. Mirvac is working closely with Eveleigh Works on opportunities to enhance the presentation, functionality and activation of the workshop in Bays 1 and 2 south, as part of the overall vision to create an exciting hybrid of cultural heritage tourism and retail in Bays 1-4a.</p>

Potential Impact	Conclusion
Changes to the Locomotive Workshop bay numbering	Returning the numbering of the Locomotive Workshop Bays to their original sequence, rather than continuing the duplication of two Bay 16s, will resume the clarity as one complete set of buildings in Eveleigh Railway Workshops.
Change of Use – Retail-Supermarket	The creation of a retail offer and the flow-on benefits that go with it (public activation, reuse of a heritage asset, job creation etc) will contribute to the sustainability and viability of the precinct, and will directly contribute to the ongoing conservation of the Locomotive Workshop and its significant heritage assets, for the long-term.
Changes to Bays 1 and 2 north – Heritage Item Collection Exhibition	<p>Bays 1 and 2 north currently house a static display of in-situ machinery, as well as moveable heritage items from elsewhere within the ERW. Most visitors are unable to gauge what tools and machinery were used for what purposes, and whether they remain in their original context or not. A number of the moveable heritage items are not in-situ which adds to the confusion. The management of items that are no longer in-situ or within an appropriate context is being carefully considered as part of the new interpretation proposed for Bays 1 and 2. A large part of the significance of the moveable heritage items, is their context and their function as part of the Locomotive Workshop activities, and telling this story in a unique and accurate way. The interpretive initiatives for the Locomotive Workshop and wider ATP site aim to give a voice to the heritage machinery, to communicate their function and significance in a tangible and clear manner. It is appropriate that any heritage machinery items being stored within Bays 1 and 2 north that are not located in-situ, be relocated. The items can move provided they are adequately conserved, interpreted or stored in accordance with the CMP and MCMS.</p> <p>The opportunity to restore and the practical use of 1 to 3 forges and other items currently on display in Bays 1 and 2 north, by the Blacksmith places these items back into the practical and functional use for which they were intended, which is a very positive heritage outcome, consistent with the CMP. Other concerns regarding the current display include ongoing issues with dust and dirt build up resulting from objects being exposed in an open display environment. One of the main opportunities presented through the redevelopment of the ATP precinct (including the Locomotive Workshop) is the revision and improvement of heritage display and interpretation across the whole precinct, particularly Bays 1 and 2 north, and to generate a consistent and effective interpretive approach across the entire building. In keeping with the 'Ghosts' concept within the initial Interpretation Plan for the wider former ERW precinct, prepared by 3D Projects in 2012, the southern wall of the loading dock and mezzanine above will provide an appropriate and convenient canvas in Bays 1 and 2 north for the installation of a large scale heritage interpretation initiative in this location, while also allowing for the installation of the centralised services loading dock, which is pivotal to the viability and function of the retail redevelopment within the eastern portion of the Locomotive Workshop.</p>

Potential Impact	Conclusion
Changes to Bays 1 and 2 north – Heritage Item Collection Exhibition – continued	The change of use of bays 1 and 2 north from a static poorly presented heritage exhibition, to a mixed use spaced, led by heritage, will activate these previously under-visited Bays, draw users into the space, encourage interaction and engagement with the heritage of the Locomotive Workshop on a functional and everyday level, through the interpretive experience developed in this location.
Demolition of existing interpretation	Elements to be removed or demolished include all glass balustrades and metal wire fencing; all existing modern heritage interpretation elements, and the metal chequer plate pathway. The removal of 'barrier' will help to create an environment that is welcoming and inspires exploration and whilst the existing heritage interpretation signage was only prepared in 2015 it becomes redundant as a result of the introduction of a whole new interpretive approach which is intended to be more interactive, accessible and focused firmly in creating a cultural heritage tourism outcome.
Insertion of the Loading Dock	<p>The loading dock has been designed to be completely reversible and will cause no major long-term physical impacts to the fabric. It will utilise the existing opening along the eastern façade of Bay 1, without the need to create any additional openings or expanding any opening within the heritage façade. The location of the loading dock will require the relocation of three in-situ forges, to the Blacksmith area (as noted above), four in-situ tool racks, a grinder and 9 displaced machines from the Spring Shop. This is a minimal number of items when compared with the number of in-situ items throughout the rest of Bays 1 and 2 and the relocation of non in-situ items will have no physical impact, as these will be carefully relocated to more authentic locations, where possible. The potential noise generated from the truck movements in the loading dock should not be viewed as negative, as such noise and activity is considered to be consistent with the type of industrial activity and noise that filled the site for more than 100 years. Furthermore, the loss of floorspace from Bays 1 and 2 will be offset by the addition of the mezzanine level that will 'regain' the floorspace and create a dedicated heritage exhibition space that may also be used as a central repository for significant research information related to the Eveleigh Railway Workshops, as a whole. Other benefits of the loading dock are:</p> <ul style="list-style-type: none"> • an interpretative artefact wall along the southern façade of the loading dock wall; • impetus to reinterpret and revitalise the static moveable heritage collection on the ground flood level; and • the relocation of forges to Bay 2 south for restoration and use, where possible.

Potential Impact	Conclusion
Loading Dock – visual impacts	<p>The insertion of the loading dock will constitute a major visual impact within Bays 1 and 2 because the space is currently open from floor to ceiling. The proposed positioning also required the enclosure of the in-situ Davy Furnace in the north-eastern corner of Bay 1, which causes the loss of the visual relationship between the Davy Press and the Davy Furnace. The use of the southern loading dock wall as an interpretation surface and the framing of views of the Davy Furnace from the mezzanine level is similar to 'Ghosts' which was an 8mx12m artefact interpretative infrastructure proposed for the exact same space in 2012. The design of the wall as three differently positioned sections that allows views through to the Davy Furnace at ground level, and views and interpretation from the mezzanine level of the relationship between the Davy Press and Davy Furnace and the enhancement of lighting within Bays 1 and 2 is intended to offset the visual impact of the loading dock wall.</p>
Heritage Exhibition Area	<p>The new heritage mezzanine will serve to enclose the loading dock, to provide a heritage interpretation and event space, and a significant heritage interpretation opportunity for the site. The creation of the mezzanine heritage space is considered to be extremely positive, in that will become the focal point for heritage exhibitions, events and a multitude of cultural heritage outcomes.</p>
Bays 1 and 2, New retail – physical impacts	<p>Retail structures in Bays 1 and 2 north have been designed to be small scale, low-height and self-contained, that allows the opportunity for scattered, informal seating within the Bays, compatible with the heritage focused overall use of the space. It is proposed that these retail 'pods' will be lightweight, removable and will sit over a new floor plate throughout, through which all key services will run. As a result, it is intended that no significant intervention into any heritage fabric will be required.</p>
Bays 1 and 2, new retail – visual impacts	<p>The low height design of the pods ensures that the heritage columns will be retained as the primary vertical elements in Bays 1 and 2 and are not obscured by modern retail inserts.</p>
Bays 3-4a - Demolition of modern infill office – physical impacts	<p>The demolition of all internal modern office fit-outs within Bays 3-4a is positive, as the existing modern fit-outs do not take advantage of the spatial volume and character of the Locomotive Workshop, and have been sympathetically designed so that their removal will have no physical impacts. In order to ensure minimal impact of the removal and demolition of the existing infill fabric, a careful demolition program has been proposed as part of the CEMP.</p>
Bays 3-4a - Demolition of modern infill office – visual impacts	<p>While the 1990s office fit out within the Locomotive Workshop was considered best practice for the time of its creation, in many areas it does not actually relate to the form and fabric of the Locomotive Workshop building itself. Therefore, its removal as well as the removal of the mezzanine office fit-out and function space and auditorium will have a positive impact on the readability of the Locomotive Workshop, prior to its refurbishment. Further, the demolition works provides a window of opportunity for Mirvac to archivally record the original fabric of the building to modern standards, prior to refurbishment.</p>

Potential Impact	Conclusion
Supermarket in Bays 3-4a north	<p>The construction and installation of a supermarket in Bays 3-4a north will have a physical impact. The specific details of the supermarket tenancy fit-out and operations will form part of a separate tenancy development application, however the design will be in accordance with design principles prepared by Mirvac's design team as outlined in the Architectural Design Report, which will include the creation of a 'heritage transition zone' within the entrance zone to the supermarket which aims to integrate the supermarket fit-out with the rest of the building and a 'visual links zone', related to maintaining continuous views along the central spine corridor of the Locomotive Workshop. The presence of the 'heritage transition zone' will provide a positive aesthetic offset to ensure the supermarket does not have a major visual impact within the Locomotive Workshop. The design of the 'integration zone' that creates the entry point for the supermarket will be undertaken with great care. The interface between the supermarket and the public spaces of the atrium in Bay 4 and other surrounding retail spaces will not create a 'standard supermarket' frontage across all three bays, as this would create a major negative visual impact within Bays 1-4a and beyond. The softening of the impact of the main entrance to the supermarket is proposed to be achieved in many ways, including through the reduction of the entrance to the supermarket through a single bay with a 'bespoke' design approach. This entrance would draw inspiration from the industrial nature of the building, and would be designed to minimise the emphasis on views of the 'sterile day to day sections' of the supermarket space behind. The entrance zone will have retail elements, or a transitional retail zone on either side that creates a carefully curated visual aesthetic that complements the heritage fabric of the site in terms of materiality and visual impact.</p>
Ground Floor Retail in Bays 3-4a south	<p>The ground floor retail premises are proposed to house 'production type' retail, including food and beverage stalls, as well as boutique makers and producers, serving to both activate the Locomotive Workshop building and ATP precinct for the public, while complementing the new workspaces proposed within the western portion of the building. The installation of back of house facilities and other services and infrastructure has a potential to be a major physical and visual impact on the heritage values and aesthetic of the Locomotive Workshop, however in order to mitigate the potential heritage impacts, the construction is proposing to use light weight steel framing allowing for reversibility and differentiation with the heritage fabric and to allow the new fabric to have a light touch, with simple glazed tenancy walls to enable the tenancies to remain as open and transparent as possible. Whilst the tenancy fit-outs in Bays 3-4a will be subject to separate DAs, they will be required to meet Mirvac's design guidelines and will need to complement the industrial aesthetic of the heritage building, highlight any moveable heritage items and columns, and create retail spaces that are commensurate with the heritage character of the building. In this way, the proposed retail premises will be able to be designed to be commensurate with the industrial character and fabric of the building.</p>

Potential Impact	Conclusion
First Floor retail in Bays 3-4a	<p>To ensure that the physical impacts to the existing original fabric remain minimal, the design intent is to keep the first floor level pulled back from the wall fabric, through the installation of self-supporting, lightweight structures that sit within the building envelope to provide an independent structure. However, the proposed design will require the unbolting and removal of small sections of steel girders between Bay 4 and 4a as well as between Bay 3 and 3 to allow through access. The overhead crane in Bay 4 north is also to be repositioned to Bay 4 south along the same track. It is considered that the impact to the heritage fabric has been localised in order to ensure that the readability and integrity of the bays remain intact. When compared to the proposed works, the existing 1990s structure has had a much greater physical impact and visual impact on the spaces within Bays 3 – 4a.</p>
Other services and Infrastructure	<p>Many of the services are proposed to be run underneath the new flooring, so as to reduce the visual and physical impacts within the building. The existing interpretive carpet will be removed and replaced with a new interpretation of the original path of the rail tracks through the use of metal inlays in the floor. This is considered to be a positive impact, as the carpet is identified as being as of little heritage significance in the CMP and a more authentic representation of what once lined the floors is an improved interpretive and aesthetic outcome that is more in keeping with the industrial character and fabric of the building.</p>
Construction of Travelator – physical impacts	<p>The travelator is one of the key elements within the development which requires a major intervention into a small section of the building. It is considered essential from a heritage perspective that the impact of the travelator is mitigated, in various ways, in order to offset the impact of the travelator upon the central section of Bay 4.</p> <p>The installation of the travelator will require excavation into the modern fabric of the floor and below the historic footings. While this constitutes the introduction of a new use into the space, it will not impact historic building fabric at ground level or above.</p> <p>The excavation has the potential to impact the substructure foundations of the Locomotive Workshop, including the brick arch footings that support the building along the southern elevation. However, the brick arch footings are not 'relics' as defined by the NSW Heritage Act 1977 as they form part of the existing built structure. Notwithstanding this, in order to minimise the potential for the travelator to impact upon the footings, during investigative works for the travelator, the footings will be exposed locally to assess how they will be stabilised and incorporated into the design of the void space within Bay 4. The intent is to create a visual interpretation of the archway as the travelator passes beneath it, with minimal physical impact to the footing itself. The travelator will be custom-made to incorporate the interpretive elements and to reduce the impact of new fabric into the space.</p>

Potential Impact	Conclusion
Travelator – visual impacts	<p>The connection point of the travelator to the Locomotive Workshop in Bay 4 as it rises from below ground will be mitigated through the careful presentation of the heritage interpretation within the travelling route of the travelator, its colour palette, materiality and design. The view of the travelator is also intended to be softened within the industrial heritage aesthetic of the Locomotive Workshops. Furthermore, the incorporation of the brick arched footing within the roof of the travelator will provide a new opportunity for visitors to the site to understand how the building was constructed in a unique and engaging way.</p>
Travelator – interpretation	<p>Heritage Interpretation also presents an opportunity to offset the physical and visual impacts of the travelator. It is intended that the significant story of the Foundry and its relationship with the Locomotive Workshops will form the basis of the interpretation, which is important, as the Foundry building no longer exists and the tunnel provides the opportunity to display and interpret key elements that were rediscovered during the excavation for Building 2. The travelator tunnel will also provide an excellent opportunity for engagement with a relatively stationary and captive audience.</p>
Internal openings	<p>The enlargement of the internal openings along the central spine between Bays 2 and 3, and 4a and 5 will have no impact as the existing inter-bay walls are constructed of modern fabric and therefore will not impact any original heritage fabric.</p> <p>The new opening of first floor level between Bays 2 and 3 to allow the provision of accessible access from the new lift in Bay 3 to the new mezzanine heritage exhibition space will also only require demolition of modern fabric blockwork. Therefore, the proposed enhancement of new entrances and openings within Bays 3-4a is considered to have a neutral physical impact. Furthermore, the complementary design of the new wall and openings uses glazed infills with minimal framing so as not to detract from the heritage aesthetic of the building. Therefore the enhancement of these entrances is considered to be a positive visual impact.</p>
Roof Upgrade – physical impacts	<p>The upgrade strategy has been designed to retain and conserve the internal roof fabric in the majority of the Bays, with alterations only to the exterior roof sheeting in order to improve the thermal stability of the building, without major intervention within the roof spaces of the building. The actual structure of the roof and interior heritage fabric, including trusses, soffits and other associated fabric will be retained and heritage louvres will be retained, except where smoke ventilation louvres are required. The configuration of the skylight slots have been modelled on the existing roof conditions within the Large Erecting Shop and will be constructed from polycarbonate sheeting or similar. In terms of physical impact, the proposed roof treatment is considered to be neutral as the only fabric impacted will be the replacement non-original sheeting within Bays 3 -4a, and creates positive sustainable environmental benefits.</p>

Potential Impact	Conclusion
Roof upgrade – visual impact	<p>The installation of insulation and replacement of the new outer layer of metal sheeting will have a neutral visual impact, however the installation of the skylight slots will be visible from within the Locomotive Workshop and will create a major change in how the roof skylights are currently viewed in Bays 3 and 4a. Whilst not original, the current skylights are historically arranged in vertical patterns from north to south in each of the bays. The result will be a loss of the readability of the 'vertical' pattern of skylights in these locations. However, the roof lighting of the Locomotive Workshop and in particular the form of skylights has been altered numerous times over the years to accommodate the different historic activities within the various bays, therefore whilst the skylight slots will have a visual impact on balance it is considered acceptable as they will:</p> <ul style="list-style-type: none"> • achieve sustainable energy efficiency; • restrict impacts to new fabric, rather than original fabric; • minimise the need to introduce major services and infrastructure; • impact only on a total of 5% of the entire Locomotive Workshop roof area; • be consistent with the roof daylight strategy being employed by the large Erecting Shop; • be consistent with the historical changing nature of roof lighting to meet the specific requirements of the users of the different bays; and • be readily reversed in the future should future user requirements change.
New roof platforms	<p>The proposed installation of the new roof platforms in the roof valleys will require small penetrations in the roof sheeting to allow columns to run to the ground. The new roof platforms are considered to be a negative physical impact due to the requirement for irreversible penetrations in the roof in order to support the plant platform and will have a minor visual impact internally, due to the requirement for the installation of supporting columns within the building itself. However, externally, as the roof plant is to be of steel construction and they are situated within the roof valleys, the platforms and plant will not generally be visible from any of the surrounding areas.</p>

Potential Impact	Conclusion
External doors – physical impact	<p>The proposal seeks to remove and replace all modern glass doors fronting Locomotive Street and Innovation Plaza. The existing doors that lead from the interior of Bay 4 and 4a o Locomotive Street and the larger format modern glass openings from Bay 1 to Innovation Plaza have been identified as having little heritage value in the CMP. However the majority of the doors from Bays 1 through to Bay 3 retain painted timber doors which will be retained and fixed in an open position internally, with new contemporary lightweight glazed doorways installed. Overall, the removal and replacement of the external doors along the southern and eastern facades is considered to be a positive heritage outcome, retaining the existing character of the entrances while improving the openness of the Locomotive Workshop, and removing unsympathetic contemporary or intrusive modern fabric. The replacement of the large format roller door in the northeast of Bay 1 with a contemporary glazed door, similar in design will minimise heritage impact by reusing existing areas of attachment.</p>
Alteration to external doors – visual impacts	<p>The proposed visual impact of the changes to external doors within the eastern portion of the Locomotive Workshop is neutral to positive. It will create continuity along the whole of the southern and eastern facades and will ensure that the fabric of the building itself is highlighted. Alterations to the modern external features of the eastern portion of the Locomotive Workshop will also function to activate the public domain along Innovation Plaza and the main thoroughfare, ant track' to and from Redfern Station.</p>
External Heritage Windows	<p>The existing heritage windows along the northern facade of the Locomotive Workshop will be retained, restored and reused, however the frosted glass within the southern and eastern façade windows will be replaced by clear glass to create better transparency, light access and view lines to and from the building. The removal of the frosted glass is a visual and physical impact that will be carefully managed so as not to cause damage to the window frames. Three bricked up windows along the eastern façade of Bay 1 are proposed to be reopened and new custom-made windows inserted to match the existing windows. This will greatly improve the aesthetics and consistency of the eastern façade. Overall the visual impact of reinstating the windows is extremely positive.</p>

Potential Impact	Conclusion
Corner Retail Annex	<p>The new corner retail pavilion will be constructed and will utilise the brick Bay 1 annex as part of a new tenancy. While the proposed pavilion will require a change to the existing building fabric, the only fabric impacted is the demolition of the non-original lean-to and changes to the later historic corrugated iron fabric of the annex. The existing lean-to is unattractive, poorly interpreted and does not encourage appreciation of the heritage fabric of the Locomotive Workshop. The removal of the corrugated iron frontage from the Bay 1 annex and its replacement with a new contemporary glazed treatment is a minor impact within a space, that was originally an open entrance through to Bay 1. The guillotine beneath the lean-to will be retained in-situ, interpreted and celebrated as a major feature within the new retail premises, with no physical impacts proposed. The corner retail space will improve views from the public domain to the heritage building in this location, and encourages views directly into the Locomotive Workshop. The new retail space is subservient in material, form and design to the Locomotive Workshops, and will activate this, previously unattractive, corner of the site. It is therefore considered that the provision of a light-weight glazed corner retail pavilion and changes to the corrugated frontage of Bay 1 annex would be a very positive visual impact, creating an attractive and complementary visual aesthetic.</p>
External illumination	<p>The proposed external lighting strategy would predominantly serve to accentuate the key architectural features of the external façade of the building in order to assist in the activation of the public domain along Innovation Plaza and Locomotive Street and to reinforce views of the Locomotive Workshop from the public domain. The lighting strategy has been developed in close consideration and acknowledgment of the specific heritage features and character to the Locomotive Workshop. In order to affix the proposed lighting to the façade, to allow illumination and celebration of the building at night, some minor impacts will be generated. However, in order to minimise the impacts, the fixing points will be focused where possible at grout or join lines on the vertical surface of the façade in order to prevent impact to the main façade. These fixing points will be treated to prevent and eliminate water ingress and any other potential impact. Stainless steel fixings will also be used to avoid rusting and other damage to the façade. Overall, whilst, the installation of the external lighting will give rise to a minor impact to the physical fabric of the Locomotive Workshop, this is offset by the overarching positive visual impact of accentuating and highlighting the heritage values of the building at night, linking the Locomotive Workshop to the public domain and encouraging public appreciation of the architectural values of the façade.</p>
External building illumination – visual impact	<p>The proposed lighting will tastefully illuminate elements of the heritage façade, highlight significant elements and allow and encourage public appreciation of the significant external architectural in the evenings. It is considered that the proposed external lighting will have a positive visual impact.</p>

Potential Impact	Conclusion
Signage	<p>The signage is proposed to be designed to be in keeping with the heritage aesthetic of the Locomotive Workshop building, and utilise sympathetic materials. It will be located behind glazed panels where modern external doors occur, along both exposed sides of the new corner retail pavilion as well as on the brick heritage fascia which will be restricted to 'Locomotive Workshop' signage and high level facing the railway.</p>
Public domain improvements	<p>The proposed public domain works along the southern elevation of the Locomotive Workshop will be a continuation of the wider public domain improvements for the overall redevelopment of the ATP precinct, which will transform Locomotive Street into a major axis for pedestrian traffic to service the new buildings, as well as the tenants of the Locomotive Workshops. Overall the proposed public domain works within SSDA 8517 are consistent with the works proposed within SSDA 8449 and will fit seamlessly with the site wide public domain works. The proposal ground treatments are subtle and sympathetic to the external facades of the Locomotive Workshop.</p>
Impacts to the Moveable Heritage Collection	<p>The CMP identifies that the moveable heritage (including the in-situ machinery) has suffered a 'loss of context for the industrial components of the site' as 'much of the remaining machinery does not have an obvious connection to its location and that the relationship between the machinery and the layout of the workshops and how the two work together has been obscured through relocation of most machinery. The intended treatment for the moveable heritage collection will help re-establish context, where possible, and improve the interpretation of how a piece of machinery or tool would have been used, not only individually, but as part of the whole process. While the proposed new heritage interpretation within Bays 1 and 2 north is considered to be a positive initiative with an overall positive visual impact, it is still acknowledged that some more traditional heritage enthusiasts will feel the revision of the existing heritage interpretation including the relocation of numerous moveable heritage items to be a negative impact. The repositioning of all items in Bays 3-4a is considered to be a neutral impact as the items currently lack broader context and have poor interpretation. The reinterpretation of them in a more meaningful way allows them to be displayed with other items from the Spring Shop.</p>
Overhead Cranes	<p>In order to accommodate the mezzanine floors, one crane in Bay 4 and one crane in Bay 1 are to be relocated within the same Bays and along the same tracks. The repositioning of the crane in Bay 4 will have little to no impact, however the repositioning in Bay 1 will have an impact as there is a locational relationship that exists between the Davy Furnace and the Davy Press. To offset the loss of this visual relationship, the three elements are proposed to be interpreted as part of the heritage interpretation for the Davy Press and within the heritage exhibition space. The actual impacts however will be nil.</p>

In order to ensure that the heritage significance of Bays 1-4a is preserved and the proposed works do not result in any adverse impacts, Curio Projects provides the following recommendations:

1. Prior to the implementation of any changes to the roof, an archival recording of the existing roof structure, including the skylights should be undertaken, in accordance with the NSW Heritage Division Archival Recording Guidelines and kept as a part of the site records. A second copy should be lodged with the NSW Heritage Division, for their archival records.
2. The proposed demolition program should include:
 - a heritage induction program that will ensure that all construction staff are made completely aware of the significance of the building and significant fabric components;
 - the inclusion of clear plans showing all original building fabric to be protected and conserved throughout the demolition process;
 - a clear process for the archival recording of the building prior to demolition, during demolition and on completion of all demolition works; and
 - oversight of the demolition works by an experienced demolition team, with demonstrated expertise in construction and demolition works at historic sites. A nominated Heritage Specialist will undertake regular inspections to ensure that all demolition works are being undertaken in an appropriate manner.
3. An unexpected archaeological finds protocol will be developed by an appropriately qualified archaeologist and disseminated to Mirvac, as part of the Heritage Induction process, prior to the commencement of any demolition works on site. Therefore, should any unexpected Aboriginal objects or historical relics be found, works would cease in the immediate area and Mirvac's archaeologist contacted, in accordance with the unexpected finds protocol.
4. The building, including interiors and exteriors should be photographically recorded prior to the demolition of infill fabric, during demolition, and upon completion of demolition to ensure that there is a comprehensive archival record of the changes to the building over time.
5. The building should be photographically recorded in its base form, once all of the infill elements have been removed, and prior to commencement of new internal development works.
6. Prior to occupation of the site, one copy of all archival recordings should be lodged with the NSW Heritage Division and one set of archival recordings kept with the site records.
7. The details of signage to be installed within the proposed signage zones will be the subject of a future DA approval.
8. The placement, storage and interpretation of all moveable heritage items will be finalised as part of the Stage 2 Interpretation Strategy and will occur in accordance with the design principles outlined in Section 8.13.2 of the Heritage Impact Statement, the requirements of the CMP policies, the HAMS and the MCMS.
9. Prior the issue of the first Occupation Certification for the Locomotive Workshop, the Applicant shall submit Stage 2 of the Heritage Interpretation Strategy for approval by the Secretary. This plan shall be prepared in accordance with Stage 1, the applicant's Heritage Impact Statement, the ATP Conservation Management Plan and relevant NSW Heritage Guidelines. Stage 2 shall be prepared in consultation with the Heritage Council and other stakeholders, including former workers, Aboriginal stakeholders, volunteers, the local community and relevant railway associations and document the findings and recommendations raised.

6.6.1 Consistency with the principles outlined in the Conservation Management Plan

In assessing the proposal against the policies and principles contained within the Conservation Management Plan, Curio Projects makes the following conclusions:

- In keeping with Policy Objective 2 ('Conserving Heritage Significance'), the concept for the redevelopment of the Locomotive Workshop has been prepared and designed with great consideration, appreciation and incorporation of the exceptional heritage significance of the wider ATP precinct and former Eveleigh Railway Workshops site and designed to contribute to and reinforce the historical and cultural identity of the site, both tangible and intangible.
- In accordance with Policy 2, the State significance of the Locomotive Workshops and moveable heritage collection have been closely considered, appreciated and integrated with the proposed development of the TAP precinct, conserving the heritage significance and identity of the place and its moveable heritage through maximising conservation of historic fabric, implementation of substantial heritage interpretation initiatives, and integration of the heritage features and values into the development.
- The redevelopment has been designed to avoid any 'adverse impacts on components, fabric or other aspects of significance' (CMP Policy 2.11), wherever possible, with negative physical or visual heritage impacts only proposed where all other feasible options have been examined and determined to be no possible for both physical and economic reasons.
- The redevelopment of Bays 1-4a will continue to acknowledge and conserve the significant heritage values of the moveable heritage collection as an integral part of the Site's identity (as per Policy 2.13). Most notably, the proposed redevelopment intends to improve communication of the exceptional values of the moveable heritage collection, through such initiatives as improved heritage interpretation, retention of the in-situ machinery collection, through such initiatives as improved heritage interpretation, retention of the in-situ machinery, and the recommissioning of several items within the existing Blacksmith tenancy.
- The recommissioning of three forges and some other machinery, currently located on static display in Bays 1 and 2, for use in blacksmithing operations in Bays 1 and 2 south, is an extremely positive heritage outcome, consistent with Policy 5.8 of the CMP.
- Policy 4 relates to the physical conservation and maintenance of buildings within the ATP precinct, and states 'conserving the former Eveleigh Locomotive Workshop buildings is integral to conserving the heritage significance of the site'. The HIS and this EIS confirms that significant physical heritage fabric of the Locomotive Workshop building will be conserved through the proposed redevelopment.
- Significant heritage fabric has been identified appropriate to the CMP grades of significance, most notably the original internal layout of the building (including arrangement of bays divided by double rows of cast-iron columns, the exposed roof trusses and overhead gantries) and original annexes. The retail premises in-fill (including supermarket and loading dock) and other redevelopment features have been specifically designed to conserve, acknowledge and accentuate the industrial heritage values and views to these exceptional built heritage features.
- The current plan for the proposed redevelopment of the eastern portion of the Locomotive Workshop (Bays 1-4a) is consistent with proposed Future Use (Policy 7) of the CMP. The single level mezzanine retail space has been designed with the intention of conserving and highlighting the industrial features of the building with minimal major physical impacts, other than where careful analysis has identified that there is no other viable option.
- The reinterpretation, and possible reuse, of moveable heritage items (currently located in Bays 1-4a) will serve to create exciting new opportunities for visitors to engage with the collection.

- The proposal seeks to reactivate the public domain spaces adjacent to the Locomotive Workshop, by:
 - enhancing views from Locomotive Street to the façade of the building;
 - removing intrusive modern fabric;
 - communicating key stories and events through interpretation;
 - adaptively reusing the annexures for retail and heritage exhibitions;
 - external heritage lighting schemes to further enhance industrial heritage features.
- The heritage interpretation for the entire ATP precinct and the Locomotive Workshop is being developed in accordance with the policies on the CMP (Policy 10) and will continue to be developed in close consultation with the key stakeholders and future partners, such as 'Heritage Near Me' to create a world-class interpretative experience for workers and visitors alike.

6.6.2 Aboriginal Archaeological Impacts

The Heritage and Archaeological Impact Statement, prepared by Curio Projects (**Appendix M**) includes an assessment of the Aboriginal archaeological potential of the Site. The assessment states that the ATP precinct and its surrounding suburbs have an important and strong legacy of Aboriginal historical connections to the region, however a NSW Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) search confirms that no Aboriginal sites are recorded in or near the Site and no Aboriginal places have been declared in or near the Site.

Furthermore, Curio Projects confirms that no additional Aboriginal archaeological assessments or excavations were identified as having been recently undertaken in the area of the ATP and the risk of finding in-situ Aboriginal archaeological sites are considered to be low-nil. However, while some excavation is proposed within Bay 4 for the installation of the travelator, there is nil-low likelihood that this excavation will disturb any Aboriginal archaeological deposit. Notwithstanding this, an unexpected finds policy will be implemented.

6.6.3 Historical Archaeological Impacts

The Heritage and Archaeological Impact Statement, prepared by Curio Projects (**Appendix M**) assesses the archaeological potential of the Locomotive Workshop Site. It acknowledges that the Conservation Management Plan (CMP) includes an assessment of the potential for historical archaeological resources to survive within the curtilage of the ATP precinct, and that it was concluded that due to the level of cutting down of the [ATP] site and subsequent development phases there would generally be low to moderate potential across the ATP precinct for historical archaeological resources to be present.

Notwithstanding this, Curio Projects prepared a Heritage and Archaeological Impact Statement in 2015 and a subsequent 'Historical Archaeological Research Design and Methodology for the Australian Technology Park', that reviewed and revised the assessment of historical archaeological potential across the ATP precinct from that presented in the CMP.

Accordingly, Curio's revised findings are summarised below:

- Phase 1 of the ATPs occupations relates to the history of the site as Chisholm Estate and dairy farm, c. 1835-1880. However, there is no evidence of any potential archaeological features relating to Phase 1 of site occupation within the footprint of the Locomotive Workshop, therefore the Locomotive Workshop has no potential for archaeological resources relating to Phase 1 or its historical use of the ATP precinct.
- Phase 2 relates to the residential development within the ATP precinct between 1880-1917, prior to the resumption of houses and shops for the Alexandria Goods Yard. The positioning of the Locomotive Workshop did not require any resumption or demolition of residential housing, and therefore it has no potential for historical archaeological resources relating to Phase 2.
- The third and fourth phases of historical development at the ATP precinct relate to the construction and operation of the Eveleigh Railway Workshops site, with Phase 3 relating to 1880-1917 and Phase 4 relating to 1989-present day. The Locomotive Workshop was constructed at the very start of Phase 3 and remains in the same location today, therefore there is no potential for any additional activities, other than the construction of the Locomotive Workshop to be present in an archaeological context within the building.
- It is considered that there is low potential for some earlier evidence of the construction of the Locomotive Workshop beneath the current floor, which may be in the form of working footings, however this evidence, if present would likely be ephemeral, fragmentary and inconsistent.
- There is potential for arched footings to be present beneath the ground surface of the Locomotive Workshop, however these footings are considered to be 'works' as opposed to 'relics' and if present would be managed and addressed accordingly.

Overall, Curio Projects considers that the Locomotive Workshop has nil to low potential for archaeological relics to survive within the footprint of the extant building relating to any phase of historical use of the Site. However, should any unexpected historical archaeological relics be encountered during excavation of the travelator, then unexpected finds protocol would apply.

6.7 Economic Impacts

MacroPlan Dimasi has prepared an Economic Impact Assessment (**Appendix D**) to provide an assessment of the need to provide retail facilities at the Locomotive Workshop and the potential economic and community impacts associated with the proposed development.

6.7.1 Resident Trade Area

MacroPlan Dimasi has determined the likely catchment area (or resident main trade area) that will be served by the proposed retail facilities will comprise one primary sector and four secondary sectors. These are identified in **Figure 76** and described as follows:

- The **primary sector** is bounded by the railway line to the north and west, Botany Road to the east and McEvoy Street and Ashmore Streets to the south. It includes the ATP precinct as well as the South Eveleigh precinct and parts of Alexandria and Erskineville.
- The **secondary north** sector extends to Cleveland Street and King Street in the north and west. It includes parts of Eveleigh, Redfern, Darlington and Newtown.

- The **secondary east** sector extends to Cleveland Street to the north, Pitt Street in the east and McEvoy Street to the south. It includes parts of Redfern and Waterloo.
- The **secondary south** sector extends to Sydney Park to the south and includes the Ashmore Street Urban Renewal Precinct.
- The **secondary west** sector extends west to King Street and includes parts of Newtown and Erskineville.

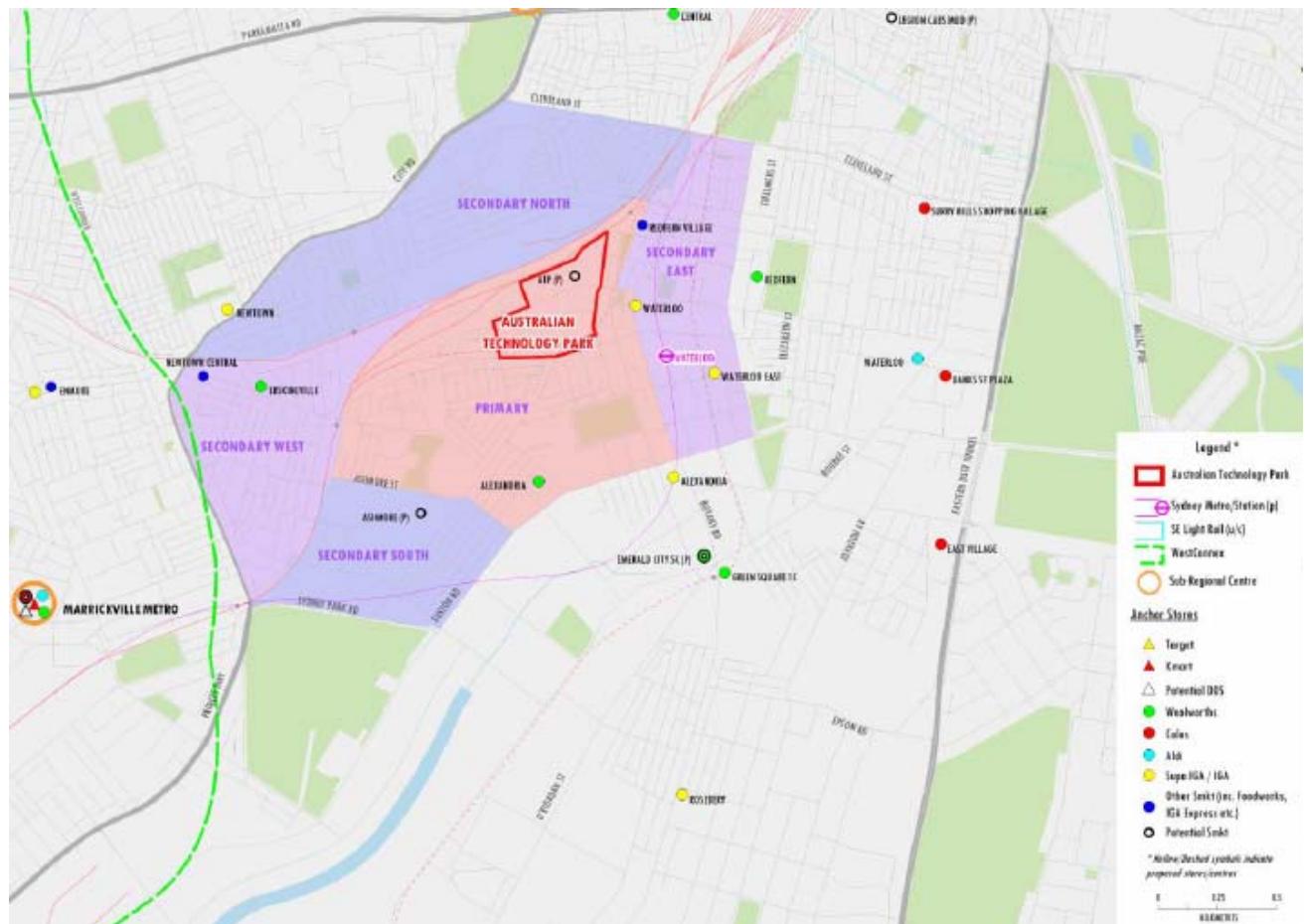


Figure 76 – Residential trade area

Source: MacroPlan Dimasi

The residential trade area has an estimated current population of 34,660 which is expected to grow to reach 56,360 by 2031, due primarily to residential intensification projects in Eveleigh, Waterloo and Ashmore Street. Further, the population of the primary sector is expected to grow to approximately 9,560 by 2031.

The socio-demographic profile of the residential trade area has also been assessed and is considered to be reflective of an urban, inner city population, primarily consisting of young, professional singles and couples, that tend to have larger than average disposable incomes and a greater propensity to spend on food catering. This general view, has been further confirmed by information sourced in relation to the estimated retail expenditure generated by the residential trade area, that found:

- the estimated total per capita retail expenditure is approximately 24% high than the metropolitan Sydney average;
- the estimated per capita expenditure on fresh food, other food and groceries, is approximately 6% above average;
- the estimated per capita expenditure of food catering is 57% higher than the metropolitan Sydney average; and
- the estimated per capita expenditure on discretionary retail categories is 25% above the average, reflecting the affluent nature of the residential trade area.

In 2017, the estimated retail expenditure was \$617 million with approximately 38% of the total sum (\$233.7 million) spent on food, liquor and groceries. By 2031, the total retail expenditure is expected to grow to \$1.15 billion with \$528.3 million (35%) spent on food, liquor and groceries. Furthermore, food catering expenditure is anticipated to grow 150% to \$269 million by 2031.

6.7.2 Worker Trade Area

The determined worker trade area that will be served by the proposed development comprises three sectors as illustrated in **Figure 77**:

- The **primary sector** bounded by the railway line to the north, Cornwallis Street to the east, Henderson Road to the south and Burren Street to the west. It includes the ATP precinct and the South Eveleigh precinct.
- The **secondary east** sector extends to Cleveland Street to the north, George Street in the east and Phillip Street to the south. It includes parts of Redfern.
- The **secondary south** sector extends to Botany Road to the east, Ashmore Road and McEvoy Street to the south and the railway line to the west. It includes parts of Erskineville and Alexandria.

Growth of the worker trade area will be driven by the development of the new buildings within the ATP precinct as well as additional commercial and retail development within the Locomotive Workshop. The worker trade area population is therefore expected to grow to 23,390 by 2031, which includes approximately 17,210 workers within the primary sector.

The total available retail expenditure generated by the worker trade area population is estimated to grow from \$36.7 million in 2017 to \$122 million in 2031, which is a growth of 9%.

Furthermore, MacroPlan Dimasi consider that the redevelopment of the Locomotive Workshop has potential to attract students from Sydney University and UTS to study and socialise as well as tourists and a destination visitor population from the broader metropolitan region.

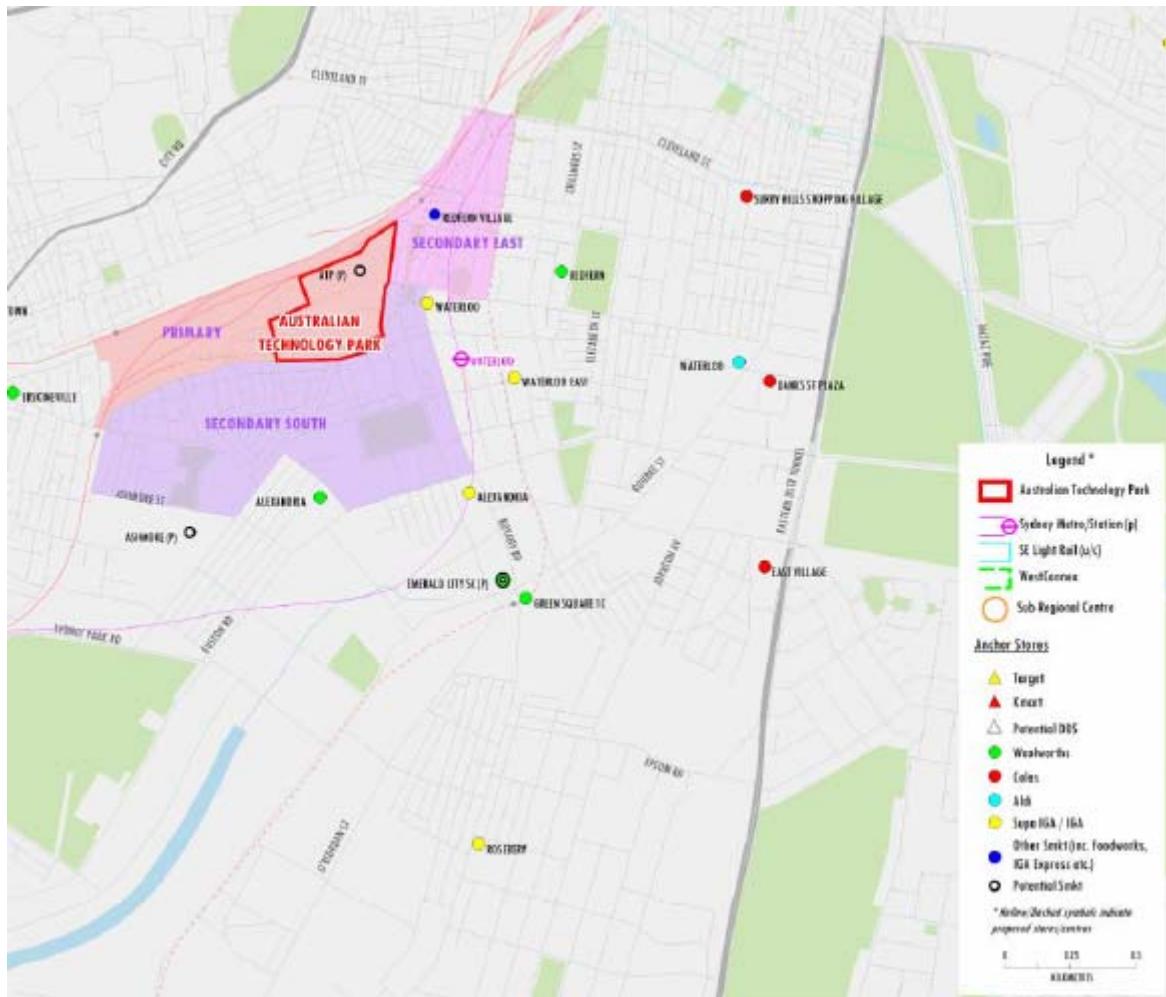


Figure 77 – Worker trade area

Source: MacroPlan Dimasi

6.7.3 Analysis of competing retail facilities

As part of its analysis MacroPlan Dimasi has undertaken a review of the retail facilities located within the surrounding areas that are likely to compete with the proposed offer at the Locomotive Workshop. Whilst it found that the existing broader retail environment is competitive, the proposed mix of offer at the Locomotive Workshop would create a significant point of difference in the market, creating a space for retail ad community and bringing together residents, workers and visitors in a unique heritage setting. Furthermore, the analysis of competition from new facilities in the supply pipeline found that new facilities will generally be provided to meet the rapid population growth of the Zetland, Waterloo and Green Square areas.

Using this analysis, MacroPlan Dimasi has assessed the level of demand for supermarket floorspace within the residential trade area and the general retail floorspace demand across both the residential and worker trade areas. Overall, the assessment confirmed that there is demand for approximately 10,900m² of supermarket floorspace across the residential trade area in 2017, which is projected to increase to 12,794m² in 2021 and 19,055m² in 2031. Based on an anticipated opening of the supermarket within the Locomotive Workshop in mid 2020, and the opening of a small convenience store in Building 2 and a 2,000m² supermarket at the Ashmore Precinct, MacroPlan Dimasi has subtracted the proposed supply of floorspace from the level of demand identified, and have found that in 2021 when the new facilities are operational, there would still be a demand for 1,689m² of supermarket floorspace in 2021 which will increase to 7,950m² in 2031.

Furthermore, in 2017 the residential and worker trade area generates demand for a total of 96,900m² which is expected to increase to 173,300m² by 2031. The total addition of approximately 4,200m² of retail floorspace (in addition to the supermarket) within the Locomotive Workshop will therefore take up approximately 4.3% of the total floorspace demand at 2021 and 2.4% of the total demand at 2031. The provision of retail floorspace to meet the needs of the local residential and worker population can therefore easily be supported and justified.

6.7.4 Trading Impacts

In the first full year of trading, the proposed development is anticipated that it will achieve sales in to the order of \$33.9 million. The trading impacts associated with the opening of Bays 1-4a of the Locomotive Workshop are estimated to result in the loss of sales within the Alexandria Precinct of approximately 6.4% (\$5.9 million), which is the largest impact. Impacts on other retail centres are expected to be between 0.5% and 5.3%, with many of these centres only drawing a very thin market share from the available resident trade area because they contain small independent supermarkets and small offers in general, serving a different role and function to the proposed development.

Based on these figures, it is considered that the proposed development is acceptable given that it is generally recognised that impacts between 10% and 15% are considered to be significant but acceptable; impacts between 5% and 10% are considered to be relatively moderate; and impacts below 5% are considered to be minor/ negligible. Furthermore, MacroPlan Dimasi make the following conclusions:

- any impacts will dissipate within 1-2 years given the projected population and retail market growth within the trade area;
- the residential trade area is significantly under-provided with retail facilities and therefore any resultant trading impacts from the proposed development is not in reality a negative economic impact, rather, an addition to net community benefits (as discussed in **Section 6.7.5**);
- there is more than ample available demand for all existing facilities to continue to trade successfully and viably;
- there is a clearly demonstrated undersupply of supermarket floorspace within the residential trade area which means that either the existing supermarkets are all trading strongly or there is significant leakage from the main trade area, or a combination of both;

- the proposed development will help meet a clearly identified market gap for supermarket facilities, will augment the existing centres hierarchy without resulting in any reduction in the level of service provision across the surrounding region and will not prevent or impact upon any new or planned centres from establishing across the region.

6.7.5 Economic and Social Benefits

The proposed retail facilities within the Locomotive Workshop is considered to result in community benefits which will generate a number of social and economic benefits for both the local and wider metropolitan area. These comprise:

- The provision of approximately 250 additional employment opportunities on Site and the provision of approximately 85 in-direct jobs throughout the supply chain, including those serving the retail tenants and approximately 500 jobs (direct and in-direct) during the construction phase, which also translates to additional wages that a proportion of which will likely be directed to towards local retail, entertainment and business services.
- The capital investment of approximately \$48 million into the local economy.
- The creation of an iconic nationally and internationally recognised precinct within an area of significant heritage value that will drive the success of the ATP precinct as a world-class high quality working environment.
- The increase in choice and amenity for the population of the residential trade area and worker trade area as well as likely increased competition for the benefit of consumers.
- The creation of increased access to new food and grocery shopping facilities and other supporting retail and non-retail services.
- The provision of convenience based retail for the on-site workers within the immediate vicinity and those that would form part of the new broader development.
- Reduced travel distances, leading to savings on time and fuel for main trade area residents and workers, due to a greatly improved provision of retail and ancillary nonretail facilities at the local level.
- Additional convenience and lifestyle retail facilities that would augment the retail hierarchy (i.e. there would be no reduction in the surrounding retail facilities).
- The stimulation of opportunities for small businesses to open premises within the Locomotive Workshop, ATP precinct or surrounding area.
- Providing jobs near to people's homes and the consequent economic multiplier impacts, which will boost the local economy.
- The creation of a new focal point within the surrounding residential community, that services the worker and student market and becomes a destination retail and leisure precinct.

6.8 Traffic, Parking & Access

6.8.1 Car Parking

The maximum car parking control (as contained in the State Significant Precincts SEPP 2005) across the ATP precinct is 1,600 spaces in total. Whilst no additional standard or accessible car parking is provided as part of this development, the total ATP parking provision will increase from 1,564 to 1,568 with the provision of the 4 accessible spaces that are proposed under SSDA 8449. Notwithstanding this, the total car parking provision remains below the threshold set for the ATP precinct.

Furthermore, it is Mirvac's intention to allow 230 of the car spaces within the Channel 7 visitor car parking area to be used by the Commonwealth Bank of Australia, and will provide visitor parking for the Locomotive Workshop and the wider ATP precinct at the lower ground floor of Building 2. It is intended that the lower ground floor of Building 2 will be connected to the Locomotive Workshop through the provision of the travellator.

In addition, Mirvac intend to promote and encourage workers to use more sustainable travel modes to and from the ATP site, and accordingly a Green Travel Plan has been prepared by GTA Consultants (included at **Appendix P**) that details the specific measures that will be implemented.

6.8.2 Bicycle Parking

The assessment of the proposed bicycle parking is provided in SSDA 8449, and therefore it is not a matter for consideration in this SSDA. However, as the proposed staff bicycle facilities are intended for use by staff of the entire Locomotive Workshop, for completeness, GTA has included the bicycle parking assessment in its Transport Impact Report at **Appendix P**, and conclude that:

- the provision of 227 bicycle spaces within Bay 15 exceeds the total DCP requirement for employees for both SSDA 8449 and SSDA 8517 combined; and
- the provision of 46 on-street car spaces is acceptable given that the Locomotive Workshop has an extremely high level of public transport accessibility, a high proportion of trips to the site will be by employees and local residents passing through the ATP and that if the ratio² of bicycle spaces to the volume of GFA that was approved under SSD 7317 was applied, then only 13 spaces would be required.

6.8.3 Loading and Servicing Management

Whilst the City of Sydney DCP is not a matter for consideration in the assessment of SSD DAs by virtue of Clause 11 of SEPP SRD, which states that '*Development control plans...do not apply to ...State significant development*' GTA has undertaken an assessment of the proposed loading dock against the provision of Schedule 7 of the City of Sydney DCP which outlines service vehicle requirements.

Application of the DCP requirements in relation to the proposed gross floor areas within both SSDA 8449 and SSDA 8517 and likely commercial and retail uses, identify that a total of 21 loading bays should be provided. This is considered to be excessive and would effectively prevent the realistic re-use of the Locomotive Workshop, particularly given its heritage constraints.

² 1 space per 2903m² GFA based on the approval of 107,427m² GFA in total and the provision of 37 visitor spaces in the public domain.

As noted in **Section 4.10**, the proposed Loading Dock will comprise:

- one (1) loading bay for a 12.5m heavy rigid vehicle (HRV); and
 - one (1) loading bay for an 8.8m medium rigid vehicle (MRV);
- OR
- three (3) loading bays for 6.4m small rigid vehicles (SRV), which will only be accessible outside of the compactor or large loading vehicle times.

Due to the limitations of the existing building and associated heritage requirements, any vehicle larger than a 6.4m SRV is required to manoeuvre within Innovation Plaza and reverse into the loading dock. In order to prevent conflict with the expected high volume of pedestrian traffic coming from Redfern Station into the ATP precinct, a loading dock management plan will be prepared that will restrict the use of the loading dock by HRV's and MRV's to between the hours of 10pm-7am, in a similar fashion to how Pitt Street Mall is operated.

Furthermore, due to the constraints of the dock size, the number of deliveries will also be limited to a maximum of two large vehicles to be present at any given time.

The SRVs are proposed to use the same area within the loading dock as the HRVs and MRVs. However, use by SRVs will be restricted to times outside of when needed by the larger vehicles or the compactor, which is to be between the hours of 9.30am-11.30am and 2pm-4pm. All 6.4m SRVs will be able to enter and exit the loading dock in a forward direction, and undertake all manoeuvring completely within the loading dock.

In addition, smaller vans and cars will be able to continue to load from Locomotive Street due to the provision of the eight on-street loading spaces as proposed within SSDA 8449. However, in order to appropriately manage on-street loading, a number of management measures will be implemented to mitigate any potential adverse environmental impacts. These include, the adoption of a vehicle booking system and co-ordination of waste servicing/ pick-ups by Site Management.

A single waste contractor is proposed to service the site, enabling single vehicles for pickup of multiple waste types. In addition, the compactor will minimise the volume of waste, and waste collection movements. As such, the number of vehicle movements associated with waste collection are not expected to increase for the combined commercial and retail components of the Locomotive Workshop development.

6.8.4 Loading Dock Layout

GTA confirm that the loading dock will be designed to meet the relevant Australian Standards requirements and its accessibility by vehicles of a size up to and including a 12.5m HRV has been confirmed using the AutoTURN program. Swept Path analysis has confirmed that vehicles between 8.8m long and 12.5m long would need to reverse into the dock from the pedestrian plaza. Therefore in order to ensure that loading dock operations do not conflict with high pedestrian movements, the following operational restrictions will be implemented:

- vehicles 8.8m long (MRV) or longer and any compactor vehicles will only access the loading dock between 10pm and 7am; and
- all other vehicles will access the dock either between 10pm and 7am, 9.30am-11.30am and 2pm-4pm.

6.8.5 Loading Dock Access

Four (4) vehicle access route options have been evaluated by GTA (see **Appendix P**), in order to determine the most feasible approach route, with the least impacts. The preferred route, Option 2, as described in **Section 4.27.4**, includes entry via Rosehill and Margaret Streets, and exit via Cornwallis Street. Within its evaluation GTA consider that the preferred option gives rise to the following issues:

- modifications required within the road network (in particular, Margaret Street) to accommodate the design vehicles, including civil works and loss of on street parking at certain periods of the day, requiring Council and RMS approval;
- loading vehicles will be directed through a residential area; and
- trees may be impacted on Innovation Plaza; and
- Margaret Street is a low order local street and has not typically been relied upon for heavy vehicles in the past.

Notwithstanding this, on balance with the other three options considered, the preferred option is considered to impart the least volume of impacts, as it will:

- limit impacts on the nearby local road network including the loss of on-street car parking and modification to existing road geometry;
- utilise the existing trafficable roadway within the site along the northern side of Innovation Plaza;
- provide separation from the proposed Cornwallis Street shared area near the Redfern Station pedestrian access; and
- minimise pedestrian/conflict within the site i.e. as opposed to a vehicle route which approaches the loading dock from Locomotive Street.

However, 2-3 car spaces on Rosehill Street that are currently signposted as unrestricted parking will be required to be relocated to cater for the design vehicle turning. Whilst Mirvac understands that the relocation of 2-3 car spaces on Rosehill Street is a potentially sensitive issue, they are willing to assist in implementing one or more of the following strategies to offset the loss of three bays in the Rosehill Street location. These comprise:

- removal of existing kerb outstand with trees located on the western side of Rosehill Street, approximately 40m south of Marion Street;
- implementation of a car share bay within proximity to the site;
- Redesign the pedestrian path and shared use path at the northern end of Rosehill Street, to create more kerbside space to implement an additional on-street car bay; or
- Negotiate with Council to make a contribution to offset the loss of any bays by creating new bays elsewhere within the LGA boundary.

Additional consultation and stakeholder engagement may be necessary to reach an agreed outcome.

6.8.6 Traffic Generation Impacts

GTA consider that the proposal will also generate traffic associated with the loading and servicing arrangements as well as pick up and drop off demands.

Under the non-loading dock scenario, GTA considers that the proposed 8 on-street loading bays will generate 8 movements in a peak hour as no time restrictions are proposed to be imposed on these spaces. Furthermore, the two taxi spaces and 1 drop off space are expected to generate 36 movements during the AM and PM peak hours and the 4 accessible spaces are expected to generate 32 movements during the AM and PM peak hours. In addition, the waste servicing (under the existing waste servicing process) occurs three times per week between 4am-5am on Mondays, Wednesdays and Fridays)

In total it is anticipated that a total of 84 vehicle movements to the external road network will be generated (42 in/ 42out) in the peak hour. This is considered to be conservative on the high side and likely to represent the worst case traffic generation scenario. Notwithstanding this, it is considered that the additional traffic generated by the proposal is not expected to compromise the safety or function of the surrounding road networks.

6.9 Public Access

The proposed works primarily involves works to the Locomotive Workshop and only a small area of the public domain within the curtilage of the building. Furthermore, works proposed within Lot 4007 in DP1194309 are restricted to the integration of the curtilage of the Locomotive Workshop with the approved design for the Locomotive Street. Accordingly, the proposed works will not impact upon the terms of the Public Access Easement.

6.10 Waste Management

Waste Audit has prepared an Operation Waste Management Plan (WMP) to ensure that waste generated by the proposal is appropriately managed (refer to **Appendix R**). The WMP identifies the likely waste streams and estimates of the quantities likely to be generated during the operation of Bays 1-4a. **Table 15** below identifies the expected waste streams and likely quantities.

Table 15 – Retail waste generation estimates, including the supermarket

Waste Type	Volumes (litres)
General Waste	62,988
Paper/Carboard	32,306
Comingled (container recycling – glass & plastic)	11,822
Organic	6,900
Total	114,016

Source: Waste Audit

Waste Audit has recommended that the following systems be implemented to ensure that only 36m² of storage space is required:

- a 20m² compactor is provided for general waste, that is serviced twice per week and is based on a compaction ration of approximately 1:3 of 1:4, as this will then provide capacity for between approximately 60-80m³ of general waste per week and would avoid the need for bins in this stream; and
- a baler is provided for carboard, which would then generate approximately 4-5 1m³ bales per week and avoid the need for bins in this stream.

Waste Audit confirm that the proposed size of the loading dock is sufficient for the storage of bins, the other recommended waste management systems and any additional waste materials should they be generated, as well as contingencies should a collection be missed. Waste Audit also provide a number of recommendations to ensure that best practice sustainability programs are met and waste generated by the proposal is suitably managed. In order to appropriately manage and mitigate any potential adverse impacts arising from waste generation, the different components of the Operational Waste Management Plan, prepared by Waste Audit will be incorporated into the design and operational management of the proposed development.

6.11 Contamination

During the preparation of SSD 7317, Mirvac engaged JBS&G to prepare a standalone site-wide remedial action plan (RAP) for a portion of the ATP. The RAP was originally prepared to support the proposed works pursuant to SSDA 7317, however, in order to avoid the preparation of a separate RAP for the Locomotive Workshop in the future and to provide consistency with regard to the remedial approach across the ATP precinct, the RAP includes the Locomotive Workshop within its scope. The RAP is therefore included at **Appendix V**.

The objectives of the RAP are to:

- characterise and document the known extent of environmental impact within the ATP precinct via the presentation of a conceptual site model;
- identify the remedial strategies to be adopted by an assessment of remedial options and development objectives; and
- document the procedures and standards to be followed in order to remove the risks posed by contaminated soils, to make the site suitable for permissible land uses, while ensuring the protection of human health and the surrounding environment.

The scope of the investigations undertaken by JBS&G in characterising the known extent of environmental impact include:

- a review of numerous detailed historical site investigations (dating back 22 years);
- a Fill Retention Assessment on the Building 2 site that comprised the collection of soil samples across the Building 2 site to evaluate fill materials on site at the time and to assess whether Acid Sulphate Soils (ASS) or Potential Acid Sulphate Soils (PASS) properties were present at depth;
- a Locomotive Workshop Soil Vapour Assessment to assess the concentration of soil vapour contaminants, specifically volatile organic compounds (VOCs) underlying the Locomotive Workshop;
- a Human Health Assessment for the ATP site with respect to permissible uses; and

- an Ecological Risk Assessment for the ATP site.

The key findings from the above investigations (as they relate to the Locomotive Workshop) are summarised as follows:

- The risk of ASS/ PASS is low, however there is uncertainty of the potential for ASS and PASS within natural soils.
- Elevated sub-slab soil vapour concentrations have been reported to be underlying the Bays within the Locomotive Workshop. However ambient air quality results from within the building were all below the adopted assessment criteria. As such no current risk from sub-slab vapour conditions has been identified.
- Lead paint dust identified within the Locomotive Workshop requires ongoing management.

Taking the above into consideration, JBS&G consider that the proposed remedial approach for the sub-slab vapour concentrations within the Locomotive Workshop is as follows:

- undertake on-going ambient air monitoring until such time that the sub-slab to indoor air attenuation that has been observed can be explained empirically by the establishment of an adequately representative vapour intrusion model. Should monitoring identify a potential human health risk, then procedures outlined in the Contingency Plan contained within the RAP are to be applied.
- maintain the existing concrete slab capping arrangements.

It is noted however that the proposed development may potentially involve the removal of the concrete slab in some areas and excavation for piling/ footing purposes. Accordingly, JBS&G has prepared an Air Quality Management Plan (**Appendix X**) that details management practices that will be implemented to mitigate the impact of potential airborne contaminants during the construction works and the air monitoring system that will be undertaken, taking into consideration the potential contaminated materials.

Furthermore, the RAP specifies that subject to the successful implementation of the measures and the implementation of the recommendations described in the RAP, that the Site can be made suitable for the intended uses and that the risks can be managed in such a way as to be adequately protective of human health and the environment. Furthermore, Mirvac will ensure that all works to the Locomotive Workshop that involve works to the existing concrete slab will be overseen by an occupational hygienist/ environmental consultant and the representative air monitoring is undertaken to confirm that the construction works and nearby persons are not subject to adverse vapour related health risks.

6.11.1 Hazardous Materials

As noted in **Section 4.7.1**, a Hazardous Materials Survey undertaken by JBS & G (see **Appendix K**), identified a range of asbestos containing materials, lead based paint fragments and lead dusts within the Locomotive Workshop. In order to ensure that all potential impacts are mitigated during the demolition phase of construction, all hazardous materials will be removed by suitably licenced contractors in accordance with the relevant legislative requirements, codes and practice guidelines, as recommended in the Hazardous Materials Report.

Furthermore, in line with the recommendations within the Hazardous Materials Survey, areas that are currently inaccessible will be inspected and surveyed for hazardous materials as the demolition progresses. If hazardous materials are observed, confirmation of the presence or absence of hazardous materials will be confirmed through laboratory testing and advice will be sought by a suitably qualified consultant.

6.12 Noise and Vibration

Arup has prepared an Acoustic Assessment (**Appendix U**) to assess the potential noise emissions generated by the development and also the likely noise intrusion from external sources. A summary of the findings of both assessments are set out below.

6.12.1 Noise Emissions

The potential noise emissions generated by the proposed development will be from the proposed retail and any associated outdoor patron areas, loading dock operations, the Blacksmith, mechanical plant and equipment and construction activities.

In order to assess these potential impacts Arup has identified the closest sensitive noise receivers to the Site. As shown in Figure xx, they are the residential apartments located on Cornwallis Street, to the east of the Site and the commercial receivers being the Channel 7 building (C5), the NIC Building (C2) and the Data 61 building (C3). Furthermore, one long-term noise measurement was conducted from Thursday 29 June 2017 to Wednesday 5 July 2017 to determine the level of background noise at the site, the logger location on the northern side of C3 is also indicated in **Figure 78**.

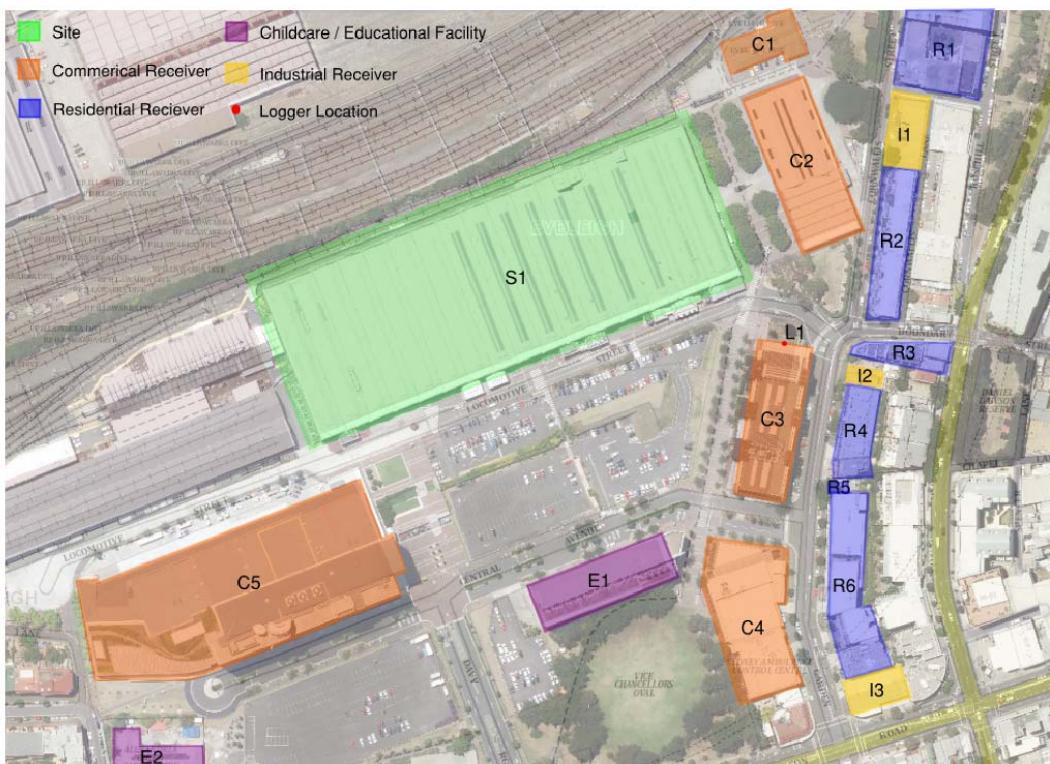


Figure 78 – Surrounding receivers and measurement locations

Source: ARUP

Operational Noise

Following a review of the NSW Industrial Noise Policy (INP), Arup has determined the adopted noise criteria for operational noise emissions generated by the development to be as follows:

Table 16 – Project noise criteria

Receiver	Time period	Existing noise levels		Project goals			
		Rating Background Levels	Industry dB LAeq	Traffic dB LAeq	Intrusive	Base Amenity	Amenity, w/mod
Residential receivers							
R1-R6	Day	46	-	60	51	60	60
	Evening	46	-	55	51	50	50
	10pm-12am	43	-	53	48	47	47
	Night	42	-	52	47	45	45
Other sensitive receivers							
	Night	42	-	52	47	45	45
C1-C5	Use hours	-	-	-	-	65	65
I1-I3	Use hours	-	-	-	-	70	70
E1-E2 (internal)	Use house	-	-	-	-	35	35

Source: Arup

The primary operational noise associated with the use of Bays 1-4a is from the building services equipment (i.e. mechanical, hydraulic and electrical equipment), such as air-conditioning and ventilation systems. Whilst some of the existing plant may be retained, most of the equipment has not been selected at this stage of the design. To ensure noise emissions from the building service equipment does not exceed the adopted noise criteria, Arup recommends that during the ongoing design of the development, all building services equipment will be selected and/ or provided with noise and vibration attenuation measures as required. However, where low noise equipment selection alone is insufficient, standard noise control methods could be adopted such as attenuators, acoustic louvres, acoustic screening around plant areas and use of sound absorptive treatments to screen plant rooms.

In addition, it is noted that a quantitative assessment has been limited to retail tenancies at the eastern end of the building. Whilst the specific tenancies and proposed uses are not known at this stage, the operation of retail uses, particularly food and beverage uses will primarily involve patron activity and potentially background music. Arup has therefore undertaken noise predictions which anticipate that the anticipated noise levels from the vocal noise as well as background music will comply with the adopted noise criteria during the day, evening and between 10pm to 12pm within receivers R2 and R3 (being the nearest residential noise receivers), however may exceed the noise criteria at night.

Accordingly, further detailed acoustic design will be required following confirmation of the intended retail spaces and a detailed review of the current building envelope should also be carried out to ensure that any opportunities to improve the sound insulation of the envelope are identified. Other potential mitigation measures could include:

- use of operable facades that be closed; and
- consideration of acoustically absorptive finishes into the fitout of new spaces.

Road Traffic Noise

Arup note that increased road traffic noise is assessed against the NSW Road Noise Policy and has assessed the traffic noise impacts of both SSDAs collectively, based on the worst-case scenario, being the provision of:

- 8 on-street loading bays to the north of Locomotive street within the public domain curtilage of the Locomotive Workshop;
- 4 accessible parking spaces located adjacent to the northern side of Locomotive street within the public domain curtilage of the Locomotive Workshop;
- 2 taxi bays and one-pick up/ drop off bay located along the southern edge of Locomotive Street; and
- a designated loading dock with five loading bays in the northern part of Bays 1 and 2 that will be shared between the commercial and retail floor areas which will be sued to transport deliveries.

Based on the expected peak traffic movements along Garden Street between Central Avenue and Locomotive Street being 469 in the morning and 355 in the afternoon, Arup consider that at worst case, the proposed developments will not result in any significant increase in traffic noise at the surrounding sensitive premises.

Furthermore, consideration has been given to the traffic noise generated by trucks accessing the loading dock. Arup consider that due to the proposition of a single waste contractor being engaged which will enable single vehicles to pick up multiple waste types, and the provision of a compactor that will minimise volume of waste, the minimum collection cycles forecast will be consistent with the current movements, being Monday, Wednesday, Friday between 4am and 5am, with nine vehicle trips. However a marginal increase in movements is expected, but this will be negligible with regard to noise impacts on surrounding development.

Construction Noise

Furthermore, with regard to the proposed construction activities, Arup has prepared a Construction Noise Management Plan (CNMP), that forms part of the Construction and Environment Management Plan (**Appendix X**). Within the CNMP, Arup has determined the project construction noise targets. Furthermore, they consider that given the works associated with the Locomotive Workshop are generally internal and will include strip out and fit-out, noise emissions and expected vibration impacts from the works are not expected to be significant. Whilst the roof upgrades will likely use larger equipment, works will be carried out bay by bay and will generally involve the replacement of only the outer roof layer with the lower skin of the roof retained which will control emissions from internal works.

Notwithstanding this, Arup recommend that a detailed Construction Noise and Vibration Report is prepared prior to the commencement of construction works.

6.12.2 Noise Intrusion

Rail noise and vibration

Arup have assessed the potential noise intrusion and vibration impacts upon the future workers within the Locomotive Workshop that will be generated by the nearby rail lines. Given the development does not include any residential, place of worship, hospital or educational establishment or child care uses, Arup confirm that it is not subject to the criteria listed in the NSW Department of Planning 'Development in Rail Corridors and Busy Roads – Interim Guideline [1]' which supplements the SEPP Infrastructure 2007.

Furthermore, Arup confirm that during the detailed design of the building, noise intrusion from external sources, such as the rail corridor will be taken into consideration, and that external vibration impacts are not expected to impact the development.

Blacksmith

Short-term noise measurements have been carried out in Bay 2 during a Blacksmithing workshop. The decision to provide additional sound insulation to separate the Blacksmith operations from the future uses will depend on the receiver occupancy type and its sensitivity to noise ingress. However, Arup consider that design targets for food and beverage uses within Bays 1 and 2 would not need to be overly onerous and may be relative to the expected noise levels, rather than the internal background noise level. Given a busy café or bar could equal or exceed the noise levels emitted from the Blacksmith, it may be acceptable to omit any physical separation.

6.13 Accessibility

Morris Goding has undertaken an assessment of the proposal against the relevant provisions of the Building Code of Australia (BCA), Australian Standard AS 1428 series, the DDA Access to Premises Standards (including the DDA Access Code) and the Commonwealth Disability Discrimination Act (DDA).

The Access Review (**Appendix Y**) provides advice and strategies to maximise the reasonable provisions of access for people with disabilities. It considers matters such as ingress and egress, paths of travel, sanitary facilities, car parking, lighting and signage.

In general, the report finds the proposed development provides accessible paths of travel that are continuous throughout and demonstrates an appropriate degree of accessibility.

Morris Goding has made a number of recommendations in its report to ensure that the development meets the relevant standards. The recommendations will be incorporated into the detailed design of the development and submitted with the construction certificate documentation. Notwithstanding this, Morris Goding confirm that the compliance with the statutory requirements pertaining to the site access, common area access, accessible parking and accessible sanitary facilities can be readily achieved.

6.14 Building Code of Australia

Philip Chun has undertaken an assessment of the proposed development's compliance with the relevant provisions of the Building Code of Australia (BCA) 2016 and in particular the fire safety provisions (**Appendix Z**).

The report confirms that all existing mechanical, electrical and wet & dry fire services will be upgraded to comply with the current provisions of the BCA 2016. Overall, Philip Chun confirm that the proposed development is capable of meeting a combination of the Deemed-to-Satisfy and Performance Requirements of the BCA.

6.14.1 Fire Engineering

Due to the heritage nature of the Locomotive Workshop, a preliminary fire engineering review of the design has been undertaken by Fire Engineering Professionals (FEP). This included a review of the Architectural Plans, prepared by Sissons and the BCA Report, prepared by Philip Chun. FEP confirm that in order to address the non-compliances with Part C, D and E of the BCA (as identified in the BCA report at **Appendix Z**) that the 'Performance Based Solutions' will need discussions between the relevant stakeholders, including Fire & Rescue NSW (FRNSW).

Accordingly, FEP have prepared a statement of intent (**Appendix AA**) to prepare a Fire Engineering Brief Questionnaire in the preferred FRNSWs format that will document the methodology and acceptance criteria proposed for the assessments to be included in the 'Performance Solution'. This document and on-going discussions with FRNSW will be undertaken during the detailed design process and the 'Performance Solution' will be confirmed within the relevant construction certificate documentation.

6.15 Services and Utilities Management

The Stormwater and Hydraulic Infrastructure Report, prepared by NDY (see **Appendix I**) and the Electrical Services Report, prepared by IGS (see **Appendix J**) confirms that reports that utilities and services can be provided to adequately service the proposed development.

6.16 Water Cycle Management

The Stormwater and Hydraulic Infrastructure Report, prepared by NDY (**Appendix I**) has assessed the impacts of the proposed development and note that no amendments are being made to the existing stormwater downpipe or drainage infrastructure in Bays 1-4a as part of this proposal. As such, NDY confirm that the existing water management system should not be affected due to the unaltered building and roof footprint.

6.17 Railway Infrastructure

Arcadis has prepared a statement (**Appendix W**) that assesses the potential impact of the proposed works upon the existing rail infrastructure located to the west and north of the Locomotive Workshop. Given the new mezzanine structures are to be made of composite steel and concrete founded on piles down to the existing rock level, and that the foundations will be situated approximately 6m from the edge of the building, Arcadis confirm that the foundations will be placed outside of the zone of influence of the rail corridor.

6.17.1 Intercity Fleet Eveleigh Facility

The NSW Government is delivering a New Intercity Fleet to replace the trains carrying customers from Sydney to the Central Coast, Newcastle, the Blue Mountains and the South Coast. As part of this, Transport for NSW are intending to make the following modifications to the existing maintenance and stabling facilities at Eveleigh to accommodate the new trains. Furthermore, according to the New Intercity Fleet Facilities Community Notification, dated November 2017, the proposed works are to be carried out within the rail corridor.

Accordingly, as confirmed by Arcadis (**Appendix W**), the proposed works will not impact upon the zone of influence of the rail corridor and therefore, the proposal will not impact upon the New Intercity Fleet Eveleigh Facility Project.

6.18 Construction Management

A Construction Environmental Management Plan (CEMP) has been prepared by Mirvac Construction and is included at **Appendix X**. The CEMP clearly defines the proposed hours of work and the contact details of the Senior Site Manager as well as the procedures that will be implemented in order to manage construction activities such as:

- traffic management;
- noise and vibration impacts;
- waste management;
- erosion and sediment control;
- air quality;
- hazardous materials;
- work place risk; and
- site management;

In order to ensure mitigate against any adverse impacts during the construction phase of the development, the management measures provided in the CEMP and its supplementary documents will be implemented.

Furthermore, a detailed final CEMP that will include a careful heritage demolition program will be prepared and submitted to the Principal Certifying Authority prior to the issue of the relevant Construction Certificate.

6.19 Ecologically Sustainable Development

The principles of ecologically sustainable development are set out in section 6(2) of the *Protection of the Environment Administration Act 1991* (NSW). The principles of ESD include intergenerational equity, the precautionary principle, conservation of biological diversity and ecological integrity and improved valuation, pricing and incentive mechanisms. The principles of ESD have informed the design, construction and proposed operation of the proposal.

It is appropriate for decisions made under the EP&A Act to have regard to the objects of the Act, as set out in Section 5 of the Act, including ESD.

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle – namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
 - (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - (ii) *an assessment of the risk-weighted consequences of various options,*
- (b) *inter-generational equity – namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*
- (c) *conservation of biological diversity and ecological integrity – namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) *improved valuation, pricing and incentive mechanisms – namely, that environmental factors should be included in the valuation of assets and services, such as:*
 - (i) *polluter pays – that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
 - (ii) *the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
 - (iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

Importantly, the Locomotive Workshop development is consistent with the principles of ESD as it meets the needs of the present without compromising the ability of future generations to meet their own needs. ESD design measures have been integrated into the design of the proposed refurbishment as detailed in the ESD Report, prepared by NDY (**Appendix S**) and will be developed during the detailed design phases to target the following:

- 5 Star Green Star ‘Design & As Built’ v1.1 rating;
- 5 Star NABERS Office Energy (Base Building) rating;
- 4 Star NABERS Water (Whole Building) rating; and
- NCC Section J Compliance.

Having regard to the ESD principles, we have made the following conclusions:

- The proposal has social, environmental and economic benefits for Sydney as a whole as it reuses a State significant heritage listed building and provides the opportunity to revitalise and prolongs its life.

- The environmental impacts of the proposed works can be appropriately managed and mitigated, as discussed elsewhere.
- The potential physical, visual and change of use impacts of the proposal of the on the heritage fabric and its significance have been thoroughly assessed and considered to be acceptable.
- The Site does not contain any threatened or vulnerable species, populations, communities or significant habitats.
- No climate change risks are identified because of the proposal.
- The proposed development represents a sustainable use of the site.
- The proposal does not impact upon biological diversity or ecological integrity.

6.20 Development Contributions

Development contributions in the Redfern Waterloo area may be levied under the following two plans.

6.20.1 Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006

The Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006 authorises the Minister for Planning to impose a condition on any approval granted to development to which the plan applies (such as the development the subject of this SSDA) requiring the payment of an affordable housing contribution.

Mirvac recognises the important and social aims of this contributions plan, however we note that the under the terms of the planning controls introduced under the *Redfern-Waterloo Built Environment Plan (Stage One)*, (that were subsequently incorporated into the SSP SEPP), it was envisaged that these planning controls would facilitate the delivery of up 600,000m² of additional floorspace, that would revitalise the Redfern-Waterloo area. However, it was also recognised that the additional development would also put upward pressure on property values and the affordability of housing in the area for the very low, low and moderate income groups. Accordingly, the contributions plan requires the payment of a levy of 1.25% of total floorspace within the Operational Area (being the 600,000m²).

Given the proposed development does not provide any additional GFA, and in fact 1,373m² less GFA is being provided within this development than exists in its current form in the relevant bays, it is considered that no payment is necessary.

6.20.2 Redfern-Waterloo Contributions Plan 2006

The Redfern-Waterloo Authority Contributions Plan 2006 authorises the Minister for Planning to impose a condition on any approval granted to development to which the plan applies (such as the development the subject of this SSDA) requiring the payment of a development levy.

The contribution rate/levy under the Plan is 2% of the cost of carrying out the development. Accordingly, based on a construction cost of \$46,130,000 (as confirmed in the Quantity Surveyors Report at **Appendix F**), a development contribution in the order of \$922,600 will be payable.

6.21 Site Suitability

Having regard to the characteristics of the site and its location, the proposal is considered suitable for the site as it will:

- revitalise and activate an under-utilised State significant heritage building to provide a unique retail and food and drink based hub to support the world class working environments within the newly developed and enlivened ATP precinct;
- is capable of being developed in a manner that will minimise impacts to the historical, natural, artificial and environmental qualities of the Site;
- will result in only minor environmental impacts that can be appropriately managed, off-set and mitigated; and
- will facilitate the renewal of this important heritage building and celebrate its rich history.

The Site is considered suitable for the proposed development in that:

- the location of the Locomotive Workshop as part of the ATP precinct, centres it at the heart of the Central to Eveleigh Urban Transformation corridor, that is earmarked for urban renewal and growth;
- the Locomotive Workshop is currently out-dated and under-utilised and does not celebrate its rich historic fabric and importance;
- it is well served by frequent existing and planned public transport; and
- is capable of being appropriately serviced.

6.22 Public Interest

The proposed development is in the public interest as it will:

- facilitate the delivery of unique retail/ food and drink based-hub within the Locomotive Workshop, that will drive the integration of the ATP precinct with the wider community and meet the anticipated demand for such facilities by the new worker population and surrounding local community;
- drive the public activation of the Locomotive Workshop and appreciation of the importance of the in-situ and moveable heritage collection; and
- demonstrate excellence in design and environmental sustainability within a State heritage setting.

7.0 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for the proposed development within Bays 1-4a of the Locomotive Workshop has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools.

In accordance with the SEARs, the ERA addresses the following significant risk issues:

- the adequacy of baseline data;
- the potential cumulative impacts arising from other developments in the vicinity of the Site; and
- measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Figure 79 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

- the receiving environment;
- the level of understanding of the type and extent of impacts; and
- the likely community response to the environmental consequence of the project;

The manageability of environmental impact is assigned a value between 1 and 5 based on:

- the complexity of mitigation measures;
- the known level of performance of the safeguards proposed; and
- the opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 79 – Risk Assessment Matrix

Table 17 - Assigned values and significance of environmental impacts

Key: C = Construction, O = Operation

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
				Significance of Impact	Manageability of Impact	Residual Impact
Heritage	C + O	<ul style="list-style-type: none"> Impacts on the Locomotive Workshops building fabric, as well as the movable heritage artefacts currently located within the building. 	<ul style="list-style-type: none"> Further detailed documentation, prepared in consultation with the City of Sydney and the NSW Heritage Division will supplement the concepts proposed within the SSDA. Implementation of recommendations as set out in the Heritage and Archaeological Impact Statement (Appendix M) to appropriately manage all potential impacts. 	3	3	6 Medium
Archaeology	C	<ul style="list-style-type: none"> Potential impacts to archaeological items of significance 	<ul style="list-style-type: none"> There is nil-low potential that the proposed works will have any impact on Aboriginal objects or historical archaeological deposits. Should an unexpected archaeological resource be found, then works would cease in the immediate area, and archaeological advice/relevant regulatory authorities' advice sought. 	1	1	2 Low
Operational Waste Management	O	<ul style="list-style-type: none"> Generation of waste 	<ul style="list-style-type: none"> Bins, storage locations and collection to be in accordance with the waste management processes outlined within the Operational Plan of Management (Appendix Q) or Operational Waste Management Plan (Appendix R). 	1	1	2 Low

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
Contamination	C + O	<ul style="list-style-type: none"> • Exposure to contamination or hazardous materials during construction and operation 	<ul style="list-style-type: none"> • Remediation to be undertaken in accordance with the Remedial Action Plan prepared by JBS&G, 15 June 2015 (Appendix V). • All works that involve works to the existing concrete slab will be overseen by an occupational hygienist/ environmental consultant. • Implementation of mitigation measures proposed in the Air Quality Management Plan (Appendix X). 	2	1	3 Low
Noise and Vibration	C + O	<ul style="list-style-type: none"> • Increase in noise levels during construction activities • Adverse noise impacts generated by the development on surrounding receivers 	<p>Construction:</p> <ul style="list-style-type: none"> • Works to the roof are to be carried out one Bay at a time, to minimise cumulative noise emissions. • Large openings in the building fabric should be sealed for the control of noise emission, where they are not utilised for site access. • Implementation of mitigation measures in the Acoustic Assessment (Appendix U). • Implementation of mitigation measures in the Preliminary Construction Environmental Management Plan (Appendix X). • Preparation of the further detailed construction Noise and Vibration Management Plan, prior to construction certificate. <p>Operational:</p> <ul style="list-style-type: none"> • Commercial uses are considered less intensive than the existing use as a function hall, and as such the proposal will not adversely affect neighbouring receivers. • Operational noise would be limited to mechanical equipment which will utilise existing servicing, with any required additional servicing likely to be located on the roof, subject to detailed design. 	2	1	3 Low

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
			<p>Plant:</p> <ul style="list-style-type: none"> • Acoustic assessment of mechanical services equipment should be undertaken during –the detail design phase of the development to ensure that the cumulative noise of all equipment does not exceed the applicable noise criteria. Development consent conditions typically require detailed assessment of mechanical plant and equipment prior to construction. • Noise control treatment can affect the operation of the mechanical services system. An –acoustic engineer should be consulted during the initial design phase of mechanical services system to reduce potential redesign of the mechanical system. 			
Construction Water Cycle Management	C	<ul style="list-style-type: none"> • Contamination of surface water runoff • Interception of groundwater through earthworks • Generation of wastewater and potential impacts of hazardous materials 	<ul style="list-style-type: none"> • Implementation of mitigation measures in the Water and Wastewater Management Plan (Appendix X) 	2	2	4 Low/Medium
Fire Engineering	O	<ul style="list-style-type: none"> • Compliance with fire safety BCA requirements 	<ul style="list-style-type: none"> • Implementation of 'performance based solutions' and on-going consultation with FRNSW, prior to construction certificate. 	1	1	2 Low

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
Environmental and Construction Management	C	<ul style="list-style-type: none"> • Noise, dust, air quality and traffic impacts • Impacts to heritage during removal, demolition and construction 	<ul style="list-style-type: none"> • Works are to be carried out in accordance with the Preliminary Construction Environmental Management Plan, which details mitigation measures to manage environmental impacts (Appendix X) • Works are to be carried out in accordance with the Heritage and Archaeological Impact Statement, which details mitigation measures to manage heritage impacts (Appendix K) 	3	2	5 Low/Medium

8.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 18** below. These measures have been derived from the previous assessment in **Section 5.0** and those detailed in appended consultants' reports.

Table 18 – Mitigation Measures

Mitigation Measures
Heritage Impacts <ul style="list-style-type: none">All works will be undertaken in accordance with the recommendations and proposed strategies outlined within the Heritage and Archaeological Impact Statement.A Stage 2 Heritage Interpretation Strategy for the Locomotive Workshop will be prepared in consultation with NSW Heritage Division and the City of Sydney to provide guidance on the curation of the moveable heritage items.Should any unexpected archaeological artefacts be found, then works will cease in the immediate area and arachnological advice sought.
Accessibility <ul style="list-style-type: none">In order to ensure equal access is provided throughout the proposed development, the detailed design of the proposal will need to ensure compliance with the relevant accessibility provisions of the BCA 2015 and other applicable legislation.
Construction Noise and Vibration <ul style="list-style-type: none">Implementation of mitigation measures in the Acoustic Assessment (Appendix U).Implementation of mitigation measures in the Preliminary Construction Environmental Management Plan (Appendix X).Preparation of a detailed construction Noise and Vibration Management Plan, prior to construction certificate.
Operational Noise <ul style="list-style-type: none">Acoustic assessment of mechanical services equipment will be undertaken during the detail design phase of the development to ensure that noise of all equipment does not exceed the applicable noise criteria. Development consent conditions typically require detailed assessment of mechanical plant and equipment prior to construction.
Operational Waste Management <ul style="list-style-type: none">Comply with the waste management processes outlined within the Operational Plan of Management (Appendix Q) or Operational Waste Management Plan (Appendix R).
Contamination <ul style="list-style-type: none">Implement the measures and the recommendations as described in the RAP relevant to the Locomotive Workshop.
BCA <ul style="list-style-type: none">The detailed design of the development must ensure that it complies with the current provisions of the BCA 2016 or appropriate alternative solutions should be developed and verified by a qualified BCA Consultant or Fire Safety Engineer.

Mitigation Measures

Environmental and Construction Management

- Works are to be carried out in accordance with the Preliminary Construction Environmental Management Plan, which details mitigation measures to manage environmental impacts (**Appendix X**)
 - Works are to be carried out in accordance with the Heritage and Archaeological Impact Statement, which details mitigation measures to manage heritage impacts (**Appendix M**)
-

9.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed redevelopment of the Locomotive Workshop. The EIS has addressed the issues outlined in the Director-General's Requirements (**Appendix A**) and accords with Schedule 2 of the EP&A Regulation with regards to consideration of relevant environmental planning instruments, built form, social and environmental impacts including heritage, traffic, noise, and construction impacts.

Having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- There is a strategic need to renew and revitalise this State significant heritage building to repurpose the eastern portion of the Locomotive Workshop as a hub for heritage cultural tourism.
- The proposal will facilitate the delivery of a world-class working, social and heritage experience.
- The proposal displays design excellence, a high quality architectural form and does not give rise to any adverse visual impacts.
- The proposal is permissible with consent and meets the objectives of all relevant planning controls for the site.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the *Environmental Planning and Assessment Regulation 2000*.
- The proposed development can be adequately serviced.
- The proposal will not result in unreasonable or unmanageable environmental impacts.
- The proposal will support the strategic objectives for Sydney and will result in positive economic impacts on the surrounding locality and on the wider region.
- The proposal will support the provision of more than 250 jobs, located within a highly accessible location.

Given the merits described above, and that the proposal responds to a strategic need in a sensitive manner, revitalises and prolongs the life of the Locomotive Workshop, and provides a unique working environment, it is requested that the application be approved.