

ETHOS URBAN

State Significant Development

Application SSDA 8449

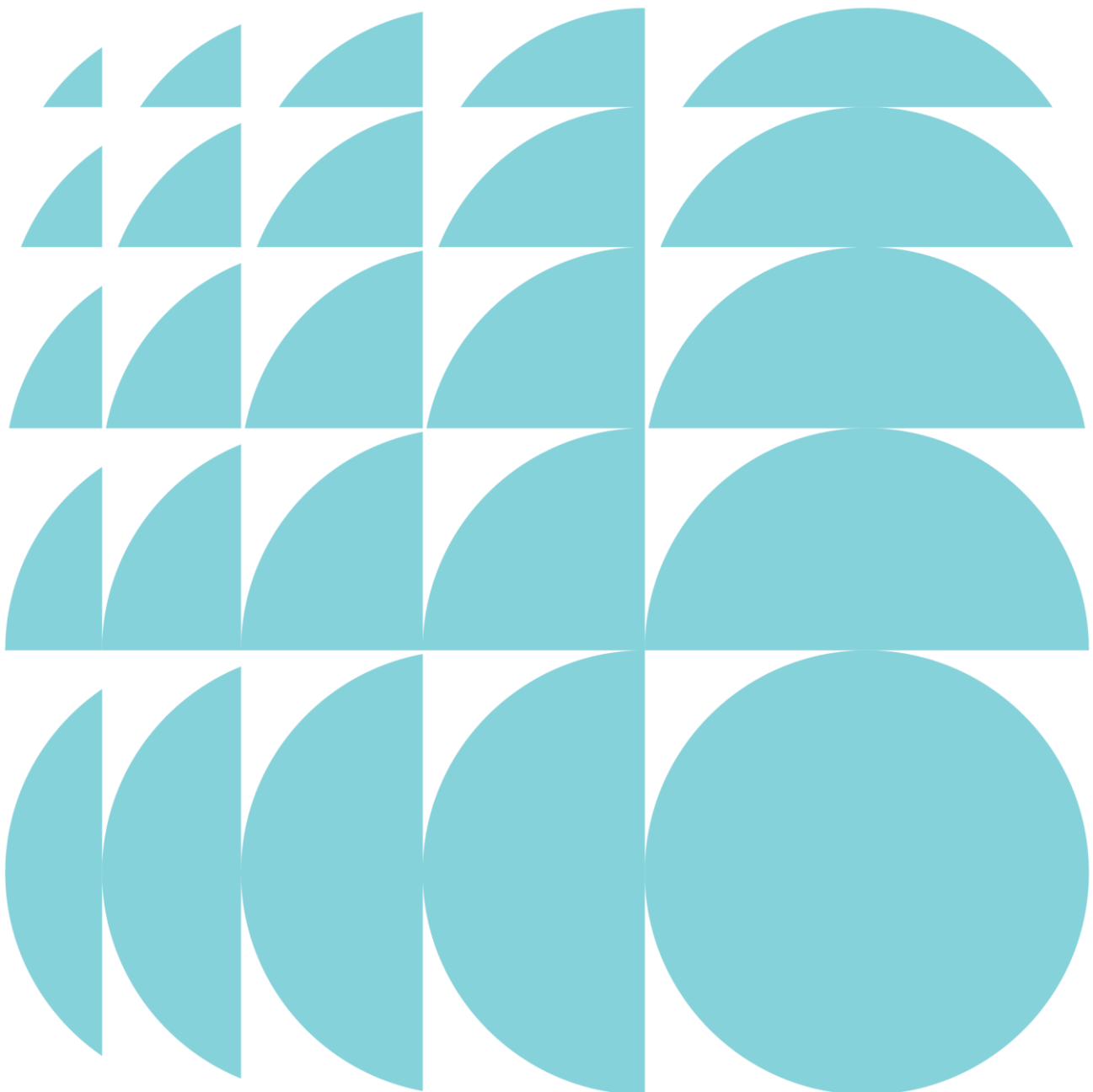
Environmental Impact Statement

2 Locomotive Street, Eveleigh, NSW, 2015
Bays 5-15, Locomotive Workshop, Australian
Technology Park, Eveleigh

Submitted to Department of Planning and
Environment

On behalf of Mirvac Projects Pty Ltd

13 November 2017 | 17068



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VERSION NO.	DATE OF ISSUE	REVISION BY	APPROVED BY
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2	9/11/17	Prugya Maini	Claire Burdett
3. FINAL	13/11/17	Prugya Maini	Claire Burdett

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Morris Goding
- Y** BCA Statement
Philip Chun
- Z** 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 5-15, Locomotive Workshop, Australian Technology Park, Eveleigh
Proposed development	Adaptive reuse and redevelopment of the western 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 SSD8449
Certification	
	<p>I certify that I have prepared the content of this EIS and to the best of my knowledge:</p> <p>it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;</p> <p>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.</p>
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 western portion of the Locomotive Workshop (being Bays 5-13 and Bay 15) within the Australian Technology Park (ATP), Eveleigh.

Redfern-Waterloo is identified as a State Significant Development (SSD) '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 \$88,620,000, and is in excess of \$10 million (ex. GST), the proposal is declared to be SSD.

On 11 May 2017 a request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought by Mirvac, and the SEARs were issued on 8 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 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 5-15 extend over approximately 17,340m² and the proposed development includes public domain works and the provision of on-street car parking and loading/ servicing on 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 (Mircvac) was named as the successful party and ownership and development rights of the precinct were subsequently transferred.

In December 2015, an SSDA (SSD 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 western 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 5-13, Bay 15 and two annex structures;
- adaptive re-use of Bays 5-13, Bay 15 and two annex structures for commercial premises uses and light industrial floorspace;
- construction of internal and external alterations to Bays 5-13, Bay15 and to the two annex structures and roof;
- a maximum of 27,237m² GFA for commercial premises uses within Bays 5-15 and the two annex structures, that may include up to a maximum of 156m² for retail premises uses and a maximum of 1,206m² GFA for light industrial uses;
- on-street car parking and loading and servicing bays;
- heritage interpretation and conservation works;
- public domain improvements within the curtilage of Bays 5-15;
- provision of an external building illumination system;
- signage; and
- associated utilities and infrastructure.

1.5 Planning Context

Section 6.0 of this 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 western portion of the Locomotive Workshop building (being Bays 5-15 and two annex structures), to provide a maximum gross floor area of 27,237 m² for commercial premises uses that may include up to a maximum of 156m² for retail premises uses, and up to a maximum of 1,206 m² for light 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 State Significant Development (SSD) application, for the adaptive reuse and redevelopment of the western portion of the Locomotive Workshop (being Bays 5-15) 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 \$88,620,000 (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 (Mircvac), 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 development consent for the following:

- demolition of existing 'modern' infill fit-out elements to Bays 5-13, Bay 15 and two annex structures;
- adaptive re-use of Bays 5-13, Bay 15 and two annex structures for commercial premises uses and light industrial floorspace;
- construction of internal and external alterations to Bays 5-13, Bay15 and to the two annex structures and roof;
- a maximum of 27,237m² GFA for commercial premises uses within Bays 5-15 and the two annex structures, that may include up to a maximum of 156m² for retail premises uses and a maximum of 1,206m² GFA for light industrial uses;
- on-street car parking and loading and servicing bays;
- heritage interpretation and conservation works;
- public domain improvements within the curtilage of Bays 5-15;
- 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 Workshops consist 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 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 are 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.

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**.

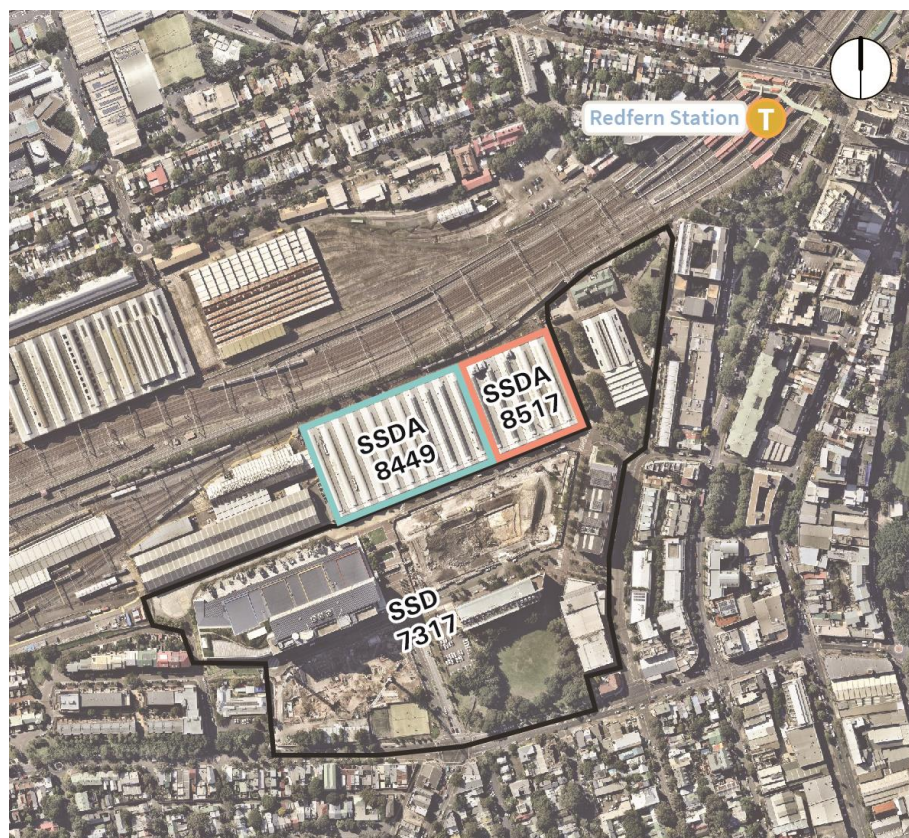


Figure 1 – ATP State Significant Development Applications

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.

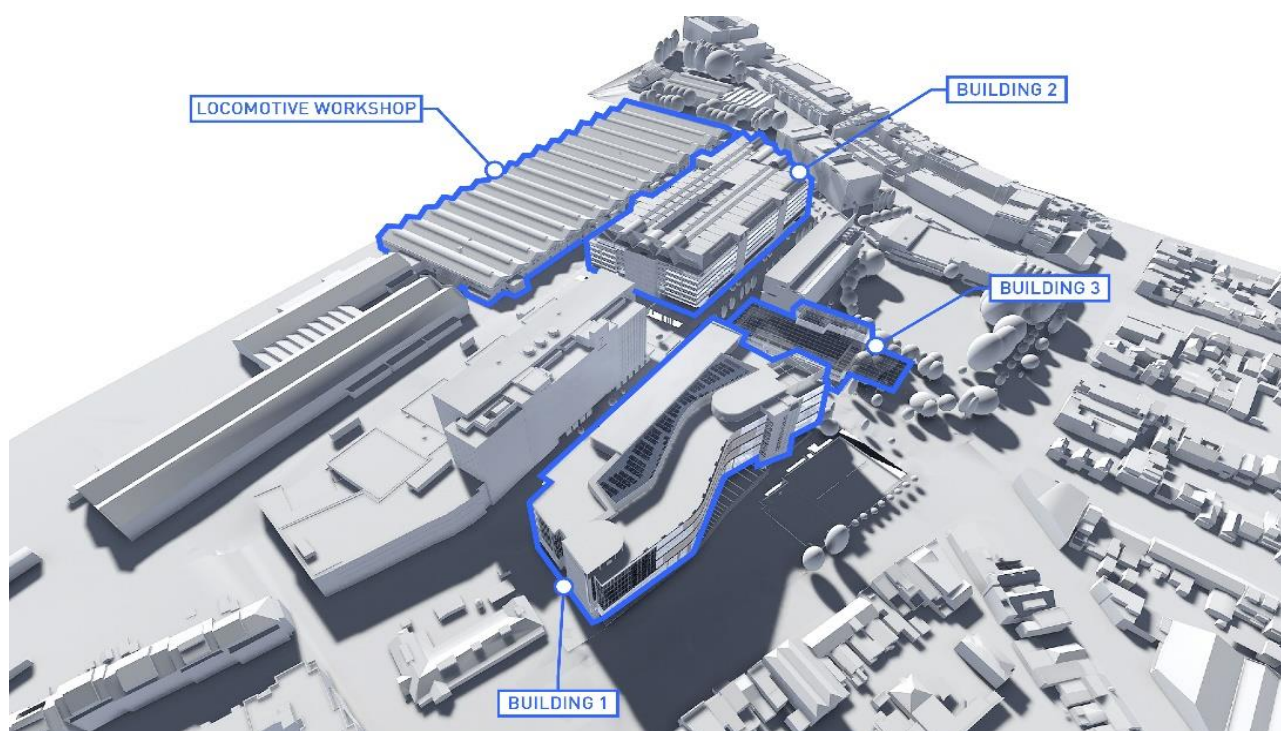


Figure 2 – Locational context of the ATP Buildings 1,2 & 3

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 8449 (SSDA 8449)

This SSD Application relates to the western portion of the Locomotive Workshop being Bays 5-15. On 11 May 2017 a request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was issued by Mirvac and the SEARs were issued on 8 June 2017.

2.3.4 State Significant Development Application 8517 (SSDA 8517)

SSDA 8517 relates to the eastern portion of the Locomotive Workshop being Bays 1-4a. SSDA 8517 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, 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 Bays 5-15 has been based on the following concept:

"The Locomotive Workshops, which once represented the cutting-edge technology of their day, are to be reimagined as a hub for contemporary technology and innovation, whilst sensitively responding to the heritage elements which give the existing building its unique character."

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 these 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.

The proposed development is 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 mix of commercial tenancies to support and nurture a new innovative, creative and entrepreneurial based working community. It also represents Mirvac's vision for the Locomotive Workshop to be the jewel in the crown for ATP, that celebrates and enhances the heritage significance of the ATP site.

2.6.2 Alternative Options

Three options are available to Mirvac in responding to the need to revitalise and adaptively re-use Bays 5-15 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 Workshop or surrounding public realm.

This option undermines the strategic importance of the Site within Central to Eveleigh Global Sydney Precinct. Further, the building will stagnate and not align with the wider vision and objectives identified for ATP, in *A Plan for Growing Sydney*, and the *draft Eastern City District Plan* that pursues that ATP be a world class technology and innovation hub.

The 'do nothing' option fails to capture the significant opportunity to increase employment opportunities within the Locomotive Workshop and provide specific spaces to promote and support start-up and incubation businesses. If nothing is changed within the Building, overtime it will become further outdated, and cease to positively contribute to the ATP precinct. 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 5-15 being undertaken in an alternative manner than proposed as part of this SSDA. As noted in the Architectural Design Statement (**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 commercial fit outs.

Due to Mirvac's vision to significantly improve upon the current situation and integrate the Locomotive Workshop with the high quality and world-class buildings being constructed within the remainder of the ATP precinct, the option of making minor improvements to the existing fit-out was discounted. Sissons also explains in detail in its Architectural Design Statement (**Appendix C**) the reasons why the alternative layout options were discounted and why the proposed design was chosen.

Option 3: The Proposal

Option 3 involves the redevelopment and adaptive reuse of Bays 5-15 as proposed within this SSDA (described in **Section 4.0**). The proposal will ensure that the Locomotive Workshop will be repurposed in a sensitive manner that responds to a strategic need, revitalises and prolongs its life and provides a unique working environment.

The proposed design for Bays 5-15 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 8 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 – Section 6.0
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
Qualified Quantity Surveyors Report 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 D
Certification that the information provided is accurate at the date of preparation.	Page i

Requirement	Location in Environmental Assessment	
Key Issues	EIS Section	Technical Study
Statutory and Strategic Context		
<ul style="list-style-type: none">Environmental Planning and Assessment Act 1979	Section 6.1	
<ul style="list-style-type: none">State Environmental Planning Policy (State and Regional Development) 2011	Section 6.3.1	
<ul style="list-style-type: none">State Environmental Planning Policy (State Significant Precincts) 2005	Section 6.3.2	
<ul style="list-style-type: none">State Environmental Planning Policy No. 64 – Advertising and Signage	Section 6.3.4	
<ul style="list-style-type: none">State Environmental Planning Policy No. 55 – Remediation of Land.	Sections 6.3.3 and 6.10	Remedial Action Plan – Appendix T
<ul style="list-style-type: none">A Plan for Growing Sydney	Section 6.2	
<ul style="list-style-type: none">Draft Central District Plan	Section 6.2	
<ul style="list-style-type: none">Sustainable Sydney 2030	Section 6.2	Landscape Design Report – Appendix M
<ul style="list-style-type: none">City of Sydney Public Domain Manual	Section 6.2	Landscape Design Report – Appendix M
<ul style="list-style-type: none">Development Near Rail Corridors and Busy Roads - Interim Guideline	Section 6.2	Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix N
<ul style="list-style-type: none">Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics		Heritage and Archaeological Impact Statement - Appendix K
<ul style="list-style-type: none">Conservation Management Plan for the Locomotive Workshop building	Section 16.2	Heritage and Archaeological Impact Statement - Appendix K
<ul style="list-style-type: none">Heritage Council Guideline on Heritage Curtilages 1996		Heritage and Archaeological Impact Statement - Appendix K
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 6.6.1	Heritage and Archaeological Impact Statement - Appendix K
<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, C and K

Requirement	Location in	Environmental Assessment
<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 4.23	Landscape Design Report – Appendix M
<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 3.5.2 and Section 6.8	
<ul style="list-style-type: none"> demonstrate how the proposal relates to the future plans for Bays 1- 5 (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 B , and Heritage and Archaeological Impact Statement – Appendix K
<ul style="list-style-type: none"> demonstrate the relationship to Bay 14 (previously known as Bay 15) and how it can be incorporated in the future. 	Section 6.5 and Section 6.6	Architectural Design Report – Appendix B , and Heritage and Archaeological Impact Statement – Appendix K

Heritage & Archaeological Assessment

<p>HIS shall be prepared in accordance with the NSW Heritage Office publication <i>Statement of Heritage Impact</i>, 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 1-5 (as existing numbering) 	Section 6.6	Heritage and Archaeological Impact Statement – Appendix K
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Requirement	Location in	Environmental Assessment
<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 K
Traffic & Parking		
<p>Traffic and Transport Impact Assessment that:</p> <ul style="list-style-type: none"> 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 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 type and the likely arrival and departure times). 	Section 6.7	Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix N

Requirement	Location in Environmental Assessment
Noise (construction and operational)	
<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 6.11</p> <p>Acoustic Assessment – Appendix S</p>
Hazardous Materials	
<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 6.10.1</p> <p>Hazardous Materials Assessment – Appendix I</p>
Ecologically Sustainable Development (ESD)	
<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 0</p> <p>Ecological Sustainable Development Report – Appendix Q</p>
Utilities & Railway Infrastructure	
<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 6.14</p> <p>Electrical Services Report – Appendix H</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 	Sections 4.28 and 6.15	Stormwater & Hydraulic Infrastructure Services Report – Appendix G
<ul style="list-style-type: none"> address any potential impacts on existing Sydney Train infrastructure, in particular the Illawarra Line Tunnels. 	Section 6.16	Rail Corridor Impact Statement – Appendix U
Contributions		
The EIS shall address the contributions payable pursuant to the <i>Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006</i> and the <i>Redfern-Waterloo Authority Contributions Plan 2006</i> .	Section 6.20	
Plans and Documents		
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.		EIS and all Appendices
In addition, the EIS must include the following: <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 Design Report – Appendix C
<ul style="list-style-type: none"> structural engineer's report 		Structural Design Report – Appendix J
<ul style="list-style-type: none"> green travel plan 		Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix N
<ul style="list-style-type: none"> public domain and landscaping plans 		Landscape Design Report – Appendix M
<ul style="list-style-type: none"> architectural design statement 		Architectural Design Report – Appendix C

Requirement		Location in Environmental Assessment
<ul style="list-style-type: none"> ESD statement (incorporating a sustainability framework) 		Ecological Sustainable Development Report – Appendix Q
<ul style="list-style-type: none"> heritage impact assessment (including archaeological assessment) 		Heritage and Archaeological Impact Statement – Appendix K
<ul style="list-style-type: none"> access impact statement 		Access Review – Appendix W
<ul style="list-style-type: none"> transport, traffic and parking assessment 		Transport Impact Assessment, Green Travel Plan & Construction Transport Impacts Assessment – Appendix N
<ul style="list-style-type: none"> services and utilities infrastructure report 		Electrical Services Report – Appendix H Stormwater & Hydraulic Infrastructure Services Report – Appendix G
<ul style="list-style-type: none"> BCA statement 		BCA Statement – Appendix Y
<ul style="list-style-type: none"> schedule of materials and finishes 		Architectural Design Report – Appendix C
<ul style="list-style-type: none"> operational plan of management 		Operational Plan of Management – Appendix O
<ul style="list-style-type: none"> noise impact assessment 		Acoustic Assessment – Appendix S
<ul style="list-style-type: none"> preliminary construction management statement 		Preliminary Construction Environmental Management Plan – Appendix V

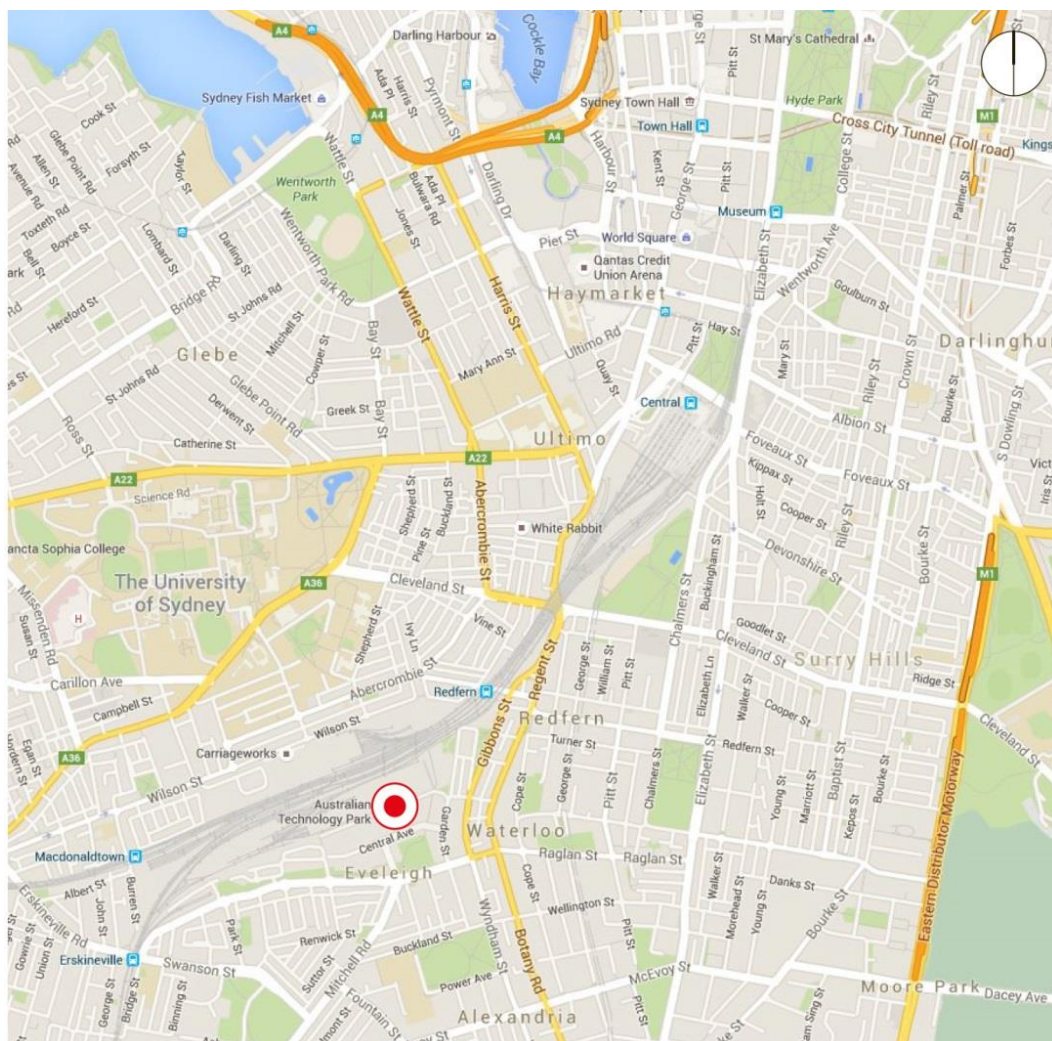
Requirement	Location in Environmental Assessment
<p>Consultation</p> <p>During the preparation of the EIS, you are required to consult with the relevant local, State or Commonwealth Government authorities, service providers, and the local community. In particular, you must consult with:</p> <ul style="list-style-type: none"> - City of Sydney Council - Roads and Maritime Services - Transport for NSW - Sydney Water - Urban Growth NSW Development Corporation - Local Aboriginal and Community Groups <p>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.</p>	<p>Section 5.0</p> <p>Stakeholder and Community Engagement/Consultation Report – Appendix R</p>

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 5-15 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 included at **Appendix E**.

The Site, the subject of this SSDA comprises Bays 5-15 of the Locomotive Workshop Building 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 5**.

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.

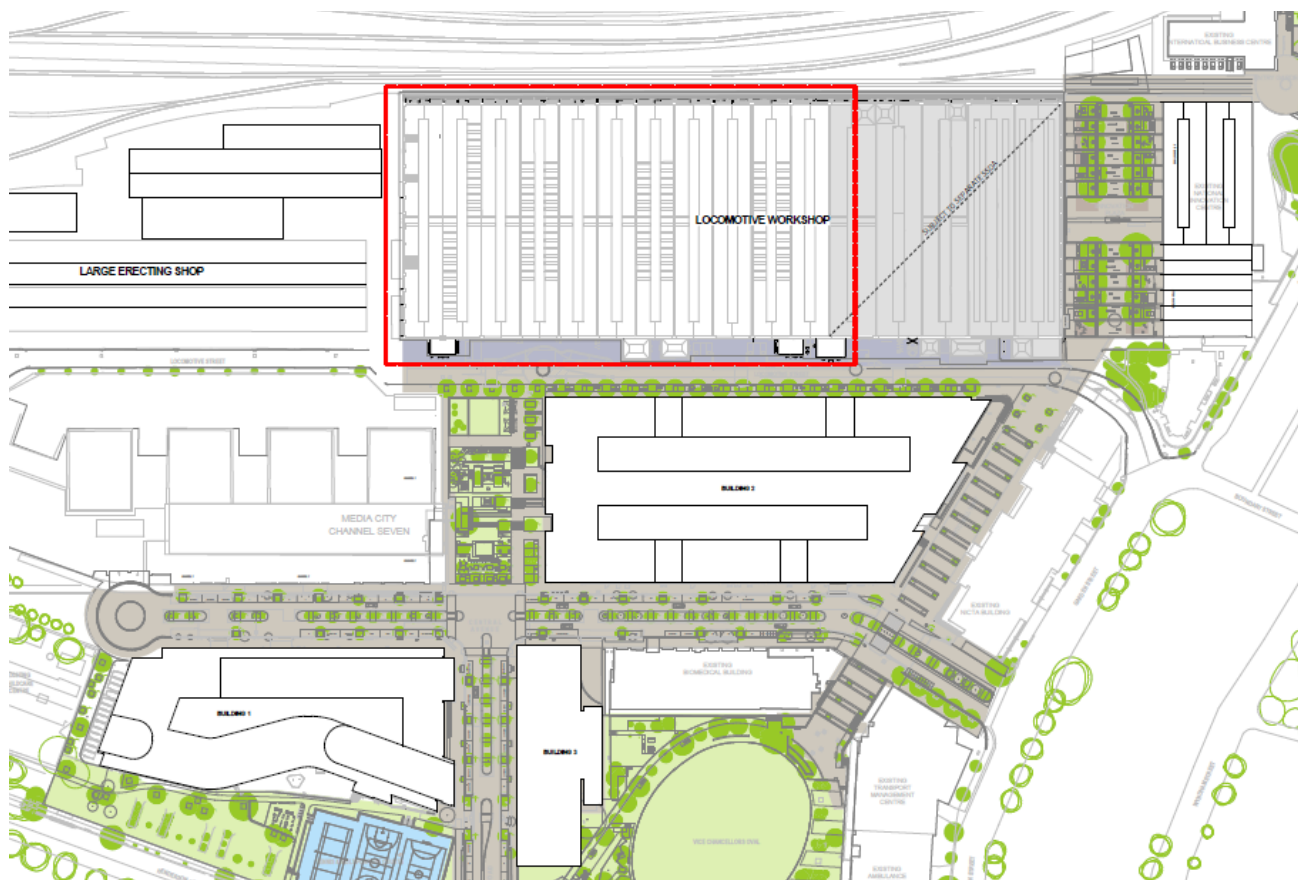


Figure 5 – Site Plan

Source: Sissons

3.3 Existing Development

The Locomotive Workshop Building is a large brick building, with a sheet metal roof, that is divided into 16 equally sized '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 5-15 comprise a footprint area of 17,340m², and currently incorporates the following:

- commercial office accommodation within Bays 5-8 and 14-15;
- a café within Bay 7;
- an Exhibition Hall within Bays 9-13; and
- circulation and entertaining space within Bay 7 and within the central spine between Bays 5-8 and 14-15.

The Locomotive Workshop Building also incorporates a number of annexes along the southern side of the Building, these contain:

- pump and plant between Bays 4a & 5;
- substations 1 and 2 between Bays 5 & 6 and 14 & 15; and
- offices (containing security offices) between Bays 8 & 9 and Bays 9 & 10.

Photographs of the external appearance of the Locomotive Workshop Building and the interiors within Bays 5-15 are included at **Figure 7** to **Figure 32**.

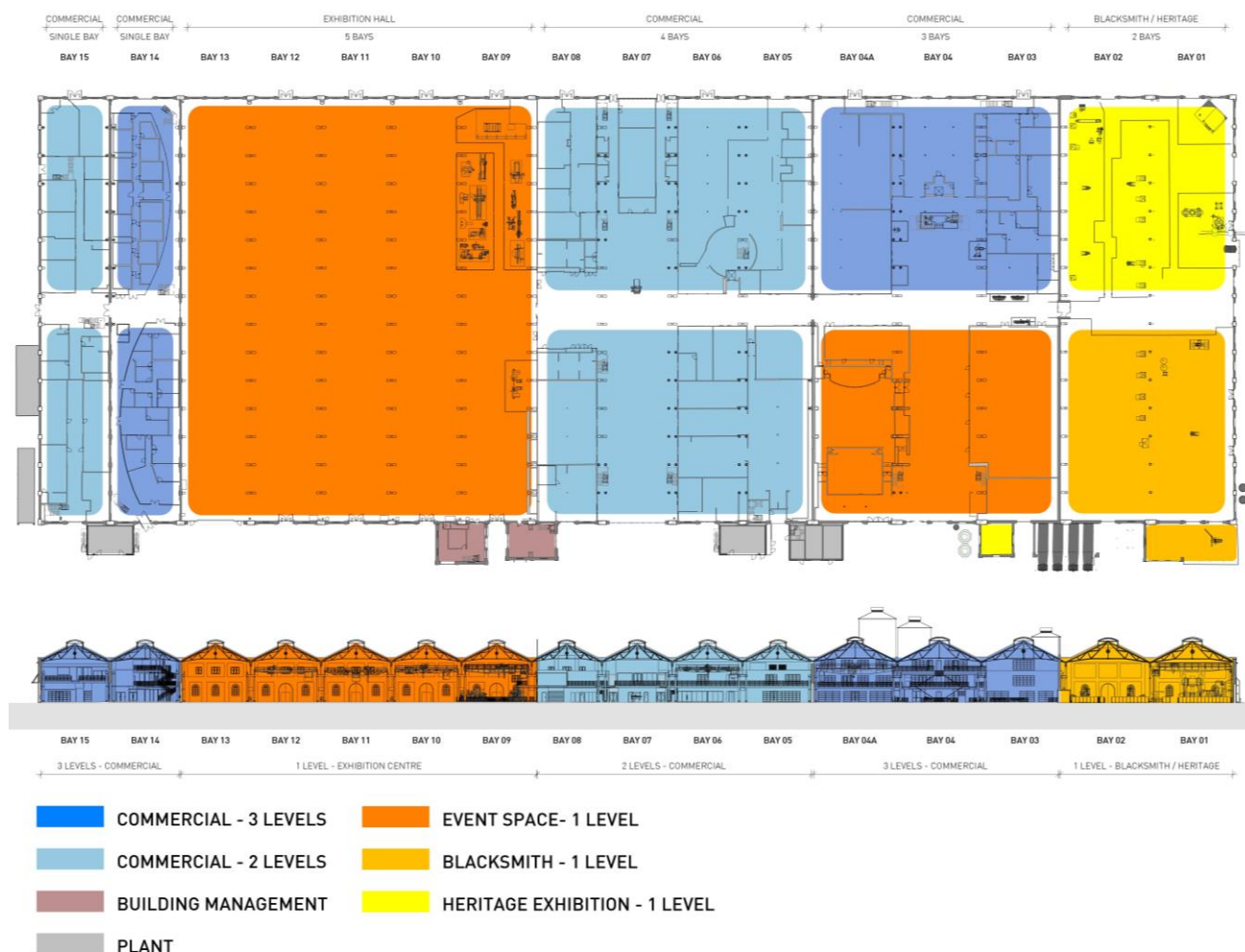


Figure 6 – Existing layout of the Locomotive Workshop

Source: Sissons

Bay 5-15 External Appearance



Figure 7 – Southern elevation of the Locomotive Workshop looking west, Bays 5 to 15 shown (currently known as Bays 6-16).



Figure 8 – Southern elevation of the Locomotive Workshop looking east, Bays 5 to 7 shown.



Figure 9 – Southern elevation of the Locomotive Workshop, Bays 11 to 15 shown.



Figure 10 – Key pedestrian entry and elevation of Bay 7 (currently known as Bay 8).



Figure 11 – Office annex between Bay 9 and 10 exterior elevation



Figure 12 – Bay 9 existing entrance (currently known as Bay 10)



Figure 13 – Bay 10 exterior elevation, and office annex (currently known as Bay 11)



Figure 14 – Southern elevation of existing entrance in to the Exhibition Hall in Bays 9-13 (currently known as Bays 10-14)



Figure 15 – Bay 14 existing pedestrian entry (currently known as Bay 15)



Figure 16 – Bay 15 existing pedestrian entry (currently known as Bay 16)



Figure 17 – Western elevation of the Locomotive Workshop

Source: Ethos Urban

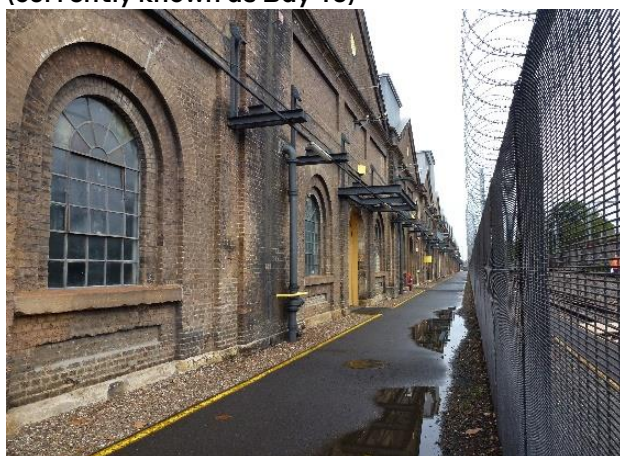


Figure 18 – Northern elevation of the Locomotive Workshop and northern access way

Bays 5-15 Interior



Figure 19 – Second floor of existing Bay 5 office accommodation (currently known as Bay 6)



Figure 20 – Existing Bay 6 fit-out office accommodation (currently known as Bay 7)



Figure 21 – Existing café within Bay 7

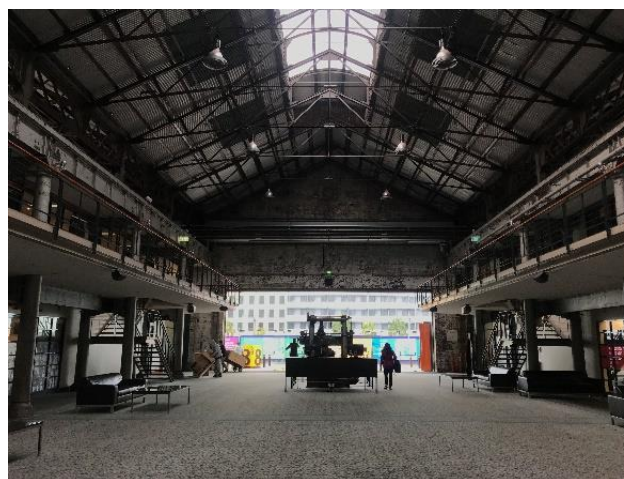


Figure 22 – Existing Bay 7 circulation space



Figure 23 – View from Bay 7 (currently known as Bay 8) of circulation space to Exhibition Hall within Bays 9- 13 (currently known as Bays 10-14)



Figure 24 – View of Bay 8 existing office accommodation (currently known as Bay 9)

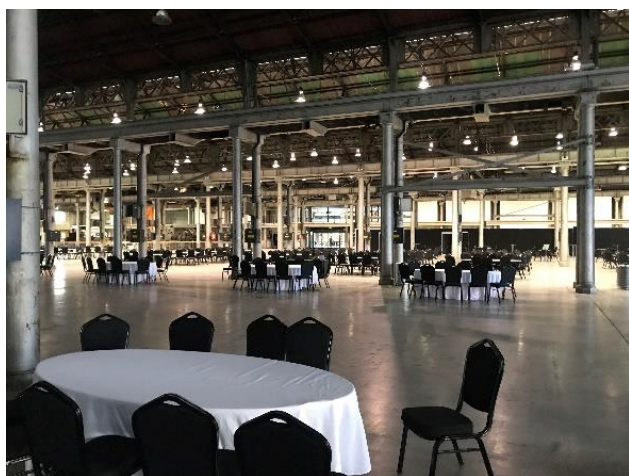


Figure 25 – View of Bays 9-12 within the existing Exhibition Hall (currently known as Bays 10-14)

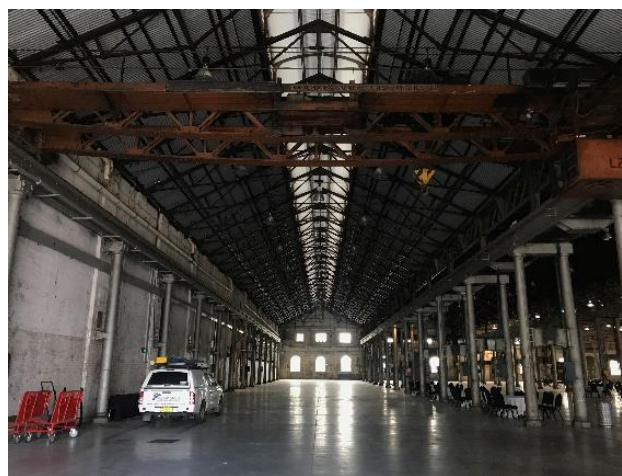


Figure 26 – Bay 13 of the Exhibition Hall (currently known as Bay 14)

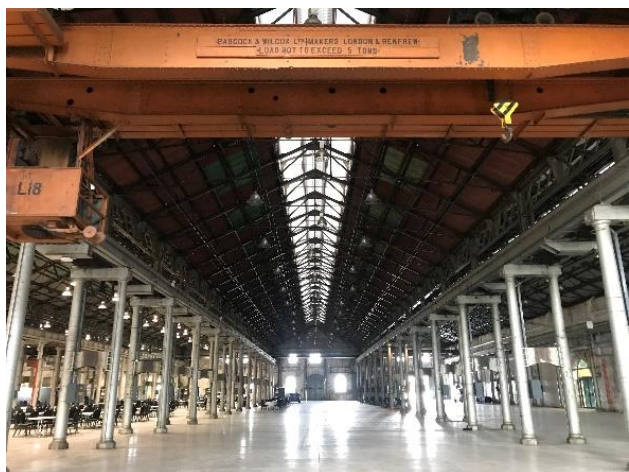


Figure 27 – Bay 12 within the Exhibition Hall (currently known as Bay 13)

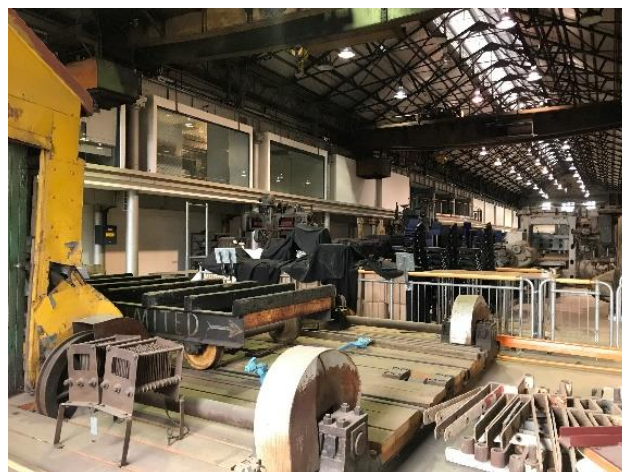


Figure 28 – Heritage artefacts displayed within Bay 9 of the Exhibition Hall (currently known as Bay 10)

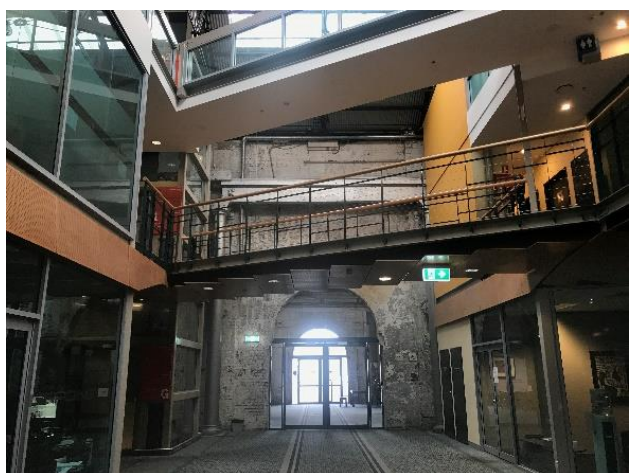


Figure 29 – Existing Bay 14 (currently known as Bay 15) fit-out (not subject to this SSD application)

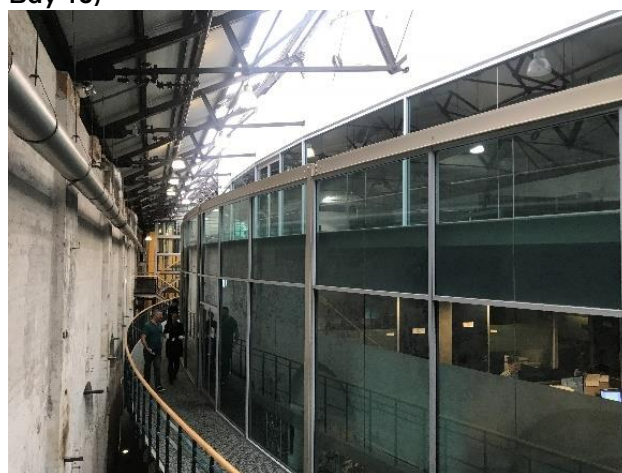


Figure 30 – Existing Bay 14 (currently known as Bay 15) fit-out (not subject to this SSD application)



Figure 31 – Existing Bay 15 fit-out, used for educational/commercial purposes (currently known as Bay 16)



Figure 32 – Existing Bay 15 fit-out, used for educational/ commercial purposes (currently known as Bay 16)

3.4 Public Domain

Locomotive Street runs adjacent to the southern façade of Bays 5 -15. 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.

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 33**:

- 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.

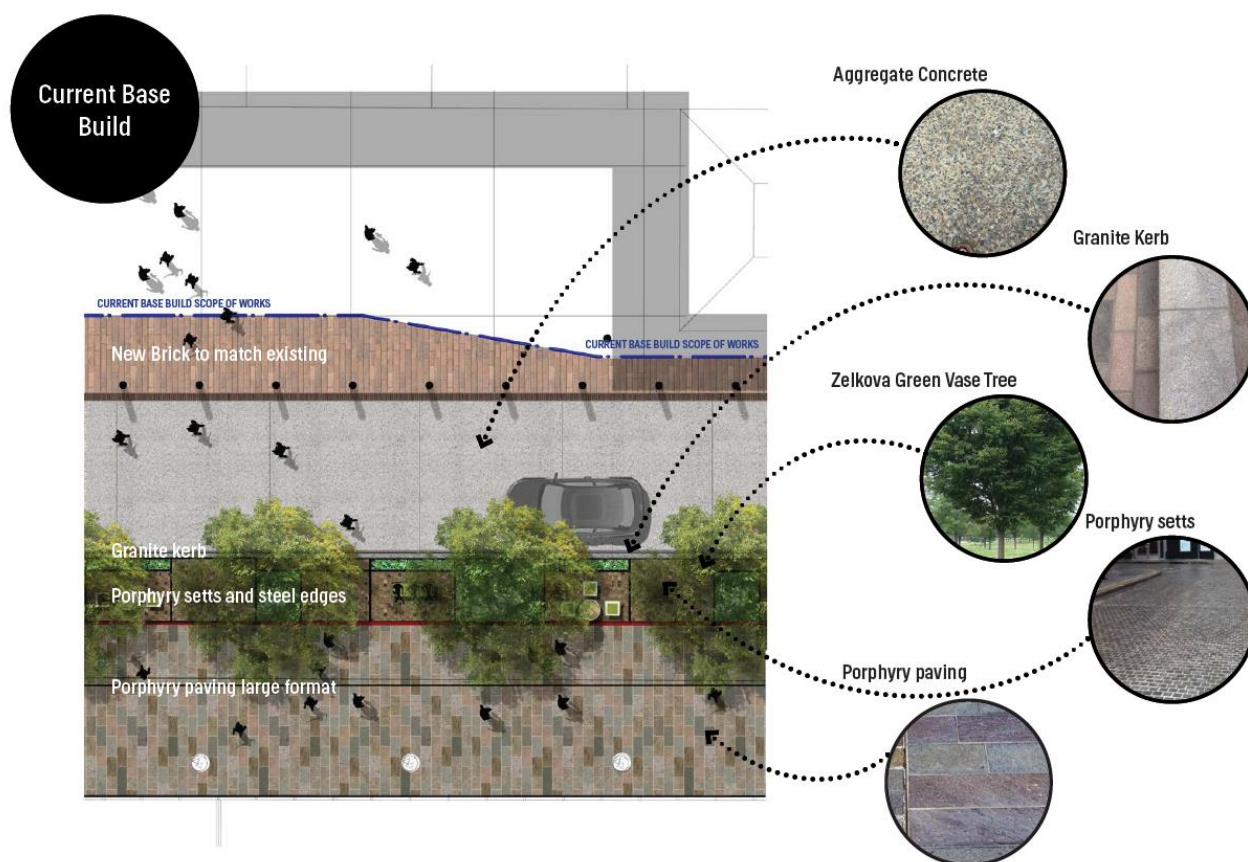


Figure 33 – Locomotive Street Base Build Principles

Source: Aspect

3.5 Access & Parking

3.5.1 Pedestrian Access

The primary pedestrian access points into Bays 5-15, as shown in **Figure 34**, are located off Locomotive Street into Bays 6,7,13,14 and 15, and from the northern access way into Bays 6, 7 and 8. All building annexes connected to the southern side of the Locomotive Workshop, have access independent of the Locomotive Workshop Bays, via Locomotive Street.

Secondary access points are provided from Locomotive Street into Bays 5, 8,9,10,11 and 12, but are only utilised occasionally by certain tenants or events.

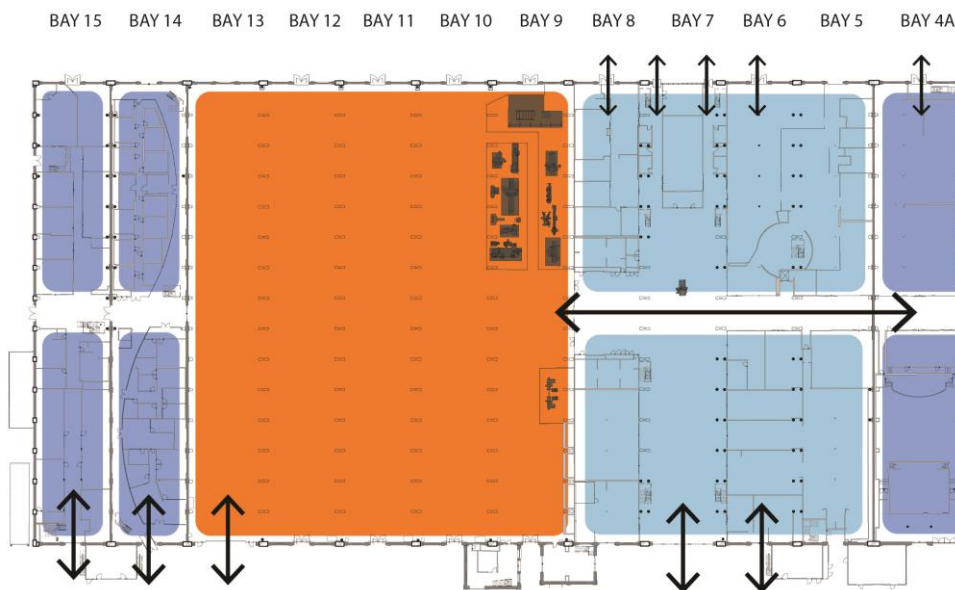


Figure 34 – Extract of existing primary pedestrian access points into Bays 5-15

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 35**.

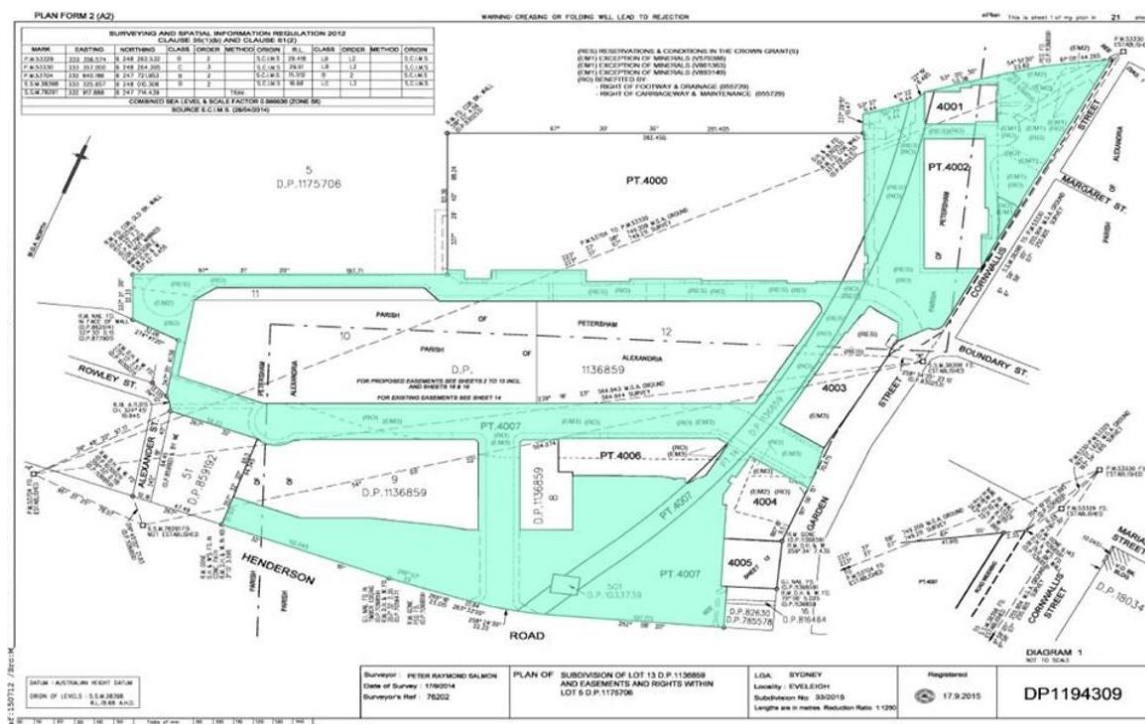


Figure 35 – ATP public access easement

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 main-stream off-street parking. However, Locomotive Street currently provides 1 motorbike parking area, 4 accessible spaces and 16 loading spaces adjacent to the Locomotive Workshop.

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 car space allocations provided across the entire ATP precinct that will be provided at completion of Buildings 1, 2 and the public domain works.

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/ Mirvac

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.

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 36**. 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.

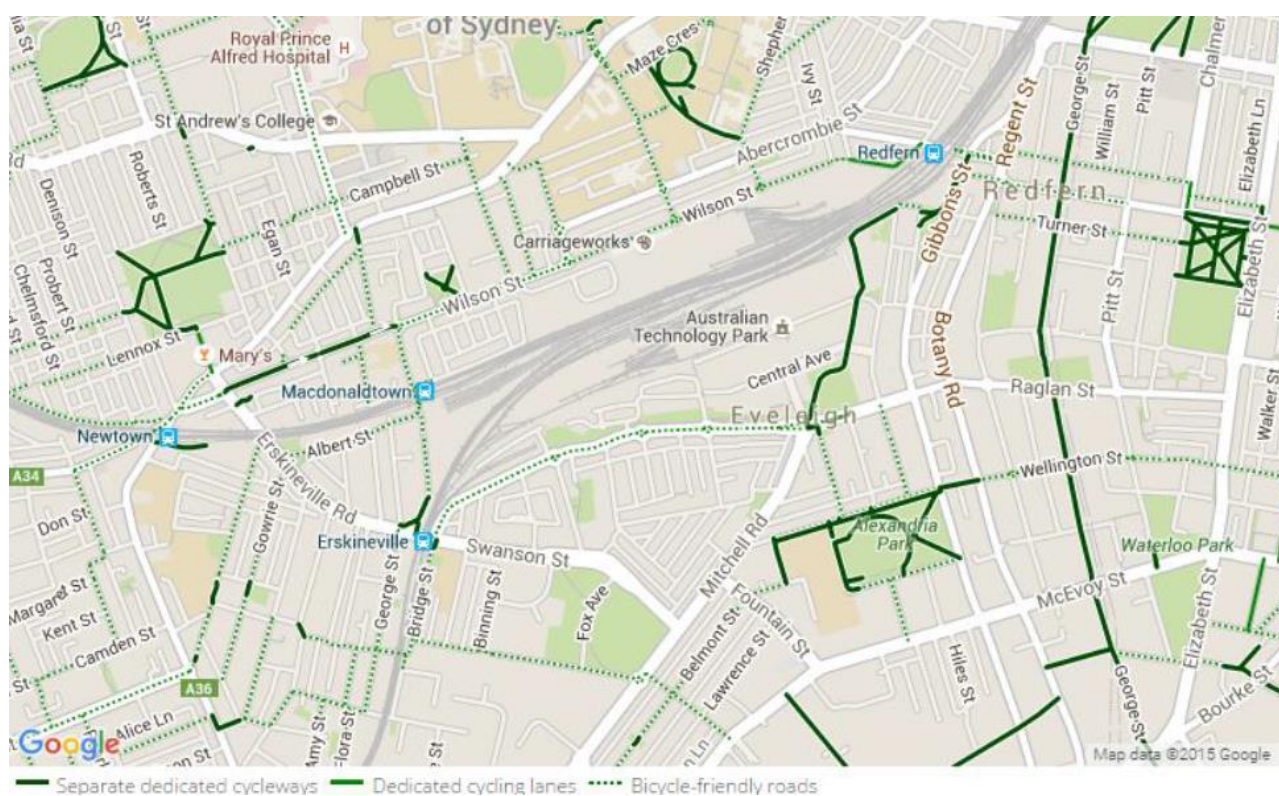


Figure 36 – Bicycle network

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 37**) 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.

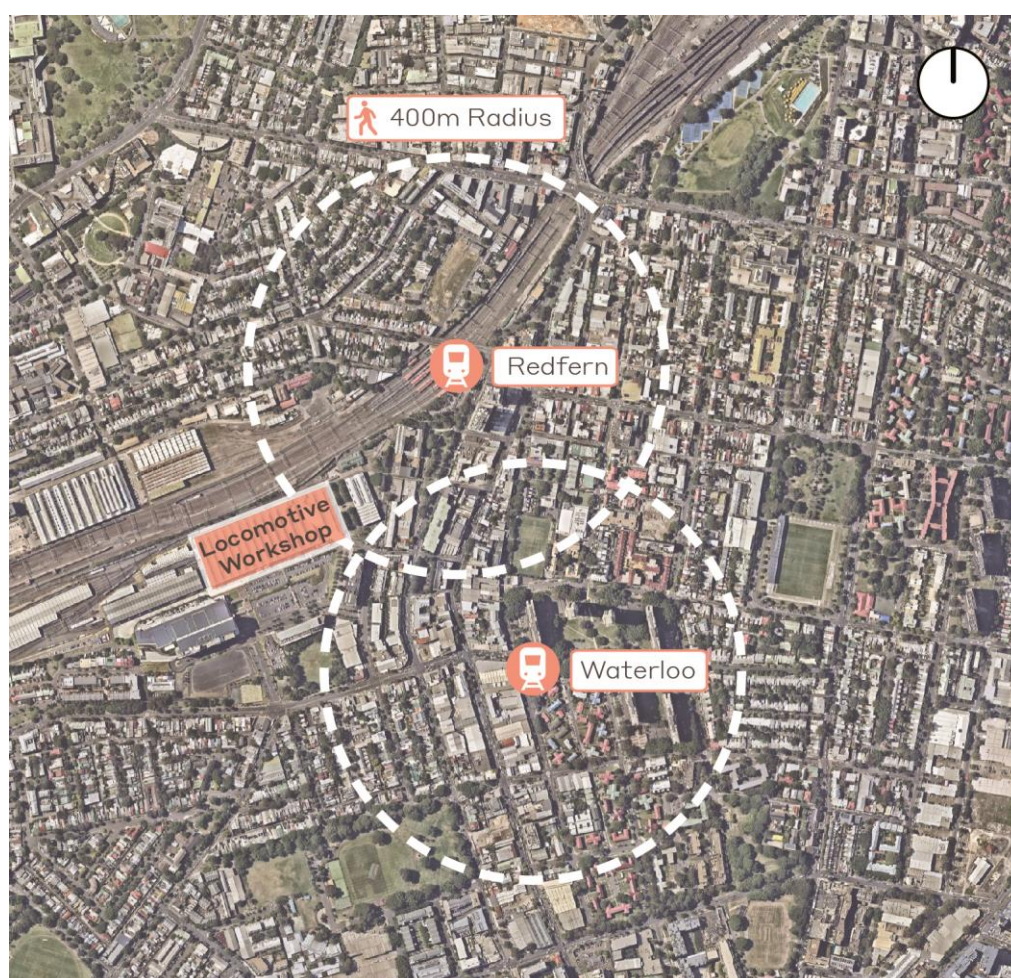


Figure 37 – 400m radius from Redfern and Waterloo (future) Stations

Source: Ethos Urban

3.5.7 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

3.6 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

3.7 Topography

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

3.8 Geotechnical Conditions

The Geotechnical Investigation Report, prepared by Douglas and Partners (**Appendix F**) 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, laminite, 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.

3.8.1 Groundwater

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

3.9 Utilities & Infrastructure

NDY has provided a Stormwater and Hydraulic Infrastructure Services Report (**Appendix G**) and IGS has provided an Electrical Services Report (**Appendix H**). 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. Portions of the system also appear to discharge to the north-west corner of the Site and to the south.

3.10 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 38**, 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 45**). 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 49**).

The existing 10-storey Channel 7 building, with underground parking is located to the south east (see **Figure 50**).

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 54**).



- The ATP Precinct
- Residential
- Mixed Use
- Commercial
- Childcare/Community
- Central to Eveleigh - Urban Renewal Corridor Investigation
- Carriageworks

Figure 38 – ATP Site and surrounding context

Source: Ethos Urban

An aerial photograph of the precinct is provided at **Figure 39**. It identifies the locations of the corresponding photographs of the surrounding development at **Figure 40** to **Figure 56**.

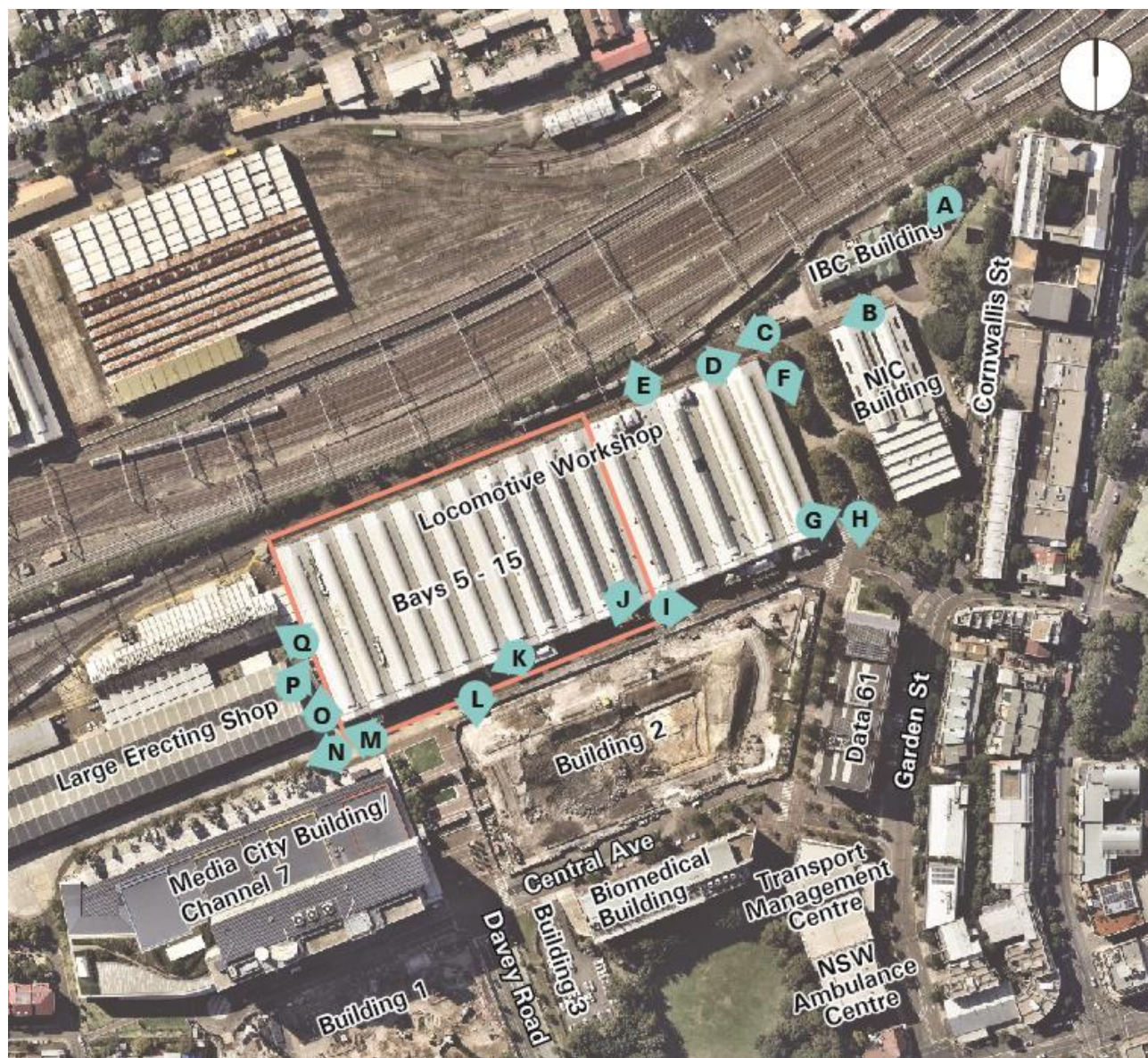


Figure 39 – Aerial Photograph of the site and immediate surrounds

Source: Nearmap & Ethos Urban



Figure 40 – Location A:

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



Figure 41 – 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 42 – Location C:

View of access easement to the north of the Locomotive Workshop



Figure 43 – Location D:

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



Figure 44 – Location E:

View of railway infrastructure to the north of the Locomotive Workshop



Figure 45 – Location F:

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



Figure 46 – Location G:

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



Figure 47 – Location H:

View of NICTA building, looking south east from Locomotive Street



Figure 48 – Location I:

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



Figure 49 – 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 K:

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



Figure 51 – Location L:

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



Figure 52 – Location M:

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



Figure 53 – Location N:

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



Figure 54 – Location O:

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



Figure 55 – Location P:

Locomotive Workshop's western elevation, looking north-east



Figure 56 – 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 development consent for the following:

- demolition of existing ‘modern’ infill fit-out elements to Bays 5-13, Bay 15 and two annex structures;
- adaptive re-use of Bays 5-13, Bay 15 and two annex structures for commercial premises uses and light industrial floorspace;
- construction of internal and external alterations to Bays 5-13, Bay 15 and to the two annex structures and roof;
- a maximum of 27,237m² GFA for commercial premises uses within Bays 5-15 and the two annex structures, that may include up to a maximum of 156m² for retail premises uses and a maximum of 1,206m² GFA for light industrial uses;
- on-street car parking and loading and servicing bays;
- heritage interpretation and conservation works;
- public domain improvements within the curtilage of Bays 5-15;
- 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 57, Figure 58, Figure 59** and **Figure 60** and details are provided within the Architectural Design Report at **Appendix C**.



Figure 57 – Artist impression of internal commercial space looking west from Bay 5.

Source: Sissons



Figure 58 – Artist impression of the interior of Bay 6 looking north at ground floor level

Source: Sissons



Figure 59 – Artist impression of the interior of Bay 6 looking north from Level 1

Source: Sissons



Figure 60 – Artist impression of exterior of Bays 10 to 13 from Locomotive Street

Source: Sissons

4.2 Approvals 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 M**), prepared by Sissons. This application also seeks consent for the provision of 8 loading, 4 accessible car spaces, 2 taxi and 1 drop off as illustrated on the Car Parking plans, prepared by GTA.

Separate applications will be submitted for approval for the operation and fit-out of the following:

- tenancies in Bays 5-7 at ground floor and first floor;
- commercial tenancy 3 in Bays 8-13 at ground floor and first floor;
- commercial tenancy 4 in Bay 15 at ground floor; and
- the two retail tenancies within the two annexes at ground floor.

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 4.20**, and in the Heritage and Archaeological Impact Statement (**Appendix K**), 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 final Occupation Certificate for the Locomotive Workshop.

4.3 Numerical Overview

The key numeric information for the proposed development is provided in **Table 3**.

Table 3 - Key Development Information

Component	Proposal
Footprint area (Bays 5-15 only)	17,340m ²
Existing GFA (Bays 5-15 only)	23,229m ²
Gross Floor Area Total	• 27,237m ²
• Ground Floor	• 14,573m ²
• First Floor	• 11,139m ²
• Second Floor	• 1,525m ²
Maximum Height	RL 35.225 (existing height of the Building)
Car Parking	4 accessible parking spaces, 8 loading spaces, 2 taxi spaces and 1 drop-off space
Bicycle Spaces	227

4.4 Land Use & Gross Floor Area

The Architectural Plans included at **Appendix B** illustrate a total GFA of 27,237m² across Bays 5-15 which includes the existing GFA included within Bay 14 (3,299m²).

The primary use of Bays 5-15 is for commercial premises¹ that may potentially include up to a maximum of 156m² for specific retail premises uses and up to a maximum of 1,206m² GFA for light industrial uses.

As indicatively illustrated on the Architectural Plans at **Appendix B**, the two existing office annexes that are located on the southern side of the Locomotive Workshop between Bays 8 & 9 and Bay 9 & 10 may accommodate future retail premises uses.

Furthermore, the light industrial floorspace may be utilised by an operator that provides computers, tools and other equipment to people to build their own projects. Activities may include a mix of 'hard arts' and 'soft arts'. The 'hard arts' in such spaces are generally focused on making items from metal and wood, including jewellery and the 'soft arts' are generally focused on graphic design, 3D printing and hi-tech products like circuitry boards. However, no future tenant has been secured at this time and therefore, if the 1,206m² of notionally allocated GFA is not used for light industrial uses², then it will be utilised by other commercial premises uses.

Whilst the fit out and operation of the defined spaces illustrated in the Architectural Plans at **Appendix B** will be the subject of future applications, Mirvac seek consent for the overall GFA and use parameters in order to provide certainty for future tenants.

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 5-13 and Bay 15 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 contemporary workplace, that sensitively responds to the heritage elements which give the Building its unique character.

¹ A Commercial Premises use is defined under the Standard Instrument – Principal Local Environmental Plan "any of the following:

- a) Business premises,
- b) Office premises,
- c) Retail premises."

² A light industrial use is defined under the Standard Instrument – Principal Local Environmental Plan as "a building or place used to carry out an industrial activity that does not interfere with the amenity of the neighbourhood by reason of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or otherwise, and includes any of the following: (a) high technology industry, (b) home industry."

- 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:

- 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.
- Provide a high level of appeal aligned with the aspirational expectations of a premium commercial tenant, whilst showcasing the unique heritage elements.
- Create a substantial point of difference from typical CBD commercial buildings and provide a unique spatial experience afforded by the low expansive building form with an industrial aesthetic.
- Provide opportunities for the public to be 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 – Outline of proposed demolition

Floor level	Proposed Demolition Works
Ground Floor	<ul style="list-style-type: none"> • Removal of existing separation wall between Bays 8 and 9. • Removal of existing doorways fronting Locomotive Street into Bays 5, 6, 7, 8, 13,14 and 15. • Removal of doorways in Bay 15 opening to western façade. • Reinstatement of window in Bay 11. • Removal of existing doorways into Bays 7 and 14 opening to the northern access way. • Removal of existing internal commercial fit-out within Bays 5 to 8 and Bay 15. • Removal of existing barrier surrounding existing heritage collection in Bay 9. • Removal of existing doorways and internal commercial fit-out of the two office annexes fronting Locomotive Street, between Bays 8 and 9 and 9 and 10.
First Floor	<ul style="list-style-type: none"> • Removal of existing separation wall between Bays 8 and 9. • Opening of heritage wall between Bay 4a and 5. • Removal of existing internal commercial fit-out within Bays 5 to 8 and Bay 15. • Removal of existing mezzanine structure within Bays 5 to 8 and Bay 15. • Removal of existing internal commercial fit-out within the two office annexes fronting Locomotive Street, between Bays 8 and 9 and 9 and 10. • Removal of existing cladding to substations fronting Locomotive Street.
Second Floor	<ul style="list-style-type: none"> • Removal of existing separation wall between Bays 8 and 9. • Opening of heritage wall between Bay 4a and 5. • Removal of internal commercial fit-out elements including lighting within Bays 5-13 and Bay 15. • Removal of existing generator structure attached to the southern side of the Locomotive Workshop between Bays 5 and 6.
External	<ul style="list-style-type: none"> • Removal of existing cladding to substations fronting Locomotive Street. • Removal of existing external building signage. • Removal of existing doorways fronting Locomotive Street into Bays 5, 6, 7, 8, 13,14 and 15. • Removal of existing doorways into Bays 7 and 14 opening to the northern access way. • Reinstatement of window in Bay 11. • Removal of doorways in Bay 15 opening to western façade. • Removal of existing cladding to substations 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 5 to 15.

4.7.1 Hazardous Materials Removal

A Hazardous Materials Survey has been prepared by JBS&G (**Appendix I**) 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 are specified within the Structural Design Report, prepared by Arcadis (**Appendix J**).

All structural systems proposed within the development will be designed to satisfy the provisions of relevant Australian Standards and 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 5-15 Design

As explained in the Architectural Design Report (**Appendix C**), during the evolution of the design, Sissons Architects 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 61**. The revised grouping then evolved to form the proposed layout arrangement as illustrated in **Figure 62**. Furthermore, the design for Bay 15 was determined by the fact that Bay 14 was not part of the proposed works and that this separates Bay 15, physically and visually from Bays 5-13. It was therefore determined and considered appropriate to create a floorplate within Bay 15 that matches that of bay 14 to allow potential integration opportunities in the future.

The proposed design for Bays 5-15 therefore comprises:

- A group of three bays (Bays 5-7) which will be occupied by:
 - five tenancies and public circulation space at ground floor that will include two lifts, amenity and service pods and stairs; and
 - four tenancies at first floor, that will include service pods, stairs and lifts.
- A group of 6 bays (Bays 8-13) that will be occupied by one large tenant over two levels and will include eight amenity and services pods at each level, three lift cores, and seven stairwells.

- Two retail tenancies within the Annexes located between Bays 8 & 9 and Bays 9 & 10.
- Bay 14, which will continue to be occupied over three levels by the existing tenant, which has a lease until 2023.
- Bay 15, which will provide:
 - a commercial tenancy within the southern portion of the ground floor level;
 - End of Trip Facilities within the northern portion of the ground floor level, comprising 227 bicycle spaces and changing rooms for use by the staff within entire Locomotive Workshop;
 - a commercial tenancy within the southern portion of the first-floor level;
 - site management and security offices and facilities, along with plant and mechanical infrastructure rooms within the southern portion of the second-floor level;
 - back of houses facilities, plant and building services rooms within the northern portion of the second-floor level; and
 - lift cores, fire stairs and circulation space.

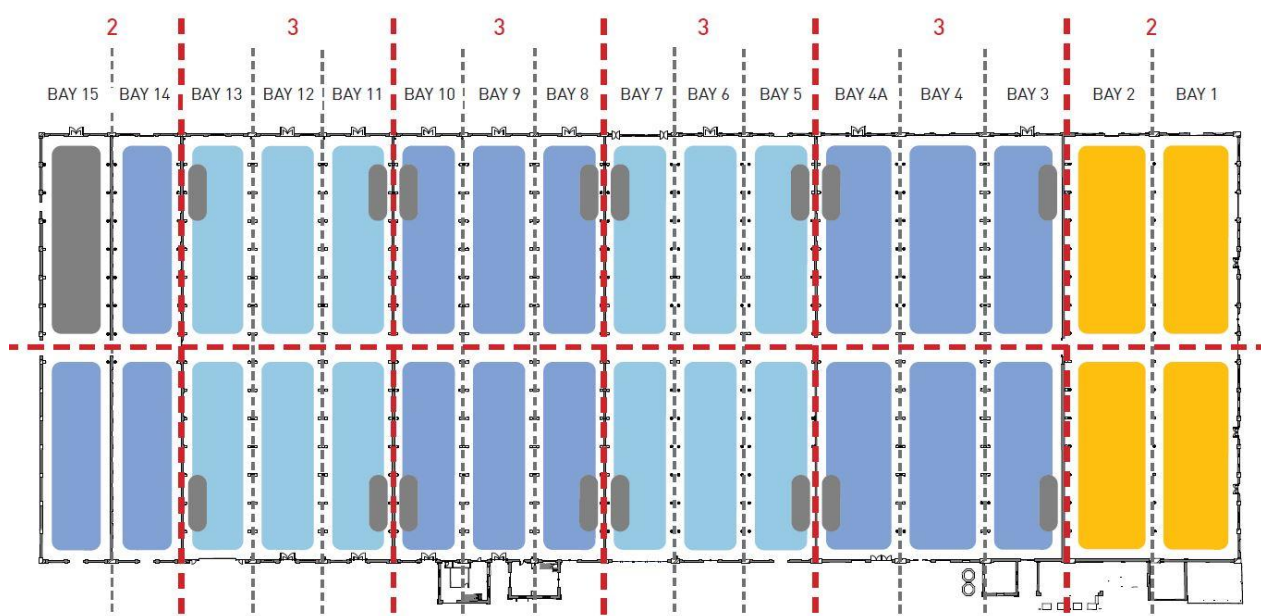


Figure 61 – Existing building Bay grouping arrangement

Source: Sissons



Figure 62 – Proposed ground floor plan for Bays 5-15

Source: Sissons

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

Table 5 – Description of the proposed physical works

Bay	Proposed Development
Building Interior Bays 5 - 13	<ul style="list-style-type: none"> Removal of existing 'modern' infill features Construction of internal tenancy divisions, including mezzanine floor over 2 storeys amenities and service pods, new stairs and lifts Enhancements of entrances including the enlargement of the opening between Bays 4a and 5.
Building Interior Bay 14	No works proposed
Building Interior Bay 15	<ul style="list-style-type: none"> Removal of existing 'modern' infill features Construction of commercial tenancy divisions, mezzanine floors, site management and security office accommodation, end of trip facilities and central plant equipment Enhancements of entrances
Building Exterior Bays 5-15	<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
Roof	<ul style="list-style-type: none"> Roof upgrade - installation of insulation and insertion of natural daylight 'slots'.

Bay	Proposed Development
Retail/ Office Annexes	<ul style="list-style-type: none"> • Removal of modern infill features • Refurbishment of single level retail tenancy • Enhancement of entrances
Plant Annexes	<ul style="list-style-type: none"> • Recladding

4.10 Enlargement of the internal openings between Bay 4a & Bay 5

The existing opening within the significant heritage wall, that currently exists between Bay 4a and Bay 5 is to be enlarged in order to enhance lines of sight through the building to reveal more of the heritage super structure beyond. **Figure 63** and **Figure 64** provide a comparison between the existing situation and indicative post development appearance.

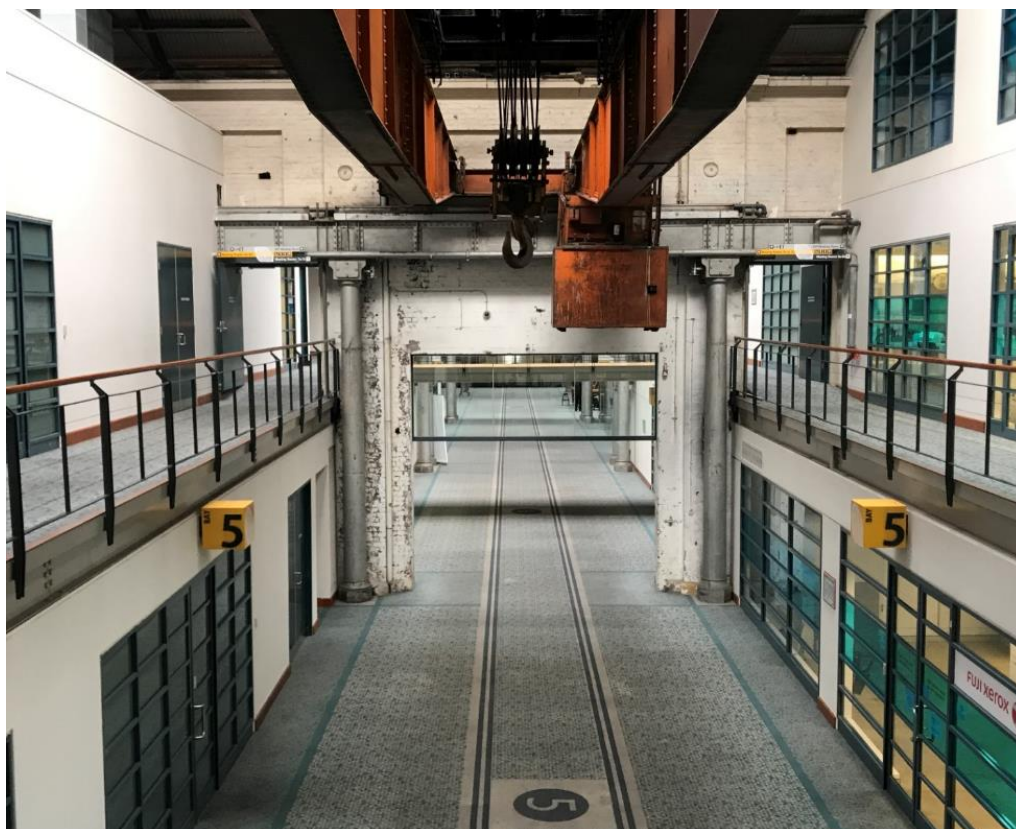


Figure 63 – Existing opening between Bays 4a and 5

Source: Ethos Urban

4.11 Intertenancy Walls

In line with the enlargement of the internal opening between Bays 4a and 5, and as noted in **Section 4.5**, 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 of the tenancies that line the central spine within Bays 5-7 will comprise simple glazed walls with minimal framing elements. No solid elements above 1200mm will be provided within the Visual Sight Line shown on the Ground Floor Plan (**Appendix B**) and higher solid walls will be retracted from the tenancy line by approximately 1800mm to create a broad visual corridor lined by the heritage columns and guided by a railway track interpretation inlay set into the floor.

The intertenancy walls that are to be inserted between Bays 4a and 5, and Bays 7 and 8, will cross the central circulation spine for fire compartmentalisation purposes. They will comprise framed, infill glazed elements that are set back from the heritage columns to replicate the treatment for the external openings and provide an enhanced industrial aesthetic as indicatively shown in **Figure 64**.

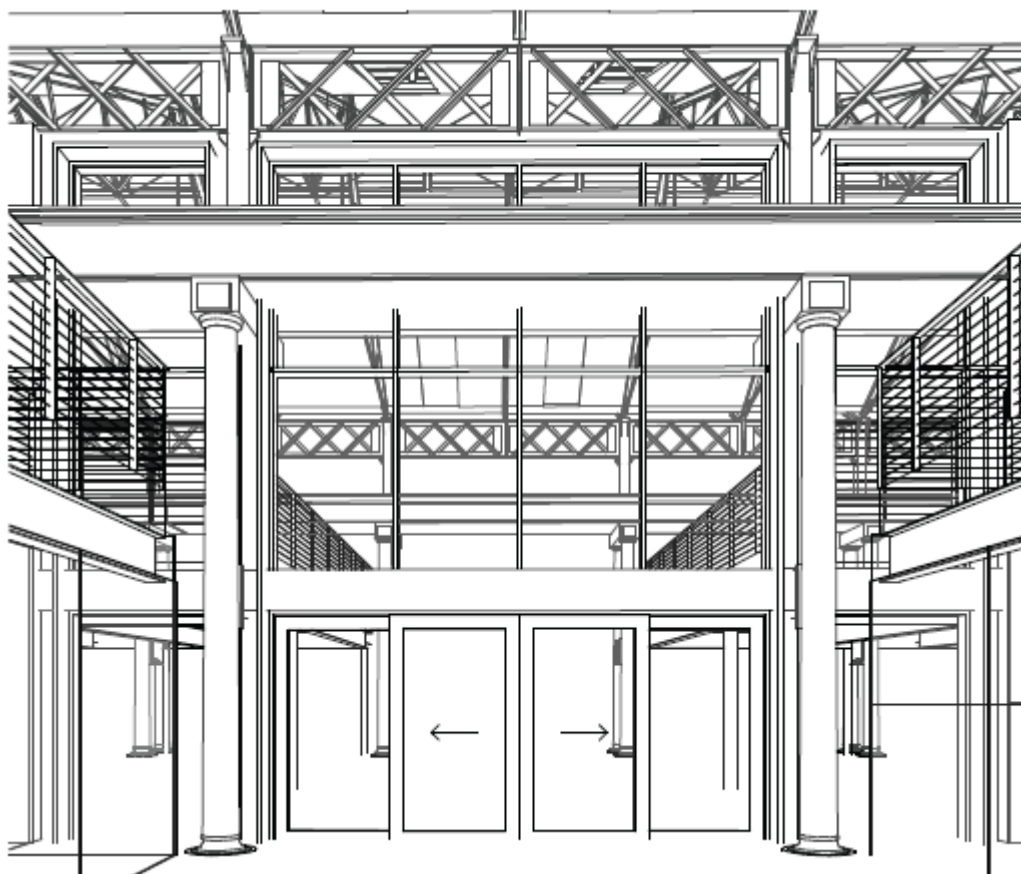


Figure 64 – Proposed glazed intertenancy wall between Bays 4a and 5 and Bays 7 and 8

Source: Sissons

4.12 Service Pods

To ensure that Bays 5-13 provides appropriate facilities for the future users of the space, a number of 'service pods' have been specifically designed that will wrap around the existing columns and integrate with the existing heritage structure. As shown on the Architectural Plans (**Appendix B**) and detailed in the Architectural Design Report (**Appendix C**), the service pods will be two stories in height, and provide amenities at both ground floor and first floor level with plant on the roof of the pods. They will however sit at a lower height than the roof trusses to provide visual links above them to the roof structure. The service pods will serve multiple purposes and incorporate amenities, services and mechanical equipment along with an access floor at both levels to enable all services to be reticulated without disrupting the existing floor treatment. The service pods will be constructed of steel, and therefore will be reversible and removable but will also provide bracing to the new first floor level structure.

4.13 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 and modern polycarbonate cladding over the curved lanterns 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 Bays 5-15 and above the atria within Bays 6, 9, 12 and 14 to provide daylight penetration; and
- installation of operable smoke attenuation louvres to meet the BCA fire safety and smoke management regulations.

4.14 Building entrances and windows

Along the southern façade, the existing openings within Bays 5-15 of the Locomotive Workshop consist of a series of original arched doorways and windows at ground floor level with high level rectangular windows at first floor level. The ground floor openings are interspersed with large rectangular openings into Bays 7 and 13.

Along the northern façade, the openings also comprise a series of original arched doorways and windows at ground floor level with high level rectangular windows at first floor and the inclusion of a large rectangular doorway into Bay 7.

The design approach that has been adopted in relation to the doorways and windows is to maintain and enhance the original heritage openings and where original windows remain, restore and repair these as necessary. This will involve:

- refurbishing the existing steel/ wrought iron frame and sashes;
- installing new clear glazing along the southern facade;
- retain and replace (to match) existing patterned glass along the northern facade;
- performing maintenance to remove rust, improve the operability of the sashes and make weathertight;
- restore infilled windows in line with the overall aesthetic approach;
- preserving the existing timber doors and retain them in-situ in an open position internally.

The large rectangular doorways will also be sensitively upgraded, and an additional pane of clear glass installed internally (where required) to meet ESD requirements and improve thermal comfort.

Due to the variation of openings, each door and window opening will be individually assessed, and the appropriate treatment determined.

4.15 Recladding of Plant Annexes

The proposed development includes the recladding of the Plant Annexes that are located on the southern elevation of the Locomotive Workshop to improve their aesthetic appearance. The existing metal sheeting will be removed and replaced with a new metal sheet façade which will be dark grey in colour to match the painted metal heritage equipment located along the Locomotive Street façade and be visually recessive against the existing heritage brickwork of the Locomotive Workshop.

The existing plant equipment, ladders and walkways will also be consolidated to allow for a less cluttered façade, although the existing doors, stairs and ventilation louvre locations will be retained to ensure that the refurbishment does not impact upon the function of the substations. An artistic impression of the proposed recladding is illustrated in **Figure 65**.



Figure 65 – Proposed recladding of building plant and annexes

Source: Sissons

4.16 Design Treatment to Edge of Mezzanine Floors

The mezzanine structures that will be inserted within the Locomotive Workshop will be constructed of steel and designed to be lightweight, removable and reversible. The mezzanine structures will be setback from the edge of the external heritage wall of the building and a simple tensile wire balustrade will be provided to minimise views of the edge of the mezzanine floor from outside of the building, minimise reflection and allow clear vision through the space to the heritage features within.

Tensile wire balustrades will also to be provided to internal edges of the mezzanine structures.

4.17 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:

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

4.18 Public Access & Circulation

The proposed primary pedestrian access points into Bays 5-15, are located off Locomotive Street into Bays 7, 13, 14 and 15, however a number of other doorways along both the southern and northern facades of the Locomotive Workshop that will be openable and be utilised according to the requirements of the tenants.

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

The doorway situated on the western façade will continue to function as an emergency exit only, as access is restricted by the neighbouring State Rail Workshops.

Bays 5 – 7 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.

Bays 8 to 13 will have limited access to the singular tenant. However, Mirvac will endeavour to arrange controlled public access through Bays 8-13 and Bays 14 and 15 during nominated times (such as the Great Strike Day) subject to agreement with the tenants and their security requirements.

4.19 Relocation of Overhead Gantries

As shown on the Architectural Plans at **Appendix B**, in order to maximise the efficiency of the proposed mezzanine floorplates, approval is sought to relocate seven of the overhead gantries within Bays 9-13 to the central circulation spine and atria areas within Bays 9-13.

4.20 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 K**). 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 K**) 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 and finalised prior to the issue of the final Occupation Certificate. 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.

- **Relocation of some of the moveable heritage items** to better improve contextual location and heritage interpretation opportunities and to ensure that heritage items are located in effective locations for communication of heritage values to site users. The Architectural Plans at **Appendix B**, identify indicative heritage interpretation zones at Ground Floor level. It is intended that following careful consideration and development of the detailed heritage interpretation design that the majority of the moveable heritage items that are currently located in Bay 9 will be relocated to these zones or other heritage interpretation zones within the Bays 1-4a. The detailed heritage interpretation design will utilise specialist up-lighting and fold up flooring as indicatively shown in **Figure 66**.



Figure 66 – Heritage interpretation design concept for in-situ heritage items

Source: Trigger

- **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) and a clearer communication of the heritage significance of the Site using a variety of media and other techniques.
- **Telling key stories**, such as how it created a place of positive empowerment for the Aboriginal Community and the story of Unionism, Activism and the iconic strikes waged by the workers at ATP and how events that unfolded at Eveleigh over its history have led to the improved workplace conditions in place today. This involves concept ideas for artworks outside Bay 15 or on the exterior of the substation cladding, with a digital or other type of interpretive overlay to tell the stories of the workers, the strikes and the rise of the Unions.

4.21 Signage

As indicated on the Signage zone plan, included at **Appendix B**, approval is sought for signage zones behind the glazing line, above the heritage entrance doorways along the southern and northern elevations of the Locomotive Workshop. In addition, approval is sought for signage zones behind the glazing line above the large entrance doorways leading into Bay 7 and Bay 13 for the purpose of tenant identification signage.

The signage zones for tenant identification signage zones, behind the glazing will be 11.6m long and 1.67m wide. The signage zones behind the glazing, above the heritage entrances will be 2.78m long and 0.32m high.

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

4.22 Illumination Strategy

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

4.22.1 Exterior Lighting

The general approach that will be adopted for the southern façade of Bays 5-15 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; 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.

4.22.2 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.

4.23 Public Domain

As noted in **Section 3.4**, the public domain area, situated within the SSD 8449 Site boundary comprises only a very small area of land adjacent to the southern and northern facades of Bays 5-15.

Sissons has prepared a Landscape Report (**Appendix M**) which provides details of the proposed public domain works within the curtilage of Bays 5-15. In summary the following is proposed:

- ground treatment to include brick paving to integrate with the Locomotive Street design as illustrated in **Figure 67**;
- new bicycle racking providing 24 spaces;
- provision of 8 new drop-off parking bays, 4 accessible parking bays, 2 taxi bays and 1 drop off bay;
- refreshment of line markings and make good any existing element along the northern accessway; and
- make good any area adjacent to the western building façade that may be impacted.

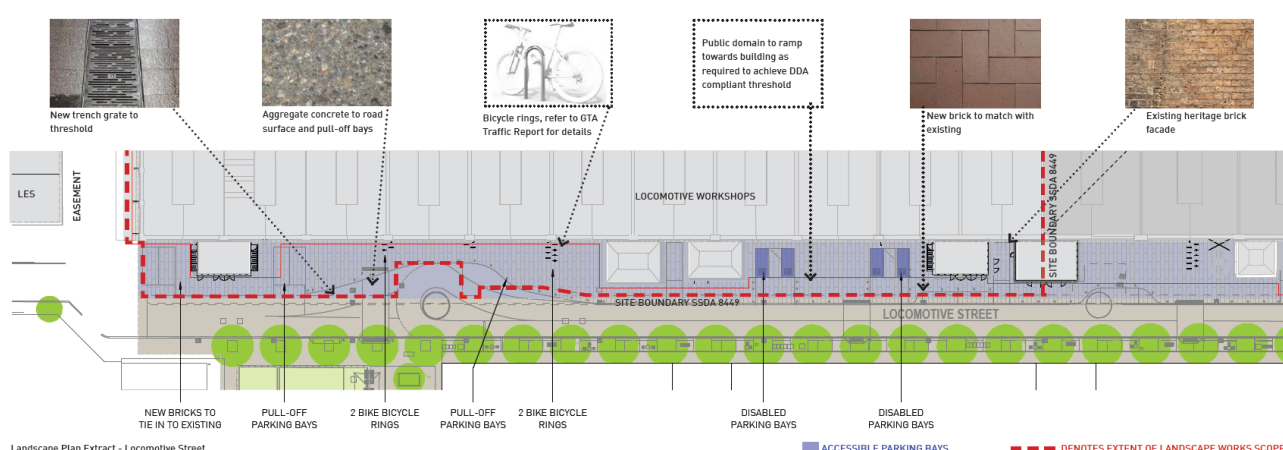


Figure 67 – Proposed Public Domain Works for Locomotive Street frontage

Source: Sissons

4.24 Vehicle Access, Loading and Car Parking

4.24.1 Vehicle Access

Vehicular access to Bays 5-15 will continue to be provided via Locomotive Street.

4.24.2 Car Parking

No additional standard car parking is proposed to be provided as part of this development, however as illustrated on the plans included within Attachment 1 of the Traffic Impact Assessment, prepared by GTA (**Appendix N**) a total of 4 accessible parking spaces, 2 taxi bays, and 1 drop-off bay spaces will be provided within the public domain area to the north of Locomotive Street. This will supplement the car parking supply that will be provided across the ATP precinct as set out in **Table 2**.

4.24.3 Bicycle Parking

The proposed development includes secure bicycle parking for a total of 227 bicycles and end of trip facilities for staff within Bay 15. These facilities are provided for the use of staff within the Locomotive Workshop.

In addition, as included in the Landscape Design Report (**Appendix M**) and illustrated in **Figure 67**, 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.

4.24.4 Loading and Servicing

The overall strategy for loading and servicing within the entire Locomotive Workshop is based on the provision of loading in two areas:

1. Within **8 on-street loading bays** provided on Locomotive Street as illustrated on the plans at **Appendix N**, generally per existing arrangements; and
2. Within **a designated loading dock** to be provided in the northeast corner of Bay 1 (subject to separate SSDA 8517). It is intended that this loading dock will ultimately service the proposed retail uses within Bays 1-4a and the commercial uses within Bays 5-15.

Along with the provision of the additional on-street accessible car parking, taxi and drop-off spaces within the public domain area to the north of Locomotive Street, this proposal includes the provision of eight (8) loading bays. Access to these bays will be gained from Locomotive Street via Garden Street as per the existing arrangement.

Given the provision of the designated loading dock within Bays 1 and 2 is subject to a separate development application (SSDA 8517), until such time as the loading dock has development consent, servicing and loading activities for Bays 5-15 will utilise the proposed eight loading spaces. These new spaces will replace the existing loading arrangements which currently exist and will principally be used for small vehicle deliveries and couriers etc.

In addition, under the non-loading dock scenario, the waste management strategy that is currently in place, will be utilised. In this respect, waste collection vehicles will continue to collect garbage from the existing waste storage location/ compound situated to the north-east of the Locomotive Workshop as identified by the red circle in **Figure 68**.

Should the loading dock proposed in Bays 1 and 2 be approved, it will include approximately five loading bays and include waste storage rooms. Further details are provided in SSD 8517.

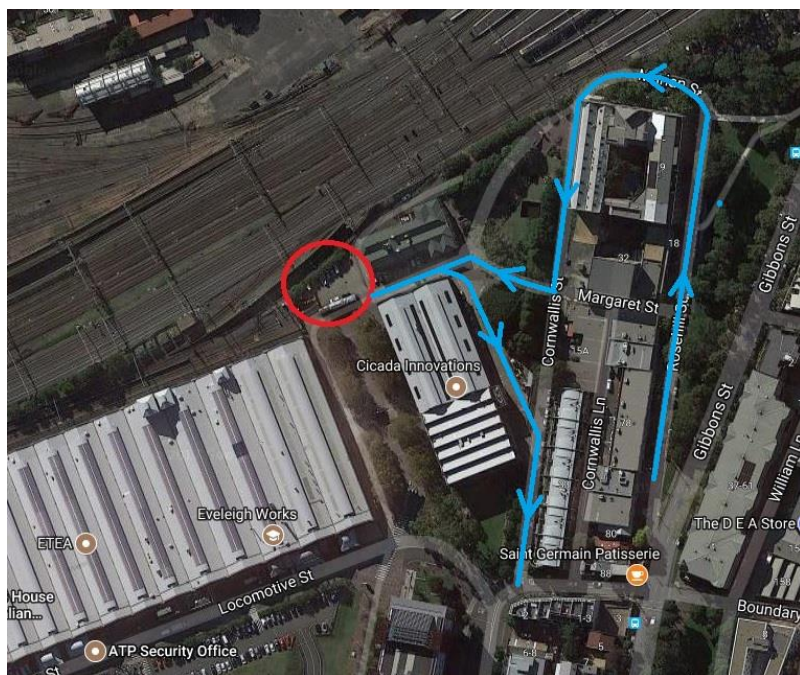


Figure 68 – Existing waste storage location and servicing route

Source: Mirvac

4.25 Operational Management

An Operational Plan of Management (**Appendix O**) has been prepared by Mirvac to explain how Bays 5-15 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.

4.25.1 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.

4.25.2 Public Access

Public access within the public circulation areas will be determined by Mirvac, however it will likely be open as a minimum 12 hours a day, 5 days a week. Public access to individual will be dependent on the nature of the business, subject to tenant requirements and conditions of consent attached to any fit-out approval.

4.25.3 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.

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.

4.25.4 Site Security

Security offices will be located on Level 2 of Bay 15 adjacent to the Site management offices. Security personnel will be on-site 24 hours, 7 days a week and will be responsible for on-foot patrols of the Locomotive Workshop both internally and externally. The exterior of the Locomotive Workshop will also be monitored by close circuit television (CCTV).

4.25.5 Staff

The Site management team will comprise of approximately 4 staff. However, the total number of staff employed within Bays 5-15 across all tenancies will be approximately 2,800.

4.26 Waste Management

As noted in **Section 4.26**, 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 that will be located within the north-eastern corner of Bays 1 and 2. However the provision of the loading dock in this location is dependent upon the approval of SSDA 8517.

Under the loading dock scenario, the loading dock will include a compactor and allocated waste storage rooms. It is intended that this loading dock will ultimately service the proposed retail uses within Bays 1-4a and the commercial uses within Bays 5-15 and waste management will be undertaken in line with the management measures outlined in the Operational Waste Management Plan, prepared by Waste Audit (**Appendix P**).

However, under the non-loading dock scenario, the requisite number and type of bins will be provided within the existing waste storage location (as indicated in **Figure 68**) and waste management will be undertaken in accordance with the measures outlined within the Operational Plan of Management included at **Appendix O**).

4.27 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 Q**) 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 0**.

4.28 Infrastructure and Services

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

4.28.1 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.

4.28.2 Electricity

Ausgrid have confirmed that the existing substation (S.3507) that is proposed to feed the new development within Bays 5-15 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 I**) 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 commercial development within Bays 5-15 and the new retail and development within Bays 1-4A.

4.28.3 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.

4.28.4 Stormwater Management

The Locomotive Workshop's existing stormwater drainage and downpipe system will be retained. However, as noted in the Stormwater & Hydraulic Infrastructure Services Report, prepared by NDY (**Appendix G**) this will be supplemented by the introduction of a rainwater reclamation system that comprises a 100,000 litre capacity rainwater reclamation tank within Bay 15. All rainwater from the roof of Bay 15 will then be collected and diverted to the rainwater tank.

The reclaimed rainwater from the tank will be pressurised through pressure system pumps, treated via a two-stage filtration process and then UV treated, prior to being reticulated to the necessary fixtures that will enable water closet flushing, washing down and landscape watering.

4.28.5 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 H**).

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 R**) focus on the issues related to the adaptive reuse and redevelopment of the western portion of the Locomotive Workshop (being Bays 5-15) herein referred to as the Commercial SSDA. A subsequent report that will support SSDA 8517 will outline the issues related to the redevelopment of the eastern portion of the Locomotive Workshop (being Bays 1-4a).

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 (**Appendix R**):

- 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 the Stormwater and Hydraulic Infrastructure Report (**Appendix G**) and Electrical Services Report (**Appendix H**).

A summary of the main issues raised by relevant authorities, agencies and organisations relating to the Commercial SSDA 8449, 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)		
3.	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 curtilage of the Locomotive Workshop. It is considered that the proposed development will therefore retain the vision for a vibrant public domain shared space for Locomotive Street.
4.	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.
5.	Internal spaces should not be cluttered	Functions of the proposed workspaces are opened or closed through varying levels of transparency, in both the facade and interior design. The atria spaces have been designed such that they are open at the ends to allow views out for staff and views into the atria for the public, and the mezzanine have been designed to open to the roof.
6.	Heritage items should be kept in-situ	Some in-situ machinery is currently located along the south-eastern corner of Bay 9 north and Bay 7. The current SSDA proposes that this machinery will be retained and integrated with the future fit-out design for the tenancies and public circulation space. Other moveable items (not in-situ) will be relocated in accordance with principles outlined in the Heritage Impact Statement, and as part of the broader interpretation strategy. Further details are provided with the Heritage and Archaeological Impact Statement (Appendix K).
7.	Location and storage of heritage items	Four (4) indicative locations for heritage machinery and items have been indicated within the commercial tenancies on the Architectural Plans (see Appendix B). 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 and this will also include the mechanisms and processes for storage of any items not displayed.
8.	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 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 K .
9.	Light touch and reversibility of all heritage impacting elements is important.	

Key Issue		Response
10.	Permeability between commercial and retail components of the building	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. It also allows for a full appreciation of the architecture and fabric of the building, including the cast iron columns, roof trusses, and overhead gantries. 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.
11.	Concerns that public won't be able to access machinery that is proposed within the commercial tenancies.	Mirvac will endeavour to arrange controlled public access through Bays 8-13 and Bays 14 and 15 during nominated times (such as the Great Strike Day) subject to agreement with the tenants and their security requirements. In addition, machinery will be displayed in publicly accessible areas within Bays 5 to 9 of the tenancies, such as the central atria.
12.	Provide photo montages to indicate the location of the service pods in context and from different views within the building.	Photomontages have been provided, to particularly illustrate the indented design and treatment of the service pods within the commercial tenancies (see Appendix C).
13.	Ventilation and sustainability aspects of building	An Ecological Sustainability Development Report has been prepared by NDY (see Appendix Q), which provides further details regarding sustainability initiatives and mitigation measures for the development.
14.	Loss of Exhibition space needs to be justified and mitigated.	The Heritage Impact Assessment at Appendix K , provides a robust analysis and justification for the change of use of the Main Exhibition Hall.

Heritage Division – Office of Environment and Heritage NSW (including Director – Heritage Operations)

15.	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 Public Domain, Buildings 1, 2 and 3, and Locomotive Workshop (currently in preparation). Once complete, the Stage 2 Interpretation Plans will fit together to apply to the broader ATP site. 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.
16.	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, its patina and machinery, to 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 .

Key Issue		Response
17.	The volume of change in use should be considered and justified. The building should not lose its essence and history of usage.	The Heritage and Archaeological Impact Assessment at Appendix K , provides a robust analysis and justification for the change of use of Bays 5-15.
18.	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 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. Currently it is underutilised and lacks the sense of noise and activity that it once had. The redevelopment of the Locomotive Workshop along with the redevelopment of the remainder of the ATP will enliven the ATP precinct and ensure that it will become a hub with a mix of uses, and activation more alike to the former busy industrial character that the Site once enjoyed.
19.	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 shared zone. The proposed redevelopment, the subject of this application has integrated with these works, proposing key entries to the commercial tenancies at Bays 7 and 13 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 and Bays 14 and 15. As part of the separate SSDA 8517 retail zones with Bays 1-4a will provide activation at ground level throughout Locomotive Street and indirectly activate Innovation Plaza.
20.	Internal spaces should not be cluttered	See Point 3 above.
21.	Heritage items should be kept in-situ	See Point 4 above.
22.	Location and storage of heritage items	See Point 5 above.
23.	Three mezzanine levels should not be an option.	This application proposes a maximum of two floors for a majority of the redevelopment, with the exception of Bay 15, which proposes a second mezzanine level for the southern portion of the bay to ensure consistency and circulation with layout of existing tenants in Bay 14.
24.	New building features should be independent and should have their own architectural style	See Point 6 & 7 above.
25.	Light touch and reversibility of all heritage impacting elements is important.	

	Key Issue	Response
26.	External door and window treatments should be lightweight. These elements should not have intrusive profiles.	The language of new opening arrangements will entail a painted steel frame which is offset from the existing opening, then in-filled with contemporary aluminium and glass infill. The heritage industrial aesthetic of the building will be carried through into all new external items. Where heritage timber doors are existing, these will be preserved and retained in an open position internally. 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 K .
27.	Concern about the readability of the mezzanine level through the glazed entrances/windows on Locomotive Street.	The design approach is to setback the mezzanine from the walls, so as to be reduce visibility. The Architectural Design Report at Appendix C and Section 4.16 outlines and provide details in regard to the proposed treatment to the edge of the mezzanine floors.
28.	Preference for treatment of external substations is for simple ventilated framework, rather than angled finishes (e.g. a simple/industrial look)	The proposal is consistent with this preference, providing a simple finish with only horizontal finishes. Further design details are provided within the Architectural Design Report (Appendix C) and at Section 4.15 .
29.	Provide an illustration of the proposed height of the service pods, and their functionality	Proposed service pods have been illustrated and further detailed within the Architectural Design Report (Appendix C). The amenities and services pods are designed to serve multiple purposes, minimising the impact of not only amenities, but also services and mechanical equipment.
30.	Provide more detail of the proposed changes to the roof structure, including the addition of skylights.	Proposed changes to the roof structure have been indicated within the Architectural Plans (Appendix B), further detailed within the Architectural Design Report (Appendix C), Heritage and Archaeological Impact Statement (Appendix K), and at Section 4.13 .
31.	Ensure that both the commercial space and public domain is part of the broader Heritage Interpretation plans across the site.	Indicative locations for heritage machinery and items have been indicated within the commercial tenancies on the Architectural Plans (see Appendix B). The intent is to have uniform treatment of interpretation of heritage items throughout, and to interpret in paving and along Central east-west spine. The Heritage Interpretation concepts are discussed in Section 4.20 .
32.	Encourage the commercial tenant to tell the story of the site by providing marketing/information material for them to refer to.	The Heritage Interpretation concepts discussed at Section 4.20 discuss the proposed methods for how the stories of the Site will be told, however the exact details will be included in the Stage 2 Interpretation Plans that are currently being developed. Former uses, digital overlays are intended as part of the Stage 2 Interpretation Strategy throughout the site, creating journeys both within the Locomotive Workshop building and outside within the whole site.

Key Issue	Response
<p>33. The preference is for moveable items to be relocated to areas of their provenance.</p> <p>Heritage Division would like further consultation regarding potential relocation of the Traverser.</p>	<p>The proposal is consistent with this preference and the heritage interpretation strategy. Generally, machinery has been relocated within the appropriate Bays, where possible. It is proposed to consult with the Heritage Division NSW as part of finalising the new locations for Moveable heritage items that will require relocation as part of the Stage 2 Interpretation Strategy.</p> <p>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.</p>
<p>34. Proposal needs to justify the change of use from exhibition space to commercial.</p>	<p>See Point 12 above.</p>
<p>35. Balance and justify the impact of the proposed third floor within Bay 15.</p>	<p>There are existing tenancy lease arrangements until the year 2023, which currently occupy 3 floors of commercial space within Bay 14. As such, it is proposed that this third floor will be matched in Bay 15 for consistency and provide circulation. Given that Bay 14 will act as a barrier, both visually and physically between Bay 15 and Bays 5-13 it was considered appropriate to create a floorplate that matches that of Bay 14 to enable potential opportunities in the future.</p>

Heritage Council of NSW

<p>36. Request for details on the proposed treatment of the movable heritage collection and items on display.</p>	<p>See Point 5 above.</p>
<p>37. Concern that the collection must be properly conserved, interpreted in a meaningful way throughout the development, particularly compared to present poor interpretation outcomes.</p>	<p>The proposal is consistent with the Stage 1 Heritage Interpretation Plan, as outlined within the Heritage and Archaeological Impact Statement (Appendix K). The conservation and interpretation works will be developed as part of the detailed Stage 2 Interpretation Strategy, to be developed in consultation with key stakeholders. Principles for the management of the collection are outlined in the Heritage Impact Statement, and are consistent with the ATP Conservation Management Plan, Heritage Asset Management Strategy 2013-2018 and Moveable Collection Management Plan. This strategy seeks to build upon and ensure more sustainable and thorough interpretation works/activities.</p>
<p>38. Requests for details of storage of moveable heritage and machines not being display, and understanding of the proposed conservation measures long term.</p>	<p>See Point 5 above.</p>

Key Issue		Response
UrbanGrowth NSW Development Corporation		
39.	The storage and location of movable heritage items that are not on display needs to be identified.	See Point 5 above.
40.	Themes relating to diverse communities, including the working class, needs to be interpreted across the site.	The heritage interpretation concepts discussed at Section 4.20 , demonstrate the importance of telling the stories of the diverse communities that use the Site. Initial key themes are included in the Heritage and Archaeological Impact Statement (HIS). Concepts of how themes will be interpreted and developed are discussed in the HIS, and will be further developed in the Stage 2 Interpretation Strategy.
Metropolitan Local Aboriginal Land Council		
<i>No issues raised regarding the Commercial SSDA.</i>		
Jenny Leong, MP for Newtown		
41.	Concern about loss of Exhibition Hall to commercial tenant and loss of public access	Whilst the commercial space will not always be publicly accessible, Open Days and Guided Tours will enable interested members of the community to visit Heritage machinery and items in this space. Refer to Point 12 .
42.	Permeability of the site – especially as large commercial tenant will close off this area of the building	The proposal does not propose a reduction in building permeability, in comparison to the existing conditions. The Exhibition Hall is currently only publicly accessible, by pre-arrangement with Doltone House or via attendance to an event. The proposal retains public accessibility via the central access spine between Bays 1-7, connecting to Innovation Plaza to the east. Refer to the Heritage and Archaeological Impact Assessment at Appendix K .
43.	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 38 above.
44.	Recognition of Aboriginal heritage	The heritage interpretation concepts discussed at Section 4.20 , 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 Public Domain and Buildings 1,2 and 3, and Locomotive Workshop building are currently only preliminary, however they detail the importance of the Aboriginal heritage of the Site and will ensure that it is prepared in consultation with the local Aboriginal Community. The HIS notes that Aboriginal people are the rightful owners of their stories.

Key Issue		Response
45.	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)		
46.	Consideration should be given to the use of Locomotive Street by coach and bus facilities.	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.
47.	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.
48.	The impacts of traffic generated during construction on surrounds must be cumulatively analysed and mitigated.	Cumulative traffic impacts have been analysed and further details provided within the Transport Impact Assessment at Appendix N .
49.	Heritage items should be kept in-situ	All 'in-situ' heritage items will be kept in-situ. Moveable heritage items that are not in-situ will be managed as part of the Stage 2 Interpretation Strategy (see Point 4 above).
50.	Location and storage of heritage items	See Point 5 above.
51.	The Heritage Interpretation Plan needs to apply to the entire site.	See Point 13 above.
52.	Coordination with TfNSW Heritage on heritage interpretation	<p>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.</p> <p>Mirvac and Transport Heritage NSW are currently in detailed discussions regarding re-use of much of the Moveable Heritage Collection as part of an apprenticeship program, as discussed in the Heritage and Archaeological Impact Statement at Appendix K. This does not include in-situ items.</p>
53.	Explore opportunities for relocation and integration of machinery at Chullora Railway Workshops.	Mirvac is currently investigating potential partnerships with Transport Heritage NSW that may allow for key machinery to be loaned by Mirvac for recommissioning and reuse in a proposed new apprenticeship training program for repair and conservation of historic trains at Chullora.

Key Issue		Response
Roads and Maritime Services		
54.	Provide accessibility for existing and future visitors	<p>An Accessibility Review has been prepared by Morris Goding (see Appendix W), and is further discussed in Section 6.12.</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		
55.	Sydney Water were consulted by NDY. This is outlined with the Stormwater and Hydraulic Infrastructure Services Report by NDY included at Appendix G .	
Ausgrid		
56.	Ausgrid were consulted as part of the Electrical Services Report by IGS, and is further detailed at Appendix H .	
Local Aboriginal and Community Groups		
57.	Extensive and ongoing community consultation has been undertaken as part of this SSDA and the SEARs Requirements, as detailed in Section 2.7 . Further consultation will continue to be undertaken as part of the redevelopment of the ATP (SSD 7317). 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 R , and a summary of the key issues raised by the community collectively is discussed in Section 5.3 below.	

5.3 Project Response 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 SSDA 8449, 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: Concern over the conversion of the Exhibition Hall into commercial space and loss of valuable 'publicly accessible' space.

Project Response: Mirvac agrees with the intent to retain aspects of the Locomotive Workshop for public use and accessibility, and as such want to encourage a greater range of community groups to utilise ATP.

Whilst there is a perception that the Exhibition Hall is publicly accessible, at present it is not the case as it is privately managed by Doltone House and is a large space suitable only for very large events. An operations analysis has been undertaken for the Heritage Impact Assessment (HIS) prepared by Curio Projects. The HIS details findings that the existing Exhibition Hall is underutilised for a variety of reasons. It is considered that as an event space, Bays 9-13 no longer present the essence of their significance as a place of high activity, of making, of doing, of technology and innovation. The repurposing of these Bays for commercial purposes presents the opportunity to recreate the sense of workers, activity, technology and innovation, a more positive reflection of its historic use.

Whilst the commercial space will not always be publicly accessible, Open Days and Guided Tours will enable interested members of the community to visit Heritage machinery and items in this space. Mirvac will endeavour to arrange controlled public access through Bays 8-13 and Bays 14 and 15 during nominated times (such as the Great Strike Day) subject to agreement with the tenants and their security requirements.

Mirvac will be making a range of other spaces available for the public to use (subject to separate SSDA 8517). These spaces will accommodate a range of activities and numbers of attendees, allowing for greater flexibility and diversity of use.

Key Issue 2: Heritage machinery and items located within the commercial space should be publicly accessible.

Project Response: Mirvac will balance the objectives of ensuring that Heritage machinery and items are publicly accessible with the proposed change of use. As noted above, whilst the commercial space will not always be publicly accessible, Open Days and Guided Tours will enable interested members of the community to visit Heritage machinery and items in this space.

Mirvac will endeavour to arrange controlled public access through Bays 8-13 and Bays 14 and 15 during nominated times (such as the Great Strike Day) subject to agreement with the tenants and their security requirements.

Currently, guided heritage tours are run by Richard Butcher on a voluntary basis, who was previously an employee of the Locomotive Workshops during its original use for Rail Infrastructure manufacturing and maintenance. There will be further opportunities for such tours to continue occurring.

Key Issue 3: The internal fit out of the commercial space must not compromise the original heritage building.

Project Response: Any future commercial tenant will be assessed as part of a separate development application which will include an assessment of heritage impacts, and will be based on the principle of compatibility with the look, feel and qualities of the building. The heritage of the building and site is a significant asset that will be protected and celebrated. The proposal has been sympathetically designed with the conservation of the Locomotive Workshop volumes, elements, fabric and functionality as the key requirement. The proposed internal design is much more sympathetic to heritage fabric than current fit-out, as it aims 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 Assessment has been prepared by Curio Projects (see **Appendix K**), assessing the proposed works, and is included in support of the EIS. The Architectural Design Report prepared by Sissons (see **Appendix C**) also provides further detailed design response.

Key Issue 4: The heritage items and machinery within the commercial space should be sympathetically interpreted in-situ or elsewhere on site.

Project Response: Mirvac's first priority is to retain and interpret in-situ heritage items and machinery within the Commercial space in their original location. The Moveable Heritage Collection on display in Bay 9 north and Bay 7, that is not in-situ, will be interpreted as part of a broader Heritage Interpretation Strategy, which includes display, or re-use by Transport Heritage NSW on site. This strategy seeks to re-locate heritage items with their provenance, accessibility and conservation in mind.

A holistic interpretive design language employed in commercial areas (affecting the floor plane, interpretive quotes, labels, panels and lighting) will be consistent with those in public areas - creating a cohesive interpretive experience across the whole site. Location of machinery is according to provenance and 'clusters' of machines will be created that reflect original uses and proximities – which enables more compelling and informative interpretive stories to be told, where possible. The final interpretation of Heritage items and machinery will form part of the Stage 2 Interpretation Plan.

Key Issue 5: The significant increase in the number of workers at the Locomotive Workshop will put pressure on public transport and local traffic.

Project Response: The redevelopment of the Locomotive Workshop will be accompanied by public domain improvements that will improve the connection between ATP and local public transport options. Improved wayfinding will encourage pedestrian movement, whilst better facilities will increase cycling to and from the site. The proposal does not seek consent for any additional vehicular parking, but rather aims to utilise the existing Redfern Station and future Metro Waterloo Station. This will help to diversify transportation options and assist in satisfying objectives of the City of Sydney, which is to reduce reliance on cars within the ATP.

Key Issue 6: The synergies between local organisations and the proposed tech ecosystem in the Locomotive Workshop should be preserved.

Project Response: Mirvac is actively working with local organisations to enable a thriving commercial and creative community at ATP.

Mirvac's existing Hatch initiative is to design the community utilising leading-edge Design Thinking methodologies - a customer centred approach that places the needs of ATP's technology and creative community at the heart of all decisions. A key part of the process is gaining an intimate understanding of the needs of all the groups expected to play a role in the ecosystem including start-ups & entrepreneurs, tech companies, local communities, investors, tech space operators, tenants at ATP, government & universities. This includes extensive face to face interviews with over 80 different groups that are expected to play a key role in the success of the ecosystem.

The findings of this interview process will inform decisions around the composition of business types to support a thriving community, what Mirvac can do to remove the barriers to entry for Tech Start-ups, the elements needed to ensure long-term viability of ATP as a technology precinct, and how we can ensure connectivity with other technology precincts.

Key Issue 7: The status of existing ATP tenants in the redevelopment of the Locomotive Workshop needs to be clarified.

Project Response: Existing tenants will be able to occupy the Locomotive Workshop until they are given the required notice under their lease in relation to termination. Mirvac will provide these notices as the earliest possible stage, to maximise notification period for existing tenants, and existing tenants will continue to be notified on progress of the development application. There may be potential for relocation opportunities to other buildings within Mirvac's portfolio, or alternatively to the Centuria owned buildings located within ATP. This has been raised during progress updates with existing tenants, and will continue to be communicated prior to construction phase. During the demolition and construction phase of the redevelopment of the Locomotive Workshop, existing tenants will be required to vacate the premise, with the exception of the Blacksmith in Bays 1 and 2, and tenancies within Bay 15 (currently known as Bay 14). It is the intention that the Blacksmith and Bay 15 tenancies will retain independent access during construction.

Key Issue 8: Redfern Station needs significant upgrades to accommodate the expected increase in workers travelling to and from the Locomotive Workshop.

Project Response: Mirvac have limited control over upgrades to Redfern Station, and this is not within the scope of this development application or Mirvac owned land. However, Mirvac understands and agrees with the feedback received regarding the requirement for Redfern Station Upgrades, and as such have separately been actively working with local stakeholders and neighbours to try and expedite the process.

At present, as part of the Conditions of Consent for the redevelopment of the Australian Technology Park for CBA (SSD 7317), Mirvac are required to provide a concept for DDA compliant access from ATP to Redfern Station. Mirvac are currently working with Transport for NSW to achieve this.

Key Issue 9: Mirvac need to manage the interaction between pedestrians, cyclists and motorists using Locomotive Street.

Project Response: Mirvac intend to prioritise pedestrian movement along Locomotive Street by careful landscaping features and wayfinding mechanisms. A dedicated bicycle lane will provide a safe route for cyclists. The use of Locomotive Street for vehicular movement will be discouraged where possible, and the proposed design avoids a dedicated loading dock in any location fronting Locomotive Street.

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 2.7**).

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.	<p>The proposal responds positively to this objective by promoting the adaptive and ongoing use and conservation of this State significant heritage building.</p> <p>The proposal will create high quality modern working environments that encompass, embrace and highlight 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 entrepreneurialism and innovation; and effective use of a currently under-utilised building within a high-quality environment.</p>
5(a)(ii) To encourage the promotion and co-ordination of the orderly economic use and development of land.	<p>The proposed development involves the orderly redevelopment of Bays 5-15 within the Locomotive Workshop to predominantly provide commercial premises floorspace within a range of various sized tenancies, shared working and maker spaces. The existing fit-outs within the Locomotive Workshop are approximately 20 years old and therefore the proposal represents the next phase of its life. It therefore promotes the orderly economic and development of the site.</p>

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 G), and Electrical Services Report (Appendix H) 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 5-7 during its hours of operation. Furthermore, Mirvac will endeavour to arrange controlled public access through Bays 8-13 and Bays 14 and 15 during nominated times (such as the Great Strike Day) subject to agreement with the tenants and their security requirements.
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. Whilst Bays 5-15 do not provide specific areas for use by community groups, cultural tourism is being promoted within other parts of the Locomotive Workshop. 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 0 of this EIS.
5(a)(viii) To encourage the provision and maintenance of affordable housing.	The proposed development will contribute towards the provision of affordable housing (supporting the delivery of approximately 5 affordable housing units) through the affordable housing levy.
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 R .
5(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.	The community consultation carried out assisted the development of the proposal and is detailed in Section 5.0 of this EIS. 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 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: (a) the provisions of: (i) any environmental planning instrument, and	The proposal is consistent with the relevant environmental planning instruments as set out in Section 6.3 .
(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.
(iiia) 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 5-15 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 .

Matter for Consideration	Comment
(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"> - delivers 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 floor space in the 'right location' within the Global Economic Corridor and adjacent to a key transport corridor; - supports the viability of ATP as a knowledge hub; and - assists in realising the vision for ATP as a destination for creative industries, at the end of 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 to the demographic characteristics of surrounding communities; • supports internationally competitive, knowledge intensive jobs sectors; • supports the consolidation of the broader Sydney CBD as Australia's premier economic hub; and • provides larger floorplate commercial office space in a highly accessible, connection location.

Instrument/Strategy	Comments
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"> • promotes the strengthening of the Innovation Corridor, which includes the site, as a key space for knowledge intensive, creative and start-up industries • 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 opportunities for the growth of commercial floor space.
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 5-15 facilitates the provision of 27,237m² of commercial premises use floorspace that will be utilised by a varied range of tenants, entrepreneurs and start-up companies, providing approximately 2,800 new operational jobs and approximately 100 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 N). • The proposal proposes bicycle parking and End of Trip facilities and 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 4.19, Curio Projects and Trigger Design have been engaged by Mirvac to prepare the Stage 2 Interpretation Strategy for the Locomotive Workshop and the Stage 2 Interpretation Strategy for the broader Public Domain, and Buildings 1,2 and 3. 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.

Instrument/Strategy	Comments
City of Sydney Public Domain Manual	The proposal includes minor works to public domain within the curtilage of Bays 5-15. 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.
Development Near Rail Corridors and Busy Roads-Interim Guideline	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 N), and the Acoustic Assessment (Appendix S). Potential impacts on Sydney Train Infrastructure (i.e. Illawarra Line Tunnels) is addressed in Appendix U .
Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics	Refer to Section 6.6 and Appendix K .
Conservation Management Plan for the Locomotive Workshop Building	Refer to Section 6.6 and Appendix K .
Heritage Council Guideline on Heritage Curtilages 1996.	Refer to Section 6.6 and Appendix K .

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 western portion of the Locomotive Workshop for a range of 'commercial premises' uses and 'light industrial' uses as described in detail in Section 4.4 . These uses are permissible with development consent.
Clause 8 – Business Zone – Business Park Objectives	
<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 27,237m² GFA of high quality commercial premises floorspace. In line with UrbanGrowth's requirement to provide a quantum of high-tech floorspace. it provides small ancillary retail tenancies within the two annexes fronting Locomotive Street to increase the range of retail facilities servicing the Locomotive Workshop worker and visitor population as well as the wider working population across the ATP and local community; it will revitalise a currently under-utilised State heritage listed building and naturally increase the level of safety of the community through the increase in footfall and level of activity across all areas of the ATP precinct; and it will integrate with the high-quality upgrade proposed for Locomotive Street.
Clause 21 (1) – Height	
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>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 5-15.</p> <p>The proposal does not exceed the height of the existing roof form at any point and is therefore compliant.</p>

Relevant Provision	Consistency
Clause 21 (2) – Floor Space Ratio	
The Locomotive Workshop site does not have a maximum FSR control shown on the Redfern-Waterloo Authority Sites – Floor Space Ratio map.	The proposal is consistent.
Clause 21 (2A) – Gross Floor Area	
The maximum Gross Floor Area of the Locomotive Workshop is 42,055m ² .	<p>The proposed total GFA within Bays 5-15 is 27,237m². The existing GFA of Bays 1-4a is 12,731m².</p> <p>Should Bays 1-4a not be developed the total GFA within the Locomotive Workshop will be 39,968m², however if Bays 1-4a are developed as proposed in SSD 8517 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>
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 	Section 6.4 discusses design excellence in greater detail, and demonstrates that the proposal is consistent with the criteria.
Clause 23 – Car Parks	
Clause 23 restricts the number of car spaces on land within the Business Zone – Business Park to a maximum of 1,600 spaces.	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.

Relevant Provision	Consistency
Clause 26 – Notification of advertised development	
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.	The SSDA will be placed on public exhibition in accordance with the requirements of the Department of Planning and Environment.
Clause 27 – Heritage conservation	
<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. 	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 K .
Clause 28 – Preservation of trees or vegetation	
Various provisions relating to the preservation of certain trees and vegetation.	The proposal does not propose works that will impact upon any trees or vegetation.

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, Policies and Guidelines

Instrument/Strategy	Comments
SEPP 55 (Remediation of Land) 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	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 T 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 6.9 .
SEPP 64 (Advertising and Signage)	As further discussed in Section 0 , 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. The future signage proposed will be subject to separate more detailed development application.
SEPP (Infrastructure) 2007	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.

Instrument/Strategy	Comments
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 and southern facades of Bays 5 to 15. 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 for individual tenants.

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 the 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 located above doorways or behind the exterior glazing. 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 future signage will be integrated behind the glazing of 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, behind the glazing.	✓
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.	✓
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.	✓

Assessment Criteria	Comments	Compliance
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 above the doorways will reduce clutter, rationalise and improve the appearance of the signage in and around the building.	✓
Does the proposal screen unsightliness?	The proposed signage zones are 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, behind the glazing, 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.	✓
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7 Illumination

Would illumination result in unacceptable glare? Would illumination affect safety for pedestrians, vehicles or aircraft?	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.	✓
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Assessment Criteria	Comments	Compliance
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? Is the illumination subject to a curfew?	It is not considered necessary or appropriate to impose a curfew on the illumination of signage given 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 **Table 10**, 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 5-15 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>

Requirement	Response
(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 be modest in scale and nature and seek to simplify, declutter and enhance the existing heritage facades.</p> <p>The plant annex recladding, will ensure that they are more visually recessive and enhance the existing exterior brickwork of the Locomotive Workshop building. This will also contribute to, and enhance the visual appearance of the building from the public domain.</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 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 Q), 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 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 69** and **Figure 70**, 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 each SSDA, the description of works and environmental assessment of potential impacts only focuses on those that are relevant to Bays 5-15 within this EIS.

Notwithstanding this, the designs for both parts of the Locomotive Workshop (including Bay 15) 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 through Bays 8 to 13;
- 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;
- the illumination strategy.

Overall, the design quality of the proposal is to an extremely high standard and it seeks to carefully convert Bays 5-13 and Bay 15 from an under-utilised and sterile location to a vibrant and contemporary working environment, that retains the significant heritage fabric and celebrates its massing and industrial history.



Figure 69 – Proposed Ground Floor of the Locomotive Workshop



Figure 70 – 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 K**). It addresses the proposal in terms of its impacts on the western portion of the Locomotive Workshop, being Bays 5-15, but also addresses how the proposed works relate to any future works within Bays 1-4a, the wider ATP precinct and the surrounding Eveleigh Railway Workshop precinct.

In particular the HIS provides an extensive and detailed assessment of 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 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/ RAlA 2005, Design in Context – *guidelines for infill development in the Historic Environment*.

Overall, Curio Projects supports the proposal and considers that *“whilst the proposed redevelopment of Bays 5-15 within the Locomotive Workshop requires a major change of use in key spaces, it will have an exciting and positive long-term effect in protecting and celebrating the Site's heritage fabric and stories. The redevelopment aims to preserve, accentuate and emphasize the exceptional physical and aesthetic heritage value of the building and its spaces, within an operational framework that will secure the long-term economic viability and activation of the Site”*.

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

Table 14 – Key conclusions of the Heritage Impact Statement

Potential Impact	Conclusion
Change of use of Bays 8-13	The proposal intends to repurpose the current vast Main Exhibition Hall of Bays 9-13 back to an active, high functioning commercial space that is once again occupied by hundreds of workers of a daily basis. The proposed use will result in a change in how the space is viewed, used and appreciated and has been designed to be fully reversible. As an event space, Bays 9-13 no longer represent the essence of their significance as a place of high activity, of making, of doing, of technology and innovation. Bays 8-13 would have been full of workers, machinery, noise and action on a daily basis. The opportunity exists to recreate that sense of importance, of activity, of technology and innovation in a sympathetic way that will protect and celebrate the fabric whilst allowing the spaces to once again, adapt and change for the future – ever evolving and ever adapting. The introduction of a large-scale work environment, back into the space provides a more positive reflection of the busy, vibrant workshop environment that once functioned in this location. It is therefore considered to be a positive heritage outcome, returning it more closely to its original function as a busy workplace.
Use of Bays 5-7 as a technological innovation and development focused space	The renewed function of Bays 5-7 will see technological advances remain a core function of the Locomotive Workshop. Outstanding advancements in technology are synonymous with the history of the Eveleigh Railway Workshops stretching from the industrial rail technology of the 1800s and 1900s through to the modern-day technological advances in STEM disciplines.
Changing the use of the two annexes to retail spaces	The proposed change of use will enhance public activation along Locomotive Street for the first time since the site was redeveloped in the 1990s. The retail spaces will draw residents and site workers into the Locomotive Workshop and encourage visitors to use the central spine to travel between Bays 1-7. The creation of the retail use in the annexes will be a positive impact.
Changes to the Locomotive Workshop bay numbering	The renumbering of the Bays is a positive change that was identified by the many stakeholders as being necessary. Using the original sequence of bay numbering provides the most historical and interpretative context for the Locomotive Workshop within its broader Eveleigh Railway Workshops setting. Returning the numbering of the Bays to their original sequence, rather than continuing the duplication of two Bays 16s, will create a much clearer linkage between the Locomotive Workshop and Carriageworks.
Design approach of the intertenancy Walls	The proposal to retract the intertenancy walls from the central spine to create a broad visual corridor will allow greater views to and appreciation of the industrial architecture of the building itself. Reinforcing the focus within the interior of the Locomotive Workshop on the original industrial fabric of the building is considered to be a positive visual impact.

Potential Impact	Conclusion
Maintenance of the publicly accessible central spine and provision of the 12-13m wide central atria in Bays 6, 9 and 12	The maintenance of the central spine will allow and encourage public access between Bays 1-7. The public accessibility to the significant heritage and historical values, the industrial architecture and moveable heritage collection embodied within the building will be preserved and encouraged within these central spaces.
Relocation of overhead gantries and cranes	Originally, during the ERW function of the Locomotive Workshop, the Bay 3 to 4a overhead gantries and cranes were repositioned along tracks whenever it was required, for use in moving heavy items. Therefore, their relocation will have no negative impacts and their repositioning to the central circulation spine and atria provides more opportunities for increased visibility in Bay 4. Interpretation and appreciation of these iconic pieces of machinery.
Roof upgrade and installation of skylight slots – physical impact	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. In addition, the installation of the skylight slots is limited to 5% of the entire roof surface and will standardise the quality of daylight to common spaces and atria to provide natural even daylight distribution without the need for major physical intervention through the introduction of a whole new system of overhead lighting and associated infrastructure within key circulation areas. The configuration of the skylight slots have been modelled on the existing roof conditions within the Large Erecting Shop and will be constructed from Alsynite 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, and creates positive sustainable environmental benefits.

Potential Impact	Conclusion
Roof upgrade and installation of skylight slots – visual impact	<p>The installation of insulation and replacement of the new outer layer of metal sheeting will have a neutral impact, however the installation of the skylight slots will be visible from within the Locomotive Workshop. Changes to the roof skylights will create a major change and 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 complete loss of the readability of the 'vertical' pattern of skylights in Bays 6,9, 12 and 14. 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 for new office lighting in the central atria; • 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; • be readily reversed in the future should future user requirements change.
Demolition of the modern fit-out elements – physical impact	<p>The existing modern fit-out when constructed in the 1990s were commended for their ability to work with the original fabric of the building and their reversibility. As a result, there are very minimal to no physical impacts proposed with respect to the proposed demolition of the modern sit-outs.</p>
Demolition of the modern fit-out elements – visual impact	<p>While the 1990s fit-out was considered to be best practice at the time of its creation, in many locations the infill development does not actually relate to the form and fabric of the Locomotive Workshop building. The removal of the existing fit-out in Bays 5-13 and 15 provides the opportunity for the fit-out to be reconsidered, using current technologies that allow for greater flexibility for servicing and a stronger visual relationship between the new fabric and the old. Furthermore, the full demolition of the infill allows the building to be returned to its base state, prior to the new works commencing. As a result, the demolition works provides a window of opportunity for Mirvac to archivally record the original fabric of the building to modern standards, including a possible 3-D recording, which will provide a valuable resource for Mirvac, researchers, interpretation and heritage specialists, the NSW Heritage Division and the City of Sydney in the future.</p>

Potential Impact	Conclusion
Construction of new commercial and light industrial uses within Bays 5-13	The design comprises a Ground Floor and First Floor mezzanine with an open ceiling structure throughout Bays 5-13. Following design input from key stakeholders, it was concluded that a second mezzanine level to increase the offering of floorspace would have a detrimental effect on the readability of the historic fabric within Bays 5-13. The resulting design proposes only two storeys, that are connected by the central spine and incorporate 12m wide floor to roof atria in Bays 6, 9 and 12. The design approach represents a sustainable approach to the development that will allow for the heritage fabric to remain front and centre.
Bays 5-7 fit-out	The changes to the internal configuration of the internal spaces within Bays 5-7 will require the introduction of new fabric for partition walls and intertenancy divisions, the construction of a mezzanine level and a new central corridor. To ensure that the physical impacts to existing original fabric remain minimal, the design intent is to keep the mezzanine level pulled back from the wall fabric, through the installation of self-supporting lightweight structures that sit within the building envelope. This will provide a structure that is independent from the cast iron columns rather than attached, and to work with materials that could be removed and reversed in the future without having a major physical impact to original building fabric. Overall, the proposed new multi-purpose office spaces will have a positive impact in Bays 5-7 due to the low impacts to physical fabric, the retention of key open spaces and visual connections to important sightlines. When compared to the existing fit-out of Bays 5-7, the aesthetics, activation and amenity of the spaces will be greatly enhanced, as will the appreciation of the heritage values of the building.
Bays 8-13 fit-out	The proposal to create one large commercial tenancy within Bays 8-13 will create a major change to the current physical and visual environment within Bays 9-13, being the Main Exhibition Hall. The key part of the fit-out in Bays 8-13 is the proposed mezzanine, which will be setback from the fabric of the building with voids retained at key locations to correspond with the locations of the external doors and windows, so that the fabric of the doors and windows will not be impacted. Furthermore, three north-south light-weight bridges will be incorporated within the mezzanine on either side of the atrium in Bay 9 and between Bays 12 and 13 to ensure circulation throughout the tenancy remains easy and flexible. The incorporation of bridges within the mezzanine design is considered to have a minor visual impact on views within the central atria and along the central spine, but they are consistent with the bridges that were incorporated in the 1990s fit-out. Overall, the proposed fit-out will be carefully managed, designed and executed in order to ensure that the original fabric of the building, including the overhead gantries, roof trusses, support beams, cast iron columns, windows and walls are protected, interpreted and conserved throughout the detailed design and construction process.

Potential Impact	Conclusion
Bay 15 internal fit-out	The new three storey fit-out within Bay 15 will result in minor physical changes to the existing Bay. The impact of a third storey will have a greater visual and physical impact within Bay 15, as opposed to the remainder of the infill development throughout Bays 5-15. However, by creating a third-storey it is possible to accommodate plant at the rear of the bay, relocate the facilities management and create commercial space to the Locomotive Street frontage. By continuing to have commercial space within Bay 15, it helps the space to remain as a relevant and activated component within the Locomotive Workshop and the broader site. One of the key determining factors in treating this bay differently from the rest was the inability to physically or visually link Bay 15 with Bays 5-13 due to the long-term lease in Bay 14 that creates a barrier between Bay 15 and the rest of the central spine. Therefore, it was considered appropriate to create a floorplate that matches with that of Bay 14 so that it allows for potential opportunities in the future. Whilst the proposed new use will result in the need for the localised removal and replacement of some roof sheeting to install some plant and larger equipment by crane, this would have minimal impact on heritage fabric beyond installation and removal and the proposed reconfiguration of the space will have a minor impact on original building fabric, with the walls, roof trusses and other significant heritage fabric to remain intact.
Amenity and Service Pods	The service pods have been designed to be fully reversible and self-contained. They will be located between and wrapped around the cast iron columns supplemented by an access floor to allow for all services to be reticulated without disrupting the existing floor treatment. The service pods have been designed to touch the heritage fabric lightly so as not to disrupt the impact on the fabric of the columns. Therefore, in terms of actual physical impacts to the heritage fabric, the installation of the service pods is considered minor as it relates only to wrapping around the cast iron columns in the identified pod locations. The pod location strategy has been designed to minimise the impact on the heritage structure by clustering required amenities in several singular locations. They will also be articulated to reduce the visual scale of the structures themselves. However, the readability of some columns that are to be enclosed will be impacted, it is considered an acceptable impact on balance, as the functionality of the service pods will reduce the need for the installation of extensive internal infrastructure throughout the whole of the Locomotive Workshop and the potential large-scale, visual and physical impacts elsewhere are reduced by consolidating all the key amenities and services within these discrete structures.
Fit-out of two existing office annexes	This refurbishment will only impact upon the modern fabric of the annexes and will have no physical impact to any original or heritage fabric.

Potential Impact	Conclusion
Recladding of plant annexes	The removal of the existing cladding and replacement with more contemporary, sympathetic cladding in a darker colour is proposed to make the modern substations recede more along the length of the façade. The existing cladding is modern and has no significance and the replacement cladding will not require any additional fixtures or changes to any original building fabric. As a result, the changes will have a neutral physical impact as the proposed works will result in no changes to or impacts upon original fabric associated with the external façade. Further, the replacement cladding will be less intrusive and will help reduce its impact within the streetscape.
External doors	The existing modern glass doors that lead from the interior of each bay to Locomotive Street (and to the north) have been identified through the CMP as having little heritage value. However, some bays retain historic timber door which will continue to be retained and fixed in an open position internally, in front of a contemporary lightweight glazed doorway. The upgrade of the doors will have little or no physical impact on any significant fabric of the Locomotive Workshop, as they will be designed to sit within the existing openings of the building. They will pay homage to the fact that many of the bays of the locomotive Workshop did not originally have doors, or would not have had them shut often, with locomotives constantly entering and exiting the building. The open position of the retained timber doors will also serve to achieve this aesthetic, while retaining historic fabric and allowing for a consistency of design approach, across the entirety of the façade of the Locomotive Workshop.
External windows	The existing heritage windows along both the northern and southern facades of the Locomotive Workshop will be retained, restored and reused, however the frosted glass within the southern façade windows will be replaced by clear glass to create better transparency, light access and view lines to and from the building. The bricked up window in Bay 11 is also to be reopened and a new custom-made window inserted to match the existing windows. The replacement of the bricked up window in Bay 11 will improve the aesthetics and consistency of the southern façade. Overall, the proposed visual impact is positive as it will create continuity along the whole of the façade.
Materials palette	The proposed materiality includes a simple palette of glass and steel for the base build, in order to complement the industrial fabric and spaces of the building. The new fabric will clearly be able to be read as contemporary, but will be read as far more sympathetic than the existing fit-out.

Potential Impact	Conclusion
External illumination	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 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.
External building illumination – visual impact	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.
Signage	The signage is proposed to be designed to be in keeping with the heritage aesthetic of the Locomotive Workshop building, and utilise sympathetic materials or be located behind glazed panels where the large format doors occur. The proposed signage will have a neutral visual impact, provided that the signage is consistent in materiality and colour palette of the heritage character of the external façade and has been designed to not detract from the significant aesthetic heritage values of the building.
Public domain improvements	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 will have a positive impact, that is commensurate with and sympathetic to the existing heritage façade.

Potential Impact	Conclusion
Moveable heritage items	The CMP identifies that the opportunity remains within the locomotive Workshop to 'conserve the significance of items of the machinery Collection by returning them to use, taking into account relevant WHS, operational and amenity considerations. In addition, the CMP identifies that the moveable heritage collection, 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 worked together has been obscured through relocation of most machinery. Therefore, the proposed relocation of some moveable heritage items within Bays 7 and 9, that are no longer in their original location, provides the opportunity to significantly increase the communication of the heritage values of these machinery items, ideally to be re-associated with their original context of use or to a more effective location to improve the overall communication of the original function and heritage significance of the Locomotive Workshop. The opportunity for re-use of a large number of machinery by NSW Transport Heritage is extremely positive.

Source: Curio Projects

In order to ensure that the heritage significance of Bays 5-15 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.
- While the CMP generally supports the retention of the Main Exhibition Hall as an open and empty space, the repurposing of this space into commercial office space is in keeping with Policy 2.11, by converting it from an under-utilised private event space into a lively and busy technical workplace, that is consistent with the original use of the space and commensurate with the historical use of the bays.

- The redevelopment of Bay 5-15 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 exceptional values of the moveable heritage collection, through such initiatives as improved heritage interpretation, retention of in-situ machinery, and potential partnerships with Transport Heritage NSW that may allow for key machinery to be loaned by Mirvac for recommissioning and reuse in a proposed new apprenticeship training program for repair and conservation of historic trains at Chullora.
- 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 overhead gantries) and original annexes. The commercial office in-fill 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 concept plan for the proposed redevelopment of the western portion of the Locomotive Workshop (Bays 5-15) is consistent with the proposed Future Use (Policy 7) of the CMP. The single level mezzanine office fit-out has been designed with the intention of conserving and highlighting the industrial features of the building without having any major physical impacts. The reinterpretation, and possible reuse, of moveable heritage items (currently located in Bays 5-15) 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;
 - interpretation of key stories and events through interpretation;
 - adaptive reuse of annexures for retail; and
 - 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 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 K**) 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 the risk of finding in-situ Aboriginal archaeological sites are considered to be low to nil. Which is consistent with the CMP assessment of Aboriginal archaeological potential.

6.6.3 Historical Archaeological Impacts

The Heritage and Archaeological Impact Statement, prepared by Curio Projects (**Appendix K**) 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 'works' rather than 'relics'.
- 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 are proposed to form part of the travelator interpretation.
- Two turntables remain within the ATP precinct, along Locomotive Street in front of Bay 5 and Bay 13 and are both listed on the S170 Register and recommended to be 'retained for interpretive purposes'. These turntables will be conserved and interpreted as part of the public domain works.

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. There is some likelihood for 'works' (i.e structural remains, fabric associated with existing building to be present). Such fabric would be archivally recorded, if uncovered.

6.7 Traffic, Parking & Access

A Transport Impact Assessment has been prepared by GTA Consultants (**Appendix N**) that provides a comprehensive assessment of the potential transport impacts that may result from the proposed development. The key components of the assessment are outlined below.

6.7.1 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 additional standard car parking is not provided as part of this development, 4 additional accessible spaces are proposed within the public domain area located to the north of Locomotive Street as show on the plans at Attachment 1 of the Traffic Impact Assessment, prepared by GTA (**Appendix N**). The addition of these 4 spaces will increase the total ATP parking provision from 1,564 to 1,568. Notwithstanding this, the proposal remains below the threshold set within the ATP precinct.

Furthermore, it is noted that employees within the new commercial tenancies will be offered the ability to lease a car parking space from the overall pool of parking provided across the ATP precinct. However, 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 N**) that details the specific measures that will be implemented.

6.7.2 Bicycle Parking

As noted in **Section 4.24.3**, the proposed development includes a secure bicycle storage area for 227 bicycles and end-of trip facilities within Bay 15. 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 applied the relevant bicycle parking requirement rates to the proposal given that cycling is considered to be a key mode of transport for the ATP precinct.

Accordingly, GTA confirm that the overall bicycle provision requirements for the Locomotive Workshop development are as follows:

Table 15 – Bicycle Parking requirements for the entire Locomotive Workshop

Use	Size	DCP Rate		DCP Requirement	
		Employee	Visitor	Employee	Visitor
Bays 1-4a	11,358m ²	1 per 150m ² GFA	1 per 400m ² GFA	76	28
Bays 5-15	27,237m ²	1 per 200m ² GFA	1 per 300m ² GFA	137	90
Total				213	118

Source: GTA

Table 15 demonstrates 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. GTA also confirm that the bicycle parking layout has been designed in accordance with the relevant provisions of Australian Standard AS2890.3-2005.

However, the overall provision of 46 on-street spaces is 72 less than the DCP requires, which equates to a provision of 39% of the DCP requirement.

GTA confirm that a provision of 39% of the DCP requirement 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 ratio³ of bicycle spaces to the volume of GFA that was approved under SSD 7317 was applied, then only 13 spaces would be required.

6.7.3 Loading and Servicing Management

As described in **Section 4.24.4**, the overall strategy for loading and servicing within the entire Locomotive Workshop is based on the provision of a loading dock within the northern part of Bays 1 and 2. Given the provision of the loading dock is included as part of SSD 8517, the assessment of the impacts associated with it is provided within SSD 8517, however further details are provided in the Transport Impact Assessment (**Appendix N**), prepared by GTA as it provides a comprehensive assessment of the transport impacts associated with the entire Locomotive Workshop.

In the event that the loading dock is not provided, a number of management measures will be implemented to mitigate any potential adverse environmental impacts. These include, the adoption of a vehicle booking system, engagement of contractors with smaller trucks and co-ordination of waste servicing/ pick-ups by Site Management.

³ 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.

6.7.4 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.

6.8 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.

6.9 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 P**).

The WMP identifies the likely waste streams and estimates of the quantities likely to be generated during the operation of Bays 5-13. **Table 16** below identifies the expected waste streams and likely quantities.

Table 16 – Waste generation estimates

Waste type	Volume (litres)
General Waste	66,833
Paper/ Cardboard	43,441
Comingled (container recycling (glass and plastic)	23,391
Total	133,665

In addition to these common waste streams, other forms of waste such as organics, fluorescent light tubes, toner cartridges, e-waste and mobile phones may also be generated.

As noted in **Section 4.26**, Mirvac's overall strategy for waste storage within the entire Locomotive Workshop is to provide general and recycled waste storage facilities within the loading dock that will be located within Bays 1 and 2. If the loading dock is approved and provided under SSD 8517, then Waste Audit estimate that 56m² of waste/ recycling storage space will be required to store the required 43x660 litre mobile bins and allow for 30% additional space for bin movement.

However, given that it is anticipated that the waste storage facilities will be provided for all of Bays 1-15 in the one location, Waste Audit has recommended that the following systems be implemented as then only 36m² storage space would be required:

- a 20m³ 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 cardboard, 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 space allocated within the proposed loading dock would be sufficient to store 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 the event that the loading dock is approved under SSD 8517, 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.

Furthermore, should the loading dock not be approved, then, the following strategy (as set out in the Operational Plan of Management at **Appendix O**) will be implemented:

- General Waste, Paper/ Cardboard and Comingled bins will be located within the existing waste storage area.
- The waste storage location will contain the required number of bins (as determined by an appropriately qualified waste auditor).
- Waste contractors will service the Site and empty the respective bins on a regular basis.
- The waste storage area will be kept clean and tidy at all times.
- Ensuring there are suitable systems in place to create an effective waste management system.

6.10 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 T**.

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 V**) 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.

6.10.1 Hazardous Materials

As noted in **Section 4.7.1**, a Hazardous Materials Survey undertaken by JBS & G (see **Appendix I**), 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.

6.11 Noise and Vibration

Arup has prepared an Acoustic Assessment (**Appendix S**) 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.

6.11.1 Noise Emissions

The potential noise emissions generated by the proposed development will be from proposed mechanical plant and equipment, road traffic generated by the development 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 71**, 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 71**.

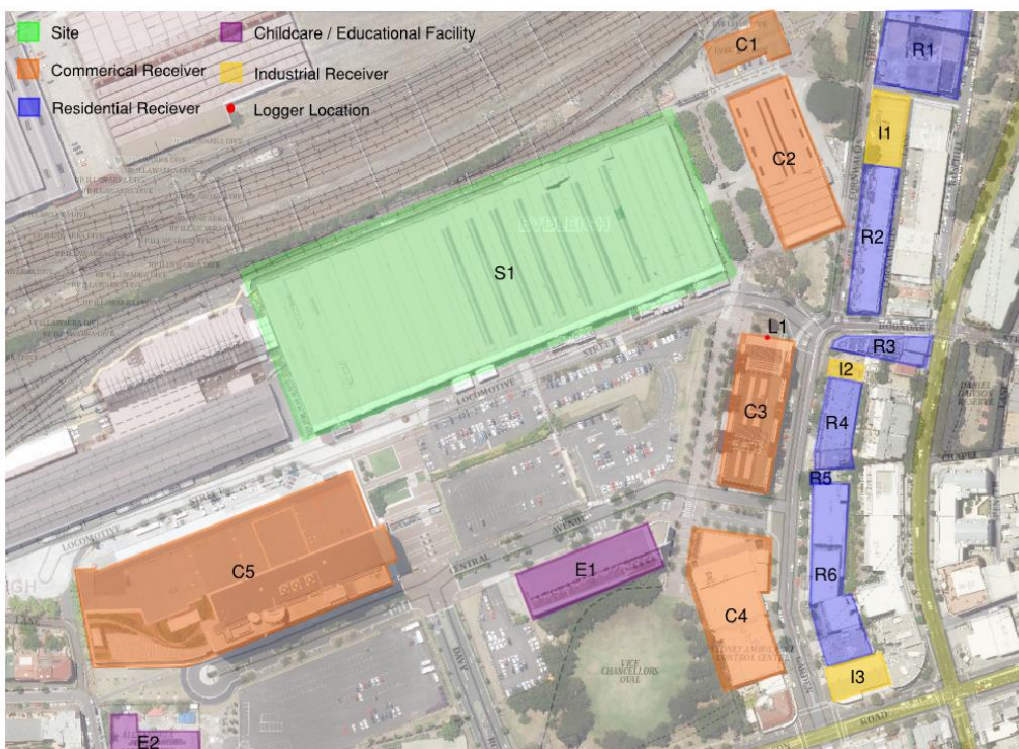


Figure 71 – Surrounding receivers and measurement locations

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 17 – Project noise criteria

Receiver	Time period	Existing noise levels		Project goals			
		Rating Background Levels	Industry dBL _{Aeq}	Traffic dBL _{Aeq}	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

Therefore, given the only operational noise proposed to be generated by the proposal is expected to come from the building service equipment (i.e. mechanical, hydraulic and electrical equipment). Whilst the existing thermal cooling plant is being 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.

Notwithstanding this, given the development will utilise the existing building services equipment currently servicing Bays 5-15 where possible, if new roof cowls for small exhaust fans are required, given the distance to surrounding noise sensitive receivers, Arup confirm that with the appropriate selection of equipment, building services can be designed to readily comply with the project noise goals.

In addition, it is noted that the provision of the on-street loading bays will not give rise to significant on-site noise emissions and notes that the existing Doltone House Function Centre operation within Bays 9-13 will be removed which is a more intensive use the proposed commercial uses.

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 used 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.

Construction Noise

Furthermore, with regard to the proposed construction activities, Arup has prepared a Construction Noise Management Plan (CNMP), that forms part of the Preliminary Construction and Environmental Management Plan (**Appendix V**). 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.

6.11.2 Noise Intrusion

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.

6.12 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 (see to **Appendix W**) 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.

In addition, Morris Goding have completed an assessment of the 4 assessable car parking bays proposed, as indicated on the Plans included within the Transport Impact Assessment at **Appendix N**. The DDA Statement (see **Appendix X**) confirms the proposal meets the relevant provisions.

6.13 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 Y**).

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. However, it is noted that Bay 14 is not included as part of the redevelopment, and will be fire separated from adjoining bays to the east and west.

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.

6.13.1 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 Y**) 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 Z**) 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.

6.14 Services and Utilities Management

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

6.15 Water Cycle Management

The Stormwater and Hydraulic Infrastructure Report, prepared by NDY (**Appendix G**) has assessed the impacts of the proposed rainwater reclamation system that will be installed within the Locomotive Workshop (as discussed at **Section 4.28.4**). Overall, NDY confirm that the existing stormwater drainage and downpipe system should not be affected by the proposed development due to the unaltered building footprint, however the proposed rainwater reclamation system will reduce the stormwater outflow rate by 6.25%. This will then result in annual water savings for water closet flushing, washing down water and landscape watering of 58%.

In addition, a water balance model has proven that the 100,000 litre rainwater tank will be fully utilised within the Locomotive Workshop, without overflow occurring. However, any overflow will be able to be piped back into the original existing stormwater drainage system.

6.16 Railway Infrastructure

Arcadis has prepared a statement (**Appendix U**) 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 Social and Economic Benefits

The proposed redevelopment of the western portion of the Locomotive Workshop will 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 2,800 additional employment opportunities on Site and the provision of in-direct jobs throughout the supply chain, including those serving the future 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 \$88.6 million into the local economy.
- The creation of an iconic nationally and internationally recognised precinct within an area of significant heritage value that will contribute to the success of the ATP precinct as a world-class high quality working environment.
- Reduced travel distances, leading to savings on time and fuel for workers, due to the high level of accessibility to public transport 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.

6.18 Construction Management

A Preliminary Construction Environmental Management Plan (CEMP) has been prepared by Mirvac Construction and is included at **Appendix V**. 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 Q**) 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 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, and accordingly will pay in full the required affordable housing contribution, determined in accordance with the plan. Based on the additional amount of GFA provided within the development (i.e. 4008m²), the affordable housing contribution that Mirvac will pay will be in the order of \$339,076 (based on the 2017/2018 indexed contribution rate). This amount will lead to the delivery of approximately 1 affordable housing unit (based on a delivery cost of \$470,000 per unit) within the Redfern-Waterloo area.

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 \$84,400,000 (as confirmed in the Quantity Surveyors Report at **Appendix D**), a development contribution in the order of \$1,688,000 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 world class commercial workspace 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 revitalised and vibrant new commercial development, set within a State Significant heritage building that will provide a range of tenancies to support start-up, small scale and large scale enterprises;
- provide opportunities to increase the public activation of the Locomotive Workshop and appreciation of the importance of the Site;
- create new jobs and facilitate entrepreneurial innovations; 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 5-15 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 72 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 72 – Risk Assessment Matrix

Table 18 – 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 K) 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 O) or Operational Waste Management Plan (Appendix P). 	1	1	2 Low

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
				Significance of Impact	Manageability of Impact	Residual Impact
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 T). 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 V). 	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 S). • Implementation of mitigation measures in the Preliminary Construction Environmental Management Plan (Appendix V). • 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. <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 	2	1	3 Low
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Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
				Significance of Impact	Manageability of Impact	Residual Impact
			<p>mechanical plant and equipment prior to construction.</p> <ul style="list-style-type: none"> 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 V) 	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
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 V) 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	4 Low/Medium

8.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 19** below. These measures have been derived from the previous assessment in **Section 7.0** and those detailed in appended consultants' reports.

Table 19 – Mitigation Measures

Mitigation Measures
<p>Heritage Impacts</p> <ul style="list-style-type: none"> • All works will be undertaken in accordance with the recommendations and proposed strategies outlined within the Heritage 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 archaeological advice sought.
<p>Accessibility</p> <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.
<p>Construction Noise and Vibration</p> <ul style="list-style-type: none"> • Implementation of mitigation measures in the Acoustic Assessment (Appendix S). • Implementation of mitigation measures in the Preliminary Construction Environmental Management Plan (Appendix V). • Preparation of a detailed construction Noise and Vibration Management Plan, prior to construction certificate.
<p>Operational Noise</p> <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.
<p>Operational Waste Management</p> <ul style="list-style-type: none"> • Comply with the waste management processes outlined within the Operational Plan of Management (Appendix O) or Operational Waste Management Plan (Appendix P).
<p>Contamination</p> <ul style="list-style-type: none"> • Implement the measures and the recommendations as described in the RAP relevant to the Locomotive Workshop.
<p>BCA</p> <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 V**)
 - 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**)
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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 western portion of the Locomotive Workshop as a hub for contemporary technology and innovation.
- The proposal will facilitate the delivery of a world-class working environment.
- 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 2,800 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.