

North Eveleigh Affordable Housing Project

April 2013

Prepared for **City West Housing**



Environmental Impact Statement
Reference No. SSD 5708

Architectus Group Pty Ltd
ABN 90 131 245 684
Level 3 341 George Street
Sydney NSW 2060
Australia
T 61 2 8252 8400
F 61 2 8252 8600
sydney@architectus.com.au
www.architectus.com.au

Contents

Statement of Veracity	5
Executive Summary	6
1 Introduction	8
1.1 Project overview	8
1.2 Proponent and project team	10
1.3 Development consent history	11
1.4 Director General's Requirements	11
2 The site and its context	15
2.1 Site details	15
2.2 Context	15
2.3 Historical context	16
2.4 Existing conditions	17
3 The proposal	23
3.1 Introduction	23
3.2 Permissibility	23
3.3 Detailed description	23
3.4 Building height	24
3.5 Unit mix	24
3.6 Gross floor area	25
3.7 Materials	25
3.8 Background to development	26
3.9 Who is City West Housing?	27
3.10 Information about City West Housing Tenants	27
3.11 Architectural design	28
3.12 Access, traffic and transport	30
3.13 Landscaping and open space	31
3.14 Precinct staging	33
3.15 Ecologically Sustainable Development	33
3.16 Integrated Water Management	33
3.17 Stormwater management	34
4 Planning context	36
4.1 Strategic context	36
4.2 Regulatory context	46
4.2.1 Legislation	46
4.2.2 Environmental Planning Policies	50
5 Consultation	53
5.1 Government and agency consultation	53
5.2 Community consultation	56
5.3 Future consultation	57
6 Environmental Impact Assessment	58
6.1 Environmental planning instruments	58
6.2 Policies, guidelines and planning agreements	75
6.3 Analysis of environmental impacts	77
7 Project justification	99
7.1 Objectives of the development	99
7.2 Analysis of feasible alternatives to the proposed development	100
7.3 Reasons for carrying out the development	100
8 Mitigation measures	102
9 Summary and conclusions	104

<p>Quality Assurance</p> <p>Reviewed by</p> <p>.....</p> <p>Michael Harrison Director Urban Design and Planning Architectus Sydney Pty Ltd</p> <p>.....</p> <p>Date This document is for discussion purposes only unless signed.</p>

Figures

Figure 1	Location Plan	9
Figure 2	Local Context Plan	16
Figure 3	View towards the site from the north east.	19
Figure 4	View towards the site from the north west.	19
Figure 5	Clothing Stores building to the west of the site.	19
Figure 6	Road and parking between the site and Carriageworks.	19
Figure 7	Existing roadway running along the northern boundary of the site.	19
Figure 8	View of Carriageworks from its western end.	19
Figure 9	Part of retaining wall supporting Wilson Street.	20
Figure 10	Heritage Map for SEPP (Major Development) 2005	20
Figure 11	Ground Floor landscape plan	32
Figure 12	Level 7 Landscape Plan	32
Figure 13	Concept Plan (western precinct)	37
Figure 14	Wilson Street view lines	78

Tables

Table 1	Project team	10
Table 2	Director General's Requirements	12
Table 3	Unit mix	24
Table 4	Schedule of areas	25
Table 5	Demand for car parking per unit type – City West Housing Waiting Lists	27
Table 6	Concept Plan Conditions consistency	38
Table 7	Schedule 2 of the Regulations EIS Requirements	48
Table 8	Government and agency consultation	53
Table 9	Urban Consolidation SEPP assessment	59
Table 10	SEPP 65 Design Principles assessment	60
Table 11	Residential Flat Design Code assessment	61
Table 12	Planning principles for City West, SREP 26 – City West	72
Table 13	Metropolitan Plan for Sydney 2036	75
Table 14	Draft Sydney City Subregional Strategy	75
Table 15	On-site parking provision	89

Appendices

Appendix A	Architectural Drawings <i>Prepared by Architectus Group Pty Ltd</i>
Appendix B	Director General's Requirements <i>Issued by the NSW Department of Planning and Infrastructure</i>
Appendix C	Services and Utilities Report <i>Prepared by WSP</i>
Appendix D	Traffic Impact Assessment <i>Prepared by Arup</i>
Appendix E	Survey Plan <i>Prepared by Whelans Insites Pty Ltd</i>
Appendix F	Registered Plan of Subdivision <i>Prepared by Whelans Insites Pty Ltd</i>
Appendix G	Crime Prevention through Environmental Design Report <i>Prepared by Architectus Group Pty Ltd</i>
Appendix H	Social Impact Assessment <i>Prepared by GHD</i>
Appendix I	Construction Management Plan <i>Prepared by City West Housing</i>
Appendix J	Acoustic Report <i>Prepared by WSP</i>
Appendix K	Wind Report <i>Prepared by Vipac</i>
Appendix L	Stormwater Management Plan <i>Prepared by Enstruct</i>
Appendix M	Technical Specification <i>Prepared by AECOM</i>
Appendix N	Ecologically Sustainable Development (ESD) Report <i>Prepared by WSP</i>
Appendix O	Preliminary Waste Management Plan <i>Prepared by City West Housing</i>
Appendix P	Heritage Impact Statement <i>Prepared by Graham Brooks and Associates</i>
Appendix Q	BASIX Report and Certificates <i>Prepared by WSP</i>
Appendix R	Landscape Plans <i>Prepared by Arcadia</i>
Appendix S	Accessibility Report <i>Prepared by Morris Goding Accessibility Consultants</i>
Appendix T	Site Management Agreement <i>Prepared by City West Housing</i>
Appendix U	Transport Management and Accessibility Plan <i>Prepared by Arup</i>

Appendix V	Structural Report <i>Prepared by Enstruct</i>
Appendix W	Agency consultation
Appendix X	Correspondence regarding a future car share scheme <i>Prepared by GoGet</i>
Appendix Y	Air Quality Impact Assessment <i>Prepared by City West Housing</i>
Appendix Z	Geotechnical Report <i>Prepared by JK Geotechnics</i>
Appendix AA	Groundwater Report <i>Prepared by JK Geotechnics</i>
Appendix BB	Consultation overview <i>Prepared by Urban Growth NSW</i>
Appendix CC	City West Housing Applicant Summary <i>Prepared by City West Housing</i>
Appendix DD	Precinct wide staging plan <i>Prepared by Architectus Group Pty Ltd</i>
Appendix EE	Communication and Consultation Strategy <i>Prepared by City West Housing</i>
Appendix FF	Electrolysis Report <i>Prepared by NPC Engineering Pty Ltd</i>
Appendix GG	SEPP 65 Design Verification Statement <i>Prepared by Architectus</i>
Appendix HH	Services Design Statements <i>Prepared by WSP Buildings Pty Ltd</i>

Statement of Veracity

Submission of Environmental Impact Statement:

Prepared under Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*.

Environmental Impact Statement prepared by:

Jane Grose

Associate

Bachelor of Urban Planning and Development (University of Melbourne)

Jayne Klein

Senior Urban Planner

Bachelor of Planning (University of Auckland)

Masters of Resources and Environmental Planning (Massey University)

Camille Lattouf

Urban Planner

Bachelor of Planning (University of Western Sydney)

Masters of Development Studies and Culture Change (current, Macquarie University)

Member Planning Institute of Australia (MPIA)

Address:

Architectus Group Pty Ltd
Level 3, 341 George Street
Sydney NSW 2000

In respect of:

Environmental Impact Statement for State Significant Development
Application for Eveleigh Affordable Housing Project (SSD 5708).

Declaration:

It is declared that:

- This Environmental Impact Statement has been prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*; and
- This Environmental Impact Statement contains all available information that is relevant to the environmental assessment of the proposed development; and
- To the best of my knowledge, the information contained in this report is neither false nor misleading.

(signature and date)

Michael Harrison
Director, Urban Design and Planning
Architectus Group Pty Ltd

Executive Summary

This Environmental Impact Statement (EIS) supports a State Significant Development (SSD) application for the development of a residential flat building to be used for affordable housing on the site known as North Eveleigh. The application is made under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), by Architectus Sydney, on behalf of City West Housing (CWH).

The development application applies to Lot 3 DP 1175706, which is the 10.7 hectare North Eveleigh rail yard site. The proposal is for the development of Lot 3 DP 1175706/ Building D4, which has a site area of approximately 2,500sqm within the North Eveleigh site.

In 2008 the Minister for Planning approved Concept Plan MP 08_0015 for the redevelopment of the 10.7 hectare North Eveleigh site for a mix of residential, commercial and community uses. Under the Concept Plan, significant heritage buildings such as the Carriage Workshop are to be retained.

UrbanGrowth NSW Development Corporation (UGDC) is currently purchasing the site from RailCorp and managing the site's renewal. To date, some early infrastructure works have been undertaken and a Development Application to the City of Sydney Council for the construction of two new open spaces was lodged in March 2013.

The proposed development will be the first new building developed under the Concept Plan approval.

The proposed development is for a part six, part seven storey residential flat building comprising 88 units and basement car parking for 39 cars and 88 bicycles. A private open space area to the rear of the building comprises a vegetable garden and communal gathering areas and significant deep soil zones allow for tall trees for shade, acoustic protection and privacy. A roof top garden provides further spaces for residents to meet their neighbours.

The building has been designed by Architectus to be passively environmentally sustainable. The fundamental design has been driven by the need to provide solar access and cross-ventilation well above the minimum recommended proportion of units under the NSW Residential Flat Design Code Rules of Thumb.

The building is to be used for affordable housing, owned and managed by CWH – a not-for profit group who have developed 547 affordable units in the City of Sydney LGA. The units are to be rented to low to moderate income earners who have a connection to the locality at a maximum rate of 30% of their net income.

State Environmental Planning Policy (Major Development) 2005 (MD SEPP) is the principal planning instrument applicable to the site. The site is zoned *Business – Mixed Use* under the provisions of Schedule 3, Part 5 of the MD SEPP. The proposed development is permissible under these provisions.

The Concept Plan MP08_0015, approved under Part 3A of the EP&A Act allows for a six-storey residential building on Lot 3 DP 1175706, known as Building D4. The proposed development is generally consistent with the building envelopes approved by the 2008 Concept Plan, but exceeds the maximum building height on part of the site by one storey. The proposed floor space is considerably less than approved under the Concept Plan. The additional height allows for a slimmer building, which improves its

environmental performance. An application to amend the Concept Plan Approval to allow for this additional height is made concurrently with this State Significant Development Application.

The proposed development is within the Redfern-Waterloo Area, which is identified as a site of State Significance under *State Environmental Planning Policy (State and Regional Development) 2011*. Because the value of the development will be greater than \$10 million, the proposed development is declared State Significant Development and the Minister for Planning and Infrastructure is the determining authority.

The proposed development has been assessed against the relevant controls and policies and found to be supportable. In summary:

- The proposed development will not have any unreasonable traffic, social, amenity, construction or environmental impact;
- The building has been designed to respond to the heritage significance of the site and complement the Carriage Workshop and other existing listed buildings;
- The building will provide 88 affordable housing units, which makes a significant contribution to the target of 150 units for the North Eveleigh Concept Plan approval site;
- The proposed development is scheduled to follow the development of new roads and open spaces in the precinct, ensuring new residents will be able to enjoy a quality public domain;
- The proposed site is appropriately zoned and suitable for this development. It is fully-serviced and all site issues such as flooding and contamination can be resolved;
- The proposed design has been developed in consultation with the community and key agencies; and
- The proposed affordable housing development will act as a catalyst for the wide-spread renewal of the North Eveleigh Precinct and the creation of new homes, jobs and services.

1 Introduction

1.1 Project overview

This Environmental Impact Statement (EIS) has been prepared by Architectus Group Pty Ltd on behalf of City West Housing (CWH) to accompany a State Significant Development (SSD) application for a residential flat building, to be used as affordable housing.

The development application applies to Lot 3 DP 1175706, which is the 10.7 hectare North Eveleigh rail yard site. The proposal is for the development of Lot 3 DP 1175706/ Building D4, which has a site area of approximately 2,500sqm within the North Eveleigh site. The site is within the City of Sydney Local Government Area (LGA). The site's location within the Concept Plan precinct area is shown in **Figure 1** overleaf.

On 16 December 2008, the Minister for Planning approved the North Eveleigh Concept Plan, which applies to all 10.7 hectares of the North Eveleigh Rail Yards. The 2008 Concept Plan approval is for a mixed use precinct, that provide new open spaces, sees the retention of heritage buildings and approximately 1250 new dwellings.

UrbanGrowth NSW Development Corporation (UGDC) is currently purchasing the site from Railcorp. UGDC has commenced early works in accordance with the 2008 Concept Plan approval. A Development Application was lodged with the City of Sydney Council in March 2013 for the development of two new parks.

Lot 3 DP 1175706 has been conditionally sold to CWH, a not-for-profit, Registered Housing Provider for the purposes of building affordable housing units.

This SSD application relates only to Lot 3 DP 1175706 and the proposed residential flat building which is to be used as affordable housing. The affordable housing scheme will be owned and operated by CWH.

The proposed development is generally consistent with the building envelopes approved by the 2008 Concept Plan, but exceeds the maximum building height on part of the site by one storey. The proposed floor space is considerably less than approved under the Concept Plan. The additional height allows for a slimmer building, which improves its environmental performance. An application to amend the Concept Plan Approval to allow for this additional height is made concurrently with this SSD application.

The proposed development is within the Redfern-Waterloo Area, which is identified as a site of State Significance under *State Environmental Planning Policy (State and Regional Development) 2011*. Because the value of the development will be greater than \$10 million, the Minister for Planning and Infrastructure is the determining authority for this application.

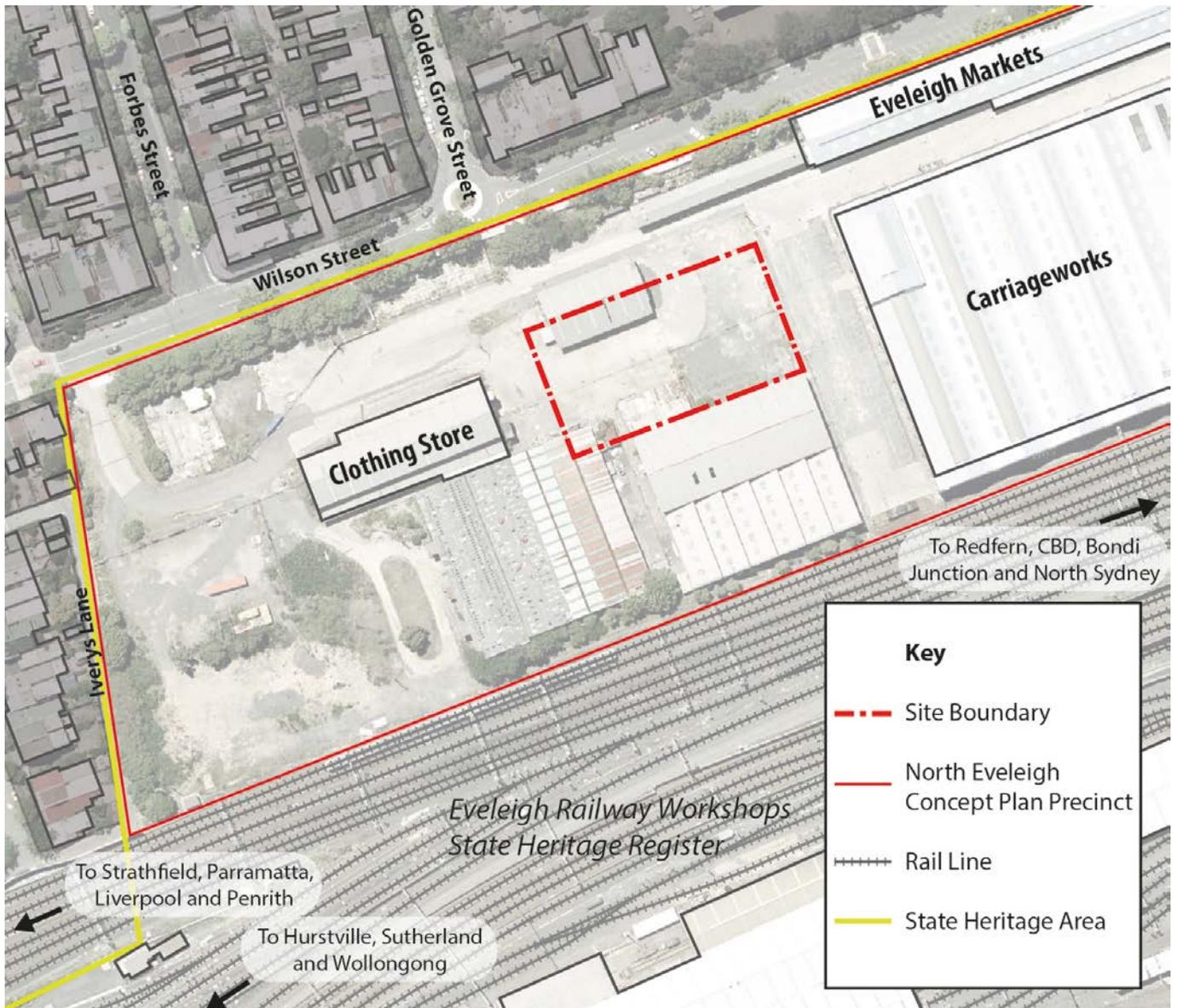


Figure 1 Location Plan

This application seeks consent for:

- The construction of a part six (6), part (7) storey plus basement, residential flat building to be used for affordable housing which includes 88 apartments and 39 basement car parking spaces; and
- Landscaping and associated site works.

The project objectives are:

- Design a building that has minimal environmental impact and sustains the new community that will inhabit it.
- Achieve a high level of architectural design that respects the site's heritage makes a positive contribution to the local character of Eveleigh.
- Provide affordable housing in a location close to major transport infrastructure, and local services and amenities, to allow for key worker housing, and contribute to the City of Sydney's *Sustainable Sydney 2030* targets for affordable housing in the Sydney LGA.
- To contribute to the realisation of the North Eveleigh Concept Plan and the renewal of this significant site.

This statement is submitted to the NSW Department of Planning and Infrastructure on behalf of CWH under the State Significant Development provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This EIS should be read in conjunction with the attached architectural drawings at **Appendix A**, and documentation and supporting information provided at **Appendices B** to **HH**.

1.2 Proponent and project team

Proponent

The proponent for this application is City West Housing.

Project team

The project team is outlined at **Table 1** below.

Table 1 Project team

Architect	Architectus Group Pty Ltd
Urban Planner	Architectus Group Pty Ltd
Surveyor	Whelans Insites Pty Ltd
Social Planner	GHD
Transport Planner	Arup
Acoustic Engineer	WSP
Wind Consultant	Vipac
Stormwater and Civil Engineer	Enstruct
ESD and Services Consultant	WSP
Heritage Consultant	Graham Brooks and Associates
Landscape Architect	Arcadia
Accessibility Consultant	Morris Goding Accessibility Consultants
Structural Engineer	Enstruct
Geotechnical Engineer	JK Geotechnics
Quantity Surveyor	Altus Page Kirkland
BCA Consultant	Group DLA

1.3 Development consent history

The subject site is part of the broader North Eveleigh Concept Plan precinct. The following previous development consents are applicable to the proposed development and subject site:

- **Approved Concept Plan MP 08_0015:** In January 2008, the then Redfern Waterloo Authority submitted a Preliminary Environmental Assessment for a mixed use residential, commercial, cultural and open space precinct at North Eveleigh. The Concept Plan was exhibited 1 May 2008 and 12 June 2008. Following the submission of the Preferred Project Report, the Concept Plan was approved on 16 December 2008.
- **Part 5 Approval for Infrastructure Works:** On 2 November 2012, approval was granted by SMDA under Part 5 of the EP&A Act for Infrastructure works to be undertaken on the North Eveleigh site. This was accompanied by a Section 60 Heritage Approval issued by the Heritage Branch.
- **Development Application 2013/367:** This DA was submitted by UGDC to the City of Sydney Council in March 2013, seeking consent for a local park and a pocket park, including adaptive re-use of heritage elements and the creation of pedestrian access from Wilson Street. A condition of the 2008 Concept Plan approval requires that a DA for the parks is lodged concurrently with the first application for new floor space on the site.
- **Development Application SSD 12_5708:** This subject application for affordable housing units is submitted to the Department of Planning and Infrastructure in response to the Director General's Requirements issued for this project. This application will be the first for new floor space in the Concept Plan area.
- **Modification Application to Concept Plan MP 08_0015:** This modification is submitted concurrently to this application, to modify the approved height, and building footprint of Building D4 under the Concept Plan.

1.4 Director General's Requirements

The Director General's Requirements (DGRs) for the proposal were provided to CWH under Schedule 2 of the *Environmental Planning and Assessment Regulations 2000* (the Regulations) on 21 December 2012, and we subsequently amended in January 2013.

Table 2 below summarised the DGRs and provides references to where the various issues are addressed as part of the EIS. A full copy of DGRs is provided at **Appendix B** to this report.

Table 2 Director General's Requirements

Requirement	Section of report
<p>General Requirements</p> <p>The Environmental Impact Statement (EIS) must meet the minimum requirements in Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>, specifically:</p> <ul style="list-style-type: none"> • Form specifications in clause 6; and • Content specifications in clause 7. 	<p>An application form for this State Significant Development Application is provided under separate cover.</p> <p>The Content Specifications of the Regulations are addressed in detail at Table 7 to this report.</p>
<p>Key Issues</p> <p>The EIS should address the following key matters:</p> <p>1. Environmental Planning Instruments (EPIs)</p> <p>Address the relevant statutory provisions applying to the site contained in all relevant EPIs, including:</p> <ul style="list-style-type: none"> • Objects of the EP&A Act 1979; • SEPP (Major Projects) 2005; • State Environmental Planning Policy (Affordable Rental Housing) 2009; • SEPP (Building Sustainability Index: BASIX) 2004; • SEPP 55 – Remediation of Contaminated Sites; • SEPP 65 – Design Quality of Residential Flat Development; • SEPP (Infrastructure) 2007; • SREP 26 – City West; • SEPP 32 – Urban Consolidation. 	<p>Section 4 contains an overview of the regulatory context. Section 6.1 contains an assessment of the proposed development against the regulatory documents.</p>
<p><i>Permissibility</i></p> <p>Detail the nature and extent of any prohibitions that apply to the development. Demonstrate permissibility.</p>	<p>Section 3.2 addresses permissibility of the proposed development.</p>
<p><i>Development Standards</i></p> <p>Identify the Development Standards applying to the site. Justify any Development Standards not being met.</p>	<p>Refer Sections 6.1 and 6.2.</p>
<p><i>Contamination</i></p> <p>Demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. Relevant Policies and Guidelines: "Managing Land Contamination: Planning Guidelines – SEPP 55 Remediation of Land" (DUAP).</p>	<p>An overview of SEPP55 is provided in Section 4.2 and an assessment against the provisions of SEPP55 is included in Section 6.1.</p>
<p>2. Policies, Guidelines and Planning Agreements</p> <p>Address the relevant planning provisions, goals and strategic planning objectives in the following:</p> <ul style="list-style-type: none"> • Metropolitan Plan for Sydney 2036; • Draft Sydney Subregional Strategy; • Redfern-Waterloo Built Environment Plan (Stage One); • Provision of Public Infrastructure having regard to the Redfern-Waterloo Authority Contributions Plan; • Provision of Affordable Housing Contributions Plan; • NSW Planning Guidelines for Walking and Cycling; • Sustainable Sydney; • Sydney DCP 2012; • Crime Prevention through Environmental Design Guidelines. <p>Detail how the development promotes or is consistent with these provisions and strategic objectives.</p>	<p>Section 4 contains an overview of the relevant policies and guidelines. Section 6.2 contains an assessment of the proposed development against the relevant policies and guidelines.</p>

Requirement	Section of report
<p>3. Built Form and Urban Design</p> <ul style="list-style-type: none"> Address the height, bulk and scale of the proposed development within the context of the locality. Design quality with specific consideration of the overall site layout, axis, vistas, connectivity, open spaces and edges, primary elements, gateways, façade, rooftop, mechanical plant, massing, setbacks, building articulation, materials, choice of colours. <p><i>Relevant policies and guidelines:</i></p> <ul style="list-style-type: none"> Crime Prevention through Environmental Design Guidelines (CPTED). 	<p>Section 6.3 addresses built form and urban design, including Crime Prevention Through Environmental Design.</p>
<p>4. Ecologically Sustainable Development (ESD)</p> <p>Details how ESD principles (as defined in clause 7(4) of Schedule 2 of The Regulations) will be incorporated into the design, construction and operation phases of the development.</p>	<p>Section 3 describes the proposed ESD measures and section 6.3 contains an assessment of impacts.</p> <p>The ESD principles, as defined by the Regulations, are addressed at Section 7.3 of this report.</p>
<p>5. Amenity</p> <p>Demonstrate how the proposals will achieve a high level of environmental amenity. Detail solar access, acoustic impacts, visual privacy, servicing requirements (including but not limited to waste management, loading zones, mechanical plant), view loss, overshadowing and wind impacts.</p>	<p>Section 6.3 addresses amenity and provides an assessment against the relevant amenity provisions provided within the applicable planning controls.</p>
<p>6. Noise</p> <p>Identify the main noise generating sources and activities at all stages of construction, and any noise sources during operation. Outline measures to minimise and mitigate the potential noise impacts on the surrounding occupiers of land.</p> <p><i>Relevant policies and guidelines</i></p> <ul style="list-style-type: none"> NSW Industrial Noise Policy (EPA); Interim Construction Noise Guidelines (DECC). 	<p>Section 6.3 contains an assessment of noise. An Acoustic Impact Report has been prepared and is provided at Appendix J to this report.</p>
<p>7. Transport and Accessibility (Construction and Operation)</p> <ul style="list-style-type: none"> Detail access arrangements at all stages of construction; Demonstrate the provision of sufficient on-site car parking; Provide an assessment of the implications of development on non-car travel modes (including public transport, walking and cycling). <p><i>Relevant policies and guidelines</i></p> <ul style="list-style-type: none"> Guide to Traffic Generating Development (RTA). 	<p>Section 6.3 addresses traffic impacts, including parking.</p> <p>A detailed assessment of the traffic impacts of the development are provided as part of the Traffic Impact Assessment at Appendix D to this report. A Transport Management and Accessibility Plan (TMAP) has also been prepared and is provided at Appendix U to this report.</p> <p>A Preliminary Construction Management Plan has also been prepared and is provided at Appendix I to this report.</p>
<p>8. Sediment, Erosion and Dust Controls (Construction and Excavation)</p> <p>Details measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles).</p> <p><i>Relevant Policies and Guidelines</i></p> <ul style="list-style-type: none"> Managing Urban Stormwater, Soils and Construction Volume 1 2004 (Landcom); Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA). 	<p>Sediment, erosion and dust controls are addressed at Section 6.3. An Erosion and Sediment Control Plan, prepared by Enstruct, is provided as part of the Stormwater Management Plan and Civil Drawings at Appendix L to this report.</p>
<p>9. Rail Impacts</p> <p>Address noise and vibration impacts from adjacent rail activities including mitigation and monitoring measures where appropriate, consistent with guidance published by RailCorp including <i>Interim Guidelines for Applicants – Consideration of Rail Noise and Vibration in the Planning Process</i> and <i>Interim Guidelines for Council’s – Consideration of Rail Noise and Vibration in the Planning Process</i>.</p>	<p>Section 6.3 includes an assessment of rail impacts. A detailed Acoustic Impact Assessment taking into consideration the railway impacts is provided at Appendix J to this report.</p> <p>A structural report has also been prepared to confirm the appropriateness of the structural design taking into consideration the proximity to the railway (refer to Appendix V).</p> <p>Vibration impacts are addressed at Appendix Z to this report.</p>

Requirement	Section of report
<p>10. Drainage and Flooding</p> <p>Address drainage/flooding issues associated with development/site including: stormwater, drainage infrastructure and incorporation of Water Sensitive Urban Design measures.</p>	<p>Drainage and flooding are included at Section 6.3. A Stormwater Management Plan and associated civil plans are attached at Appendix L to this report. This includes reference to the precinct wide drainage and flooding management system.</p> <p>A range of water management measures to minimise water usage and allow for some reuse of water, are proposed. These are detailed as part of the ESD Report at Appendix N to this Report.</p>
<p>11. Original Concept Plan</p> <p>Demonstrate that the proposal is consistent with the Concept Plan Approval MP 08_0015. Future assessment requirements should also be addressed.</p>	<p>Section 4.1 addresses consistency with the Concept Plan Approval MP 08_0015.</p>
<p>Plans and documents</p> <p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of The Regulations. Provide these as part of the EIS rather than as separate documents.</p> <p>In addition, the EIS must include the following:</p> <ul style="list-style-type: none"> • Shadow diagrams; • 3D Model; • Photomontages; • Elevations and Sectional Drawings; • Heritage Impact Statement; • An existing Site Survey Plan; • Stormwater/Drainage Concept Plan; • Construction Management Plans; • Infrastructure Management Plan; • Traffic Transport Plan; • Integrated Water Management Plan; • Waste Management Plan; • Air Quality Impact Assessment. 	<p>Shadow diagrams, photomontages, elevations and sectional drawings are provided at Appendix A.</p> <p>Architectus has developed an electronic 3D model to generate the proposed design and to understand the proposed development in context. Key perspectives of the proposed development have been rendered and are included in the set of architectural plans at Attachment A to this application.</p> <p>The Heritage Impact Statement is at Appendix P.</p> <p>The Site Survey Plan is at Appendix E.</p> <p>The Stormwater / Drainage Concept Plan is at Appendix L.</p> <p>The Construction Management Plan is at Appendix I.</p> <p>There is no known infrastructure that will be impacted by the proposed development. Refer to Services and Utilities Report at Appendix C to this report.</p> <p>The Traffic Transport Plan is at Appendix D.</p> <p>The Integrated Water Management Plan is at Section 3 of this report.</p> <p>The Waste Management Plan is at Appendix O.</p> <p>The Air Quality Impact Assessment is at Appendix Y.</p>
<p>Consultation</p> <p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government Authorities, service providers, community groups and affected landowners.</p> <p>In particular, you must consult with:</p> <ul style="list-style-type: none"> • City of Sydney Council; • Transport for NSW; • Sydney Water; • Roads and Maritime Services; • RailCorp; • Office of Environment and Heritage; • NSW Police; • Environmental Protection Authority; • Department of Family and Community Services; • Ausgrid. <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended to respond to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>	<p>For a summary of consultation undertaken, refer Section 5.</p>

2 The site and its context

This section provides details of the site and its context including regional and local context, existing conditions, history, land uses and the relationship of the site to nearby land uses.

2.1 Site details

The subject site is Lot 3 in DP 1175706, which has an area of 2,562m². The subject site is located within the broader North Eveleigh Concept Plan Area, which forms part of a 10.7 hectare site. The site is identified as Building 'D4' within the North Eveleigh Concept Plan Area. The site is identified within the Registered Plan of Subdivision at **Appendix F** to this report. A copy of this is illustrated at **Figure 2** below.

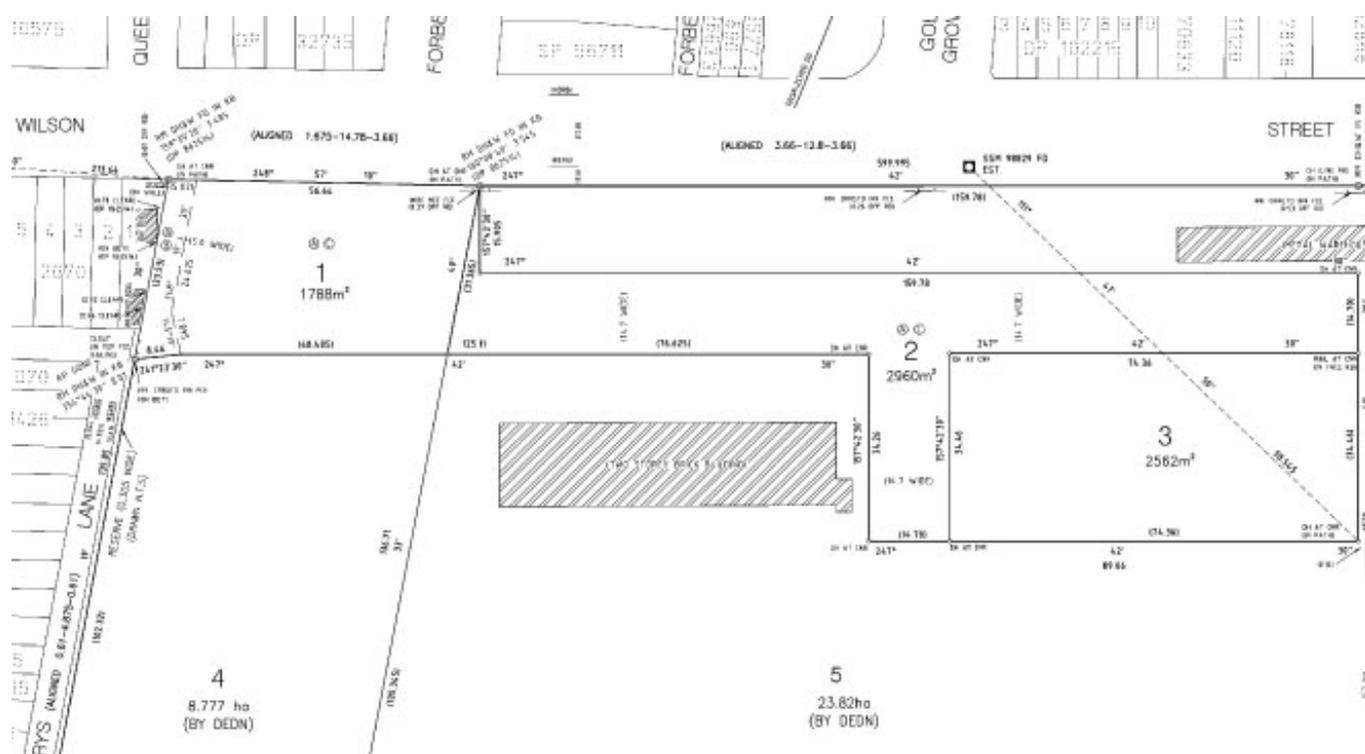


Figure 2 Registered plan of subdivision

2.2 Context

Regional context

The site is located within Central Sydney, close to the Redfern Railway Station, which provides links to destinations in regional NSW. Significant road connections are located within 3 km of the site, being South Dowling Street which leads into Southern Cross Drive heading south out of Sydney; City Road which becomes King Street and then Princes Highway heading south; and the Great Western Highway heading west out of Sydney.

Local context

The site is located approximately 4km south-west of the Sydney CBD. The site is bounded by Darlington to the north, Redfern to the east, Alexandria and Erskineville to the south and Newtown to the west. Conservation areas surround the site.

The University of Sydney is a short walk from the site, at approximately 500 metres away.

Refer Local Context Plan at **Figure 3** below. The smaller area shown as 'Site Boundary' shows the extent of Lot 3 in DP 1175706.

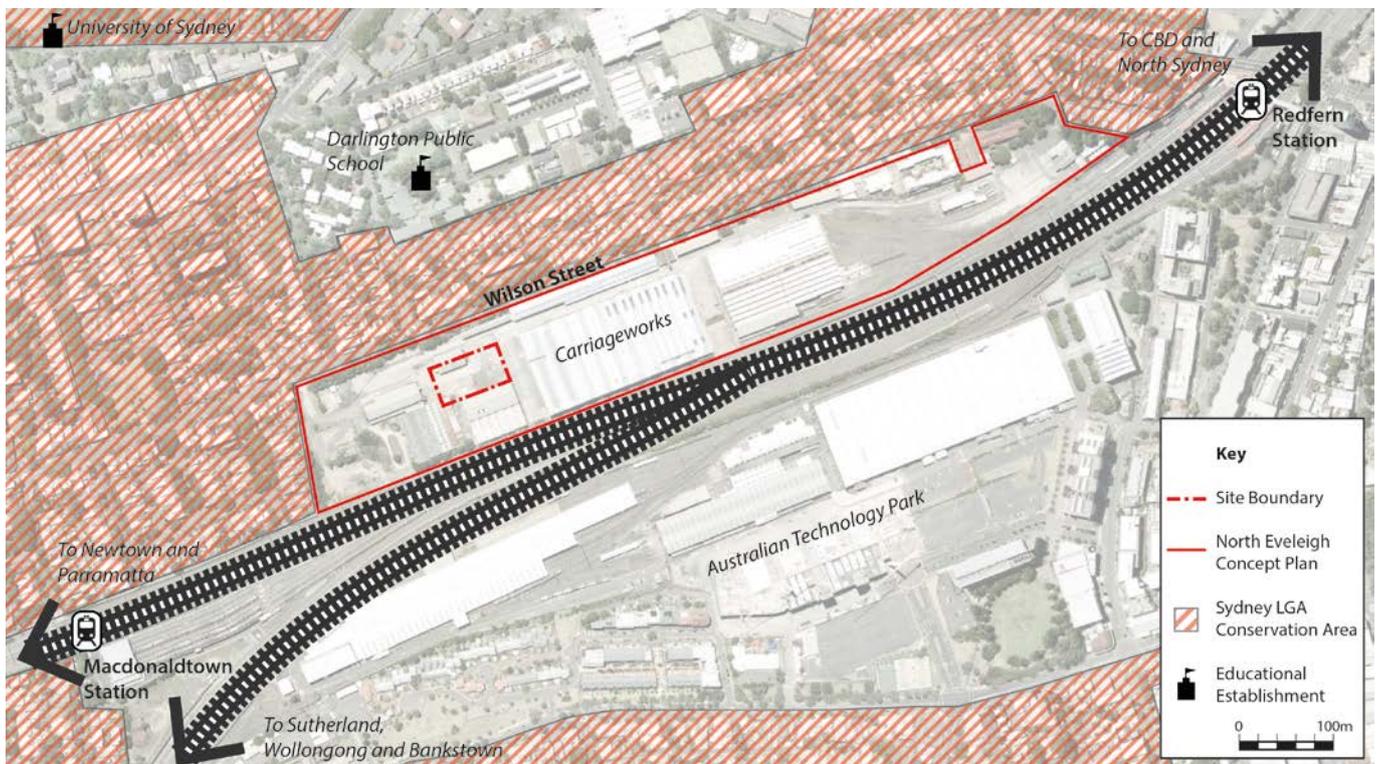


Figure 3 Local Context Plan

2.3 Historical context

The following historical summary of the site is from the Heritage Impact Statement (refer **Appendix P**).

In general terms historical research has identified three broad phases of occupation and development of the site. These are:

- Aboriginal occupation 20,000 years ago - 1794;
- Early grants and occupation of Calder House (1794-1880); and
- Establishment of the Railway and Eveleigh Carriage Workshops (1880-present).

Aboriginal occupation

Archaeological evidence indicates that Aboriginal people have occupied the Sydney region since at least 20, 000 years ago. At the time of European arrival the dominant language group within the general area of the subject site were the Gadigal people.

No historical or archaeological documentation of Aboriginal occupation of the site has been identified in previous heritage studies of North Eveleigh.

Early grants and occupation of Calder House

The North Eveleigh rail yards were granted to James Chisholm in 1835. Chisholm was born at Calder, Scotland in 1770, and arrived in NSW in 1790 with the NSW Corps. He constructed Calder House on his grant, in c1830. Following his death in 1837, his widow remained at the house until 1855.

During the early twentieth century Calder house was used as a residence for the Locomotive Works Manager of the Eveleigh Railway Workshops. The building burnt down in 1923 and its remains were demolished in 1924.

Establishment of the railway and Eveleigh Carriage Workshops

The first railway yards in NSW were constructed in 1860 at the original Sydney terminal, adjacent to Devonshire Street. These workshops were sometimes referred to as Redfern station. By the 1870's the NSW railway engineers, were beginning to realise that the existing facilities at the Sydney Terminal were inadequate, and numerous requests for improved facilities were made.

In 1880 Parliament voted 250,000 pounds to construct and equip workshops at the North Eveleigh site. Throughout most of the site only a single phase of construction associated with the railway era occupation occurred. There are only a few examples where buildings have been demolished and replaced by later structures.

The operations of the railway workshops ceased in 1989 and the buildings were identified as surplus to the needs of RailCorp. The Carriage Workshops and Blacksmiths' Shop were purchased by Arts NSW in 2002 and adapted for reuse as a multi arts cultural precinct known as Carriageworks.

Control of the Eveleigh site was subsequently transferred to the Redfern-Waterloo Authority (RWA) which was established in 2005 to revitalise the area through urban renewal.

In 2012 RWA amalgamated with Landcom and other government bodies to become UGDC, who now manage the site's renewal.

2.4 Existing conditions

The site characteristics are described below.

Photos of the existing site are at **Figure 4** to **Figure 10**.

Landform, land uses and existing structures

The following information has been obtained from the Geotechnical Report at **Appendix Z**.

The rail yards are dominated by two large double storey brick former workshop buildings within the central portion, known as the Carriage Workshop and Blacksmiths Shops. The Carriage Workshop is predominantly used as theatres and studios, known as 'CarriageWorks' whilst the Blacksmiths Shop is used for the Eveleigh Markets. The site of the proposed development is located within the western portion of the rail yards as shown on **Figure 1**.

The rail yards are relatively flat in comparison to the surrounding topography indicating that the existing rail yard site has been cut into the slope prior to the construction works currently being undertaken. The surrounding topography indicates that the rail yards would have been sloping down to the south-east prior to the cut and fill earthworks. Along the northern boundary of the rail yards, to the north of the proposed development site, are retaining walls and batter slopes supporting Wilson Street, with the street level approximately 5.5m higher than the surface levels of the rail yards and the subject site.

Opposite the eastern end of the subject site is a steel shed (known as the 'Reclamation Shed') and air raid shelters are located to the north of this shed. The rear wall of the concrete block structure acts as a retaining wall supporting Wilson Street. To the west of the concrete block structure is a grass covered batter sloping down from Wilson Street at approximately 25°. There are a few small trees on this batter. To the east of the batter is a highly corroded steel frame of a previous structure, with brick retaining walls forming three sides of this structure supporting the street to the north and batters to the east and west. The brick retaining walls appear to be in good condition. Further to the west of this structure is a grass covered batter sloping down from Wilson Street at approximately 25°.

The former rail yards extend in all directions around the proposed development site and are primarily covered with concrete and Asphaltic Concrete (AC) pavements. Three buildings surround the subject site, but the closest of these is located approximately 20m away. These buildings are a metal clad shed to the north, a large two storey brick warehouse (Carriage Workshop) to the east and a two storey brick building to the west.



Figure 4 View towards the site from the north east. The Clothing Stores building is to the right in the background.



Figure 5 View towards the site from the north west. The Carriageworks building is in the background.



Figure 6 Clothing Stores building to the west of the site.



Figure 7 Road and parking between the site and Carriageworks.



Figure 8 Existing roadway running along the northern boundary of the site.



Figure 9 View of Carriageworks from its western end.



Figure 10 Part of retaining wall supporting Wilson Street.

Heritage

The following information is from the Heritage Impact Statement at **Appendix P**. The subject site is located on land included on the NSW State Heritage Register as part of item 1140, Eveleigh Railway Workshops, in 1999. The following Statement of Significance for the Eveleigh Railway Workshops, sourced from the State Heritage Inventory, is attributed to the Eveleigh Rail Yards Locomotive Workshops Conservation Management Plan, prepared by the Heritage Group, State Projects in 1995.

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

The Heritage Map for SEPP (Major Development) 2005, reproduced below, identifies the following heritage items within the North Eveleigh precinct of the Eveleigh Railway Workshops:

- Item 5: Carriage Workshops
- Item 6: Blacksmiths’ Shop
- Item 7: Paint Shop
- Item 8: Scientific Services Building No. 1
- Item 9: Chief Mechanical Engineer’s Office Building
- Item 10: Telecommunications Equipment Centre

The Carriage Workshops and Blacksmiths’ Shop are in the vicinity of the subject site. A precinct heritage map is provided at **Figure 11**.

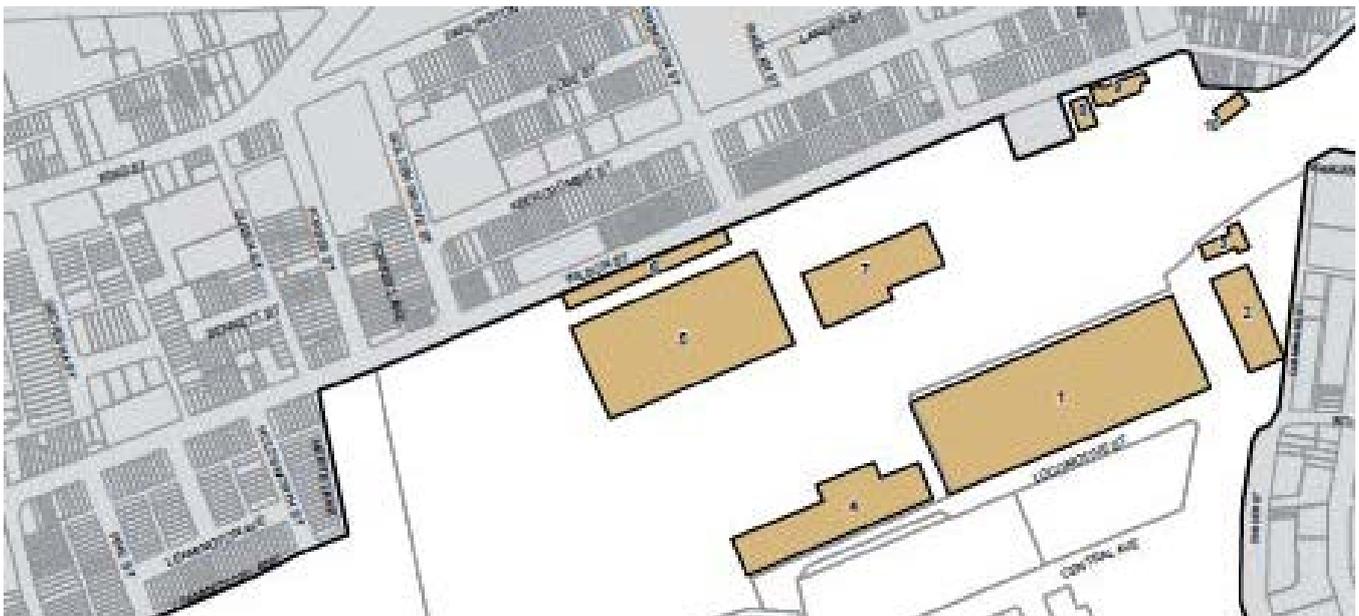


Figure 11 Heritage Map for SEPP (Major Development) 2005

Vegetation and threatened species

The site of the affordable housing scheme has no vegetation that requires removal as a result of the proposed development. There is a long history of railway related activities on the Concept Plan site and the original vegetation was removed many years ago to allow for development of rail related buildings and infrastructure. However, some replanting of exotic and native species has occurred since then.

The Concept Plan approval identified that a number of trees would require removal to permit development of the area. However, none of these trees are located on the site of the affordable housing scheme (Lot 3 DP 1175706). There are no threatened species which will be affected by the proposed development.

Traffic, access and transport

The following information is from the Traffic Impact Assessment at **Appendix D**.

Road network

The suburb of Eveleigh is divided between north and south by railway tracks between Redfern Railway Station and Macdonaldtown Railway Station. The development is accessed by the road network on the northern side of the railway line.

City Road is a nearby Roads and Maritime Services (RMS) controlled road which links Parramatta Road at Broadway to King Street travelling south. Near the site, City Road is a two-way multi-lane road with a central median to separate traffic.

Wilson Street is a Council controlled road and has a single lane of traffic in either direction, with on-street parking provided on both sides of the road. To the east, Wilson Street provides a connection to Lawson Street and Redfern Railway Station via a pedestrianised roadway and Little Eveleigh Street.

Golden Grove Street is a Council controlled road. It provides for two-way traffic with a relatively wide cross-section and connects King Street with Wilson Street.

Rail and bus networks

The site is approximately 950 metres from Redfern railway station and 650 metres to the Macdonaldtown railway station, which provides the area with frequent rail links to the surrounding region. Redfern station is the ninth busiest railway station in the Sydney area. The station has 12 platforms available, 10 of which are in use. Seven of the platforms serve CityRail services and three serve inner city services.

The majority of the buses in the area operate along City Road to the north of the site. Bus stops on City Road are approximately 500 metres away from the proposed development site – just over a 5 minute walk.

Pedestrian and bicycle network

Pedestrian connections are provided from the proposed development to nearby bus stops on City Road and at Redfern and Macdonaldtown railway stations. Pedestrian laneways and wide footpaths equipped with pram ramps and street lighting further add to the pedestrian amenity in the area. A pedestrian priority crossing is located on Wilson Street opposite Hollis Park. A pedestrian area is located between Wilson Street and Little Eveleigh Street to the east of the site, providing access to Redfern Railway Station. Dedicated pedestrian crossings are provided on all legs of key signalised intersections on City Road and King Street.

The proposed development is well connected by a series of bicycle routes that form part of the City of Sydney's cycling network. Wilson Street is a key regional cycle route running adjacent to the site, providing connections to Newtown, Erskineville and Redfern. A contra-flow cycle lane is provided on Little Eveleigh Street to the east which connects Wilson Street to Lawson Street and Redfern station. The City of Sydney has commenced a roll out of cycleway connections across the entire LGA. These routes will facilitate regional cycle connections.

Utilities and services

The following information has been obtained from the Services and Utilities Report at **Appendix C**.

The site of the proposed development contains existing electrical infrastructure that reticulates underground around the site.

There is a large quantity of telecommunications infrastructure around the site. Telecommunications infrastructure that runs along Wilson Street consists of underground installations.

There is an existing 200mm water main located in the Proposed Road running adjacent to the property frontage to the north of the property.

Currently the proposed development site is not supplied by natural gas. There is a 32mm nylon 210Kpa natural gas supply located along Wilson Street turning north into Forbes Street and a 32mm nylon 210Kpa natural branch line located in Holdsworth Street. There is also a 75mm nylon 210Kpa natural gas supply located along Wilson Street turning north along Golden Grove Street.

3 The proposal

3.1 Introduction

This application seeks consent for:

- The construction of a part six (6), part (7) storey plus basement, residential flat building to be used for affordable housing which includes 88 apartments and 39 car parking spaces; and
- Landscaping and associated site works.

The proposed development is in accordance with the Architectural Drawings, prepared by Architectus. Full size drawings are provided under separate cover, and reduced copies provided at **Appendix A** to this report.

3.2 Permissibility

Permissibility of the proposed affordable housing scheme is also established through Concept Plan MP08_0015, approved under Part 3A of the EP&A Act. The Concept Plan approves the development of Building D4 for residential uses. Refer to **Section 4** for information about the Approved Concept Plan.

State Environmental Planning Policy (Major Development) 2005 (MD SEPP) is the principal planning instrument applicable to the site. The site is zoned *Business – Mixed Use* under the provisions of Schedule 3, Part 5 of the MD SEPP and is also identified in the Redfern-Waterloo Authority Built Environment Plan (BEP) as a strategic site for the purposes of a mix of employment, educational, cultural and residential uses.

The “Concept Plan for North Eveleigh Director-General’s Report Major Project 08_0015” dated November 2008 found that the proposed Concept Plan for the Site, which proposes the residential use of Lot 3 DP 1175706 “*meets the requirements of the MP SEPP and the proposed use is permissible.*”

3.3 Detailed description

The proposal contains eighty eight (88) apartments accessed from generous lobbies at the eastern and western ends of the building or from linking open covered galleries on its southern elevation.

While the apartment mix responds directly to the CWH’s client requirements, it has also influenced the building’s planning layout, its circulation and its architectural expression. The building’s main entry, incorporating a generous complying ramp, is located in its most active north-east corner while a secondary entry is located along its western side. A landscaped rear garden is accessed directly from the ground floor gallery. Secure basement parking for 39 cars and 88 bicycle spaces is accessed from the western side of the site with six visitor bicycle spaces located adjacent to the main entrance.

The form and scale of the proposed building corresponds generally with the 2008 Concept Plan’s six storey envelope, with minor departures introduced for urban design and amenity reasons. Rather than dominate its context, the proposal has been designed to complement its existing heritage context and significant public setting. While continuity with the site’s built heritage fabric is provided through the use of brick and the building’s formal layout, it is intended for there to be a clear contrast between the proposal’s material, colour and character and that of the

existing buildings to the east and the west.

To modulate its length and scale, the proposed massing is arranged in three parts, with each part reflecting its role in the composition through alignment, expression and material. To express the building's main entry, the eastern component is raised by one storey, following the example of the adjacent Carriage Workshop.

The middle framed section of the building comprises a large number of single units precisely aligned with the existing Carriage Workshops. While regular structural bays recall the repetition of adjacent heritage façades, a doubling of width produces larger apartments at grade and doubling of height produces duplexes at upper levels. In response to the Clothing Store's landscaped setback, the western element is setback and expressed horizontally with large spandrels, each containing sliding operable west facing screens.

The western façade contains the secondary entry. The two brick corner elements are linked along the southern façade by a concrete access gallery. With clear proportions and an alternating rhythm of glazed balustrades and vertical timber screens, the gallery is proposed as an extension of the proposal's communal open space network.

The building is served by generous rear gardens and a landscaped roof terrace for communal use. With barrier free access to all public areas and apartments, eight adaptable apartments of one, two and three bedrooms are located close to the main lobby with four adaptable car spaces provided at basement level.

The building will be secure and safe, with clear access from public streets and high levels of passive surveillance provided to the public domain from street facing galleries, open rear galleries and rear garden spaces.

3.4 Building height

The 2008 Concept Plan approves a maximum height of Building D4 of RL44.1 metres and six storeys.

The height in storeys of the proposed development is part six storeys and part seven storeys. The height of the proposed building is RL48.1 metres.

3.5 Unit mix

The proposed unit mix is shown in **Table 3** below. There will be a total of 88 units. The majority will be one and two bedroom units (83% in total) with a small number of studios and three bedroom units.

Table 3 Unit mix

Unit type	Number of units	Proportion of units
Studio	10	11%
1 Bed	37	42%
2 Bed	36	41%
3 Bed	5	6%
TOTAL	88	100%

3.6 Gross floor area

The total gross floor area for the development is 5932.8m². The Schedule of Areas is shown at **Table 4** below, including apartment GFA, circulation GFA, site area and FSR. As illustrated, the proposed GFA is within the Approved Concept Plan GFA.

Table 4 Schedule of areas

SCHEDULE OF AREAS		
Apartment No.	Apartment GFA	Circulation GFA
G01-G06	529.8	121.3
101-116	916.5	41.9
201-216	916.5	49.9
301-316	916.9	41.1
401-416	955.6	49.1
501-515	1,096.7	41.1
601-603	226.1	30.3
Total	5,558.1	3,74.7
Total Apartment GFA		5,558.1
Total Circulation GFA		374.7
TOTAL		5,932.8
Site Area		2,562.0
FSR		2.32:1
Approved Concept Plan GFA		6,480.0

3.7 Materials

While the proposed building will be concrete framed, its primary material will be brick. Chosen for its compatibility with its adjacent heritage structures, brick is used in a contemporary way which expresses its versatility.

The brick chosen is Bowral Blue, a local clay pressed material favoured for its density of its colour, compatibility with existing buildings, the flat industrial ground plane of the site and future precinct landscapes.

In situ and precast concrete will be a light coloured smooth finish. Minor hoods required to shade specific windows will be steel plate, with frames and parapet capping clear anodised aluminium. While timber screens will attempt to recycle framing hard woods from the now demolished structure that once dominated the site, spotted gum will be used if this is not able to be achieved along the north and south facades.

3.8 Background to development

The following information is from the Social Impact Assessment at **Appendix H**.

North Eveleigh is located within the Redfern Waterloo urban renewal area. The Redfern Waterloo precinct has been identified as a priority area for revitalisation and redevelopment by the NSW Government to help accommodate the growing population of Sydney into the future.

The overall concept plan for North Eveleigh provides for an estimated 1,258 new dwellings across the total site, which is expected to house approximately 2,400 new residents. The concept plan also aims to provide up to 3,270 permanent new jobs.

A 12% target has been set for the affordable housing portion of new dwellings on the site, which will be funded by the UGDC's affordable housing development levies. This equates to approximately 151 affordable housing dwellings. The CWH North Eveleigh Project will provide for approximately 60% of this target (88 of the total 150 dwellings).

Affordable housing is defined as housing which is appropriate to the needs of very low to moderate income households, and which does not consume more than 30% of household income (net), so that households are left without sufficient money to meet other basic living costs.

People within these income groups are often classified as 'key workers' or people who work in typically lower paid jobs, but provide important and essential services to our communities. These can include nurses, bus drivers, office workers, construction workers, childcare workers, cleaners, and shop assistants.

CWH has developed a reputation for providing high quality, well-designed buildings that are sustainable, accessible, provide high amenity to tenants, and are integrated into surrounding neighbourhoods and communities.

CWH implements a rigorous and responsive property maintenance program to ensure its properties are maintained to a high standard. CWH also encourages socially inclusive developments, aiming to ensure that all its tenants get to know each other; live together as good neighbours and feel included and supported in their local community. CWH employs a full time Community Engagement Manager whose role focuses on facilitating social inclusion, community celebration and tenant participation across each of CWH's properties.

3.9 Who is City West Housing?

CWH was established in 1994 with a charter to provide long term secure affordable housing for rent in Ultimo/Pymont to people on low to moderate incomes.

CWH receive developer contributions from development taking place in Green Square and Ultimo Pymont and must use these contributions to develop affordable housing in the City of Sydney LGA. The objective is to provide housing for people in high need either living or working in the City of Sydney local government area who are unable to secure affordable, long term housing in the local area. Housing is provided for people with gross household income of up to a maximum \$89,471 per annum.

Importantly, CWH maintain ownership of their affordable housing developments, which are then leased to suitable tenants. Because of their long term interest in their properties, buildings are constructed to a high-standard. Extensive experience in managing buildings also influences design, and buildings are safe, functional and good community spaces.

CWH currently owns and manages 547 affordable housing units in Green Square, Ultimo-Pymont and Glebe.

In 2009 CWH became registered as a Class 1 Community housing provider.

3.10 Information about City West Housing Tenants

Appendix CC contains a letter from CWH containing information on demand for CWH developments, mix of units, tenant demographics, unit allocation policy, car parking allocation, and current waiting lists.

CWH provides housing for a full range of age groups and households, from families or single parents with children, through to elderly people living alone. CWH actively attempts to create mixed communities and allocates units accordingly to incorporate a mix of income types from very low, low and moderate income households. Generally, CWH allocates 25% of its units to very low income households, 45% to low income households and 30% to moderate income households. The household mix for the North Eveleigh scheme is yet to be determined.

The letter from CWH concludes that the proposed unit mix for this development meets the current demand by household type on the waiting list.

CWH’s car parking policy is to provide approximately 40% of units with a private parking space. The policy also states a preference for single level basement parking under a building.

Demand for parking per unit type on the CWH waiting list is shown in **Table 5** below.

Table 5 Demand for car parking per unit type – City West Housing Waiting Lists

	1 Bedroom	2 Bedroom	3 Bedroom	Total
Number of applicants	248	115	30	393
Number of applicants requiring car spaces	93	58	20	171
Percentage	37%	50%	66%	43.5%

CWH promotes sustainable transport modes and does not have a large demand for private car parking in its current developments. The future demand for car spaces per household on CWH's waiting list equates to 43.5% of households requiring parking. The proposed development at North Eveleigh proposes parking equating to an allocation of 44%, which exceeds CWH's design guidelines.

3.11 Architectural design

Context

The North Eveleigh site is a unique historical part of Sydney, structured by remarkably intact Victorian industrial buildings. Planned as a functional working environment, the site's composition, structure and architectural expression describes its past rail operations and technical services.

In this context, all movements and servicing are visible, all spaces governed by function and ergonomics and all material choices determined by economy and appropriateness to task.

Heritage buildings to the east and west of the site are striking for their clarity of structure, robust construction and compositional integrity. While repetitious roof forms allow for an economy of construction, they also create long repetitive façade elements, articulated with classical detailing.

Minor increases in height, such as the higher bay on the nearest corner to the east and a more recent addition, the higher massing to the Carriage Workshop, give emphasis to special spaces. Increased visual interest and functionality is provided, and this layer of articulation also gives greater legibility to key corners and significant entry points.

As an open industrial site, little external protection is provided from rain, sun, train noise and other external factors. Within this context, the protection provided by shade along the edges of buildings and large internal or covered spaces - now adapted for markets and performance spaces - are of high value to the entire context. The proposal follows these contextual cues by:

- Creating higher massing at its most active corner to express its main entry;
- Providing generous porch and internal and external spaces at its main entry;
- Creating open covered galleries, which clearly express the building's entry points, vertical and horizontal access and day to day circulation;
- Positively expressing the building's alignments, length and scale through the use of modulation, proportion and repetition;
- Providing clear architectural expression and structural composition, using concrete, brick and metal sheet roofing;
- Providing contemporary architectural expression as a compelling dialogue with adjacent heritage fabric; and
- Clearly locating and expressing the building's services at ground level, allowing ease and efficiency of operation, delivery and collection.

Design

The project brief required an innovative, well designed apartment building, corresponding in scale to the approved Concept Plan envelope. Directly reflecting CWH's specific residential portfolio, the brief required a high number of small apartments (60% one bedroom and 40% two bedroom) with a limited number of larger units only at ground floor level, to reflect the current housing demand for CWH's Affordable Housing (refer information at **Section 3.3** of this EIS).

The client requested that the building positively respond to its historic inner city context, be architecturally distinctive, secure and demonstrate excellence in sustainable residential design. The building has achieved these aims.

With a larger number of smaller units, the required amount of circulation space increases too, which can lead to minimally sized and austere entry spaces and lobby areas. Rather than adopt a number of cores however – each with their own lift and constrained lobby areas – the North Eveleigh project proposes a major entry to its most active corner, a secondary private entry to its west and a generous access gallery to its southern edge.

Unlike small lift lobby spaces, which do not tend to encourage communication or knowledge of neighbours from other parts of the building, the gallery brings people together around common spaces. This includes entry and lift lobbies, adjacent open communal and roof spaces, and places to dispose of garbage or to pick up mail.

Not only does this strategy introduce a legible hierarchy to the building's circulation spaces, it also emphasizes entries, creates settings for casual meetings between residents and distributes a variety of dwelling types to each of its parts. Like the adjacent Carriageworks buildings, the proposed building's architectural expression is a direct result of function, use and composition.

The gallery proposed is generous, well-screened and well-proportioned. Rather than simply being a corridor, it is proposed as an extension of the building's communal space. The gallery responds to the client brief as follows:

- provides well-designed access and circulation to a large number of smaller dwellings;
- provides natural ventilation and high levels of solar access to virtually all dwellings;
- eliminates all south facing apartments or bedrooms – a major source of noise from constant rail traffic;
- provides a series of layers between rail yards and dwellings – boundary planting, trees, rear communal open space, gallery screening, gallery space and thick wall to apartments;
- increases security and safety through passive surveillance over rear open space, along galleries, between apartments and residents generally;
- allows for hierarchy of major and minor entries and lift lobbies with a high degree of flexibility of entry and access; and
- rationalises pedestrian circulation, servicing, postal delivery and visitor entry.

3.12 Access, traffic and transport

For a detailed overview of access, traffic and transport, refer to Transport Report at **Appendix D** to this report and the TMAP at **Appendix U**.

Pedestrian Access

It is proposed that pedestrian access to the site be provided off the three street frontages. The main pedestrian entry will be located off the north facing residential entry/lobby area. Other locked, side entrances off the eastern and western street frontages are also provided.

Vehicular access

Vehicular access to the site is provided via a driveway ramp, located off the western street frontage of the site. The vehicular access ramp provides vehicular access directly into the basement parking area.

Resident car and bicycle parking

The proposed development provides parking for 39 car parking spaces and 88 bicycles, located within the Basement Level of the building. Further visitor bicycle parking spaces will be provided adjacent to the ground floor main pedestrian entry.

Visitor parking

There is no visitor car parking proposed as part of this development. Visitor bicycle parking rails are proposed at the main entrance to the building. It is considered acceptable to not provide visitor car parking, as there is new, timed car parking being developed on the streets adjoining the proposed development, as part of UGDC 's early site works currently under construction.

Basement car parking was also considered, but is not suitable for this development. CWH have found on other developments that having it has caused management problems due to tenants using the space and other tenants complaining when their visitors couldn't park. They also felt that providing a space within the basement car park would not only reduce the minimal number of spaces provided but could pose a security risk with unknown persons entering the car park.

During the design process, the possibility of at-grade visitor parking was investigated. The only possible location is on the site's eastern boundary, where spaces could be accessed from the road that is shared with Carriage Works. A cross-over to the site in this location would result in the loss of several existing Carriage Works spaces (as approved), and the cross-over was not supported by CarriageWorks operators or UGDC.

Loading and waste collection

For the same reasons it has not been possible to provide a designated loading area on site.

Waste will be removed from the site via the ramp to the rear of the building, where bins will need to be wheeled onto the eastern side street and emptied into a truck. There is sufficient turning room for garbage trucks at the end of that eastern side street. CWH are a registered user of the City of Sydney GAR System, which provides keyed access to the development's waste room for the garbage contractor.

Loading will primarily be conducted through the front of the building, where trucks will have access to timed, on-street parking spaces and clear access to the lobby and the lifts. The basement is designed with enough clearance for small vans (B99 vehicles), so loading will be via the basement in many cases.

3.13 Landscaping and open space

A Landscape Report and Plans has been prepared by Arcadia, and are provided at **Appendix R** to this report. The landscape architecture has been designed to take into consideration the site's context, particularly its railway and heritage surrounds, and to ensure maximum amenity for future occupants.

Communal open space areas are designed to accommodate a range of uses, from passive recreation, to reading, exercise, relaxing, as well as allowing for gardening and growing of herbs and vegetables.

Streetscape works to the main northern street frontage will provide seating, street trees, pedestrian footpath and paving adjacent to the main building entrance. This will assist in creating an active main street frontage, and also provide a landscaped edge to the otherwise solid masonry design of the building. Pedestrian footpath and street trees are also proposed to the western street frontage, which provides a secondary access point to the development.

The rear communal open space at the ground floor will include a deck, grassed area, vegetable garden, and recycled material seating and screen planting. The landscape design also includes the adaptive reuse of a historic water tank found in the local area for rainwater capture and reuse in the garden – a practical way to interpret the site's industrial history.

Further planting and seating areas are located within circulation areas to the upper floor levels. These areas will provide smaller areas for interaction between neighbours, and in close proximity to dwellings on each level.

A roof top communal open space area will be provided to accommodate a small scale entertaining area and a BBQ, surrounded by landscaping. This will add to the dynamic of the overall landscape and open space design, and to the range of uses that can be accommodated for within the development site for future occupants.

The Ground Floor landscape plan, including the proposed communal open space and streetscape planting is illustrated at **Figure 12**. The proposed roof top terrace communal open space area is illustrated at **Figure 13**.



Figure 12 Ground Floor landscape plan



Figure 13 Level 7 Landscape Plan

3.14 Precinct staging

The proposed development is part of Stage 1 of the overall North Eveleigh Concept Plan Precinct. Within Stage 1 is a series of sub-stages, which include remediation works, construction of roads, public open space, as well as the proposed development. The Stage 1 Precinct Staging Plan is provided at **Appendix DD** to this report.

3.15 Ecologically Sustainable Development

The proposed development is designed to achieve a high level of passive ecologically sustainable development, achieved through a range of measures including:

- Exceeding the minimum energy and water efficiency targets established by BASIX (refer to BASIX Report and Certificate at **Appendix Q** to this report);
- Achieving a 5.9 star NatHERS rating for Thermal Comfort and Passive Design;
- Appropriate and location sympathetic design of glazing and sun shading to maximise the benefits of natural light into dwellings;
- Achieve a high level of day-time cross ventilation, and north/east and west aspect ventilation during the night to minimise the impacts of railway noise;
- Reuse of materials from the demolition of other buildings within the precinct; and
- Re-use of rainwater to minimise use of potable water.

The proposal is assessed against the ESD principles within the Regulations at **Section 7.3** of this report.

A detailed overview of the proposed ESD measures is provided at **Appendix N** to this report.

3.16 Integrated Water Management

The ESD Report by WSP at **Appendix N** includes water management measures for the proposed development. The development is aiming to demonstrate best practice in water efficient design by reducing potable water consumption by at least 43% from a base case scenario.

Incorporation of water efficient fixtures and fittings (e.g. 5 Star WELS rated taps, 4 Star WELS rated toilets, etc.) and 'low water' use landscaping will reduce potable water consumption by 32% from a base case scenario.

A 30m³ rainwater tank to provide for landscape irrigation, laundry facilities and toilet flushing for all units will further reduce potable water demand by 11%.

The Stormwater Management Plan prepared by Enstruct (refer **Appendix L**) addresses water quality. As part of the Concept Plan approval for the entire North Eveleigh development there is a requirement to provide a reduction in average annual loads of pollutants as follows:

- Total Suspended Solids (TSS) by 80%;
- Total Phosphorous (TP) by 45%;

- Total Nitrogen (TN) by 45%; and
- The water quality controls are to remove visible oil or grease, litter >50mm and sediments >0.125mm.

To achieve these reductions, it is proposed to provide enviropod (or equivalent) on the stormwater sump pit, and a trash rack in the on-site detention (OSD) tank to remove gross pollutants. To remove TSS, TP & TN it is proposed to provide (Cartridge Stormfilter systems) within the OSD tank to clean first flush flows to the existing stormwater network.

3.17 Stormwater management

As part of the development of the Concept Plan for the overall North Eveleigh site, a Hydraulic Services Concept Design Report was prepared by Warren Smith and Partners (April 2008) which presents a concept design of the stormwater management for the site. Based on this document, the DGRs and Statement of Commitments included in the planning approval present the key stormwater management obligations for development on the whole North Eveleigh site. This includes a commitment to not increase flows discharged from the site post development.

A Stormwater Management Plan (SWMP) prepared by AECOM (appended to Enstruct's detailed Stormwater Management Plan at **Appendix L**) describes how the affordable housing development will address these planning obligations and develop the previous stormwater management concept design to be specific to the current scope of work.

Furthermore, as the proposed development is located within the broader catchment covering the entire western part of the North Eveleigh Concept Plan site, to provide a holistic strategy for this site this SWMP also considers the future additional development proposed immediately to the south of the affordable housing scheme site. This land currently remains in RailCorp ownership and there is no plan to develop this area in the short term, however as any future development will rely on the same stormwater discharge points as the affordable housing scheme, it is essential that this also be considered in this SWMP.

As part of the affordable housing development, UGDC is responsible for delivery of infrastructure to support building development to be delivered by others. The report prepared by AECOM provides an overall strategy for the western part of the North Eveleigh Concept Plan Site, with additional detail being provided for the areas being delivered by UGDC.

The various site boundaries and responsibilities for delivery across the western part of the site are summarised within the AECOM Stormwater Management Plan.

The detailed stormwater management (refer Enstruct's Stormwater Management Plan), based on the requirements specified in the overall precinct strategy, has been designed to connect into the new infrastructure works designed by AECOM which is under construction at this time. The new stormwater network designed for both the new roads and the 4 lots runs to the north and west of the project site across the western precinct and into a new connection installed along Iverys Lane.

The overland flows for the precinct run north of the project site, flow south along the new western access road and drain across to the 'Holdsworth Street low point' as referenced in AECOM's Stormwater Management Plan report.

Roof Drainage

The roof drainage from the building will travel to a retention tank, that will have a high level bypass to the on-site detention (OSD) tank when full of water.

The roof drainage system will be designed to convey the 100 year design flows created by the building roof catchment to the retention tank. Any flows in excess of the design flows will discharge onto the surrounding ground and run as overland flow towards the discharge point for the site.

Surface Drainage

The in ground drainage system to the south for the site in the landscape zone will be sized to convey the 20 year design flows from the surface area to the OSD tank.

Flows in excess of the 20 year event surcharge the below ground OSD tank into the above ground OSD which fills with water up to a maximum height of 300mm. In events greater than 100 ARI storm event water will surcharge the above ground OSD and flow as overland flow to the south east, discharging to the existing road.

On-Site Detention

The on-site detention requirements for the lot have been provided by AECOM's Stormwater Management Plan which is included in the Appendix of Enstruct's Stormwater Management Plan.

The minimum storage requirement for Building D4, the subject site, is 51m³ for a lot area of 0.2562 hectares as per Table 7 in the plan. The OSD will have an orifice plate to limit flows in the Q20 and Q100 ARI storms (56l/s and 77l/s) taking into account any bypass flows not draining to the OSD tank.

Modelling of the internal stormwater with the high surface water level in the external stormwater network in events greater than Q20 events was completed using Watercom DRAINS. There is a need for both a below ground OSD tank (for events up to and including 20 year ARI storms) and above ground storage (for events between 20 year and 100 year events).

The impacts of different storm events are addressed at **Section 6.3** under "Stormwater and flooding".

4 Planning context

This section outlines the strategic and statutory planning context within which the proposal is to be considered.

4.1 Strategic context

Concept Plan MP08_0015

The North Eveleigh Concept Plan was approved by the Minister for Planning on 16 December 2008.

The Concept Plan anticipates the gradual development of the site over the next five to fifteen years. The future of the site and in development is linked to long term rail needs and the impact of rail projects on the site. Ultimately, the site is still owner by RailCorp, who will only release parts of the site once they are satisfied that those sites are surplus to their needs.

Under the 2008 Concept Plan, the 10.7 hectare mixed use will accommodate residential, commercial, retail, cultural and community uses, as well as public open space. The distribution of uses is as follows:

- Eastern Precinct - mix of commercial, residential, community and open space uses.
- Central Precinct - cultural and community uses and open space.
- Western Precinct - residential and open space.

The plan below is of the Western Precinct, and shows the exact location of Lot 3 DP 1175706, the Concept Plan approval footprint and the proposed building footprint. This plan is included in the architectural plans at **Attachment A**.

The eastern component of the North Eveleigh Concept Plan is illustrated at **Figure 14**.



Figure 14 Concept Plan (western precinct)

The Concept Plan would achieve a density of 1.65:1 over the entire site. This is comprised of approximately 177,500sqm of floor area including:

- 60,000sqm of commercial and retail floor space and 23,000sqm of cultural floor space, providing an estimated 3200 jobs.
- 95,000sqm of residential floor space, providing around 1250 dwellings.

The Concept Plan will create around 6,500 new jobs including approximately:

- 3,300 construction jobs, of which more than 300 will be set aside Indigenous workers.
- 3,200 permanent jobs from the commercial, retail and cultural development.

The Project provides for the retention and adaptive reuse of heritage buildings, and new buildings range in height from from 4 storeys to 16 storeys. The lower scale buildings are located along Wilson Street and will have a three storey scale consistent with the 2-3 storey terrace house building that characterise the streetscape. Higher scale buildings are located towards the centre of the site adjacent to the railway corridor.

Five new parks are planned for the site, totalling around 10,000sqm. The largest of the parks is around 3,350sqm. Overall, around 15% of the site area consists of parks and public domain areas (not including roads) that will be accessible to the public.

A 12% target has been set for the affordable housing quota of new dwellings on the site.

The following table (**Table 6**) sets out the conditions of the 2008 Concept Plan approval and how the proposed application satisfies those conditions.

Table 6 Concept Plan Conditions consistency

Concept Plan Condition	Proposed development consistency
<p>PART A – TERMS AOF APPROVAL</p> <p>A1 Development description</p> <p>Concept approval is granted only to the carrying out of development solely within the concept plan area as described in the document “North Eveleigh Concept Plan” prepared by Urbis dated 28 March 2008 and in the document titled “North Eveleigh Concept Plan Response to Key Issues, Preferred Project Report and Revised Statement of Commitments”, prepared by the Redfern Waterloo Authority dated September 2008, including:</p> <p>(1) The redevelopment of the site for a mix of commercial, retail cultural, community and residential uses involving a maximum of 177,527m² of GFA comprised of:</p> <ul style="list-style-type: none"> (a) A maximum of 55,672m² of commercial GFA; (b) A maximum of 4,000m² retail GFA; (c) A maximum of 22,796m² cultural / community GFA; and (d) A maximum 95,059m² residential GFA. <p>The maximum permissible GFA for Building D4 is 6,480 m².</p>	<p>The proposed development has a GFA of 5,932.8 m², which is well below the maximum permissible GFA for Building D4 of 6,480 m².</p> <p>The proposed development is generally consistent with the Concept Plan Approval, with the exception of the maximum building height and encroachments of the building beyond the approved building envelope. Such modifications to the Concept Plan are being addressed through a Section 75W Modification Application to be submitted to the Department of Planning and Infrastructure concurrently with the subject Development Application.</p> <p>Refer to Section 6.3 of this report, which assesses the impacts of the proposed minor departure from the approved envelope.</p>
<p>(2) Maximum building heights and envelopes within development blocks as identified in ‘Drawing Land Use Plan Eastern Site’ and ‘Land Use Plan and Western Sites’ prepared by Bates Smart dated October 2008 of the Preferred Project.</p>	<p>The maximum building height on the subject site will be exceeded by 1 storey (total seven storey development) and 4 metres (total height of RL 48.1 metres).</p>
<p>(3) A maximum of 1800 car parking spaces to service the mix of uses, including retention of existing car parking spaces allocated to Carriageworks and Blacksmiths’ Shop buildings, with the final amount to be determined at the detailed design stages using the following maximum car parking rates.</p> <ul style="list-style-type: none"> – Studio apartment: 0.25 spaces per dwelling – 1 bedroom apartment: 0.5 spaces per dwelling – 2 bedroom apartment: 1.2 spaces per dwelling – 3+ bedroom apartment: 2 spaces per dwelling 	<p>Under the approved Concept Plan, the maximum number of parking spaces permitted for the proposed development is 74.2. A total 39 spaces are proposed, well below the maximum parking rates permitted.</p>
<p>(7) (b) Affordable housing.</p>	<p>The proposed development fulfils the requirement for the provision of affordable housing within the North Eveleigh precinct.</p>
<p>A2 Development in accordance with the plans and documentation</p> <p>The approval shall be generally in accordance with MP 08_0015 and with the Environmental Assessment, except where amended by the Preferred Project Report and additional information to the preferred Project Report and the Concept Plan drawings prepared by Bates Smart.</p>	<p>The proposed development is generally consistent with the Concept Plan Approval, with the exception of the maximum building height and encroachments of the building beyond the approved building envelope. Such modifications to the Concept Plan are being addressed through a Section 75W Modification Application to be submitted to the Department of Planning and Infrastructure concurrently with the subject Development Application.</p>
<p>B1 Built form</p> <p>(1) Approval is given to a mixed use development involving a maximum of 177,527m² GFA, comprised of (d) a maximum 95,059m².</p>	<p>The proposed development will not result in any precinct wide exceedence of the maximum GFA, and is below the maximum GFA permitted for the subject site. The proposed GFA is 6,215m².</p>
<p>(2) Despite (1) above, future project applications are not to exceed the GFA in each precinct (c) Western Precinct 50,698m².</p>	<p>As above.</p>
<p>B3 Transport and Pedestrian Management</p> <p>(1) A transport Management and Accessibility Plan (TMAP) is to be prepared prior to or concurrently with the first project application that includes new floor space for the site and should include:</p>	<p>A Transport Management and Accessibility Plan has been prepared by Arup for UGDC and is included at Appendix U.</p>

Concept Plan Condition	Proposed development consistency
<p>(a) Identification of measures to support the achievement of a maximum 40% mode share to car. The measures proposed should be to the satisfaction of the Ministry of Transport, and may include enhancements to public transport, changes in parking allocation and/or pedestrian infrastructure, policy initiatives or behaviour change programs.</p> <p>(b) Detailed modelling of critical local and regional intersections, are to be calibrated and reviewed in consultation with the RTA and Ministry of Transport. Both AM and PM peaks are to be modelled to determine the impact of any proposed works on intersection operation.</p> <p>(c) Funding mechanisms and timing of road and intersection upgrades.</p> <p>(d) The method of achieving restriction to traffic generated by site staff and delivery vehicles during AM and PM peak periods.</p> <p>The TMAP is to be submitted to the Ministry of Transport for approval.</p>	
<p>(2) Notwithstanding modification B2(1)(c), the following are to be incorporated into the final TMAP:</p> <p>(a) Any recommended improvements to existing intersections controlled by traffic signals require assessment by the RTA's Network Operations Section.</p> <p>(b) The extension of existing left and right turning lanes in Abercrombie and Lawson Streets may involve the removal of on-street parking, and will require the concurrence of the City of Sydney Local Traffic Committee.</p> <p>(c) Further investigation into the feasibility of extending the existing right hand turn bay on Cleveland Street into Shepherd Street.</p> <p>(d) Costs associated with any road improvements are to be borne by the Proponent.</p> <p>(e) Further information regarding the consequences for pedestrians, if any, by removing the pedestrian scramble phase at the intersection of Abercrombie and Shepherds Streets.</p>	<p>As above.</p>
<p>B4 Staging of development</p> <p>(1) The Proponent shall demonstrate with each project application that the proposed development represents orderly and coordinate development, such that:</p> <p>(a) It may be serviced by existing infrastructure, by infrastructure approved by this Concept Plan, or is capable of being serviced; and</p> <p>(b) Access for vehicles and pedestrians is available and can be made available; and</p> <p>(c) Relevant infrastructure and publicly accessible areas are available.</p>	<p>The proposed development will be capable of being serviced with the necessary infrastructure. A Services and Utilities Report will be provided as part of the Development Application to confirm the provision of services and infrastructure to the site.</p> <p>UGDC are undergoing precinct construction works to provide vehicular and pedestrian access to the subject site. These works were approved under Part 5 of the Environmental Planning and Assessment Act by UGDC (then Sydney Metropolitan Development Authority).</p>
<p>(4) The project applications associated with the public parks identified by modification B(1)(3) are to be concurrently submitted with the respective first project applications lodged for new GFA in the Western Precinct. Public parks and other open space areas are to be provided as soon as practicable.</p>	<p>An application to the City of Sydney Council for consent for the construction and embellishment of two public parks was lodged by UGDC in March 2013 and is currently being assessed.</p>
<p>B5 Developer Contributions</p> <p>Contributions will be required by the Minister based on the 'Redfern-Waterloo Authority Contributions Plan 2006' or any other applicable Contributions Plan as advised by the Redfern Waterloo Authority or the Department of Planning at the time that future project applications are determined.</p>	<p>Clause 6 of the 2006 Contributions Plan identifies development to which the plan applies. Under this clause, development for provision of affordable housing, that is provided by or on the behalf of a community housing organisation registered with the Office of Community Housing can be exempt from the Contributions Plan, with permission from the Minister.</p> <p>It is confirmed that the proposed development is for 'affordable housing' as defined by the <i>State Environmental Planning Policy (Affordable Rental Housing) 2009</i>, and CWH is a Registered Community Housing Provider.</p>

Concept Plan Condition	Proposed development consistency
	As such, it is requested that the Minister make the proposed development exempt the 2006 Contributions Plan and notify the applicant of this decision in the Assessment Report.
<p>B6 Affordable Housing Contribution</p> <p>To contribute to the provision or refurbishment of affordable housing within the Redfern Waterloo Operational Area, contributions will be required by the Minister based on the Redfern Waterloo Authority Affordable Housing Contributions Plan 2006, or other applicable Affordable Housing Contributions Plan, as advised by the Redfern Waterloo Authority or the Department of Planning at the time that future project applications are determined.</p>	<p>Clause 6 of the <i>Affordable Housing Contributions Plan 2006 – Redfern-Waterloo Authority Operational Area</i> defines which development does not apply to.</p> <p>Under this provision, the Plan does not apply to affordable housing by a Registered Housing Provider.</p> <p>It is confirmed that the proposed development is for 'affordable housing' as defined by the <i>State Environmental Planning Policy (Affordable Rental Housing) 2009</i>, and CWH is a Registered Community Housing Provider. The development therefore does not attract any contribution requirements under this Plan.</p>
<p>Part C – Future Assessment Requirements</p> <p>C1 Wind Impacts</p> <ul style="list-style-type: none"> • Recommendations made in the Wind Effects Study, prepared by Vipac Engineers and Scientists Ltd and dated 12 September 2008, are to be implemented in each subsequent project application. • A wind tunnel based assessment is to be undertaken when building design(s) are resolved at each project application stage, and should consider the following: <ul style="list-style-type: none"> – Main entries to buildings being located away from building corners; – The use of canopies/awnings to assist in effective wind amelioration; – The use of other wind amelioration measures necessary. 	<p>A Wind Impacts Report has been prepared, confirming the proposed development will allow for a suitable environment with respect to wind impacts. Wind impacts will be at an acceptable level.</p> <p>A Wind Impacts Report is included at Appendix K to this report.</p>
<p>C2 Site Contamination and Remediation</p> <p>Prior to lodgement of the first project application, a remediation strategy and remediation action plan are to be prepared and submitted to the Department and Council. The remediation strategy and remediation action plan must be implemented in a staged manner and in a rational and orderly manner.</p>	<p>The site is currently being remediated by UGDC in accordance with the applicable Remediation Action Plan for the precinct.</p>
<p>C3 Heritage and Archaeology</p> <p>An interpretation plan is to be submitted:</p> <ul style="list-style-type: none"> • With the lodgement of the first Project Application, if the site is developed as a whole, or • With the first Project Application for each precinct, if the site is developed in parts. 	<p>This condition has been satisfied by UGDC and the Interpretation Plan is available on the UGDC website.</p> <p>A Heritage Impact Assessment has been prepared and is included at Appendix P to this report.</p>
<p>C6 Site Management Agreement</p> <p>A Site Management Agreement for construction and ongoing operations, between the owner of Carriage Works and the Blacksmiths Shop and the owner(s) of residential and commercial buildings, will be required to be prepared for future Project Applications.</p>	<p>Site Management Agreement between CWH, ATP and Railcorp (landowner of the Carriage Works and Blacksmiths Shops sites) has been executed and is included at Attachment T to this report. This plan was prepared in consultation with the operators and other stakeholders.</p> <p>CWH has worked with operators on the site to ensure that the design, construction and operation of the proposed development will have a minimum impact on existing operations.</p>
<p>C7 Site servicing</p> <p>Emergency and service vehicles must have adequate access to and within the site and into each proposed basement car parking area.</p>	<p>The basement will be accessible to cars and small van servicing and emergency vehicles. Larger emergency vehicles will be capable of accessing the site easily from the street, with emergency crew able to access the building via the ground floor lobby.</p>

Concept Plan Condition	Proposed development consistency
<p>C8 ESD and Sustainable Design</p> <ul style="list-style-type: none"> • The future project applications for residential development are to demonstrate compliance with the provisions of SEPP BASIX. • Future project applications are to consider the Water Management Plan of the Environmental Assessment and are to investigate options for reducing potable water consumption, provision of alternative water supply for non-potable uses, and the use of recycled water. 	<p>A BASIX Certificate will be submitted with the Development Application for the proposed Affordable Housing. The proposed development will be consistent with the minimum energy, water and thermal comfort targets required under SEPP BASIX.</p> <p>An ESD Report is included at Appendix N to this report.</p>
<p>C9 Sydney Water</p> <ul style="list-style-type: none"> • Future project applications are to consider the impacts on Sydney Water stormwater infrastructure. Prior to lodgement of project applications, consultation with Sydney Water regarding any potential impacts on this infrastructure is to occur. • Future project applications are also to liaise with Sydney Water to: <ul style="list-style-type: none"> – Ensure water and sewer infrastructure are appropriately sized to correlate with the requirements of the Water Management Plan. – Investigate the potential of having a reticulated recycled water scheme for the development. 	<p>A Stormwater Management Plan has been prepared and is included at Appendix L to this EIS.</p> <p>CWH has sought to liaise with Sydney Water as required, however has not received any response from Sydney Water at the time of lodging this application.</p>
<p>C10 RailCorp</p> <p>Future project applications must address the following requirements of RailCorp:</p> <ul style="list-style-type: none"> • Corridor Protection <ul style="list-style-type: none"> – Prior to lodgement of an application seeking approval for any structure within 25 metres of the rail corridor that involves ground penetration of greater than 2 metres, the following are to be prepared in accordance with RailCorp's requirements and lodged with the relevant application: <ol style="list-style-type: none"> (i) A Geotechnical and Structural Report; (ii) An Excavation and Construction Methodology; and (iii) Cross Sectional drawings showing ground surface, rail tracks, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the Rail Corridor. 	<p>The proposed development is approximately 60-90 metres from the existing rail line.</p> <p>Notwithstanding, a Geotechnical Report and Structural details have been provided to RailCorp for review and consent as the current landowner of the site.</p>
<ul style="list-style-type: none"> • Derailment protection <ul style="list-style-type: none"> – Prior to the lodgement of any project application seeking approval for new structures located within 20 metres of the rail corridor, a derailment protection risk assessment in accordance with AS 5100 must be prepared and lodged with the application. 	<p>Given the distance of the proposed development from the rail line, a derailment protection risk assessment is not required as part of this application.</p>
<ul style="list-style-type: none"> • Drainage <ul style="list-style-type: none"> – Stormwater drainage from the North Eveleigh site may be discharged across the rail corridor utilising either the existing drainage system or through the installation of a new drainage system across the corridor serving the subject land; – The final drainage solution is to be development in consultation with Railcorp, with the written approval of Railcorp and landowner, prior to the lodgement of either the first application for subdivision or first application for new GFA, whichever occurs first. – Notwithstanding the above, the following information is to be submitted regarding the final drainage solution: <ol style="list-style-type: none"> (i) Demonstrate that drainage and stormwater within the site can be managed without any adverse impact on the rail corridor, and that any existing future pipes, across the corridor, can accommodate any increase in stormwater and drainage loads. Any necessary amplification or upgrading of the downstream drainage system is to be borne by the Proponent. Stormwater runoff from and through the property is to be appropriately managed, including by volume, direction 	<p>Drainage details are provided as part of the precinct-wide Stormwater Management Plan, prepared by AECOM, and the Stormwater Management Plan prepared to accompany the Development Application for the proposed Affordable Housing. The proposed stormwater management and drainage is considered to be appropriately designed so as to not impact on any rail operations.</p> <p>Full calculations, stormwater management plans and the Stormwater Management Plans will be provided to accompany the Development Application.</p>

Concept Plan Condition	Proposed development consistency
<p>and speed, so as to control nuisance, damage and hazard during storm events.</p> <p>(ii) Provide drainage calculations carried out in accordance with 'Australian Rainfall and Runoff' published by the Institute of Engineers Australia, including a contoured catchment diagram and delineation of flow paths for storms of average recurrence interval of 1:100 years (1% AEP) where appropriate.</p> <p>(iii) Provide full computer modelling of stormwater drainage design and analysis of the site and results of the computer output shown on the engineering plans. Detention system shall not be designed to ensure that post development flow rates from the site is not more than the pre-developed site discharge at each discharge point for all rainfall events up to 1 in 100 year ARI.</p> <p>(iv) That stormwater runoff from all impervious surfaces on the property is collected and conveyed to a point suitable for integration with the construction drainage system. The drainage system shall convey runoff from storms up to the 10% AEP. Defined overland flow paths shall be provided to safely convey runoff from the storm events up to 1% AEP.</p> <p>(v) Details of future care and control of the drainage system.</p>	
<ul style="list-style-type: none"> • Noise and vibration <ul style="list-style-type: none"> – An acoustic assessment is to accompany any project application for a new building. 	<p>An Acoustic Report is provided at Appendix J to this report.</p>
<ul style="list-style-type: none"> • Balconies and Windows <ul style="list-style-type: none"> – Any proposed balcony or window that is within 20 metres of the rail corridor is to incorporate adequate measures that prevent the throwing of objects onto the rail corridor. 	<p>The proposed development does not provide any balconies or windows within 20 metres of the rail line.</p>
<ul style="list-style-type: none"> • Reflective material <ul style="list-style-type: none"> – Future structures located along the railway corridor are to minimise the use of reflective material such as mirrored glass and metal finishes. 	<p>The proposed development will comprise mostly solid masonry material. There will be no mirrored glass or metal finish components that have the potential to cause any adverse reflective impacts to the rail corridor.</p>
<ul style="list-style-type: none"> • Future North Eveleigh Dive Alignment <ul style="list-style-type: none"> – Railcorp have nominated the North Eveleigh Dive Alignment adjacent to the southern boundary and in the southern section of the site, which may accommodate a future underground rail connection. – All new structures which have the potential to impact on the North Eveleigh Dive Alignment must be designed in accordance with RailCorp's design criteria. – The location of basements for Block B, C and D are to be located outside the RailCorp exclusion zone for the Dive Alignment. Future project applications involving basement structures of any block adjacent to the Dive Alignment are to be developed in consultation with RailCorp. – A detailed regime is to be prepared in consultation with RailCorp, for the future excavation of the site and the construction of building foundations (including ground anchors) which have a potential impact on the Dive Alignment, and may include geotechnical and structural certification. 	<p>Noted.</p> <p>The proposed development is located 60-90 metres from the identified North Eveleigh Dive Alignment. Geotechnical and structural details have been submitted to RailCorp for review and consent.</p>
<p>C11 Water Table / Ground Water</p> <p>Future project applications involving basement structures are to provide details of how the water table and ground water will be managed during and after construction of the basement car park.</p>	<p>The proposed development is not likely to give rise to any adverse impacts on the water table or ground water details, as noted within the Geotechnical report.</p>

Concept Plan Condition	Proposed development consistency
<p>C12 Car Share Details of car share arrangements are to be submitted with future project applications.</p>	<p>The proposed development will incorporate a car share scheme to minimise private car ownership. Consultation has already been carried out with GoGet in relation to this, and their interest in operating a scheme in the subject location is included at Appendix X to this report.</p>

NSW 2021 (State Plan)

NSW 2021 is a 10 year strategic plan to guide policy and other decisions for the state. The Plan is based on five strategies to rebuild the economy, provide quality services, renovate infrastructure, strengthen local environments and communities and restore government accountability.

The State Plan contains a number of strategies and goals that are relevant to the North Eveleigh affordable housing scheme. In particular, this includes the goal of placing downward pressure on the cost of living by improving housing affordability and availability.

Metropolitan Plan for Sydney 2036

The Sydney Metropolitan Plan guides growth and change for the Sydney metropolitan area to the year 2036.

The Plan contains Strategic Directions, including objectives for housing Sydney’s population and more specifically achieving housing affordability. Affordable housing targets for State urban renewal projects are to be set on a case by case basis.

Another of the Strategic Directions is achieving equity, liveability and social inclusion. Areas undergoing renewal are to have a mix of housing types. Connections to transport, employment and social opportunities for existing disadvantaged communities are to be improved.

Draft Sydney City Subregional Strategy

Key directions of the Draft Subregional Strategy for Sydney City are to:

- Provide a range of housing to cater for changing needs.
- Implement affordable housing initiatives.

The Sydney City Subregion has a target of 55,000 new dwellings over the lifespan of the sub-regional strategy to 2031.

The Redfern-Waterloo area has been identified in the Strategy as a major renewal site, with the potential to accommodate a share of planned growth in dwellings. The Strategy recognises the importance of meeting the accommodation needs of tourists and visitors while ensuring adequate supply of affordable housing for residents.

The Strategy has a number of actions of relevance to the proposed affordable housing scheme including:

C1.3 Plan for increased housing capacity targets in existing areas

Across the metropolitan region a target of 60–70 per cent of new housing is to be accommodated in existing urban areas, focused around centres and corridors. This will take advantage of existing services such as shops and public transport and reduce development pressures in other parts of Sydney.

C4.1.3 Redfern–Waterloo Authority to provide opportunities for improving the availability of affordable housing in Redfern–Waterloo

The Strategy recognises that the supply of local affordable housing is important in order to enable existing residents to take advantage of expanded employment opportunities while continuing to reside in the area and maintaining social cohesion.

Redfern-Waterloo Built Environment Plan (Stage One) 2006

This Built Environment Plan (Stage One) was prepared to provide a planning framework for the redevelopment of the Redfern-Waterloo Authority's strategic sites. North Eveleigh is identified in the plan as one of the Authority's strategic sites.

The land use and design strategies in the Plan were developed through an urban design analysis of the existing context and site specific conditions of each strategic site. This process generated potential development yields, and indicative employment and residential projections.

Redfern-Waterloo Authority Contributions Plan 2006

The Contributions Plan 2006 was adopted by the Minister for Redfern-Waterloo on 2 May 2007 and came into effect on 16 May 2007.

Clause 6 of the 2006 Contributions Plan identifies development to which the plan applies. Under this clause, development for provision of affordable housing, that is provided by or on the behalf of a community housing organisation registered with the Office of Community Housing can be exempt from the Contributions Plan, with permission from the Minister.

It is confirmed that the proposed development is for 'affordable housing' as defined by the State Environmental Planning Policy (Affordable Rental Housing) 2009, and CWH is a Registered Community Housing Provider.

As such, it is requested that the Minister make the proposed development exempt the 2006 Contributions Plan and notify the applicant of this decision in the Assessment Report.

Redfern-Waterloo Affordable Housing Contributions Plan 2006

The objective of this Plan is to enable the imposition of consent conditions requiring the payment of contributions toward the provision of affordable housing within the "Operational Area" which includes Redfern.

Clause 6 of the Affordable Housing Contributions Plan 2006 – Redfern-Waterloo Authority Operational Area defines which development does not apply to.

Under this provision, the Plan does not apply to affordable housing by a Registered Housing Provider.

It is confirmed that the proposed development is for 'affordable housing' as defined by the State Environmental Planning Policy (Affordable Rental Housing) 2009, and CWH is a Registered Community Housing Provider. The development therefore does not attract any contribution requirements under this Plan.

NSW Planning Guidelines for Walking and Cycling

The guidelines were prepared because the government was keen to support NSW councils, communities and the development industry to improve planning for walking and cycling.

The guidelines include information, concepts, case studies and illustrations designed to assist planners.

Development Near Rail Corridors and Busy Roads – Interim guidelines

The guideline provides guidance for planning, design and assessment of development in or adjacent to rail corridors and busy roads. It provides advice to councils, state agencies, proponents and the community on ways to avoid and manage the impact of road and rail operations on surrounding land uses and the impact of surrounding land uses on road and rail infrastructure.

In accordance with this guideline, an Acoustic Report has been prepared and is included at **Appendix J**. At the request of RailCorp, an Electrolysis Report has been commissioned by the Applicant to assess if the proposed design can withstand the impacts of stray DC current from the rail line. This report is included at **Appendix FF**.

NSW BikePlan May 2010

The NSW BikePlan seeks to promote travel by bicycle and commits State Government funding towards new regional bike paths. There are no planned paths in close proximity to the site that might affect traffic movement or safety in relation to this development.

The proposed development promotes the objectives of this plan by providing a significant number of new bicycle spaces for residents.

Sustainable Sydney

Sustainable Sydney 2030 is a set of goals Sydney City has set to help make the city as green, global and connected as possible by 2030.

The 2030 vision focuses on ten strategic directions including a globally competitive and innovative City; a leading environmental performer; integrated transport for a connected City; a City for pedestrians and cyclists; a lively, engaging City Centre; vibrant local communities and economies; a cultural and creative City; housing for a diverse population; sustainable development, renewal and design; implementation through effective partnerships.

Sydney Development Control Plan (DCP) 2012

The purpose of the DCP is to supplement the Sydney Local Environmental Plan (LEP) 2012 and provide more detailed provisions to guide development.

Clause 11 of the State Environmental Planning Policy (State and Regional Development) 2011 states that development control plans (whether made before or after the commencement of the SEPP) do not apply to State Significant Development. However, the objectives of the Sydney DCP 2012 in relation to the proposed development will be considered in **Section 6** of this EIS.

4.2 Regulatory context

This section sets out the regulatory context of the proposed development, including applicable legislation, environmental planning instruments (EPIs), plans and policies. These include:

Legislation and regulations:

- *NSW Environmental Planning and Assessment Act, 1979* (EP&A Act);
- *NSW Environmental Planning and Assessment Regulations, 2000* (The Regulations);
- *Commonwealth Environment Protection and Biodiversity Act 1999* (EPBC Act);
- *NSW Heritage Act 1977* (Heritage Act).

Environmental Planning Policies:

- State Environmental Planning Policy No 32 – Urban Consolidation (Urban Consolidation SEPP);
- State Environmental Planning Policy No 55 – Remediation of Contaminated Sites (SEPP 55);
- State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (SEPP 65);
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (BASIX SEPP);
- State Environmental Planning Policy (Major Development) 2005 (MD SEPP);
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP);
- State Environmental Planning Policy (Affordable Rental Housing) 2009 (Affordable Housing SEPP);
- State Environmental Planning Policy (State and Regional Development) 2011 (Development SEPP); and
- Deemed SEPP: Sydney Regional Environmental Plan 26 – City West (SREP 26).

4.2.1 Legislation

This section provides the regulatory context with respect to the applicable legislation.

Environmental Planning and Assessment Act 1979

The EP&A Act is the primary applicable legislation for planning and assessment in NSW. The EP&A Act enables development to be considered state significant in accordance with a relevant state environmental planning policy (SEPP).

The Development SEPP (discussed further) provides the provisions for development that may be considered state significant development. The development is also required to be consistent against the objects of the EP&A Act, stipulated under Section 5. These are addressed below:

(a) *To encourage:*

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.

The proposed development will ensure the development of a brownfield site to support the social and economic welfare of the community through the provision of affordable housing in a highly accessible inner city location, in close proximity to amenities and employment. Further, the proposal incorporates a number of ecologically sustainable development initiatives (further detailed in this report) to provide positive environmental outcomes.

(ii) the promotion and co-ordination of the orderly and economic use and development of land.

The proposed development promotes the orderly and economic use and development of land by developing an affordable housing residential building on a currently unused parcel of land in a highly accessible inner city location.

(iii) the protection, provision and co-ordination of communication and utility services.

The proposed development will be serviced by the appropriate communication and utility services, as provided by the Services and Utility Report at **Appendix C** to this report. The proposed development will not impact on the provision of utilities and services in the locality.

(iv) the provision of land for public purposes.

The subject site will be used for affordable housing, operated by CWH. This is considered to provide a development for the purpose and benefit of the public.

(v) the provision and co-ordination of community services and facilities.

The provision of affordable housing will provide a community service, providing housing to essential workers (teachers, police etc) in close proximity to employment and amenities.

(vi) 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 proposed development will not result in the removal of any native animal or plant species or habitats, given the sites brownfield location on disused former rail yard lands. The proposal will also incorporate existing materials that have been provided following the demolition of buildings across the North Eveleigh precinct. This will reduce the need for new materials, contributing to the protection of the environment, native animals and plants, threatened species, ecological communities and their habitats.

(vii) ecologically sustainable development.

As required under The Regulations, the proposed development will comply with the principles of ecologically sustainable development. Refer to **Section 7.3** of this report.

(viii) the provision and maintenance of affordable housing.

The proposed development will provide 100% affordable housing in a highly accessible inner city location, directly in support of this object of the Act.

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State.

The proposed development is submitted to the State government (Department of Planning and Infrastructure) in accordance with the Urban and Regional Development SEPP. A range of State Government agencies and the City of Sydney Council have been consulted with in the preparation of this Application.

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

It is expected that the community will be consulted during the exhibition period of this DA, in accordance with this object of the Act.

Clause 89J

Clause 89J(1)(c) of the EP&A Act states that an approval under Part 4 of the Heritage Act 1977 does not apply to State Significant Development. Part 4 applies to State heritage listed items.

The affordable housing scheme is located on land on which the State listed Carriageworks building is also located. The effect of clause 89J is that the proposed development does not require approval under the Heritage Act 1977.

Environmental Planning and Assessment Regulations 2000

The Regulations complement the EP&A Act and provide specific requirements for the preparation of Environmental Impact Statements, under Schedule 2. This Environmental Impact Statement is prepared in accordance with these requirements. These requirements are listed at **Table 7** below.

Table 7 Schedule 2 of the Regulations EIS Requirements

Schedule 2, The Regulations requirements	Reference
6 Form of environmental impact statement	
An environmental impact statement must contain the following information:	
<ul style="list-style-type: none"> The name, address and professional qualification of the person by whom the statement is being prepared, 	Refer to Statement of Veracity at the opening section to this report.
<ul style="list-style-type: none"> The name and address of the responsible person, 	Refer to Statement of Veracity at the opening section to this report.

Schedule 2, The Regulations requirements	Reference
<ul style="list-style-type: none"> The address of the land in respect of which the development application is to be made, 	<p>The address of the land including its legal description is provided at Section 1.1 of this report.</p>
<ul style="list-style-type: none"> An assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule, 	<p>Refer to Section 6 of this report.</p>
<ul style="list-style-type: none"> A declaration by the person by whom the statement is prepared to the effect that: <ul style="list-style-type: none"> The statement has been prepared in accordance with this schedule, and The statement contains all available information that is relevant to the environmental impact of the development, activity or infrastructure to which the statement relates, and That information contained in the statement is neither false nor misleading. 	<p>Refer to Statement of Veracity.</p>
<p>7 Content of environmental impact statement</p>	
<p>An environmental impact statement must also include each of the following:</p> <ul style="list-style-type: none"> A summary of the environmental impact statement, 	<p>Refer to Executive Summary.</p>
<ul style="list-style-type: none"> A statement of the objectives of the development, activity or infrastructure, 	<p>Refer to Section 7.1 of this report.</p>
<ul style="list-style-type: none"> An analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure, 	<p>Refer to Section 7.2 of this report.</p>
<ul style="list-style-type: none"> An analysis of the development, activity or infrastructure, including: <ul style="list-style-type: none"> A full description of the development, activity or infrastructure, 	<p>Refer to Section 3 of this report.</p>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> A general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and 	<p>Refer to Section 2.4 of this report.</p>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> The likely impact on the environment of the development, activity or infrastructure, and 	<p>Refer to Section 6.3 of the report.</p>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> A full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and 	<p>Refer to Section 6.3 and Section 8 of this report.</p>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> A list of any approvals that must be obtained under any other Act or law before development, activity or infrastructure can be lawfully carried out, 	<p>Refer to Section 4.2 of this report.</p>
<ul style="list-style-type: none"> A compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv), 	<p>Refer to Section 8 of this report.</p>
<ul style="list-style-type: none"> The reasons justifying carrying out of the development, activity or infrastructure in the manner proposed, having regard to the biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause 4. 	<p>Refer to Section 7.3 of this report.</p>

Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act provides the legal framework for the protection and management of nationally and internationally important flora, fauna, ecological communities and heritage places.

As no such items occur on the subject site, heritage approval under this Act is not required.

Heritage Act 1977

The Heritage Act seeks to conserve the environmental heritage of NSW. The Act establishes the Heritage Council and State Heritage Register.

As the proposed development is located on land which includes a State Heritage Item, it would normally require an approval from the Heritage Council under Section 60 of the Act. However, Clause 89J of the EP&A Act excludes State Significant Development from requiring approval under Section 60.

4.2.2 Environmental Planning Policies

State Environmental Planning Policy No 32 – Urban Consolidation

The Urban Consolidation SEPP promotes the development of multi-unit residential development on land no longer required for its use. The subject site is part of disused railway lands, now available for residential development.

State Environmental Planning Policy No 55 – Remediation of Land

SEPP 55 requires that the consent authority take into consideration the suitability of land for its intended use with respect to contamination. Should a site be contaminated, appropriate remediation and decontamination works are to be undertaken to ensure the suitability of the site.

State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development

SEPP 65 applies to the proposed development, which includes development defined under the SEPP as a 'residential flat building', meeting the criteria of being three or more storeys in height, and containing four or more self contained dwellings. The SEPP provides 10 Design Principles for development, and is accompanied by the Residential Flat Design Code (RFDC), which provides 'rules of thumb' guidelines for residential flat building design.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (BASIX SEPP)

The purpose of the BASIX SEPP is to ensure consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans. The BASIX SEPP specifies that SEPP 1 does not apply in relation to any development standard arising under BASIX.

State Environmental Planning Policy (Major Development) 2005 (MD SEPP)

The MD SEPP defined certain developments that were major projects to be assessed under Part 3A of the EP&A Act 1979 and determined by the Minister for Planning. This SEPP does not call in the proposed development as State Significant – this project is declared State Significant under the *State Environmental Planning Policy (State and Regional Development) 2011*.

The MD SEPP does provide planning provisions for State significant sites, including the Redfern Waterloo Area, in which the site is located.

The MD SEPP zones the subject site Business Zone – Mixed Use, which allows for a variety of residential, community and commercial uses. The MDSEPP also sets height and FSR controls for the whole Redfern Waterloo Area.

Part 5, Division 3, Clause 21 limits the floor space ratio and height of the site in accordance with the Redfern-Waterloo Authority Sites Height Map and Redfern Waterloo Authority Sites Floor Space Ratio Map. Part 5, Division 3, Clause 21 (3) allows the Minister to vary the Height and Floor Space Ratio control in an approval for a Concept Plan for the development.

The 2008 Concept Plan was assessed under these controls and found to comply. This development, which is generally consistent with the Concept Plan approval is also considered to comply with the Major Project SEPP.

The Concept Plan for the North Eveleigh site was approved under Part 3A of the EP&A Act 1979.

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)

The Infrastructure SEPP provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

RailCorp has been consulted throughout the development of the design for the proposed affordable housing project. Throughout this process, electrolysis and geotechnical issues have been resolved and RailCorp have provided in-principle support for the design. Refer to **Table 5** for a summary of discussions with RailCorp. The application will be referred to RailCorp for formal comment.

Refer to Section 6 for an assessment against Clause 85, 86 and 87 of the Infrastructure SEPP.

State Environmental Planning Policy (Affordable Rental Housing) 2009 (Affordable Housing SEPP)

The Affordable Housing SEPP establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

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

The aims of this Policy are to identify development that is State Significant Development, to identify development that is State Significant Infrastructure and critical State Significant Infrastructure and to confer functions on joint regional planning panels to determine development applications.

The proposed development is identified as State Significant Development in Schedule 1 of the Development SEPP as it is part of the Redfern-Waterloo site and it has a Capital Investment Value in excess of \$10 million.

Deemed SEPP: Sydney Regional Environmental Plan 26 – City West (SREP 26)

SREP 26 Covers the areas of Ultimo–Pyrmont, Glebe Island, White Bay, Rozelle Bay, Central and Eveleigh. The plan aims to promote the orderly and economic use and development of land known as City West. It establishes planning principles and controls for the area as a whole and for each of its precincts.

5 Consultation

Meetings have been held with a range of agencies, authorities, service providers and community groups during preparation of the EIS. The consultation undertaken is detailed below.

5.1 Government and agency consultation

The DGRs required government and agency consultation with the City of Sydney Council, Transport for NSW, Sydney Water, Roads and Maritime Services (RMS), RailCorp, Office of Environment and Heritage, NSW Police, the Environmental Protection Authority (EPA), Department of Family and Community Services and Ausgrid. Consultations with these agencies are detailed at **Table 8**.

Table 8 Government and agency consultation

Authority/Agency	Consultation	Date	Comments
City of Sydney Council	1 x meeting with development officers; and 1 x meeting with social planners	14 February 2013; and 18 February 2013	<ul style="list-style-type: none"> • Council requested further information regarding the staging of the overall precinct development (this is described under Section 3 of this report); • Details of way-finding strategies – this is to be addressed by UGDC as part of their overall site management; • Council officers were generally supportive of the proposed unit mix, the under-provision of parking and the building design; • Council recommended individual street entrances to units and making the minor entrance more visible – given the nature of the proposed housing, and for the safety and security of future occupants, individual street entries have not been included for units at ground floor level. • A CPTED review and Social Impact Assessment are recommended for submission as part of the Environmental Impact Assessment – A CPTED Review has been prepared by Architectus Group and is provided at Appendix G, and a Social Impact Assessment, prepared by GHD, is provided at Appendix H to this report.
Transport for NSW	Email invitation for consultation sent.	15 February 2013	<ul style="list-style-type: none"> • An email from CWH inviting representatives of Transport for NSW to a meeting for consultation regarding the proposed development was sent on 15 February 2013. No response was since received and as such, it is anticipated Transport for NSW will be given the opportunity to provide comment on the proposal during the exhibition period.
Sydney Water	Email invitation for consultation sent.	15 February 2013	<ul style="list-style-type: none"> • An email from CWH inviting representatives of Sydney Water to a meeting for consultation regarding the proposed development was sent on 15 February 2013. No response was since received and as such, it is anticipated Transport for NSW will be given the opportunity to provide comment on the proposal during the exhibition period. • An email from the Environmental Protection Agency noted Sydney Water may require a licence for scheduled works on the subject site. This has not been verified by Sydney Water. It is considered Sydney Water will be given the opportunity to provide comment on the proposal during the exhibition period.

Authority/Agency	Consultation	Date	Comments
Roads and Maritime Services	Email invitation for consultation sent.	15 February 2013	<ul style="list-style-type: none"> An email from CWH inviting representatives of RMS to a meeting for consultation regarding the proposed development was sent on 15 February 2013. No response was since received and as such, it is anticipated RMS will be given the opportunity to provide comment on the proposal during the exhibition period.
RailCorp	<p>Regular meetings with RailCorp and issue of architectural plans</p> <p>RailCorp have also attended regular Project Control Group meetings with CWH and Urban Growth NSW.</p> <p>As the landowner, RailCorp will be required to provide landowner's consent prior to determination.</p>	21 February 2013 and 20 March 2013.	<p>Plan of Acquisition</p> <ul style="list-style-type: none"> UGDC confirmed a Plan of Acquisition has been submitted for the hand over of ownership of the subject site. <p>High Voltage Electricity Line</p> <ul style="list-style-type: none"> It was noted that a high voltage electricity line will be temporarily relocated as part of the infrastructure works running from the CarriageWorks site across the new access road and parallel to the subject site. The abovementioned electricity line is expected to be relocated into an underground conduit as part of the site infrastructure works by 2015. A Construction Work Method Statement and Plan of Works will need to be prepared for sign off by RailCorp prior to work commencing on site. <p>Application to Department of Planning</p> <ul style="list-style-type: none"> If the ownership of the site has not be transferred to UGDC by the time of lodgement to the Department of Planning and Infrastructure, RailCorp will provide owners consent. It is noted that under the Regulations, the owner at the time will need to provide owner's consent prior to determination of this application. Owner's consent is currently being sought. It was noted that RailCorp will have the opportunity to comment on the proposed development during the assessment period. RailCorp advised that the provision of plans early will allow for quicker comment. Plans have been forward to RailCorp separately, as requested. <p>CarriageWorks</p> <ul style="list-style-type: none"> The Proponent ,met with CarriageWorks regarding a site management plan and acoustic impacts and requirements. A copy of the Site Management Agreement is included at Appendix T to this report.
Office of Environment and Heritage	1 x meeting with Heritage Branch Conservation Team Manager	21 February 2013	<ul style="list-style-type: none"> At the meeting, a draft set of drawings were issued to the Heritage Branch for review and comment. The Heritage Branch later advised that no comment will be provided prior to lodgement, and that the Heritage Branch will make formal comments via a submission during the exhibition period of the DA. The Heritage Branch was generally supportive of the reuse of material from demolished buildings on the North Eveleigh Precinct site. The Heritage Branch gave no indication as to whether the proposal was supportable or not from a heritage perspective.
NSW Police	1 x meeting with Redfern Police Command	20 February 2013	<ul style="list-style-type: none"> Police concerned that the lack of on-site parking may result in tensions and damage to property crime occurrences if the development increases demand for on-street parking in the surrounding area. As noted by the Traffic Report at Appendix D to this report, the proposed development provides adequate on-site parking to accommodate for the expected demand. Further, the parking provision is consistent with the maximum number of parking spaces permitted under the Concept Plan approval and the Sydney Local Environmental Plan 2012.

Authority/Agency	Consultation	Date	Comments
			<ul style="list-style-type: none"> • Ground floor units facing the street should balance active street frontage whilst ensuring that apartments can not be broken into. The balconies have been raised from the street level, and designed in such a way to minimise the potential for climbing from the street. This is assisted by the provision of landscaping along this frontage. In addition, parts of the private open space will step down to street level, and be enclosed by transparent fencing, to provide some activation and surveillance to Wilson Street. • Surveillance of public domain surrounding the site. The proposed development is designed so as to provide surveillance to all frontages, particularly the surrounding streets. This is achieved through the orientation of living spaces and balconies, and the incorporation of transparent, metal palisade fencing to some portions of the frontages. • Design quality should be achieved. The proponent, CWH, has engaged Architectus, as part of an initiative for well designed affordable housing development. • Concern with the concentration of social housing. It was noted during the meeting that the proposed development is not 'social housing', but rather, 'affordable housing' whereby local to moderate income earners who have applied to CWH directly, can be accommodated. The housing is generally to accommodate key workers with a connection to the local area. • Possible implementation of safe window design to prevent children falling out, and break-ins. All windows will be capable of being locked at a maximum opening width of 125mm to prevent falling out or break ins. • All units should be adequately lockable from doors and windows. Balconies should not be easily accessible by climbing. All units will have lockable doors and windows. Balconies will be provided with balustrades which reduce the potential for climbing. Shrub landscaping will be located across the site frontage to further prevent climbing into ground floor units.
Environmental Protection Authority	Email invitation for consultation sent and 1 x email reply.	18 February 2013	<ul style="list-style-type: none"> • The EPA noted that it provided input into the project at earlier stages, most likely as part of the Director General's Requirements preparations. • With regards to the suitability of the site, the Proponent notes that remediation works are being undertaken by UGDC. This was approved under Part 5 of the EP&A Act by UGDC (then Sydney Metropolitan Development Authority).
Department of Family and Community Services	Email invitation for consultation sent.	15 February 2013	<ul style="list-style-type: none"> • An email from CHW inviting representatives of Department of Family and Community Services to a meeting for consultation regarding the proposed development was sent on 15 February 2013. No response was since received and as such, it is anticipated the Department will be given the opportunity to provide comment on the proposal during the exhibition period.
Ausgrid	Email invitation for consultation sent.	15 February 2013	<ul style="list-style-type: none"> • An email from CWH inviting representatives of Ausgrid to a meeting for consultation regarding the proposed development was sent on 15 February 2013. The email was forwarded to other staff within Ausgrid, but no response was later made. It is anticipated that Ausgrid will be given the opportunity to comment on the proposal during the exhibition period.

5.2 Community consultation

On Wednesday, 20 February 2013, a community consultation session was held at the Yaama Dhiyan Centre, at 225 Wilson Street. The session provided local residents the opportunity to view and discuss:

- The proposed affordable housing development, subject of this application; and
- UGDC's application to develop two new open space, lodged with the City of Sydney Council in March 2013.

The meeting was attended by representatives from CWH, UGDC and Architectus. Generally, the following comments were made by the community:

- Development should complement the architectural style and materiality of CarriageWorks;

Comment: The proposed development has been designed to be sympathetic to the heritage significance of Carriage Works. The building design utilises solid masonry materials and finishes that correspond to the solid, masonry appearance of the Carriage Works building. The building form, height and setbacks and have also been designed so as to sit comfortably and sympathetically to the adjacent Carriage Works building. Refer to Heritage Impact Statement at **Appendix P** to this report.

- Questions about precinct-wide development and staging.

Comment: Currently, Stage 1 of the development is underway. Given the uncertainty surrounding the future railway alignment and expansion, the timing of further stages of development is yet to be determined. A plan identifying the proposed Stage 1 works is provided at **Appendix BB** to this report.

- Questions regarding the nature of Affordable Housing compared to 'social housing'.

Comment: Affordable Housing seeks to provide residential accommodation for low to moderate income earners, with a particular focus on key workers, such as teachers, police officers and others who have a connection to the local area. All applicants apply directly to City West Housing.

Affordable Housing is not the same as social housing, as discussed in the Social Impact Assessment attached to this report.

- The development may give rise to traffic impacts and increase demand for on-street parking in the local area.

Comment: The proposed development is consistent with the maximum car parking provisions provided by the Concept Plan and just below the maximum car parking rates set by the Sydney LEP 2012 (which has been used as a guide only: it does not apply to this development). The rate of car parking provision (39 spaces for 88 units) is consistent with the demand for parking spaces generated by existing CWH tenants (which is approximately 40%). Furthermore, it is noted that local on-street parking is time-limited and future occupants of the building will not receive residential parking permits, to ensure there is minimal use of on-street parking for long-term parking. The TMAP commissioned by UCDC (refer to **Appendix U**) also addresses this issue.

-
- The community was generally supportive of the development, and development of the precinct as a whole.
 - The community was generally supportive of initiatives to reuse timber and other materials from demolished buildings on the site.

5.3 Future consultation

Future public consultation will be undertaken with UGDC to keep the community informed on the site and precinct-wide development. Generally, future consultation will occur via email notifications, letter drops and via the UGDC website. Refer to the Consultation Overview at **Appendix BB** to this report.

6 Environmental Impact Assessment

This Section provides an assessment of the proposed development against the applicable EPIs, policies, guidelines and planning agreements, as required by the DGRs. It also provides an analysis of the anticipated environmental impacts likely as a result of the proposed development.

6.1 Environmental planning instruments

This section provides an assessment against the EPIs applicable to the proposed development, as required by the DGRs. These include:

- State Environmental Planning Policy No 32 – Urban Consolidation (Urban Consolidation SEPP);
- State Environmental Planning Policy No 55 – Remediation of Contaminated Sites (SEPP 55);
- State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (SEPP 65);
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (BASIX SEPP);
- State Environmental Planning Policy (Major Development) 2005 (MD SEPP);
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP);
- State Environmental Planning Policy (Affordable Rental Housing) 2009 (Affordable Housing SEPP);
- State Environmental Planning Policy (State and Regional Development) 2011 (Development SEPP); and
- Deemed SEPP: Sydney Regional Environmental Plan 26 – City West (SREP 26).

State Environmental Planning Policy No 32 – Urban Consolidation

The proposed development is assessed against the relevant provisions of this policy at **Table 9**.

Table 9 Urban Consolidation SEPP assessment

Provision	Consistency	Comment
<p>2 Aims and objectives</p> <p>This policy aims:</p> <ul style="list-style-type: none"> • To promote the orderly and economic use and development of land by enabling urban land which is now longer required for the purpose for which it is currently zoned or used to be redeveloped for multi-unit housing and related development, and • To implement a policy of urban consolidation which will promote the social and economic welfare of the State and a better environment by enabling: <ul style="list-style-type: none"> – The location of housing in areas where there are existing public infrastructure, transport and community facilities, and – Increased opportunities for people to live in a locality which is close to employment, leisure and other opportunities, and – The reduction in the rate at which land is released on the fringe of existing urban areas. 	<p>✓</p>	<p>The proposed development involves the redevelopment of unused railway lands in an inner city location to accommodate multi-unit affordable housing.</p> <p>The proposed housing is located in close proximity to:</p> <ul style="list-style-type: none"> • Public infrastructure, including all basic utilities and services (refer to Services and Utilities Report at Appendix C); • Transport, including Redfern Railway Station and local and regional bus networks (refer to Traffic Impact Assessment at Appendix D to this report); • Community facilities such as libraries, open space and other community facilities and services provided by the State Government and the City of Sydney provided in this locality, • Employment opportunities provided in the Central Sydney, Redfern, Newtown as well as the nearby Universities and the Prince Alfred Hospital; • Leisure facilities including open space, sports facilities, dining and arts and cultural facilities. <p>The proposed housing provides brownfield development in an inner city location, contributing to the availability of housing within the existing urban footprint of the Sydney Metropolitan Area, and thus reducing demand for housing on Sydney’s urban fringes.</p>
<p>The objectives of this policy are:</p> <ul style="list-style-type: none"> • To ensure that urban land suitable for multi-unit housing and related development is made available for the development in a timely manner, and • To ensure that any redevelopment of urban land for multi-unit housing and related development will result in: <ul style="list-style-type: none"> – An increase in the availability of housing in a particular locality, and – A greater diversity of housing types within a particular locality to meet the demand generating by changing demographic and household needs. 	<p>✓</p>	<p>The proposed development is permissible on the subject site via the approved Concept Plan (MP 08_0015), which envisages multi-unit housing on this particular site.</p> <p>The proposed development comprises 88 units, on a site which currently comprises no residential development, this resulting in an increase in the availability of housing in this locality.</p> <p>The proposed development provides a mix of one, two and three bedroom apartments, all comprising affordable housing – which provides low-cost rental housing to core service employees (such as teachers, police officers and the like) to allow people to live in close proximity to employment. This responds to the demographic and housing needs of such workers.</p>

The proposed development is consistent with the applicable provisions of the Urban Consolidation SEPP.

State Environmental Planning Policy No 55 – Remediation of Land

The subject site is being remediated as part of the Early Works REF for site, remediation and infrastructure works, approved under Part 5 of the EP&A Act. Remediation is to be completed on the subject site prior to any construction works being undertaken for the proposed development. Refer to the Technical Specification at **Appendix M** to this report, which relates to the Stage 1 Precinct Early Works. Accordingly, the subject site will be suitable for the proposed residential use.

State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development

The proposed development is assessed against the relevant provisions of SEPP 65 at **Table 10** below. The SEPP 65 Design Verification Statement is attached at **Appendix GG**. The relevant ‘rules of thumb’ guidelines under the RFDC are addressed at the following **Table 11**.

Table 10 SEPP 65 Design Principles assessment

SEPP 65 Design Principle	Consistency	Comments
<p>Principle 1: Context</p> <p>Good design responds and contributes to its context. Context can be defined as the key natural land and built features of an area. Responding to context involves identifying the desirable elements of a location's current character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.</p>	<p>✓</p>	<p>The proposed development is located within the North Eveleigh Concept Plan (MP 08_0015) which sets out the desired future character of the locality. The proposed development is consistent with the envisaged built form outcome for the subject site, and includes design elements that take into consideration the context of the building, including in relation to the nearby heritage buildings, including the Carriage Workshop.</p>
<p>Principle 2: Scale</p> <p>Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and scale needs to achieve the scale identified for the desired future character of the area.</p>	<p>✓</p>	<p>The scale of development is considered appropriate for the subject site, being consistent with the scale of development envisaged for the site under the Concept Plan approval.</p>
<p>Principle 3: Built form</p> <p>Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.</p>	<p>✓ - with minor variations</p>	<p>The proposed development is generally consistent with the built form outcome envisaged by the Concept Plan approval. Minor variations occur as the eastern and western ends of the building extend southward beyond the building envelope stipulated by the Concept Plan. The variations are considered minor given the proposed development remains consistent with maximum floor space ratio for the site, and the variations to the building envelope will not result in any significant impacts on the surrounding area beyond those reasonably expected by a complying development.</p>
<p>Principle 4: Density</p> <p>Good design has a density appropriate for the site and its context, in terms of the floor space yields (number of units or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition are consistent with the desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.</p>	<p>✓</p>	<p>The proposed development will accommodate residential dwellings in a locality serviced by frequent train and local and regional bus services. The site is also in close proximity to services and amenities, including entertainment, retail, health and education. The density is therefore considered appropriate for the site and locality.</p>
<p>Principle 5: Resource, energy and water efficiency</p> <p>Good design makes efficient use of natural resources, energy and water throughout its life cycle, including construction. Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts, and built form, passive solar design principals, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.</p>	<p>✓</p>	<p>The proposed development exceeds the minimum targets for energy efficiency, water efficiency and thermal comfort required under State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (BASIX SEPP). The proposal is considered acceptable with respect to resource, energy and water efficiency.</p>
<p>Principle 6: Landscape</p> <p>Good design recognises that together landscape and building operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the existing site's natural and cultural features by co-ordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character. Landscape design should optimise useability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide practical establishment and long term management.</p>	<p>✓</p>	<p>The proposed landscaping will complement the overall building design and operate as a sustainable system. Landscaping is proposed to the northern and western street frontages, to enhance the aesthetic quality of the building, and soften the otherwise solid masonry appearance of the building. Large areas of deep soil zone are proposed to accommodate tall tree plantings and provide screening to the communal open space area and from the development toward the railway corridor. Communal open space areas will be provided at both the ground floor level and the Level 6 roof top terrace, to accommodate a range of uses for occupants.</p>

SEPP 65 Design Principle	Consistency	Comments
<p>Principle 7: Amenity</p> <p>Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.</p>	✓	The proposal provides good amenity for the site as there are well planned apartments that maximise sunlight, ventilation and privacy. The site is shown to be easily accessible and incorporates well designed living environments.
<p>Principle 8: Safety and security</p> <p>Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and a clear definition between public and private spaces.</p>	✓	The building design provides for maximum outlook onto the street and surrounding common area, maximising passive surveillance. The development will be appropriately secured to ensure access is limited to residents and authorised visitors.
<p>Principle 9: Social dimensions and housing affordability</p> <p>Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provisions of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community.</p> <p>New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.</p>	✓	All of the proposed dwellings will comprise affordable housing, managed by City West Housing. The provision of affordable housing will meet the demand for such within this locality, and in close proximity to existing infrastructure and services.
<p>Principle 10: Aesthetics</p> <p>Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to the desirable elements of the existing streetscape, or, in precincts undergoing transition, contribute to the desired future character of the area.</p>	✓	The building has been designed to positively contribute aesthetically to the approved new road and the surrounding heritage buildings. The proposal has also been designed so as to contribute positively to the locale if surrounding envisaged development does not occur for some time.

Table 11 Residential Flat Design Code assessment

Residential Flat Design Code 2002	Consistency	Comment
Local context: Primary development controls		
<p>Building height</p> <ul style="list-style-type: none"> To ensure future development responds to the desired future character of the street and local area. To allow reasonable daylight access to all developments and the public domain. 	Refer to comment	<p>Under the approved Concept Plan, the maximum height envisaged for the site is RL 44.1 and six storeys. The proposed development is up to 7 storeys in height and has a maximum RL of 48.1, exceeding the maximum by 1 storey and up to 4 metres.</p> <p>The proposed non-compliance with the maximum height standard relates the eastern end of the building. The height non-compliance will not create any significant additional overshadowing on any public open space or residential properties.</p> <p>A Section 75W Modification has been submitted concurrently with this application to amend the Concept Plan approval maximum height, to seven storeys and RL 48.1 metres.</p>
<p>Building depth</p> <p>Control over building depth is important as the depth of a building will have a significant impact on residential amenity for the building occupants. In general, narrow cross section buildings have the potential for dual aspect apartments with</p>	Refer to comment	The building depth ranges from 13 to 20 metres. This is generally in accordance with the Concept Plan building envelope approval with the exception of the eastern and western ends of the building envelope which extend further south than envisaged by the Concept Plan.

Residential Flat Design Code 2002	Consistency	Comment
<p>natural ventilation and optimal daylight access to internal spaces.</p> <p>In general, apartment building depth of 10-18 metres is appropriate. Developments that propose wider than 18 metres must demonstrate how satisfactory day lighting and ventilation are to be achieved.</p>		<p>Building achieves adequate solar access and 100% natural ventilation and therefore the building depth is considered acceptable.</p> <p>A Section 75W Modification has been submitted concurrently with this application to amend the Concept Plan approval to reflect the proposed built form.</p>
<p>Building separation</p> <p>For buildings over three storeys it is recommended that building separation increase in proportion to building height to ensure appropriate urban form, adequate amenity and privacy for building occupants. Suggested dimensions within a development, internal courtyards and between adjoining site are:</p> <ul style="list-style-type: none"> • Up to four storeys/12 metres <ul style="list-style-type: none"> – 12m between habitable rooms/balconies – 9m between habitable/balconies and non-habitable rooms – 6m between non-habitable rooms • Five to eight storeys/25 metres: <ul style="list-style-type: none"> – 18 metres between habitable rooms/balconies; – 13 metres between habitable rooms/balconies and non-habitable rooms; – 9 metres between non-habitable rooms. • Nine storeys and above 25 storeys: <ul style="list-style-type: none"> – 24 metres between habitable rooms/balconies; – 18 metres between habitable rooms/balconies and non-habitable rooms; – 12 metres between non-habitable rooms. • Allow zero building separation in appropriate contexts, such as in urban areas between street wall building types (party walls). • Where a building step back creates a terrace, the building separation distance for the floor below applies. • Protect the privacy of neighbours who share a building entry and whose apartments face each other by designing internal courtyards with greater building separation. • Developments that propose less than the recommended distances must demonstrate that daylight access, urban form and visual and acoustic privacy has been satisfactorily achieved. 	<p>✓</p>	<p>The proposed development is separated significantly from any surrounding residential uses, with the site bounded by road way to the north, east and west. To the south, the site is bounded by a vacant future residential development site. The proposed development is situated to the north of the site, and therefore will not result in any building separation constraints on future residential development to the south.</p>
<p>Street setbacks</p> <ul style="list-style-type: none"> • Street setbacks should relate to the desired streetscape character, the common setback of buildings in the street, the accommodation of street tree planting and the height of buildings and daylight access controls. • Relate setbacks to area's street hierarchy. • Identify the quality, type and use of gardens and landscape areas facing the street 	<p>Refer to comment</p>	<p>The proposed development is setback 4.3m to 9.7m metres from the proposed new road to the north, 7.4 metres to the roadway between the site and Carriage Workshop, and 5.1 metres to the proposed new road to the west. The proposed development is generally sited in accordance with the approved Concept Plan siting of the building. The building is marginally setback further than the Concept Plan setback to the north, to allow the building to align directly with heritage listed Carriage Workshop.</p>
<p>Side and rear setbacks</p> <p>Side setbacks should minimise the impact of light, air, sun and privacy, views and outlook for neighbouring properties, including future buildings and retain a rhythm or pattern that positively defines the streetscape so that space is not just what is left over from the building form.</p> <p>Rear setbacks should maintain deep soil zone to maximise natural site drainage and protect the water table; maximise the opportunity to retain and reinforce mature vegetation; optimise the use of land at the rear and surveillance of the street at the front and maximise building separation to provide visual and acoustic privacy.</p>	<p>Refer to comment</p>	<p>The proposed rear boundary currently adjoins a vacant potential future residential lot. The proposed development is oriented to the northern portion of the site, therefore minimising potential for privacy and overshadowing impacts to future residential development to the south.</p>

Residential Flat Design Code 2002	Consistency	Comment
Part 2: Site Design		
<p>Site analysis</p> <p>Development proposals need to illustrate design decisions, which are based on careful analysis of the site conditions and their relationship to the surrounding context. By describing the physical elements of the locality and the conditions impacting on the site, opportunities and constraints for future residential flat development can be understood and addressed in the design.</p> <p>A written statement explaining how the design of the proposed development has responded to the site analysis must accompany the development application.</p>	✓	<p>A site analysis has been prepared taking into consideration local context, opportunities and constraints. Refer to Architectural Drawings at Appendix A and Section 2 of the Environmental Impact Assessment.</p>
<p>Site configuration: deep soil zones</p> <p>Optimise the provision of consolidated deep soil zones within a site.</p> <p>Optimise the extent of deep soil zones beyond the site boundaries by locating them contiguous with the deep soil zones of adjacent properties.</p> <p>Promote landscape health by supporting for a rich variety of vegetation type and size.</p> <p>Increase the permeability of paved areas by limiting the area of paving and/or using pervious paving materials.</p> <p>A minimum of 25% of the open space area of a site should be a deep soil zone; more is desirable. Exceptions may be made in urban areas where sites are built out and there is no capacity for water infiltration. In these instances, stormwater treatment measures must be integrated with the design of the residential flat building.</p>	✓	<p>The proposed basement is predominately located beneath the building footprint, providing a significant area of deep soil planting in the south-east quarter of the site, to accommodate large plantings and mature trees.</p>
<p>Site configuration: fences and walls</p> <p>Respond to the identified architectural character for the street and/or the area; contribute to the amenity, beauty and useability of private and communal open spaces and retain and enhance the amenity of the public domain.</p> <p>Clearly delineate the private and public domain without compromising safety and security.</p> <p>Select durable materials, which are easily cleaned and graffiti resistant.</p>	✓	<p>Fences and walls are provided along the side and rear boundaries of the site. Parts of the fencing will be solid masonry, whilst the rear boundary and parts of the side boundary will be metal palisade fencing. Fencing will provide a clear delineation between the site and surrounding public domain.</p>
<p>Site configuration: landscape design</p> <p>Improve the amenity of open space with landscape design which provides appropriate shade from trees or structures, accessible routes through the space, screening, allows for locating artworks. Contribute to streetscape character and the amenity of the public domain.</p> <p>Improve the energy efficiency and solar efficiency of dwellings and the microclimate of private open spaces.</p> <p>Design landscape that contributes to the site's particular and positive characteristics.</p> <p>Contribute to water and stormwater efficiency by integrating landscape design with water and stormwater management.</p> <p>Provide sufficient depth of soil above paving slabs to enable growth of mature trees.</p> <p>Minimise maintenance by using robust landscape elements.</p>	✓	<p>Detailed landscape plans are provided at Appendix R to this report. The landscaping is designed to soften to buildings siting amongst an otherwise very hard surfaced precinct.</p>
<p>Site configuration: open space</p> <p>Provide communal open space that is appropriate and relevant to the context and the building's setting.</p> <p>Where communal open space is provided, facilitate its use for the desired range of activities.</p> <p>Provide private open space for each apartment capable of enhancing residential amenity.</p>	✓	<p>Communal open space is made up of the ground floor open space area located at the rear of the site, the roof top terrace area, and areas of seating and planting along the circulation gallery spaces.</p> <p>The communal open space areas will provide for a range of passive and limited active recreational opportunities, with facilities such as seating, a BBQ, and soft landscaping provided.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Locate open space to increase the potential for residential amenity.</p> <p>Provide environmental benefits including habitat for native fauna, native vegetation and mature trees, a pleasant microclimate, rainwater percolation and outdoor drying area.</p> <p>The area of communal open space required should generally be at least between 25 and 30% of the site area. Larger sites and brownfield sites may have potential for more than 30%.</p> <p>Where developments are unable to achieve the recommended communal open space, such as those in dense urban areas, they must demonstrate that residential amenity is provided in the form of increased private open space and/or in a contribution to public open space.</p> <p>The minimum recommended area of private open space for each apartment at ground level or similar space on a structure, such as on a podium or car park, is 25m², the minimum preferred dimension in one direction is 4.0m.</p>		<p>The area of communal open space is 1000sqm (or 39%) of the total site area. This is considered an appropriate provision of open space.</p> <p>The communal open space is further complemented by the surrounding public domain to be embellished by UGDC which will include new parks for more active recreational opportunities.</p> <p>All units are provided with balconies, which will have a minimum depth of 2 metres.</p>
<p>Site configuration: orientation</p> <p>Plan the site to optimise solar access by positioning and orienting buildings to maximise north facing walls, providing adequate building separation within the development and to adjacent buildings.</p> <p>Select building types or layouts which respond to the streetscape while optimising solar access.</p> <p>Optimise solar access to living spaces and associated private open spaces by orienting them to the north.</p> <p>Detail building elements to modify environmental conditions, as required, to maximise sun access in winter and sun shading in summer.</p>	✓	<p>All units are provided a northern, eastern or western frontage. The proposed building is sited in accordance with the orientation of the approved Concept Plan envelopes.</p>
<p>Site configuration: planting on structures</p> <p>Design for optimum conditions for plant growth by providing soil depth, soil volume and soil area appropriate to the size of the plants to be established etc.</p> <p>Design planters to support the appropriate soil depth and plant selection. Increase minimum soil depths in accordance with the mix of plants in a planter.</p> <p>In terms of soil provision there is no minimum standard that can be applied to all situations as the requirements vary with the size of plants and trees at maturity. The recommended minimum soil depth standards range from 100-300mm for turf to 1.3 metre large trees.</p>	✓	<p>The basement is contained as much as possible to be located beneath the building footprint to maximise deep soil area.</p> <p>Where planting above a structure is provided, appropriate soil depth and volume will be provided as suitable for the proposed planting.</p>
<p>Site configuration: stormwater management</p> <p>Reduce the volume impact of stormwater on infrastructure by retaining it on site.</p> <p>Optimise deep soil zones. All development must address the potential for deep soil zones.</p> <p>On dense urban sites where there is no potential for deep soil zones to contribute to stormwater management, seek alternative solutions.</p> <p>Protect stormwater quality by providing for sediment filters and traps etc.</p> <p>Reduce the need for expensive sediment trapping techniques by controlling erosion.</p> <p>Consider using grey water for site irrigation.</p>	✓	<p>Stormwater will be appropriately managed to ensure minimal impacts during flood events, and to manage potential stormwater flow over the site.</p> <p>Rainwater will be reused on the site for purposes such as toilet flushing and irrigation.</p> <p>Refer to Stormwater Management Plan at Appendix L to this report.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Site amenity: safety</p> <p>Reinforce the development boundary to strengthen the distinction between public and private space. This can be actual or symbolic.</p> <p>Optimise the visibility, functionality and safety of building entrances.</p> <p>Improve the opportunities for casual surveillance by orienting living areas with views over public or communal open spaces, where possible.</p> <p>Minimise opportunities for concealment.</p> <p>Control access to the development.</p>	✓	<p>The proposed building entry is directly visible from the new road frontage.</p> <p>Balconies and living areas face the new road. The open circulation gallery provides surveillance opportunities to the communal open space area at the rear.</p> <p>Appropriate security will be provided to the building and car parking areas.</p> <p>A CPTED Report has been prepared and is provided at Appendix G to this report.</p>
<p>Site amenity: visual privacy</p> <p>Locate and orient new development to maximise visual privacy between buildings on site and adjacent buildings.</p> <p>Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to apartments.</p> <p>Use detailed site and building design elements to increase privacy without compromising access to light and air.</p>	✓	<p>The proposal is appropriately separated from adjoining future development, being surrounded on three sides by road frontages. To the rear, the building is appropriately sited to the north, to provide adequate separation from any future residential development that may occur to the south of the site.</p> <p>Appropriate screening and siting of balconies and living areas is provided to ensure there is minimal opportunity for overlooking between dwellings.</p>
<p>Site access: building entry</p> <p>Improve the presentation of the development to the street (ie. designing the entry as a clearly identifiable element of the building in the street, ground floor apartment entries-where it is desirable to activate the street edge or reinforce a rhythm of entries along a street).</p> <p>Provide as direct a physical and visual connection as possible between the street and the entry.</p> <p>Achieve clear lines of transition between the public street, the shared private, circulation spaces and the apartment unit.</p> <p>Ensure equal access for all. Provide safe and secure access.</p> <p>Generally provide separate entries from the street for pedestrians and cars and different uses.</p> <p>Design entries and associated circulation space of an adequate size to allow movement of furniture between public and private spaces.</p> <p>Provide and design mailboxes to be convenient for residents and not to clutter the appearance of the development from the street.</p>	Refer to comment	<p>The building entry is directly visible from the proposed new road.</p> <p>For security and overall building management by City West Housing, individual entries from the street to ground floor apartments is not provided.</p>
<p>Site access: parking</p> <p>Determine the appropriate car parking space requirements in relation to proximity to public transport, shopping and recreational facilities, density etc.</p> <p>Limit the number of visitor parking spaces, particularly in small developments.</p> <p>Give preference to underground parking, whenever possible.</p> <p>Where above ground enclosed parking cannot be avoided, ensure the design of the development mitigates any negative impact on streetscape and amenity.</p> <p>Provide bicycle parking, which is easily accessible from ground level and from apartments.</p>	✓	<p>Under the approved Concept Plan, up to 80 car spaces are required. The proposal provides 39 car parking spaces and 88 bicycle spaces. A detailed assessment of parking is provided as part of the Traffic Impact Assessment at Appendix D.</p> <p>Bicycle parking is also provided adjacent to the main entry for visitors.</p>
<p>Site access: pedestrian access</p> <p>Utilise the site and its planning to optimise accessibility to the development.</p> <p>Promote equity by ensuring the main building entrance is accessible for all from the street and from car parking areas.</p> <p>Design ground floor apartments to be accessible from the street, where applicable, and to their associated private open space.</p>	✓	<p>Pedestrian access is provided via the main building entrance at the Ground Floor level or via lift access from the basement parking level.</p> <p>Barrier free access is provided to all units, with lifts provided direct access to all levels from basement car parking levels as well as Ground Floor Level.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Maximise the number of accessible, visitable and adaptable apartments in a building. Australian Standards are only a minimum.</p> <p>Separate and clearly distinguish between pedestrian access ways and vehicle access ways.</p> <p>Follow the accessibility standard set out in Australian Standard AS 1428 (Parts 1 and 2), as a minimum.</p> <p>Provide barrier free access to at least 20% dwellings in the development.</p>		
<p>Site access: vehicle access</p> <ul style="list-style-type: none"> • Generally limit the width of driveways to six metres. • Locate vehicle entries away from main pedestrian entries and on secondary frontages. 	<p>Refer to comment</p>	<p>The driveway width is 6.1 metres. The proposed access is consistent with relevant Australian Standards.</p> <p>Refer to Traffic Impact Assessment at Appendix D to this report.</p> <p>The proposed driveway will not have any detrimental impact on the streetscape.</p>
Part 3: Building Design		
<p>Building configuration: apartment layout</p> <p>Determine appropriate apartment sizes in relation to geographic location and market demands, the spatial configuration of an apartment, not just its plan, and its affordability.</p> <p>Ensure apartment layouts are resilient over time.</p> <p>Design apartment layouts, which respond to the natural and built environments and optimise site opportunities by providing private open space, orienting main living spaces toward the primary outlook, etc.</p> <p>Avoid locating the kitchen as part of the main circulation space of an apartment, such as a hallway or entry space.</p> <p>Ensure apartment layouts and dimensions facilitate furniture removal and placement.</p> <p>Comparative unit sizes: internal area (external area):</p> <ul style="list-style-type: none"> • Studio 38.5m² (6m²) • 1br cross-through 50m² (8m²) • 1br loft 62m² (9.4m²) • 1br single-aspect 63.4m² (10m²) • 2b corner 80m² (11m²) • 2br cross-through 89m² (21m²) • 2br cross-over 90m² (16m²) • 2br corner with study 121m² (33m²) • 3br 124m² (24m²) <p>The back of a kitchen should be no more than 8.0m from a window.</p> <p>Buildings not meeting the minimum standards listed above, must demonstrate how satisfactory day lighting and natural ventilation can be achieved, particularly in relation to habitable rooms.</p> <p>Minimum apartment sizes that do not exclude affordable housing are:</p> <ul style="list-style-type: none"> • 1 bedroom apartment 50m² • 2 bedroom apartment 70m² • 3 bedroom apartment 95m² 	<p>✓</p>	<p>Apartment sizes have been designed in accordance with existing and future population trends and to accommodate suitable affordable housing accommodation. Accordingly, a high proportion (53%) of studio and one bedroom apartments are provided.</p> <p>Apartments have been designed to accommodate a range of household types and preferences.</p> <p>All kitchens are within 8 metres from a window or opening.</p> <p>All units are generally consistent with the minimum unit sizes required. In some instances where unit sizes are marginally smaller than those required, the units are designed in such a way so as to optimise cross ventilation and internal design flexibility.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Building configuration: apartment mix Provide a variety of apartment types. Refine the appropriate apartment mix for a location by:</p> <ul style="list-style-type: none"> • Considering population trends. • Noting the apartment's location in relation to public transport, public facilities, etc. • Locate a mix of apartments on the ground level. • Optimise the number of accessible and adaptable apartments. <p>Investigate the possibility of flexible apartment configurations.</p>	✓	<p>The proposed development provides a mix of one bedroom (53%), two bedroom (41%) and three bedroom (6%) apartments.</p> <p>This is considered a suitable mix considering the development is to accommodate the affordable housing demand of City West Housing.</p> <p>Accessible and adaptable units are provided in accordance with the relevant Australian Standards. Adaptable Unit plans are provided as part of the Architectural Drawings at Appendix A to this report.</p>
<p>Building configuration: balconies Provide at least 1 primary balcony. Primary balconies should be located adjacent to the main living areas, sufficiently large and well proportioned to be functional and promote indoor/outdoor living. Design and detail balconies in response to the local climate and context. Design balustrades to allow views and casual surveillance of the street while providing for safety and visual privacy. Coordinate and integrate building services, such as drainage pipes, with overall facade and balcony design. Consider supplying a tap and gas point on primary balconies. Provide primary balconies for all apartments with a min. depth of 2.0m.</p>	✓	<p>All balconies have a depth of at least 2 metres and directly accessible from the primary indoor living areas.</p> <p>Balconies are provided addressing the surrounding public domain areas, providing opportunities for casual surveillance of these areas.</p>
<p>Building configuration: Ceiling Heights Design better quality spaces in apartments by using ceilings to define a spatial hierarchy between areas of an apartment using double height spaces, raked ceilings, changes in ceiling heights and/or the location of bulkheads, maximise heights in habitable rooms by stacking wet areas from floor to floor, promote the use of ceiling fans. Facilitate better access to natural light by using ceiling heights which promote the use of taller windows, highlight windows and fan lights and light shelves. Recommended minimum floor to ceiling heights:</p> <ul style="list-style-type: none"> • 2.7m for all habitable rooms on all floors; and • 2.4m is the preferred minimum for all non-habitable rooms, however, 2.25m is permitted. 	✓	<p>Ceilings of habitable rooms are generally at least 2.7 metres in height.</p>
<p>Building configuration: flexibility Provide apartment layouts, which accommodate the changing use of rooms. Utilise structural systems, which support a degree of future change in building use or configuration. Promote accessibility and adaptability by ensuring the number of accessible and visitable apartments is optimised and adequate pedestrian mobility and access is provided.</p>	✓	<p>The proposed units allow for a sufficient degree of internal flexibility for the rearrangement of furniture and internal layouts.</p>
<p>Building configuration: ground floor apartments</p> <ul style="list-style-type: none"> • Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desire streetscape and topography of the site. • Provide ground floor apartments with access to private open space, preferable as a terrace or garden. 	Refer to comment	<p>Ground floor apartments are not provided with separate entries for safety and security reasons. Balconies to ground floor units are raised off the ground floor level and designed so as to minimise the opportunities for climbing from the street.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Building configuration: internal Circulation</p> <p>Increase amenity and safety in circulation spaces by providing generous corridor widths and ceiling heights, appropriate levels of lighting, including the use of natural daylight, minimising corridor lengths, providing adequate ventilation.</p> <p>Support better apartment building layouts by designing buildings with multiple cores which increase the number of entries along a street and the number of vertical circulation points, give more articulation to the facade, limiting the number of units off a circulation core on a single level.</p> <p>Articulate longer corridors.</p> <p>Minimise maintenance and maintain durability by using robust materials in common circulation areas.</p> <p>In general, where units are arranged off a double-loaded corridor, the number of units accessible from a single core/corridor should be limited to 8. Exceptions may be allowed.</p>	✓	<p>All units are accessible off a circulation corridor. The circulation gallery is accessible via two lift cores, at the eastern and western end of the building. The gallery, being open at its southern elevation, will provide natural light and ventilation to circulation areas.</p>
<p>Building configuration: storage</p> <p>Locate storage conveniently for apartments. Options include providing at least 50% of the required storage within each apartment, dedicated storage rooms on each floor, providing dedicated and/or leasable secure storage in internal or basement car parks.</p> <p>Where basement storage is provided ensure that it does not compromise natural ventilation in car parks or create potential conflicts with fire regulations, exclude it from FSR calculations.</p> <p>Provide accessible storage facilities at the following rates:</p> <ul style="list-style-type: none"> • Studio apartments 6m³ • 1 bedroom apartments 6m³ • 2 bedroom apartments 8m³ • 3 plus bedroom apartments 10m³. 	✓	<p>Generally, all units are provided with the minimum storage space required under this rule of thumb. Most units will have storage within the unit and within the basement parking area. Where a unit is not provided with basement storage, additional internal storage is provided.</p>
<p>Building amenity: acoustic privacy</p> <p>Utilise the site and building layout to maximise the potential for acoustic privacy by providing adequate building separation within the development and from neighbouring buildings.</p> <p>Arrange apartments within a development to minimise noise transition between flats.</p> <p>Design the internal apartment layout to separate noisier spaces from quieter.</p> <p>Resolve conflicts between noise, outlook and views by using double glazing, operable screened balconies, and continuous walls to ground level courtyards where they do not conflict with streetscape.</p> <p>Reduce noise transmission from common corridors or outside the building by providing seals at entry doors.</p>	✓	<p>Adequate acoustic privacy is provided to all residential units in accordance with relevant Australian Standards. The design of the building has taken into consideration the noise impacts of the surrounding area, particularly the railway corridor. Refer to Acoustic Report at Appendix J to the SEE.</p>
<p>Building amenity: daylight access</p> <p>Plan the site so that new residential flat development is oriented to optimise northern aspect.</p> <p>Ensure direct daylight access to communal open space between March and September and provide appropriate shading in summer.</p> <p>Optimise the number of apartments receiving daylight access to habitable rooms and principal windows.</p> <p>Design for shading and glare control, particularly in summer using shading devices, colonnades, balconies, pergolas, external louvres and planting, optimising the number of north-facing living spaces, providing external horizontal shading to north-facing windows, providing vertical shading to east or west windows, using high performance glass but minimising external glare, use a glass reflectance below 20%.</p>	✓	<p>The proposed development achieves 84% of apartments with more than 3 hours of direct sunlight to living rooms and private open space at 21 June.</p> <p>No apartments that are entirely south facing are provided.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Prohibit the use of lightwells as the primary source of daylight in habitable rooms.</p> <p>Living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of 3 hours direct sunlight between 9.00am and 3.00pm in mid winter. In dense urban areas a minimum of 2 hours may be acceptable.</p> <p>Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10% of the total units proposed. Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed.</p>		
<p>Building amenity: natural ventilation</p> <p>Plan the site to promote and guide natural breezes.</p> <p>Utilise the building layout and section to increase the potential for natural ventilation. Design solutions include facilitating cross ventilation etc.</p> <p>Design the internal apartment layout to promote natural ventilation.</p> <p>Select doors and operable windows to maximise natural ventilation opportunities established by the apartment layout.</p> <p>Coordinate design for natural ventilation with passive solar design techniques.</p> <p>Explore innovative technologies to naturally ventilate internal building areas or rooms - such as bathrooms, laundries and underground car parks.</p> <p>Building depths, which support natural ventilation typically range from 10 to 18m.</p> <p>60% of residential units should be naturally cross ventilated and 25% of kitchens within a development should have access to natural ventilation.</p> <p>Developments which seek to vary from the minimum standards must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms.</p>	✓	<p>The proposal exceeds the minimum 60% naturally ventilated target, achieving 87% natural cross flow ventilation.</p>
<p>Building form: facades</p> <p>Consider the relationship between the whole building form and the facade and/or building elements. The number and distribution of elements across a facade determine simplicity or complexity. Columns, beams, floor slabs, balconies, window openings and fenestrations, doors, balustrades, roof forms and parapets are elements, which can be revealed or concealed and organised into simple or complex patterns.</p> <p>Compose facades with an appropriate scale, rhythm and proportion, which respond to the building's use and the desired contextual character.</p> <p>Design facades to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls, depending on the facade orientation.</p> <p>Express important corners by giving visual prominence to parts of the facade, for example, a change in building articulation, material or colour, roof expression or increased height.</p> <p>Coordinate and integrate building services, such as drainage pipes, with overall facade and balcony design.</p> <p>Coordinate security grills/screens, ventilation louvres and car park entry doors with the overall facade design.</p>	✓	<p>The building façade is predominately solid masonry to complement the character of the surrounding heritage buildings which comprise a heavy masonry character.</p>

Residential Flat Design Code 2002	Consistency	Comment
<p>Building form: Roof design</p> <p>Relate roof design to the desired built form. Some design solutions include:</p> <p>Articulating the roof, using a similar roof pitch or material to adjacent buildings, using special roof features, which relate to the desired character of an area, to express important corners etc.</p> <p>Design the roof to relate to the size and scale of the building, the building elevations and three-dimensional building form.</p> <p>Design roofs to respond to the orientation of the site, for example, by using eaves and skillion roofs to respond to sun access.</p> <p>Minimise the visual intrusiveness of service elements by integrating them into the design of the roof.</p> <p>Support the use of roofs for quality open space in denser urban areas.</p>	✓	<p>A projecting roof form is required to complement the overall building design. The roof form adds to the visually interesting façade.</p>
<p>Building performance: energy efficiency</p> <p>Incorporate passive solar design techniques to optimise heat storage in winter and heat transfer in summer. Improve the control of mechanical space heating and cooling.</p> <p>Provide or plan for future installation of photovoltaic panels. Improve the efficiency of hot water systems. Reduce reliance on artificial lighting. Maximise the efficiency of household appliances.</p>	✓	<p>The energy efficiency of the building is acceptable and is consistent with the energy efficiency and thermal comfort targets required under BASIX, as discussed further in this report. Refer to Appendix Q to this report.</p>
<p>Building performance: maintenance</p> <p>Design windows to enable cleaning from inside the building, where possible.</p> <p>Select manually operated systems, such as blinds, sunshades, pergolas and curtains in preference to mechanical systems.</p> <p>Incorporate and integrate building maintenance systems into the design of the building form, roof and facade.</p> <p>Select durable materials, which are easily cleaned and are graffiti resistant.</p> <p>Select appropriate landscape elements and vegetation and provide appropriate irrigation systems.</p> <p>For developments with communal open space, provide a garden maintenance and storage area, which is efficient and convenient to use and is connected to water and drainage.</p>	✓	<p>It is considered the proposed development is suitably designed to allow for adequate building cleaning and maintenance. CWH will maintain ownership of the proposed development and therefore be responsible for maintenance.</p>
<p>Building form: waste management</p> <p>Incorporate existing built elements into new work and recycle and reuse demolished materials, where possible.</p> <p>Specify building materials that can be reused and recycled at the end of their life.</p> <p>Integrate waste management processes into all stages, of the project, including the design stage.</p> <p>Support waste management during the design stage.</p> <p>Prepare a waste management plan.</p> <p>Locate storage areas for rubbish bins away from the front of the development where they have a significant negative impact on the streetscape, on the visual presentation of the building entry and on the amenity of residents, building users and pedestrians.</p> <p>Provide every dwelling with a waste cupboard or temporary storage area of sufficient size to hold a single day's waste and to enable source separation.</p> <p>Incorporate on-site composting, where possible, in self contained composting units on balconies or as part of the shared site facilities.</p>	✓	<p>Waste will be disposed of by residents in the ground floor waste room. The waste room is accessible via the ground floor in close proximity to the eastern lift core.</p> <p>Council will collect waste via the roadway between the site and Carriage Works. Refer to Preliminary Waste Management Plan at Appendix O to this report.</p>

Residential Flat Design Code 2002	Consistency	Comment
Building form: water conservation Use AAA rated appliances to minimise water use. Collect, store and use rainwater on site. Incorporate local indigenous native vegetation in landscape design. Consider grey water recycling.	✓	The buildings will have water efficient appliances installed to minimise water use. The proposal is consistent with the minimum targets for water efficiency. Refer to BASIX Certificate at Appendix Q to this report.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (BASIX SEPP)

A BASIX report and certificates have been prepared for the proposed development and are attached at **Appendix Q**. The proposed development achieves the following BASIX scores:

- Water efficiency: 43 (40 to pass);
- Thermal comfort: Pass; and
- Energy Efficiency: 31 (20 to pass).

The proposed development is therefore consistent with the BASIX SEPP.

State Environmental Planning Policy (Major Development) 2005 (Major Development SEPP)

The North Eveleigh site is now identified as a State Significant Development State Environmental Planning Policy (State and Regional Development) 2011 because it has a project value in excess of \$10 million and is within the Redfern Waterloo Area.

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)

Schedule 3 of the Infrastructure SEPP requires traffic generating development to be referred to the Roads and Maritime Services (RMS). This referral applies to residential flat buildings with 75 or more dwellings, located on a site with access to a classified road or to a road that connects to classified road (if the access is within 90m of the connection, measured along the alignment of connecting road).

The affordable housing scheme is not in such a location, therefore, there is no requirement for referral to the RMS under Schedule 3 of the Infrastructure SEPP.

Clause 85 Development immediately adjacent to rail corridors of the Infrastructure SEPP applies to development within or adjacent to a rail corridor, and

- (a) is likely to have an adverse effect on rail safety, or*
- (b) involves the placing of a metal finish on a structure and the rail corridor concerned is used by electric trains, or*
- (c) involves the use of a crane in air space above any rail corridor.*

The proposed development does not involve these uses and will not impact on rail safety. As such, Clause 85 does not apply to this development.

Division 15 Railways, Clause 86 – *Excavation in, above or adjacent to rail corridors* requires concurrence from RailCorp that involves excavation to a depth of at least 2m on land within or above a rail corridor, within 25m (measured horizontally) of a rail corridor or within 25m (measured horizontally) of the ground directly above an underground rail corridor.

Verbal confirmation has been received from RailCorp that the location of the rail corridor is in excess of 25 metres from Lot 3 DP 1175706. The rail corridor is shown on Architectural Drawing no. DA 02-005 at **Appendix A**.

Clause 87 Impact of rail noise or vibration on non-rail development provides noise controls for residential uses adjacent to rail lines. The Acoustic Report at **Appendix J** specifies an appropriate glazing and ventilation strategy to meet the noise criteria.

State Environmental Planning Policy (Affordable Rental Housing) 2009 (Affordable Housing SEPP)

Division 5 of the SEPP applies to residential flat buildings delivered by social housing providers, but not if development for the purposes of a residential flat building is permissible on the land under another environmental planning instrument.

As the approved Concept Plan under the former Part 3A of the EP&A Act and MD SEPP permits residential flat buildings, then this division (and therefore the Affordable Housing SEPP) does not apply to the proposed development.

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

The proposed development is identified as State Significant Development (SSD) under the Development SEPP as it is part of the Redfern-Waterloo site and it has a CIV in excess of \$10 million.

Clause 11 of the Development SEPP states that development control plans (whether made before or after the commencement of this Policy) do not apply to State Significant Development.

The proposed development application is being submitted as an SSD application as required by the SEPP.

Deemed SEPP: Sydney Regional Environmental Plan 26 – City West (SREP 26)

Planning principles for City West

SREP 26 includes planning principles of regional significance for City West. The relevant consent authority must take into consideration the aim of the SREP that development is to be consistent with the planning principles for City West.

Table 12 addresses the planning principles for City West of relevance to the proposed development.

Table 12 Planning principles for City West, SREP 26 – City West

Principle	Comment	Consistency
<i>Regional role</i> Development is to promote urban consolidation and is to reflect its central location and accessibility to public transport.	The development of a residential flat building in this urban renewal area promotes urban consolidation.	Consistent
<i>Land use activities</i> Development is to contribute to an integrated mixed-use development pattern containing a wide range of activities.	The proposed development contributes to the housing component of an integrated mixed-use development pattern.	Consistent
<i>Mixed living and working environment</i>	The development will provide infill medium-high	Consistent

Principle	Comment	Consistency
<p>Development is to house an increased population and provide an increased quantity and range of employment opportunities compatible with a high quality mixed living and working environment.</p> <p>Development is to provide different kinds of housing, including affordable housing, to ensure that low to moderate income households may continue to be able to live in City West.</p>	<p>density housing close to public transport and within a mixed living and working environment.</p> <p>The development is 100% affordable housing in Central Sydney, where there is a lack of supply of this type of housing.</p>	
<p><i>Environmental issues</i></p> <p>Development is to ensure a high level of environmental quality by addressing issues of air quality, noise levels, wind conditions, access to light and sunshine, privacy, soil conditions and water quality.</p>	<p>Air quality is addressed through the Construction Management Plan at Appendix I.</p> <p>The Acoustic Report at Appendix J specifies appropriate glazing and a ventilation strategy to meet noise criteria. Plant noise emissions from the proposed development will be achieved through equipment selection and placement.</p> <p>With the proposed design and recommended wind control measures set out in the Wind Tunnel Assessment at Appendix K, wind conditions adjacent to the proposed development will satisfy criterion for walking along the footpath and other pedestrian areas, and for standing in building entrances.</p> <p>Of the 88 units in the development, 74 (84%) receive at least three hours continuous mid-winter solar access between 9am and 3pm (SEPP 65 requires 70% compliance). In addition, 84 of the 88 units (95%) receive at least 2 hours continuous mid-winter solar access between 9am and 3pm (SEPP 65 requires 60% compliance in an urban setting).</p> <p>Care has been taken to ensure that a high level of internal privacy is achieved. Screens on south facing windows will allow for ventilation but ensure visual privacy. Screens to balconies and front gardens in the northern façade and the gallery screening to the south also provide the appropriate balance between ensuring passive surveillance of the public domain whilst protecting privacy.</p> <p>Stormwater management and erosion and sediment controls measures to address water quality are included in the Stormwater Management Plan at Appendix L and the civil drawings at Appendix M.</p>	Consistent
<p>Development is to have regard to the principles of ecologically sustainable development (namely, the precautionary principle, inter-generational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms).</p>	<p>The ESD Report at Appendix N addresses the principles of Ecologically Sustainable Development.</p>	Consistent
<p>Development is to incorporate measures to minimise waste, including (where practicable) utilising recycled materials and renewable building resources, recycling building and demolition wastes, and providing facilities for recycling and composting.</p>	<p>Refer to the Waste Management Plan at Appendix O for the waste management strategy.</p> <p>Building materials are to be recycled through the use of timber salvaged from the demolition of the Timber Shed Extension, formerly located on part of the subject site, and other items salvaged from the wider site. Refer drawing no. A-SD118 Materials – Recycling and Re-Use at Appendix A and the Heritage Impact Statement at Appendix P.</p>	Consistent
<p>Development is to implement total water cycle management, including (where practicable) reducing consumption of potable water, treating and recycling waste water for re-use, minimising site run-off and stormwater generation, and reusing stormwater.</p>	<p>Strategies for the capture and reuse of water are provided in the ESD Report at Appendix N.</p> <p>Stormwater management for the site is addressed in the Stormwater Management Plan at Appendix L.</p>	Consistent
<p>Development is to incorporate measures to conserve energy,</p>	<p>The ESD Report at Appendix N and the BASIX</p>	Consistent

Principle	Comment	Consistency
including (where practicable) reducing energy consumption, and increasing inherent energy efficiency through design and materials selection.	Report and Certificates at Appendix Q address energy consumption and efficiency.	
Development is to promote biological diversity by measures that include (where practicable) increasing habitat through appropriate retention, planting and maintenance of native flora considered representative of the locality.	Refer Landscape Plans at Appendix R .	Consistent
Development is to complement and reinforce the development and use of the existing and planned integrated public transport, pedestrian and cycling networks in City West.	The proposed development is within walking distance of both the Macdonaldtown Railway Station and the Redfern Railway Station and transport hub. Limited car parking is provided for the development as it is anticipated that there will be significant use of public transport.	Consistent
<i>Urban design and the public domain</i> Development is to enhance, complement and contribute to the development of the public domain in order to create a high-quality physical environment for access, enjoyment and recreation for residents and workers.	Refer Urban design and built form impacts at Section 6.3 of this EIS.	Consistent
Development is to contribute to a high level of residential amenity and convenience.		
<i>Heritage</i> The items and areas of heritage significance are to be conserved and enhanced. New development is to respect the character of heritage items and conservation areas.	Refer to the Heritage Impact Statement at Appendix P .	Consistent
<i>Movement and parking</i> A range of housing and work, leisure and service facilities is to be provided so that the need for travel is minimised.	The proposed residential development is located within Central Sydney, in close proximity to numerous work, leisure and service facilities, accessible by walking, cycling and public transport.	Consistent
A high degree of accessibility is to be provided to places in and outside City West for both able and disabled persons. Walking, cycling and use of public transport are to be encouraged as the means of movement.	Refer to Accessibility Report at Appendix S for assessment of accessibility of the proposed development.	Consistent
Development is to be within the capacities of existing and proposed public transport and arterial road systems.	Refer to the Traffic Impact Assessment at Appendix D .	Consistent

Planning principles for Eveleigh

A specific planning principle for Eveleigh from SREP 26 – City West is that “Development is to provide affordable housing which will supplement the existing housing within the Precinct.” The North Eveleigh affordable housing scheme is consistent with this principle as it provides 100% affordable housing.

Heritage conservation

SREP 26 also addresses heritage conservation. Development in the vicinity of a heritage item must be compatible with the conservation of the heritage significance of the item.

A Heritage Impact Statement has been prepared (refer **Appendix P**), as required by clauses 30 and 31 of the SREP. The statement concludes that:

- The heritage impacts of the adaptive reuse of the North Eveleigh site were considered in the approval of the Concept Plan. Impacts were identified and measures for their mitigation were included in the conditions for consent of the approval. No additional mitigation measures are recommended for this application.
- There will be no further heritage impacts resulting from the proposed

design for Building D4. The aesthetic, technical and social significance of the adjacent former railway buildings, the Carriage Workshop, Blacksmiths' Shop and Clothing Store, will not be compromised by the proposed development.

- Should any unexpected relics be disturbed during excavation of the site they must be managed under the Archaeological provisions of the NSW Heritage Act.

6.2 Policies, guidelines and planning agreements

NSW 2021 (State Plan)

The proposal is consistent with the State Plan goal of rebuilding the economy by placing downward pressure on the cost of living. The proposed development will improve housing affordability and availability in Central Sydney.

Metropolitan Plan for Sydney 2036

Relevant objectives and actions of the Metropolitan Plan are considered in **Table 13** below. The proposal will assist in meeting demand for additional affordable housing in Central Sydney, in a location close to public transport.

Table 13 Metropolitan Plan for Sydney 2036

Objective / Action		Comment	Consistency
D3.2	Set affordable housing targets for State urban renewal projects on a case by case basis	The proposed North Eveleigh affordable housing scheme is providing 100% affordable housing in an inner city location, where the cost of housing can be particularly high.	Consistent
H1.3	Set equity, liveability and social inclusion targets for major urban renewal proposals on a case by case basis	The provision of affordable housing close to the Redfern railway station enables ease of access to public transport to be achieved for low to moderate income households within Central Sydney.	Consistent

Draft Sydney City Subregional Strategy

Relevant considerations of the Draft Sydney City Subregional Strategy are set out in **Table 14** below.

Table 14 Draft Sydney City Subregional Strategy

Objective / Action		Comment	Consistency
C1.3	Plan for increased housing capacity targets in existing areas	The Redfern-Waterloo area has been identified in the Strategy as a major renewal site. Re-development in this location will take advantage of existing services such as shops and public transport and reduce development pressures in other parts of Sydney.	Consistent
C4.1.3	Redfern-Waterloo Authority to provide opportunities for improving the availability of affordable housing in Redfern-Waterloo	The proposed development provides a significant amount of additional affordable housing within the Redfern-Waterloo area.	Consistent

Redfern-Waterloo Built Environment Plan (Stage One) 2006

The Built Environment Plan (Stage One) was released in 2006 and is primarily a planning framework to encourage future economic growth including the creation of up to 18,000 jobs and 2,000 new dwellings throughout Redfern and Waterloo.

Assessment of the proposed affordable housing scheme against the planning framework within the Built Environment Plan is therefore not necessary given that the approved Concept Plan for North Eveleigh (MP08_0015) was prepared taking into account the provisions of the Built Environment Plan.

NSW Planning Guidelines for Walking and Cycling

The proposed development is in a good location to support walking and cycling by its future residents as there are many facilities within the Central Sydney area which residents will be able to access easily through walking or cycling, including shops, cafes and restaurants, recreational and cultural facilities, Sydney University and the nearby train stations of Redfern and Macdonaldtown.

Development Near Rail Corridors and Busy Roads – Interim guidelines

The impacts of noise from the nearby rail corridor are addressed in **Section 6.3**. Mitigation measures have been designed into the apartments to ensure that noise impacts upon residents will be at acceptable levels.

NSW BikePlan May 2010

The proposed development supports the aims of the NSW State Government BikePlan by providing 88 bike spaces in the basement of the proposed building. This will encourage bike ownership and use.

Sustainable Sydney

In addressing the strategic directions of Sustainable Sydney, the proposed development responds to these goals in the following ways:

- it assists to provide housing for a diverse population;
- it encompasses sustainable development, renewal and design as evidenced in the ESD Report at **Appendix N**;
- its location enables good opportunities for accessing public transport and for walking and cycling to facilities in the local area; and
- its potential environmental impacts are addressed through the proposed mitigation measures at **Section 8**.

6.3 Analysis of environmental impacts

Building height

The proposed building height is RL 48.1. The approved Concept Plan design envelope has a height of RL 44.1. There will be minimal adverse impacts as a result of the increased building height, and there will be a number of positive impacts, as follows:

- The view from Wilson Street to the site will be blocked by the approved four storey residential development located within the Concept Plan area, along the southern side of Wilson Street (refer to **Figure 15** below).
- The proposed building's total GFA of 5932.8m² is less than the approved Concept Plan GFA of 6480m².
- The building will be slimmer and broader than a building built within the Concept Plan envelope to help to achieve cross ventilation and solar access.
- The additional height at the proposed building's eastern end reflects and complements the additional height at the western end of the Carriageworks building.
- The additional height in the building's north-eastern corner emphasises the location of the building's main entrance at this corner.
- It would be unreasonable not to permit the additional storey proposed as part of this application, as that would result in a significant loss of affordable housing units.
- The seventh storey allows for partial activation of the open space on the top floor through enabling passive surveillance from adjoining units.
- The additional height allows for articulation of the roofline to enhance the visual appearance of the development.

Mitigation measures

No mitigation measures are required.

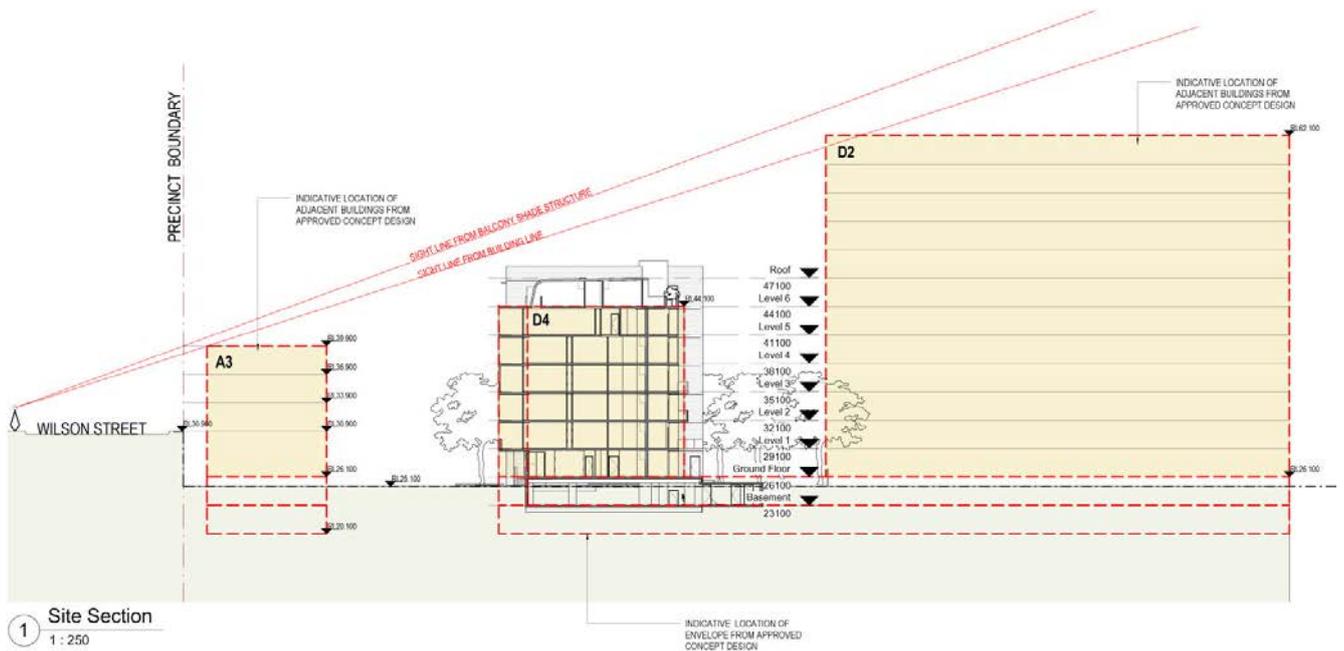


Figure 15 Wilson Street view lines

Building footprint

The building footprint extends outside the footprint indicated in the approved Concept Plan to allow for improved urban design and amenity outcomes.

Aside from minor changes to the footprint at the building’s eastern end, the most significant alteration is at the western end of the building (refer Architectural Drawing floor plans at **Appendix A**).

In contrast to the rectilinear form of the approved Concept Plan footprint, the western component of the building is increased in length to the south, creating an L shaped envelope. While strengthening the side street and allowing vehicular access directly into the built form (rather than an unattractive open cut), this design approach also enables the building to engage with the rear alignment of the adjacent heritage Clothing Store to its west. This results in a building that sits comfortably in its context.

Mitigation measures

No mitigation measures are required.

Environmental sustainability

Cross Ventilation & Daylight Access

The design incorporates an open gallery walkway to the southern façade which increases the potential for cross ventilation & natural light to the apartments. This allows for:

- Natural cross ventilation through over 86% of the apartments – well in excess of the 60% recommended by the RFDC;
- Many bathrooms located at external walls enabling natural ventilation and day lighting;
- Winter sun access to all living areas;
- Deep private balconies providing sun protection in summer months;

- Sun-shading and weather protection to openings specific to orientation

Water Saving

- **Fixtures & Fittings:** The most important issue in water cycle management is firstly to reduce water demand as much as possible. This is achieved through design initiatives such as water efficient fittings and fixtures, low water demand landscape selection and efficient irrigation systems. The proposed water efficient fixtures and fittings are scheduled in Table 1 of **Appendix N** to this report. After demand has been minimised, the potential for supplying non-potable demands with non-potable sources is increased.
- **Landscape Design:** Further water savings are to be achieved through water efficient landscape design such as vegetation selection which prioritises plants with low or no watering requirement. The majority of landscaping species will be classed as “low water use”, which significantly reduces irrigation demands for the site.
- **Alternative water sources:** Once demand has been minimised, the potential for meeting water needs with alternative forms of water is increased. Current practice is to use Grade A water (rainwater, stormwater and recycled water) for non-potable uses only, such as toilet flushing, clothes washing and irrigation.

A 30m³ rainwater tank is to be incorporated, which will provide non-potable water for:

- toilet flushing;
- laundry uses;
- wash-down facilities; and
- providing for irrigation demands of the site.

It is expected that the site-wide water consumption would be reduced by a further 11% on top of the reduction achieved by efficient fixtures and water efficient landscaping. Also, by incorporating dual reticulation pipe work into the building, this future-proofs the building to connect to an external source of recycled water if a recycled water network is developed in the future.

Other Initiatives:

- **Reuse of Materials and Machinery:** A study has been undertaken to determine which materials found on-site may have the potential to be reused as part of the building and/or landscaping. These include:
 - **Timber** – timber salvaged from the old industrial building on the site have been stored and will be reused to provide a portion of the building cladding, including vertical louvres to provide external shading and used within the landscaped areas as furniture;
 - **Machinery** – Enamelled light fittings approximately 600mm in diameter will be refurbished and reused within the building. Also, there is the potential to reuse drill bits, punches, lathe tools, steel beams, rails, steel roof trusses, steel cover plates and steel bending machines. A compressed air tank will be reclaimed and used to store rainwater for irrigation purposes.
- **Community Garden:** A community garden initiative is to be undertaken for use by the residents and an area within the rear landscape has been set aside for this purpose.

Mitigation measures

- Compliance with the commitments set out by the BASIX Certificate, to ensure maximisation of energy and water efficiency;
- Consistency with the commitments made in the ESD Report at **Appendix N** to this report.

Social impacts

A Social Impact Assessment (SIA) has been prepared by GHD and is attached at **Appendix H**.

CWH currently provides housing to 543 households within its 547 properties located throughout Pymont, Ultimo and Green Square. Within these households there are approximately 1,034 total residents. Based on the types of households that have applied for housing, there is a total of 608 people waiting to be housed in CWH units. A diverse range of age groups are housed in CWH housing, from young families with children, to working adults and older people. However, households with a single occupant make up the largest proportion of current CWH households. In addition, at 63% of the waiting list, single households are also the most in demand. Dual occupancy households, which include couples or single parents with children, make up the next largest group of current households and the second most in-demand household type.

The proposed North Eveleigh affordable housing scheme has been designed to meet these demands by providing over 50% of development as one bedroom units and over 40% as two bedroom units.

With regard to existing community facilities and services, it is not likely that the small increase in the local population as a result of the proposed development (estimated at 134) will have a significant impact on local social infrastructure, such as child care services or schools. Consultation on the North Eveleigh Concept Plan indicated that existing local schools have capacity to accommodate the proposed population of school aged children.

UGDC has lodged a Development Application with the City of Sydney Council for the development of two public parks, in accordance with the Concept Plan approval. This Application is currently being assessed by Council.

The SIA has considered key social issues and factors in order to understand the local community and the likely social impacts of the proposed development. Both positive and negative impacts have been identified in relation to the future tenants of the development, the local community, key stakeholders and CWH.

The positive impacts have been identified as:

- The attraction of very low, low and moderate income workers to Redfern Waterloo, many of whom will be “key workers” who are essential to the long term sustainability of the community.
- The retention of very low, low and moderate income workers to Redfern Waterloo with these households already living or working in the area.
- Activation of an unused part of the North Eveleigh site and change in local character of the site and the surrounding area.
- A slight increase in people walking and cycling along local streets.

- A range of household types living in the development leading to a socially mixed community.
- An increased customer base for local businesses and services.

The potential risks or potential negative impacts identified include:

- A slight increase in cars travelling along and parking in local streets.
- Potential for social isolation due to lack of interaction.
- Potential lack of acceptance of CWH tenants within broader community and by key service providers leading to social isolation.
- Amenity impacts from construction such as noise, vibration, dust and increased construction traffic.
- Strain on local community facilities such as child care services, schools and open space.

Measures to enhance the potential benefits and minimise the risks associated with the proposed development include:

- Continue to apply the CWH allocation policy which seeks to provide a mixed community within each property.
- Provide seating and facilities such as barbecues in common areas to facilitate informal interaction between tenants. Such facilities are proposed for the development.
- Continue to provide programs which encourage interaction and connections between tenants such as Welcome BBQs for new tenants.
- CWH to develop a communication and consultation strategy to ensure that community members and key stakeholders understand what affordable housing is and who will be living at the North Eveleigh development. [Note that a communication and consultation strategy has already been developed and is underway (refer **Appendix EE**)].

Additional strategies are recommended within the SIA for implementation by CWH and others such as UGDC to further mitigate any potential social impacts from the proposed development.

There are a significant number of positive social impacts which will result from the proposed affordable housing scheme. Where there are potential negative impacts, a number of strategies can be activated to minimise these potential impacts. Some of these are recommended as mitigation measures, as follows.

Mitigation measures

A condition of consent is recommended for the preparation of a final Construction Management Plan prior to issue of Construction Certificate.

Economic impacts

The proposed development will bring additional residents into the local area, which will create positive economic impacts as a result of additional spending on local goods and services. In addition, the construction of the development will generate construction work as well as work for other trades including electrical and plumbing.

In the long term, this development will generate long-term employment for property managers within CWH.

The rent generated by this development must also be used to development more affordable housing units, in accordance with CWH's Charter.

The key economic benefit of providing affordable housing is that key workers can continue to find accommodation in the central Sydney area where there is employment demand.

Mitigation measures

No mitigation measures are required.

Built form and urban design

Alignment, length and scale are positively expressed by the proposed affordable housing building through the use of modulation, proportion and repetition. The long facades of the existing Victorian buildings of the Carriageworks site are enhanced by the repetition of classically proportioned openings, roof forms and brick detailing. The forms used in the proposed new contemporary building reinforce its architectural connections with the older more public buildings.

The proposed development provides clear architectural expression and structural composition, using concrete, brick and metal sheet roofing, again responding to the existing material of the heritage buildings. Locating and clearly articulating the building's services at ground level, allows ease and efficiency of operation, delivery and collection.

The proposal creates open covered galleries to its southern elevation, which clearly express the building's entry points, vertical and horizontal access and day to day circulation. This responds to the openness and functionality of the site, which was completely purpose built and has left a legacy of functional buildings with clear construction, servicing and operational methods.

The proposed seven storey building element at its most active (north-east) corner provides greater legibility of key corners and significant entry points. It also increases visual interest and internal functionality for the proposed development.

As an open industrial site, there is little external protection from rain, sun, train noise and so on. Within this context, the shade provided along the edges of buildings and large internal or covered spaces (now adapted for markets and performance spaces) are of high value to the entire context. The proposal provides a generous porch and internal and external spaces at its main entry. This follows the precedent of the Carriageworks performance space and adjacent markets and increases the level of security and safety through increased passive surveillance.

Massing, alignment and scale

Rather than compete with the site's significant and now public buildings, the massing and architectural expression of the proposed development softens and articulates the approved Concept Design envelope. On a flat site in this significant context, the approved Concept Design envelope is potentially overwhelming.

In terms of massing, the proposed building has been articulated into three main components. Slightly set back from the alignment of the Carriageworks main building, the eastern brick element houses larger apartments which take advantage of its dual aspect. In raising the top storey, the main entry is emphasized and the upper outdoor space is better integrated into the building's fabric and provided with passive surveillance.

Expressed as an articulated concrete frame, the central component is aligned with the original Carriageworks building, reflecting the bay repetition of surrounding heritage buildings and their clear expression of use and composition.

Both the north facing facade and gallery to the south are enriched with a patina of protective timber screens and glazed balustrades, complementing the casual landscaped terraces that occur along the building's length.

At grade, bays are paired to become three storey apartments with projecting brick gardens to the north. At upper levels, the introduction of duplexes creates an expressed zinc roof for a portion of its length, complementing the material palette with familiar roofscape elements. This western brick component introduces a generous soft landscape setback to the building's secondary corner and signals the proposal's minor side street entry. In contrast to the eastern component's vertical emphasis, this element's horizontal expression is reinforced by deep spandrels. These respond to a broader street section and house sliding horizontal screens to protect from harsh westerly sun.

In its various alignments, the proposed building reinforces the Carriage Workshop's primary axis, while providing an alternative expression for each of its corners.

The character and expression of the building connects with neighbouring brick heritage buildings. To mediate height difference, each corner uses subtle differences between lower and upper levels, creating mid-scale groupings and allowing differentiation between base, middle and top sections. Through variance in corner treatment, expression of balcony and balustrade, use of brick as a solid or screen material and window configuration and grouping, scale is modulated and reduced.

In a similar vein, the introduction of detail such as projecting hoods and aligned windows creates groups of elements that can be read as a larger component, in much the same way that the Victorian expression of the industrial buildings groups elements into orders and bays. However, as this building is in close proximity to heritage buildings, it is crucial that it achieves compatibility without mimicking those buildings.

Materials

The proposed building does not seek to compete with the existing heritage buildings as much as complement and defer to the prominence of those buildings. Between the proposed building's three distinct component parts, external detailing reduces the scale of the building, introducing subtle contrasts of solid and framed surfaces, horizontal and vertical articulation and various opening types, each responding to position, outlook and environment.

Simple, clearly expressed construction techniques will be used, reflecting the working history of the site.

Streetscape

The western façade of the building creates a direct dialogue with the regular fenestration of the Clothing Store's northern façade, enhanced by new landscape along its setback alignment. An appropriate "gateway" is thereby created to the new precinct.

At street level, vistas are enhanced to both the main axis and side streets through the proposal's use of alignment, massing, material and landscape.

Lower level balconies project from three bedroom units at ground level, with stairs down to secure lower gardens. This enables greater engagement and visual interactivity with the street. Passive surveillance from west, north and east facing living spaces and balconies will ensure that adjacent streets and open spaces are active, safe and secure. At upper levels, a variety of roof types including a roof garden, its adjacent brick level, a zinc upper level and service roofscape provide a rich mixture of materials and forms, integrated around the requirements of contemporary living.

Residential amenity and safety

Solar access

Of the 88 units in the development, 74 (84%) receive at least three hours continuous mid-winter solar access between 9am and 3pm (SEPP 65 requires 70% compliance). In addition, 84 of the 88 units (95%) receive at least 2 hours continuous mid-winter solar access between 9am and 3pm (SEPP 65 requires 60% compliance in an urban setting).

Balconies are positioned to optimise solar access, outlook and amenity. Horizontal screening is provided to west facing windows and projecting hoods are provided to east and north facing windows to reduce glare from direct sunlight.

Visual privacy

The proposed development is separated from adjoining future development, being surrounded on three sides by road frontages. To the rear, the building is appropriately sited to the north, to provide adequate separation from any future residential development that may occur to the south of the site.

Appropriate screening and siting of balconies and living areas is provided to ensure there is minimal opportunity for overlooking between dwellings.

In addition, the north facing facade and the gallery to the south have protective timber screens which provide privacy, as well as screening sunlight from the north. The western elevation incorporates sliding horizontal screens to protect from harsh westerly sun, which also provide privacy for residents.

Each unit has been designed to incorporate appropriate levels of visual privacy between units. The ground floor of the development has been raised by 1000mm above the general external ground level. The change in level minimises sight lines from the street into the apartments whilst increasing street surveillance from the apartments. The windows of habitable rooms have been located to provide visual privacy between apartments.

Vistas

The apartments have been designed to make the most of the primary outlook and aspect to the north by locating the main living spaces towards this aspect and providing protection from the railway.

Natural ventilation

87% of the apartments in the building are naturally cross ventilated, as are all lobbies and access ways. All entry doors have security screen doors to facilitate the opening of entry doors during the day.

Overshadowing

Shadow diagrams are provided with the Architectural Drawings at **Appendix A**. The drawings indicate that the proposed development will reasonable overshadowing impacts on the public domain. The private open space to the rear of the proposed development also receives adequate solar access throughout the year.

The overshadowing diagrams also show the shadow that would be cast by the envelope approved by the Concept Plan. The proposed development, which has a more articulated roof line, and exceeds the Concept Plan envelope by one storey for part of the building is not considered to create any unreasonable additional overshadowing.

Safety

A Crime Prevention Through Environmental Design (CPTED) Report is attached at **Appendix G**. The report concludes that the proposed development is considered acceptable from a crime prevention, safety and security perspective and is not considered to have a detrimental impact on the safety and security of the surrounding area, subject to a number of recommended mitigation measures, as set out below.

Mitigation measures

Prior to issue of Occupation Certificate -

- CCTV cameras should be installed in the parking area, basement entry point, terrace rooftop and pedestrian entry points.
- Ceilings and walls in the basement parking area should be painted a light colour.
- Lighting should be provided at entry points (vehicular and pedestrian) and to all communal open space and public areas. This lighting should be automatically controlled by time clocks and/or sensors where appropriate, and to provide an energy efficient and controlled lighting environment. Lighting should be provided in accordance with the relevant Australian Standards.
- The main entry/exit doors and fire exit doors should be fitted with appropriate locksets, intercoms and central access measures to restrict unauthorised access to the building.
- Secure basement access should be controlled using a swipe card and/or intercom to restrict unauthorised access to both pedestrians and motorists.
- Signage should be provided at entry/exit points to public spaces including:
 - **Warning:** These premises are under constant CCTV surveillance.

Operational phase -

- Graffiti and vandalism should be removed/repaired as soon as practicable following such incidents.
- Any burnt out lighting should be replaced as soon as practicable.
- Landscaping on the site is to be maintained to a density and height that allows clear sight lines from the street. Large trees should provide adequate shade, whilst low shrubs maintain the necessary sight lines.
- Regular cleaning of public space and collection of rubbish.

Other comments -

- There is uncertainty of future layout and uses surrounding the site which hinders a full CPTED assessment of the proposed development.

Heritage

A Heritage Impact Statement has been prepared by Graham Brooks and Associates and is provided at **Appendix P**. The findings of the Statement are provided here.

The subject site is located on land included on the NSW State Heritage Register as part of item 1140, Eveleigh Railway Workshops.

The following buildings within the boundaries of the State Heritage listing for the Eveleigh Railway Workshops site are also listed as individual heritage items under the State Environmental Planning Policy (SEPP) (Major Development) 2005:

- Carriage Workshops

- Blacksmiths' Shop

The site is in the vicinity of the following heritage items of local significance, listed under the Sydney Local Environmental Plan (LEP) 2012:

- Golden Grove Conservation Area - CA 18
- Pines Estate Conservation Area - CA 44
- Queen Street Conservation Area - CA 45

The heritage impacts of the adaptive reuse of the North Eveleigh site were considered in the approval of the Concept Plan. Impacts were identified and measures for their mitigation were included in the conditions for consent of the approval. No additional mitigation measures are recommended for this application.

There will be no further heritage impacts resulting from the proposed design for the affordable housing scheme. The aesthetic, technical and social significance of the adjacent former railway buildings, the Carriage Workshop, Blacksmiths' Shop and Clothing Store, will not be compromised by the proposed development.

Although the proposed new building is slightly higher than the adjacent Carriage Workshop it will not dominate, or visually challenge, this building given the commanding scale and form of the former industrial building.

Similarly, the Blacksmiths' Shop has a strong linear form that will not be dominated by the proposed development.

The Clothing Store has a strong, sober presentation and is setback from the alignment of the Carriage Workshop and the proposed building. As such, it will remain a prominent building in the revitalised precinct.

The proposed design for the building is considered to be sympathetic to the heritage items for the following reasons:

- it continues the strong linear presentation of the existing buildings in the former railway yard;
- the higher element on the eastern side of the building emulates the presentation of the western bay of the Carriage Workshop without dominating this heritage item;
- the contemporary facade design reflects the materials and repetitive rhythmic design of the adjacent Carriage Workshop without mimicking the form of the heritage item;
- the use of masonry elements in the facades of the proposed building reflect the materials of the adjacent buildings; and
- the site landscaping includes the reuse of salvaged materials from the wider site.

If any unexpected relics are disturbed during excavation of the site they must be managed under the Archaeological provisions of the NSW Heritage Act.

Mitigation measures

A condition of consent is recommended stating that if any unexpected relics are disturbed during excavation of the site they must be managed under the Archaeological provisions of the NSW Heritage Act.

Traffic, transport, access and parking

The Traffic Impact Assessment at **Appendix D** details the traffic, transportation, access and parking impacts resulting from the proposed development. Results are summarised below.

Traffic generation

The RMS “Guide to Traffic Generating Developments” recommends a vehicle trip generation rate of 0.24 trips per unit in the peak hour from a high density residential development. The affordable housing scheme contains 88 units, corresponding to a peak hour trip generation of 21 vehicles.

As part of the Stage 1 Transport and Management and Accessibility Plan (TMap) for the North Eveleigh site (refer **Appendix U**) intersection analyses were undertaken for the following intersections:

- Abercrombie Street / Shepherd Street (traffic signals)
- Abercrombie Street / Lawson Street (traffic signals)

The analysis indicates that the level of service through both intersections are maintained at Level of Service B in the AM and PM peak hours following the introduction of an additional 200 dwellings on the Stage 1 site. Given the proposed development contains only 88 dwellings, the impact on the local road network will be even lower than that for a 200 dwelling development. Therefore, no additional works or upgrades are considered necessary to accommodate the traffic generated by the proposed development.

Site access

The main vehicular access to the North Eveleigh site is via an entrance from Wilson Street at the far western end of the North Eveleigh site, near Queens Street and Forbes Street.

On-site car parking

The North Eveleigh Concept Plan approval provides maximum car parking rates for the subject development. These were based on the City of Sydney LEP 2005, which has now largely been superseded by the Sydney LEP 2012. The Sydney LEP 2012 maximum parking rates for residential development in the vicinity of the subject site are also provided below. These rates do not apply to the proposed development, but are considered best practice in terms of balancing the need to provide off-street parking against the need to reduce travel by private vehicle.

These rates, along with the proposed parking provision, are outlined in **Table 15**, below.

Table 15 On-site parking provision

Dwelling type	Proposed Number of Dwellings	Maximum Car Parking Rate		Maximum Car Parking Provision		Proposed Car Parking Provision
		Concept Plan Approval	City of Sydney LEP 2012 (Area B)	Concept Plan Approval	City of Sydney LEP 2012	
Studio	10	0.25 spaces /dwelling	0.20 spaces /dwelling	2.5	2.0	39
1 bed	37	0.50 spaces /dwelling	0.40 spaces /dwelling	18.5	14.8	
2 bed	36	1.2 spaces /dwelling	0.80 spaces /dwelling	43.2	28.8	
3+ bed	5	2 spaces /dwelling	1.1 spaces /dwelling	10	5.5	
Total	88			64.2	51.1	

The proposed parking provision of 39 is well below the maximum 64.2 allowable under the North Eveleigh Concept Plan approval and the maximum 51.1 spaces permissible under Sydney LEP 2012.

The low parking provision recognises the area’s good public transportation and the walking and cycling network surrounding the site, all of which encourage non-car modes of travel.

CWH’s car parking policy is to provide approximately 40% of residential units with access to a parking space. CWH does not construct multi-level basements. If underground parking is required a single level basement underneath the building will be provided. North Eveleigh proposes a single level basement of 39 spaces for 88 units, this equates to 44% which exceeds the design guidelines.

Current parking levels in existing CWH developments are indicated in Table 11 of the Traffic Impact Assessment. The table illustrates that CWH promotes sustainable transport modes and its developments do not have a large demand for private car parking. Table 12 of the Traffic Impact Assessment shows the future demand for car spaces per household type on the CWH waiting list and illustrates that approximately 43.5% of households require parking. The level of parking proposed at North Eveleigh is consistent with current and future parking provision.

Public transport

The proposed development is located in close proximity to a range of good public transport options.

Rail network

Upgrading of the Redfern Railway Station is proposed through a separate planning process to facilitate access and connectivity, increased station capacity and improved links to other transport modes such as surrounding bus stops, and pedestrian and cycle links.

The proposed development is served by a second railway station – Macdonaldtown Station – which is located approximately 650 metres from the site. While Macdonaldtown Station is closer to the site than Redfern Station, it is expected that the majority of residents using trains will walk to Redfern Station as the more frequent services and additional lines service this station.

Bus network

The majority of buses in the area operate along City Road to the north of the site. Bus stops on City Road are approximately 500m from the affordable housing scheme site, just over a five minute walk.

Walking and cycling

Proposed improvements to walking and cycling connections -

A number of improvements are planned both internally to the site and externally on the road network to facilitate improved walking and cycling connections for future residents. These are summarised below:

- **Wilson Street Cycleway** – a bi-directional separated bicycle facility is proposed for the southern side of Wilson Street. Existing traffic counts in the area already indicate a significant number of cyclists use this corridor in peak hours.
- **Access to Macdonaldtown Station** – no formal pedestrian or cyclist access currently exists linking the Concept Plan site with Iverys Lane, which is the most direct path to the station. Pedestrian access is proposed to be improved through a connection at the western end of the site to the station which is approximately 650 metres away. A new accessible access will be provided at the western end of the North Eveleigh site.

Existing Sydney City Council Plans for the precinct indicate that Council is currently investigating the implementation of shared zones west of the Concept Plan site, which would improve the pedestrian environment in the area and encourage additional walking trips to the Macdonaldtown station. In addition, improvements are to be undertaken by UGDC as part of the infrastructure works to support affordable housing on the site.

- **Access to Redfern Station** – Redfern Station is approximately 950 metres away for the proposed development (a ten minute walk) with existing pedestrian connections provided linking Wilson Street and Little Eveleigh Street. Sydney City Council has identified Little Eveleigh Street as a priority future shared zone with possible implementation in the next 3 – 4 years. This link will provide good walking access for pedestrians between the station and the proposed development.
- **Other pedestrian improvement works** – The Council, in discussion with Sydney University, is currently investigation other opportunities for improvements in the pedestrian environment in the local area.

Bicycle parking

The proposed bike parking provision is for 88 spaces. This is well above the number recommended in both the Austroads Standards and the NSW Planning Guidelines for Walking and Cycling. Therefore, the proposed bike parking provision complies with the recommendations outlined in the Stage 1 TMAP for the North Eveleigh site (refer TMAP at **Appendix U**).

Site Travel Plan

It is recommended that a site specific travel plan be prepared prior to the initial occupation of the affordable housing scheme. A recommendation of the travel plan would be the development of a transport access guide (TAG) to be distributed to residents prior to occupancy of the building. The TAG would provide site specific travel information using sustainable modes of transport, e.g. walking, cycling and public transport.

Waste collection access

CWH are a registered user of the City of Sydney GAR System, which provides keyed access to the development's waste room for the garbage contractor. The North Eveleigh project will include a similar arrangement for access to the single garbage room.

The garbage room is at ground level with garbage trucks emptying bins from the internal site road system. The new access connection will allow garbage trucks to loop through the site. As further development occurs across the site, the traverser two-way roadway will be used with trucks turning at the end of the roadway.

Mitigation measures

A condition of consent is recommended which requires a site specific travel plan to be prepared prior to occupation of the building. The travel plan would include the recommendation for a transport access guide (TAG) to be developed and distributed to residents prior to occupancy of the building.

Acoustics

An Acoustic Report has been prepared by WSP and is at **Appendix J**.

The noise assessment criteria have been established from the Director's General requirements.

Noise and vibration ingress

Noise levels on the proposed building's facades have been predicted based on traffic flow data and onsite measurements. Glazing specifications have been provided in section 4.2 of the Acoustic Report for the north and south façade to meet the criteria.

Ventilation strategy

Natural ventilation throughout the development is proposed. The noise predictions are based on openings providing a 5dB reduction from outside to inside. This is considered a conservative estimate. The criteria has a 10dB relaxation for windows/doors open.

- **Daytime:** Cross-flow ventilation is provided through openings on the north and/or south.
- **Night-time:** Ventilation throughout the unit is provided from openings on the north and/or east/west facades ensuring that opening sizes to each space meet the Building Code of Australia ventilation requirements. This allows the occupants to have the openings on the south closed during the night time and therefore preventing the noise levels exceeding the criteria.

With the above strategy in place the internal noise criteria (set out in Section 2.2.1 of the Acoustic Report) are achievable.

Vibration ingress

Based on the worst case scenario, the vibration levels are well below the criteria and as such, no adverse impacts will be caused from rail vibration.

Noise emissions

Plant noise emissions are subject to the project specific noise levels from the Industrial Noise Policy criteria in Section 2.1.3 of the Acoustic Report and will be achieved through equipment selections and placement.

Upon design development, if the predicted noise levels increase due to changes in equipment needs, acoustic mitigation measures may be necessary. These measures may include, but are not limited to:

- Attenuators,
- Noise barriers,
- Acoustic louvres, and
- Acoustic absorption.

Construction noise & vibration

Ground-borne vibration is not considered an issue as the DECC guidance only specifies vibration limits for outside of working hours.

The noise affected management trigger represents the point above which there may be some community reaction to noise. If activity noises are to exceed this limit then the following is required:

- The proponent should apply all feasible and reasonable work practices to meet the noise affected level; and
- The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contract details.

This will be developed with the main contractor leading up to and during the construction phase.

The Acoustic Report contains an outline assessment provided for information at this stage. A detailed assessment will need to be undertaken once the main contractor is appointed and additional detailed construction methods are known.

Mitigation measures

Prior to issue of the Construction Certificate, a detailed assessment of construction noise is to be carried out in consultation with the main contractor, which will address all feasible and reasonable work practices required to meet the noise affected level. A strategy to inform all potentially impacted residents of the nature of the works is to be prepared concurrently.

Rail impacts

Impacts of noise from the nearby railway line have been addressed under Acoustic impacts in this section of the EIS.

As requested by RailCorp, CWH commissioned an Electrolysis Report, which is provided at **Appendix FF**.

The Electrolysis Report found that the proposed development will not be subject to damaging stray DC current originating from either the existing electrified Main Western Line and/or future rail tunnel associated with Redfern Station.

Construction management

A Preliminary Construction Management Plan has been prepared and is provided at **Appendix I**. A final Construction Management Plan will be required prior to issue of a Construction Certificate. The main contents of the Construction Management Plan are the following:

- Construction duration and times;
- Noise and vibration management;
- Traffic and pedestrian management in accordance with the Construction Traffic Management Plan referred to below;
- Waste management, including quantities storage and disposal;
- Dust control and management;
- Erosion and sediment control;
- Tree protection and management; and
- Contact details of Site Manager.

Construction traffic

The construction of the development will require access for heavy vehicles. Prior to commencement of construction, a Construction Traffic Management Plan is to be prepared to ensure the safest possible management of construction access. Further detail in relation to construction traffic is provided in the Traffic Impact Assessment at **Appendix D**.

Air quality impacts

CWH has prepared an Air Quality Impact Assessment (refer **Appendix Y**) to accompany the Construction Management Plan. The air quality assessment will be developed throughout the detailed design phase for implementation during the construction phases. CWH will monitor air quality impacts throughout the development phase.

Mitigation measures

Preparation of a final Construction Management Plan including air quality control measures prior to issue of a Construction Certificate.

A Construction Traffic Management Plan is to be prepared prior to issue of a Construction Certificate.

Utilities and services

A Utilities Services Report has been prepared by WSP and is at **Appendix C**. The Report addresses electrical services, telecommunication services and hydraulic services.

Electrical services

Existing electrical infrastructure is reticulated underground around the site. The majority of existing infrastructure is not expected to have any significant impact upon the proposed development.

Underground 11kV high voltage (HV) cables run alongside Wilson Street and these will be used to feed the proposed development site via a new 800kVA kiosk which will be located on site adjacent to the building's western end. The infrastructure forms part of the Ausgrid utility network.

The existing HV cable will be replaced and re-routed where required and new cables installed. Easements will be registered in Ausgrid's favour for the cable and kiosk.

The minor low voltage infrastructure reticulated throughout Wilson Street is likely to have to be relocated or moved to allow the development to occur.

Telecommunication services

Telstra Infrastructure which will be utilised to provide telecommunications services to the new development is widely present around the site. The National Broadband Network will be available to the development. Fibre reticulation is proposed from the local point of connection to the site to ensure there is capacity to accommodate the network.

Hydraulic services

The Utilities Services Report notes that the assessment of hydraulic services in the report is conceptual only and will require formal approval from the appropriate infrastructure authority prior to the detailed design phase.

Domestic water and fire flow demands –

Fire flow requirements are based on the Deemed to Satisfy requirements as specified by the BCA, AS 2419. Domestic water demands will be catered for within the supply of the fire flow demands. The existing 200mm water mains are located in the Proposed Road running adjacent to the property frontage to the north of the property.

A pressure and fire flow statement from Sydney Water will be required to ensure adequate residual pressure for fire fighting requirements as specified by the BCA, AS 2419.

On site booster pumps may be required to achieve required system(s) pressures in accordance with AS2419 (subject to pressure and fire flow statement results).

Natural gas demands –

There is a 32mm nylon 210Kpa natural gas supply located along Wilson Street turning north into Forbes Street and a 32mm nylon 210Kpa natural branch line located in Holdsworth Street.

There is also a 75mm nylon 210Kpa natural gas supply located along Wilson Street turning north along Golden Grove Street. Jemena will need to be consulted to determine requirements for gas cooking and hot water supply in order to negotiate an extension to the development from the existing network.

Sewer requirements –

The site is served by a Sydney Water sewer located in the Proposed Road running adjacent to the property frontage to the north of the property. The Sydney Water sewer infrastructure appears adequate to serve the proposed development.

Mitigation measures

Prior to detailed design, obtain a Section 73 Notice of Requirements from Sydney Water to ensure all conditions are met by the development in relation to domestic water, fire flow demands, and sewer requirements.

Prior to detailed design, undertake further consultation with the relevant utility companies to finalise requirements for utility services.

Include in the Construction Management Plan, required prior to issue of the Construction Certificate, an appropriate setback from the existing high voltage electricity lines.

Stormwater and flooding

A Stormwater Management Plan has been prepared by Enstruct and is attached at **Appendix L**. It is to be read in conjunction with the Stormwater Management Report for the North Eveleigh precinct prepared by AECOM, which is appended to Enstruct's report. The impacts of different storm events are addressed below.

Up to 20 year ARI Storm:

Both the landscaping and roof catchment discharge into OSD tank via the in ground stormwater network in the landscaping area and retention tank from the roof. There is a 20yr orifice inside the tank that limits the flow down to the required particle size distribution (PSD) taking into account flow from the bypass catchment. In these events the invert of the orifice sits higher than the water surface level of the external system.

The OSD tank size is 72m³ with the internal water surface level remaining lower than the 25.15 level in the landscape area, resulting in no ponding in the landscaped area as a result of OSD.

Up to and over 100yr ARI Storm:

In events greater than the 20yr storm event the water surface level increases to a point where there is ponding at the pit A13.2 in the 100yr ARI event. To achieve the 100yr PSD there is a need to provide both non-return valves and above ground OSD as well as a 100yr orifice in the OSD tank.

A description of how the system works between the 20 year and 100 year events is as follows:

As the storm starts water will run into the OSD tank and discharge out to the external drainage. As the water surface level increases in pit A13.2 the non-return valve initiates and water runs into the OSD tank from the Building D4 catchment, without discharging, until the water surface level in the OSD tank is higher than water surface level inside the tank.

As water continues to run into the tank, water will start to run over the 20 year weir into a chamber with a 100yr orifice. From this point the OSD tank is discharging out at 100 year PSD. As the tank fills, the tank will surcharge via a surcharge pit into the above ground storage. The above ground storage fills while still discharging water through the internal drainage network. This above ground storage is sized at 27m³ to achieve the 100yr PSD. In events greater than 100yr event water will surcharge the above ground storage and run overland to the west via the path and then on to the road.

Mitigation measures

No mitigation measures are required.

Sediment and erosion control

Sediment and erosion control measures are shown in the Erosion and Sedimentation Control Plan in the appendix to Enstruct's Stormwater Management Plan at **Appendix L**.

Mitigation measures

A detailed final Erosion and Sediment Control Plan is to be submitted prior to issue of the Construction Certificate.

Wind

The Vipac Wind Report is provided at **Appendix K**. Vipac carried out wind tunnel testing of pedestrian level wind effects for the proposed development. Wind conditions were assessed based on internationally accepted comfort and safety criteria.

Vipac recommended and tested the following wind mitigation measures:

- Additional trees on the west and east side of the proposed development.
- Set back of one metre for the entrance at the southeast side or installation of a 1m wide by 2m high windscreen at the east side of the entrance.

These wind mitigation measures have been incorporated into the ground level design (refer Architectural Drawings at **Appendix A**).

Therefore, it is concluded that:

- Wind conditions adjacent to the proposed development will satisfy criterion for walking along the footpath and other pedestrian areas.
- Wind conditions will satisfy criterion for standing in the building entrance areas.
- All balconies and the rooftop terrace will be likely to satisfy the recommended walking criterion, however, as a general statement for any high-rise development, educating the occupants about wind conditions at open terrace areas during high-wind events and tying down loose lightweight furniture are highly recommended.

Mitigation measures

Include in an information pack for new residents information about wind conditions at open terrace areas during high-wind events. This is to include the measures required to ensure safety of residents and others and to avoid damage to property.

Groundwater

A Groundwater Report has been prepared by JK Geotechnics (refer **Appendix AA**). The Report concludes that it is not expected that the proposed basement will be adversely affected by groundwater provided engineer designed drainage systems are constructed. Similarly, it is not expected that the basement will have an adverse effect on the regional groundwater flows given its limited extent into the groundwater.

Allowance should be made for seepage into the basement excavation and this will tend to occur along the soil/rock interface or through joints within the shale. This should be able to be adequately controlled using conventional sump and pump techniques.

Drainage should be provided as part of the basement retaining walls and below the basement slab. The completed excavation should be inspected by an hydraulic engineer to confirm that the designed drainage system is adequate for the actual water flows.

Mitigation measures

The completed excavation is to be inspected by an hydraulic engineer to confirm that the designed drainage system is adequate for the actual water flows.

Accessibility

The Accessibility Report prepared by Morris-Goding Accessibility Consulting is attached at **Appendix S**. It is noted in the report that, in general, the proposed development has accessible paths of travel that are continuous throughout. Provided that the recommendations of the report are addressed at detailed design stage, the development is able to demonstrate an appropriate degree of accessibility.

The recommendations of the report should be addressed prior to Construction Certificate.

Mitigation measures

A condition of consent is recommended requiring compliance with the recommendations of the Accessibility Report prior to issue of the Construction Certificate.

Waste Management

The Preliminary Waste Management Plan is at **Appendix O**. The Plan gives examples of waste minimisation measures. It also sets out methods for the collection, storage and disposal of contaminated and non-contaminated construction wastes.

In relation to the operation of the proposed development, the following details are given:

Garbage Room Design

A central collection point is to be set aside for garbage in the main entrance area that will be easily accessible to all residents (including disabled access) and the City Council garbage collectors. In order to allow garbage trucks to collect waste, the garbage room is located on the ground floor rather than in the basement. Collections will be made in accordance with City of Sydney requirements, with garbage trucks pulling up on the street to make their collections.

General refuse shall be collected and transported to an approved recycling or disposal site.

The garbage room conforms to the requirements of City of Sydney Council. CWH does not include garbage chutes or garbage compactors in its buildings for maintenance reasons, therefore all garbage will be stored and collected from the one garbage room.

Number of bins provided

The garbage room will be large enough to cater for: 1 x 240 litre recycling bin for every four units and 1 x 240 litre rubbish bin for every three units. The development comprises 88 units therefore a total of 30 x 240 litre rubbish bins will be provided and 22 x 240 recycling bins.

Green waste

Green waste arising from landscape maintenance will remain in-situ. All green waste and trimmings will be kept away from drainage lines and waterways to avoid blockages.

Vegetation from tree lopping activities will be mulched and reused in landscaped areas if considered practical. Where vegetative waste is to be disposed of, it will be taken to an approved facility that accepts green waste.

CWH oversees all waste management in its buildings to ensure compliance with its waste management policy.

Mitigation measures

A final Waste Management Plan is to be prepared and submitted prior to issue of the Occupancy Certificate.

7 Project justification

The proposed development is justified on the grounds that it is permissible, consistent with the relevant controls and policies, makes a positive design contribution and has no unreasonable environmental impact. The proposed 88 affordable housing units will make a positive contribution towards the affordable housing targets set in the Concept Plan approval (150 units) and the City of Sydney's Sustainable Sydney 2030 target that 7.5% of all housing in the local area will be affordable housing delivered by not-for-profit or other providers by 2030.

7.1 Objectives of the development

The objectives of the development are to:

- Provide a significant number of affordable housing units within Central Sydney;
- To locate the units within walking distance of two railway stations and other amenities;
- To incorporate the principles of Ecologically Sustainable Development into the design, construction and operation of the development;
- To provide a building that makes a positive contribution to the significant site, the public domain and the local character;
- To provide a limited number of off-street parking spaces to encourage the use of sustainable transport modes;
- To incorporate a high standard of design and amenity within the development;
- To design a building that promotes community development and integration with the surrounding area;
- To provide a secure living environment for residents; and
- To manage, minimise and mitigate potential impacts arising from construction and operation.

7.2 Analysis of feasible alternatives to the proposed development

The site has been identified for residential development in the North Eveleigh Concept Plan. UGDC is committed to provide affordable housing on Lot 3 DP 1175706 – the subject site. As a result, no alternative locations were considered for the proposed development.

The alternative to the proposed development that was considered was a development which was within the building envelope established by the Concept Plan.

The massing and architectural expression of the proposed development softens and articulates the approved Concept Design envelope. On a flat site in this significant context, the approved Concept Design envelope is potentially overwhelming and does not result in the optimum design or environmental outcome.

In contrast to the rectilinear form of the approved Concept Plan, the western component of the building is increased in length to the south, creating an L formed envelope. This design strengthens the side street and allows vehicular access directly into the built form (rather than an unattractive open cut). This design also engages with the rear alignment of the adjacent Clothing Store to the west.

In increasing the height of the building, the main entry is emphasised and the upper outdoor space is better integrated into the building's fabric and provided with passive surveillance.

7.3 Reasons for carrying out the development

- Affordable housing is an essential component of a diverse and sustainable city. The proposed development will result in well-designed and well-managed affordable housing units, rented to low to moderate income households in perpetuity.
- The proposed development is permissible and consistent with the relevant planning controls. The proposed increase in building height of one storey for parts of the building results in better design and improves the building's environmental performance.
- The proposed 5,932.8 square metres of gross floor area is less than the 6,480 square metres of gross floor area permissible under the 2008 Concept Plan approval. The proposed development is a responsive, sensitive design and does not represent an over-development of the site.
- The proposed development is in the public interest.
- The proposed development has been assessed by experts in the fields of social impact, ESD, flooding and stormwater management, traffic and parking and other areas addressed in this report, and found to have no unreasonable impacts.
- The architectural design will make a positive contribution to the North Eveleigh Rail Yards and the local landscape.
- The proposed development is appropriately staged, so that it will be completed following the construction of essential works and the Stage 1 public domain in the Western Precinct by UGDC.

-
- The proposed design has been developed in consultation with key agencies such as UGDC, the Department of Planning and Infrastructure, the City of Sydney Council, RailCorp, other agencies and with the community.
 - The proposed development will act as a catalyst for the renewal of the North Eveleigh Precinct in accordance with the 2008 Concept Approval.
 - Pursuant to Schedule 2, Section 7(4) of the *Environmental Planning and Assessment Regulations 2000*, the proposed development achieves the principles of sustainable development:
 - The "precautionary principle" has been applied and experts have identified any environmental consequences of the development and recommended mitigation measures to avoid irreversible damage to the environment.
 - "Inter-generational equity" is achieved in that the development maintains the quality of the environment for future generations;
 - The proposed development ensures "conservation of biological diversity and ecological integrity" in that the conservation of biological diversity and ecological integrity has been a fundamental consideration in the development of the proposed design; and
 - The principle of "improved valuation, pricing and incentive mechanisms" has been considered by CWH who have determined that the need to build units cheaply should be balanced against the need for the building to be sustainable. As such, ESD measures such as rainwater re-use are proposed as part of the development.

8 Mitigation measures

Social impacts

1. A condition of consent is recommended for the preparation of a final Construction Management Plan prior to issue of Construction Certificate.

Safety

Prior to issue of Occupation Certificate -

2. CCTV cameras should be installed in the parking area, basement entry point, terrace rooftop and pedestrian entry points.
3. Ceilings and walls in the basement parking area should be painted a light colour.
4. Lighting should be provided at entry points (vehicular and pedestrian) and to all communal open space and public areas. This lighting should be automatically controlled by time clocks and/or sensors where appropriate, and to provide an energy efficient and controlled lighting environment. Lighting should be provided in accordance with the relevant Australian Standards.
5. The main entry/exit doors and fire exit doors should be fitted with appropriate locksets, intercoms and central access measures to restrict unauthorised access to the building.
6. Secure basement access should be controlled using a swipe card and/or intercom to restrict unauthorised access to both pedestrians and motorists.
7. Signage should be provided at entry/exit points to public spaces including:
 - **Warning:** These premises are under constant CCTV surveillance.

Operational phase -

8. Graffiti and vandalism should be removed/repaired as soon as practicable following such incidents.
9. Any burnt out lighting should be replaced as soon as practicable.
10. Landscaping on the site is to be maintained to a density and height that allows clear sight lines from the street. Large trees should provide adequate shade, whilst low shrubs maintain the necessary sight lines.
11. Regular cleaning of public space and collection of rubbish.

Heritage

12. A condition of consent is recommended stating that if any unexpected relics are disturbed during excavation of the site they must be managed under the Archaeological provisions of the NSW Heritage Act.

Transport, traffic, access and parking

13. A condition of consent is recommended which requires a site specific travel plan to be prepared prior to occupation of the building. The travel plan would include the recommendation for a transport access guide (TAG) to be developed and distributed to residents prior to

occupancy of the building.

Acoustics

14. Prior to issue of the Construction Certificate, a detailed assessment of construction noise is to be carried out in consultation with the main contractor, which will address all feasible and reasonable work practices required to meet the noise affected level. A strategy to inform all potentially impacted residents of the nature of the works is to be prepared concurrently.

Construction management

15. Preparation of a final Construction Management Plan including air quality control measures prior to issue of a Construction Certificate.
16. A Construction Traffic Management Plan is to be prepared prior to issue of a Construction Certificate.

Utilities and services

17. Prior to detailed design, obtain a Section 73 Notice of Requirements from Sydney Water to ensure all conditions are met by the development in relation to domestic water, fire flow demands, and sewer requirements.
18. Prior to detailed design, undertake further consultation with the relevant utility companies to finalise requirements for utility services.
19. Include in the Construction Management Plan, required prior to issue of the Construction Certificate, an appropriate setback from the existing high voltage electricity lines.

Stormwater and flooding / erosion and sediment control

20. A detailed final Erosion and Sediment Control Plan is to be submitted prior to issue of the Construction Certificate.

Wind

21. Include in an information pack for new residents information about wind conditions at open terrace areas during high-wind events. This is to include the measures required to ensure safety of residents and others and to avoid damage to property.

Groundwater

22. The completed excavation is to be inspected by a hydraulic engineer to confirm that the designed drainage system is adequate for the actual water flows.

Accessibility

23. A condition of consent is recommended requiring compliance with the recommendations of the Accessibility Report prior to issue of the Construction Certificate.

Waste

24. A final Waste Management Plan is to be prepared and submitted prior to issue of the Occupancy Certificate.

9 Summary and conclusions

This Project Application seeks approval for an affordable housing development of Lot 3 DP 1175706 within the North Eveleigh rail yards.

This proposed affordable housing scheme will meet the commitment of UGDC (formerly the Sydney Metropolitan Development Authority) to provide affordable housing at North Eveleigh.

This State Significant Development Environmental Impact Statement has been prepared in accordance with the Director-General's Requirements provided at **Appendix B**, the Architectural Drawings provided at **Appendix A**, and the additional plans and documentation provided at **Appendices C - FF**.

The proposed development is generally consistent with the applicable legislation, planning instruments, controls and guidelines, with the exception of some minor, and acceptable variations. It is proposed to amend the Concept Plan approval to increase building height by one storey, for part of the proposed building, and make minor amendments to the building footprint. The result of the amendments will be a building that better aligns with adjacent, heritage-listed buildings, performs well-environmentally, creates good internal amenity, achieves high quality design, creates 88 new affordable housing units and makes a positive contribution to the significant North Eveleigh site.

It is recommended that this State Significant Development application be approved subject to the Mitigation Measures because of the project's importance to provision of affordable housing within Central Sydney, and on the grounds that that there are minimal environmental impacts on the locality.