

SYDNEY METRO NORTHWEST
SYSTEM WIDE DESIGN
URBAN DESIGN AND CORRIDOR LANDSCAPE PLAN





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This report has been prepared by HASSELL on behalf of Northwest Rapid Transit and Transport for NSW.

Front cover image: Visualisation of Cudgegong Road Station
Image by Ai3D

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This Sydney Metro Northwest Urban Design and Landscape Corridor Plan has been prepared to fulfil Condition 44 of the Minister for Planning and Infrastructure's Approval for Application No: SSI-5414. Condition 44 requires the Proponent i.e. Transport for NSW (TfNSW), to prepare, and submit to the Director General, the Urban Design and Corridor Landscape Plan (UDCLP) prior to the commencement of permanent built works and/or landscaping, unless otherwise agreed by the Director General. This UDCLP is for the contract works covered by the Operations, Trains and Systems design and construct contract, being undertaken by the Northwest Rapid Transit Joint Venture (NRTJV), which was a subject of the project Environmental Impact Statement known as EIS 2. Another Urban Design and Corridor Landscape Plan has been prepared for the design and construction contract for the surface and viaduct civil works, the subject of project EIS 1. This UDCLP for the NRTJV contract works does not duplicate matters addressed in the UDCLP for the surface and viaduct civil works.

The Sydney Metro Northwest UDCLP presents an integrated urban, landscape and architectural design for the project extending from Epping Services Facility to Cudgegong Road station consistent with the requirements of Condition 44. The design has been based on an examination of functional, natural and cultural drivers of the project at the metropolitan, regional and local scales, consultations with stakeholders and an agreed process of iterative design.

The UDCLP proposes a coordinated response to the integration of the rail infrastructure stations and facilities into their existing and proposed settings. Features of the UDCLP include the following:

- Three station architectural typologies that respond to “Place” as well as satisfying the functional and operational requirements of the stations.
- Station environs design that integrates the facility with the adjacent precinct and maximises the potential to derive lasting social cultural, economic and environmental benefits for the community over the long term.
- A landscape design respectful of the regional and local natural and cultural (as appropriate to place) settings, directed towards mitigating impacts, healing disturbed ecosystems and providing sustainable settings for the benefit of the environment and its citizens.
- A functional design that promotes pedestrian and cyclist access and facilitates multi modal transport integration.
- A “kit of parts” architectural design to reinforce the Sydney Metro Northwest brand and obtain economies of scale while still responding to local conditions.
- A public art and interpretation program based on telling the story of the area's heritage as well as using cultural links to introduce new initiatives focused on the theme “Light Line Social Square”, which will interpret the stories of the past in the new spaces created by Sydney Metro Northwest.

This UDCLP report is “modular” and is structured as follows.

- Section 1 contains an outline of the UDCLP purpose, scope, approach, structure and compliance with Condition 44.
- Section 2 deals with the project's context and the overarching system wide strategies that have informed the planning and design of the UDCLP.
- Section 3 presents precinct plans for 11 precincts around stations and service facilities, as well as the corridor below the Sky Train viaduct section of the route, where not covered by the UDCLP for the Surface and Viaduct Civil Works Contract. The precinct plans describe the station/service facility design and the measures to integrate it with the adjacent precinct. Each of the Section 3 precinct reports can be read alone, in conjunction with Sections 1,2 and 4 or in combination with other precinct reports or as a complete ‘book’ of all precinct reports, with Sections 1,2 and 4.
- Section 4 presents the system wide componentry and elemental strategies that underpin the urban, landscape and architectural design for the project.

This Urban Design and Landscape Corridor Plan will make a strong contribution to the integration of the Sydney Metro Northwest project with its environment and communities. It will be a catalyser for a new age of service, community and urban development possibilities for generations of people living in the North West region of Sydney.



Figure 1.1_Artist Impression of Rouse Hill Station. Source: Ai3D

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01 Introduction



Artist Impression of Rouse Hill Station. Source: Ai3D.

1.1 Purpose

This report has been prepared to document the Urban Design and Landscape Corridor Plan (UDCLP) for the Sydney Metro Northwest project (formerly North West Rail Link). The plan has been prepared and implemented to guide the design of the permanent built works and landscaping associated with the project. The preparation of the UDCLP was a requirement of Condition 44 of the Ministerial Infrastructure Approval granted on 8 May 2013. Refer Appendix A: Urban Design Condition 44 - extract from SSI Ministerial Infrastructure Approval.

The UDCLP and its contents have been used throughout the design evolution of the project as well as to assist in consultations with relevant authorities, councils and the community. Refer Appendix B: Summary of Stakeholder Consultation and DRP Interaction.

Consistent with the requirements of Condition 44, the UDCLP contains:

- _ information about the design initiatives to integrate rail infrastructure, stations and facilities into their existing and proposed settings
- _ landscaping measures to minimise, mitigate and/or offset the impacts of the new rail facility on property and other land uses
- _ landscaping measures to minimise, mitigate and/or offset the impacts of the new rail facility on visual amenity and local vistas and heritage values.

As required by Condition 44, the UDCLP has been prepared by appropriately qualified person(s). Refer Appendix C: Authorship Competence.

In June 2015, North West Rail Link (NWRL) was renamed Sydney Metro Northwest. The new name has been used throughout this document except where “North West Rail Link” or “NWRL” appear as part of the title of an existing policy, strategy document or report prepared prior to June 2015.

1.2 Scope

This Urban Design and Corridor Landscape Plan (UDCLP), describes the design of the permanent built works and landscaping of the corridor, stations and management facilities of the Sydney Metro Northwest and the interaction these elements will have with the environment within which they are located. It responds to the requirements of Condition 44.

Other UDCLPs have been prepared for different parts of the the overall Sydney Metro Northwest project. For example the Surface and Viaduct Civil Works and Rapid Rail Transit Facility (SMTF). Reference should be made to such documents for other information about the urban design and landscape proposals of the Sydney Metro Northwest.

This document draws upon numerous planning, design and specialist studies. On a project as large as the Sydney Metro Northwest there are many of these and to include them here would draw away from the focus of this report. As such, the main points of the most relevant documents (i.e. those specifically required to be addressed by Condition 44) are summarised in this document to provide the necessary context about the proposals and their interactions. These and other relevant documents are referenced in the appendix. Refer Appendix D: Glossary and References.

The information contained in this report is the latest available at the time of writing. The nature of the design process on a project of this scale is one that requires continuous development and refinement until the project is constructed.

Notwithstanding this, the material herein provides a clear appreciation of the scale, nature and treatment of the facilities proposed and their interactions with the environment.

1.3 Approach

The approach adopted in the preparation of this document has been to present the contextual and strategic matters first, followed by consideration of the individual precincts or station sites and then the site wide elements that make up the proposed facilities, as follows:

- Section 1 contains an outline of the UDCLP purpose, scope, approach, structure and compliance with Condition 44.
- Section 2 deals with the project’s context and the overarching system wide strategies that have informed the planning and design of the UDCLP.
- Section 3 presents precinct plans for precincts around stations and service facilities, as well as the rail corridor below the Sky Train viaduct section of the route, where not covered by the UDCLP for the Surface and Viaduct Civil Works Contract. The precinct plans describe the station and service facility design and the measures to integrate it with the adjacent precinct. Each of the Section 3 Precinct reports can be read alone, in conjunction with Sections 1, 2 and 4 or in combination with other precinct reports or as a complete “book” of all precinct reports, with Sections 1, 2 and 4.
- Section 4 presents the system wide componentry and elemental strategies that underpin the urban, landscape and architectural design for the project.

This approach enables a consistent narrative about the project urban and landscape design and its interactions, from the large to the detailed scale, to be maintained throughout.

This “modular” construction of the report will assist the reader to obtain the “big picture” about the project in Sections 1 and 2, zero in on a precinct of specific interest in Section 3 and then learn about the supporting, system wide componentry in Section 4.

The format also enables individual precinct focused reports to be provided to local user groups/community stakeholders. This will enable the community to appreciate proposals for their local area in the wider project context.

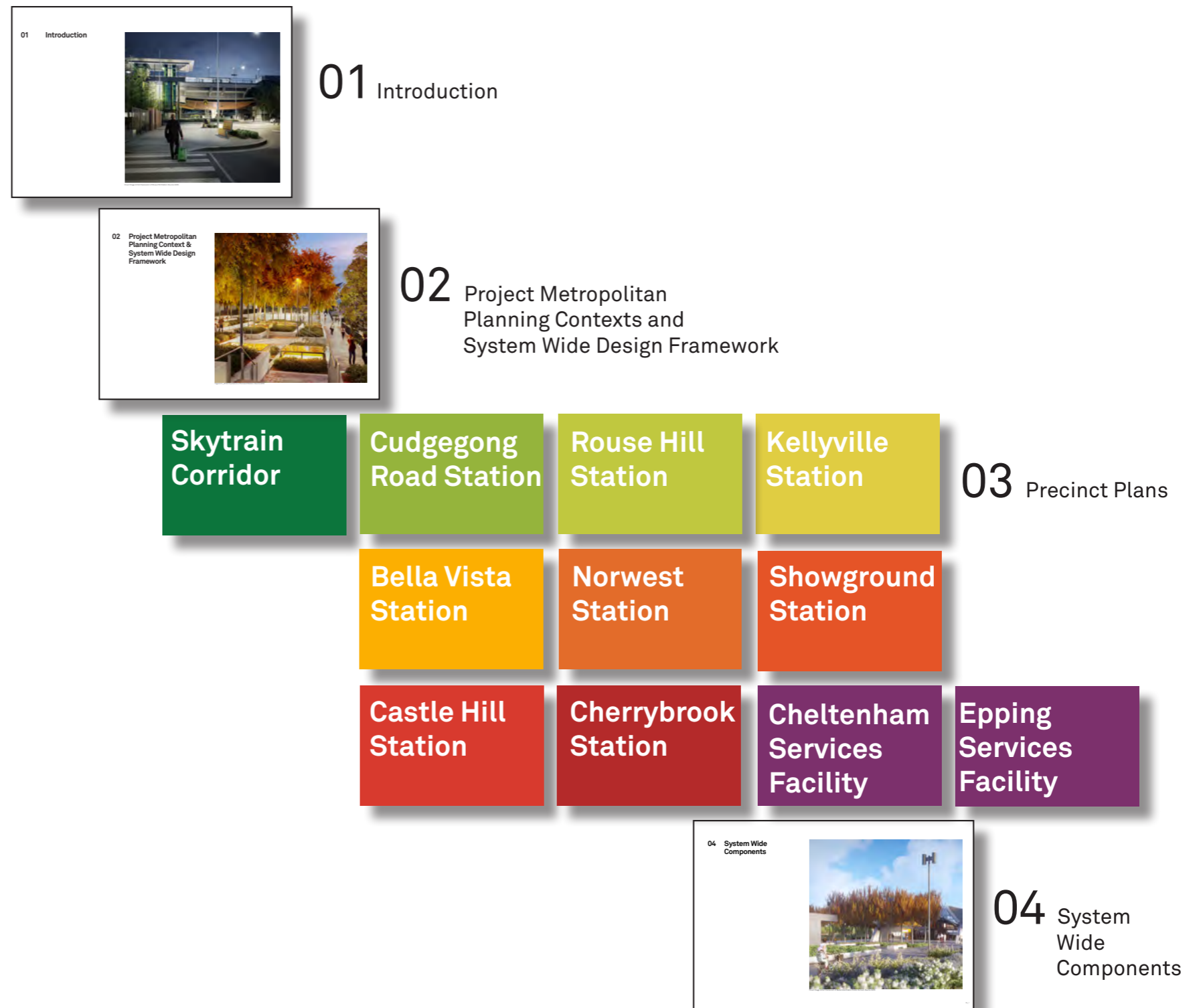


Figure 1.2_UDCLP Structure. Source: HASSELL

1.4 Compliance

A compliance table has been prepared to assist in determining compliance of this document with the requirements of urban design Condition 44 of the infrastructure approval issued by the Minister for Planning and Infrastructure on 8 May 2013 (Schedule A of Application No: SSI-5414).

The table opposite, lists the requirements of the heads of consideration of Condition 44 and where the relevant response is contained in the main sections of the report. Due to the complex nature of the heads of consideration, responses at different scales have been required to address the heads of consideration.

Table 1.1_Urban Design and Corridor Landscape Plan (UDLCP) Compliance Table

Relevant Clause	Requirements from relevant Condition 44 of Infrastructure Approval document issued pursuant to Section 115Z of the Environmental Planning and Assessment Act 1979	Project Metropolitan Planning Context and System Wide Design Framework -Refer Section 2 of this document	Individual Project Precincts: Context, Urban,Landscape and Architectural Design Proposals-Refer Section 3 of this document	Project Components and Elements applying throughout the project-Refer Section 4 of this document	Other relevant project reference material and information-not included in this document are listed in the Appendix
C44	The Proponent shall, prior to the commencement of permanent built works and/or landscaping, unless otherwise agreed by the Director-General, prepare and implement an Urban Design and Corridor Landscape Plan for the corresponding permanent built works and/or landscaping. The Plan shall be submitted to the Director-General and made publicly available.	Section 2 comprises part of the Urban Design and Corridor Landscape Plan that addresses the overarching requirements of Condition 44.	Section 3 comprises part of the Urban Design and Corridor Landscape Plan that addresses the overarching requirements of Condition 44.	Section 4 comprises part of the Urban Design and Corridor Landscape Plan that addresses the overarching requirements of Condition 44.	Reference to these documents comprises part of the Urban Design and Corridor Landscape Plan that addresses the overarching requirements of Condition 44. Refer Appendix A: Urban Design Condition 44 Extract from SSI Infrastructure Approval
C44	In preparing the Plan, the Proponent shall consult with the Department (Land Release), RMS, relevant Councils and the community.	Refer Section: 2.10 Stakeholder Consultation Strategy			Refer Appendix B: Summary of Stakeholder Consultation and DRP Interaction.
C44	The Plan shall be prepared by appropriately qualified person(s).				Refer Appendix C: Authorship Competence, for qualifications and experience of plan authors.
C44	The Plan shall detail the design initiatives to integrate rail infrastructure, stations and facilities into their existing and proposed settings, and landscaping measures to minimise, mitigate and/or offset the impacts of the SSI (including acoustic barriers and embankments/cuttings) on property and other land uses (such as open space), visual amenity and local vistas and heritage values.	Refer Sections: 2.5 Urban and Landscape Design Values and Approach 2.11 Visual Impact Strategy 2.12 Heritage Interpretation	Refer Sections. 3.1 Precinct Context 3.2 Urban Design and Landscape Plan 3.3 Architectural Design	Refer Sections: 4.2 Design Initiatives to Integrate Rail Infrastructure, Stations and Facilities into their Existing and Proposed Settings 4.3 Landscaping Measures to Minimise, Mitigate and/or Offset the Impacts of the SSI	Refer Appendix D: Glossary and References
C44(a)	Identification of design objectives and standards based on local environmental and heritage values, strategic and statutory planning, future land release form and function, sustainable design and maintenance, transport and land use integration, passenger and community safety and security, community amenity and privacy, and relevant design standards and guidelines	Refer Sections. 2.1 Project Context 2.2 Strategic and Statutory Context 2.3 Functional, Land Use and Transport Context 2.4 Metropolitan Scale Design Objectives and Vision 2.5 Urban and Landscape Design Values and Approach 2.5.4 Integrated Public Art_Light Line Social Square 2.6 Design Themes and Conceptual Approach 2.7 Environmental and Sustainability Strategy 2.8 Passenger and Community Safety and Security 2.9 Community Amenity and Privacy 2.10 Stakeholder Consultation Strategy 2.11 Visual Impact Strategy 2.12 Heritage Interpretation	Refer Sections. 3.1 Precinct Context 3.1.16 Parking, Pedestrian / Cyclist Access Arrangements and Facilities 3.2 Urban Design and Landscape Plan 3.3 Architectural Design	Refer Sections: 4.2 Design Initiatives to Integrate Rail Infrastructure, Stations and Facilities into their Existing and Proposed Settings 4.3 Landscaping Measures to Minimise, Mitigate and/or Offset the Impacts of the SSI 4.3.8 Landscape Maintenance Summary 4.5 Sustainable Design and Maintenance 4.6 Station Access Strategy (Condition C5) 4.7 Pedestrian and Cyclist Network Facilities Strategy (Condition 10) 4.13 Implementation, Management and Monitoring Strategy	Refer Appendix E: Relevant Design Standards and Guidelines

Relevant Clause	Requirements from relevant Condition 44 of Infrastructure Approval document issued pursuant to Section 115Z of the Environmental Planning and Assessment Act 1979	Project Metropolitan Planning Context and System Wide Design Framework -Refer Section 2 of this document	Individual Project Precincts: Context, Urban, Landscape and Architectural Design Proposals-Refer Section 3 of this document	Project Components and Elements applying throughout the project-Refer Section 4 of this document	Other relevant project reference material and information-not included in this document are listed in the Appendix
C44(b)	Details on the plans to provide, mitigate and/or augment landscaped areas and elements, with landscaping works to enhance ecological values, including riparian areas and fauna corridors, the provision of water sensitive urban design initiatives and to mitigate impacts to heritage landscapes.	Refer Section: 2.5 Urban and Landscape Design Values and Approach 2.7 Environmental and Sustainability Strategy	Refer Sections: 3.1.6 Parking, Pedestrian/Cyclist Access Arrangements and Facilities 3.2.1 Site Interactions 3.2.2 Design Opportunities 3.2.3 Landscape Site Plan and Precinct Elements 3.2.5 Heritage Interpretation, Interactions, and Public Art 3.2.6 Planting Design	Refer Sections: 4.2 Design Initiatives to Integrate Rail Infrastructure, Stations and Facilities into their Existing and Proposed Settings 4.3 Landscaping Measures to Minimise, Mitigate and/or Offset the Impacts of the SSI 4.4 Built Elements in the Landscape 4.5 Sustainable Design and Maintenance 4.10 Aboriginal Archaeological and Cultural Heritage Interpretation Installations 4.11 Public Art Plan 4.12 Built Elements Typical System Wide Details	
C44(c)	Design details of the built elements of the SSI, including retaining walls, embankments, viaducts, culverts, bridges and underpasses, noise barriers, train stabling facility, and substations, and the measures to minimise the impact of these elements, particularly with respect to the impacts on adjoining residences, educational facilities, open space areas and heritage items and landscapes, including the recommendations of the Visual Impact Strategy (condition C27).	Refer Section: 2.11 Visual Impact Strategy 2.7 Environmental and Sustainability Strategy	Refer Sections: 3.2.4 Heritage Interpretation, Interactions, and Public Art (Skytrain Corridor only) 3.2.5 Heritage Interpretation, Interactions, and Public Art 3.3.1 Built Elements Typology 3.3.2 Built Elements Design Opportunities 3.3.3 Built Elements Design 3.3.4 Future Opportunities (where relevant) 3.3.5 Signage and Wayfinding	Refer Sections: 4.2 Design Initiatives to Integrate Rail Infrastructure, Stations and Facilities into their Existing and Proposed Settings 4.3 Landscaping Measures to Minimise, Mitigate and/or Offset the Impacts of the SSI 4.4 Built Elements in the Landscape 4.5 Sustainable Design and Maintenance 4.12 Built Elements Typical System Wide Details	
C44(d)	Specific plans for station precincts to provide high quality sustainable stations that enhance the public domain and provide for active uses, ensure intermodal integration and equitable and safe access, including connectivity of the stations to surrounding precincts and integration into strategic planning directions for these areas consistent with Station Access Plan(s) (condition C5).	Refer Sections: 2.5 Urban and Landscape Design Values and Approach 2.6 Design Themes and Conceptual Approach 2.7 Environmental and Sustainability Strategy 2.8 Passenger and Community Safety and Security 2.9 Community Amenity and Privacy	Refer Section: 3.1.6 Parking, Pedestrian/Cyclist Access Arrangements and Facilities	Refer Sections: 4.5 Sustainable Design and Maintenance 4.6 Station Access Strategy 4.7 Pedestrian and Cyclist Network Facilities Strategy 4.8 Parking Management Strategy 4.9 Signage and Wayfinding Strategy 4.12 Built Elements Typical System Wide Details	
C44(e)	Details on pedestrian and cycle access elements and fixtures, including crossings, secure cycle facilities, and other fixtures such as seating, lighting, fencing and signs etc, to enhance connectivity and the provision of a safe and secure environment consistent with the Pedestrian and Cyclist Network Facilities Strategy (condition C10).	Refer Sections: 2.5 Urban and Landscape Design Values and Approach 2.6 Design Themes and Conceptual Approach	Refer Section: 3.1.6 Parking, Pedestrian/Cyclist Access Arrangements and Facilities	Refer Sections: 4.6 Station Access Strategy 4.7 Pedestrian and Cyclist Network Facilities Strategy 4.8 Parking Management Strategy 4.9 Signage and Wayfinding Strategy 4.12 Built Elements Typical System Wide Details	

Relevant Clause	Requirements from relevant Condition 44 of Infrastructure Approval document issued pursuant to Section 115Z of the Environmental Planning and Assessment Act 1979	Project Metropolitan Planning Context and System Wide Design Framework -Refer Section 2 of this document	Individual Project Precincts: Context, Urban,Landscape and Architectural Design Proposals-Refer Section 3 of this document	Project Components and Elements applying throughout the project-Refer Section 4 of this document	Other relevant project reference material and information-not included in this document are listed in the Appendix
C44(f)	Details on parking elements and how commuter parking areas at stations shall be designed to minimise amenity impacts and so as not to preclude or prejudice the future functionality of town centres consistent with the Parking Management Strategy (condition C11).	Refer Sections: 2.5 Urban and Landscape Design Values and Approach 2.6 Design Themes and Conceptual Approach	Refer Section: 3.1.6 Parking, Pedestrian/Cyclist Access Arrangements and Facilities 3.3.3 Built Elements Design	Refer Sections: 4.7 Station Access Strategy 4.8 Pedestrian and Cyclist Network Facilities Strategy 4.9 Parking Management Strategy 4.10 Wayfinding Strategy 4.12 Built Elements Typical System Wide Details	
C44(g)	Details on public art and heritage (indigenous and non-indigenous) interpretation installations.	Refer Sections: 2.5 Urban and Landscape Design Values and Approach 2.5.4 Integrated Public Art_Light Line Social Square 2.6 Design Themes and Conceptual Approach 2.12 Heritage Interpretation	Refer Section: 3.2.5 Heritage Interpretation, Interactions, and Public Art	Refer Sections: 4.10 Aboriginal Archaeological and Cultural Heritage Interpretation Installations 4.11 Public Art Plan 4.12 Built Elements Typical System Wide Details	
C44(h)	Implementation, management and monitoring strategies to ensure the establishment and ongoing maintenance of built elements and landscaped areas, including performance standards.	Refer Section: 2.7 Environmental and Sustainability Strategy		Refer Sections: 4.3.8 Landscape Maintenance Summary 4.5 Sustainable Design and Maintenance 4.13 Implementation, Management and Monitoring Strategy	
C44(i)	Consideration of relevant design standards, such as the Sustainable Design Guidelines for Stations, Commuter Car Parks and Maintenance Facilities (2011), Bridge Aesthetics Design guidelines to improve the appearance of bridges in NSW (2012), Guidelines for the Development of Public Transport Interchange Facilities (2008) and Crime Prevention Through Environmental Design Principles, and relevant Agency and Council design standards.			Refer Appendix D: Glossary and References	Refer Appendix D: Glossary and References Appendix E: Relevant Design Standards and Guidelines
C44	The Plan shall be endorsed by an independent Design Review Panel. The Design Review Panel shall consist of appropriately skilled professionals in the fields of architecture, landscape design, transport integration and heritage. The Panel representatives shall be approved by the Director-General.				Refer Appendix B: Summary of Stakeholder Consultation and DRP Interaction.

1.5 Common Abbreviations Used In This Report

The table opposite contains abbreviations used commonly throughout this report. There are numerous others used on the Sydney Metro Northwest project and in information about planning, environmental, heritage and engineering matters relating to it.

See also Appendix E for Glossary and References.

Table 1.2. Common Abbreviations

Acronym	Definition
Station and Facility Abbreviations	
BLV	Bella Vista Station
CHE	Cherrybrook Station
CSF	Cheltenham Service Facility
CSH	Castle Hill Station
COR	Skytrain Corridor
CUD	Cudgegong Road Station
EPP	Epping Station
ESF	Epping Service Facility
KVE	Kellyville Station
NRW	Norwest Station
RSH	Rouse Hill Station
SMTF	Sydney Metro Trains Facility
SHW	Showground Station
Other Common Abbreviations	
CPTED	Crime Prevention Through Environmental Design
DCP	Development Control Plan provide detailed planning and design guidelines to support the planning controls in the LEP - Location Environmental Plan provides the basic planning objectives and development
DP&E	NSW Department of Planning and Environment
LGA	Local Government Area
LMA	Licensed Maintenance Areas
LTTMP	Long Term Transport Master Plan
NRT	Northwest Rapid Transit, the OTS Contractor
NWRL	North West Rail Link. Since 4 June 2015, North West Rail Link/NWRL has been renamed Sydney Metro Northwest. All references in this document have been replaced accordingly with the new name except where 'North West Rail Link' or NWRL appear as part of the title of an existing policy or strategy document.
OTS	Operations Trains and Systems
PTPM	Public Transport Project Model
RMS	Roads and Maritime Services
SSI	State Significant Infrastructure, under Part 5.1 of the Environmental Planning and Assessment Act 1979
Sydney Metro Northwest	Since June 2015, North West Rial Link/NWRL has been renamed to Sydney Metro Northwest. All references in this document have been replaced accordingly with the new name except where 'North West Rail Link' or NWRL appear as part of the title of an existing policy or strategy document.
TfNSW	Transport for NSW
The Deed	North West Rail Link Operations Trains and Systems Deed

