



July 2018

**Concept State Significant Development
Application**

Sydney Metro Northwest

Tallawong Station Precinct South

SSD 9063

Volume 1

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- T. Biodiversity Assessment
- U. Bushfire Safety Assessment

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- V. Phase I Site Investigation
 - W. Statement of Heritage Impact
 - X. Civil Report
 - Y. Civil Drawings
 - Z. Utilities Report
 - AA. Integrated Water Cycle Management Strategy
 - BB. Air Quality Review
 - CC. Waste Strategy
 - DD. Stakeholder Engagement Outcomes Summary

Glossary and Abbreviations

Term	Definition
AHD	Australian Height Datum
ASS	Acid sulphate soils
Concept Proposal	The overall concept for which approval is being sought
concept SSD application	A concept development application as defined in Section 4.22 of the EP&A Act, as a <i>development application that sets out Concept Proposals for the development of a site, and for which detailed proposals for the site or for separate parts of the site are to be the subject of a subsequent development application or applications</i>
Council	Blacktown City Council
CPTED	Crime Prevention Through Environmental Design
CSSI	Critical State Significant Infrastructure
Cudgegong Road Station (Area 20) Precinct	The area designated as such under the North West Growth Area and shown in Figure 8
The Department	NSW Department of Planning and Environment
DSI	Phase 2 Detailed Site Investigation
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000 (NSW)</i>
EIS	Environmental Impact Statement
GANSW	Government Architect NSW
Growth Centres SEPP	State Environmental Planning Policy (Sydney Region Growth Centres) 2006
heritage item	An item of environmental heritage listed on the State Heritage Register under the <i>Heritage Act 1977</i>
ILP	Indicative layout plan
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
Local centre	The local centre is shown in Figure 7. It refers to Site as well as land to the north of Tallawong station
m	Metre
m ²	Square metres
PSI	Phase 1 Preliminary Site Investigation
RMS	Roads and Maritime Services
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the NSW Department of Planning and Environment, or their delegate
SEPP	State Environmental Planning Policy
The Site	The subject site - Tallawong Station Precinct South as shown in Figure 6
Sydney Metro	Sydney Metro (ABN 12 354 063 515) a New South Wales Government agency constituted under the <i>Transport Administration Act 1988 (NSW)</i>
SMNW	Sydney Metro Northwest
SoHI	Statement of Heritage Impact (refer Appendix W)
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011

SSD	State significant development
SSDA	State significant development application
SSI_5100	<i>North West Rail Link Major Civil Construction Works</i> CSSI application approved by the Minister for Planning on 25 September 2012
SSI_5414	<i>North West Rail Link – Stations, Rail Infrastructure and Systems</i> CSSI application approved by the Minister for Planning on 8 May 2013
Sydney Metro Northwest	Construction and operation of a metro rail line together with eight new stations and the upgrade of the railway between Epping and Chatswood. The project is approximately 23 kilometres long (of which approximately 15.5 kilometres is located in underground rail tunnels), extending from Epping Station to just west of the proposed new Tallawong Station. The Sydney Metro Northwest, formerly known as the North West Rail Link, is Stage 1 of the overall Sydney Metro project with Stage 2 involving the construction and operation of a new metro rail line from Chatswood through Sydney's CBD to Sydenham (Sydney Metro City and Southwest).
Tallawong Station Precinct South	The site
TfNSW	Transport for NSW
TOD	Transit oriented development

Project Team

Applicant	Landcom on behalf of Sydney Metro
Project Management	Landcom
Architect	Bennett and Trimble
Urban Planning	MG Planning
Accessibility	Design Confidence
Air Quality	AECOM
Biodiversity	EcoLogical
Bushfire	Australian Bushfire Protection Planners
Civil	AECOM
Contamination	ADE Consulting Group
CPTED	AECOM
Ecological Sustainability	AECOM
Integrated Water Cycle Management	AECOM
Noise and vibration	Acoustic Logic
Public Domain and Landscape	Clouston
Quantity Surveyor	Napier and Blakely
Retail and commercial analysis	AEC Group
Social impact	GHD
Transport and traffic	SCT Consulting
Utility services infrastructure	AECOM
Visual impact	AECOM
Waste	AECOM
Wind impacts	Windtech

Statement of Validity

Development application details (SSD 18_9063)

Applicant name	Landcom on behalf of Sydney Metro
Responsible person	Adam Turnbull
Applicant address	Level 14, 60 Station Street Parramatta NSW 2150
Land to be developed	75 and 81 Schofields Road and 38 Cudgegong Road, Rouse Hill
Proposed development	Tallawong Station Precinct South Development. A concept State significant development application for a mixed use development, village park and associated facilities. The application seeks consent for the broad development concept including land uses, gross floor area, and building envelopes

Environmental Impact Statement prepared by:

Name	Nicola Gibson, MG Planning
Qualifications	Bachelor of Arts, Grad Dip Urban and Regional Planning
Address	MG Planning Pty Ltd, PO Box 197 Drummoyne NSW 1470

Declaration

I declare that I have prepared the contents of this Environmental Impact Statement and to the best of my knowledge:

- it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000
- all available information that is relevant to the environmental assessment of the development to which the Statement relates
- The information contained in the Statement is neither false nor misleading.

Signature



Date

29 June 2018

Executive Summary

Introduction

This Environmental Impact Statement (EIS) relates to a Staged State Significant Development Application (SSD application), being a Stage 1 Concept Proposal, for a mixed use development, park and associated facilities on land located south of the proposed Tallawong Station (hereby referred to as 'Tallawong Station Precinct South' or 'the Site'). The station was previously known as Cudgegong Road Station but has since been renamed to Tallawong Station. All references to Cudgegong Road Station in supporting documents and appendices should be taken to be referring to Tallawong Station South Precinct.

This EIS is submitted to the Minister for Planning and Environment pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. The applicant is Landcom on behalf of Sydney Metro.

A request to issue Secretary's Environmental Assessment Requirements (SEARs) for the environmental assessment of the Concept Proposal was made in January 2018, with SEARs issued on 16 February 2018.

Sydney Metro background

Sydney Metro is a new standalone rail network identified in *Sydney's Rail Future*. It is Australia's biggest public transport project, consisting of the Sydney Metro North West (SMNW) (Stage 1), which is due for completion in 2019, Sydney Metro City and Southwest (Stage 2), which is due for completion in 2024 and Sydney Metro West (Stage 3) which is due for completion in the second half of the 2020s. Figure 1 shows the components of the Sydney Metro network.

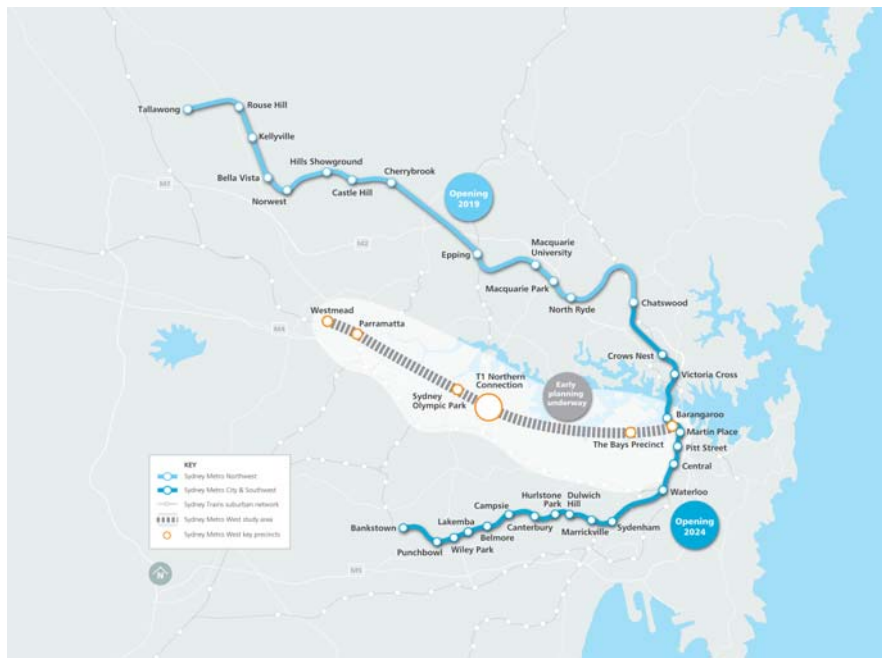


Figure 1: Sydney Metro

The SMNW, formerly known as the North West Rail Link, is the first stage of the overall Sydney Metro project. SMNW is delivering eight new stations and commuter car parking as well as upgrading the existing railway line between Epping and Chatswood - and the five existing stations - to metro rail standards. It will provide, for the first time, a reliable public transport service to a region which has the highest car ownership levels per household in Australia.

The SMNW has been designed to work together with the existing Sydney Trains network, and includes the construction of eight new railway stations between Epping and Tallawong and 4,000 commuter car parking spaces to Sydney's growing North West. Trains will run every four minutes in the peak.

Planning context

The Site is located within the North West Growth Area which is intended to provide substantial land release areas for homes and jobs in Sydney's northwest. The North West Priority Growth Area is forecasted to contribute approximately 12% of the homes needed to meet demand over the next 20 years and (to date) land in the North West Priority Growth Area has been rezoned to support 53,150 dwellings.

The Site is located within the 'Area 20' precinct of the Growth Area which was rezoned for urban development in October 2011. The planning controls for the Area 20 precinct are contained in Appendix 6 to the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres SEPP). Area 20 is intended to deliver capacity for approximately 4,400 new dwellings. The controls for Area 20 were updated in 2015 so the new community can take advantage of the new Tallawong Station.

Overview of the project

The Concept Proposal comprises residential, retail and commercial uses and building envelopes of varying heights up to eight storeys. The proposal also includes car parking, roads, landscaping, services and the provision of a new village park of approximately 2,900m².

An indicative yield of 1,100 dwellings is anticipated to be provided by the proposal.

More specifically, the Concept Proposal comprises:

- Up to 16 buildings of varying heights to a maximum of eight storeys
- Maximum gross floor area (GFA) of 94,295m²
- Residential development – approximately 1,100 dwellings equating to approximately 85,000m² GFA
- Commercial, retail and community uses - approximately 9,000m² GFA
- Provision of car parking facilities for the retail, commercial and residential components underground provided in accordance with the following maximum car parking rates:

Residential	Maximum car parking rate
1 bedroom apartment	0.4 spaces/dwelling
2 bedroom apartment	0.7 spaces/dwelling
3+ bedroom apartment	1.2 spaces/dwelling
Visitor	0.14 spaces/dwelling
Other	
Commercial	1/70m ² GFA
Retail/community	1/60m ² GFA

- Provision of bicycle parking spaces at a rate of 1 cycle parking space per dwelling plus 1 space per 10 dwellings for visitors
- A minimum of 5% affordable housing

- A public park (approximately 2,900m²)
- Landscaping of the Site
- Road layout
- Strategies for utilities and services provision
- Strategies for managing stormwater and drainage
- A strategy for the achievement of ecologically sustainable development.

Relationship between site and Sydney Metro

The proposed development forms part of the SMNW Urban Transformation Program to develop surplus government owned land around the proposed metro stations. The SMNW provides a unique opportunity to integrate land use, transport and infrastructure planning in North West Sydney.

A number of parcels of land were acquired by TfNSW for the purposes of construction and operation of the SMNW Project, including land around the Tallawong Station. The land is being, or has been, used for construction of the SMNW Project. Some portions of the acquired land, following completion of construction, is now surplus to construction and available for redevelopment for other purposes.

Project objectives

The objectives for this development are to:

- plan and deliver a high-density urban precinct with a great variety of products, built forms, activation, public domain experience - with streets, laneways, parks and plazas
- deliver high quality public domain works on the south side of the local centre to help shape the future character of the precinct
- deliver a vibrant mixed use centre on the south side of Tallawong Station that demonstrates best practice transit oriented development principles
- deliver appropriate scale and preferably commercially viable interim activation facilities, activities and events around the station that deliver a positive experience for users following the opening of SMNW in 2019 (subject to separate approval)
- maximise the supply and diversity of higher density housing for different generations, lifestyles and price points
- have delivered by development partners an appropriate scale of long term retail, community and commercial activities in the local centre – especially on the ground floors and around the station and the centre.

Assessment of impacts and mitigation measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings to manage and minimise potential impacts arising from the development. Key potential impacts identified include, amongst others:

- urban design, built form, and the desired principles for future development
- visual and view impacts
- solar access and overshadowing
- land use mix

-
- public domain design and treatment
 - traffic impacts
 - social and economic impacts.

All identified impacts are addressed in this EIS and are capable of being ameliorated through the implementation of appropriate mitigation measures as detailed in Chapters 8 and 11.

Community consultation

Key stakeholders including local residents, surrounding landowners, government agencies, public authorities and Blacktown City Council have been consulted during the preparation of the EIS. Details of this consultation are provided in Chapter 4 of this EIS.

Government agencies, particularly Government Architect NSW, the Department of Planning and Environment and Blacktown City Council, have been closely engaged during the development of the Concept Proposal with multiple opportunities to feed into and comment on the process and overall proposal.

The feedback received during the consultation has been taken into account during the development of the Concept Proposal.

Conclusion and justification

The Concept Proposal provides around 1,100 dwellings and approximately 9,000m² of non-residential floorspace to create a high density residential and mixed use development within approximately 300m of the new Metro Station to meet the future housing and employment needs of the growing population in the North West Growth Area.

The principles of Transit Oriented Development (TOD) have informed the design of the Concept Proposal. The proposed development supports best practice TOD principles, by providing increased residential density in proximity of existing and planned transport infrastructure upgrades. The proposed infrastructure upgrades will provide residents with greater access to public transport and employment options, while promoting the use of sustainable travel options.

Internally the proposed development promotes pedestrian and cyclist movements with a permeable internal layout that provides good connection to the surrounding cycling and walking network and to public transport. It will provide an attractive, vibrant and safe place for people to live and work.

This EIS fulfils the requirements of the EP&A Act and addresses the SEARs. Chapters 8 and 11 set out the mitigation measures to ensure that the potential impacts of the development are acceptable and are able to be managed. Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning.

Next Steps

The applicant is seeking concept approval from the Minister for Planning for a mixed use development, village park and associated facilities on land located south of the proposed Tallawong Station.

Subsequent steps in the process include:

- Exhibition of the development application and Environmental Impact Statement for a minimum of 28 days and invitation for the community and stakeholders to make submissions
- Consideration of submissions - submissions received by the Secretary of Department of Planning and Environment (the Department) would be provided to the applicant and are placed on the Department's website

-
- The applicant may then be required to prepare and submit:
 - A submissions report, responding to issues raised in the submissions
 - A preferred project report, outlining any proposed changes to the proposal to minimise its environmental impacts or to deal with any other issues raised.
 - Determination of the concept development application - the Minister for Planning would then make a decision on the project and, if approved, this may be with modifications to the development or with conditions as the Minister may determine.

Part A

Introduction and background

1. Introduction

1.1. Background

The New South Wales (NSW) Government is implementing *Sydney's Rail Future*, a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future (Transport for NSW, 2012). Sydney Metro is a new standalone rail network identified in *Sydney's Rail Future*. It is Australia's biggest public transport project, consisting of Sydney Metro North West (Stage 1), which is due for completion in 2019, Sydney Metro City and Southwest (Stage 2), which is due for completion in 2024 and Sydney Metro West (Stage 3) which is due for completion in the second half of the 2020s.

Sydney Metro is more than just a public transport project – it is a defining city building opportunity. Australia's biggest public transport project presents a major opportunity to shape Sydney for generations to come, contributing a unique legacy for our evolving global city.

Not only will Sydney Metro move more people safely and reliably than ever before, it will unleash the potential of Sydney as a growing global city - providing opportunities to revitalise precincts and communities.

Through urban design principles and place making, Sydney Metro stations will be more than somewhere to catch the train; they will be the centre of communities through a variety of uses.



Figure 2: Sydney Metro

Sydney Metro North West (SMNW), formerly known as the North West Rail Link, is the first stage of the overall Sydney Metro project. SMNW is delivering eight new stations and commuter car parking as well as upgrading the existing railway line between Epping and Chatswood - and the five existing stations - to metro rail standards. It will provide, for the first time, a reliable public transport service to a region which has the highest car ownership levels per household in Australia.

The SMNW has been designed to work together with the existing Sydney Trains network, and includes the construction of eight new railway stations between Epping and Tallawong and 4,000 commuter car parking spaces to Sydney's growing North West. Trains will run every four minutes in the peak.

A number of parcels of land were acquired by TfNSW for the purposes of construction and operation of the SMNW Project, including land around the Tallawong Station. The land is being, or has been, used for the construction of the SMNW Project. Some portions of the acquired land, following completion of construction, are now surplus to construction and available for redevelopment for other purposes.

Surplus land around the new SMNW stations of Cherrybrook, Castle Hill, Showground, Norwest, Bella Vista, Kellyville and Tallawong (formerly referred to as Cudgegong Road) and an upgraded Epping Station will be transformed for a range of residential, community and commercial uses - attracting investment, stimulating economic development, and providing a diverse range of housing products in attractive and complete precincts. This is known as the SMNW Urban Transformation Program.

The SMNW Urban Transformation Program provides a unique opportunity to integrate land use, transport and infrastructure planning in North West Sydney. To this end Landcom and Sydney Metro are working in collaboration to develop walkable, mixed use precincts around the SMNW stations.

1.2. The concept for which approval is sought

1.2.1. The concept

As part of the NSW Government's SMNW Urban Transformation Program, surplus government owned land to the south of Tallawong Station is now proposed to be developed based on 'transit oriented development' (TOD) principles and reflecting best practice in urban design.

This Environmental Impact Statement (EIS) is submitted by Landcom, on behalf of Sydney Metro, in support of the concept State Significant Development Application (concept SSD application) for a mixed use development, park and associated facilities on land located south of the proposed Tallawong Station (hereby referred to as 'Tallawong Station Precinct South' or 'the Site').

It should be noted that the Tallawong Station was previously known as Cudgegong Road Station but has since been renamed. As a result, the Concept Proposal site is now described as Tallawong Station South Precinct not Cudgegong Road Station South Precinct. All references to Cudgegong Road Station and Cudgegong Road Station South Precinct in the SEARs as well as supporting documents and appendices should now be taken to be referring to Tallawong Station and Tallawong Station South Precinct respectively.

The concept for which approval is sought (the 'Concept Proposal') comprises residential, retail and commercial uses in buildings of varying heights up to eight storeys. The proposal also includes car parking, roads, landscaping, services and the provision of a new village

park of approximately 2,900m². An indicative yield of 1,100 dwellings is anticipated to be provided by the proposal. A more detailed description of the proposal is provided in Chapter 6.

As the proposed development is within a rail corridor, is associated with railway infrastructure and is for residential and commercial premises with a Capital Investment Value of more than \$30 million, the project is identified as State Significant Development (SSD) pursuant to Schedule 1, 19(2)(a) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP).



Figure 3: Concept Proposal

1.2.2. Location

The location of the Concept Proposal is shown in Figure 4. The Site is located north of Schofields Road, Rouse Hill, generally between Cudgegong Road to the east and Tallawong Road to the west. The future Tallawong Station is located immediately to the north. The proposal is located in the Blacktown local government area.

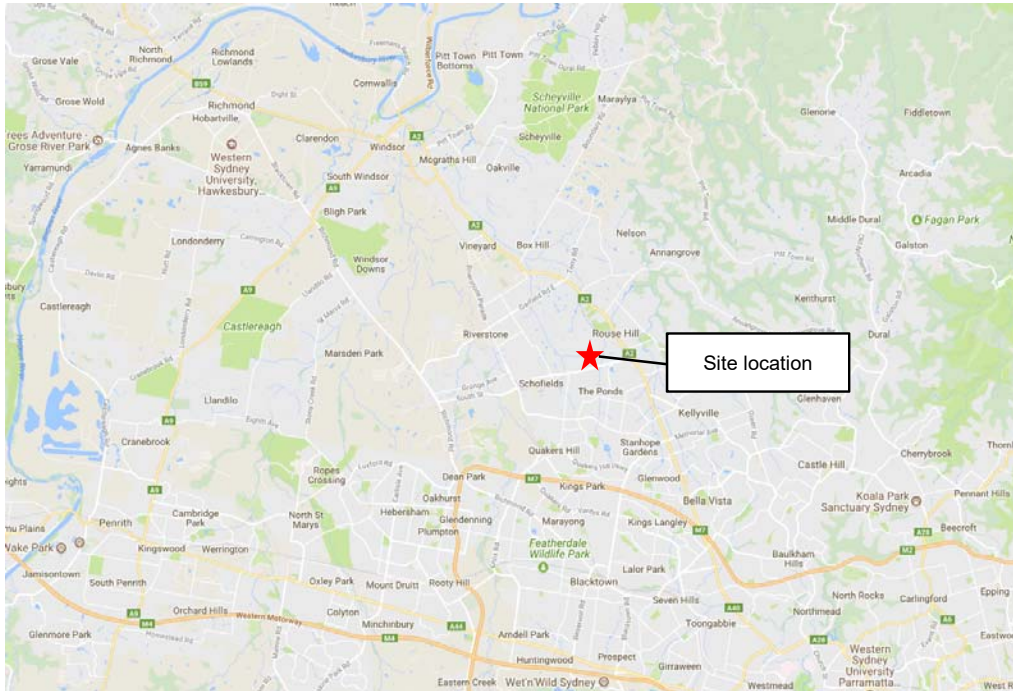


Figure 4: Site location (www.nearmap.com)

1.2.3. Project objectives

This concept SSD application forms part of a broader planning process to realise the project objectives and vision for the development of the Site as part of the SMNW Urban Transformation Project.

The objectives for this development are to:

- plan and deliver a high-density urban precinct with a great variety of products, built forms, activation, public domain experience - with streets, laneways, parks and plazas
- deliver high quality public domain works on the south side of the local centre to help shape the future character of the Precinct
- deliver a vibrant mixed use centre on the south side of Tallawong Station that demonstrates best practice transit oriented development principles and
 - meet Landcom's diverse and affordable housing targets
 - meet Landcom's sustainability strategy targets
- deliver appropriate scale and preferably commercially viable interim activation facilities, activities and events around the station that deliver a positive experience for users following the opening of SMNW in 2019
- maximise the supply and diversity of higher density housing for different generations, lifestyles and price points
- have delivered by development partners an appropriate scale of long term retail, community and commercial activities in the local centre – especially on the ground floors and around the station and the town

It is also intended that the concept for the Site will accord with TOD principles in that it will:

- provide mixed use development within 300 metres of the Tallawong Station which will provide a rapid and frequent metro rail service connecting to jobs, services and strategic centres in the northwest and across Sydney
- provide high density residential development around the station, supported by appropriate community and open space facilities
- provide for integrated retail, commercial, recreational and community uses therefore stimulating activity around the new station
- moderate the amount of private car parking while ensuring pedestrian and bicycle connectivity to the station and the local centre to the north
- provide liveable and active public domain spaces for the community that integrate with proposed land uses and the metro station.

1.2.4. Staging of development applications

The application seeks approval for a concept development only and is made under Section 4.22 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) which relates to concept development applications.

As the application includes conceptual proposals for the entire development, the level of assessment may in some parts be more general in nature. However, sufficient detail is provided to ensure that approval may reasonably be granted to the overall concept, subject to additional details being the subject of future detailed development application(s).

Should the concept SSD application be approved, detailed development applications for the design and construction of the development in accordance with the concept approval will be lodged.

1.3. Summary of previous approvals

1.3.1. SSI-5100 and SSI-5414

On 25 September 2012, the Minister for Planning approved the *North West Rail Link Major Civil Construction Works* application lodged by TfNSW as a Critical State Significant Infrastructure (CSSI) project (reference SSI-5100). The approval includes all major civil construction works involving earthworks, excavation of tunnels and underground station boxes and construction of above ground infrastructure including viaducts and bridges. The civil construction works in accordance with this approval are now well advanced. The anticipated opening date is mid 2019.

On 8 May 2013, the Minister for Planning approved the *North West Rail Link – Stations, Rail Infrastructure and Systems* application, also lodged by TfNSW as a CSSI project (reference SSI-5414). The approval includes those construction works not subject to SSI-5100 as well as the operation of the railway, including:

- construction and operation of stations and wider precincts
- services facilities and Sydney Metro Stabling Facility at Tallawong Road, Rouse Hill
- rail infrastructure systems.

A summary of the relevant approvals is provided in Table 1. Site preparation works in accordance with SSI_5100 and SSI_5414 are almost complete around the Tallawong Station, including on the subject Site.

Table 1: Relevant SSI Approvals for the Sydney Metro North West

RELEVANT SSI APPROVALS FOR THE SYDNEY METRO NORTH WEST	
Application No SSI 5100 Major Civil Construction Works	Major civil construction works involving: <ul style="list-style-type: none">▪ excavation of tunnels and underground station boxes▪ construction of above ground infrastructure, including viaducts and bridges▪ earthworks Approved 25 September 2012
Application No SSI 5100 Mod 1 Major Civil Construction Works	Revisions to the scope of the project relating to the Showground Station Approved 18 April 2013
Application No SSI 5414 Stations, Rail Infrastructure and Systems	Construction works (not subject to SSI 5100) and operation of the railway, including: <ul style="list-style-type: none">▪ construction and operation of stations and wider precincts▪ services facilities and Sydney Metro Stabling Facility at Tallawong Road, Rouse Hill▪ rail infrastructure systems Approved 8 May 2013
Application No 5931 Sydney Metro Stabling Facility	Construction works (not subject to SSI 5100 and SSI 5414) including: <ul style="list-style-type: none">▪ expanding the train stabling and maintenance facility at Tallawong Road▪ site preparation works including bulk earthworks, demolition and tree removal▪ construction and operation of a rapid transit facility including train stabling, train maintenance, infrastructure maintenance and operations in support of the rapid transit network▪ construction of an Operations Control Centre (within the administration building) to monitor and control operations for the rapid transit network▪ vehicular access, internal roads and staff car parking construction of substations, a communications tower, and on-site stormwater detention and treatment ponds Approved January 2014
Application No 5414 Mod 1 Stations, Rail Infrastructure and Systems	Revisions to the scope of the project including modification of Stage 2, associated with altering the approved viaduct structure over Windsor Rd, Rouse Hill. Approved 20 May 2014

1.3.2. Relationship between SSI-5414 Approved Works and Concept Proposal

The approved works under the *North West Rail Link – Stations, Rail Infrastructure and Systems* CSSI (SSI_5414) are as follows:

- Construction of the Metro station and station forecourt
- Widening and realignment of Cudgegong Road from Schofields Road to just north of the rail corridor to provide two traffic lanes in each direction
- Widening of Tallawong Road to provide two traffic lanes in each direction from Schofields Road to north of the rail corridor
- Provision of local access roads including footpaths either side of the rail corridor, the southern links between Cudgegong Road and Tallawong Road, being Themeda Avenue and Conferta Avenue. The northern station access road, Implexa Parade,

does not connect to Tallawong Road. There are no footpaths being constructed on Conferta Avenue within the site

- Provision of bus stops on both the northern and southern sides of the northern access road near the station entry
- Provision of taxi ranks and kiss and ride spaces on the northern and southern sides of the northern access road, either side of the station entry
- Provision of traffic signals at the intersections of Themeda Avenue with both Cudgegong Road and Tallawong Road
- Provision of at-grade car parks to the southern side of the rail corridor, between Tallawong and Cudgegong Roads, with entries and exits via Conferta Avenue and Aristida Street. This will provide for over 1,000 off-street commuter parking spaces
- Planting of over 400 trees along the rail corridor and Themeda Avenue and over 470 trees in the commuter car parks
- Provision of an additional north-south street over the rail corridor between Cudgegong Road and Tallawong Road, Aristida Street
- Provision of an additional pedestrian and cyclist link over the rail corridor between the newly built Aristida Street and Cudgegong Road
- Pedestrian crossing directly south of the station
- Filling of the site to provide levels necessary for connecting roads over the railway line. This includes fill of up to 5m over the site, with fill imported from other locations along the Sydney Metro North West site.

In relation to the Tallawong Station Precinct South site, SMNW is providing the following:

- the station and station plazas or forecourts
- Themeda Avenue to the south of the station running east-west connecting Tallawong Road and Cudgegong Road
- the commuter car park
- Aristida St running north-south from Conferta Ave to service the car park and across the rail corridor, parallel to Cudgegong and Tallawong Road
- Conferta Ave to the south of Themeda Ave running east-west connecting Tallawong Road and Cudgegong Road and servicing the commuter car park.

Sydney Metro is also providing precinct utility works (excluding sewer) in the new precinct access streets which have been sized in consideration of expected development of the adjoining superlots around the station.

These works are shown in Figure 5 and are envisaged to be completed in 2019.

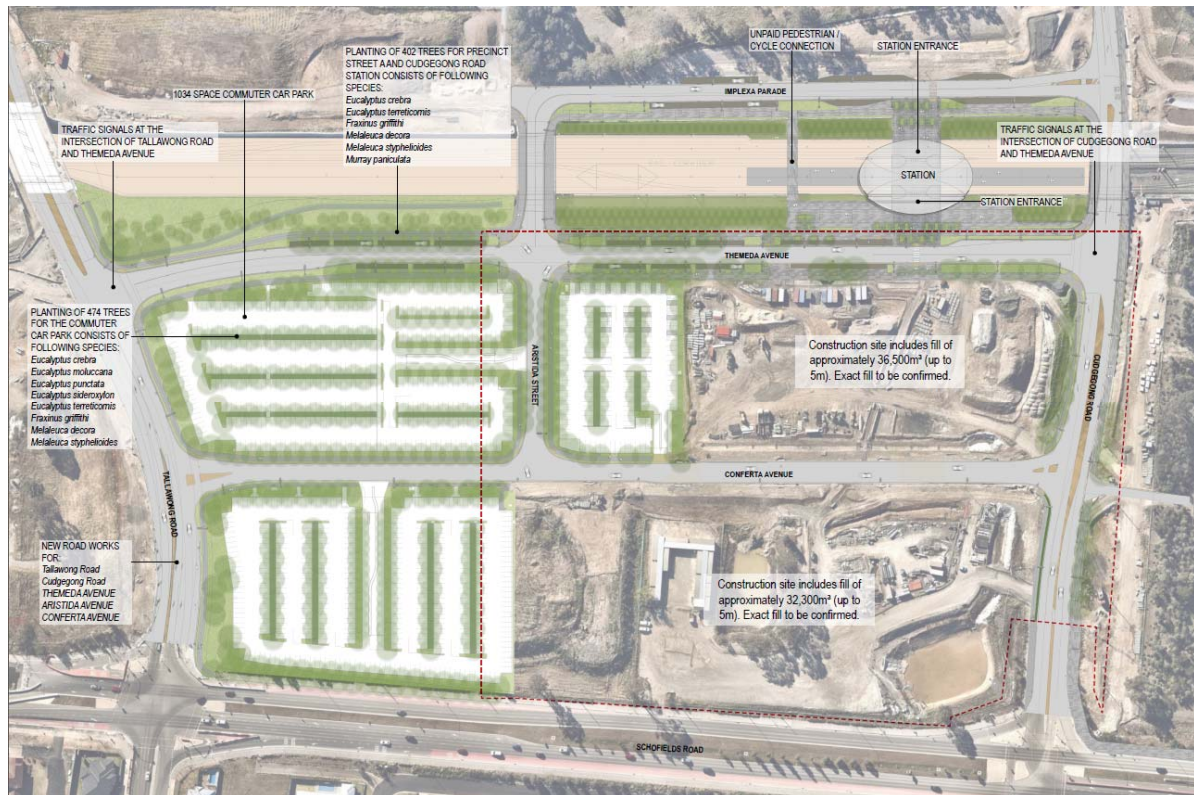


Figure 5: SMNW works

1.4. Project needs and benefits

The NSW Government is committed to increasing housing supply and employment opportunities in close proximity to good public transport. The construction of the SMNW will transform North Western Sydney, not only significantly improving accessibility and reducing the reliance on private vehicles, but also creating new neighbourhoods which will reflect best practice TOD and urban design principles.

The Tallawong Station South Precinct provides the opportunity to create a new transit oriented neighbourhood focused around a rail station and village centre, with increased residential densities within easy walking distance of the station. It also provides the opportunity to deliver a variety of housing types to meet the needs of our changing population and to help ensure there is an adequate and appropriate supply of housing for all members of the community.

The Concept Proposal will exemplify the principles of Transit Oriented Development in that it will:

- Provide mixed use development within 300 metres of the Tallawong Station which will provide rapid and frequent transit service
- Provide higher density residential development around the station, supported by appropriate open space and community uses
- Integrate retail, commercial, recreational and community uses with Tallawong Station therefore stimulating activity around the station
- Apply reduced rates of private car parking while ensuring pedestrian and bicycle connectivity to Tallawong Station and nearby recreation and other uses

-
- Provide liveable, active and high quality public domain and open space for the community that integrates with proposed land uses and the station.

The Concept Proposal has been designed to benefit existing and future generations by creating an attractive high density and sustainable urban precinct. It will provide a great variety of products, built forms, activation and public domain experience – with streets, laneways, parks and plazas – that will create a neighbourhood that people will want to live and work in. The proposal has also been designed to optimise the use of surplus government land and provide a return on investment.

Further information on the need for and benefits of the project is provided in Chapter 5.

1.5. Purpose and structure of the EIS

This EIS supports a concept SSD application for approval under Section 4.22 of the EP&A Act. It addresses the environmental assessment requirements of the Secretary of the Department of Planning and Environment (the 'SEARs'), dated 16 February 2018 (refer to **Appendix A**).

The Environmental Impact Statement (volume 1) is structured in five parts as follows:

- **Part A Introduction and background:**
 - an introduction to the environmental impact assessment (Chapter 1)
 - a description of the project area and a concise description of its general environment (Chapter 2)
 - an overview of the project's statutory context, in terms of relevant assessment and approval requirements (Chapter 3)
 - a summary of community and stakeholder engagement (Chapter 4).
- **Part B The concept:**
 - an overview of the need for the Concept Proposal and alternatives considered, as well as an assessment of the Concept Proposal in relation to the goals and planning objectives of strategic land use, urban design and transport plans and policies (Chapter 5)
 - a description of the Concept Proposal including key development and land use parameters, concept design features and infrastructure proposed (Chapter 6)
- **Part C Statutory planning framework:**
 - an assessment of the Concept Proposal's compliance with relevant legislation and statutory planning instruments (Chapter 7)
- **Part D Environmental assessment:**
 - the results of the assessment of the key environmental issues identified by the SEARs, including information on the existing environment, potential impacts, and proposed mitigation measures (Chapter 8)
 - an assessment of the site's suitability and whether the project is in the public's interest (Chapter 9)
 - an assessment of the environmental risks of the Concept Proposal (Chapter 10).

- **Part E Conclusion:**

- a consolidated list of mitigation measures (Chapter 11)
- a summary conclusion of the findings of the Environmental Impact Statement (Chapter 12).

The specialist technical reports prepared as an input to the Environmental Impact Statement are provided in Volumes 2 and 3.

2. Location and setting

This chapter describes the project's location. It defines the project area for the purpose of the EIS, and provides a summary of the key features of the environment of the project area, and the broader study area in which it is located. The EIS assesses the potential impacts of the project on the project area and, where relevant, the broader study area. These terms are defined in the chapter.

2.1. Definitions used in this EIS

The following are the key locational descriptor definitions used in this EIS.

2.1.1. The Site

The term 'the Site' refers to the Tallawong Station Precinct South which is the area in which the Concept Proposal would be undertaken. The Site is shown in Figure 6 and is described elsewhere in this chapter.



Figure 6: The Site

2.1.2. Local centre

The 'local centre' relates to the broader precinct described as the Cudgegong Road Local Centre under *Schedule 4 Cudgegong Local Centre Development Controls* of the *Blacktown City Council Priority Growth Area Precincts Development Control Plan*. The local centre includes land to the north of the Tallawong Station, the commuter car park area to the south of the station as well as the Site, the subject of this Concept Proposal. The local centre is shown in Figure 7.



Figure 7: Excerpt from *Schedule 4* of the Blacktown Priority Growth Area Precincts DCP showing extent of local centre

2.1.3. Cudgegong Road Station (Area 20) Precinct

The Tallawong Station Precinct South is within the southern part of what is referred to as *Cudgong Road Station (Area 20) Precinct* of the North West Priority Growth Area. The *Cudgong Road Station (Area 20) Precinct* is shown in Figure 8. It is referred to in this EIS in the context of broader strategic planning considerations.



Figure 8: Area referred to as Cudgegong Road Station (Area 20) Precinct in the North West Priority Growth Area

2.2. Location and description

The Site is located north of Schofields Road, Rouse Hill, generally between Cudgegong Road to the east and Tallawong Road to the west. The future Tallawong Station is located immediately to the north (see Figure 9).

The Site is generally rectangular in shape with a total area of approximately 7.8 hectares. It is situated within the Blacktown Local Government Area.

The Site formerly consisted of predominantly rural residential activities with some areas of remnant native bushland. The Site has now been largely cleared and site preparation works have commenced in accordance with the approval of the CSSI project (reference SSI-5414) for the 'North West Rail Link – Stations, Rail Infrastructure and Systems' (refer discussion in Section 1.3).

Table 2: Legal Description of Site

Address	Lot and DP
75 Schofields Road	Lots 13 and 14 DP 1168129
81 Schofields Road	Lot 15 DP 1168129
38 Cudgegong Road	Lot 10 DP 1185116

2.3. Existing context

The Site is located within the suburb of Rouse Hill, approximately 33 km north-west of the Sydney CBD. The site context is shown in Figure 9.

The Site is within the 'Area 20 Precinct' of the North West Growth Centre which was rezoned for urban development in October 2011. The plan for the precinct makes provision for the North West rail corridor and the new Tallawong metro station located directly adjacent to the Site to the north. A 1,000 space commuter car park for the new station will be located immediately west and partially within the Site, and is currently under construction. Also under construction to the west is the Sydney Metro Trains Operations Control Centre and Sydney Metro Stabling Facility.

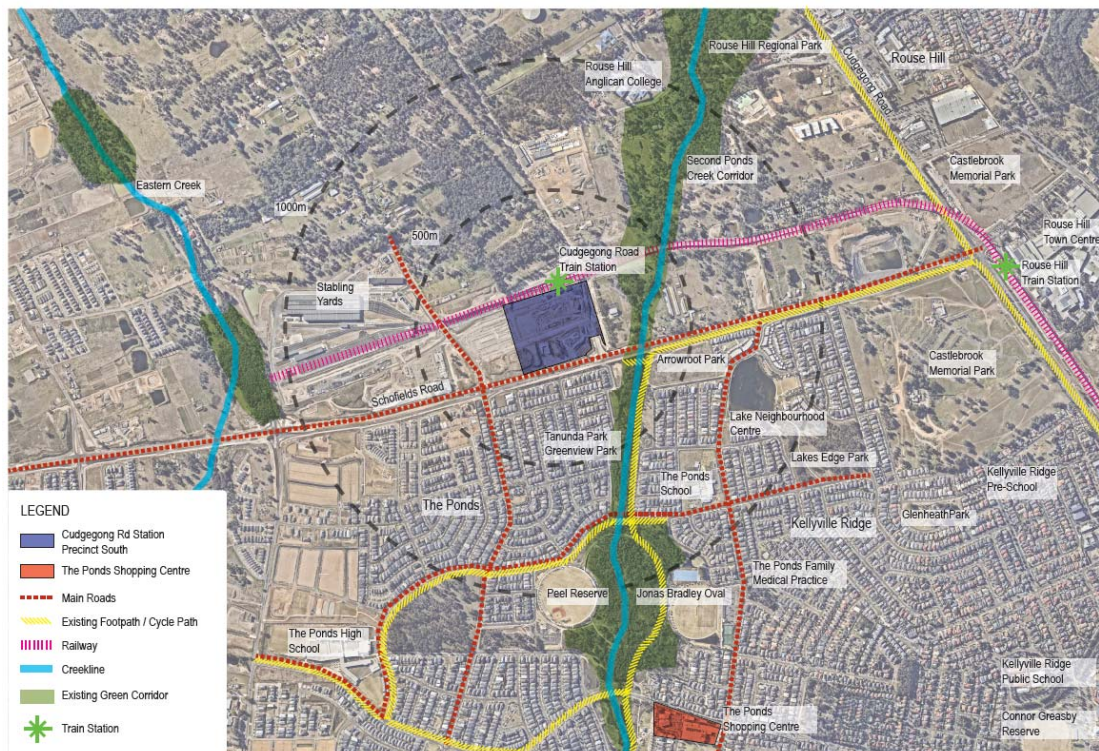


Figure 9: Site context (subject site shown in purple)
(Source: Public Domain and Landscape Strategy, Appendix I)

The local centre extends beyond the Site and north of the rail corridor. This area is subject to a number of development applications for commercial and residential uses. To the south of the Site is The Ponds residential release area.

The Second Ponds Creek Corridor is located to the east of the Site, and further east is the Rouse Hill Town Centre (approximately 1.5 km).

2.4. Transport and accessibility

Road network

Entrance to the Site can be made through either Tallawong Road or Cudgegong Road. Tallawong Road provides access to the Site from Schofields Road in the south and Guntawong Road in the north, as part of a future collector road connection. It currently carries a single lane of traffic in each direction, however, it is planned to provide two lanes in each direction south of the Site on approach to the signalised intersections.

Schofields Road (four lane) provides regional connections to Windsor Road (A2) in the east and to Railway Terrace to the west. Windsor Road (four to six lane) is the main connector between the Site and the arterial road network, providing a direct north-south connection to the wider road network such as the Westlink M7 to the south and to suburbs such as McGraths Hill, Richmond and Windsor in the north.

Cudgegong Road provides connection from Schofields Road in the south to Guntawong Road in the north. The road is currently partly closed for construction, but in the future it is planned to provide a two-way, four-lane road to and from Schofields Road. There are a number of works currently being undertaken within the vicinity of the Site along Cudgegong Road in preparation for the SMNW.

Public transport

There are three public bus service routes in proximity of the Site (routes T72, T75 and 752) which run between Rouse Hill and Blacktown (with route T75 also running from Riverstone and route 752 running via Quakers Hill).

Along Windsor Road, approximately 1.5km east of the Site, runs route 746 and T71 (in addition to route T75), providing access between Box Hill and Rouse Hill (route 746) and between Castle Hill and Blacktown via Stanhope Gardens (route T71).

The bus services located in proximity of the Site provide good accessibility between the Site and other key destinations such as Rouse Hill, Blacktown and Riverstone. Routes T72 and T75 currently stop on Schofield Road, west of Tallawong Road, while route 752 stops further east (approximately 500m east of Cudgegong Road) along Schofields Road. Footpaths are provided between the nearby bus stops and the Site.

Dedicated bus lanes are provided along sections of Schofields Road. The signalised crossings on Schofields Road facilitate safe pedestrian access to the public transport services from the Site.

A future bus network is being developed to integrate with future metro services following the opening of the Tallawong station.

Walking and cycling

Shared paths, providing accessibility for both cyclist and pedestrians in proximity of the Site are provided in an east-west direction along Schofields Road, between Railway Terrace in the west and Windsor Road in the east.

North-south cycle connectivity is provided along Windsor Road via a shared path. The cycleway along Windsor Road provides access to Rouse Hill, McGraths Hill and Western

Sydney University Hawkesbury Campus in the north and to the inner west to the south. Pedestrian access across Schofield Road is provided at the signalised intersections of Schofields Road with Tallawong Road and Cudgegong Road.

2.5. Topography, soils and flooding

The Site topography generally falls from north to south, with a high point located to the north-west of the Site. There is a low point in the south eastern corner of the Site where overland stormwater flow ultimately discharges into the Second Ponds Creek.

The Site is elevated in the north western section at 58 m Australian Height Datum (AHD) and slopes towards the east to approximately 50 m AHD. The topography in the area comprises of gently undulating rises on Wianamatta Shale with local relief 10–30 m and slopes generally >5% but occasionally up to 10%. Crests and ridges are broad (200–600 m) and rounded with convex upper slopes grading into concave lower slopes. Outcrops of shale do not occur naturally on the surface.

The surface area of the Site is predominantly cleared and covered with fill material and some large soil stockpiles.

The soil type around the Site is identified as Podzolic. The underlying geology of the area is classified as Wianamatta Group—Ashfield Shale consisting of laminite and dark grey siltstone, Bringelly Shale which consists of shale with occasional calcareous claystone, laminite and infrequent coal, and Minchinbury Sandstone consisting of fine to medium-grained quartz lithic sandstone.

Characteristics of this soil include low to moderate fertility with low to moderate available water capacity, low CEC values, very low phosphorus and low to very low nitrogen levels. The topsoils are less erodible as they have high fine sand, silt content and organic matter content whereas the subsoils are highly erodible as they are very low in organic matter, highly dispersible and occasionally sodic.

The Site is located within close proximity to two water bodies with First Ponds Creek to the west and Second Ponds Creek to the east of the Site. The Integrated Water Cycle Management Strategy (**Appendix AA**) reports that the flood extents provided by Council indicate that the proposed development site is situated outside of the 100yr ARI and PMF flood extents.

As the Site is currently a construction zone, the levels are constantly changing due to the construction of the metro rail line, commuter car parks and associated infrastructure.

2.6. Utilities and infrastructure

Potable Water

Sydney Water supplies potable water to the Site from the prospect supply system. The Rouse Hill Supply Area, which includes the subject Site, is supplied via the Potts Hill Trunk Delivery System and incorporates the Rouse Hill Waste Water Treatment Plant/Water Recycling Plant, Parklea North Reservoir, Kellyville Reservoir and Parklea Reservoir. There are also three potable water pumping stations within the system – Parklea North (WP0308), Kellyville (WP0307) and Parklea (WP0309).

Dial Before You Dig (DBYD) records indicate the presence of numerous potable water mains within and adjacent to the precinct boundaries.

Wastewater

The Site is located within the Rouse Hill wastewater system, with wastewater being treated at the Rouse Hill Recycling plant and transferred via a series of sewer pumping stations. The facility is Australia's largest residential recycling scheme which treats wastewater to tertiary standards which then recycles back to customers for non-drinking purposes. It has a capacity of 20ML/day and services approximately 32,000 properties. Flow is transferred to treatment plants via a series of sewer pumping stations and any excess recycled water is released into wetlands in Second Ponds Creek.

The existing wastewater network within the vicinity of the development primarily consists of DN600 GRP pipe running through property east of the Precinct.

Electricity

The Site is predominantly serviced via 22kV reticulation feeders from the Mungerie Park Zone Substation located 2km east of the Site along Commercial Road.

DBYD records indicate that there are existing underground electrical assets adjacent to the Site boundary. These include electrical conduits running underneath Schofields Road and Cudgegong Road and while additional underground cables have been proposed to run along Tallawong Road.

Gas

Gas servicing to the Site is provided by Jemena. Whilst there is a substantial distribution network in the area, it is predominately comprised of small connections providing supply at a low pressure.

Existing Jemena gas infrastructure on Site have been identified using DBYD records. These records indicate the presence of a number of existing gas mains surrounding the proposed development site.

Data and telecommunications

A number of communication providers have assets around the Site. However, the only providers which have assets that border or intersect with the Site are Telstra, Uecomm and NBN Co.

Underground services (pits and cables) have been identified underneath the streets surrounding the Site boundaries, namely underneath Tallawong, Schofields and Cudgegong Roads.

NBN Co. assets are present within the Site and are in the process of being rolled out. NRT plans show NBN cables located underneath Conferta, Themeda and Implexa Streets fed through Cudgegong and Tallawong Roads.

2.7. Site photographs

Photographs of the Site and surrounding development are provided below including:

- Figure 10: Corner of Schofields Road and Cudgegong Road looking towards the future train station
- Figure 11: Corner of Schofields Road and Tallawong Road looking toward the Sydney Metro construction site
- Figure 12: Shared path looking west along Schofields Road, with the Site to the right
- Figure 13: The Site from the location of proposed park looking north toward the station

- Figure 14: Northern boundary of the Site, looking east toward the station



Figure 10: Corner of Schofields Road and Cudgegong Road looking towards the future train station



Figure 11: Corner of Schofields Road and Tallawong Road looking toward the Sydney Metro construction site



Figure 12: Shared path looking west along Schofields Road, with the Site to the right



Figure 13: The Site (location of proposed park) looking north towards the station



Figure 14: Northern boundary of the Site, looking east toward the station

3. Planning context

This chapter provides a summary of the general planning context and approval pathway for the project. It includes a summary of the SEARs and indicates where in the EIS the requirements are addressed.

A detailed assessment of the Concept Proposal's compliance with legislative and statutory planning requirements is provided in Chapter 7.

3.1. North West Growth Area

The Site is located within the North West Growth Area which is intended to provide substantial land release areas for homes and jobs in Sydney's northwest. The North West Priority Growth Area is forecast to contribute approximately 12% of the homes needed to meet demand over the next 20 years and (to date) land in the North West Priority Growth Area has been rezoned to support 53,150 dwellings.

The Site is located within the 'Area 20' precinct of the Growth Area which was rezoned for urban development in October 2011. The planning controls for the Area 20 precinct are contained in Appendix 6 to the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres SEPP). Area 20 is intended to deliver capacity for approximately 4,400 new dwellings. The controls for Area 20 were updated in 2015 with increased heights and FSR so the incoming community can take advantage of the new Tallawong Station.

3.2. State significant development

This EIS is submitted to the Department in support of a concept SSD application for the proposed Tallawong Station Precinct South development.

The SRD SEPP identifies development which is considered to be State significant. Clause 19(2) of Schedule 1 of the SRD SEPP provides that the following development is SSD:

Development within a rail corridor or associated with railway infrastructure that has a capital investment value of more than \$30 million for any of the following purposes:

- (a) commercial premises or residential accommodation;*
- (b) container packing, storage or examination facilities;*
- (c) public transport interchanges.*

As the proposal comprises development associated with railway infrastructure, is for the purposes of residential accommodation and commercial premises and the development has a Capital Investment Value in excess of \$30 million, it qualifies as SSD for the purposes of the EP&A Act (see QS report in **Appendix B**).

The EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the EP&A Regulation and the SEARs for the preparation of the EIS. A copy of the SEARs is provided in **Appendix A**.

The Concept Proposal is made under Section 4.22 of the EP&A Act and seeks consent for a mixed use development including land uses, maximum building envelopes, maximum building height, maximum gross floor area, car parking, village park and associated facilities on land located south of the proposed Tallawong Station. As this is a first stage concept development application only, consent is not sought for any construction or other physical work.

The Concept Proposal is detailed in the Urban Design Report prepared by architects Bennett and Trimble. The Urban Design Report, including drawings and photomontages, is provided in **Appendix C**. Other supporting documents are appended to this Report (see Table of Contents). All images used to support this concept SSD application are indicative/representative only and are subject to normal planning processes, including stakeholder engagement, approval and design development.

3.3. Secretary's Environmental Assessment Requirements

In accordance with Section 4.39 of the EP&A Act, the Secretary of the Department issued the SEARs for the preparation of this EIS for State significant development on 16 February 2018. The SEARs are included in **Appendix A**.

Table 3 provides a detailed summary of the individual matters listed in the SEARs and identifies where each requirement has been addressed in this Report and the accompanying supporting technical studies.

Table 3: Secretary's Environmental Assessment Requirements

Reference	Requirement	Chapter of EIS	Technical report
1 Statutory and Strategic Context	<p>The EIS shall address:</p> <ul style="list-style-type: none"> State Environmental Planning Policy (BASIX) 2004 State Environmental Planning Policy (Infrastructure) 2007 State Environmental Planning Policy (State and Regional Development) 2011 State Environmental Planning Policy (Sydney Region Growth Centres) 2006 & any exhibited Draft Amendments relevant to the North-West Growth Centres State Environmental Planning Policy (Urban Renewal) 2010 State Environmental Planning Policy No. 19 – Bushland in Urban Areas State Environmental Planning Policy No 55 – Remediation of Land State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development & the Apartment Design Guide 	Chapter 7	
	<p>The EIS shall address the relevant planning provisions, goals and strategic planning objectives in the following:</p> <ul style="list-style-type: none"> NSW State Priorities Premier's Priorities A Plan for Growing Sydney Revised Draft Central City District Plan North West Rail Link Corridor Strategy NSW Long Term Transport Master Plan Draft Architecture and Design Policy for NSW Development Near Rail Corridors and Busy Roads - Interim Guideline Noise Policy for Industry (EPA 2017) Guide to Traffic Generating Developments NSW Planning Guidelines for Walking and Cycling Better Placed – an integrated design policy for the built environment of NSW 2017 Draft Greener Places Policy; Interim Construction Noise Guidelines Heritage Council Guideline on Heritage Curtilages 1996 Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 	Chapter 5	

Reference	Requirement	Chapter of EIS	Technical report
	<ul style="list-style-type: none"> Draft Planning for Bush Fire Protection 2017 		
2 Land Use and Permissibility	<ul style="list-style-type: none"> Justify mix of land uses and demonstrate that the proposal strategic objectives/social and economic needs; 	Section 8.3	<ul style="list-style-type: none"> Retail and Commercial Land Use Analysis (Appendix J)
	<ul style="list-style-type: none"> Demonstrate proposed dwelling density supported by sufficient open space/adequate infrastructure 	Section 8.4	<ul style="list-style-type: none"> Public Domain and Landscape Strategy (Appendix I)
	<ul style="list-style-type: none"> Assess permissibility of proposal, including consultation with relevant acquisition authority regarding land for local drainage, road and other infrastructure. 	Chapter 7	<ul style="list-style-type: none"> Social Needs and Impact Assessment (Appendix K)
3 Site Layout, Staging and Integration with Sydney Metro Station Infrastructure	<ul style="list-style-type: none"> Illustrate site design and subdivision plan 	Chapter 6	<ul style="list-style-type: none"> Urban Design Report (Appendix C)
	<ul style="list-style-type: none"> identify extent of proposal that is State Significant Development (SSD), how this relates to the approved State Significant Infrastructure (SSI-5414) and any modifications required to the SSI; 	Section 1.3	<ul style="list-style-type: none"> Public Domain and Landscape Strategy (Appendix I)
	<ul style="list-style-type: none"> show how proposal integrates with Sydney Metro station infrastructure 	Section 1.3	<ul style="list-style-type: none"> Staging Plans (Appendix N)
	<ul style="list-style-type: none"> identify any specific requirements of SSI approval that have influenced design of proposal 	Section 1.3	
4 Built form, urban design and public domain	<ul style="list-style-type: none"> set out staging of proposed development, including subdivision, land dedication, relationship with the delivery of Sydney Metro stations, timing of public domain works etc. 	Section 6.16	
	<ul style="list-style-type: none"> Describe design process leading to the Concept Proposal 	Section 5.4	<ul style="list-style-type: none"> Design Excellence Report (Appendix H)
	<ul style="list-style-type: none"> Provide a design excellence strategy 	Section 8.1.3	<ul style="list-style-type: none"> Design Quality Guidelines (Appendix E)
	<ul style="list-style-type: none"> Include a proposed schedule for regular design review with an independent panel endorsed by the Government Architect NSW and describe how feedback will be documented and addressed 	Section 8.1.2	<ul style="list-style-type: none"> Urban Design Report (Appendix C)
	<ul style="list-style-type: none"> include design quality guidelines, endorsed by the design review panel, with specific guidance on: <ul style="list-style-type: none"> public and private space integration with the Metro station building articulation, materials, massing and setbacks connectivity street activation microclimate conditions over shadowing building entrances and loading/services arrangements integrated landscaping Crime Prevention Through Environmental Design principles rooftop and mechanical servicing/plant 	Section 6.4	
5 Transport, Traffic, Parking and Access	<ul style="list-style-type: none"> provide indicative buildings showing possible built forms within the proposed building envelopes 	Section 7.5	<ul style="list-style-type: none"> Schedule 4 DCP Assessment (Appendix F)
	<ul style="list-style-type: none"> considers the relevant design guidelines and the Structure Plan/Indicative Layout Plan in the <i>Blacktown City Council Priority Growth Area Precincts Development Control Plan</i> and how the proposed development will integrate with future developments including infrastructure delivery in the Cudgegong Road Precinct (Area 20). 	Section 7.5	
5 Transport, Traffic, Parking and Access	<ul style="list-style-type: none"> Prepare a Transport and Traffic Impact Assessment that provides, but is not limited to, the following: 	Section 8.7	<ul style="list-style-type: none"> Traffic and Transport Impact Assessment (Appendix L)
	<ul style="list-style-type: none"> accurate details of the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements from existing buildings/uses on the site using the adjacent and surrounding road network 		
5 Transport, Traffic, Parking and Access	<ul style="list-style-type: none"> forecast total daily and peak hour trips (all transport modes), together with cumulative impact assessment and any transport/ traffic 		

Reference	Requirement	Chapter of EIS	Technical report
	<ul style="list-style-type: none"> upgrade impacts of the proposed development on the operation of existing/future transport networks, including capacity of public transport to accommodate increased trips detailed assessment of the existing and future performance of key supported by appropriate modelling and analysis to the satisfaction of RMS and TfNSW measures to mitigate impacts of the proposed development on the operation of existing and future transport networks, including any required upgrades proposed car and bicycle parking provision for workers and visitors, including consideration of the availability of public transport and the requirements of the relevant parking codes and Australian Standards loading dock and servicing arrangements measures to encourage users of the development to make sustainable travel choices identify potential work zones/construction areas and impact on pedestrian amenity and public domain. 		
6 Amenity	<ul style="list-style-type: none"> Demonstrate consistency with the requirements of SEPP 65 and the Apartment Design Guide; address solar access, acoustic impacts, visual privacy, views and visual impacts, reflectivity, overshadowing and noise and vibration impacts view analysis to and from the site from key vantage points and streetscape locations including photomontages/perspectives illustrate the proposal's potential amenity impacts to surrounding properties, including low-density residential development to the south (The Ponds), and any proposed mitigating measures 	<p>Section 8.1</p> <p>Sections 8.5, 8.6, 8.10, 8.12</p> <p>Section 8.12</p> <p>Sections 8.5, 8.10</p>	<ul style="list-style-type: none"> Design Verification Report (Appendix D) Urban Design Report (Appendix C) Landscape and Visual Impact Assessment (Appendix O) Design Quality Guidelines (Appendix E)
7 Noise Impacts	<p>The EIS shall include a noise impact assessment identifying:</p> <ul style="list-style-type: none"> measures to minimise and mitigate potential noise and vibration impacts of the proposal on surrounding developments; and the impacts of likely noise and vibration from surrounding land uses, such as noise from the operation of the rail line and surrounding road networks and mitigation measures to protect the amenity of residents/ visitors/ employees. 	Section 8.10	<ul style="list-style-type: none"> Noise and Vibration Assessment (Appendix S)
8 Air Quality	<p>The EIS shall include air quality assessment in accordance with relevant Environment Protection Authority guidelines identifying all potential sources of air and odour emissions from surrounding land uses and a description and appraisal of any mitigation and monitoring measures required.</p>	Section 8.17	<ul style="list-style-type: none"> Air Quality Review (Appendix BB)
9 Heritage and Archaeological Impacts	<ul style="list-style-type: none"> Prepare detailed Heritage Impact Assessment (HIS) including view impact assessment informed and illustrated with photomontages. Address the project's compliance with the policies of the Conservation Management Plan for the former Royal Oak Inn and Rouse Hill House. Identify if there are any areas with historical archaeological potential within the project area that could be impacted by the proposal and prepare an historical archaeological assessment if required. identify any Aboriginal Cultural Heritage impact assessment. 	Section 8.11	<ul style="list-style-type: none"> Statement of Heritage Impact (Appendix W)
10 Ecologically Sustainable	<p>The EIS shall:</p> <ul style="list-style-type: none"> detail how ESD principles (as defined in clause 	<p>Section 6.11</p> <p>Section 7.2</p>	<ul style="list-style-type: none"> Ecologically Sustainable

Reference	Requirement	Chapter of EIS	Technical report
Development	<p>7(4) of Schedule 2 of the <i>EP&A Regulation 2000</i>) will be incorporated in the design, construction and ongoing operation of the development</p> <ul style="list-style-type: none"> include a framework for how the proposed development will reflect best practice sustainable building principles include commitments to relevant ESD benchmarks. 		Development Report (Appendix M)
11 Biodiversity	<p>The EIS shall provide:</p> <ul style="list-style-type: none"> an assessment of the proposal's biodiversity impacts, including the preparation of a Biodiversity Development Assessment Report, if required under the Biodiversity Conservation Act 2016; and assess the consistency of the proposal with the applicable Biodiversity Certification Order conferred on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006. 	Section 8.13	<ul style="list-style-type: none"> Biodiversity Assessment (Appendix T)
12 Riparian Corridor	<ul style="list-style-type: none"> Include an assessment of the proposal on the ecological values of the First Ponds Creek and Second Ponds Creek riparian corridors. 	Section 8.13	<ul style="list-style-type: none"> Biodiversity Assessment (Appendix T)
13 Bushfire Safety	<ul style="list-style-type: none"> Include a bush fire assessment report which assesses the proposal against the relevant provisions of <i>Planning for Bushfire Protection (PBP) (2006)</i> and the potential for revegetation SP2 Local Drainage and RE1 Public Recreation zoned land to the east of the subject site and its impacts on the future development. 	Section 8.14	<ul style="list-style-type: none"> Bushfire Safety Assessment (Appendix U)
14 Flooding	<ul style="list-style-type: none"> Include a detailed flood impact assessment in accordance with the <i>NSW Floodplain Development Manual</i> (2005) and consistent flood assessment for SSI-5415 and the recommendations made by the Department relating to the Cudgegong Road Station Precinct; and identify minimum floor levels for buildings and flood evacuation strategies, where necessary. 	Section 8.15	<ul style="list-style-type: none"> Integrated Water Cycle Management Strategy (Appendix AA)
15 Soil and Water	<ul style="list-style-type: none"> Include a description of local soils, topography, drainage and landscapes; include a water management strategy prepared with consideration of Water Sensitive Urban Design principles and the relevant provisions in <i>Council's Engineering Guide for Development 2005</i> and <i>Blacktown Development Control Plan 2015</i>; determine the presence, extent and severity of soil salinity affecting the site, including how salinity may affect groundwater resources and hydrology; and include an assessment in accordance with ASSMAC Guidelines for the presence and extent of acid sulfate soils and appropriate mitigation measures. 	Section 8.16 Section 8.15	<ul style="list-style-type: none"> Integrated Water Cycle Management Strategy (Appendix AA) Phase I Site Investigation Report (Appendix V)
16 Contamination	<p>Outline measures to remediate the site so it is suitable for the intended land uses, in accordance with <i>State Environmental Planning Policy No 55 – Remediation of Land</i>.</p>	Section 8.16	<ul style="list-style-type: none"> Phase I Site Investigation Report (Appendix V)
17 Utilities	<ul style="list-style-type: none"> identify and address proposed demand for utilities in consultation with relevant agencies provide details of how relevant infrastructure assets, easements or property of various utility stakeholders will be identified/protected/relocated to accommodate the development. 	Section 6.14	<ul style="list-style-type: none"> Utilities Report (Appendix Z)
18 Public benefits, contributions and/or voluntary	<ul style="list-style-type: none"> address the applicable s94 Contribution Plan and the provision of public benefit, land dedication, services and infrastructure in 	Section 8.19	

Reference	Requirement	Chapter of EIS	Technical report
planning agreement	<ul style="list-style-type: none"> consultation with key stakeholders provide details of any voluntary planning agreement (VPA) or other legally binding instrument agreed between relevant public authorities and the applicant. 		
Plans and Documents	<ul style="list-style-type: none"> architectural drawings physical and 3D digital model, photomontages and streetscape elevations site analysis plan site diagrams and survey plan, including design levels (as proposed) concept subdivision and staging plan with consideration of preliminary construction management principles, infrastructure implementation and any interim precinct activation schedule of proposed gross floor area per land uses and public open space building envelopes If required, Clause 4.6 variation written request and comparative models/analysis to identify the potential impacts of any breach of development standards Design Excellence Strategy/Design Guideline, including public domain and landscaping strategy visual and view impacts analysis solar access analysis report and diagrams wind analysis air quality report noise and vibration report flood assessment and water management plan contamination investigation report and remediation plan salinity and acid sulfate soil investigation report Social and Economic Impact Study ESD statement (incorporating a sustainability framework and benchmark commitments) heritage and archaeological impacts assessments transport, traffic and parking assessment services and utilities infrastructure report waste strategy CPTED assessment accessibility DDA report pre-submission consultation statement 	<ul style="list-style-type: none"> Urban Design Report - Appendix C Urban Design Report - Appendix C Urban Design Report – Appendix C Urban Design Report – Appendix C Staging plans – Appendix N Urban Design Report – Appendix C Urban Design Report – Appendix C Clause 4.6 Variation Request – Appendix G Design Excellence Report – Appendix H Design Quality Guidelines – Appendix E Landscape and Visual Impact Assessment – Appendix O Urban Design Report – Appendix C Wind Environment Statement – Appendix Q Air Quality Review – Appendix BB Noise and Vibration Assessment – Appendix S Integrated Water Cycle Management Strategy – Appendix AA Phase I Site Investigation – Appendix V Phase I Site Investigation – Appendix V Social Needs and Impact Assessment – Appendix K Retail and Commercial Land Use Analysis – Appendix J Statement of Heritage Impact – Appendix W Traffic and Transport Impact Assessment – Appendix L Utilities Report – Appendix Z Waste Strategy – Appendix CC CPTED Report – Appendix P Access Design Assessment – Appendix R Stakeholder Engagement Outcomes Report – Appendix DD 	
Consultation	<p>Consult with the relevant local, State or Commonwealth Government authorities, service providers and community groups, including:</p> <ul style="list-style-type: none"> Government Architect of NSW; Blacktown City Council; Roads and Maritime Services; Office of Environment and Heritage; NSW Rural Fire Service; TfNSW (Sydney Coordination Office, Sydney Trains and Sydney Metro); and Surrounding residents, businesses and local community groups. <p>The EIS must include a consultation report describing consultation undertaken and proposed responses to issues raised.</p>	Chapter 4	<ul style="list-style-type: none"> Stakeholder Engagement Outcomes Report – Appendix DD

3.4. Environmental Planning and Assessment Regulation 2000 requirements for the EIS

This EIS has been prepared in accordance with the requirements of Schedule 2 of the EP&A Regulation. Table 4 below outlines these requirements and identifies where in this report the requirement have been addressed.

Table 4: Schedule 2 of EP&A Regulation

Requirement for Content of EIS	Chapter of EIS
(1) An environmental impact statement must also include each of the following:	
a) a summary of the environmental impact statement,	Executive Summary
b) a statement of the objectives of the development, activity or infrastructure,	Section 1.2.3
c) 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,	Section 5.4
d) an analysis of the development, activity or infrastructure, including:	
i. a full description of the development, activity or infrastructure, and	Chapter 6
ii. 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	Chapter 8
iii. the likely impact on the environment of the development, activity or infrastructure, and	Chapter 8
iv. a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and	Chapters 8 and 11
v. a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,	Section 7.3
e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d)(iv),	Chapter 11
f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).	Chapter 5 Section 7.2
Note. A cost benefit analysis may be submitted or referred to in the reasons justifying the carrying out of the development, activity or infrastructure.	

(2) Subclause (1) is subject to the environmental assessment requirements (SEARs) that relate to the environmental impact statement.

4. Consultation

This chapter describes the consultation undertaken to date, and that proposed during the detailed design and delivery of the project.

4.1. Consultation objectives and overview

The objectives of the pre-lodgement consultation process for Tallawong Station Precinct South were to:

- provide local community members, businesses and other key stakeholders with an opportunity to provide feedback on the proposal to inform the SSDA
- ensure stakeholder views were identified, understood and considered during the preparation of the SSD application
- ensure stakeholders were well informed of the SSD application and its impact on the local community, services and infrastructure
- ensure consistent messaging about the SSD application was shared with all stakeholders.

Consultation to date has been undertaken to satisfy the objectives outlined above, as well as to satisfy the SEARs for the Concept Proposal. Consultation activities were designed to build upon previous engagement undertaken by both TfNSW and the Department, and planned to suit the scale of the project. Activities included a series of stakeholder meetings and a community information session for all residents, landowners and local stakeholders within an approximate radius of 800m from the Site.

Communications to support consultation activities included the delivery of letters and flyers to local residents, as well as the ongoing operation of the community information line and project email. In addition, the Landcom website continues to be updated with relevant project information to ensure that a wide audience has access to information about the project.

A detailed discussion of the pre-lodgement consultation process is provided in the Stakeholder Engagement Outcomes Summary Report provided at **Appendix DD**.

4.2. Discussions with stakeholders

Landcom held a number of meetings with key stakeholders during the development of the Concept Proposal. A summary of the feedback received during correspondence with key stakeholders is detailed in Table 1 of the Stakeholder Engagement Outcomes Summary Report at **Appendix DD**. Consultation was undertaken with the following stakeholders:

- Department of Planning and Environment
- Government Architect NSW
- Roads and Maritime Services
- NSW Police
- NSW Ambulance
- Western Sydney Local Health District
- Department of Education

-
- Office of Environment and Heritage
 - Quakers Hill Police Command
 - Fire and Rescue NSW
 - Sydney Trains
 - Endeavour Energy
 - Sydney Water
 - Jemena
 - Telstra
 - NBN Co
 - Mr Kevin Conolly MP
 - Member for Riverstone
 - Local residents and landowners
 - Rouse Hill Action Group.

4.3. Community consultation

Landcom hosted a community information session on Saturday 17 March 2018. Local residents were invited to drop-in at any stage between 2pm – 4pm at the Vinegar Hill Library in the Rouse Hill town centre.

This information session was advertised to the local community and key stakeholders via newspaper adverts, flyer letterbox drop, social media adverts and Landcom e-news.

For the duration of the session, representatives of Landcom and Sydney Metro were available to answer questions and explain key aspects of the proposal. A total of 60 people attended the session, providing feedback directly to the project team or via feedback forms. The feedback forms gave participants the opportunity to identify issues for consideration throughout the planning process.

Communication channels were made available to complement face-to-face consultation activities with the community and key stakeholders. Information about the Sydney Metro Northwest Places Program and the Tallawong Station Precinct South Concept Proposal was available through:

- Landcom's Facebook page, Twitter feed and website
- operation of a toll-free 1800 community information line and project email
- Sydney Metro Northwest Places program and Cudgegong specific factsheets

Both the community information line and project email address were advertised in the flyer letterbox drop to 1,305 neighbouring residents, and in newspaper adverts published in the Rouse Hill Times and the Blacktown Advocate.

4.4. Consultation feedback

Feedback received during consultation activities with the local community identified the following key issues of community interest:

-
- development timeframes
 - housing density
 - provision of community facilities
 - open spaces and green infrastructure
 - commuter parking and shuttle bus services
 - frequency of new metro services
 - retail offering
 - precinct activation
 - heritage
 - safety.

The feedback received from both the community, government agencies and other stakeholders during the consultation activities has been considered in the preparation of the Tallawong Station South Concept Proposal. A detailed summary of all feedback received and the corresponding project response is provided in Table 2 of the Stakeholder Engagement Outcomes Summary Report at **Appendix DD**.

4.5. Future consultation

To date, Landcom has kept all stakeholders, including the local community, adjoining landowners and government authorities informed about the development of the Concept Proposal. Landcom will continue to engage with stakeholders, including the community, during the statutory exhibition of the SSD application as well as during future stages of the planning and development process. Specifically, Landcom will continue to work closely with the Department and Blacktown City Council to plan and coordinate activation and renewal of land around Tallawong Station Precinct South. Landcom will also update its website with program updates and produce regular program updates to send to stakeholders who register an interest.

Part B

The Concept Proposal

5. Project need

This chapter describes the need for the Concept Proposal and its benefits as well as consideration of alternatives. It also provides an assessment of the proposal against key NSW Government strategic policies.

5.1. Need for the project

The Concept Proposal is needed for four key reasons:

- To help meet the demand for housing in Sydney
- To provide housing that is well connected to employment areas and services via public transport, pedestrian and bicycle links
- To maximise public transport patronage on the new Sydney Metro Northwest through the appropriate provision of compatible land uses as well as good accessibility and connectivity through the precinct and to the station
- To provide an exemplar of high density mixed use development that is based on TOD principles, and which reflects best practice urban design.

The project contributes to the regional needs of a growing population in North West Sydney and aids in the response to housing and job demands. In particular, it increases housing supply to meet the differing housing needs of the community in accordance with the NSW Government's planning directions for the North West Growth Area.

The project also makes the best use of government land and investment in infrastructure. It ensures the orderly and economic use and development of land by creating a well-connected and sustainable community on surplus government land adjacent to a new Metro station.

In addition to the above, the Concept Proposal provides for the following:

- a mixed use development within approximately 300 metres of the Tallawong Station which will provide a rapid and frequent metro rail service connecting to jobs, services and strategic centres in the northwest and across Sydney
- the integration of land use and transport, aligning housing development with the NSW Government's investment in infrastructure
- a walkable and active local centre development with good access to a range of parklands, open space, commercial and retail facilities and the Metro station. High quality pedestrian links through the Site allow for finer grain pedestrian connections within the area
- a balanced built form outcome, with the proposal fitting with the future built form framework of the Precinct and ensuring variation in building massing and typologies
- a significant public benefit through the provision of a high quality and attractive public domain, including a new village park and plaza
- a minimum of five per cent affordable housing targeted to very low, low and moderate income earners
- retail, commercial, recreational and community uses that integrate with the new station and stimulate activity around the new station

The project also addresses a number of strategic needs, as outlined in the following plans and policies:

- *Premier's and State priorities: NSW State Plan* (NSW Government, 2015)
- *Greater Sydney Region Plan - A Metropolis of Three Cities* (Greater Sydney Commission, 2018)
- *Central Sydney District Plan* (Greater Sydney Commission, 2018)
- *North West Priority Growth Area Land Use and Infrastructure Implementation Plan* (Department of Planning and Environment, 2017)
- *NSW Long Term Transport Master Plan* (Transport for NSW, 2012)
- *Future Transport 2056* (Transport for NSW, 2018)
- *North West Rail Link Corridor Strategy* (Transport for NSW, 2013)

The strategic context for the project is described in Section 5.2 and strategic policies are discussed in Section 5.3.

5.2. Strategic context

It is considered that the Concept Proposal has a clear strategic justification given:

- It is consistent with the Premier's Priorities to provide new work environments and housing close to public transport, leading to the creation of jobs and meeting local housing needs
- It is consistent with a *Metropolis of Three Cities* – the Greater Sydney Region Plan, as it will provide housing choice in a highly accessible location and will hence contribute to the goals of achieving a '30 minute city' and optimise infrastructure use
- It is consistent with the *Future Transport 2056 Strategy* and the *NSW Long Term Transport Master Plan* by providing for a transit oriented high density residential and mixed use development immediately adjacent to rapid transit infrastructure in the form of the Sydney Metro Northwest
- It is consistent with the *State Infrastructure Strategy 2018-2038* by integrating land use and transport to create an attractive environment and making the best use of planned urban infrastructure
- It has been developed having regard to the objectives and planning framework for the North West Growth Centre as contained in the *North West Priority Growth Area Land Use and Infrastructure Implementation Plan*, the Growth Centres SEPP and the *Blacktown City Council Priority Growth Area Precincts Development Control Plan*
- It will provide direct investment in the region of approximately \$435 million which will support the creation of approximately 840 construction jobs and around 602 full-time equivalent operational jobs
- It provides high density residential and mixed use development in proximity to a station to meet the future housing and employment needs of the growing population in the Central City Subregion
- It supports the following Planning Priorities in the Central City District Plan:
 - *C1 Planning for a city supported by infrastructure*

- *C5 Providing housing supply, choice and affordability, with access to jobs, services and public transport*
- *C6 Creating and renewing great places and local centres, and respecting the District's heritage*
- *C9 Delivering integrated land use and transport planning and a 30-minute city*
- *C16 Increasing urban tree canopy cover and delivering Green Grid connections*
- *C17 Delivering high quality open space*
- *C19 Reducing carbon emissions and managing energy, water and waste efficiently*

5.3. Strategic policies

5.3.1. NSW State Priorities

The NSW Government has 18 State Priorities, one of which is to increase housing supply. The Concept Proposal supports this priority by providing for approximately 1,100 new dwellings in close proximity to public transport and service. Having regard to the Site's proximity to excellent public transport, the Concept Proposal aims to maximise the supply and diversity of higher density housing for different generations, lifestyles and price points.

There are no other State Priorities relevant to the project.

5.3.2. NSW Premier's Priorities

The NSW Premier has identified 12 key priorities for the State of NSW including creating jobs, delivering infrastructure, making housing more affordable and improving health, education and other services across NSW.

The proposal is consistent with the Premier's State Priorities as follows:

- It will provide for new work environments close to public transport, leading to the creation of jobs within the local area
- It will allow for the development of higher density housing forms to meet the range of demographic needs in the area
- It will activate the area around the Tallawong Station, encouraging people to use public transport and helping to make the station active and viable.

5.3.3. Greater Sydney Region Plan

The Greater Sydney Region Plan – *A Metropolis of Three Cities* was released on 18 March 2018. It presents a vision and actions for managing Greater Sydney's growth and enhancing its status as one of the most liveable global cities. It has been prepared concurrently with *Future Transport 2056* and the State Infrastructure Strategy, aligning land use, transport and infrastructure planning to reshape Greater Sydney as three unique but connected cities.

The Greater Sydney Region Plan sets a 40-year vision and a 20-year plan to manage growth and change for Greater Sydney in the context of economic, social and environmental matters. The vision seeks to meet the needs of a growing and changing population by transforming Sydney into a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City. The Site is located within the Central River City.

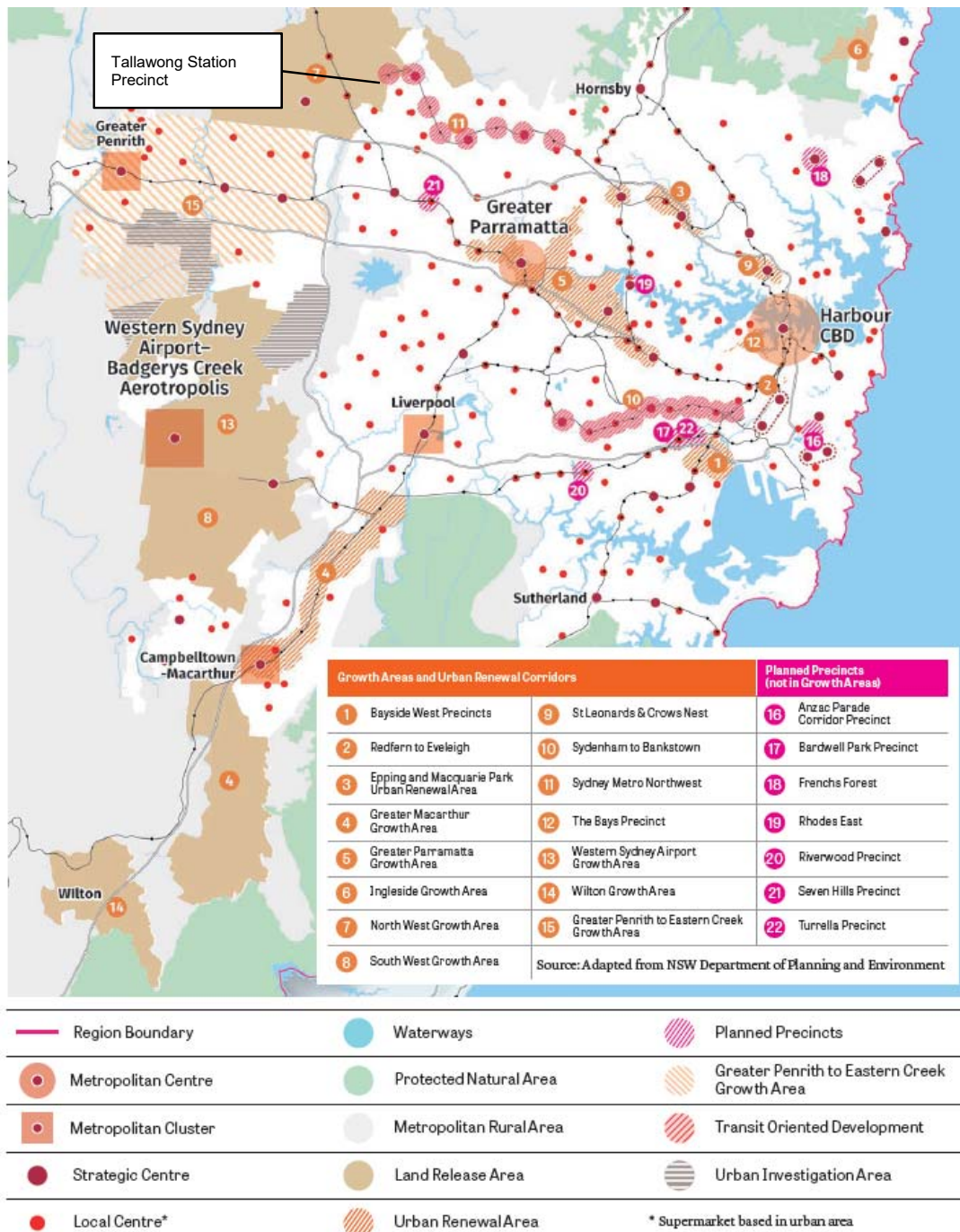


Figure 15: Future housing: government programs and preferred locations for consideration under Greater Sydney Region Plan

The Plan supports the focus on optimisation of government-owned land and urban renewal to deliver housing. The Plan also identifies housing targets for the Central City District of 53,500 dwellings in Year 0-5 and 207,500 beyond Year 20. More specifically the Cudgegong area is identified in the Plan as a Transit Oriented Development. Accordingly it is intended to contribute to the achievement of the stated dwelling targets.

The proposal is consistent with the key directions, objectives and strategies outlined within the Plan. In particular it provides for the supply of approximately 1,100 new dwellings in the

form of transit-oriented development immediately adjacent to the SMNW. It will provide housing choice in a highly accessible location and will hence contribute to the goal of achieving a 30 minute city and optimising infrastructure use. It will also provide for compact development and contribute to a low carbon future for Sydney.

5.3.4. Central City District Plan

The *Central City District Plan* was also released in March 2018 and sets out a 20-year vision for the Central City District, which includes Blacktown, The Hills, Parramatta and Cumberland local government areas.

The Central City District Plan sets out priorities and actions for the growth and development of the Central District. The Plan provides the district level framework to implement the directions, objectives, strategies and actions outlined in the Greater Sydney Region Plan.

The Central City District is identified as one of the most dynamic and rapidly growing regions in Australia and one which plays a pivotal role in Greater Sydney's future as an economic and employment powerhouse, a core hub for transport and services, and the home of vibrant and diverse centres and communities.

Consistent with the Greater Sydney Region Plan, the Central City District Plan identifies the Cudgegong area as a transit oriented development located adjacent to the SMNW and in close proximity to the Rouse Hill Strategic Centre. The Plan notes that additional capacity for housing supply is well progressed across much of the City Central District and that the SMNW Urban Renewal Corridor, as a current State-led initiative, will contribute to the achievement of the Districts housing targets (53,500 in 0-5 years).

The proposal will provide housing close to public transport and employment in support of the 30 minute city concept promoted by the GSC and is consistent with relevant directions and actions outlined in the Central City District Plan.

5.3.5. North West Priority Growth Area Land Use and Infrastructure Implementation Plan

The North West Priority Growth Area Land Use and Infrastructure Implementation Plan (the Implementation Plan) outlines plans for the growing North West Priority Growth Area and the infrastructure needed to support this growth. The Implementation Plan replaces the North West Structure Plan of 2006. It guides the direction for growth and development in the North West Priority Growth Area, which is underpinned by major and local infrastructure commitments and improved planning processes to help expedite the delivery of new homes and jobs in this region.

The objectives of the Implementation Plan are to:

- Plan for an additional 20,000 dwellings than originally anticipated in Sydney's North West in vibrant and liveable neighbourhoods, and facilitate the supply of 18,000 new homes by 2021 and 33,000 new homes by 2026
- Balance the needs of a growing population with opportunities for employment and recreation by establishing minimum and maximum residential densities as a priority, in line with infrastructure provision
- Identify and coordinate the delivery of infrastructure that will support housing and employment growth to ensure there is an ongoing supply of development-ready land in Sydney's northwest
- Explore new land uses along major infrastructure corridors to benefit from public investment in infrastructure such as Schofields Road, Richmond Road and Bandon Road, as well as the SMNW and its transport corridor extension

- Improve transport accessibility and connectivity throughout the area to reduce car reliance and connect people to other parts of Sydney by providing opportunities for the integration of travel modes through detailed precinct planning
- Identify and enhance key biodiversity areas, open spaces, riparian corridors and culturally sensitive areas and identify additional open space to support a high growth housing capacity scenario, as well as improved links to regional open space.

The Concept Proposal will help meet these objectives by:

- Facilitating new housing in an area that will be well serviced and well connected
- Providing appropriate land uses adjacent to the new Sydney Metro station, thereby maximising the benefit from public investment in infrastructure
- Providing for development that is based on TOD principles, maximising connectivity not only to the new station but also to other travel modes
- Delivering a new park as well as an extensively landscaped public domain consistent with the NSW Government's new "Green Grid" policy.

The Implementation Plan also identifies specific actions to support the delivery of housing and jobs. These include providing more land supply for new homes, protecting and planning for major transport corridors, managing residential densities to align with infrastructure and improving pedestrian, cycle and green connectivity. The Concept Proposal delivers on these actions by providing high density housing immediately adjacent to a planned transport corridor and aligned with the provision of adequate infrastructure to support the development. It also provides for an integrated network of pedestrian and cycle linkages in support of the TOD principles which underpin the proposal.

5.3.6. North West Rail Link Corridor Strategy

The North West Rail Link Corridor Strategy was published in 2013. It identifies the Tallawong Station study area as providing the opportunity to create a new transit oriented neighbourhood focused around a rail station and village centre, with increased residential densities within walking distance of the station and a variety of housing types provided to ensure there is affordable and appropriate housing for all members of the community.

Higher residential densities are proposed within 800 metres of the station and the Tallawong Station South Precinct is designated for mixed use development.

A finer street network is proposed throughout the Study Area to increase connectivity and permeability. The Strategy states that these links could be either pedestrian and/or vehicular connections and would be subject to further detailed analysis to determine their location and configuration.

The Concept Proposal is consistent with the aims of the Strategy in that it provides for increased residential densities close to the station. It also provides for a variety of housing types, including affordable housing. In addition, the Concept Proposal has been designed to achieve a high degree of permeability and connectivity, particularly for pedestrians and cyclists.

The North West Rail Link Corridor Strategy recommends that the residential development close to the station be 3 to 6 storeys in heights. However, the Strategy pre-dates the amendments made to the Area 20 Precinct Plan in 2015 and the introduction of the planning controls for the Site provided for in Appendix 6 to the Sydney Region Growth Centres SEPP. These changes allowed for greater density and development up to 26 metres in height. The Concept Proposal has been guided by these more recent planning parameters for the Site.

5.3.7. Better placed – integrated design policy for the built environment

Better Placed was released in late 2017 and provides an overarching policy framework and focus for championing good design and great places. It provides a set of principles and guidance to support good design and was also developed to support the inclusion of a new Design Object in the EP&A Act (refer Section 7.1 for discussion on EP&A Objects) as part of the review of the Act.

The Concept Proposal has been subject to extensive review and input by the Landcom Design Directorate (refer discussion in Section 5.4.2) as well as the GANSW having regard to the objectives and directions in *Better Placed*.

An assessment of the Concept Proposal in relation to the *Better Placed* objectives is provided in Table 5.

Table 5: Assessment of Concept Proposal in relation to *Better Placed* objectives

Objective	Assessment
<i>Better fit - contextual, local and of its place</i> <i>Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, heritage and communal aspirations. It also contributes to evolving and future character and setting.</i>	The Concept Proposal has been designed to respond to the existing context including the existing and proposed surrounding street pattern, the Metro station, commuter carparks and the existing low-density neighbourhood of The Ponds to the south. The concept has been designed to create an active and walkable neighbourhood with the Metro station at its core. The proposed street pattern is rationalised and extended through the development to create a clear and legible urban grid. A network of pedestrian and cycleways is then introduced to complement and extend this urban grid with a series of through-site links dividing the developable areas into smaller blocks to create a more permeable and pedestrian friendly urban environment. The proposed pedestrian and cycle network will provide direct links between the residential areas, the local centre, the metro, adjoining neighbourhoods such as The Ponds to the south, and the Second Ponds Creek landscape corridor to the east.
<i>Better performance - sustainable, adaptable and durable</i> <i>Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.</i>	Sustainability has been one of the key design parameters shaping the Concept Proposal. Passive design initiatives have sought to reduce energy use and increase thermal comfort through building orientation, utilisation of natural cross ventilation and use of natural lighting. Across the precinct, street trees have been identified to provide shading and reduce microclimate impacts and urban heat island effect. These benefits have been amplified with the use of high albedo and natural materials, external shading and vegetated roof terraces. Deep soil zones have been identified and Water Sensitive Urban Design measures provided for ground water recharge and to reduce surface flows. Street layout has been designed for pedestrian connectivity and delivers active transport corridors for an inclusive and connected community with regional public transport links. The local centre provides a central, multipurpose community space for all generations and

Objective	Assessment
<p>Better for community - inclusive, connected and diverse</p> <p><i>The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.</i></p>	<p>abilities, and a mixed use hub for retail, commercial and community services.</p> <p>The Concept Proposal is designed at the scale of a masterplan and the proposed buildings are not designed in detail. Sustainability for natural cross ventilation and solar access will be provided for review as each site and building is developed in greater detail for approval.</p> <p>The Concept Proposal provides numerous and a rich variety of opportunities for social interaction in the private communal areas (lobbies, courtyards and rooftop terraces), in the generous public spaces (park, plazas, streets with wide footpaths, through-site links), and in and around the active uses such as shops, offices, work spaces, smart-work hub, childcare centres, and flexible community spaces.</p> <p>Landcom has a clear mandate to focus on housing supply, affordability and diversity. Through the disposal of the land, Landcom is encouraging developers to propose solutions and demonstrate their ability to deliver housing affordability, diversity and innovation to provide greater housing choice that meets the needs of the local community now and into the future. This will be the case with development at the Tallawong Station South Precinct.</p> <p>In terms of dwelling typology, one of the key considerations in the preparation of the Concept Proposal was to provide a variety of products and building types. The Concept Proposal includes and can accommodate two-level terrace-type apartments on the ground floor of many of the residential buildings. The four levels buildings in the concept could be designed as manor homes or “intermediate housing” – as seen in Europe – where two-level dwellings are superposed and have independent access and outdoor spaces, achieving some of the qualities of a stand-alone house while providing for a greater density.</p>
<p>Better for people - safe, comfortable and liveable</p> <p><i>The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.</i></p>	<p>The proposal has been designed to create a walkable and active local centre development with good access to a range of parklands, open space, commercial and retail facilities and the Metro station. High quality pedestrian links through the Site allow for finer grain pedestrian connections within the area.</p> <p>The precinct layout, urban and landscape design have adopted good CPTED principles and practices. This is noticeable in the passive surveillance that has been provided by maintaining good sight lines throughout the Site. The</p>

Objective	Assessment
	<p>street and pedestrian network layout is legible and provides direct routes to destination points.</p> <p>The central park design takes advantage of the topography, proximity to the metro station and the surrounding buildings to provide a central meeting place that will attract large numbers of people and will receive good passive surveillance, from numerous vantages points making it a safe place to recreate.</p>
<p>Better working - functional, efficient and fit for purpose <i>Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to change. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.</i></p>	<p>The Concept Proposal is designed at the urban scale of a masterplan and the proposed buildings are not designed in detail. However, the Concept Proposal is designed to provide a diverse range of urban forms, scales and characters. In particular, buildings in the B4 Mixed Use area will have 4m floor to floor heights on the ground floor and 3.4m floor to floor heights on the first floor to provide for flexibility of ground/first floor uses over time.</p> <p>Other measures to allow for efficiency and usability over time include the opportunity for 'smart hub' office space including potential for co-working facilities and shared precinct parking between multiple uses.</p>
<p>Better value - creating and adding value <i>Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.</i></p>	<p>The Concept Proposal has been designed to benefit existing and future generations by creating an attractive high density and sustainable urban precinct. It will provide a great variety of products, built forms, activation, public domain experience – with streets, laneways, parks and plazas – that will create a neighbourhood that people will want to live and work in. The proposal has also been designed to optimise the use of surplus government land and provide a return on investment.</p>
<p>Better look and feel - engaging, inviting and attractive <i>The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement</i></p>	<p>The Concept Proposal has been carefully designed to ensure that the built form and amenity of the future urban environment results in the creation of useable, enjoyable and attractive buildings and public domain. The design is the culmination of a detailed assessment of the Site, its relationship to the Metro Station, the objectives of transit oriented development as well as a range of other design parameters. This is shown in the Urban Design Report at Appendix C.</p> <p>The detailed design of the buildings will be subject to a design excellence assessment process (refer discussion in Section 8.1) to ensure that the ultimate built form and public domain outcomes meet the seven objectives set out in the GANSW's <i>Better Place - An integrated design policy for the built environment of New South Wales</i>.</p>

The Design Quality Guidelines and the Design Excellence Strategy, intended to be implemented for future stages of the development, will ensure that the objectives of the Better Placed policy are met for the Tallawong Station South Precinct.

5.3.8. Draft Greener Places Policy

GANSW has recently released a draft policy document, *Greener Places* (2018) that outlines the essential role of Green Infrastructure in the delivery of sustainable landscapes and communities. Greener Places proposes a design approach for urban environments that promotes nature as a key driver and the policy cites four core principles in realising that objective:

- Integration: combine Green Infrastructure with urban development and grey infrastructure
- Connectivity: create an interconnected network of open space
- Multi-functionality: deliver multiple ecosystem services simultaneously
- Participation: involve stakeholders in development and implementation

The application of these four principles to the landscape design of the Concept Proposal is outlined in the Public Domain and Landscape Report at **Appendix I**.

5.3.9. Other strategic policies and guidelines

The Concept Proposal is also consistent with the key additional strategic planning policies and guidelines identified in the SEARs, as outlined in Table 6 below.

Table 6: Summary of consistency with relevant additional planning policies

Strategy/Guideline	Comment
<i>NSW Long Term Transport Master Plan</i>	<p>The NSW Long Term Transport Master Plan (Transport for NSW, 2012) establishes a framework for the delivery of an integrated transport system over the next 20 years. The objectives underpinning the delivery of the master plan are to:</p> <ul style="list-style-type: none"> • Improve quality of service • Improve liveability • Support economic growth and productivity • Support regional development • Improve safety and security • Reduce social disadvantage • Improve sustainability • Strengthen transport planning processes. <p>The LLTM notes that transport planning is integrally linked to land use planning and that in order to improve transport usage, reduce congestion and improve the liveability of the City, transport is required that supports transit oriented development. This includes the provision of higher density development and employment opportunities to support the efficient use of public transport services and corridors.</p> <p>The proposal is consistent with this strategic direction and will provide for a transit oriented high density residential and mixed use development immediately adjacent to rapid transit infrastructure in the form of the SMNW.</p>
<i>Future Transport 2056</i>	Refer discussion in Transport and Traffic Impact Assessment at Appendix L.

Strategy/Guideline	Comment
<i>Development near Rail Corridors and Busy Roads – Interim Guideline</i>	<p>The Department's Development near Rail Corridors and Busy Roads – Interim Guideline makes recommendations for the assessment of noise impacts to developments from rail and road corridors and for mitigating such impacts. The Interim Guideline seeks to protect the safety and integrity of key transport infrastructure from adjacent development, and ensure that adjacent development achieves an appropriate acoustic amenity by meeting internal noise criteria specified in the Infrastructure SEPP.</p> <p>Pursuant to <i>State Environmental Planning Policy (Infrastructure) 2007</i> (Infrastructure SEPP), a consent authority must take the guideline into consideration before determining an application for residential development in or adjacent to a rail corridor if it considers that the development is likely to be adversely affected by rail noise or vibration.</p> <p>The Noise and Vibration Assessment at Appendix S addresses the guidelines contained within this document.</p>
<i>Guide to Traffic Generating Development</i>	<p>Schedule 3 of <i>State Environmental Planning Policy (Infrastructure) 2007</i> stipulates certain types of development that should be referred to the RMS as a Traffic Generating Development. As the development facilitated by the proposed building envelopes will deliver 300 or more dwelling it will be a development to which this policy applies and will therefore be referred to the RMS.</p> <p>The content of a Guide to Traffic Generating Development has been considered at a high level in the Concept Proposal and will be considered in more detail as part of future SSDAs. The Guide has also been specifically considered by SCT Consulting as part of preparing the transport assessment report (Appendix L).</p>
<i>Noise Policy for Industry</i>	<p>The Noise Policy for Industry (NPI) provides guidelines for assessing noise impacts from industrial developments. The recommended assessment objectives vary depending on the potentially affected receivers, the time of day, and the type of noise source. The NPI has two requirements which must be complied with, namely an amenity criterion and an intrusiveness criterion.</p> <p>A Noise and Vibration Assessment (Appendix S) has been prepared for the Concept Proposal and is provided at Appendix S. The report includes an assessment of the project in relation to the Noise Policy for Industry.</p>
<i>Interim Construction Noise Guideline</i>	<p>The Interim Construction Noise Guideline deals with the assessment of noise from construction activities and advises on best practice approaches to minimise noise impacts.</p> <p>As this application seeks approval for the Concept Proposal only and no construction works, an assessment of construction noise and vibration impacts has not been conducted as part of this assessment. An assessment in accordance with the EPA Interim Construction Noise Guideline will be provided in subsequent detailed applications for development works.</p>
<i>NSW Planning Guidelines for Walking and Cycling</i>	Refer <i>Sydney's Walking Future</i> and <i>Sydney's Cycling Future</i> below
<i>Sydney's Walking Future</i>	<p><i>Sydney's Walking Future</i> (Transport for NSW, 2013) is a plan by the State government to get people in Sydney walking more through actions that make it a more convenient, better connected and safer mode of transport. The plan draws on consultation on the NSW Long Term Transport Master Plan and customer research.</p> <p>The Concept Proposal supports the goal of increasing walking as a transport mode</p>

Strategy/Guideline	Comment
	by providing for a high quality public domain with a permeable internal layout that provides good connection to the surrounding network and to public transport.
<i>Sydney's Cycling Future</i>	<p><i>Sydney's Cycling Future</i> (Transport for NSW, 2013) is a plan by the State government to provide direction for the planning, prioritisation and provision of cycling infrastructure in Sydney. The overarching goal of the plan is to make cycling a safe, convenient and enjoyable transport option for short trips.</p> <p>The proposal supports this goal by providing:</p> <ul style="list-style-type: none"> • a highly permeable and safe pedestrian network throughout the development • dedicated cycle routes that connect to the regional routes and major transport hubs • key design principles to integrate walking and cycling network and facilities into the planning and delivery of the development • high quality and accessible end-of-trip facilities (centralised cycle hubs, on-street secure bicycle storage, lockers and showers).
<i>Heritage Council Guidelines on Heritage Curtilages 1996</i>	<p>A Statement of Heritage Impact (SoHI) has been prepared by OCP Architects and is provided at Appendix W. The SoHI has been prepared in accordance with the NSW Heritage Manual.</p> <p>There are no heritage listings for the Tallawong Station Precinct South Site, however there are three state-listed heritage items within two kilometres of the Site. The report has assessed the potential impact of the Concept Proposal on the state heritage items, including Rouse Hill House and Farm and its curtilage. Analysis indicates that the potential for any impact arising from the proposal on Rouse Hill House and Farm and its curtilage would be very low. This is because of the distance between the two sites (1.5km) as well as the undulating landscape and remnant vegetation which restrict views.</p> <p>No other heritage items are considered likely to be meaningfully impacted by the proposed works.</p> <p>Accordingly, an assessment of the Concept Proposal in relation to the Heritage Curtilage Guidelines is not considered necessary in this instance.</p>
<i>Guide to investigating, assessment and reporting on Aboriginal Cultural Heritage in NSW</i>	An investigation, excavation and salvage program was undertaken in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECWW, 2011) and Aboriginal Cultural Heritage Consultation requirements for Proponents 2010, and the Site area has been confirmed to be cleared of Aboriginal heritage by Transport for NSW. Further detail is provided in the SoHI at Appendix W.
<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i>	See above
<i>Draft Planning for Bush Fire Protection 2017</i>	A Bushfire Safety Assessment has been carried out for the Concept Proposal and is provided at Appendix U. In accordance with the recommendations of the Rural Fire Service the assessment has been undertaken in accordance with <i>Planning for Bushfire Protection – 2006</i> .

5.4. Analysis of alternatives

5.4.1. Do Nothing Option

The 'do nothing' option (i.e. no development of the Site) is not a feasible option. The Sydney Metro project is fully committed and advanced in its planning and delivery, with transit oriented development a key component to the overall project. In addition to place making and contributing towards the stimulation of urban development (consistent with the objectives for the Sydney Metro project) the development of surplus government lands around the Metro stations by Sydney Metro supports the NSW Government in funding the cost of this step change piece of public transport infrastructure.

5.4.2. Development option

The Concept Proposal has been subject to a rigorous design development process involving consideration of various options for the Site and overseen by the Landcom Design Directorate. The Design Directorate is co-chaired by Board member Ken Maher and the NSW Government Architect Peter Poulet. Members included highly respected leaders in the professions of architecture, landscape architecture, urban design, and planning, including:

- Catherin Bull – Principal at Catherin Bull Urban Design and Strategy
- Julie Bindon – Director of Planning at Ethos Urban
- Roderick Simpson – Environmental Commissioner at the Greater Sydney Commission and Associate Professor in Urban Design at the Faculty of Architecture, Design and Planning, University of Sydney
- Tony Caro – Architect

Design input was also provided by Government Architect NSW (GANSW) and the Department.

A detailed discussion of the design process is provided in the Design Excellence Report at **Appendix H**. Options that have been explored looked at different commuter car parking configurations, building configurations, building heights, open space distribution and dwelling typologies.

In addition to the consideration of different design alternatives, two scenarios were tested to determine the appropriate allocation of retail floorspace on the Site. The Retail and Commercial Land Use Analysis prepared by AEC Group (refer **Appendix J**) for the Concept Proposal calculated total retail floorspace from the estimated residential population based on two growth scenarios:

- **Scenario 1 (Capped Growth)** which assumes a total development yield of 5,000 dwellings in the broader precinct, referred to as the *Cudgegong Road Station (Area 20) Precinct* in Schedule 4 of the *Blacktown City Council Priority Growth Area Precincts Development Control Plan*. This includes a yield of 1,100 dwellings on the Site, and circa 1,800 dwellings in Riverstone East Stage 1 thereby giving circa 6,800 in the Main Trade Area¹
- **Scenario 2 (High Growth)** which assumes a development yield of 9,200 dwellings in the *Cudgegong Road Station (Area 20) Precinct*.

¹ The Main Trade Area is a combination of the Primary Trade Area and Secondary Trade Area, wherein the Primary Trade Area represents the Cudgegong Road Precinct and the Secondary Trade Area represents the Riverstone East Precinct Stage 1.

The outcome of this analysis and the implications for the Concept Proposal land use distribution is discussed in Section 8.3.2.

6. Concept description

This chapter provides a description of the Concept Proposal for which approval is sought. Along with information regarding the future land use, built form and public domain, the chapter also details proposed access arrangements, pedestrian and cycle network, infrastructure provision and development staging.

6.1. Concept vision

The area around the Tallawong station will evolve into a series of attractive neighbourhoods centred on the local centre and connected by a revitalised Second Ponds Creek parkland. New pedestrian and cycling networks will improve connectivity with and between the surrounding communities of the Ponds, Rouse Hill and Riverstone.

The public realm in the new local centre will create an attractive place and deliver a functional network. Key streets, parks and town squares will be created to offer great amenities and comfortable connections to the station.

The local centre will offer a range of housing typologies and provide convenient and lifestyle destinations for residents, workers and visitors, all within walking distance.

Within the government lands, the developments will complement the main retail centre to the north of the station with community facilities, workspaces and retail destinations. These active uses will mainly be on the ground floor and organised around the future village park and the station.

The Tallawong Station Precinct South will have an attractive residential character with sweeping scenic views of the surrounding natural landscape and distant ridgelines. The enhanced stands of creek and bushland and the pedestrian and cyclist friendly environment will contribute to a pleasant natural environment.

Most sites will be organised as perimeter blocks on 2,500m² to 5,500m² sites with generous public domain to encourage residents and visitors to walk, cycle and engage in public life. The developments will respond to the topography to take advantage of district views.

Some buildings will have no or limited setback to reinforce the spatial definition of the street. This will contribute to an engaging urban experience, based on proximity and immediacy. The future developments will demonstrate variation and articulation of facades.

This urban form also allows for internal open spaces that add to the amenities of the new homes and to the experience of pedestrians as they will be able to see the courtyards from the street.

Generous and well-defined public domain and parks will add to the liveability of the place. New streets delivered by Landcom or their development partners will have generous pedestrian crossing and cycle paths or shared paths. Opportunities to deliver pedestrians crossings across existing streets will be explored.

Ground floor activation will be achieved through the provision of shops, workspaces, community spaces, and terrace-type apartments possibly organised on two levels with 1 to 3 metre deep front yards.

An Urban Design Report, including concept design drawings and details, has been prepared by Bennett and Trimble and is provided at **Appendix C**. It includes images which show the vision for the concept.

6.2. Description of the Concept Proposal

Concept approval is sought for:

- Up to 16 buildings of varying heights to a maximum of eight storeys
- Maximum gross floor area (GFA) of 94,295m²
- Residential development – approximately 1,100 dwellings equating to approximately 85,000m² GFA
- Commercial, retail and community uses - approximately 9,000m² GFA
- Provision of car parking facilities for the retail, commercial and residential components underground provided in according with the following maximum car parking rates:

Residential	Maximum car parking rate
1 bedroom apartment	0.4 spaces/dwelling
2 bedroom apartment	0.7 spaces/dwelling
3+ bedroom apartment	1.2 spaces/dwelling
Visitor	0.14 spaces/dwelling
Other	
Commercial	1/70m ² GFA
Retail/community	1/60m ² GFA

- Provision of bicycle parking spaces at a rate of 1 cycle parking space per dwelling plus 1 space per 10 dwellings for visitors
- A minimum of 5% affordable housing
- A public park (approximately 2,900m²)
- Landscaping of the Site
- Road layout
- Strategies for utilities and services provision
- Strategies for managing stormwater and drainage
- A strategy for the achievement of ecologically sustainable development.

An Urban Design Report, including concept design drawings and details, has been prepared by Bennett and Trimble and is provided at **Appendix C**.

A Reference Scheme for the Concept Proposal is provided to demonstrate how the site could be developed to achieve good amenity based on best practice urban design principles. The Reference Scheme is shown in Figure 16.

Subdivision, including dedication of land for roads, will be progressed following the construction of roads by Sydney Metro.

Further details on the various elements of the concept proposal are outlined in the following sections of the report.

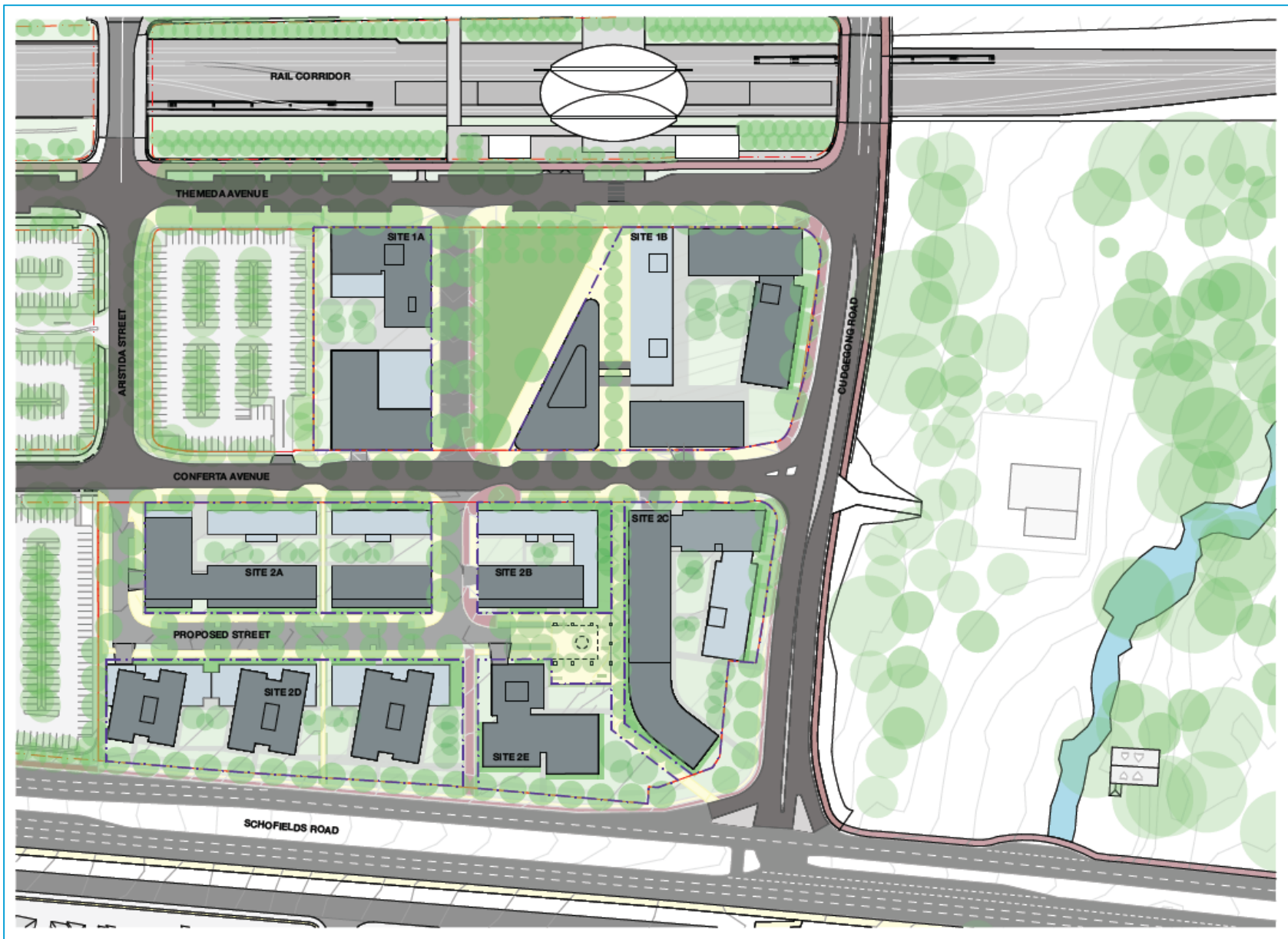


Figure 16: Concept Proposal Reference Scheme

6.3. Key development information

The key numeric details of the proposal are summarised in Table 7:

Table 7: Key development information

Site area	7.8ha
GFA	94,295m ² (approximately 85,000m ² residential and 9,000m ² non residential)
No of dwellings	1,107 (estimate)
FSR	1.34:1
Height	Varying heights up to a maximum of eight storeys
Setbacks	Refer Building Setback drawing in Urban Design Report at Appendix C
Car spaces	975

6.4. Building envelopes

The proposed building envelopes set the parameters for the future buildings and are detailed within the Plans included as part of the Urban Design Report prepared by Bennett and Trimble (refer to **Appendix C**).

Detailed buildings within the prescribed envelopes will be subject to future detailed development application(s). These future DA/s will seek approval for the design, construction and fit out of the buildings.

The overall building envelopes are shown on the Envelope Diagram in the Urban Design Report and reproduced in Figure 17 below.

The building envelopes have been designed having regard to maximising solar access, creating a variety of urban scales and visual interest in the urban form, enabling a range of housing typologies and providing for a permeable environment. Further justification for the proposed built form is provided in Section 8.1.

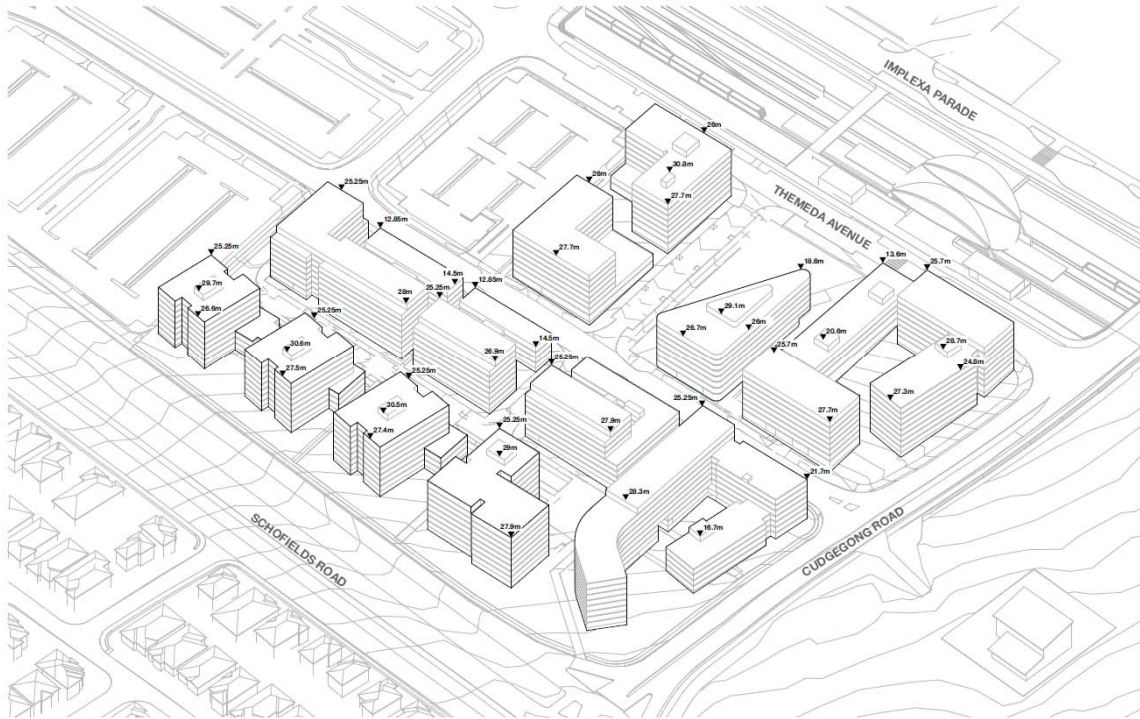


Figure 17: Building envelopes
(Source: Urban Design Report, Appendix C)

6.5. Land use

It is proposed to provide for a vibrant mixed use centre comprising residential, commercial, retail and community uses. The residential development will comprise a diverse housing stock including two storey terraces, maisonettes and apartments to accommodate and foster a diverse community of residents.

The primary role of retail and non-retail facilities on the Site will be convenience-based, to serve localised demand for residents, workers and commuters. Retail floorspace will generally focus on convenience goods, everyday comparison goods, food, beverage, cafes and eating out, retail services, and non-retail shopfronts which reflect the local demographics. Non residential uses are located in close proximity to the Station to provide an activated local centre.

Commercial office floorspace is proposed that offers residents the ability to work close to home. It is envisaged that the commercial floorspace will need to be designed to be flexible in function and use, offering a mix of co-working/flexible space as well as conventional office space.

Some community space is provided for in the Concept Proposal. Community uses would contribute to the daily activity and vibrancy of the precinct. The use and management of the community space will be subject to further discussion with Blacktown City Council at the appropriate stage.

Further details and justification for the proposed land use mix are provided in Section 8.3.

6.6. Affordable housing

A minimum of 5 per cent of the final number of dwellings on sites 1 and 2 will be provided as affordable housing targeted to very low, low and moderate income earners in line with the

State Environmental Planning Policy (Affordable Rental Housing) 2009. At a minimum, this housing stock will be managed by a Community Housing Provider for 10 years from the date of practical completion / certification / occupancy.

Through the disposal of the land, Landcom and Sydney Metro will be seeking and incentivising respondents and potential purchasers to go beyond this minimum and to develop and commit to solutions that are achieving more affordable housing and diverse housing outcomes as per the Landcom's Housing Affordability and Diversity Policy.

Landcom's Housing Affordability and Diversity Policy is publicly available at <http://www.landcom.com.au/assets/Our-approach/1711-Landcom>

<http://www.landcom.com.au/assets/Our-approach/1711-Landcom-Housing-Policy.pdf>

6.7. Public domain and landscaping

A Public Domain and Landscape Strategy has been prepared by Clouston Associates which will guide the future development and treatment of the public domain (refer **Appendix I**). High quality public domain and open space will be integral to the overall concept for the Site. Generous and well-defined public domain, including the central park, key streets and pedestrian/cycle links, will create an attractive place and deliver a functional network. Vibrancy and activation of the public domain will be created through the delivery of active street frontages and by providing buildings with no setbacks in certain key areas.

Further detail regarding the landscape concept and public domain treatment is provided in Section 8.2 of this EIS and in the Public Domain and Landscape Strategy at **Appendix I**.



Figure 18: Landscape master plan
(Source: Public Domain and Landscape Strategy, Appendix I)

6.8. Open space

The Concept Proposal makes provision for a 2,900m² village park. This complies with Section 4.2.3(2) of the *Schedule 4 Area 20 Precinct Cudgegong Road Station DCP*, which requires a park in the order of 2,500m² to 3,000m² in area.

The design for the village park creates and fosters the idea of the 'meeting place' by providing a variety of spaces, activities and opportunities for social interaction while also increasing the awareness of the surrounding natural environment, particularly its connection to the Second Ponds Creek corridor.

The proposed park design provides for a variety of spaces and attractions across the park. This is shown in Figure 8.2 in the Public Domain and Landscape Strategy at **Appendix I**. The village park also forms an important network to and from the train station.

There are five key considerations for the park design:

- Maximising useful and functional space
- Activation of space
- Ease of circulation
- Balance of hardscape and softscape eg paved plaza and open lawn
- Universal access to the adjacent buildings.

Due to the sloping land form, the northern side of the park is four metres higher than the southern side of the park. Therefore, creating level and accessible platforms (levels) is a core design goal. A connected network of pathways, steps and ramps within the park will provide access for all abilities between the various platforms.

A tree grid with a 7m x 6m spacing is proposed in the paved plaza to provide flexible space for community activities. The grid utilise deciduous species to ensure sufficient shade in summer and solar access in winter is provided. Seating walls and shelters are proposed along the paved area surrounding an upper level lawn area. A play area is proposed for the lower lawn area.

6.9. Vehicular access and parking

Vehicular Access

Vehicular access to the Site is proposed at the collector roads of Cudgegong Road and Tallawong Road. These access points will connect to a series of internal local streets.

The proposed internal road network will provide easy and direct access to the surrounding wider road network including Windsor Road, via Schofields Road (and also Hambledon Road) to the south and Guntawong Road to the north. Windsor Road then provides direct access to the arterial road network including the Westlink M7 in the south and suburbs such as Rouse Hill, Windsor and Richmond to the north.

Themeda Avenue, located to the north of the Site is connected to Cudgegong Road and Tallawong Road via two set of traffic signals. The proposed signalised intersections will be all-movement permitted intersections. Therefore, safe access and egress can be made on Themeda Avenue, providing ample opportunities for vehicles to safely egress.

On the other hand, Conferta Avenue connects with Cudgegong Road and Tallawong Road via two left in / left out priority intersections to minimise conflicts with traffic on the two collector roads Cudgegong Road and Tallawong Road and also preserve Conferta Avenue

with a local street function. Residents / visitors accessing the Site from the north can enter via the signalised intersections at both end of Themeda Avenue.

The combination of the different access options to the Site will provide easy and direct connections to and from the surrounding road network in all directions.

Parking

The Traffic and Transport Impact Assessment prepared by SCT Consulting (**Appendix L**) provides an assessment of appropriate parking provision of the Site, having particular regard to adherence to TOD principles. The Concept Proposal provides for a total of 975 residential car parking spaces and 140 non residential parking spaces based on the parking rates set out in Table 8. The number of car parking spaces provided as part of the proposal is targeted to be lower than those suggested by the relevant guidelines, in order to reduce reliance of future residents and employees on vehicular traffic and take full advantage of a transit-oriented development.

Table 8: Proposed parking rates

Residential	Maximum car parking rate
1 bedroom apartment	0.4 spaces/dwelling
2 bedroom apartment	0.7 spaces/dwelling
3+ bedroom apartment	1.2 spaces/dwelling
Visitor	0.14 spaces/dwelling
Other	
Commercial	1/70m ² GFA
Retail/community	1/60m ² GFA

One of the key principles of the development is to encourage greater use of cycling by residents. The Concept Proposal aims to modify local residents' travel behaviour by providing high quality, safe and accessible end-of-trip facilities such as lockers and showers located in centralised cycle hubs that are integrated within developments. Accordingly, it is proposed to provide 1 cycle parking space per apartment for residents plus 1 space per 10 dwellings for visitors which would equate to a total of approximately 1,210 bicycle parking spaces being required. Bicycle parking would be provided in safe and accessible locations within the buildings and / or appropriate public domain locations that would encourage higher use of active transport.

An assessment of traffic and parking impacts is provided in Section 8.7.

6.10. Pedestrian and cycle access

Pedestrian and cyclist access to the Site will be provided mainly via the proposed north-south shared paths on Cudgegong Road and Tallawong Road, as well as the north-south street (Aristida Street) to the west of Cudgegong Road. These routes will connect cyclists and pedestrians to the existing east-west shared path on Schofields Road south of the Site and Rouse Road north of the Site.

The connections to Schofields Road will provide excellent cycle access to the wider cycle network via the cycle routes along Windsor Road in the east and Richmond Road in the west. Pedestrian and cycling access to the Site from the wider road network will also be facilitated with the provision of crossing opportunities at the signalised intersections of Themeda Avenue with Cudgegong Road and Tallawong Road.

Internal pedestrian crossings are proposed across Themeda Avenue to provide safe crossing opportunities for pedestrians to access the Tallawong Station. A strong north-south pedestrian and street environment is created to link both sides of the Station Precinct area and the Station Concourse, while a new park is identified on this axis in the south to serve the new residents.

A strong pedestrian desire line between Schofield Road and the Tallawong Station is expected through the design of the Site. The need for an additional pedestrian crossing at Conferta Avenue south of the park will be considered during detailed design. This would provide continuity and a safer route for pedestrians walking between Schofield Road and the Station. Further consideration would also be given during detailed design to whether the pedestrian crossing should be combined with a crossing for cyclists, or whether an additional (separate) crossing opportunity needs to be provided for cyclists.

The proposed development promotes pedestrian and cyclist movements with a permeable internal layout that provides good connection to the surrounding cycling and walking network.

6.11. Ecologically Sustainable Development

An Ecologically Sustainable Development Report has been prepared by AECOM and is provided at **Appendix M**. The report details how ESD principles (as defined in clause 7(4) of Schedule 2 of the EP&A Regulation 2000) are intended be incorporated in the design, construction and ongoing operation of the development.

The report includes a framework for how the proposed development will reflect best practice sustainable building principles to improve environmental performance, including energy and water efficient design and technology and use of renewable energy. The framework seeks to identify the complex interchangeable relationship between indicators that contribute to a sustainable and liveable development. The assessment takes in to account both the proposed precinct development impacts and broader Area 20 elements to ensure an integrated planning approach.

The ESD report also outlines aspirational targets, acting to guide future developers, inform tenderers and further enhance ESD outcomes. These have not been mandated to allow for further evaluation of practical solutions and flexibility in design development.

The ESD Report proposes a governance framework and process of continual review to provide a best for project approach that delivers optimal sustainability outcomes.

More detail on ESD principles will be provided as part of the future detailed applications. It is anticipated the recommendations and targets specified in the ESD report will inform developer(s) requirements.

6.12. Accessibility

An Access Design Assessment Report has been prepared by Design Confidence and is provided at **Appendix R**. The report considers the extent to which the architectural design documentation complies with the accessibility provisions of the Building Code of Australia 2016 (BCA) and how advisory inclusive design provisions might be implemented within the public realm.

The report summarises the compliance status of the architectural design in terms of applicable prescriptive provisions of the BCA and indicates a capability for compliance with the BCA. At this concept stage in the design, documentation is not able to be provided for assessment, therefore in all instances design detail is required. The report refers to matters which need to be considered by the design team and any assessment authority at relevant stages of design and/or assessment.

In relation to the public domain, it is proposed that the development be designed to incorporate access principles, including the following:

- To provide liveable and active public domain spaces that integrate with the Metro station and proposed land used and are accessible for new residents and the neighbouring community
- To address the anticipated aging population and its needs
- To maximise access to all parts of the Site, especially the Metro Station for all future visitors and members of the community
- To provide a strong, legible framework for pedestrians and cyclists, considering desire lines
- To meet the aims of the Disability Discrimination Act.

The sloping site has been identified as a challenge when providing level changes. The report recommends that as far as possible walkways, ramps and stairways within the public realm be designed in accordance with AS1428.1-2009.

The report further notes that the proposed pathways provide an appropriate level of access to the buildings located within the precinct, as well as to and from the Metro Station, the commuter car park and the adjacent neighbourhood, being The Ponds. All pedestrian paths are provided with a minimum of approximately 1800mm width, which is capable of accommodating a ramp or walkway compliant with AS1428.1-2009.

The recommendations in the Access Design Assessment will guide the future design of the public domain. In particular, further consideration of gradients and accessibility requirements will be required as the design progresses.

6.13. Civil design

A Civil Design Report and Civil Drawings have been prepared by AECOM for the Concept Proposal and are provided at **Appendices X** and **Y** respectively.

The Civil Design Report provides advice on the design for roads, earthworks and levels, intersections and basement, pavements, lighting, stormwater and utilities. These have been prepared with consideration for the requirements set out in technical studies and standards already existing which include but are not limited to:

- Blacktown City Council – Civil Works Specification (BCC, 2005)
- Blacktown City Council Growth Centre Precincts – Development Control Plan (DCP) (BCC, 2016).

6.14. Infrastructure and services

A Utilities Report has been prepared by AECOM and is provided at **Appendix Z**. The report investigates the provision of the following services:

- Potable Water

-
- Wastewater
 - Electrical
 - Gas
 - Data and Telecommunications

More specifically, the report:

- summarises the existing services infrastructure located within the Tallawong Station Precinct South and surrounding area
- identifies scope of potential diversions and removal of existing services infrastructure required to support the proposed development
- considers potential internal services reticulation layouts and key design parameters
- considers potential external utility connections and lead-in infrastructure requirements based on advice from the relevant authorities
- summarises next steps including site investigations to confirm the assumptions included in this report.

The report provides concept layouts for costing and infrastructure capacity testing and has been prepared in liaison with relevant authorities. Further detailed design will be required to confirm the final layouts of each utility service including lead-in requirements.

This report demonstrates that public infrastructure (including the supply of potable water, wastewater, electricity, gas and telecommunications) have been considered within the proposal and will be made available to adequately service the future precinct development.

6.15. Stormwater drainage

The proposed stormwater drainage system for the Site is detailed in the Integrated Water Cycle Management Strategy prepared by AECOM and included at **Appendix AA**. The main features of the system will be:

- provision of a pit and pipe drainage network with capacity to convey the 20 year ARI storm
- provision of overland flow routes to safely convey runoff from the 100 year ARI storm
- provision of onsite detention storage for each development lot
- provision of drainage connection points for each development lot
- management of water quality through the incorporation of Water Sensitive Urban Design (WSUD) techniques
- management of water quantity to ensure no increase in stormwater discharge from the Site for the 1, 20 and 100 year ARI storms
- provision of a bioretention basin on the eastern side of Cudgegong Road, adjacent to an existing basin. This basin will be required to service the development on the southern side of Conferta Avenue.

WSUD measures including gross pollutant traps, passive irrigation, bioretention areas and rainwater harvesting have been considered for the development. General layouts have been

adopted for the current design, and further details including subsoil drainage and exact infrastructure layouts will be further developed in detailed design.

6.16. Development staging

The proposed development staging is shown in the plans at **Appendix N**. The Metro station, surrounding works and dedication of roads are expected to be completed in 2019 (refer discussion in Section 1.3). Site 1 is expected to be developed during 2020-2022 and Site 2 during 2022-2026.

Expressions of Interest have been sought from developers for delivery of Sites 1 (north of Conferta Avenue) and 2 (south of Conferta Avenue). It is intended that both sites will be sold to one developer though this may change depending on market responses. To ensure early activation, the developer is likely to be required to develop Site 1 before commencing on Site 2. In order to ensure early activation, Landcom and Sydney Metro expect the successful purchaser(s) to deliver the buildings and public domain on Site 1 as soon as practical.

Early works/interim activation uses - From 2019-2022

Around Metro opening in 2019 and before the developer delivers buildings and public domain on Site 1, Landcom and Sydney Metro are planning to deliver some early works to activate areas around the station with various interim or long term uses to provide services, community events and improved amenity for commuters and the neighbouring community. Early public domain works may include the delivery of:

- paving, astro-turfed park space, landscaping, seating, umbrellas and other street and park furniture
- hoarding and fencing that are either standard, or more interactive with possible use of vertical space for information, wayfinding, displays, public art, advertising, etc
- signage and directional bollards
- public art offerings that could be small or large, ephemeral or permanent
- a playground and/or play areas, possibly including interactive water play and/or adventure maze or other temporary play set-ups
- toilets and other amenities such as a water bubbler and seasonal decorations
- the northern portion of the future village park in an interim or permanent state.

Potential uses may include:

- interim food and beverage spaces, potentially including containers or prefab kiosk structures, one or several food trucks, click and collect lockers (online shopping)
- a permanent retail offer that could include a café with NBN and Wi-Fi, an all-day licensed dining area, toilets, a small bookshop and a convenience store
- other temporary structures that could be used for community spaces ,creative spaces (educational, experimental, artistic, entrepreneurial), and retail spaces (convenience retail, brand activation and pop ups)
- some larger events designed to attract a large number of visitors
- temporary uses that take-up a large portion of vacant land such as tree and plant nursery, storage, BMX tracks, etc.

Site 1 Development – estimated 2020-2022

Site 1, closest to the Metro Station is expected to be developed between 2020 and 2022. It will include:

- Approximately 360 apartments and approximately 9000m² of retail, commercial and community use floor space
- A 2900m² public park and pedestrian links to the station
- A new north-south street including pedestrian and cyclist link to meet the Sydney Metro constructed unpaid pedestrian/cycle link.

Site 2 Development – estimated 2022-2026

Site 2, located between Conferta Avenue and Schofields Road is expected to be developed between 2022 and 2026. It will include:

- Approximately 740 apartments
- Pedestrian access route from the intersection of Cudgegong Road and Schofields Road toward the station
- Pedestrian and cyclist route aligned with the pedestrian and cyclist link which crosses the rail corridor
- New road into the southern site, and a pedestrian plaza
- A bioretention basin, located on the eastern side of Cudgegong Road.

Part C

Statutory planning framework

7. Statutory planning framework

This Chapter addresses compliance with:

- the EP&A Act and the Regulation (as required by Section 4.15(a)(iv)) in relation to the requirements for SSD
- Section 4.15(1)(i) of the EP&A Act and the requirements of the SEARs in relation to the statutory provisions applying to the Site in environmental planning instruments, being State Environmental Planning Policies (SEPPs)
- Section 4.15(a)(ii) of the EP&A Act, in relation to any proposed EPIs (draft LEPs and SEPPs) that have been the subject of public consultation under the EP&A Act
- Section 4.15(a)(iii) in relation to consideration of the Council's development control plan (DCP), notwithstanding that that clause 11 of the SRD SEPP states that DCPs do not apply to SSD.

7.1. Environmental Planning and Assessment Act 1979

7.1.1. EP&A Act Objects

An assessment of the project in relation to the objects of the EP&A Act is provided in Table 9.

Table 9: Assessment of Concept Proposal against objects of EP&A Act

Object	Assessment
1.3(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	<p>The Concept Proposal will promote the social and economic welfare of the community by increasing housing supply to meet the differing housing needs of the community, by providing housing in close proximity to high quality public transport, by activating the area around the Tallawong Station to help to make the station active and viable, and by aligning housing development with investment in regional and district infrastructure.</p> <p>The Concept Proposal will also contribute to the proper management, development and conservation of the State's natural and other resources. In particular, measures outlined in the ESD report prepared by AECOM and included in Appendix M will be implemented to ensure the conservation of resources throughout the construction and operational phases.</p>
1.3 (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	<p>The Concept Proposal accords with the principles of Ecologically Sustainable Development, as set out in Schedule 2 of the EP&A Regulation 2000. This is further considered in Section 7.2 of this EIS.</p>
1.3(c) to promote the orderly and economic use and development of land	<p>The Concept Proposal encourages the promotion and co-ordination of the orderly and economic use and development of land by creating a well-connected and sustainable community on surplus government land adjacent to a new Metro station.</p>
1.3(d) to promote the delivery and maintenance of affordable housing	<p>Landcom and Sydney Metro are committed to providing affordable housing and housing that meets the diverse needs of the community. The Concept Proposal will provide for affordable housing in accordance with Landcom's policy (refer discussion in Section 6.6).</p>
1.3(e) to protect the environment,	<p>The Site is certified under the Biodiversity Certification Order and has been cleared. The</p>

Object	Assessment
including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats	removal of vegetation on the Site has been offset via the Growth Centres Conservation Plan. Further detail on the offset program is provided in Section 8.13.
1.3(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	There are no heritage listings for the Tallawong Station Precinct South Site. The proposed development of the Site will have no adverse impact on the heritage significance of three state heritage items within two kilometres of the Site: Rouse Hill House and Farm; the (former) Royal Oak Inn; and Merriville House and Gardens. Previous investigations have determined that there is little potential for subsurface archaeological remains to remain on site and the Site area has been confirmed to be cleared of Aboriginal heritage.
1.3(g) to promote good design and amenity of the built environment	<p>The Concept Proposal has been carefully designed to ensure that the built form and amenity of the future urban environment results in the creation of useable, enjoyable and attractive buildings and public domain. The design is the culmination of a detailed assessment of the site, its relationship to the Metro Station, the objectives of transit oriented development as well as a range of other design parameters. This is shown in the Urban Design Report at Appendix C and Design Verification Report at Appendix D.</p> <p>The detailed design of the buildings will be subject to a design excellence assessment process (refer discussion in Section 8.1.3) to ensure that the ultimate built form and public domain outcomes to meet the seven objectives set out in the GANSW's <i>Better Placed - An integrated design policy for the built environment of New South Wales</i>. Further discussion on the built environment design is provided in Section 8.1.</p>
1.3(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	This Concept SSD application is a Stage 1 application and does not seek approval for any construction works. However, future applications for development will consider building construction related matters to meet this objective.
1.3(i) promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	Consultation has been undertaken with various levels of government and government agencies during the preparation of the Concept Proposal, and all government agencies will be afforded the opportunity for further input into the development process during the public exhibition process.
1.3(j) to provide increased opportunity for community participation in environmental planning and assessment.	A consultation program with the community and key stakeholders has been undertaken (refer discussion in Chapter 4). Further consultation will be carried out during exhibition of the application.

7.1.2. State Significant Development

Under Part 4, Division 4.7 of the EP&A Act, an assessment pathway is provided for State Significant Development. The State Significant Development provisions under the EP&A Act are accompanied by the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) which defines which projects are deemed to be of State Significance.

Under Schedule 1 of the State and Regional Development SEPP, development within a rail corridor or associated with railway infrastructure for residential and commercial purposes with a capital investment value of more than \$30 million is declared to be SSD. The Concept

Proposal is valued at over \$30 million and is therefore considered to be SSD. A Quantity Surveyor's report confirming the CIV is provided at **Appendix B**.

Under clause 8A of the SRD SEPP Minister for Planning ("the Minister") is the consent authority for SSD made by a public authority. Transport for NSW is a public authority and therefore the Minister is the consent authority in this instance.

Under Section 4.41 of the EP&A Act certain authorisations that would normally be required from other agencies, such as approval under the Heritage Act, are suspended in relation to SSD.

7.1.3. Staged SSD application

Section 4.22 of the EP&A Act relates to staged development applications. A staged development application is one that sets out Concept Proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications. The application may set out detailed proposals for the first stage of development.

This development application is a Staged SSD application, comprising a Concept Proposal for the Tallawong Station Precinct South Site. A staged DA is commonly referred to as a 'Stage 1 Development Application' or a 'Concept Proposal'. These terms are used interchangeably throughout the consultant reports, but should be interpreted to mean 'staged DA' (for the purposes of Section 4.22 of the EP&A Act) in each instance.

Section 4.24 of the EP&A Act provides that while any consent granted on the determination of a staged DA for a site remains in force, the determination of any further development application in respect of that site cannot be inconsistent with that consent.

7.2. Environmental Planning and Assessment Regulation 2000

Schedule 2 of the EP&A Regulation 2000 provides the requirements for the content of an EIS. The provisions of the Regulation, specifically clauses 6 and 7 relating to the form and content of an EIS are relevant to this document and have been used as the basis for preparing this EIS.

The EP&A Regulation lists four principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle
- Intergenerational equity
- Conservation of biological diversity and ecological integrity
- Improved valuation and pricing of environmental resources.

7.2.1. The Precautionary Principle

The precautionary principle provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment as a result of the Concept Proposal and therefore the precautionary principle is not relevant to the proposal.

7.2.2. Inter-Generational Equity

Inter-generational equity seeks to ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

The proposal has been designed to benefit both the existing and future generations by providing for the orderly and sustainable use of surplus government land for housing in an area that will have excellent transport and other services.

The proposal has also been designed to benefit existing and future generations by creating an attractive high density urban precinct with a great variety of products, built forms, activation, public domain experience – with streets, laneways, parks and plazas – that will create a neighbourhood that people will want to live and work in.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

7.2.3. Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration. As discussed in Section 8.13, the proposal will not have any significant effect on the biological diversity and ecological integrity of the site or surrounds. The area has been largely cleared in accordance with the Biodiversity Certification Order and does not contain any significant biodiversity or ecological elements.

7.2.4. Improved valuation, pricing and incentive mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. As demonstrated throughout this EIS, the project will have significant social, economic and environmental benefits. Mitigation measures will be put in place to ensure environmental resources are protected. Sustainability initiatives will be incorporated into the design and operation of the various elements of the project as well as during the construction phase. Further detail regarding sustainability initiatives will be provided in future Stage 2 development application(s).

7.3. Other NSW legislation that applies

Clause 7(1)(d)(v) of Schedule 2 of the EP&A Regulation requires a list of any approvals that must be obtained under any other Act or law before the development may be carried out.

Being a SSD DA, the requirement for certain other approvals under other NSW legislation is 'switched off' under Section 4.41 of the EP&A Act. This includes the Heritage Act, Rural Fires Act and Water Management Act.

In respect of other approvals that are required, the provision of new roads that will connect into Conferta Ave will require consent under Section 138 of the Roads Act of the roads authority, in this case Blacktown City Council. However, in relation to SSD applications, Section 4.42 of the EP&A Act provides that other authorisations that may be required, including consent under Section 138 of the Roads Act, cannot be refused if:

- It is necessary for carrying out an approved State significant development
- It is substantially consistent with that approval.

7.4. State Environmental Planning Policies

As required by the SEARs and Section 4.15 (a)(i) of the EP&A Act, the Concept Proposal has been assessed in relation to the following current and draft environmental planning instruments:

- *State Environmental Planning Policy (BASIX) 2004*
- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy (State and Regional Development) 2011*
- *State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and relevant exhibited Draft Amendments*
- *State Environmental Planning Policy (Urban Renewal) 2010*
- *State Environmental Planning Policy No 19 – Bushland in Urban Areas*
- *State Environmental Planning Policy No. 55 Remediation of Land*
- *State Environmental Planning Policy No. 65 Design Quality of Residential Apartment Development*

7.4.1. State Environmental Planning Policy (BASIX) 2004

State Environmental Planning Policy (Building Sustainability Index: BASIX) aims to ensure that new residential development within New South Wales is designed and constructed to use less water and energy. This policy incorporates BASIX, which is a web-based planning tool for the assessment of the potential performance of a development against an agreed set of criteria for energy and water conservation.

While this Concept SSD DA does not seek approval for building construction, the ESD Report at **Appendix M** identifies BASIX targets and makes recommendations regarding compliance with BASIX requirements for future buildings.

7.4.2. State Environmental Planning Policy (State and Regional Development) 2011

Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) identifies development which is declared to be SSD. Clause 19 of Schedule 1 provides that the following development is SSD:

19 Rail and related transport facilities

(1) *Development that has a capital investment value of more than \$30 million for any of the following purposes:*

- (a) *heavy railway lines associated with mining, extractive industries or other industry,*
- (b) *railway freight terminals, sidings and inter-modal facilities.*

(2) *Development within a rail corridor or associated with railway infrastructure that has a **capital investment value of more than \$30 million** for any of the following purposes:*

- (a) **commercial premises or residential accommodation,**
- (b) *container packing, storage or examination facilities,*

(c) *public transport interchanges.*

The term rail corridor is not defined in the SRD SEPP and therefore reference should be made to the definition in Clause 78 of the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) which defines rail corridor as follows:

rail corridor means land:

(a) that is owned, leased, managed or controlled by a public authority for the purpose of a railway or rail infrastructure facilities, or

(b) that is zoned under an environmental planning instrument predominantly or solely for development for the purpose of a railway or rail infrastructure facilities, or

(c) in respect of which the Minister has granted approval under Part 3A or Part 5.1 or (before its repeal) Division 4 of Part 5 of the Act, or consent under Part 4 of the Act, for the carrying out of development (or for a concept plan for a project comprising or including development) for the purpose of a railway or rail infrastructure facilities.

The Site meets this definition of rail corridor as:

- The Site was acquired by Transport for NSW for the purpose of the construction and operation of the SMNW
- The construction activities on the Site were approved under SSI 5414 in accordance with Part 5.2 of the EP&A Act.

As noted in Section 7.1.2, the proposal has a capital investment value over \$30 million (refer Quantity Surveyor's Report at **Appendix B**) and is for residential accommodation and commercial uses in the SMNW corridor. It therefore meets the criteria for SSD under clause 19(2) of the SRD SEPP.

7.4.3. State Environmental Planning Policy (Sydney Region Growth Centres) 2006

The planning controls for the Tallawong Station Precinct South Site are contained within the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres SEPP). The main part of the Growth Centres SEPP contains general provisions that apply across the Growth Centres while the detailed provisions applying specifically to the Area 20 Precinct are provided in Appendix 6 of the policy.

An assessment of the Concept Proposal against the relevant controls contained in Appendix 6 is provided below.

Part 2 Permitted or Prohibited Development

Under Part 2 Permitted or Prohibited Development of Appendix 6, the Site is zoned B4 Mixed Use, R3 Medium Density Residential, SP2 Local Road and SP2 Local Drainage.

Uses permitted in each of these zones are shown in Table 10. Mixed use and residential flat buildings are permissible in the B4 and R3 zones.

Table 10: Permissible uses

Zone	Relevant Permitted Uses
B4 Mixed Use	Business premises; Car parks; Centre-based child care facilities; Community facilities; Educational establishments; Entertainment facilities; Function centres; Residential flat buildings; Retail premises; Roads; Seniors housing; Shop top housing
R3 Medium Density Residential	Attached dwellings; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Group homes; Manor homes; Multi dwelling housing; Neighbourhood shops; Residential flat buildings; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Studio dwellings
SP2 Local Road	Local Road (the purpose shown on the Land Zoning Map), including any development that is ordinarily incidental or ancillary to development for that purpose; Drainage; Earthworks; Environmental protection works; Flood mitigation works; Roads; Water recycling facilities
SP2 Local Drainage	Local Drainage (the purpose shown on the Land Zoning Map), including any development that is ordinarily incidental or ancillary to development for that purpose; Earthworks; Environmental protection works; Flood mitigation works; Roads; Water recycling facilities

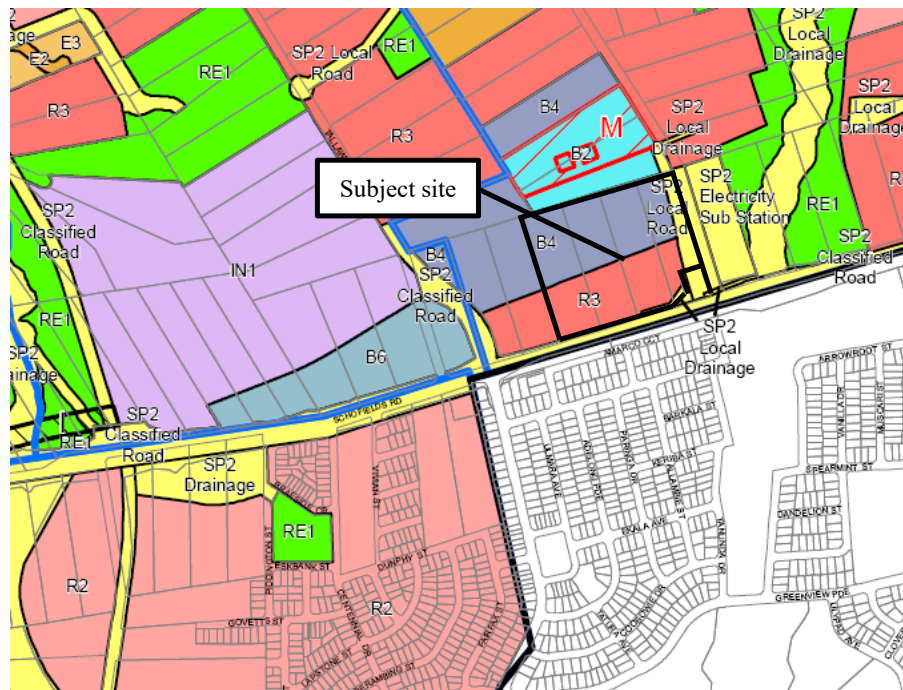
**Figure 19: Zoning map extract**

Figure 20 shows the Concept Proposal with the zoning overlain. It indicates that a small area of the proposed residential development encroaches on land zoned SP2. Residential development is not permitted in the SP2 zone. It is proposed to rely on clause 5.3 *Development near zone boundaries* for approval of this part of the Concept Proposal. Further discussion on this issue is provided below.

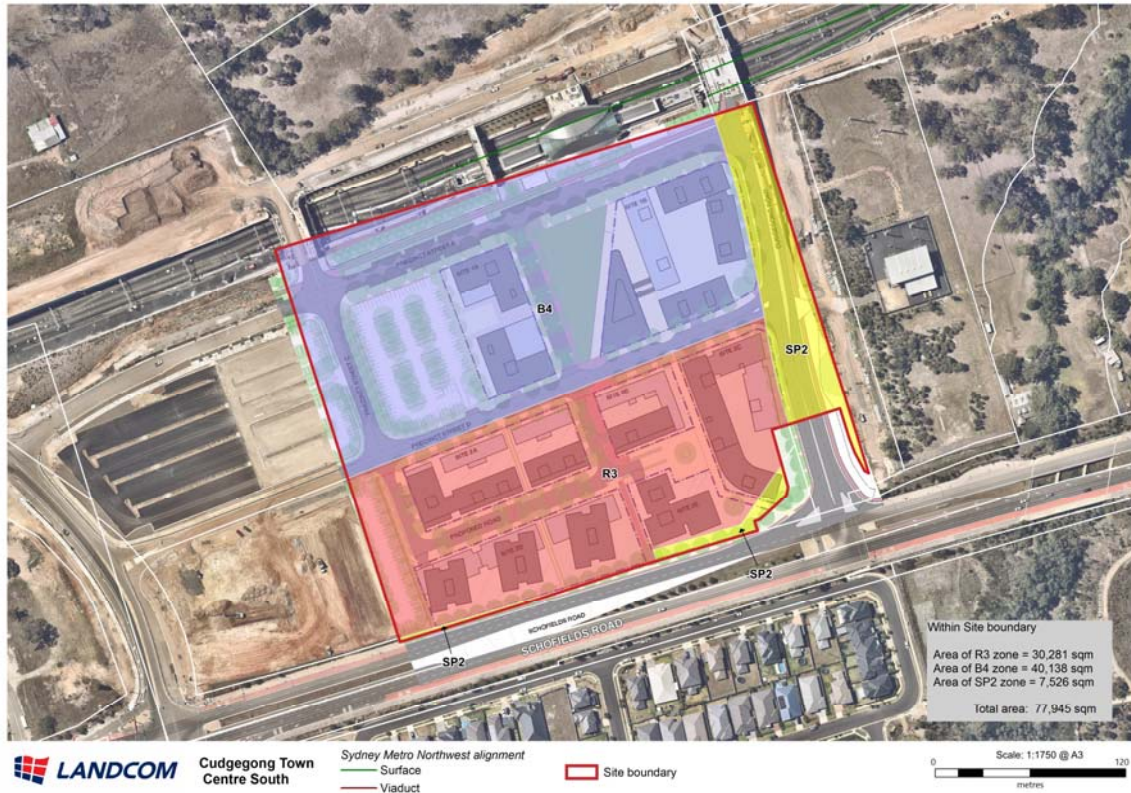


Figure 20: Zoning of Concept Proposal

Part 3 Principal Development Standards

The relevant principal development standards under Part 3 of Appendix 6 are minimum lot sizes, residential density, maximum building height and the maximum floor space ratio development standards.

Clause 4.1AB: *Minimum lot sizes for residential development in Zone R2 Low Density Residential and Zone R3 Medium Density Residential*

Clause 4.1AB specifies that minimum lot sizes for different types of residential development in the R2 and R3 zones, including residential flat buildings. Sub-clause 4.1AB(9)(b) provides that the minimum lot size for residential flat buildings is 1,000m² where the dwelling density is 45 dwellings per hectare.

This SSDA does not seek approval for subdivision. Subdivision of the proposed residential apartments will occur at a later stage. However, as noted in the Urban Design Report at **Appendix C**, the site areas for each of the apartment blocks are greater than 1,000m² and therefore are able to comply with this requirement.

Clause 4.1B: *Residential density*

The residential density controls aim to:

- establish minimum density requirements for residential development within the Area 20 Precinct
- ensure that residential development makes efficient use of land and infrastructure, and contributes to the availability of new housing

- ensure that the scale of residential development is compatible with the character of the precinct and adjoining land.

The minimum density requirements for residential development are shown on the Residential Density Map accompanying the Appendix 6 controls and reproduced below in Figure 21. The minimum residential density for that part of the Site zoned R3 Medium Density is 45 dwellings per hectare. There is no minimum density specified for the B4 zoned land.

The proposed residential density for the land zoned R3 is approximately 236 dwellings per hectare which complies with the minimum dwelling density control.

One of the fundamental objectives of the Concept Proposal is to make efficient use of land and infrastructure, particularly the new transport infrastructure being provided by the SMNW. The provision of high density residential development around the station, supported by appropriate retail, community and open space facilities is consistent with the principles of Transit Oriented Development. In addition, the Concept Proposal makes a significant contribution to the provision of new housing that is of an appropriate scale consistent with the future character of the precinct surrounding the station.

It is therefore considered that the proposal is consistent with the residential density objectives and controls contained in clause 4.1B.

Further discussion on residential density is provided in Section 8.4.

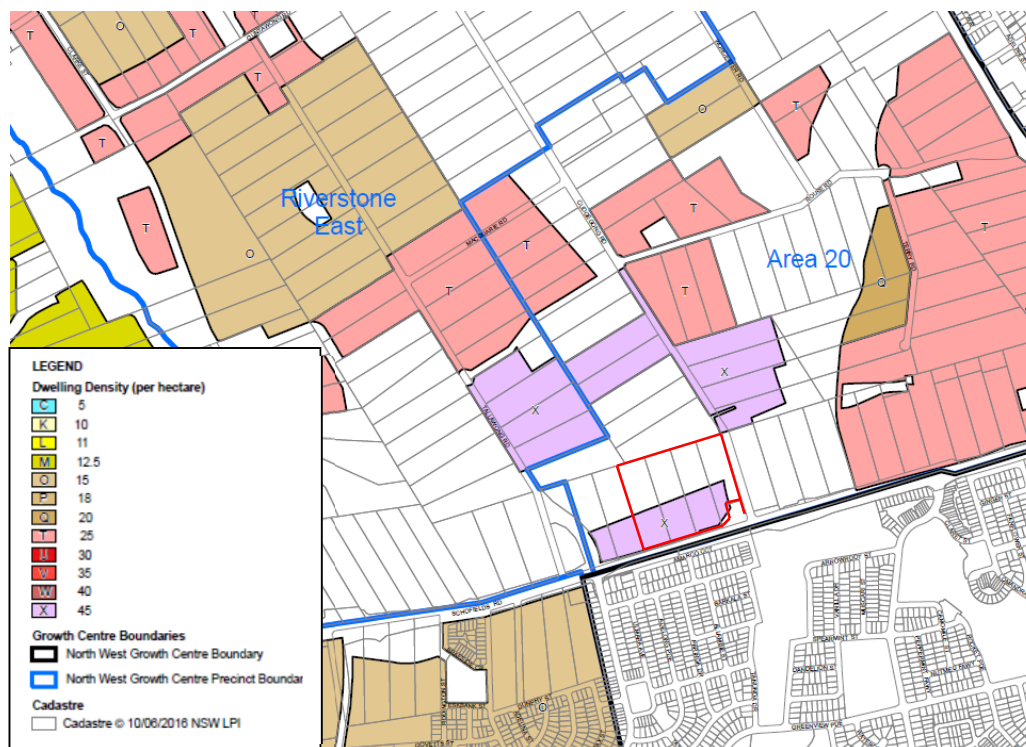


Figure 21: Minimum residential density under Appendix 6 (Site shown outlined in red)

Clause 4.3: Height of buildings

The height controls aim to:

- establish the maximum height of buildings on land within the Area 20 Precinct
- minimise visual impact and protect the amenity of adjoining development and land in terms of solar access to buildings and open space
- facilitate higher density development in and around commercial centres and major transport routes.

The maximum height limit that applies to the Site is shown on the Height of Buildings Map accompanying the Appendix 6 controls, reproduced below in Figure 22. The maximum height specified for the Site is 26 metres, intended to provide for a maximum of eight storeys.

The Concept Proposal provides for a range of building heights, ranging from two storeys to eight storeys. Notwithstanding that the buildings do not exceed eight storeys in height, a number of buildings exceed the maximum building height. This is due to a number of factors including the sloping topography, the need for lift overruns to provide access to the rooftop open space areas and the need to provide large floor to ceiling heights for the ground, first and in one instance the second floor of the buildings. All of the non-compliances are considered minor.

A Clause 4.6 Variation request has been prepared to support the variation to the height development standard as specified in the Growth Centres SEPP - Appendix 6 planning controls. The Clause 4.6 Variation Request is provided at **Appendix G** of this EIS.

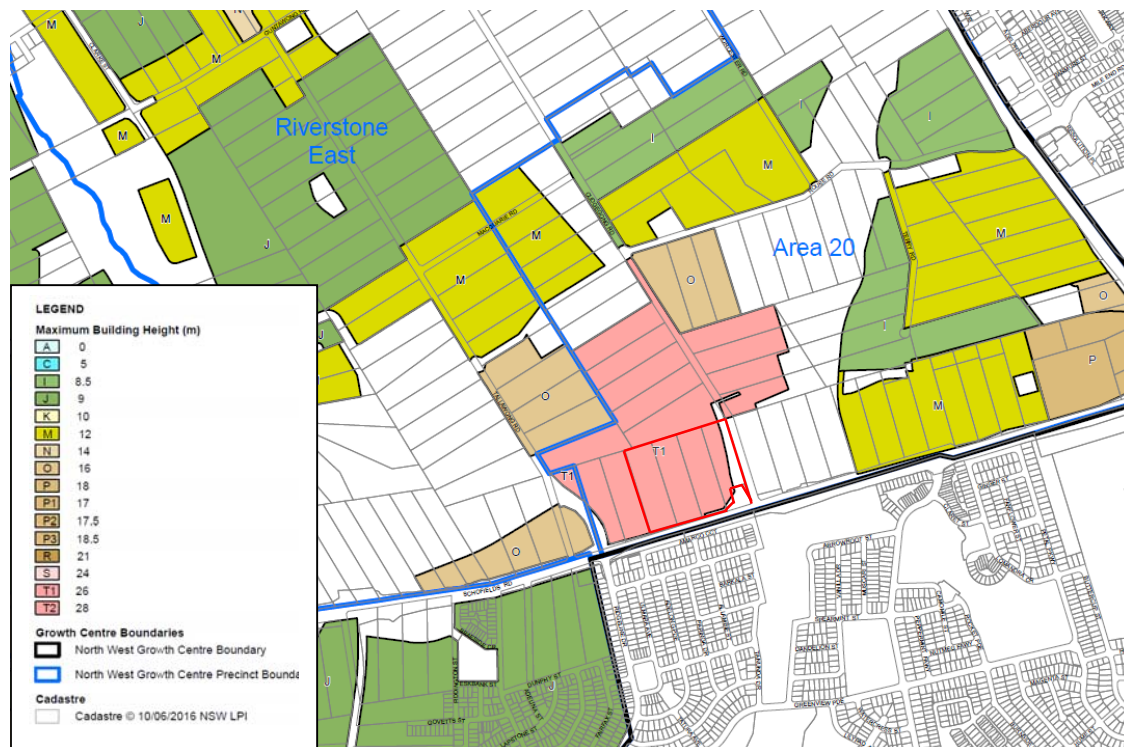


Figure 22: Maximum height limit under Appendix 6

Clauses 4.4 and 4.5: Floor space ratio

The objective of clause 4.4 is to control the bulk and scale of buildings within the Area 20 Precinct by setting maximum floor space ratios (FSRs) for development.

The maximum FSR limit that applies to the Site is shown on the Floor Space Ratio Map accompanying the Appendix 6 controls, reproduced below in Figure 23. The maximum FSR specified for the Site is 1.75:1.

Under clause 4.5, the FSR of buildings on a site is the ratio of the gross floor area of all buildings within the site to the site area. The site area, where the proposed development is to be carried out on two or more lots, is taken to be the area of any lot on which the development is proposed to be carried out that has at least one common boundary with another lot on which the development is being carried out. Land excluded from the site area calculations comprises land on which the development is prohibited (in this case, the SP2 zoned land) along with community land or a public place.

As shown in the Area Schedule – Developable Land in the Urban Design Report (**Appendix C**) the total site area is 70,419m² and the total GFA is approximately 95,000m² which results in a FSR for the buildings on the Site of 1.34:1. This is below the maximum FSR allowed on the Site of 1.75:1. The concept development therefore complies with this control.

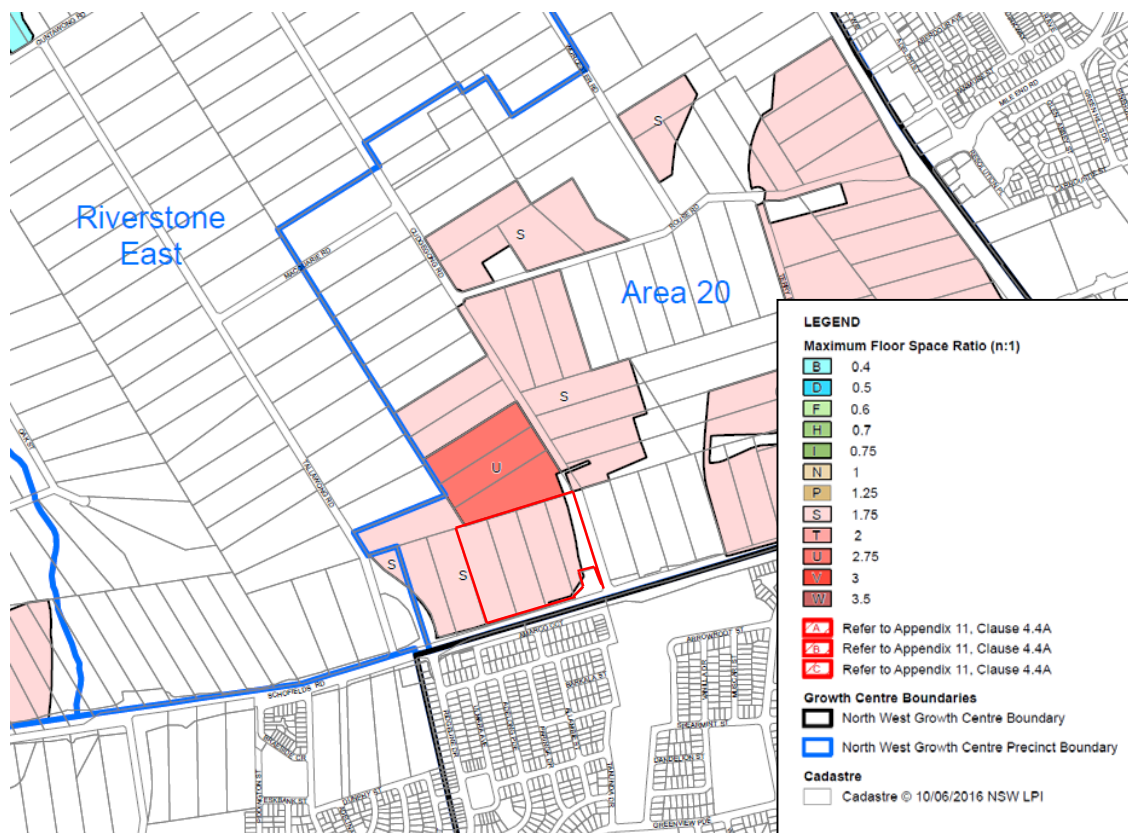


Figure 23: Maximum FSR under Appendix 6

Clause 4.6: Exceptions to development standards

As noted above, the Concept Proposal does not comply with the maximum height limit that applies to the Site. Clause 4.6 provides that development consent may be granted for development even though the development would contravene a development standard.

A Clause 4.6 Variation Request has been prepared to support the variation to the height development standard and is included in **Appendix G** of this report.

Part 5 Miscellaneous Provisions

Clause 5.1: Relevant acquisition authority

Land identified for acquisition by Blacktown Council is shown on the Land Reservation Acquisition Map accompanying the Appendix 6 controls and reproduced below in Figure 24. The Map identifies an area of Local Open Space in the B4 zone as well as the SP2 Local Road and Drainage lands for acquisition. However, the area nominated as Local Open Space does not correspond with the proposed park under the Concept Proposal which has been relocated northwards to better integrate with the station and provide a focal point for the community.

As discussed under Clause 5.3 below, there is also a small area of SP2 Drainage land that is not required for drainage purposes and is proposed to be developed for residential purposes.

As a result, there is a need for minor adjustments to be made to the Land Reservation Acquisition Map. As these changes are minor, it is considered that they can be made by the Department in due course as part of its SEPP review process or similar. There would be no change to the acquisition authority for these areas.

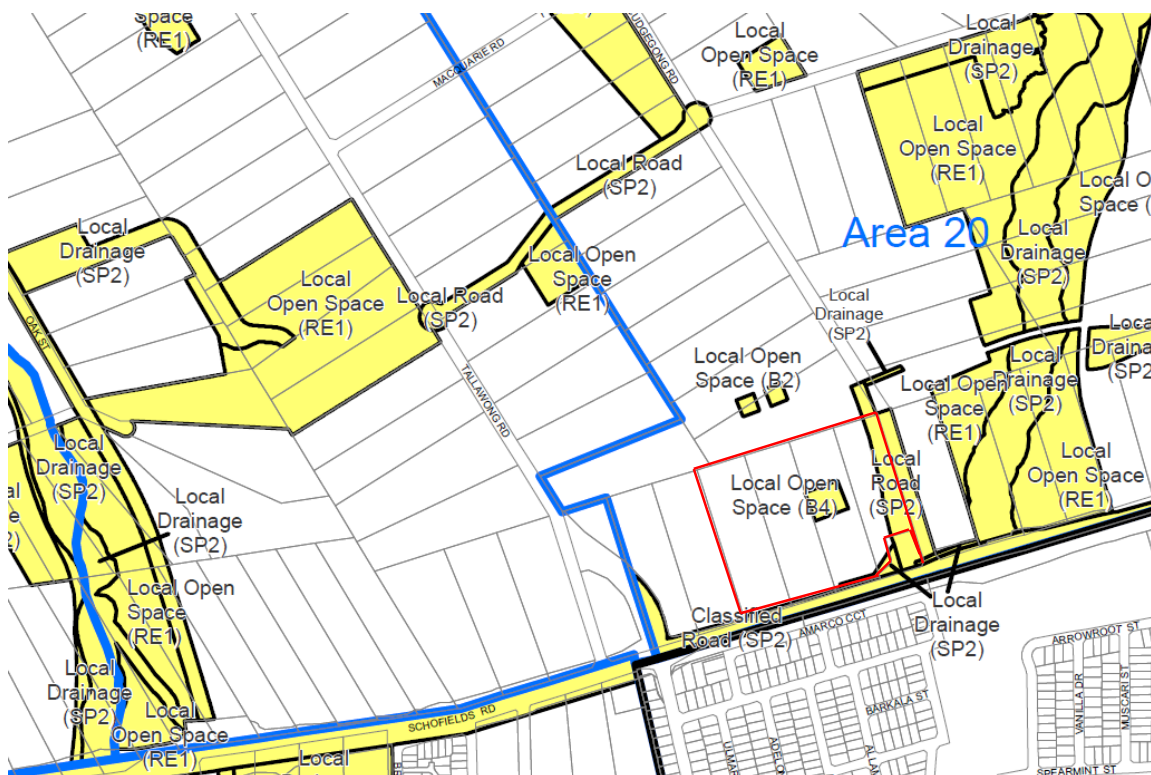


Figure 24: Area identified for acquisition as shown on Land Reservation Acquisition Map

Clause 5.3: Development near zone boundaries

The objective of clause 5.3 is to provide flexibility where the investigation of a site and its surroundings reveals that a use allowed on the other side of a zone boundary would enable a more logical and appropriate development of the site and be compatible with the planning objectives and land uses for the adjoining zone.

The relevant distance of a boundary between the two zones is 30 metres.

The clause provides that consent may be granted to development of land for any purpose that may be carried out in the adjoining zone, but only if the consent authority is satisfied that:

- the development is not inconsistent with the objectives for development in both zones
- the carrying out of the development is desirable due to compatible land use planning, infrastructure capacity and other planning principles relating to the efficient and timely development of land.

A small area of Residential Block Site 2C extends into land zoned SP2. The extent of encroachment is shown in Figure 25. It shows that residential development extends into the SP2 land by a maximum distance of 9.53 metres.

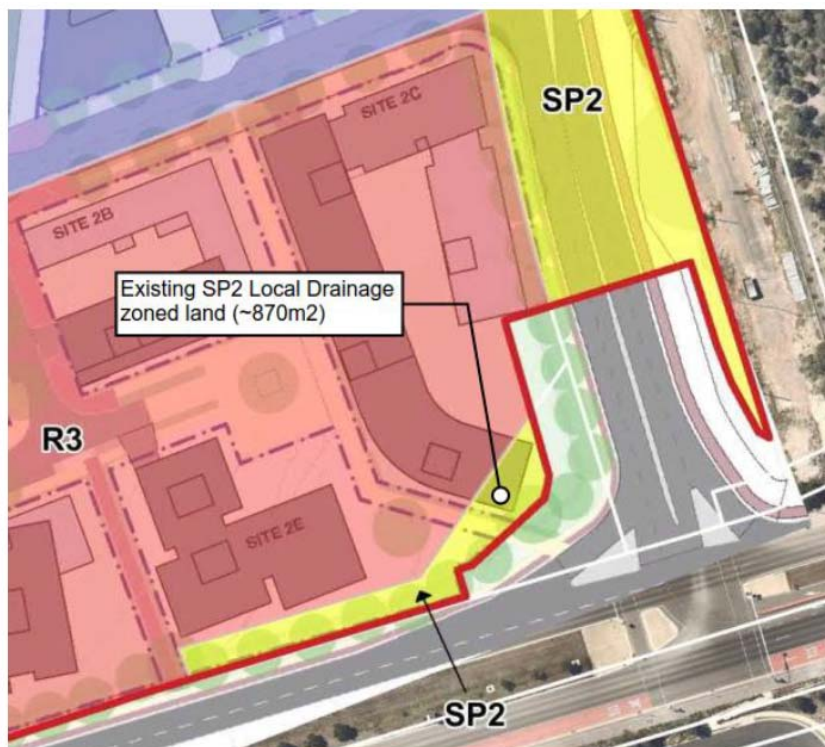


Figure 25: Extent of residential encroachment into SP2 land

The stormwater management strategy for the Site (refer Integrated Water Cycle Management Strategy at **Appendix AA**) indicates that not all the land zoned SP2 will be required to accommodate the stormwater flows from the Site.

After discussions with Blacktown City Council, it is proposed to place a new bioretention basin to the east of Cudgegong Road, between the old and new alignments of Cudgegong Road, to manage runoff from Council roads. Preliminary discussions with Blacktown Council

indicate that relocating the proposed biofiltration basin from the west of Cudgegong Road to the eastern side is reasonable, pending demonstration of the concept and its merits.

This change in basin location means that the full extent of existing SP2 Local Drainage zoned land is not required to achieve the Site stormwater objectives. Instead the remaining requirement is for an 8m drainage easement to the south of the Site (as existing in this location) expanding to a 16m wide overland flow path into land owned by RMS at the intersection of Schofields Road and Cudgegong Road as shown in Figure 26.

As the proposed works will consolidate the basins for the Site onto one parcel of land there is an opportunity for this land to now be used for residential purposes. The required SP2 Local Drainage land is also shown in Figure 26 and is approximately 65m in length and 8m wide for a total area of 520m².

Further detail regarding the stormwater management approach for the Site is provided in the Integrated Water Cycle Management Strategy at **Appendix AA** and in the discussion in Section 8.15 of this EIS.

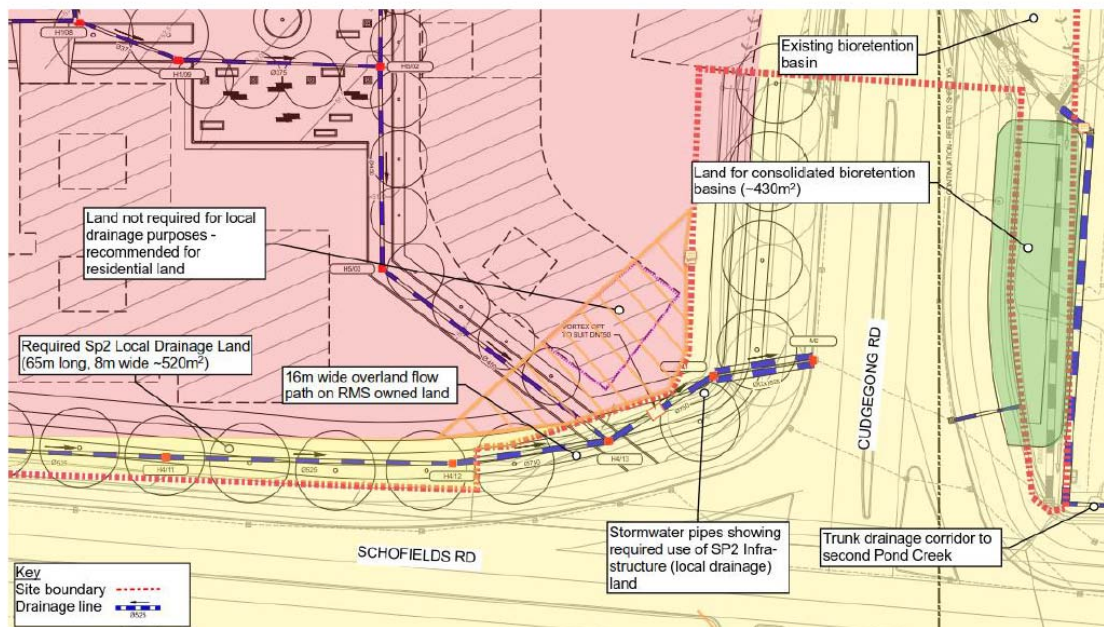


Figure 26: Proposed Drainage Easement / SP2 Local Drainage Land

The objectives of the SP2 zone are:

- to provide for infrastructure and related uses
- to prevent development that is not compatible with or that may detract from the provision of infrastructure.

It is considered that the residential development in this location is consistent with these objectives as the land is not required for infrastructure and related uses and the residential development will not detract from the provision of infrastructure in this location. Further, the carrying out of the residential development is desirable as:

- it makes use of land that is no longer required for the purpose for which it is zoned
- it is compatible with the proposed surrounding land uses

- the infrastructure carrying capacity of the Site is adequate to accommodate the proposed residential development
- it will be able to be delivered in a timely and efficient manner.

While the proposed development is considered to be permissible under the existing planning controls it is appropriate to amend the planning controls to reflect the current land zone requirements.

The Department has advised that an adjustment of the SP2 Drainage zone could be considered as part of its SEPP review process. Alternatively Council may agree to amend the SEPP through a Planning Proposal process. This should be pursued following any approval of the proposal.

Clause 5.9: *Preservation of trees or vegetation*

Clause 5.9 seeks to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.

The Site has been 'bio-certified', which effectively means that any remnant vegetation on the Site has been approved for removal and offset. Further detail on the bio-certification of the Site and an assessment of the ecological impacts of the Concept Proposal is provided in the EcoLogical Australia advice at **Appendix T** and in Section 8.13 of the EIS.

Most of the Site has already been cleared as a result of the site preparation works being undertaken by Sydney Metro. A small amount of native vegetation remains but may be removed as a result of the proposed development. These trees are located within disturbed areas and certified for removal (clearing). As the Site is wholly within Bio-Certified lands, removal of vegetation from the study area would not result in a significant impact on any threatened species or ecological community under the *Biodiversity Conservation Act 2017* or *Environment Protection and Biodiversity Conservation Act 1999*. Whilst trees (or other vegetation) present may be retained for landscaping or amenity if desired, there is no requirement to retain trees.

Part 6 Additional Local Provisions

Clause 6.1: *Public utility infrastructure*

Clause 6.1 states that the consent authority must not grant development consent to development unless it is satisfied that essential public utility infrastructure is available or that adequate arrangements have been made to ensure the infrastructure is provided when required.

A Utilities Report has been prepared for the Concept Proposal and is provided at **Appendix Z**. It outlines the public utility infrastructure, particularly water, electricity, sewage, gas and telecommunications services that are available for the development. As indicated in the report, public utility infrastructure is available or adequate arrangements have been made to ensure the infrastructure will be available when required.

Clauses 6.3 and 6.4: *Development controls—native vegetation retention areas/existing native vegetation*

The objective of clauses 6.3 and 6.4 is to prevent the clearing of certain native vegetation and to manage existing native vegetation in accordance with the relevant biodiversity measures. The clauses apply to land shown as an existing vegetation area or native vegetation retention area on the Native Vegetation Protection Map.

As shown in Figure 27, the Site does not contain vegetation mapped as existing vegetation area or native vegetation retention area and therefore these clauses are not relevant to the development.



Figure 27: Land as identified as existing vegetation area (light green) and native vegetation retention area (dark green) on Native Vegetation Protection Map

Clause 6.5: Active street frontages

The objective of clause 6.5 is to promote uses that attract pedestrian traffic along certain ground floor street frontages in Zone B2 Local Centre and Zone B4 Mixed Use.

Areas requiring active street frontages are shown on the Active Street Frontages Map accompanying the Appendix 6 controls. The local centre, including land within the northern part of the Site, is identified as requiring active street frontages as shown in Figure 28 below.

Under clause 6.5 development consent must not be granted to the erection of a building on identified land unless the consent authority is satisfied that the building will have an active street frontage after its erection. In accordance with this requirement, active uses are proposed on the ground floor of buildings located around the future village park and the station. Further detail on proposed active frontages is provided in the Urban Design Report at **Appendix C**.

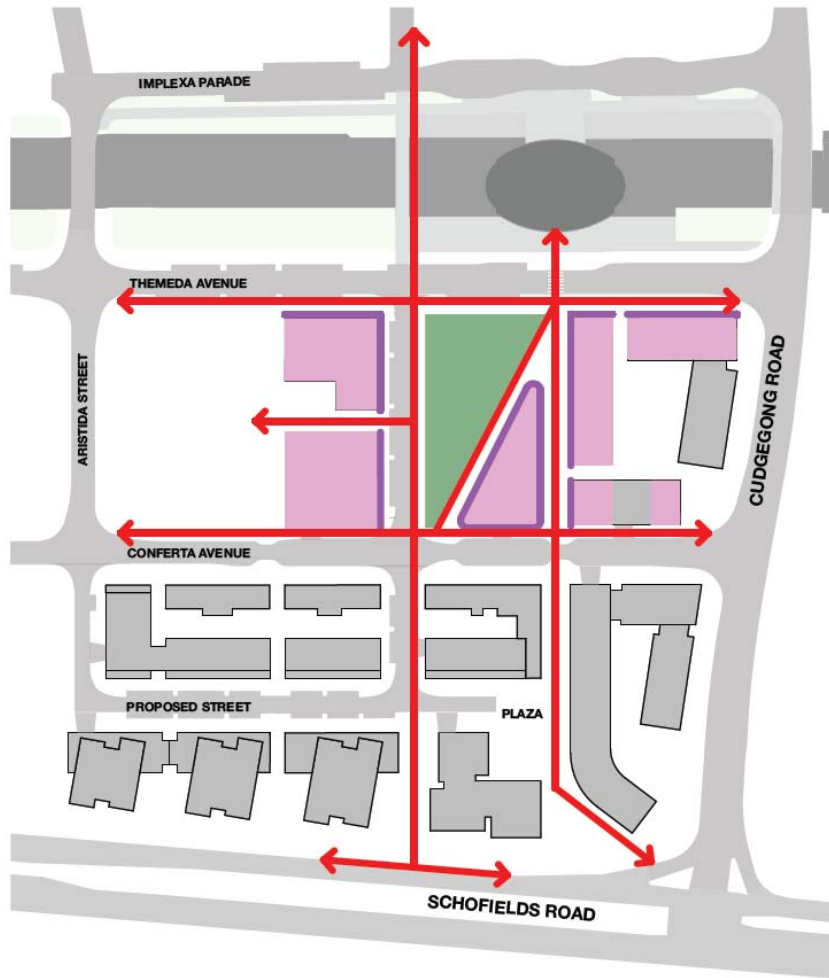


Figure 28: Proposed active frontages shown edged purple

There are no other relevant provisions under Appendix 6 to the Growth Centres SEPP.

7.4.4. Proposed amendments to Growth Centres SEPP

In 2017 the Department exhibited proposed changes to the Growth Centres SEPP to implement actions from the North West Priority Growth Area Land Use and Infrastructure Implementation Plan (the Implementation Plan). The proposed amendments:

- replace the “structure plan” for the North West Priority Growth Area with the Implementation Plan
- insert requirements for rezoning proposals to include a Development Control Plan and arrangements for the delivery of infrastructure
- implement new planning controls which set the minimum and maximum number of homes that can be built in all rezoned residential areas in the North West Priority Growth Area
- implement minimum subdivision lot sizes in all rezoned residential areas
- set minimum lot sizes for some residential land uses consistent with Council's local environmental plan

- roll the six existing precinct plans in the Blacktown local government area into the existing 'Blacktown Growth Centres Precinct Plan'. They include Riverstone West, Alex Avenue, Riverstone, Marsden Park Industrial, Cudgegong Road Station (Area 20) and Schofields. The Marsden Park and Riverstone East Precincts are already located within in the 'Blacktown Growth Centres Precinct Plan'.

Most significantly for the Tallawong Station South Precinct, the amendments propose to change the residential density controls for the R3 zoned land from the current minimum permitted density of 45 dwellings per hectare but no maximum, to a range of 55 dwellings to 100 dwellings per hectare.

The proposed cap on residential density for land within 800 metres of the metro station is not supported. The reasons for this are set out in Section 8.4 of this EIS.

7.4.5. State Environmental Planning Policy (Infrastructure) 2007

The *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, providing greater flexibility in the location of infrastructure and service facilities, allowing development of surplus government owned land, identifying environmental assessment categories and matters to be considered in assessments, and providing for consultation with relevant public authorities.

The relevant matters for consideration within the ISEPP are clause 87 relating to the impact of rail noise or vibration on non-rail development and clause 104 and Schedule 3 relating to traffic generating development.

Clause 87 applies to certain sensitive development, including residential accommodation and child care, proposed on land in or adjacent to a rail corridor. The clause requires that:

- relevant guidelines be considered by the consent authority when determining the development
- development for residential accommodation cannot be approved unless appropriate measures are taken to ensure that the following LA_{eq} levels are not exceeded:
 - in any bedroom of the residential accommodation – 35 dB(A) at any time between 10.00pm and 7.00am
 - anywhere else in the residential accommodation (other than a garage, kitchen, bathroom or hallway) – 40 dB(A) at any time.

In accordance with clause 87 of the ISEPP, the design of the proposed development has had regard to the document "Development near rail corridors and busy roads: interim guideline" (Department of Planning, 2008) (refer Noise and Vibration Assessment at **Appendix S**).

Schedule 3 of the ISEPP lists traffic generating development that is to be referred to the RMS. This includes residential development comprising 300 or more dwellings or 75 or more dwellings if connecting to a classified road. As the Concept Proposal comprises approximately 1,100 dwellings and the Site connects to Schofields Road which is a classified road the application will need to be referred to the RMS.

7.4.6. State Environmental Planning Policy No 55 – Remediation of Land

SEPP 55 provides a state-wide planning approach for the remediation of contaminated land to reduce the risk of harm to human health or the environment. Clause 7(1) requires the consent authority to consider whether land is contaminated prior to consent of a development application.

ADE Consulting Group was engaged to prepare a Phase 1 Preliminary Site Investigation (PSI) of the Concept Proposal. A copy of the PSI is provided at **Appendix V**.

The purpose of the investigation was to assess environmental conditions at the Site to identify the presence of any contaminants of potential concern during a site walkover and review of the Site history.

This project was undertaken in general accordance with the Guidelines for Consultants Reporting on Contaminated Sites, NSW Office of Environment and Heritage (OEH), 2011.

Areas that may be impacted by potential contamination were identified on the basis of the available Site information and during the Site inspection undertaken on the 16th January 2018. The qualitative assessment of the Site undertaken during this investigation has indicated the potential for contamination to be low with regards to the development and use of land as a local centre. Based on the information available it is likely that the Site can be made suitable.

However, ADE noted that given the current earthworks and the construction of Tallawong Station, constant alterations to the site condition make it problematic to fully assess the Site's suitability for future plans of development of Tallawong Station Precinct South. ADE therefore recommends that on completion of current development works, a Detailed Site Investigation (DSI) targeting imported fill material onto site, stockpiled material within the south west of the Site, and two dam footprints should be conducted to confirm the suitability of the Site for the proposed development.

Further discussion on contamination is provided in Section 8.16.

7.4.7. State Environmental Planning Policy (Urban Renewal) 2010

The Urban Renewal SEPP applies to "potential urban renewal precincts". These currently comprise land at Redfern-Waterloo and Granville only. Accordingly, the Urban Renewal SEPP does not apply to the Tallawong Station Precinct South at this time and is therefore not a relevant consideration for this Concept Proposal.

7.4.8. State Environmental Planning Policy No 19 – Bushland in Urban Areas

SEPP No 19 aims to preserve and protect bushland in or adjacent to public reserves. The policy stipulates that consent is required for the removal of bushland zoned or reserved for public open space purposes. It also applies to land adjoining bushland zoned or reserved for public open space purposes, requiring that a public authority take into account a number of matters when carrying out development adjacent to the subject bushland or when considering granting approval to such development.

The site is not located on land containing bushland zoned or reserved for public open space purposes. Further, it is not adjacent to bushland zoned or reserved for public open spaces. Accordingly, this policy is not relevant to the subject Concept Proposal.

7.4.9. State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development

State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development (SEPP 65) aims to improve the design quality of residential flat developments, provide sustainable housing in social and environmental terms that is a long-term asset to the community and delivers better built form outcomes.

A SEPP 65 Design Verification Statement has been prepared by Bennett and Trimble addressing the nine (9) design quality principles contained in the SEPP (Refer **Appendix D**). The Verification Statement is supported by a preliminary ADG Compliance Assessment. As

demonstrated in the Design Verification Statement and ADG Compliance Assessment, the Concept Proposal complies with the design principles and design guidance.

7.5. Development Control Plan – Schedule 4 Cudgegong

In accordance with Clause 11 under Part 2 to the SRD SEPP, the requirements of Development Control Plans do not apply to SSD applications. Notwithstanding this provision, the SEARs require consideration of the relevant design guidelines and the Structure Plan/Indicative Layout Plan in the *Blacktown City Council Priority Growth Area Precincts Development Control Plan* (the DCP). The Indicative Layout Plan (ILP) and relevant design guidelines are contained in *Schedule 4 Cudgegong Local Centre Development Controls* of the DCP. An assessment of the Concept Proposal in relation to the ILP is provided below and an assessment in relation to other relevant controls in the Schedule 4 DCP is provided at **Appendix F**.

7.5.1. Indicative Layout Plan

Section 2 of Schedule 4 contains the Indicative Layout Plan (ILP) for Area 20 which incorporates the Site. The ILP for Area 20 is shown in Figure 29.

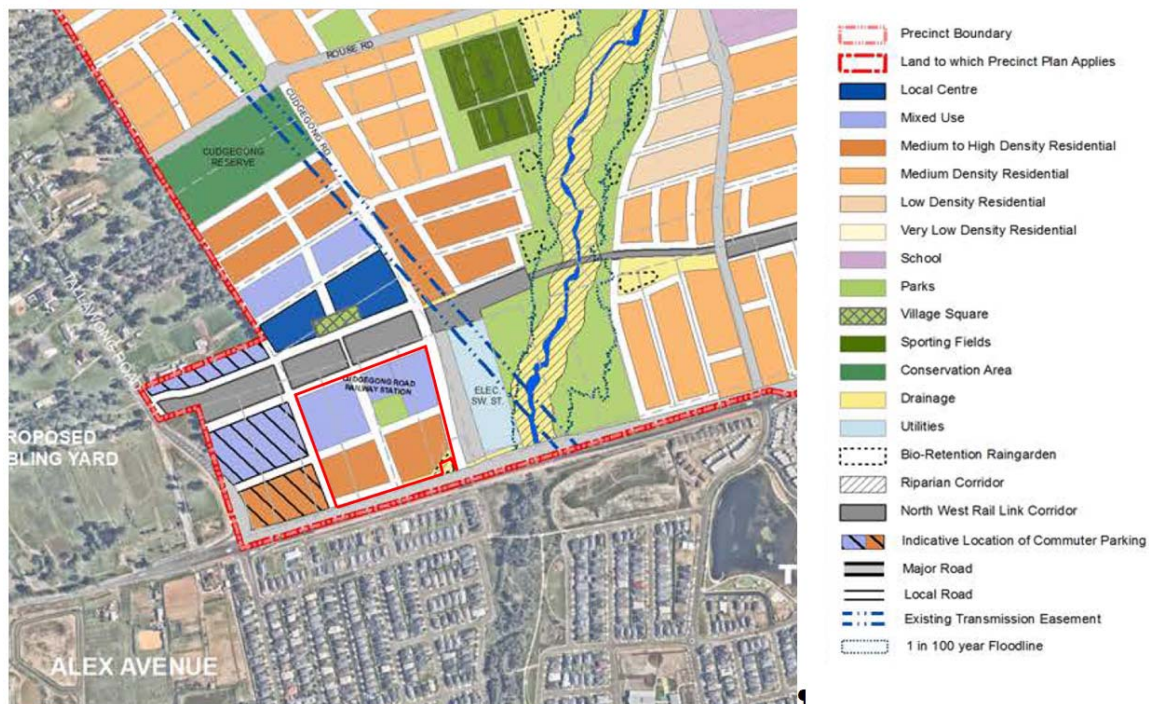


Figure 29: Indicative Layout Plan

The DCP states that all development applications are to be generally in accordance with the relevant ILP. Any proposed variations to the general arrangement of the Indicative Layout Plan must be demonstrated by the applicant, to Council's satisfaction, to be consistent with the Precinct Planning vision in the relevant Precinct Schedule.

The proposed layout of the Site is generally in accordance with the Area 20 ILP as follows:

- It provides for mixed use/medium-high density residential development as shown on the plan
- The road layout is based on a regular grid pattern to maximise connectivity and legibility

- It makes provision for a 2,900m² park.

The detailed site analysis and design process for the Concept Proposal has led to two minor changes to the layout. These are:

- The relocation of the village park further north adjacent to the Metro station
- Removal of the service road adjacent to Schofields Road.

The park has been relocated and reshaped for the following reasons:

- To optimise solar access
- To respond to the level changes between Conferta and Themeda Streets
- To reinforce the focus on the station
- To provide improved wayfinding
- To ensure all future buildings in the local centre benefit from easy access to the park.

As a result of the reconfiguration and relocation of the park, it will now receive sunlight to an throughout 11am to 2pm mid winter. This is shown in Figure 30.



Figure 30: Solar access to open space 11am-2pm mid winter (Source: Urban Design Report, Appendix C)

The removal of the service road was in response to advice from the Landcom Design Directorate to:

- reconsider the street organisation and lot sizes in the ILP that were dictating homogenous form across the Site
- reduce block sizes to encourage greater diversity of form and type.

The proposed layout for the Concept Proposal is entirely consistent with the Precinct Planning vision as described above. It provides for a range of housing forms within a walkable neighbourhood supported by local retail, employment, community, open space and recreational opportunities. The concept design is based on ESD principles and will not adversely impact on the historic and ecological values of surrounding areas. The proposed park has been designed as a major focal point for the new community, closely integrated with the Metro station and local centre.

In summary, it is considered that the non-compliances with the ILP are minor and the overall layout of the Concept Proposal will achieve the Precinct Planning vision.

7.5.2. Village Park

The DCP requires that a new public park be provided in the southern sector of the local centre, centrally located on the north/south activity spine. The new park is required to be in the order of 2,500m² to 3,000m² and include play equipment, sitting areas, pedestrian pathways, lighting and quality street furniture. The park is to provide a focus for community activities related to the new residential and mixed use precincts and be predominately green, ie grassed and landscaped with shade trees, shelters, seats and play facilities for children, and incorporate mature vegetation as may be appropriate.

The proposed village park complies with these DCP requirements. The park has been centrally located near the new Metro Station and on the corner of the Themeda Avenue and the main north-south activity spine. The park is 2,900m² and includes play equipment, sitting areas, pedestrian pathways, lighting and quality street furniture. The park has been designed and located to provide a focus for community activities and interaction.

More specifically, the park provides for the following:

- Large irrigated lawn and play space
- Plaza space with water feature capable of hosting community events
- Connected network of pathways, steps and ramps providing all abilities access throughout
- Amenities including shelters, seats and optional exercise station
- Planting for improved micro-climate and seasonal interest
- Public artwork within the park.

Concept designs of the park are provided in Figures 31 and 32 and further details on the park are provided in the Public Domain and Landscaping Strategy at **Appendix I**.



Figure 32: Park concept detail
(Source: Public Domain and Landscape Strategy, Appendix I)

7.5.3. Other controls in Schedule 4

An assessment of the Concept Proposal in relation to other relevant controls in Schedule 4 is provided in **Appendix F** of this EIS.

Part D

Environmental assessment

8. Assessment of environmental impacts

This Chapter discusses the environmental impacts of the key issues of the proposal and how this is justified and or mitigated. Technical reports explaining the assessment in more detail are in the Appendices.

As required by the SEARs, the assessment of each issue includes an environmental risk assessment (where relevant to that issue) based on:

- adequate baseline data
- consideration of cumulative impacts due to other development in the vicinity
- measures to avoid, minimise and if necessary offset the predicted impacts including contingency plans for managing significant risks to the environment.

8.1. Built form and design excellence

8.1.1. Built form

Built form ranges in scale from 2 storeys to 8 storeys to provide a variety of urban scales within the development. Built form is aligned to the edges of a permeable grid of sites to create a legible and clear high-density urban development with a well defined public realm.

Setbacks are varied in response to context, typology and amenity. There are no or limited setbacks to buildings within the areas adjacent to the Metro station or the public park with commercial and retail activities located at the ground level. This will focus pedestrian activation to the street and create an energetic mixed-use local centre development. Buildings are setback two to three metres on sites not adjacent to the Metro station to increase distance between buildings and to accommodate private gardens for ground floor maisonettes and terrace type housing. These streets will provide a more relaxed urban character.

Lower building heights are located to create an appropriate scale and character to streets and pedestrian links and to allow solar access to larger buildings. The massing of buildings to the southern sites has been designed to avoid the perception of the proposed development as a wall of buildings to Schofields Road and The Ponds.

Building massing, scale and setbacks combine to provide good solar access, and opportunities for natural cross ventilation for apartments within the development. Sites have been planned to address the perimeter of each block to overlook streets, public spaces and pedestrian links that extend through the site. Many buildings have views of landscaped areas including streets, courtyards and public areas. Views to the surrounding context including the Second Ponds Creek have been maximised where possible.

More specifically, the building envelopes have been oriented and designed to:

- ensure adequate sunlight to apartments and solar access to the public domain, including the park
- provide for appropriate separation and privacy between buildings
- respond to the topography to take advantage of district views
- comply with the gross floor area permitted under the SEPP FSR control

- have reduced setbacks along certain street frontages to reinforce the spatial definition of the street and contribute to an engaging urban experience through proximity and immediacy
- allow for generous internal open spaces that add to the amenity of the apartments and to the pedestrian experience.

It is considered that the variety in building heights and the large number of smaller urban block sites will foster a wide range of architectural responses in buildings to create a diverse and interesting neighbourhood with the careful consideration of massing, materials, fenestration and building scale.

As noted in Section 7.4.3, some of the buildings in the Concept Proposal do not comply with the maximum height specified in the Appendix 6 controls under the Growth Centres SEPP. This is due to a number of factors including the sloping topography, the need for lift overruns to provide access to the rooftop open space areas and the need to provide large floor to ceiling heights for the ground, first and in one instance the second floor of the buildings. All of the non-compliances are considered minor.

A Clause 4.6 Variation request has been prepared to support the variation to the height development standard as specified in the Growth Centres SEPP - Appendix 6 planning controls. The Clause 4.6 Variation Request is provided at **Appendix G** of this EIS.

A Design Verification Report has also been prepared which assesses the Concept Proposal against the nine design quality principles contained in SEPP 65. It also tests a number of sample sites and sample buildings for ADG compliance for:

- Solar and daylight access
- Natural cross ventilation
- Apartment size, layout and mix
- Core configuration and egress

The analysis indicates that ADG compliance would be possible to achieve when each sample site or building is developed in greater detail for approval.

A copy of the Design Verification Report is provided at **Appendix D**.

8.1.2. Design Quality Guidelines

Design Quality Guidelines have been prepared and are provided at **Appendix E**.

A range of documents have been considered in the design of the Concept Proposal and the preparation of the Design Quality Guidelines. These documents include:

- SEPP 65 Design Quality Principles and the Design Criteria contain within the Apartment Design Guide
- *Better Placed* – Design Policy for the Built Environment of NSW 2017
- Draft Greener Places Policy for NSW, 2017
- Blacktown Growth Centres Development Control Plan, September 2016
- Cudgegong Schedule 4 DCP

The Design Quality Guidelines have been written to be specific to the proposed development and will assist in the creation of a successful urban centre through a careful consideration of:

- integration of the development with the Metro Station
- urban connectivity
- urban scale, legibility and ownership
- an integrated landscape including a new public park
- building heights, separation and setbacks
- diversity in housing typologies
- local centre activation through mixed use programs
- environmental considerations
- CPTED
- car parking and servicing
- the design of public streets
- building articulation and material selection.

Expressions of Interest have been sought from developers for delivery of Sites 1 and 2. Landcom and Sydney Metro will be inviting short listed teams to submit Tenders. Tenderers will be required to consider the Design Quality Guidelines in preparing their tenders and the Guidelines will continue to guide the project design during the detailed development application(s) stages.

8.1.3. Design excellence

A Design Excellence Report has been prepared which sets out the design excellence process followed to date and outlines a recommended design excellence strategy for the future stage(s) of the development. The Design Excellence Report is provided at **Appendix H**.

The Strategy addresses selection of a preferred developer with demonstrated capability to deliver design excellence, and with an independent design review advisory panel established by Landcom.

The Strategy incorporates requirements to respond to the Design Quality Guidelines. The Strategy is summarised in Table 1 of the Design Excellence Strategy Report.

Further detail on the Design Excellence Strategy is provided in **Appendix H**.

8.2. Public domain and landscaping

A wide variety of connected landscaped spaces will be created throughout the site including elements such as the village park, a plaza, communal open space and street planting. These spaces will be diverse in terms of size and character to respond to different user requirements.

8.2.1. Open space provision

A new village park of 2,900m² will be provided within the subject site, within easy access to the new metro station. The Public Domain and Landscape Strategy at **Appendix I** provides a detailed analysis of the proposed park. It notes that the metrics for size, access and diversity of recreation opportunity of the existing open space in the locality is readily achieved.

The immediate locality and district is well served with existing public open space, as shown in Figure 33 and Table 11.

Table 11: Open space in vicinity of Site

Type of open space	Name of park	Distance from site
Active Open Space	Jonas Bradley Oval, The Ponds	Approximately 800m
	Peel Reserve, The Ponds	Approximately 800m
	Bruce Purser Reserve, Kellyville	Within 2km
	Hills Centenary Reserve, Kellyville	Within 2km
	Future Rouse Road Reserve	Within 500m
Passive Open Space	Tanunda Park, The Ponds	Within 400m
	Arrowroot Park, The Ponds	Within 400m
	Kalina Reserve, The Ponds	Within 400m
	Greenvue Park, The Ponds	Within 400m
Bushland	Bushland between Peel Reserve and Jonas Bradley Reserve	Approximately 800m
	Second Ponds Creek Corridor	Approximately 200m

(Source: Public Domain and Landscape Strategy, Appendix I)

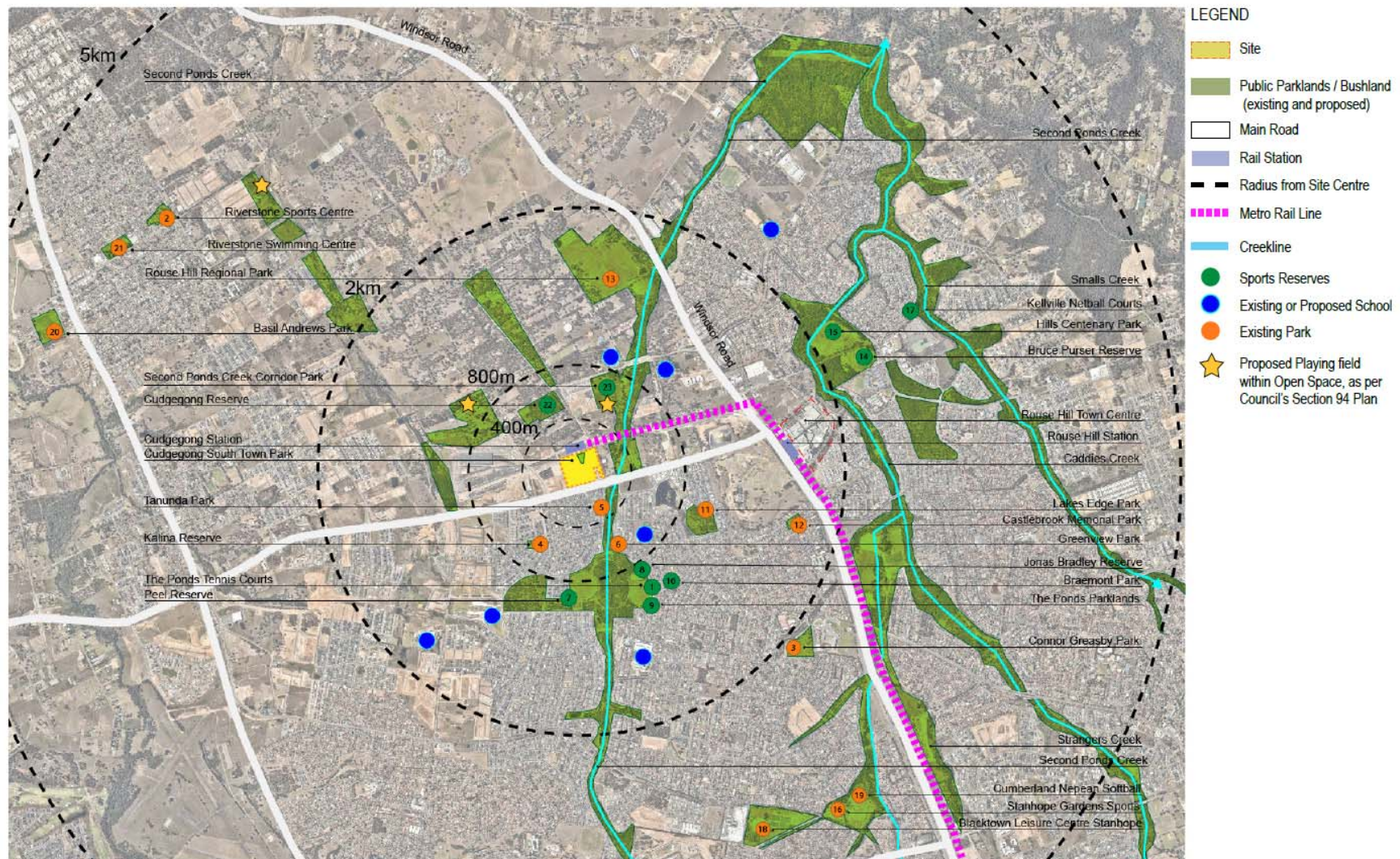


Figure 33: Open space in vicinity of site (Source: Public Domain and Landscape Strategy, Appendix I)

A high degree of accessibility and connectivity for walkers and cyclists is provided between the site and open space in the locality. Of particular note are the following:

- The relatively short block lengths in the precinct that permit a high level of pedestrian and cycle connectivity with a strong north/south and east west axis
- Residents in the south of the South Precinct will be able to walk and cycle to the future Cudgegong Reserve to the north relatively easily via the station precinct
- Walking and cycle access to the Second Ponds Creek corridor in a southerly direction is readily achieved with a single road crossing (Schofields Road)
- Paths connecting to the Second Ponds Creek corridor for walkers and cyclists heading in a northerly direction will have options to follow a path to the south of the rail corridor or to the north of Schofields Road.

On the basis that the precinct is providing a village park at 2,900m² and several smaller open spaces, this collectively with the adjoining open space network would meet future needs of the precinct's community.

Further detail and justification for the proposed size of the village park is provided in the Public Domain and Landscape Strategy at **Appendix I**.

8.2.2. Public domain design

The design for the village park creates and fosters the idea of the 'meeting place' by providing a variety of spaces, activities and opportunities for social interaction while also increasing the awareness of the surrounding natural environment, particularly its connection to the Second Ponds Creek corridor. The village park also forms an important network to and from the train station.

Providing winter sun and summer shade is one of the core design strategies. Where appropriate evergreen tree species are proposed along north-south running street whereas deciduous species are proposed along east-west running street, to maximise winter solar access. Shade structures are proposed at the village park to provide sufficient shaded area for gatherings.

Plant species have been selected to best respond to the local conditions and provide low maintenance and attractive landscape spaces within the village park. The character of the planting will follow a native theme utilising, where practical, species that occur within the Cumberland Plain Vegetation Community, which is endemic to the area. Utilising native species will help to increase the ecological value of the park whilst also minimising the maintenance and watering requirements during establishment. Some exotic species will be used to form a grid pattern in the paved plaza adjacent to the kiosk and water element, to match those species to be used at the estate entry.

Street trees will be planted, generally on-road in between parking spaces. This approach will maximise the distance of tree canopies from street lights and ensure an even tree canopy along the footpath.

8.2.3. Crime Prevention Through Environmental Design

An assessment of Crime Prevention Through Environmental Design has been prepared by AECOM for the Concept Proposal. A copy of the assessment is included at **Appendix P** and a summary has been provided below.

Crime prevention and public safety is an important consideration for the Tallawong Station Precinct South development. The proposal has been designed to take into account the

principles of Crime Prevention Through Environmental Design (CPTED) and a range of measures are proposed which will be considered at the detailed design stage. These measures are summarised in Table 12.

Table 12: CPTED Measures

PRINCIPLE	PROPOSED MEASURES
Natural Surveillance Maximising opportunities for residents and the general public to observe the activities in an area (the safety in numbers concept). The real or perceived notion that someone is able to see the perpetration of a crime can be achieved through the considered design and placement of buildings, physical features, public domain layout and people movement through an area.	<ul style="list-style-type: none"> • Utilisation of the landform to enhance surveillance across the park from the upper level • A children's play space at the lower level that will attract families and will have good surveillance from the upper level of the park • The shade structure designs are not enclosed and provide good visibility into and out of the structures • Lighting is proposed in the central park to complement the street and building spill over light • The use of low level planting to maximise sight lines
Access Control Control of where people may enter, leave or move within an area through the implementation of legible paths, signage, physical barriers, cleared open space and the like to prevent the creation of undesirable areas with perceived dangerous and unsafe routes.	<ul style="list-style-type: none"> • The use of pedestrian / cycle paths to clearly delineate between private and public areas • The material and width of pavement in the central park caters for larger gatherings but also allows for passage of maintenance and emergency vehicles • Design of private courtyard fences to be a combination of solid and open-style fencing to have a perceived frontage to the park, communal areas and streets • A well connected precinct with a clear street network and hierarchy and a series of pedestrian and cycle links that extend through the site connecting key elements such as the Metro Station, parks, communal areas and residential blocks • A series of 'urban blocks' that provide a rational, legible and permeable urban footprint • Building setbacks that are appropriate to the scale of the streetscape and not imposing to the general pedestrian
Territorial Reinforcement A community is more likely to protect and care for a place they feel they have a sense of ownership and belonging. This can be expressed through community participation, public art and general upkeep of good maintenance and landscaping to provide a pleasant area to be proud of.	<ul style="list-style-type: none"> • The design intent of the central park to be 'the meeting place' by promoting social interaction through the design of the spaces • Spacing of trees in the streets, plazas and park that maintains sightlines. The grid-like layout of the trees in the plaza provides flexibility in the use of the space such as market stalls and community events • The use of deciduous trees encourages year round use of the public spaces • An interconnected open space network of varying scales including a central park, urban plazas, communal areas and private open spaces such as podiums and rooftop gardens • A concentration of non-residential accommodation such as retail, cafes, childcare and work hubs in close proximity to the Metro Station and the central park to promote activation the core areas of the precinct • Varying heights of buildings to create a variety of urban scale with height strategically located to alleviate overshadowing and concentrate density around amenity
Space Management and Maintenance A solid management and maintenance program will	<ul style="list-style-type: none"> • The material and width of pavement in the central park caters for larger gatherings but also allows for

PRINCIPLE	PROPOSED MEASURES
ensure that space is appropriately utilised and cared for. Space management and the maintenance strategies should include items such as site cleanliness, rapid repair of vandalism or graffiti, regular maintenance and the like so that high usage of space is encouraged	<p>passage of maintenance and emergency vehicles</p> <ul style="list-style-type: none"> The proposed materials and detailing of the seat walls are robust and will withstand a degree of vandalism

8.3. Land use mix

8.3.1. Overview

The Concept Proposal is seeking approval for a mix of residential, retail, commercial, community and open space uses on the site. The retail, commercial and community uses will be located to the north of Conferta Avenue while development south of Conferta Avenue will be wholly residential.

The retail, commercial and community uses will be predominantly located within the ground and first floor of buildings with residential apartments located above. These uses form an integral component of the activation strategy for the precinct.

As noted elsewhere in this EIS, around 4,500m² GFA of retail, 3,000m² GFA of commercial and 1,500m² GFA of community uses are proposed for the B4 Mixed Use land. The mix of non-residential uses has been informed by a Retail and Commercial Land Use Analysis prepared by AEC Group and provided at **Appendix J**. This is discussed further in Section 8.3.2 below.

It is envisaged that the B4 Mixed Use land will make an important contribution towards meeting the demand for additional retail goods and services that may not be met by the Local Centre located north of the railway station.

In relation to community uses, a Social Needs and Impact Assessment has been prepared by GHD (refer **Appendix K**) which notes that existing communities and new residents will need opportunities for social interaction, and access to local facilities and services, particularly given the precinct is not within easy walking distance of existing social infrastructure. This is discussed further in Section 8.8.

The Concept Proposal provides for new homes of different bedroom sizes in a range of housing typologies, including two storey terraces, maisonettes and apartments. This will increase the supply of smaller, affordable dwelling types (i.e. one, two and three bedroom apartments) in the area and close to the future metro station. It will also increase the diversity of housing within the area, which is predominantly separate houses. This will benefit the area in the long term, contributing to the overall growth planned for the North West Priority Growth Area. This is also important to ensure different household types and people from different backgrounds (e.g. single households, couple families, students, young families, older couples looking to downsize) have access to appropriate housing. This may also support the creation of a more diverse community over time compared to the existing Tallawong Station area.

This mix of land uses, together with the delivery of a high quality and attractive public domain and open space network, will deliver an active, diverse and sustainable precinct.



Figure 34: View looking south from the Metro Station canopy
(Source: Urban Design Report, Bennett and Trimble, Appendix C)

8.3.2. Non residential land uses

AEC Group has prepared a Retail and Commercial Land Use Analysis for the Tallawong Station Precinct South Concept Proposal. A copy of the report has been provided in **Appendix J**.

The existing and planned retail hierarchy around the Site is well defined, and offers several retail options of different sizes. This limits the role of the Local Centre to provision of daily and some weekly shopping needs of a localised catchment which is consistent with planning policy aspirations for the Local Centre.

Initial precinct planning for the broader Cudgegong Road Station (Area 20) Precinct makes provision for 12,500m² to 15,000 m² of retail and commercial floorspace in the B2 Local Centre to the north of the Metro station. Based on dwelling numbers, AEC estimates that a town centre of 12,500m² to 15,000m² could be fully realised by 2021. Demand for retail floorspace will continue to grow beyond 2021.

The area zoned B2 Local Centre to the north of the Metro station will broadly cater for the demand generated by residents, workers and commuters in the area. However, there will be additional demand for retail floorspace outside this area. Therefore, it will be necessary for the B4 Mixed Use land in the Cudgegong Road Precinct to the south of the station to assist in supplementing the needs of shoppers that are not met within the B2 land to the north. More importantly, these lands will need to service the daily activity that will be focused to the south of the train station.

The commuter car park will drive high volumes of pedestrian and vehicular activity on a daily basis. Having retail and complementary facilities that are directly accessible will contribute to an active and convenient offer available to local residents, workers and commuters alike.

Proposed retail/commercial land uses

Given the extent of residual retail demand and considering the aspirations for the site, the potential land use mix is shown in Table 13.

Table 13: Potential Land Use Mix

LAND USES	UNITS	FLOORSPACE (GFA, m ²)	POTENTIAL OCCUPIERS
Retail			
<i>Food</i>			
Small Supermarket	1	1,200-1,500	
Other food	4-5	400	Bakery, patisserie, butcher, fishmonger, greengrocer, deli, health food ethnic food
<i>Food and beverage</i>			
Takeaways	4-5	400	
Restaurants	2	500	
Cafes/restaurants	6-8	600	
<i>Non-food</i>			
Pharmacy	1	200	
Other non-food	5-7	500	Florist, hardware store, newsagency, electronics, haberdashery, household goods, giftware
<i>Personal services</i>	5-7	500	
<i>Non-retail shopfronts</i>			
General	3-4	300	Flexible arts/dance/community space, real estate agency, bank, travel agency, lawyers, tax agent
Childcare facilities	1	800	
Health and Fitness studio	1	400	
Total Retail	33-42	Approx 6,000	
Commercial			
Commercial office	1	2,000	Mix of co-working/flexible space and conventional office space
GP Surgery	1	500	An alternative to commercial office use
Medical Suites	5	500	An alternative to commercial office use
Total Commercial	7	3,000	

The B4 mixed use portion of the site to the south of the train station is currently subject to a floorspace cap in the DCP, restricting the size of individual retail premises to 300m². This is intended to ensure that retail uses in the B4 Mixed Use zone do not compete with the B2 Local Centre to the north of the station.

The level of demand identified and assumed population growth means a fully realised centre to the north of the station is likely to exceed the capacity of 12,500m² to 15,000m² for the local centre. On this basis, AEC finds there is justification for relaxing the restrictive retail cap. This would allow for the delivery of a smaller, metro-style supermarket of at least 1,200m² GFA on the south side of the station. AEC considers that a metro style supermarket on the south would complement the offer on the northern side of the line rather than detract from it. This is due to the significant retail demand identified in this location and the difference between the retail offer on the southern and northern side of the precinct in terms of its form, accessibility and size.

Retail facilities on the Site to the south of the Metro station are important as they will:

- Activate the public realm and contribute to a vibrant local community that incorporates convenience-based retail facilities
- Complement the overall travel experience of commuters and those who use the commuter car park
- Provide the retail and urban amenity that is necessary for commercial uses to be successful and well patronised
- Accommodate spillover demand from the B2 zoned land north of the train station.

In the early stages of development, possible interim use of space may be required to ensure that retail can be 'switched on' when required e.g. cafes, restaurants, entertainment, 'pop up' and the like. This is discussed in Section 6.16.

The AEC report also supports the provision of the proposed community uses which would contribute to the daily activity and vibrancy of the Station Precinct South.

8.4. Residential density

As noted in Section 7.4.3, there is a minimum 45 dwellings per hectare residential density standard for land within the site zoned R3 Medium Density Residential. There is no cap on the residential density for the R3 land and there is no residential density specified for land zoned B4 Mixed Use.

The Concept Proposal proposes a residential density of 236 dwellings per hectare for the R3 land which complies with the current planning control.

While the proposed residential density for the R3 land is consistent with the existing planning controls, it would not comply with the proposed amendment to the Growth Centres SEPP. The amendment was exhibited in 2017 but finalisation of the proposed densities in the Tallawong Station Precinct has been deferred by the Department pending the outcome of further investigations.

There are strong arguments in favour of providing higher residential densities in areas close to good public transport and local services. Tallawong Station is a key transport node and development in this area should be capitalising on the significant investment in transport and other infrastructure that is being provided. Increased densities should be promoted on residential land within 800 metres of a station and in accordance with TOD principles.

Increasing residential densities in centres with good accessibility is strongly supported by the Greater Sydney Region Plan. The NSW Government has identified that 725,000 additional homes will be needed by 2036 to meet demand based on current population projections. The Greater Sydney Region Plan notes that sustained population growth over the coming decades will require a minimum of 36,250 new homes every year. Maintaining adequate supply to meet demand can help to address housing price growth and is one measure to improve housing affordability.

One of the fundamental objectives of the Greater Sydney Region Plan is the achievement of the "30-minute city", where jobs, services, and quality public spaces are in easy reach of people's homes. At the same time, the Plan emphasises that higher density development must be located in areas which can adequately accommodate increased growth. The Plan recognises that housing supply must be coordinated with local infrastructure to create liveable, walkable and cycle-friendly neighbourhoods with direct, safe and universally designed pedestrian and cycling connections to shops, services and public transport.

The Tallawong Station Precinct South has clearly been identified as an appropriate location to accommodate higher density residential development. There is a significant demand for housing in the North West Growth Area, particularly in centres and in locations near the

Sydney Metro North West. Both the State Government and Blacktown City Council have committed significant resources to delivering infrastructure in this area as well as elsewhere in the North West Growth Area to accommodate the increased growth in population. The proposed residential density on the Site ensures that the investment in this infrastructure is capitalised upon.

Further, the Concept Proposal has been designed to create an active and walkable neighbourhood with the Metro station at its core. Along with higher density housing, it provides a public park, mixed use facilities and pedestrian and cycling connections all within 300 metres of a new station. As such, it meets the objectives of the Greater Sydney Region Plan.

8.5. Solar access and overshadowing

Shadow diagrams and solar analysis are provided in the Urban Design Report at **Appendix C**. These illustrate the solar access and shadows generated by the proposed concept masterplan.

Building massing has been arranged to minimise solar impact on neighbouring properties in mid winter. In particular, taller buildings have been strategically located to alleviate overshadowing to public spaces. The public park and adjacent buildings have been designed and located to limit overshadowing of the park which receives sunlight to an area greater than 50% of its site area between 11am and 2pm on 21 June. The urban form of the Concept Proposal has been designed to mitigate overshadowing of surrounding areas with overshadowing of the low density residential minimised to later afternoon in mid winter.

The SEPP 65 Design Verification Report at **Appendix D** includes an assessment of sample designs to test for ADG compliance, including compliance with solar and daylight access. The assessment of the sample designs demonstrates that ADG compliance would be possible to achieve when each site or building is developed. It also demonstrates that the urban scale siting of the Concept Proposal has been carefully considered.

8.6. Wind impacts

A Pedestrian Wind Environment Statement has been prepared by Windtech and is provided at **Appendix Q**.

8.6.1. Assessment approach

The report identifies the likely wind conditions affecting the various trafficable outdoor areas within and around the development having regard to local wind climate, building morphology and land topography. The interaction between the wind and the building morphology in the area was considered, and important features taken into account include the distances between the building forms, their overall heights and bulk, as well as the landform.

8.6.2. Existing environment

The region is governed by three principal wind directions, and these can potentially affect the subject development. These winds prevail from the north-east sector, south sector and west.

8.6.3. Impact assessment

The assessment indicates that the subject development will be exposed to the prevailing winds from all directions due to the low-rise surrounding structures. However, the prevailing winds are expected to be shielded by the development itself for specific wind directions. Certain regions of the development may be prone to adverse wind effects due to the interaction of the prevailing winds with the built form. These potentially adverse wind effects include the direct impact of the prevailing winds, funnelling winds between the various podia

and towers due to the alignment of the buildings with respect to the prevailing winds, the side-streaming and acceleration of winds around the various corners of the development and downwash caused by the prevailing winds impacting the building and redirecting winds downwards.

To address the potential for adverse wind effects impacting the comfort of pedestrians within and around the development, the report recommends the following generalised wind mitigation treatments be considered:

- inclusion of proposed planting and vegetation throughout the site
- inclusion of continuous awnings over trafficable areas below towers or podia of a significant height which are exposed to the prevailing winds
- inclusion of localised screening where longer duration activities are expected
- inclusion of operable screening to be utilised by the various retail tenancy owners for patron flexibility
- inclusion of wind screens or planting within through site links, and at corners of buildings.

The report notes that for tree planting/landscaping to be effective as a wind mitigation device, the species need to be of a densely foliating evergreen variety to ensure year-round effectiveness. Trees also need to be planted in clusters with interlocking canopies to effectively absorb incident winds. The planting of undergrowth such as shrubs or hedges will also further improve wind conditions.

The recommendations of the Pedestrian Wind Environment Statement have been incorporated into the Landscape Concept Design and will be further considered during the detailed design of the buildings.

The report concludes that with the inclusion of the above considerations in the detailed design of the development, wind conditions within outdoor trafficable areas are expected to be suitable for their intended uses. It also recommends that a further more detailed wind environment analysis will be undertaken once the design of the development precinct has been further developed.

8.6.4. Mitigation measures

The wind mitigation measures outlined in the Pedestrian Wind Environment Statement will be taken into account during the detailed design of the buildings.

8.7. Transport and accessibility

SCT Consulting has prepared a Traffic and Transport Impact Assessment (TTIA) for the Concept Proposal. A copy of the report is provided at **Appendix L** and a summary is provided below.

8.7.1. Assessment approach

The assessment approach in the TTIA is based on consideration of:

- The existing and future context of the site, the wider Tallawong Station Precinct and the surrounding transport network
- The principles of a transit-oriented development and the implementation of targeted travel demand management measures and green travel initiatives to reduce the need

and reliance on private vehicle travel. This has been developed through meetings with Transport for NSW, Sydney Metro and the design team

- The potential cumulative impacts of net increase in development yield (currently proposed by Landcom), when compared to the 'baseline' assessment undertaken as part of the *Cudgegong Road Station Precinct Finalisation Report* (Department of Planning and Environment 2015) as well as the approved dwelling numbers within the wider area
- Inputs and feedback from relevant stakeholders to the overall approach of the TTIA.

8.7.2. Existing conditions

The existing transport and traffic conditions are described in the TTIA. Notable features of the existing conditions include the following:

- The bus services located in proximity of the site run along Schofields Road and provide good accessibility to key destinations such as Rouse Hill, Blacktown and Riverstone. All bus routes operate with between one and two services per hour, during both AM and PM weekday peak hours and throughout Saturdays and Sundays
- Shared paths in proximity of the site are provided in an east-west direction along Schofields Road, between Railway Terrace in the west and Windsor Road in the east. North-south cycle connectivity is provided along Windsor Road, also providing access to the wider cycle network
- Pedestrian access across Schofield Road is provided at the signalised intersections of Schofields Road with Tallawong Road and Cudgegong Road. As part of Blacktown City Council's Draft Bike Plan 2016, additional cycle routes in proximity of the site are proposed
- The site is bounded by Cudgegong Road, Schofields Road and new internal roads. Previous assessment of performance of the signalised Schofields Road / Tallawong Road intersection suggests that it currently performs satisfactorily during peak hours, with a Level of Service C
- Peak hour traffic volumes along Tallawong Road and Schofields Road are within the nominal mid-block capacity, with 440 – 500 veh/hr (Tallawong Road) and 1,500 – 1,700 veh/hr (Schofields Road) during the peak hours.

8.7.3. Transport strategy

Residents / employees of the proposed development will be located within a 300m walking distance of the new Tallawong Station of the future SMNW project, which will provide direct access to Chatswood. Sydney Metro Northwest will be open in 2019, and customers will also have a new direct Metro service to Crows Nest, Barangaroo and Martin Place when Sydney Metro City and Southwest opens in 2024.

Vehicular access to the site is proposed at the collector roads of Cudgegong Road and Tallawong Road, which connect to a series of internal local streets that provide access to underground car parks. Internally the proposed development promotes pedestrian and cyclist movements with a permeable internal layout that provides good connection to the surrounding cycling and walking network and to public transport.

The proposed development supports best practice transit oriented development principles, by providing increased residential density in proximity of existing and planned transport infrastructure upgrades (such as the future Sydney Metro North West). The proposed

infrastructure upgrades will provide residents with greater access to public transport and employment options, while promoting the use of sustainable travel options.

The number of car parking spaces provided as part of the Proposal complies with the RMS Guide to Traffic Generating Developments and is supported by the excellent level of access to frequent public transport (rail / metro and buses) within approximately 300m walking distance to the site and good access to alternative cycle parking and facilities provided within the development. Further discussion on car parking is provided below.

Secure bicycle storage facilities are also provided for both residents and visitors, at rates that are significantly higher than those specified by the Blacktown City Council Growth Centre Precincts DCP 2016. A total of 1,210 bicycle spaces will be provisioned, equivalent to a rate of one space per apartment plus one visitor space per 10 apartments, to encourage use of active travel means to cater for short distance trips. This will be supported by future cycle links to the surrounding locality and sub-regional centres.

Travel Plan

The TTIA recommends that a Travel Plan should be developed and monitored for the Tallawong Station Precinct community to deliver best practice travel programs and initiatives to manage travel demand for a transit-oriented development. The planning and implementation of a targeted Travel Plan will support the delivery of a transit-oriented development at this location.

8.7.4. Impact assessment

Traffic impact

The net increase of 450 apartments compared to the approved Indicative Layout Plan (based on 650 apartments) would be expected to generate up to 87 and 68 additional vehicular trips in the AM and PM peak hour respectively. This level of trip generation is supported given the site's proximity and accessibility to good public transport services.

As a result of the increased yield of the proposed development (+450 apartments), the highest increase of peak hour traffic volumes would be expected to occur at the intersections of Schofields Road / Cudgegong Road and Schofields Road / Tallawong Road, with an increase of approximately 60 peak hour trips (approximately two percent increase of the total intersection traffic volumes).

Overall vehicle trips generated by the increased yield of the proposed development are considered to have an acceptable impact on the corridor performance, and on intersections in proximity of the site.

The net increase of 450 apartments would also expect to generate 40 additional public transport trips in the AM peak, 31 additional public transport trips in the PM peak and a total of 315 additional daily public transport trips. The provision of frequent metro and bus services in the vicinity of the development are expected to cater for these additional demands.

It should be noted that the TTIA assumes that the retail and commercial areas were already considered in the approved ILP, and so no net increase in trip generation are associated with the retail and commercial uses considered as part of the Proposal.

Car parking

A total of approximately 975 car parking spaces are proposed to service the residential development and 140 spaces for non residential development. This is less than would be required under the Growth Centre Precincts DCP and is because transit-oriented developments must aim to adopt car parking rates that provide a balance between meeting

car parking demand whilst encouraging sustainable and active transport by residents. New developments are encouraged to minimise car parking provision and demonstrate the inclusion of transport alternatives or strategies to discourage private motor vehicle use.

The number of car parking spaces provided as part of the Proposal complies with the RMS Guide to Traffic Generating Developments and is supported by the excellent level of access to frequent public transport (rail / metro and buses) within approximately 300m walking distance to the site and good access to alternative cycle parking and facilities provided within the development. The Proposal is not considered to have an adverse impact on the surrounding on-street parking, while encouraging sustainable transport use.

Strategies have also been considered to minimise the potential impacts of reduced off-street parking provision as follows:

- Timed / Restricted on-street parking in areas surrounding the station and the development.
- Commuter car park use only if it is linked to public transport trips via Opal Card.

The Proposal also provides secure bicycle parking within development as well as well-designed facilities at appropriate locations along cycle routes / shared paths which will encourage residents to adopt sustainable transport modes.

Similar to the residential car parking provision, it is considered acceptable to adopt the lower rates for non residential development given the transit-oriented nature of the development and the excellent access from the site to future transport infrastructure. The estimated number of required parking spaces for the non-residential component is approximately 140 spaces.

Summary

The TTIA concludes that:

- There will not be any adverse traffic implications on the public road as a result of the additional vehicle trips generated by the proposed development (compared to the approved ILP).
- The proposed vehicle, pedestrian and cyclist access will be suitable and appropriate and promote sustainable transport modes.

8.7.5. Mitigation measures

A Travel Plan will be developed and monitored for the Tallawong Station Precinct South community to deliver best practice travel programs and initiatives to manage travel demand for a transit-oriented development.

8.8. Social impacts

GHD has prepared a Social Needs and Impact Assessment for the Concept Proposal, a copy of which is provided at **Appendix K**. A summary of the key findings of the report is provided below.

8.8.1. Assessment approach

The assessment approach involved the following:

- Review of social policies released by NSW Government and Blacktown City Council to understand local community characteristics and values as well as government plans for social infrastructure in the area

- Development of existing community profile for the area to determine the scope and extent of the social impacts
- Audit of social infrastructure within 5 km of the Site that is likely to service the existing and potential future community
- Preparation of a potential future population profile for the Tallawong Station Precinct South
- Consultation with Blacktown City Council, Western Sydney Local Health District, NSW Department of Education, Quakers Hill Police Area Command, Fire and Rescue NSW and NSW Ambulance
- Development of social sustainability objectives
- Assessment of social infrastructure requirements for the future community as well as an assessment of social impacts arising from the proposal
- Development of a social sustainability plan for the future community.

8.8.2. Existing environment

In 2016, 177 people lived in the Tallawong Station Area (Australian Bureau of Statistics, 2016). Compared to Rouse Hill and Blacktown LGA, the existing residential population is characterised by an older age profile, slightly larger households, higher level of home ownership but lower household income, and significantly lower level of public transport usage.

As a semi-rural area, there is currently limited local social infrastructure available within 1km of the site. The closest existing public open space includes two passive parks that are within short walking distance (400m or five minutes) of the site. These parks are the Second Ponds Creek corridor park and Cudgegong Reserve. Both have been identified in the Blacktown City Council (2018) *Section 94 Contributions Plans No's 22L and 22W Rouse Hill* to be embellished. The closest active recreation facilities include Peel Reserve Park and Jonas Bradley Park, which are both just within 1km at The Ponds.

8.8.3. Impact assessment

The Tallawong Station Precinct South has the potential to accommodate 1,100 dwellings and between 2,750 and 2,970 people at completion. Compared to the existing population of the surrounding rural area, future residents are likely to be younger, living in smaller households, and rent their homes, which is common within higher density developments in Western Sydney.

New residents may include people from culturally and linguistically diverse backgrounds including India, China, Philippines and Sri Lanka.

Existing communities and new residents will need opportunities for social interaction, and access to local facilities and services, particularly given the precinct is not within easy walking distance of existing social infrastructure.

GHD's assessment has found that the proposed 2,900m² central park, 300m² flexible community space and 800m² child care centre is sufficient to meet the needs of the potential future population. In particular, the recommended central park and flexible community space meet Council's benchmark needs.

The park will provide public open space within 200m radius of all residents. Park embellishments could include play equipment and play themes, which would meet Council's requirements for play opportunities within 500m walking distance of all residents. Further,

the proposed roads and pedestrian and cycle network would increase the connectivity between the development to nearby open spaces of the Second Ponds Creek corridor park and Cudgegong Reserve.

Social impacts of the proposal are expected during the construction and operation of the proposal. These include potential short term amenity and traffic impacts as a result of construction activities on a small number of nearby residences. These impacts should be addressed by a construction management plan. Neighbouring residences should also be consulted prior to construction to ensure that they are aware of potential amenity impacts.

There is potential for segregation between existing and new residents, as well as the Station Precinct South community and surrounding communities. The Station Precinct South is also not within easy walking distance of existing local social infrastructure.

These risks can impact on the access and participation of residents in community life, however the pedestrian and cycle links through the site, along with the retail, commercial and community uses are expected to enhance local access, amenity and community wellbeing for future Station Precinct South residents, workers and visitors.

As detailed in Section 6.16, early works and interim activation are proposed to support community cohesion in the early stages of the development. Early public domain works, such as landscaping, seating, play equipment, temporary public art and the like are proposed to improve the amenity of the Site during the construction period. Interim activities such as food and beverage spaces, pop up community and creative spaces, as well as retail spaces are proposed to attract people to the area and generate social interaction and community engagement.

8.8.4. Mitigation measures

The GHD report recommends the preparation of an overarching social plan/place plan to help achieve the social sustainability objectives and manage the identified social impacts of the proposal. This will guide the future stages of the development.

8.9. Economic impacts

Along with assessing the demand for retail and commercial floorspace (discussed in Section 8.3), the Retail and Commercial Land Use Analysis at **Appendix J** provides an assessment of the economic impacts of the Concept Proposal. The economic impacts resulting from development as proposed by the Concept Proposal can be classified as:

- Direct impacts, which are the first round of effects from direct operational expenditure on goods and services
- Indirect Impacts (Flow-on impacts), which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales.

On completion of development, the Site is expected to generate ongoing economic/operational activity through direct turnover generated by the retail and commercial operational activities.

The activity associated with the Tallawong Station Precinct South Concept Proposal is estimated to support the following economic activity through direct and flow-on impacts (indirect impacts) on an annual basis, once fully developed and operational:

- \$136.0 million in output (including \$64.4 million in direct activity)
- \$71.2 million contribution to Gross Regional Product (GRP, including \$32.1 million in direct activity)

- \$70.4 million in incomes and salaries paid to households
- 602 full-time equivalent (FTE) jobs (including 350 direct employees on the Site).

The future residents of dwellings will support household expenditure activity. Some of this household expenditure will result in increased economic activity outside of the Site and in the Blacktown LGA. Household expenditure associated with the net residential dwellings is estimated to support the following economic activity through direct and flow-on impacts (per annum):

- \$80.7 million in output (including \$40.8 million in direct activity)
- \$47.0 million contribution to Gross Regional Product (GRP, including \$25.1 million in direct activity)
- \$23.1 million in incomes and salaries paid to households
- 374 full-time equivalent (FTE) jobs (including 235 direct employees).

Adverse economic impacts on surrounding existing businesses are not anticipated as a result of the Concept Proposal. The proposed retail and non retail floorspace in the Tallawong Station Precinct South would effectively serve a localised convenience role to surrounding residents, workers and commuters and supplement the role of the Local Centre to the north of the station. Higher order retail needs will continue to be met in higher order centres.

8.10. Noise and vibration (operation)

A Noise and Vibration Assessment for operational noise has been prepared by Acoustic Logic and is provided at **Appendix S**. As no construction is proposed at this stage, construction noise and vibration will be assessed as part of a future development applications as relevant.

8.10.1. Existing environment

The acoustic environment is categorised by the following:

- Toward the South, West and East of the site, high background noise levels associated with traffic using Schofields Road during the day and evening and moderate background noise levels during the night
- Toward the North, moderate background noise levels from latent traffic noise from surrounding transportation noise sources.

Acoustic monitoring has been conducted at the site and at surrounding uses to establish the existing acoustic environment.

Sensitive uses in the vicinity of the site will typically include the following:

- Residential dwellings within the Ponds development to the south
- Existing dwellings along Cudgegong Road to the north of the site
- Existing dwellings along Tallawong Road to the northwest.

8.10.2. Noise criteria

Traffic noise impacts on the residential component of the development have been addressed in accordance with the requirements of Growth Centre Precincts DCP and Infrastructure SEPP.

Rail noise and vibration impacts on the residential component of the development have been addressed in accordance with the requirements of the Infrastructure SEPP and the NSW Department of Planning policy 'Development Near Rail Corridors and Busy Roads Interim Guideline'.

8.10.3. Impact assessment

Sensitive uses within the proposed development may be impacted by existing and future local noise sources as follows:

- Tallawong Station
- Metro Line
- Sydney Metro Trains Facility (SMTF)
- Future traffic noise from Schofields Road, Cudgegong Road, Tallawong Road and roadways within the proposal.
- Retail and commercial noise.

The assessment of potential noise and vibration impacts indicates as follows:

- Rail noise impacts associated with the metro line to the north of the site will have minimal acoustic impact on receivers within the nearest buildings of the proposal. Standard glazing will be acoustically suitable to satisfy rail noise objectives
- Noise emanating from the station associated with public address systems and services equipment will have negligible acoustic impact on receivers within the nearest buildings of the proposal. No additional acoustic treatment is recommended
- Based on predictions undertaken as part of the Sydney Metro Train Facility (SMTF) assessment, noise impacts on the proposal site will be negligible in context with the future acoustic environment
- Traffic noise impacts from major roads surrounding the development have been addressed with consideration to future growth. In principle façade treatments have been considered to satisfy traffic noise objectives
- Patron noise from the retail component including potential food and beverage outlets may have the potential to impact the residential dwellings. Given the 'urban' environment that is consistent with a residential/retail interface, a certain level of noise impact would be expected. Notwithstanding, suitable internal noise levels may be achieved within residential apartments by closing doors and windows directly facing onto retail food and beverage precincts.
- Noise emissions are to be addressed for each individual development application to confirm compliance with the Environmental Protection Authority.

The Noise and Vibration Assessment concludes that the proposed development can comply with the Infrastructure SEPP and other relevant legislation and policies subject to the incorporation of suitable acoustic treatment and mitigation measures to protect the amenity of future residents. Acoustic treatments should be determined in detail for each building during the development application stage to confirm compliance with the internal noise level requirements.

8.10.4. Mitigation measures

The noise mitigation measures outlined in the *Masterplan Noise and Vibration Assessment* will be taken into account during the detailed design of the buildings.

8.11. Heritage and archaeology

A Statement of Heritage Impact (SoHI) has been prepared by OCP Architects and is provided at **Appendix W**. A summary of the SoHI is provided below.

8.11.1. Existing environment

Heritage items

There are no heritage listings for the Tallawong Station Precinct South site. However, there are three state-listed heritage items within two kilometres of the site. They are:

- Rouse Hill House and Farm (1.5km away)
- Royal Oak Inn (1.3km away)
- Merriville House and Gardens (1.4km away)

There are also a number of local heritage items within the general area surrounding the site but none within the immediate vicinity. Heritage items are shown Figure 35.

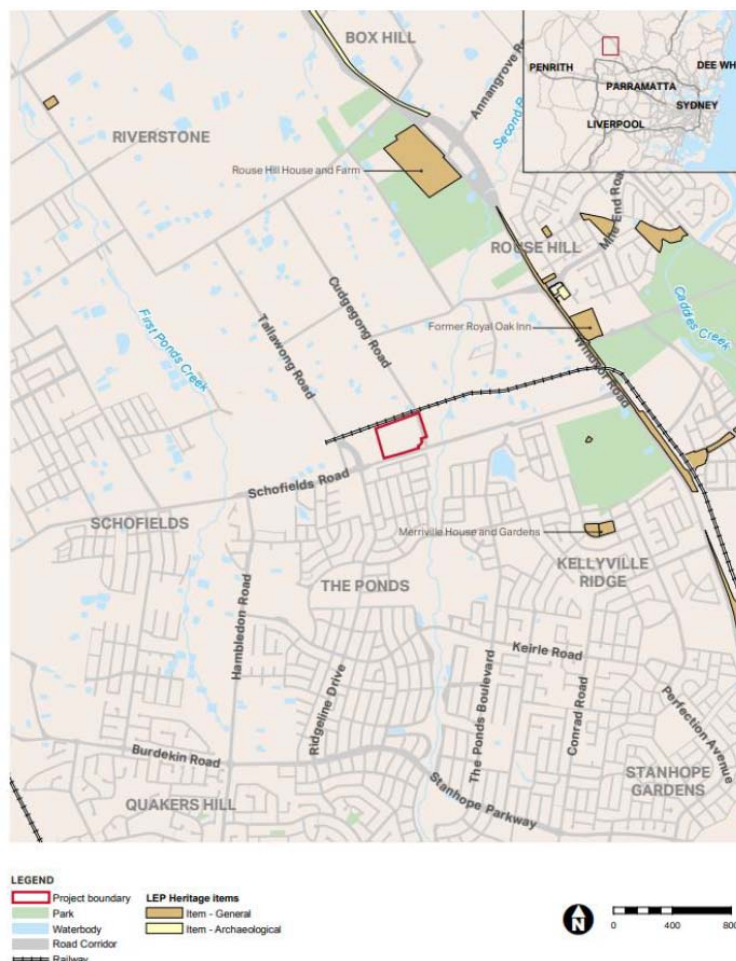


Figure 35: Heritage items in the vicinity of the site

Historical archaeology

Prior assessment has found the archaeological potential of the area to be low. The SoHI refers to an assessment undertaken by Godden Mackay Logan which states as follows:

The Rouse Hill Estate originally extended as far south as Schofields Road and 250m west of Tallawong Road (to the west). The entire proposed Cudgegong Road Station Precinct was once located within the Rouse Hill Estate and would have comprised open paddocks for grazing and growing of grain.

A 1947 aerial photograph of the area shows an undeveloped area that had reverted to bushland and was devoid of any substantial structures, but containing a few distinctive features whose potential remains may have survived until now.

Subsequent development initiated by the land subdivisions in the 1950s resulted in the formation of small farms, industries (including a still-active quarry along Schofields Road at the southern end of ...) and connecting roads, with minimal impact on the Rouse Hill Estate. The site area, comprising mainly farms and minor industries, has therefore been characterised by small-scale rural development and pockets of uncleared bushland allotments.

Given the above site formation processes, there is little potential for subsurface archaeological remains to remain on site. If any remains do survive in situ, they would generally include internal tracks/roads and post holes from old fence lines enclosing earlier paddocks. (Godden Mackay Logan, North West Rail Link EIS 1 – European Heritage – Final Report, March 2012, pp. 46-49)

Indigenous archaeology

Prior survey work identified a number of Aboriginal sites in the area covering Cudgegong Road to Tallawong Road, including two isolated finds, four stone artefact concentrations and three areas of potential archaeological deposit (PAD) within these sites.

Further survey work identified a number of previously unrecorded Aboriginal sites (including two isolated finds, two stone artefact concentrations and two areas of PAD) confirmed the presence of previously recorded Aboriginal sites and confirmed zones with PAD.

An investigation, excavation and salvage program was undertaken in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECWW, 2011) and Aboriginal Cultural Heritage Consultation requirements for Proponents 2010, and the site area has been confirmed to be cleared of Aboriginal heritage by Transport for NSW (*Construction Heritage Management Plan for Sydney Metro Northwest Operations, Trains and Systems PPP*, 29/10/2015, pp. 46-47).

8.11.2. Impact assessment

Lands in the general vicinity of the site have long been substantially modified for a variety of small-scale rural and agricultural activities, and more recently the surrounding rural areas have started to undergo planned major urban development, with a recently completed housing estate at The Ponds having already commenced the transformation of the visual character of the area from rural to suburban. The immediate context of the site is an area undergoing transformation through the construction of the Sydney Metro Northwest and associated Sydney Metro Trains Operations Control Centre and Sydney Metro Stabling Facility.

Analysis of the topography of the land that lies between Rouse Hill House and the site suggests that the potential impact upon the Rouse Hill House property or its extended visual

curtilage would be very low. The property lies approximately 1.5 kilometres to the north of the site. Rouse Hill House and Farm is separated from the site by an undulating landscape including forested areas. It is considered therefore that the construction work would be barely visible from Rouse Hill House and Farm, and that the possibility of these works resulting in any appreciable negative heritage impacts upon this historic property and its curtilage would be very low. This is especially the case given there is already-existing urban development visible from Rouse Hill House and Farm.

Analysis of the landscape between the site and the former Royal Oak Inn shows the proposed development will have no visual impact and will barely be visible. The area surrounding the Royal Oak Inn is already characterised by urban development and there would be no meaningful impact on the site from the proposed works. The impact on views from Merriville House and Gardens – this site too already surrounded by urban development – is negligible.

The SoHI concludes that the proposed development of the site will have no adverse impact on the heritage significance of the three state heritage items. No other heritage items are considered likely to be meaningfully impacted by the proposed works. Previous investigations have determined that there is little potential for subsurface archaeological remains to remain on site and the site area has been confirmed to be cleared of Aboriginal heritage.

8.12. Visual impacts

A *Landscape and Visual Impact Assessment* (LVIA) has been prepared by AECOM and is provided at **Appendix O**. A summary of the LVIA is provided below.

8.12.1. Assessment approach

The LVIA assesses landscape character and visual amenity effects arising from the Concept Proposal derived from an analysis of the preliminary design drawings in the Urban Design Report prepared by Bennett and Trimble (**Appendix C**). The method:

- analyses the existing landscape character and visual environment
- determines the extent and nature of potential landscape and visual impacts of the Concept Proposal on surrounding areas
- identifies measures to mitigate and minimise potential landscape and visual impacts.

For the purpose of this assessment, the key area of focus is considered to be within a two kilometre offset from the Concept Proposal. Beyond this area, it is anticipated that the combined effects of intervening landform, built form and vegetation would combine to substantially limit landscape and visual impacts.

The assessment is made with reference to an understanding of techniques set out in the document, *The Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013), (GLVIA) developed by the Landscape Institute and Institute for Environmental Management (United Kingdom).

8.12.2. Existing environment

Landscape character zones were identified based on an assessment of the existing natural and cultural influences that shape the landscape and visual context of the study area. The landscape character zones are shown in Figure 36.

The LVIA provides an assessment of landscape character impacts arising from the concept of the identified landscape character zones to determine the significance of potential changes to the character of the landscape. This is provided in Tables 8 to 13 of the LVIA.

Potential landscape character changes are most likely to affect the area shown as LCZ1 Residential in Figure 36. In other areas the potential landscape character changes are assessed to be low to moderate.

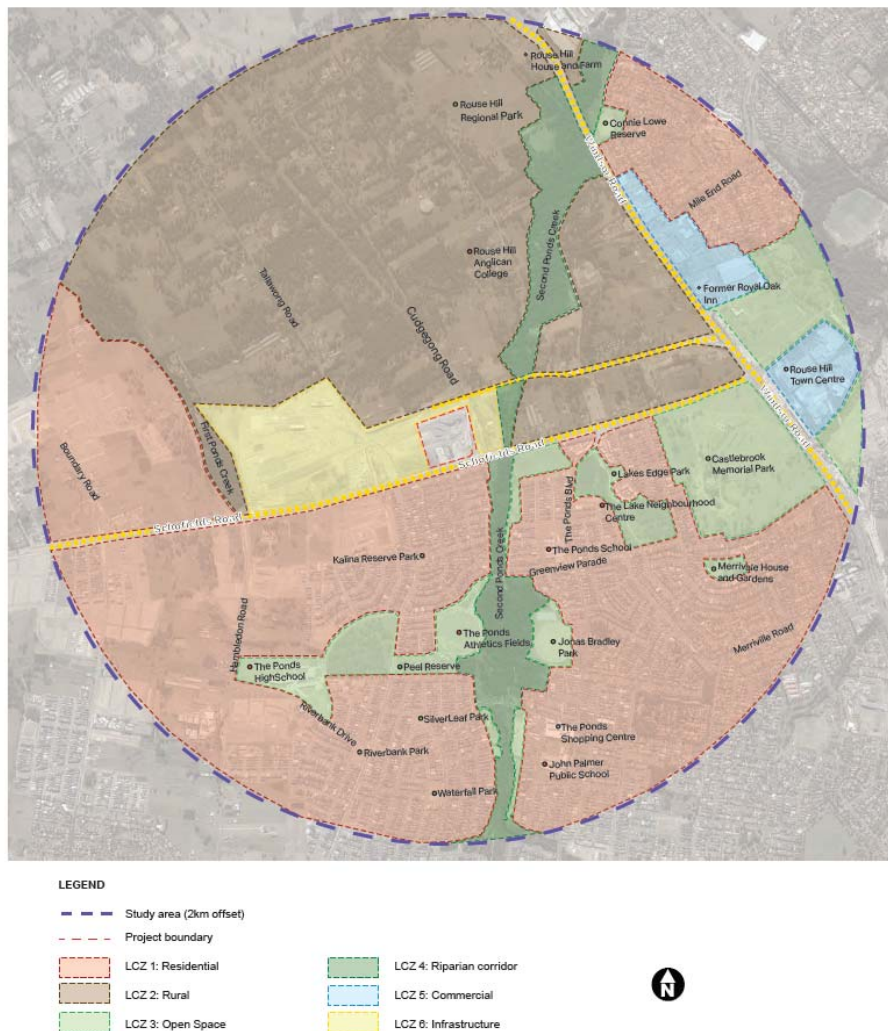


Figure 36: Landscape character zones

8.12.3. Impact assessment

The LVIA provides an assessment of the effects of the Concept Proposal on key visual receptors. This assessment is provided in Tables 14 to 20 in the LVIA. In relation to the visual impact of the Concept Proposal on nearby State heritage listed items, the LVIA finds that:

- There will be negligible visual impact on Rouse Hill House and the former Royal Oak Inn
- There will be moderate visual impact on Merrville House from the addition of new built form on the distant horizon but this would only be a minor element in a panoramic view.

There is likely to be a significant impact on views from The Ponds residential area to the south with the proposed built form appearing visually prominent and generally seen in sharp relief against the distant skyline. Existing skyline views from some locations would be substantially blocked. These impacts are to be expected given the change in land use that is now proposed for the area.

8.12.4. Mitigation measures

The mitigation measures specified in the LVIA will be implemented to minimise the level of visual impact during the design development, construction and operation phases of the project.

8.13. Biodiversity

Advice in relation to biodiversity matters has been prepared by EcoLogical Australia and is provided at **Appendix T**.

8.13.1. Assessment approach

The report assesses the consistency of the proposal with the Biodiversity Certification Order that applies to the site, as well as the impact of the project on the ecological values of the riparian corridors in proximity to the site. A summary of the key findings in the report is provided below.

In relation to the requirement in the SEARs that a Biodiversity Development Assessment Report (BDAR) be provided, it should be noted that subsequent to receiving the SEARs email correspondence from OEH was received confirming that a BDAR was not required in relation to this Concept SSD application.

8.13.2. Biodiversity certification

The entire site is 'subject land' according to Schedule 7 to the *Threatened Species Conservation Act 1995* (TSC Act). In August 2017, the *Biodiversity Conservation Act 2016* (BC Act) was gazetted and repealed the TSC Act, however Section 43 of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* carries over the effect of the biodiversity certification into the new BC Act.

Section 8.4(2) of the BC Act describes the effect of biodiversity certification in relation to development (including State Significant development) under Part 4 of the Environmental EP&A Act. This section states that an assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&A Act.

Therefore, no further assessment of impacts to threatened species, populations or ecological communities is required under the NSW BC Act. Furthermore, the preparation of a BDAR under the BC Act is not required as noted above.

8.13.3. Existing environment

Flora and fauna

The study area had previously been mapped as containing 'Cumberland Plain Woodland' however this is no longer the case. Extensive earthworks have already been undertaken within the study area and thus, the remnant vegetation communities do no longer exist. There are some small stands of trees currently remaining in the south of the site.

The vegetation within the study area is unlikely to provide suitable habitat for threatened flora species. The high level of disturbance and modification of vegetation and soils within

the study area results in limited the opportunities for threatened flora species to persist in the landscape.

Habitat for threatened fauna species is highly limited within the study area. The small stand of isolated native trees within the southern part of the study area may provide a very small amount of marginal foraging habitat for *Pteropus poliocephalus* (Grey-headed Flying-fox), as well as marginal foraging habitat for threatened microchiropteran bats.

Riparian corridors

First Ponds Creek and Second Ponds Creek are heavily modified from rural activities, with land clearing and instream dams common.

Two second order streams are in close proximity to the study area. The creek line of First Ponds Creek is approximately 920 m to the east and the creek line of Second Ponds Creek is approximately 126 m to the east. Both riparian corridors are mapped as River-Flat Eucalypt Forest with good to poor condition. Second Ponds Creek also contains Cumberland Plain Woodland in poor condition.

The proposed development is consistent with the *Guidelines for Riparian Corridors on Waterfront Land* (Office of Water, 2012) with the closest waterbody (Second Ponds Creek) approximately 126 m to the east of the development site.

8.13.4. Impact assessment

A small amount of native vegetation may be removed as a result of the proposed development. These trees are located within disturbed areas and certified for removal (clearing). As the site is wholly within Bio-Certified lands, removal of vegetation from the study area would not result in a significant impact on any threatened species or ecological community under the BC Act or EPBC Act. Whilst trees (or other vegetation) present may be retained for landscaping or amenity if desired, there is no requirement to retain trees.

In regard to the both riparian corridors to the east and west of the study area, the listed potential impacts above can be adequately mitigated through standard sediment and erosion controls during the construction phase. As both First Ponds Creek and Second Ponds Creek are separated from the study area, no impacts on riparian vegetation or fauna are anticipated.

8.13.5. Mitigation measures

The mitigation measures recommended in the EcoLogical report will be implemented during the future stages of the development.

8.14. Bushfire

Australian Bushfire Protection Planners Pty Limited has prepared a *Bushfire Protection Assessment* which is provided at **Appendix U**. A summary of the key findings of the report is provided below.

8.14.1. Assessment approach

The assessment has been undertaken in accordance with *Planning for Bushfire Protection 2006* (NSW Rural Fire Service). It has not had regard to the draft *Planning for Bush Fire Protection 2017* as this is still in draft form and following exhibition in 2017 is expected to be substantially revised.

8.14.2. Existing environment

The original vegetation within the development site has been removed as part of the construction works for the rail corridor and Metro Station.

The only vegetation which constitutes a potential bushfire hazard to the development site is within the riparian corridor to Second Ponds Creek. This corridor has a nominal width of 80 metres.

Parts of the site are identified as “Category 1 Bushfire Prone Vegetation” and “100 metre wide buffer zone to the Category 1 Bushfire Prone Vegetation” under the Blacktown Bushfire Prone Land Map.

8.14.3. Impact assessment

The key findings of the assessment are as follows:

- The proposed retail and commercial component of the development will be located more than 90 metres from the vegetation in the Second Ponds Creek riparian corridor and therefore not exposed to the direct impacts of a bushfire
- Emergency response access/egress is available via the existing and new public road network and internally to the residential towers via lifts and fire stairs providing safe operational access for emergency service personnel and safe egress is available for emergency service personnel and customers/staff of the retail development
- The proposed retail and commercial component of the Concept Proposal will not be exposed to the direct impacts of a bushfire. Therefore there is no requirement to provide and manage bushfire protection measures
- The Site is not exposed to a bushfire hazard therefore the siting and design of the building/s is not relevant
- As the Site is located more than 100 metres from the bushfire hazard in the Second Ponds Creek riparian corridor there is no requirement to apply bushfire construction standards to the building/s, pursuant to A.S. 3959 2009 – *Construction of Buildings in Bushfire Prone Areas*
- No specific bushfire protection requirements apply to the landscaping within the Site.

8.14.4. Mitigation measures

The recommendations in the Bushfire Protection Assessment will be taken into account during the future stages of the development.

8.15. Stormwater and flooding

An Integrated Water Cycle Management Strategy (ICWM) has been prepared by AECOM and is provided at **Appendix AA**. A summary of the report and key findings is provided below.

8.15.1. Assessment Approach

The assessment approach has involved:

- Detailed flood modelling
- Formulation of a stormwater management plan using industry standard software and having regard to:

-
- Drainage performance criteria prescribed in the Blacktown City Council Engineering Guide for Development
 - Stormwater pollution reduction targets and stream erosion index target prescribed in Blacktown DCP 2015 - Section J *Water Sensitive Urban Design and Integrated Water Cycle Management*

8.15.2. Existing environment

The project site is located within a semi-rural to low-density residential external catchment which drains towards the Second Ponds Creek low point extending from the high point north-west of the site. Stormwater from this external catchment is conveyed via overland flow paths and Blacktown City Council pipe drainage network which are currently present underneath Schofields Road to the south.

There is a network of existing and new stormwater infrastructure in and around the site. NRT has recently updated stormwater drainage infrastructure as part of the precinct enabling and augmentation works. RMS also currently upgraded a network of pits and pipes underneath Schofields and Cudgegong Roads.

Rouse Hill Trunk Drainage Strategy

The Tallawong Station Precinct South is within the area covered by the Rouse Hill Trunk Drainage Strategy, developed by GHD on behalf of the Rouse Hill Infrastructure Consortium during the late 1990's. Sydney Water is the authority for management of the trunk drainage infrastructure incorporated within the strategy.

Stormwater quantity management for the precinct is addressed through the provision of regional detention basins, located external to the site. As such, stormwater quantity management, relating to detention basins, does not require further consideration as part of the IWCM and stormwater strategy.

8.15.3. Impact assessment

Proposed stormwater drainage strategy

The stormwater drainage strategy for the site has been prepared having regard to the SEARs and previous investigations. The proposed stormwater drainage plan is shown in Figure 37. A notional pipe design has been developed using DRAINS hydraulic modelling software. The model demonstrates that the proposed site can be developed and achieve the requirements of Council's minor and major drainage networks.

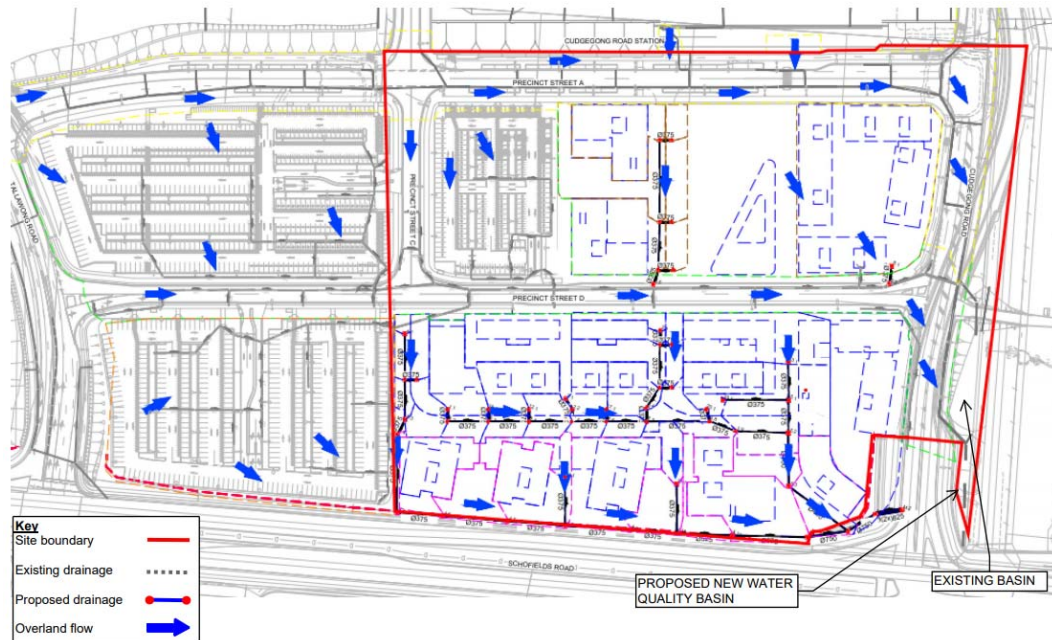


Figure 37: Proposed Stormwater Drainage Plan

Stormwater quality

The stormwater quality management approach incorporates “water sensitive urban design” (WSUD) principles and treatment train to ensure water quality targets prescribed in the Area 20 DCP and Landcom’s sustainability strategy are met.

It is intended that individual development lots will meet water quality requirements through at-source controls on the lot. This will be detailed as part of the development proposals for each building.

Stormwater quality management for runoff from Council roads and public open space is to be provided in regional stormwater management basins, which are to be provided on the eastern side of the Cudgegong and Schofield Road intersection. It is proposed that some stormwater quality management is also provided via biofiltration street trees in new streets located within Site 1 and Site 2.

WSUD measures including on lot filtration, gross pollutant traps, passive irrigation and bioretention have been considered for the development. The viability of rainwater harvesting is limited due to the supply of recycled water to the precinct, which is likely to take precedence over the provision of additional rainwater tank infrastructure within buildings.

The IWCM indicates that the proposed WSUD strategy will meet the water quality targets prescribed by Blacktown City Council for stream health and stability. The proposed development will therefore have an acceptable impact on Second Ponds Creek.

Flooding

A Flood Impact Assessment has been undertaken by AECOM and is included in Appendix C to the IWCM (refer **Appendix AA** of this EIS).

The site is located outside the 1% and PMF flood extent of Second Ponds Creek to the east.

Flood modelling of the local overland flow paths has been undertaken by AECOM to identify the 1% AEP flood level with 50% blockage of stormwater pipe network and a 15% increase in rainfall intensity to reflect possible climate change impacts.

The Cudgegong Flood Impact Assessment has been conducted under the assumption that there is no development north of the station rail line currently. In the existing condition 1% AEP flood hazards were found to be low, except at the intersection of Conferta Avenue and Cudgegong Road. At this intersection, unsafe conditions were limited to the low point of the road kerb and did not extend across the road corridor.

The assessment also informed proposed conditions. Conclusively, the 1% AEP flood impacts to the development site are limited to Council road, current drainage lands (SP2) and the car park area west of Area 2. Refer to Appendix C of the IWCM for the full version of the Cudgegong Flood Impact Assessment prepared by AECOM.

8.15.4. Mitigation measures

Future stormwater drainage infrastructure will be designed generally in accordance with the *Integrated Water Cycle Management Strategy – Cudgegong Road Station Precinct South* prepared by AECOM.

8.16. Soil and contamination

A Phase 1 Preliminary Site Investigation (PSI) has been prepared by ADE Consulting Group and is provided in **Appendix V**. The key findings of the report in relation to soils and contamination on the site is provided below.

8.16.1. Assessment approach

The assessment approach involved:

- identifying past and present potentially contaminating activities
- identifying potential sources of contamination and types of contaminants;
- evaluating the Site condition
- providing a preliminary assessment of Site contamination
- outlining measures to ensure the site is suitable for the intended land use, including considering potential requirements for remediation with State Environmental Planning Policy No. 55 – Remediation of Land (SEPP No. 55).

The legislative framework for the report is based on guidelines that have been issued and/or endorsed by the NSW (EPA) under the following Acts/Regulations:

- *Contaminated Land Management Act 1997*
- SEPP 55
- *Protection of the Environment Operations Act 1997*

8.16.2. Existing environment

The Site is currently in the construction phase of the Sydney Metro Northwest Project. A majority of the topsoil appears to have been stripped, with only a small dam and vegetation in the south west of site, adjacent the site offices remaining. Surface water is expected to flow into drainage channels and into the large dam in the south east corner of the Site which has been recently excavated into the natural soil profile.

Carpark construction, hardstand, service roads and trenching for service installation are currently in progress throughout the western section of Site. An unlined concrete washout was observed in a laydown area to the east of the small existing dam.

The northern section of the site, adjacent to Tallawong Station, appears to have been raised by up to 8 m above the adjacent Cudgegong Road footprint, with a large retaining wall installed along the boundary. The fill material used in raising the Site appears to be predominantly clays and shale. No contamination was observed on the surface of the raised soil profile.

A large stockpile of soil, trace building debris and vegetation was observed in the south west corner of the Site. Three (3) potentially asbestos containing fibre cement fragments were observed on the soil surface of the western side of the stockpile, and asbestos is presumed to be present beneath the surface of the stockpile.

8.16.3. Impact assessment

Areas that may be impacted by potential contamination were identified on the basis of the available site information and during a site inspection undertaken on 16 January 2018. The qualitative assessment of the site undertaken during this investigation has indicated the potential for contamination to be low with regard to the development and use of land as a local centre. Based on the information available it is likely that the Site can be made suitable.

A previous report conducted by Environmental Earth Sciences (2014), found the potential for contamination within the site to be low, however did note that some asbestos containing material (ACM) was identified on the surface of the site.

The site has been predominantly cleared, with extensive cut and fill activities raising the site by up to 8 m. A large stockpile of topsoil material was observed in the south west corner of site, with presumed ACM fragments observed on the surface.

Given the current earthworks and the construction of Tallawong Station, constant alterations to the site condition make it problematic to fully assess the site's suitability for future plans of development of Tallawong Station Precinct South. On completion of current development works, a Detailed Site Investigation (DSI) targeting imported fill material onto site, stockpiled material within the south west of the Site, and two dam footprints should be conducted to confirm the suitability of the site for the proposed development.

However, based on the information available it is likely that the site can be made suitable for the proposed development. Measures to ensure the site is suitable for the intended land use are available, in accordance with the *State Environmental Planning Policy No.55 - Remediation of Land*.

The site and surrounding areas are classified as having high salinity probability. Notwithstanding, previous assessments of salinity undertaken for the Sydney Metro works concluded there was a negligible potential salinity rating, and aggressivity results had a "non-aggressive" rating.

However, due to the lack of information for soils deeper in the profile, ADE recommends that additional investigation into these soils is undertaken.

The ASS probability within the site was classified as C4 - extremely low probability of occurrence as per the ASRIS (2015) ASS maps. ASS is therefore not considered to be a risk to the project.

8.16.4. Mitigation measures

Following completion of works on site associated with the Sydney Metro North West proposal, and prior to further development applications associated with the proposal, a Phase II Detailed Site Investigation (DSI) of soil and groundwater in accordance with National Environmental Protection Measure (NEPM 2013), Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soil Management Advisory Committee ((ASSMAC 1998) and ESS (2014) recommendations is required.

Due to the site's constant evolution as part of the Sydney Metro Northwest Project, the full extent of contamination is unable to be determined. A revision of the information within this report, and intrusive works for the Phase II DSI should be undertaken following completion of earthworks within the site.

Further salinity assessment (both soil and groundwater) of soil material will be collected and analysed prior to the construction phase.

8.17. Air quality

AECOM was engaged to undertake an Air Quality Impact Assessment to address the requirements of item 8 of the Cudgegong Road Station Precinct South – SEARs. A copy of the report is provided at **Appendix BB**.

8.17.1. Assessment approach

The assessment approach involved the following:

- Identification of relevant ambient air quality criteria
- Discussion of relevant guidelines including the Department's *Development Near Rail Corridors and Busy Roads – Interim Guideline* (2008)
- Discussion of local meteorology and climate conditions based on available Bureau of Meteorology (BoM) data
- Discussion on existing air quality within the Study Area based on available Office of Environment and Heritage (OEH) data
- Identification of potential sources of air and odour emissions from surrounding land uses
- A qualitative odour impact assessment conducted in accordance with the EPA's *Technical framework: Assessment and management of odour from stationary sources in NSW and Technical Notes* (DEC 2006)
- Provision of recommendations including any potential safeguards or monitoring that may be required.

8.17.2. Existing environment

The Site is situated in an area dominated by rural activities to the north and residential areas to the south. No major industrial or agricultural pollution sources are located in the proximity of the Study Area with minor road traffic and small rural farm operations the only possible air pollution sources.

Historically the local area contained a number of chicken broiler farm operations with many of these farms decommissioned and/or demolished in recent years following the encroachment of urban settlement. Onsite visits confirmed that the nearest currently operational broiler farms are located in the Riverstone / Marsden Park area, approximately six kilometres to the west of the Study Area.

Ambient air quality monitoring results between 2014 and 2017 do not indicate any significant air quality exceedances. OEH Annual Air Quality Statements for 2016 and 2017 indicate that 2016 and 2017 exceedances were all due to exceptional events which are defined as events related to bushfires, hazard reduction burns and dust storms.

The meteorological data indicates variable wind patterns throughout the year with summer easterly / winter westerly wind pattern. Given the predominant winds and the surrounding

land use, there are no indications of any potential air quality impacts on the Site due to prevailing meteorology.

8.17.3. Impact assessment

General dispersion parameters such as meteorology, terrain and surrounding land use demonstrate that due to the general wind conditions of the area blowing parallel to or away from the Site and the lack of any complex terrain or additional sources of pollution, the site is adequately located to minimise air quality impacts as a result of both vehicle emissions from Windsor Road and odour associated with broiler farm operations located at Riverstone and Marsden Park approximately six kilometres to the west. In conclusion, as current air quality meets relevant EPA criteria, in combination with the lack of any complex meteorology, terrain or major sources of pollution, there are no air quality issues requiring consideration in regard to the development within the Site.

8.18. Waste management

A Waste Management Report has been prepared by AECOM for the Concept Proposal. A copy of the report has been provided at **Appendix CC** and a summary of it provided below.

8.18.1. Assessment methodology

A review of site and concept layout, as well as a review of relevant waste legislation, regulation and guidelines was undertaken.

The objectives for the management of waste generated by the indicative Tallawong Station Precinct South design operational works are:

- To maximise opportunities for re-use through source separation and on-site storage
- To minimise waste generation and maximise re-use and recycling
- To ensure efficient collection, storage and transport and disposal of waste in an environmentally friendly manner. These objectives are in line with the WARR Strategy and the Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

8.18.2. Impact assessment

Potential measures for maximising resource recovery and management of waste during the operation phase were identified to meet the SEARs. The waste management strategies were based on implementation of the waste hierarchy, encompassing the whole waste lifecycle from generation and collection through to transport, processing and disposal. The proposed waste management strategies are summarised below:

- Source separation of waste streams at the proposed Tallawong Station Precinct South would be implemented to aid material reuse and improve recycling; in particular, source separation of recyclable waste from garbage
- Traditional waste collection methods (i.e. mobile garbage bins (MGBs) and garbage trucks) have been proposed. Waste chutes could be used for residential and commercial garbage and recycling waste collection (where applicable)
- Residents would take their waste to the waste storage room and place it in appropriate bins. All waste storage rooms shall be internal to the building and council garbage trucks shall collect the waste from collection points within the footprint of each building lot.

8.18.3. Mitigation measures

The waste management measures outlined in the Waste Management Report will be taken into account during the detailed design and operation of the future stages of the development.

8.19. Development contributions

Development of the site attracts Section 94 contributions under the *Section 94 Contributions Plan No.22L – Rouse Hill (Land)* and the *Section 94 Contributions Plan No.22W – Rouse Hill (Works)*. Contributions are payable as follows:

- Development Applications involving subdivisions - prior to release of the Subdivision Certificate
- Development Applications involving building work - prior to release of Building Construction Certificate
- Development Applications where no building approval is required - prior to occupation or use of the development

While Section 94 contributions are not payable at this concept stage of the development they will be payable for subsequent development applications involving subdivision, building works and building uses.

As shown in Figure 38, the Tallawong Station Precinct village park is identified as a contribution item under both the S94 Plan Nos. 22L and 22W for which contributions are sought. The works for the park are described as *Town Plaza including paved area, playground, pathway, fencing and landscaping works*.



Figure 38: Excerpt from Blacktown S94 Contributions Plan No 22W – Rouse Hill Works

Under S94 Plans 22L and 22W, Council may accept the dedication of land and works-in-kind to offset the monetary contribution payable. In this regard, it is intended that the park will be embellished and dedicated to Council as works-in-kind and that the cost of the land and embellishment will be offset against contributions payable. Full details of the work proposed to be undertaken will be provided to Council at the relevant stage.

The development is also located within the Western Sydney Growth Areas – Special Contributions Area and therefore a Special Infrastructure Contribution (SIC) will be payable. The SIC is a financial contribution paid during the development process to help fund regional

infrastructure required to support development in the North West and South West Growth Centres over the next 20 years. Payment of the SIC is generally required as follows:

- In the case of subdivision, before a subdivision certificate is issued
- In the case of approved building work, before a construction certificate is issued
- In the case of development for which a construction certificate is not required, before work is physically commenced on the land.

The current SIC rate is \$210,168 per hectare of net developable area however it is understood that the rate is likely to be adjusted to a per additional dwelling basis to better align the level of contribution with the demand for infrastructure.

9. Site suitability and public interest

In accordance with Section 4.15(1)(c) and (e), this chapter summarises why the Concept Proposal is suitable for the site and in the public interest.

9.1.1. Site suitability

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

- The site has been earmarked for residential and mixed use development in accordance with the North West Priority Growth Area Land Use and Infrastructure Implementation Plan and the North West Rail Link Corridor Strategy as well as other strategic and statutory planning policies
- Approval for the station development and related works has been granted (*North West Rail Link – Stations, Rail Infrastructure and Systems* CSSI (SSI_5414)) and construction works are well advanced, providing excellent transport services
- It facilitates new housing in an area that will be well serviced and well connected
- It provides for development that is based on TOD principles, maximising connectivity not only to the new station but also to other travel modes
- The site has been largely cleared of vegetation in accordance with the North West Growth Centres Biodiversity Certification
- The site is capable of being developed in a manner that will minimise impacts to the environmental qualities of the surrounding area
- It will only result in minor environmental impacts that can be appropriately managed and mitigated.

9.1.2. Public interest

The Concept Proposal is considered to be in the public interest as it will:

- Help meet the demand for housing in close proximity to public transport and employment
- Provide for new work environments close to public transport, leading to the creation of jobs within the local area
- Allow for the development of a variety of housing forms to meet the range of demographics needs in the area
- Provide for new public open space, tree planting and other significant enhancements to the public domain to create an attractive and sustainable neighbourhood
- Make the best use of the significant investment in transport and other infrastructure that is being provided in the area
- Activate the area around the Tallawong Station, encouraging people to use public transport and helping to make the station active and viable.

10. Environmental risk

The following Environmental Risk Assessment (ERA) addresses the following significant risk issues:

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

The adequacy of the baseline data is demonstrated through the range of detailed technical reports and supporting documentation appended to this EIS. Overall, Chapter 8 of the EIS and the appended technical reports and supporting documents provide a comprehensive and detailed assessment of the potential cumulative impacts arising from the proposal and other developments in the vicinity of the Site.

This assessment has determined that there are no adverse environment, social or economic impacts which cannot be managed or mitigated.

Table 14 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

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

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

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

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

Table 14: Risk Assessment Matrix

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

ITEM	PHASE*	POTENTIAL ENVIRONMENTAL IMPACT	PROPOSED MITIGATION MEASURES AND/OR COMMENT	RISK ASSESSMENT		
				SIGNIFICANCE OF IMPACT	MANAGEABILITY OF IMPACT	RESIDUAL IMPACT
Visual and views	O	Visual/view impacts from public places	Ensure future built form meets design excellence objectives through adoption of Design Excellence Strategy and compliance with Design Quality Guidelines.	3	3	6 Medium
Overshadowing	O	Overshadowing of the public domain	Arrange building massing to maximise solar access to open space and other public domain areas	3	2	5 Low/Medium
Heritage	O	Impact on heritage items in the vicinity	The proposed development will have negligible impact on State or local heritage items in the area and the site has been cleared of Aboriginal heritage	1	1	2 Low
Traffic and Transport	C+O	Increased traffic and parking on local roads	Based on the existing intersection performance and the likely traffic to be generated from the proposed development, all key intersections will perform at an acceptable level of service during peak periods. The reduced provision of parking is considered appropriate given the proximity of the site to excellent public transport and that the Concept Proposal has been designed in accordance with TOD principles.	3	2	5 Low/Medium
Noise and Vibration	O	Increase in noise and vibration levels during operation	Mitigation measures can be adopted for noise control and management, which may include physical design and management measures.	3	2	5 Low/Medium
Soil and Contamination	C	Exposure of contamination or hazardous materials during construction. Impacts of salinity on structures.	Given the current earthworks and the construction of Tallawong Metro Station, constant alterations to the site condition make it difficult to fully assess the site's suitability for future plans although potential for contamination is considered low. On completion of current development works, a Detailed Site Investigation (including salinity testing) will be conducted to confirm the suitability of the site for the proposed development.	2	2	4 Low/Medium

ITEM	PHASE*	POTENTIAL ENVIRONMENTAL IMPACT	PROPOSED MITIGATION MEASURES AND/OR COMMENT	RISK ASSESSMENT		
				SIGNIFICANCE OF IMPACT	MANAGEABILITY OF IMPACT	RESIDUAL IMPACT
Stormwater and Flooding	C+O	Potential water quality and flooding impacts	Ensure stormwater drainage infrastructure is designed in accordance with the Integrated Water Cycle Management Strategy – Cudgegong Road Station Precinct South prepared by AECOM.	3	2	5 Low/Medium
Bushfire	C+O	Potential bushfire impacts	Ensure adequate fire fighting supplies and access for fire fighting operations are provided	2	2	4 Low/Medium
Wind	O	Adverse wind environment	Ensure the wind mitigation measures outlined in the Pedestrian Wind Environment Statement are taken into account during the detailed design phase.	3	2	5 Low/Medium
Social Impacts	O	Inadequate provision of services to meet needs of incoming residents Poor social indicators	Ensure adequate social infrastructure and support is provided, particularly in early years of development	4	3	7 High/Medium
Crime and Public Safety	O	Anti-social intimidating behaviour	The recommendations of the CPTED report are to be implemented in the future detailed design stage(s)	2	2	4 Low/Medium

10.1. Cumulative impact

In light of the above and the assessment in Chapter 8 of this EIS, it is considered that the proposed development on its own or whether in conjunction with other developments occurring nearby at the same, does not give rise to any cumulative environmental impacts that cannot be appropriately managed through the mitigation measures identified in Chapter 11.

The approved Metro Station construction and associated works (SSI_5414) are well advanced and are expected to be completed by 2019 before any work on the Concept Proposal will have commenced. Major projects outside of the Site are likely to include development of other release areas which is to be expected in a nominated Growth Area. The Traffic and Transport Impact Assessment prepared by SCT Consulting has undertaken an assessment of the cumulative impact of the Concept Proposal and has concluded that no significant cumulative impacts are likely. Future Stage 2 development application(s) will consider construction impacts, including any cumulative impacts, and identify appropriate management measures.

Part E

Conclusion

11. Mitigation measures

The measures required to mitigate the impacts associated with the proposed works are detailed in Table 15. These measures have been derived from the environmental assessment in Chapter 8 and those detailed in the appended consultants' reports.

As part of the Concept Proposal is for building envelopes, many of the impacts cannot be fully assessed (and therefore mitigated) until the Stage 2 detailed design application(s) stage. The mitigation measures provided below are therefore to be read predominantly as design guidance for a future application(s). Future Stage 2 application(s) will include a complete set of applicable Mitigation Measures specific to the future development on the Site.

Table 15: Mitigation measures

Mitigation Measures
Urban Design Future applications(s) must take into consideration the Cudgegong Road Station Precinct South Design Quality Guidelines developed by Bennett and Trimble.
Design Excellence The process outlined in the Design Excellence Report prepared by Landcom will be implemented
Visual Impact Future application(s) must take into consideration the following mitigation measures: <u>During the design development process</u> <ul style="list-style-type: none">the design of the proposed buildings, columns and façades to be further refined to articulate form and profiles which may assist in minimising the bulk of built formselect materials, colour and finishes for new elements with the aim of minimising the bulk of the structures and incorporate transparent materials to maximise natural light into the structures, and use non-reflective materials for façades and finishesdesign lighting to minimise upward spread of light near local residents and key receptors. Care should be taken when selecting luminaries to ensure that light spill and glare are kept to a minimumconsideration in selection and location of new tree planting along Schofields Road, Tallawong Road and Cudgegong Road frontages that may provide partial screening of constructed elements from surrounding receptors, and facilitate improved amenityminimise disturbance of vegetation to the minimum amount necessary to construct the Proposal to maintain the screening of views. <u>During construction</u> <ul style="list-style-type: none">provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material where necessary) to minimise visual impacts on key viewpoints during construction. Hoardings and site fencing would be removed following construction completionprovide cut-off or directed lighting within and outside of construction site, with lighting location and direction considered to ensure glare and light spill is minimised.
Contamination Following completion of works on Site associated with the Sydney Metro North West proposal, and prior to further development applications associated with the proposal, a Phase II Detailed Site Investigation (DSI) of soil and groundwater will be undertaken. The DSI will be undertaken in accordance with the requirements set out in Phase I Preliminary Site Investigation prepared by ADE Consulting Group.
Traffic and Transport A Travel Plan will be developed and monitored for the Cudgegong Station Precinct community to deliver best practice travel programs and initiatives to manage travel demand for a transit-oriented development.
Stormwater and Flooding Future stormwater drainage infrastructure will be designed in accordance with the Integrated Water Cycle Management Strategy – Cudgegong Road Station Precinct South prepared by AECOM.

Mitigation Measures

Biodiversity

Future applications(s) must ensure that the following measures are put in place during construction:

- Sediment and erosion controls should be put in place during construction to prevent indirect impacts on the adjacent vegetation and the water courses to the east and west of the study area.
- Revegetation and/or soil stabilisation works should occur post construction
- When the small isolated stand of trees is removed, care should be taken to avoid harm to native fauna. If fauna is found on the construction site, all works should stop – all native fauna is protected. Do not touch animal but wait for it to leave. If it is a threatened species, advice from a qualified ecologist should be sought and a rescue agency such as WIRES should be called if it is harmed
- Weeds should be controlled within the study area as a part of landscaping works for future development.

Wind

Future applications(s) must take into consideration the recommendations of the Pedestrian Wind Environment Statement prepared by Windtech.

Social Impacts

- The recommendations in Table 28 of the Social Needs and Impact Assessment prepared by GHD will be taken into account during the preparation of the Stage 2 development application(s).
- Prepare an overarching social/place plan prior to residents moving into the development.

CPTED

The recommendations outlined in Section 8.0 of the Crime Prevention Through Environmental Design Report prepared by AECOM relating to landscape, urban and building design are to be implemented in the future detailed design stage(s).

Noise

The Stage 2 development application report(s) will have regard to the recommendations in the Masterplan Noise and Vibration Assessment prepared by Acoustic Logic. The Stage 2 development application report(s) will identify the strategies for noise control and management, including construction noise mitigation, physical design measures and management measures such as permissible hours of operation for the various uses.

Ecologically Sustainable Development

The ESD measures outlined in the Ecological Sustainable Development Report prepared by AECOM will be further developed to maximise the environmental performance and energy efficiency of the precinct.

Waste

The waste management measures outlined in the Waste Management Report will be taken into account during the detailed design and operation of the future stages of the development.

12. Conclusion

This EIS has been prepared to assess the environmental, social and economic impacts of the Stage 1 SSD Concept Proposal for a mixed use development, park and associated facilities on land located south of the proposed Tallawong Station.

The EIS has addressed the issues outlined in the SEARs (**Appendix A**) and Schedule 2 of the Environmental Planning and Assessment Regulation 2000, to consider the relevant environmental planning instruments, built form, and social and environmental impacts resulting from the proposed development.

The purpose of this application is to facilitate the delivery of a vibrant mixed use centre that demonstrates best practice transit oriented development principles and where the development is fully integrated with the new Metro Station. It is considered that the Concept Proposal warrants approval for the following reasons:

- The Concept Proposal is permissible with consent and generally meets the requirements of the relevant statutory controls
- The proposal is consistent with the principles of ecologically sustainable development as defined in Schedule 2(7)(4) of the *Environmental Planning and Assessment Regulation 2000*
- It increases housing supply to meet the differing housing needs of the community in accordance with the NSW Government's planning directions for the North West Growth Area
- It provides housing and jobs in close proximity to high quality public transport
- It provides for the integration of land use and transport by aligning housing development with the NSW Government's investment in infrastructure
- It ensures the orderly and economic use and development of land by creating a well-connected and sustainable community on surplus government land adjacent to a new Metro station
- A balanced built form outcome has been achieved in the Concept Proposal, with the proposal fitting with the future built form framework of the Precinct and ensuring variation in the building massing and typologies is achieved
- It has been designed to create a walkable and active local centre development with good access to a range of parklands, open space, commercial and retail facilities and the Metro station. High quality pedestrian links through the Site allow for finer grain pedestrian connections within the area
- It provides a significant public benefit through the provision of a high quality and attractive public domain, including a new 2,900m² village park and plaza
- It includes the provision of a minimum of five per cent affordable housing targeted to very low, low and moderate income earners
- It provides a mixed use development within approximately 300 metres of the Tallawong Station which will provide a rapid and frequent metro rail service connecting to jobs, services and strategic centres in the northwest and across Sydney
- It provides for integrated retail, commercial, recreational and community uses that integrate with the new station and also stimulate activity around the new station.

This EIS has demonstrated that the proposed development will have minimal adverse environmental effects and where impacts do occur appropriate measures can be adopted to mitigate these impacts. Given the significant public benefits of the project, it is requested that the Minister approve the State Significant Development Application under Section 4.38 of the EP&A Act.