

Statement of Environmental Effects

Proposed Subdivision

19 Barton Avenue, Wallerawang

Prepared for: **Timberfix**

December 2022





REPORT DETAILS	
Project Number	20037
Project Name	Residential Subdivision
Project Address 19 Barton Avenue, Wallerawang	
Client	Timberfix
Report Reference	20037-R01_B
Prepared by	Erika Dawson
Revision	В
Date	4 December 2022

Document Control		
Revision	Date	Purpose
А	1/12/2022	Draft for client review
В	4/12/2022	Final



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Disclaimer

This report is prepared solely for Timberfix (the 'client') and any future landowners (or their delegated representatives) of the subject lot(s) and is not for the benefit of any other person and may not be relied upon by any other person.

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1 INTRODUCTION

1.1 Background

This report has been prepared for Timberfix to accompany a Development Application (DA) for the proposed subdivision of Lot 1 DP 1253903, known as 19 Barton Avenue, Wallerawang. Development Consent is required for the subdivision pursuant to Lithgow Local Environmental Plan 2014.

1.2 Subject Site

The site the subject of this DA is comprised of Lot 1 DP 1253903, which has an area of 17.43 hectares. The Certificate of Title and title diagram are provided in **Appendix A**. As outlined on the title and shown on the Deposited Plan, the site is encumbered by a number of easements for transmission lines. A Detail Survey is provided in **Appendix B**.

Figure 1 shows the location of the subject site. A recent aerial photograph showing the site is provided at **Figure 2** and photographs of the site provided in **Plate 1** to **Plate 9**.

The site has road frontage to Barton Avenue, Lyon Parade and Cannelite Street. The site slopes generally from the west to the east with three first order intermittent drainage lines traversing the site. It contains largely grassland vegetation with some remnant isolated trees.





Figure 1: Site Location



Statement of Environmental Effects | Proposed Subdivision 19 Barton Avenue, Wallerawang



Figure 2: Site Aerial



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Plate 1: View north east along south eastern boundary



Plate 2: View north along western boundary





Plate 3: View south along western boundary



Plate 4: view south east from northern end of site





Plate 5: View from Barton Avenue north west to site



Plate 6: View from Barton Avenue west to site





Plate 7: View from Barton Avenue south west to site

1.3 Report Format

This Statement of Environmental Effects (**SEE**) has been prepared to address the requirements of Clause 2(4) of Schedule 1 of the Environmental Planning & Assessment Regulation 2000 (EP&A Regulation) and to provide sufficient information for the consent authority to determine the DA.

The SEE is provided in the following format:

- Section 1 Introduction
- Section 2 Description of the proposed development
- Section 3 Consideration of the legislative requirements
- Section 4 Consideration of the impacts of the development
- Section 5 Conclusion to the report



2 PROPOSED DEVELOPMENT

2.1 Constraints Analysis

A Constraints Analysis has been undertaken for the development site and its surrounds in accordance with Section 2.2.2 of the *Lithgow Development Control Plan 2021*. The constraints analysis is shown in **Figure 3** with the following table outlining the development response to each of the constraints identified.

Table 1: Site Analys	is & Develo	pment Respon	ise
----------------------	-------------	--------------	-----

Constraint	Development Response
Topography & Hydrology	The site slopes generally from west to east with the lowest point being adjacent to the entrance to Charles Darwin Park. Three drainage depressions traverse the site. The site contains two exiting dame which are to be filled.
	The main connection road through the site will utilise the most central of these depressions in order to best utilise the topography and natural drainage paths.
	The site contains a few areas with slopes over 20%. This threshold is deemed by Council to provide geological and built form constraints. The former is discussed below. Most of the lots affected by the \geq 20% slope have been designed to be larger in size in order to provide areas for future dwellings outside of the steep land.
	There is half a dozen lots that will predominately contain land with ≥20% slope. The client has acknowledged that these lots will require bespoke dwelling design to respond to the site constraints. Other options were contemplated for this area of land, such as having significantly larger lots or dedicating the land as open space to Council. Larger lots in this area was not considered consistent with the land use zoning and would not provide for an appropriate urban design outcome in the context of the remainder of the development on site. It was considered that providing the land as public open space would be inappropriate as it would not be usable for the public given its steepness. Therefore on balance of issues, the provision in allotments was considered the most appropriate use of the land. The development has been designed to ensure a neutral or beneficial impact on water quality, in accordance with the Sydney Drinking Water Catchment
Biodiversity	The Biodiversity Development Assessment Report has identified that the site predominantly comprised Plant Community Type (PCT) 351 - Brittle Gum - Broad- leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion. Most of this PCT is in poor condition (zone 1) and 0.39 hectares of this PCT is in moderated condition (zone 2). Field assessment confirmed there are no Threatened Ecological Communities in the study area.
	Threatened species searches in September 2020 identified one threatened species listed as vulnerable under the BC Act and the EPBC Act: Black Gum (<i>Eucalyptus aggregate</i>). No threatened species were recorded during the survey.
	The development has been designed to avoid further impact on the Zone 2 Vegetation and two existing native vegetation trees, including the Black Gum. The existing driveway for proposed Lot 15 will be utilised and sufficient area in both Lots 13 and 15 have been provided for a future dwelling outside of the zone 2 vegetation.
Natural Hazards	The land surrounding the site has the potential to carry a bushfire. As such <i>Planning</i> for <i>Bushfire Protection</i> 2019 has been applied to the development to ensure all future development can be located in an appropriate area of bushfire risk (i.e. ≤ BAL-29) through the provision of Asset Protection Zones on site, provides for appropriate and connected access, and infrastructure is appropriately designed and located.
Access	The site has frontage to both Barton Avenue and Lyon Parade (both directly and via a short connection of Cannelite Street). The direct access to Lyon Parade (at the



Table 1: Site Analysis & Development Response

Constraint	Development Response
	southern end of the site) has limited sight distances and is only appropriate for access to one or two dwellings. The access via Cannelite Street will provide for one appropriate point of access to the subdivision. There are no other opportunities for the site to gain access from Lyon Parade. Therefore, in order to provide a permeable urban environment, a second access point is required to be provided to Barton Avenue as this is the only other available access opportunity. This second access is required from both an urban design perspective and a bushfire planning perspective. This connection through the subdivision will maintain an important, albeit currently informal, pedestrian connection as well as improving vehicular permeability.
	It is considered to be inappropriate to provide the development site with only one access to Lyon Parade. This will result in a substandard outcome from an urban design and bushfire perspective. It will place an inappropriate and unnecessary burden on Lyon Avenue and in particular its intersection with Barton Avenue.
	The location of the access to Barton Avenue has been selected as it provides for appropriate safe intersection sight distances, integrates well with the access to the Charles Darwin Park (as opposed to being offset and providing a staggered intersection), and aids with stormwater management.
	It is acknowledged that new accesses are ordinarily discouraged from the classified road network. However, it is considered that given its regional classification (as opposed to state) and for the reasons outlined above that in this instance a new access is appropriate.
	The consultation undertaken with Transport for NSW (TfNSW) is outlined in Section 2.2.1.
Easements & Infrastructure	The site is encumbered by numerous forms of infrastructure, both above and below ground, which are protected by various easements benefitting the requisite utility undertakings.
	Consultation has been undertaken with the various utilities which is outlined in Section 2.2.2 . In short, the electricity undertakings need to ensure that access is maintained to their infrastructure, including development exclusion zones around the poles/stanchions to provide working room for maintenance. Their requirements inadvertently prohibit the ability to provide urban type allotments within the easement areas due to their development prohibitions and fencing restrictions that would otherwise inhibit access to the infrastructure.
	Where possible, the easement areas have been included in larger more "rural residential" style allotments. Proposed Lot 14 was expanded in size, following prelodgement advice from Council, to incorporate the adjacent easement area as opposed to providing it in an area of Public Open Space (POS). The balance of the easement areas have been provided within land to be dedicated to Council as POS as it will also provide the function of stormwater management in order to comply with the Sydney Drinking Water Catchment Neutral or Beneficial Effect (NorBE) requirements.
	The resultant POS areas will have the added benefits of providing green corridors at the interface with Barton Avenue and through the development site.





Figure 3: Site Analysis Plan



2.2 Consultation

2.2.1 Transport for NSW

Early consultation was undertaken with Transport for NSW (TfNSW) in order to ascertain their requirements for future residential development of the site as:

- The site adjoins a Regional Classified Road (Barton Avenue) and direct access is proposed to the classified road.
- The development will create more than 50 allotments and have direct access to a classified making the development "traffic generating development" pursuant to the *State Environmental Planning Policy* (*Transport & Infrastructure*) 2021.

The following table provides a summary of the prelodgement advice from TfNSW, with a response provided as to how it has been addressed. A full copy of the consultation is provided in **Appendix C**.

Table 2: TfNSW Consultation

	Matter Raised	Development Response
TfNSW requests that the Statement of Environmental Effects be supported by an Integrated Transport Assessment (ITA) prepared by a suitably qualified person in accordance with the Austroads Guide to Traffic Management Part 12, the Roads and Maritime Supplements to Austroads and the RTA Guide to Traffic Generating Developments. The ITA is to address the following.		The required information has been provided in Section 4.3 of this report.
 Phases and stages of the subdivision, including plans showing stage boundaries and required infrastructure to serve each stage. 		The DA is not proposed to be staged.
•	 Traffic volumes: Existing background traffic, Development-related traffic for each phase or stage of the project, Projected cumulative traffic at commencement of operation, and a 10-year horizon post-development. 	This is addressed in Section 4.3 of this report.
•	 Traffic characteristics: Number and ratio of heavy vehicles to light vehicles, Peak times for existing traffic, Peak times for development-related traffic including commuter periods, Interactions between existing and development-related traffic. 	This is addressed in Section 4.3 of this report.
•	The likely trip distributions across the road network based on origins and destinations for commuter vehicles.	This is addressed in Section 4.3 of this report.
•	Road safety assessment of route/s that are likely to experience a significant increase in traffic.	Not considered to result in a significant increase in traffic and as such not required.
•	The impact of traffic generation on the public road network and measures employed to ensure traffic	This is addressed in Section 4.3 of this report.



Table 2: TfNSW Consultation

	Matter Raised	Development Response
	efficiency and road safety after completion of each stage.	
•	The need for improvements to the road network, and the improvements proposed such as road widening and intersection treatments, to cater for and mitigate the impact of development-related traffic.	This is addressed in Section 4.3 of this report.
•	Proposed road facilities, access and intersection treatments are to be identified and be in accordance with Austroads Guide to Road Design including provision of Safe Intersection Sight Distance (SISD).	This is addressed in Section 4.3 of this report.
•	Consider local climate conditions that may affect road safety (e.g. fog, wet and dry weather, icy road conditions).	The location is subject to fog and icy conditions during winter. The development is not, however, expected to be adversely affected by local climatic conditions. Nor is the proposed development expected exacerbate any climatic conditions.
•	The layout of the internal road network, parking facilities and infrastructure.	This is provided in Appendix D and Appendix E.
•	Any potential impacts on rail corridors and level crossings detailing any proposed interface treatments.	The development site is not located in proximity to any rail corridors or likely to impact on any level crossings.
•	Impacts on public transport (public and school bus routes) and consideration for alternative transport modes such as walking and cycling.	Addressed in Section 4.3.6.
TfN for	SW also offers the following project-specific advice any DA:	-
•	If the proposal is for a direct road connection to Barton Avenue (a Regional classified road, MR531), referral to TfNSW would be required under Section 104 and Schedule 3 of the SEPP (Infrastructure) 2007, being subdivision with more than 50 lots.	Noted.
•	Concurrence would also need to be obtained from TfNSW for any physical works if required within Barton Avenue under Section 138 of the Roads Act 1993. The consent of Council as the roads authority would also be required.	Noted.
•	The consent authority (e.g. Council) must consider the provisions of Section 101 of the SEPP (Infrastructure) 2007, which prohibit direct access to a classified road where access by an alternate road (Lyon Parade, a local road) is practicable and safe. Based on current information TfNSW therefore generally does not support direct access to Barton Avenue.	Addressed in Table 1 and Section 3.7.3.1 .
•	TfNSW has not sighted drawings from the historic subdivision that adjoins the site on its western boundary (Lyon Parade). The current site appears to be a residue lot formed as part of that prior subdivision, noting it has frontage to Lyon Parade in	Addressed in Table 1 and Section 3.7.3.1 .



Table 2: TfNSW Consultation

	Matter Raised	Development Response
	two locations. The current proposal should remain consistent with any previously approved subdivision layout, particularly in relation to any direct access sought from the classified road.	
•	A review of TfNSW records has not yielded traffic count data for this section of Barton Avenue. Council may be able to provide recent counts, or otherwise a site-specific survey may be required (depending on constraints identified as part of assessment).	Addressed in Section 4.3.1.
•	The Austroads Guide to Road Design Part 4 Figure A 10 warrants for turning treatments should be reviewed for any new intersections, or significant increase in traffic on existing intersections, located on a classified road.	Addressed in Section 4.3.5.3.

2.2.2 Electricity

2.2.2.1 Endeavour Energy

Endeavour Energy (EE) advised that their only registered easement on the site was located in the northern portion of the site (see **Appendix C**). It protects Feeder 944 which extends from Wallerawang to Orange. The EE officer provided their general development requirement documents.

The easement will be located in the rear of three (3) allotments (proposed Lots 53-55). The development will be consistent with the requirements of EE in terms of impact on their infrastructure.

The DA will need to be referred to EE pursuant to Section 2.48 of the State Environmental Planning Policy (*Transport and Infrastructure*) 2021.

2.2.2.2 TransGrid

TransGrid has published the document *Easement Guidelines: Living and Working with Electricity Transmission Lines* (TransGrid n.d.). The development has been designed to be consistent with the Guidelines. This is further discussed in **Table 1**.

2.3 Development Description

The proposed development involves the subdivision of the site into 55 residential allotments and two (2) public open space lots to be used for stormwater management. Plans of the proposed development are provided in **Appendix D**. Concept servicing plans are provided in **Appendix E**.

The subdivision has been designed to respond to the constraints as outlined in **Section 2.1**. It will provide for two (2) connections to the existing road network to provide for permeability and connectivity. The lots range from 1,001 m² to 1.92 hectares.



3 LEGISLATIVE FRAMEWORK

3.1 Overview

The proposed development requires development consent under *Lithgow Local Environmental Plan 2014*. It will require a Bush Fire Safety Authority from the NSW RFS for subdivision of bush fire prone land, and a section 138 road works approval from Council.

3.2 Environmental Planning & Assessment Act 1979

3.2.1 Matters for Consideration

Section 4.15(1) of the Act outlines the matters that a consent authority is required to take into consideration when determining a DA. The following table outlines these requirements and where each relevant matter has been considered in this report in relation to the proposed development.

Table 3: Section 4.15(1) Matters

		Provision	Report Section where addressed		
(a)	(a) the provisions of:				
	(i)	any environmental planning instrument, and	Section 3.7		
	(ii)	any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	No known draft EPIs.		
	(iii)	any development control plan, and	Section 3.8		
	(iiia)	any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and	No known planning agreements entered into or draft planning agreements offered to be entered into.		
	(iv)	the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and	Section 3.6		
	(v)	repealed	N/A		
that	apply	to the land to which the development application relates,			
(b)	the bo in	e likely impacts of that development, including environmental impacts on th the natural and built environments, and social and economic impacts the locality,	Section 4		
(c)	the	e suitability of the site for the development,	Section 5.1		
(d)	an	y submissions made in accordance with this Act or the regulations,	N/A as notification not yet carried out.		
(e)	the	e public interest.	Section 5.2		



3.2.2 Integrated Development

Section 4.46 of the EP&A Act states that development that requires both development consent and another approval listed under that section is 'Integrated Development'. **Table 3** outlines the integrated development approvals and the applicability to the development. The proposed development is Integrated Development, by virtue of requiring approval under the *Rural Fires Act* 1997.

It should be noted that the Roads Act approval does not trigger Integrated Development, pursuant to Section 4.46(3) of the EP&A Act.

The relevant Act provisions are addressed later in **Section 3** of this report.

			Applica	ability
Act	Provision	Approval	Develo	pment
			Yes	No
Coal Mine Subsidence Compensation Act 2017	5 22	approval to alter or erect improvements, or to subdivide land, within a mine subsidence district		\boxtimes
Fisheries Management Act	s 144	aquaculture permit		\boxtimes
1994	S 201	permit to carry out dredging or reclamation work		\boxtimes
	s 205	permit to cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease		
	s 219	 permit to: (a) set a net, netting or other material, or (b) construct or alter a dam, floodgate, causeway or weir, or (c) otherwise create an obstruction, across or within a bay, inlet, river or creek, or across or around a flat 		
Heritage Act 1977	s 58	approval in respect of the doing or carrying out of an act, matter or thing referred to in s 57 (1)		\boxtimes
Mining Act 1992	ss 63, 64	grant of mining lease		\boxtimes
National Parks and Wildlife Act 1974	s 90	grant of Aboriginal heritage impact permit		\boxtimes
Petroleum (Onshore) Act 1991	s 16	grant of production lease		
Protection of the Environment Operations	ss 43 (a), 47 and 55	Environment protection licence to authorise carrying out of scheduled development work at any premises.		\boxtimes
Act 1997	ss 43 (b), 48 and 55	Environment protection licence to authorise carrying out of scheduled activities at any premises (excluding any activity described as a "waste activity" but including any activity described as a "waste facility").		
	ss 43 (d), 55 and 122	Environment protection licences to control carrying out of non-scheduled activities for the purposes of regulating water pollution resulting from the activity.		
Roads Act 19931	s 138	consent to:	\boxtimes	

Table 4: Integrated Development Requirements



Act	Provision	Approval		ability > pment
			Yes	No
		 (a) erect a structure or carry out a work in, on or over a public road, or 		
		(b) dig up or disturb the surface of a public road, or		
		(c) remove or interfere with a structure, work or tree on a public road, or		
		 (d) pump water into a public road from any land adjoining the road, or 		
		(e) connect a road (whether public or private) to a classified road		
Rural Fires Act 1997	s 100B	authorisation under section 100B in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes		
Water Management Act 2000	ss 89, 90, 91	water use approval, water management work approval or activity approval under Part 3 of Chapter 3		
Notos				

Table 4: Integrated Development Requirements

Notes:

1 Pursuant to section 4.46(3), where the roads authority is the same as the consent authority, development is not integrated development.

3.3 Biodiversity Conservation Act 2016

3.3.1 Introduction

Part 7 of the *Biodiversity Conservation Act* 2016 (BC Act) contains the requirements for biodiversity assessment and approvals under the Planning Act. Those relevant to the development are addressed below.

3.3.2 Significant Affectation of Threatened Species

Clause 7.2 of the BC Act identifies the following circumstances where a development is likely to significantly affect threatened species:

- (a) it is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, or
- (b) the development exceeds the biodiversity offsets scheme threshold if the biodiversity offsets scheme applies to the impacts of the development on biodiversity values, or
- (c) it is carried out in a declared area of outstanding biodiversity value.

The proposed development is likely to significantly affect threatened species as defined by Section 7.2 of the BC Act by virtue of exceeding the BOS threshold. Therefore, a Biodiversity Development Assessment Report (BDAR) is required to accompany the application for development consent pursuant to section 7.7 of the BC Act. The BDAR for the proposed development is provided in **Appendix F**.



3.3.3 DA Considerations

For the purposes of section 7.13 of the BC Act, the BDAR provided in **Appendix F** outlines the impacts of the development on biodiversity values. The development has been designed to avoid and minimise impacts on the BC and EPBC listed Black Gum and Plant Community Type (PCT) 351 vegetation. The residual impacts are limited to an offset requirement of:

• One (1) ecosystem credit for 351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion.

For the purposes of section 7.16 of the BC Act, the BDAR concludes that there are no candidates identified for serious and irreversible impacts on biodiversity values as a result of the development.

3.4 Rural Fires Act 1997

The subject site is mapped as being bush fire prone on Council's Bush Fire Prone Lands map, as shown in **Figure 7**.



Figure 4: Bush Fire Prone Lands Map

Section 100B of the Rural Fires Act 1997 (**RF Act**) requires a Bush Fire Safety Authority to be obtained from the Commissioner of the NSW Rural Fire Service (**RFS**) for inter alia subdivision of bush fire prone land that could lawfully be used for residential or rural residential purposes. This DA will be referred to RFS as part of an Integrated Development referral for the DA.

A Bush Fire Assessment Report (**BFAR**) has been prepared by a Level 3 BPAD Accredited Practitioner for the development in accordance with *Planning for Bush Fire Protection 2019* (**PBP**) and Clause 45 of the *Rural Fires Regulation 2021* (RF Regulation). The BFAR is provided in **Appendix E.**



3.5 Water Management Act 2000

The site is mapped as containing three first order intermittent drainage lines. The Waterfront e-tool has been utilised to determine whether a Controlled Activity Approval (CAA) is required pursuant to section 91 of the *Water Management Act 2000* (WM Act) for works within 40m of a watercourse. As outlined in **Appendix F**, a CAA is not required for the development.

3.6 Environmental Planning & Assessment Regulations 2021

3.6.1 Prescribed Matters

Section 61 to 65 of the Environmental Planning and Assessment Regulations 2021 (EP&A Regulation 2021) outlines the additional matters that are to be considered when determining a DA as prescribed by Section 4.15(1)(a)(iv) of the EP&A Act. Each of these is considered below in relation to the proposed development.

Table 5: Prescribed Matters

			Provision	Applical Develo	bility to pment
				Yes	No
61 /	Additi	onal r	natters that consent authority must consider		
(1)	ln au Sti	deter thorit ructur	mining a development application for the demolition of a building, the consent y must consider the Australian Standard AS 2601—2001: The Demolition of res.		
(2)	ln th co	deter at is si nsidei	mining a development application for the carrying out of development on land ubject to a subdivision order under the Act, Schedule 7, the consent authority must r—		
	(a)	the s	subdivision order, and		
	(b)	any Sche	development plan prepared for the land by a relevant authority under that edule.		
(3)	ln co	deter nsent	mining a development application for development on the following land, the authority must consider the Dark Sky Planning Guideline—		\boxtimes
	(a)	land in th City	in the local government area of Coonamble, Gilgandra or Warrumbungle Shire or e part of the local government area of Dubbo Regional that was formerly in the of Dubbo,		
	(b)	land is—	less than 200 kilometres from the Siding Spring Observatory, if the development		
		(i)	State significant development, or		
		(ii)	designated development, or		
		(iii)	development specified in State Environmental Planning Policy (Planning Systems) 2021, Schedule 6.		
(4)	ln ho Ri: De	deter ouse o se Hou epartn	mining a development application for development for the purposes of a manor r multi dwelling housing (terraces), the consent authority must consider the Low using Diversity Design Guide for Development Applications published by the ment in July 2020.		
(5)	Su co	bsect ntrol	ion (4) applies only if the consent authority is satisfied there is not a development plan that adequately addresses the development.		\boxtimes
(6)	In determining a development application for development for the erection of a building for residential purposes on land in Penrith City Centre, within the meaning of Penrith Local				



Table 5: Prescribed Matters

	Provision	Applical Develo	bility to pment
		Yes	No
	Assessment Guideline: An Adaptive Response to Flood Risk Management for Residential Development in the Penrith City Centre published by the Department on 28 June 2019.		
(7)	In determining a development application for development on land to which Wagga Wagga Local Environmental Plan 2010 applies, the consent authority must consider whether the development is consistent with the Wagga Wagga Special Activation Precinct Master Plan published by the Department in May 2021.		
(7A)	In determining a development application for development on land to which Moree Plains Local Environmental Plan 2011 applies, the consent authority must consider whether the development is consistent with the Moree Plains Special Activation Precinct Master Plan published by the Department in January 2022.		
(8)	Subsections (7) and (7A) do not apply to a development application made on or after 31 March 2022.		
62 C	onsideration of fire safety		
(1)	This section applies to the determination of a development application for a change of building use for an existing building if the applicant does not seek the rebuilding or alteration of the building.		
(2)	The consent authority must—		
	 (a) consider whether the fire protection and structural capacity of the building will be appropriate to the building's proposed use, and 		
	(b) not grant consent to the change of building use unless the consent authority is satisfied that the building complies, or will, when the development is completed, comply, with the Category 1 fire safety provisions that are applicable to the building's proposed use.		
(3)	Subsection (2)(b) does not apply to the extent to which an exemption from a provision of the Building Code of Australia or a fire safety standard is in force under the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.		
63 C	onsiderations for erection of temporary structures		
In de autho	ermining a development application for the erection of a temporary structure, the consent rity must consider whether—		\boxtimes
(a)	the fire protection and structural capacity of the structure will be appropriate to the proposed use of the structure, and		
(b)	the ground or other surface on which the structure will be erected will be sufficiently firm and level to sustain the structure while in use.		
64 C	onsent authority may require upgrade of buildings		
(1)	This section applies to the determination of a development application that involves the rebuilding or alteration of an existing building if—		\boxtimes
	 (a) the proposed building work and previous building work together represent more than half of the total volume of the building, or 		
	(b) the measures contained in the building are inadequate—		
	(i) to protect persons using the building, if there is a fire, or		
	 to facilitate the safe egress of persons using the building from the building, if there is a fire, or 		
	(iii) to restrict the spread of fire from the building to other buildings nearby.		



Table 5: Prescribed Matters

	Provision	Applical Develo	bility to pment
		Yes	No
(2)	The consent authority must consider whether it is appropriate to require the existing building to be brought into total or partial conformity with the Building Code of Australia.		
(3)	In this section—		
	previous building work means building work completed or authorised within the previous 3 years.		
	total volume of a building means the volume of the building before the previous building work commenced and measured over the building's roof and external walls.		
65	Consideration of conservation plan for development at Sydney Opera House		
(1)	In determining a development application for development at the Sydney Opera House to which the Act, Part 4 applies, the consent authority must consider the provisions of the Sydney Opera House Conservation Plan.		\boxtimes
(2)	In this section—		
	Sydney Opera House has the same meaning as Opera House in the Sydney Opera House Trust Act 1961.		
	Sydney Opera House Conservation Plan means the conservation management plan for the Sydney Opera House entitled "Respecting the Vision", 4th edition, published in July 2017 on the Sydney Opera House Trust's website.		

None of the clauses are applicable to the proposed development.

3.7 Environmental Planning Instruments

3.7.1 SEPP (Biodiversity and Conservation) 2021

3.7.1.1 Koala Habitat Protection 2021

Application

Chapter 4 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP B&C) applies to the development being within the R5 Large Lot Residential Zone and located within Lithgow LGA.

Development Control

The site has an area of more than 1 hectare and does not have an approved Koala Plan of Management (KPoM). Consequentially section 4.9 of the B&C SEPP is applicable to the proposed development. It requires Council to assess whether the development is likely to have any impact on koalas or koala habitat.

The BDAR provided in **Appendix E** included targeted surveys for koala in accordance with the NSW DPE Koala (*Phascolarctos cinereus*) *Biodiversity Assessment Method Survey Guide*. It identified that koalas were not present on site for the purposes of candidate fauna species and that no further assessment was required.



3.7.1.2 Sydney Drinking Water Catchment

Application

The land on which the proposed development is to be carried out is located within the Sydney Drinking Water Catchment as shown on the Sydney Drinking Water Catchment Map (refer **Figure 7**) under Chapter 8 of the B&C SEPP.



Figure 5: Sydney Drinking Water Catchment

Section 8.8 of the B&C SEPP requires the consent authority to be satisfied that a development would have a neutral or beneficial effect on water quality. A NorBE assessment has been prepared for the development and is provided on the civil plans as provided in **Appendix E**.

3.7.2 SEPP (Resilience and Hazards) 2021

3.7.2.1 Remediation of Land

Section 4.6 of State Environmental Planning Policy (Resilience and Hazards) 2021 (R&H SEPP) requires Council to consider the following before granting consent to a DA:

- (a) it has considered whether the land is contaminated, and
- (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.



The site is not known to have been used for any of the purposes as listed in Table 1 of the Contaminated Land Planning Guidelines and is therefore not considered to be contaminated. No further consideration of the SEPP is required.

3.7.3 SEPP (Transport and Infrastructure) 2021

3.7.3.1 Infrastructure

Development likely to affect an electricity transmission or distribution network

Section 2.48 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) applies to DAs that involve:

- (a) the penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,
- (b) development carried out—
 - (i) within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or
 - (ii) immediately adjacent to an electricity substation, or
 - (iii) within 5m of an exposed overhead electricity power line,
- (c) installation of a swimming pool any part of which is—
 - (i) within 30m of a structure supporting an overhead electricity transmission line, measured horizontally from the top of the pool to the bottom of the structure at ground level, or
 - (ii) within 5m of an overhead electricity power line, measured vertically upwards from the top of the pool,
- (d) development involving or requiring the placement of power lines underground, unless an agreement with respect to the placement underground of power lines is in force between the electricity supply authority and the council for the land concerned.

The site is encumbered by several above and below ground electricity transmission lines owned by TransGrid and Endeavour Energy. Consultation has been undertaken with both entities to inform the subdivision design process. The subdivision has been designed in accordance with the following documents provided by the electricity entities:

- General Restrictions for Overhead Power Lines (Endeavour Energy 2020)
- Easements and Property Tenure (Endeavour Energy 2017)
- TransGrid Easement Guide (TransGrid nd)
- TransGrid Easement Guidelines: Third Party Development (TransGrid nd)
- TransGrid Fencing Guidelines: Earthing and isolation of fences in easements (TransGrid nd)

In general, the subdivision has been designed to minimise residential allotments within easement areas. Instead, the design provides for open space areas within the easements or within much larger allotments. The road network and stormwater management system has been designed to minimise impacts for future maintenance of electricity infrastructure on site.

Before Council can grant consent to this development, it is required to refer the DA to the affected electricity entities for comment on potential safety risks and take those comments into consideration. It is considered that the subdivision has been designed cognisant of the available guidelines to best protect the infrastructure and minimise safety risks.



Development with frontage to classified road

Section 2.118 of the T&I SEPP applies to development with frontage to a Classified Road. The site fronts Barton Avenue, which is a Regional Classified Road (Main Road No. 531). The site also has frontage to Lyon Parade and Cannelite Street.

Section 2.118(2) states:

The consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that—

- (a) where practicable and safe, vehicular access to the land is provided by a road other than the classified road, and
- (b) the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of—
 - (i) the design of the vehicular access to the land, or
 - (ii) the emission of smoke or dust from the development, or
 - (iii) the nature, volume or frequency of vehicles using the classified road to gain access to the land, and
- (c) the development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.

The site has two vehicular access points other than the classified road. The direct access to Lyon Parade is neither practicable or safe to provide access to more than one or two dwellings due minimum sight distance to the north along Lyon Parade and the terrain of the land in the southwestern portion of the site.

An access is to be provided via the currently unformed portion of Cannelite Street that was dedicated as public road when the subject site was created (DP 1253903). A new road connection is also to be provided to Barton Avenue. The vehicular access to Barton Avenue has been provided for a number of reasons:

- The site is mapped as bush fire prone and requires a minimum of two access points to through public roads to comply with *Planning for Bush Fire Protection* (PBP) (NSW Rural Fire Service 2019). The direct access to Lyon Parade is not a practical, feasible or safe option for a second access point. Furthermore, it will only direct traffic onto the same public road as the Cannelite Street access does. Therefore, it is not an appropriate option for bushfire purposes. The site does not have any other road frontage options other than Barton Avenue to provide a second vehicular access point to enable compliance with PBP.
- The subdivision will provide for 55 residential allotments. From a local traffic management/distribution perspective, the provision of a single entry/exit to the subdivision is not best practice as it concentrates the traffic load into one area and also does not provide for alternative access should the single access point become blocked.
- The intersection of Lyon Parade and Barton Avenue has restricted sight distances and the requirement for all traffic with origin/destination to the Great Western Highway to utilise this intersection is not ideal.
- As outlined in **Section 4.3**, 80% of the development traffic is expected to have origins/destinations towards the Great Western Highway. Without an access onto Barton Avenue, traffic will be required to utilise the local road network, rather than providing a more even distribution of traffic with the more direct access to the sub-arterial road and utilising safer intersections.

On the basis of the above, it is not safe or practicable to solely use roads other than classified roads for access to the site.

The development will not result in an adverse impact on the safety, efficiency and ongoing operation of the classified road for the following reasons.

- The design of the new road intersection with Barton Avenue will comply with Austroads warrants and design standards.
- The development will not emit smoke or dust.



• As outlined in **Section 4.3**, the nature, volume or frequency of vehicles using the classified road to gain access to the land would not be significant and would not adversely impact on the capacity or functioning of the road network.

The development is not considered to be overly sensitive to traffic noise or vehicle emissions and the classified road has low traffic volumes. Nevertheless, the residential allotments are set back from the classified road to provide a buffer to further ameliorate adverse impacts.

Traffic-generating development

Section 2.121 of T&I SEPP applies to traffic generating development, which includes subdivisions of 50 or more allotments with access to a classified road. Section 2.121 (4) requires:

Before determining a development application for development to which this clause applies, the consent authority must—

- (a) give written notice of the application to TfNSW within 7 days after the application is made, and
- (b) take into consideration—
 - (i) any submission that RMS provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, TfNSW advises that it will not be making a submission), and
 - (ii) the accessibility of the site concerned, including—
 - (A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and
 - (B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and
 - (iii) any potential traffic safety, road congestion or parking implications of the development.

Prelodgement consultation was undertaken with Transport for NSW (TfNSW) for the proposed development (refer **Section 2.2.1**). Whilst a separate Integrated Transport Assessment has not been provided, the information requested in TfNSW's prelodgement advice has been provided in **Section 4.3** of this report.

Sufficient information is provided in **Section 3.7.2.2** and **Section 4.3** of this report to enable Council to consider the matters in (b) above.

3.7.4 Lithgow Local Environmental Plan 2014

3.7.4.1 Zoning & Permissibility

The subject site is zoned R5 Large Lot Residential under Lithgow Local Environmental Plan 2014 (LEP) as shown in **Figure 9**. The objectives of the R5 zone are:

- To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.
- To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.
- To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To limit development to areas in reasonable proximity to the settled town centres of Lithgow, Wallerawang and Portland to strengthen settlement hierarchy.
- To maintain or improve the water quality of receiving water catchments.

The proposed subdivision will provide for large residential allotments and ancillary open space, which is consistent with the zone objectives.





Figure 6: LEP Zoning

Subdivisions are permissible with consent in the R5 Zone pursuant to clause 2.6 of the LEP.

3.7.4.2 Minimum Subdivision Lot Size

Clause 4.1 of the LEP provides that the size of any lot resulting from a subdivision of land to which clause 4.1 applies, must not be less than the minimum area as shown on the LEP Lot Size Map. The Lot Size Map shows a minimum lot size (MLS) of 800m² for the subject site (refer **Figure 8**).

All allotments proposed achieve the MLS.





Figure 7: LEP Minimum Lot Size

3.7.4.3 Earthworks

Clause 7.1 of the LEP requires Council to consider the following matters for earthworks that are ancillary to other development prior to granting consent. An explanation of how the development addresses each matter is also outlined below.

Table 6: Ll	EP Clause	7.1 Consi	derations
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	Provision	Development Response
(a)	the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,	The development will involve earthworks to facilitate the subdivision. The development will be designed to ensure the works will not result in the disruption of or have any detrimental effect on drainage patterns or soil stability in the locality.
(b)	the effect of the development on the likely future use or redevelopment of the land,	The earthworks will facilitate the future use of the land.
(c)	the quality of the fill or the soil to be excavated, or both,	All fill entering the site is to be VENM or ENM. In the unlikely event that any soil to be removed from the site will be classified and disposed of at an appropriate location.
(d)	the effect of the development on the existing and likely amenity of adjoining properties,	It is not expected that the earthworks will have any effect on the existing and likely amenity of adjoining properties.



Table 6: LEP Clause 7.1 Considerations

	Provision	Development Response
(e)	the source of any fill material and the destination of any excavated material,	All fill entering the site is to be VENM or ENM. In the unlikely event that any soil to be removed from the site will be classified and disposed of at an appropriate location.
(f)	the likelihood of disturbing relics,	It is not expected that any relics will be disturbed due to the previous disturbance to the site. In the unlikely event that any relics are uncovered, works will cease and OEH will be contacted.
(g)	the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,	The proposed earthworks are not located in close proximity to or likely to adversely impact upon any water way, drinking water catchment or sensitive area.
(h)	any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development,	As outlined above.
(i)	the proximity to, and potential for adverse impacts on, any heritage item, archaeological site or heritage conservation area.	The development is not located near any known heritage item, archaeological site or heritage conservation area.

3.7.4.4 Stormwater Management

Clause 7.3 of the LEP applies to land within *inter alia* residential zones. It requires Council to be satisfied of the following matters prior to granting consent. An explanation of how the development addresses each matter is also outlined below.

Table 7: LEP Clause 7.3 Considerations

	Provision	Development Response
(a)	is designed to maximise the use of water permeable surfaces on the land having regard to the soil characteristics affecting on-site infiltration of water, and	The subdivision includes large areas of open space to maximises permeability.
(b)	includes, if practicable, on-site stormwater retention for use as an alternative supply to mains water, groundwater or river water, and	The development provides for retention basins to manage stormwater flows off site.
(c)	avoids any significant adverse impacts of stormwater runoff on adjoining properties, native bushland and receiving waters, or if that impact cannot be reasonably avoided, minimises and mitigates the impact.	The development complies with the NorBE requirements, thus managing stormwater quality and quantity leaving site.

3.7.4.5 Groundwater Vulnerability

The subject site is mapped as being Groundwater Vulnerable on the LEP Environmentally Sensitive Areas—Water Overlay Map a shown in **Figure 11**.





Figure 8: LEP Environmentally Sensitive Areas - Water

Clause 7.5 of the LEP requires Council to consider the following matters for development on groundwater vulnerable prior to granting consent. An explanation of how the development addresses each matter is also outlined below.

Table 8	LEP	Clause 7.5	Considerations
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	Provision	Development Response
(a)	the likelihood of groundwater contamination from the development (including from any on- site storage or disposal of solid or liquid waste and chemicals),	It is not expected that the subdivision or associated works will result in any groundwater contamination.
(b)	any adverse impacts the development may have on groundwater dependent ecosystems,	It is not expected that the subdivision or associated works would impact on groundwater dependent ecosystems.
(c)	the cumulative impact the development may have on groundwater (including impacts on nearby groundwater extraction for a potable water supply or stock water supply),	It is not expected that the subdivision or associated works would result in adverse cumulative impacts on groundwater (including impacts on nearby groundwater extraction for a potable water supply or stock water supply).
(d)	any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.	Nil required.



3.7.4.6 Sensitive Lands

Clause 7.7 of the LEP applies to "Sensitive Land Areas" as mapped on the LEP Environmentally Sensitive Areas—Land Overlay Map. The south western corner of the site is mapped as "Sensitive Land Areas", which is understood to be reflective of the steep slope of the land in this area. As can be seen in **Figure 9**, small parts of the site have a slope in excess of 25%.



Figure 9: Slope

Clause 7.7(3) requires that before determining a DA to which this clause applies, Council is required to consider:

whether the development is likely to have any adverse impact on the following-

- (a) any land with slopes greater than 25%,
- (b) any land subject to high erosion potential,
- (c) any land subject to salinity or impeded drainage,
- (d) any land subject to regular or permanent inundation,
- (e) any significant karst environment (including ecological, air quality and movement, water quality, biodiversity, geodiversity (geomorphical and geological), heritage, recreational and sociological values).

A review of the ESpade website (NSW Government 2022) indicates that the site is located within the Cullen Bullen Soil Landscape. The limitations to development in this soil landscape are identified, in relation to the proposed development, (NSW Government n.d.) as outlined in the table below.



Limitations Туре **Urban Capability** Low to moderate limitations for urban development. **Foundation Hazard** Foundation hazard of cb1 is generally low. Soil materials cb2 and occasionally cb3 are dispersible with a high potential for erosion and have a moderate foundation hazard. Depth to subsoil <55 cm. Total soil depth <150 cm. Erodibility Non-concentrated flows - moderate to high Concentrated flows - high to very high Wind - slight Erosion Hazard (urban) Non-concentrated flows - moderate Concentrated flows - high Wind - slight Source: (NSW Government n.d.)

Table 9: Soil Landscape Limitations to Development

Whilst it can be seen there are some soil constraints, the soil landscape is not expected to present a constraint that would prohibit or severely restrict the proposed development.

3.7.4.7 Essential Services

Clause 7.10 of the LEP requires that essential services are available or that adequate arrangements have been made to make the essential service available when required for the development. These essential services have been outlined in the table below along with how the proposed development responds.

Table 10: LEF	Clause 7.10	Considerations
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	Provision	Development Response
(a)	the supply of water	Each allotment is to be provided with connection to the reticulated water supply, as shown on the plans in Appendix I.
(b)	the supply of electricity	Each allotment will be connected to the reticulated electricity supply in accordance with the electricity providers requirements.
(c)	the disposal and management of sewage	Each allotment is to be provided with connection to the reticulated sewerage system, as shown on the plans in Appendix I.
(d)	stormwater drainage or on-site conservation	The development will be provided with a stormwater management system, as shown on the plans in Appendix I .
(e)	suitable road access	The plans provided in Appendix I show the proposed roads to be constructed as part of the development, to provide suitable road access to each lot.

3.8 Lithgow Development Control Plan 2021

Lithgow Development Control Plan 2021 (**DCP**) applies to development within the Lithgow Local Government Area (**LGA**). The provisions of the DCP relevant to the proposed development have been outlined in the following table along with details of how the development complies.



DCP Provision	Comments
Chapter 2: Site Requirements	
2.2 Site Analysis, Local Character & Context	
Site Analysis & Development Response	See Site Analysis Plan in Figure 3 and development response provided in Section 2.1.
Local Character & Context	The local character and context are outlined in Section 4.2.
Visually Prominent Sites	The site is a visually prominent site on the south-eastern entry to Wallerawang. The subdivision is located below the ridgeline and has been designed to best minimise impact on topography locating steeper areas in larger allotments. Significant vegetation will be retained.
Reflective Materials	Not applicable to the subdivision.
2.3 Slope Response, Earthworks & Retaining Walls	
Earthworks	The subdivision has been designed to minimise cut and fill. Plans are provided in Appendix I.
Retaining Walls	Nil proposed.
2.4 Stormwater Management	
	Stormwater has been designed to be managed to comply with the NorBE requirements of WaterNSW. Plans of stormwater works are provided in Appendix I with NorBE assessments provided in Appendix G .
2.5 Vehicle Access & Parking	
2.5.1 Guidelines & Standards	The roads will be designed in accordance with Council's engineering requirements, Austroads and relevant Australian Standards.
2.5.2 Vehicle Access & Driveways	The road network has been designed to respond to the topography of the site and to provide for suitable connections into the existing public roads to provide for a permeable road network as shown on the plans in Appendix I. Road No. 2 provides for a one-way crossfall to provide for improved driveway grades.
	Further details on roads and access are provided in Section 4.3.
2.5.3 Loading/Unloading, Delivery & Servicing Facilities	Not applicable
2.5.4 Parking Location, Design & Circulation	Not applicable



	DCP Provision	Comments
2.5.5	On-Site Parking Numbers	Not applicable
2.5.6	Exemptions to Off-Street Car Parking Requirements	Not applicable
2.5.7	Bicycle Parking	Not applicable
2.6	Pedestrian Access, Mobility & Safety	
2.6.1	Accessibility	Not applicable
2.6.2	Pedestrians	Footpaths will be provided in accordance with Council's requirements.
2.6.3	Street Numbering & Letterboxes	To obtained from Council and to comply with Council's standards.
2.7	Designing for Crime Prevention	
2.7.1	Crime Risk Assessment	Addressed in Section 4.17.
2.8	Utilities, Easements & Infrastructure	
2.8.1	Connection to Utilities	The new lots will be connected to available utilities in accordance with the service providers requirements. Concept servicing plans are provided in Appendix I .
2.8.2	Building Near Utilities/Easements/Drainage Lines	The site is encumbered by a number of existing electricity, telecommunications and utility services and associated easements. The development has been designed to comply with the requirements of the relevant electricity service provider's requirements as outlined in Section 3.7.2.1 . The telecommunications infrastructure has been largely retained within the open space reserves or large allotments with the electricity infrastructure, so as not to be affected by future development. The existing sewerage infrastructure and easement will be retained at the rear of proposed allotments and is not expected to be affected by future development of the lots.
2.8.3	On-Site Sewage Management	Proposed Lot 15 will utilise an on-site sewage management system for any future dwelling. Sufficient area exists on site for this system to be provided in the future with the requisite assessment provided as part of any future dwelling application.
2.8.4	Liquid Trade Waste	Not applicable
2.8.5	Re-Use of Waste-Water	Not applicable
2.8.6	Water Supply	A reticulated water supply will be provided as outlined on the concept servicing plans provided in Appendix C.



	DCP Provision	Comments
2.9	Solid Waste Management	
2.9.1	Hazardous Materials & Asbestos	Nil known to exist on site.
2.9.2	Solid Waste Management Plan – Larger Developments	Not applicable
2.9.3	Waste Storage & Collection – Larger Developments	Not applicable
2.10	Amenity / Buffers for Sensitive Uses	
2.10.1	Noise & Vibration	Not applicable
2.10.2	Air Emissions, Odour & Dust	Not applicable
2.10.3	Buffers to Sensitive Land Uses	Not applicable
2.10.4	Buffers & Landscaping	Not applicable
2.10.5	Agriculture & Right to Farm	Not applicable
2.11	Water & Energy Efficiency	
		Not applicable
Chapt	er 3: Natural Environment & Hazards	
3.2	Bush Fire Prone Land	
Contro	bls	The site is mapped as bush fire prone land. The development will comply with PBP as outlined in Appendix G.
3.3	Vegetation Management & Biodiversity	
3.3.1	Vegetation Clearing for Development Requiring Consent	Addressed in Section 3.3.
3.3.2	Threatened/ Endangered Species/ Ecological Communities	Addressed in Section 3.3.
3.3.3	LLEP2014 – Terrestrial Biodiversity	Not applicable



	DCP Provision	Comments
3.3.4	Clearing NOT Associated with Development (Non-Rural Zones)	Not applicable
3.3.5	Clearing NOT Associated with Development (Rural Zones)	Not applicable
3.3.6	Declared Vegetation in this DCP	Not applicable
3.3.7	Tree Removal Criteria	Not applicable
3.4	Land & Soils	
3.4.1	Contaminated Land	The site is not known to be contaminated.
3.4.2	Sensitive Land Areas	Addressed in Section 3.7.4.6. A Survey Plan is provided in Appendix B. A Geotech report is provided in Appendix J.
3.4.3	Erosion & Sedimentation	The development will involve minor earthworks associated with the construction of the driveway. Appropriate erosion and sediment control measures will be employed in accordance with the Blue Book.
2.4.4	Other Geological or Soil-Related Issues	Site analysis plan provided in Figure 3. Civil engineering plans provided in Appendix C. Geotech report provided in Appendix J.
3.5	Flood Prone Land	
3.5.1	Preliminary Flood Risk Assessment	Not known to be flood prone.
3.5.2	Key Controls	Not applicable
3.5.3	Construction Requirements & Flood Proofing	Not applicable
3.6	Ground & Surface Water Protection	
Contro	ols	No additional reports required.
3.7	Mine Subsidence Risk	
Contro	ols	Not applicable
Chapt	er 4: Heritage & Cultural Conservation	
		Not applicable.



	DCP Provision	Comments
Chapt	er 5: Subdivision & Roads	
5.2	Site Selection, Analysis & Design Response	
5.2.1	Site Analysis & Potential Land Use Conflicts	The site is located within an existing R5 zoned area. No land use conflicts expected. Site analysis provided in Section 2.1 and plan provided in Figure 3.
5.2.2	Water, Natural Environment & Hazards	 No stormwater management systems provided in Appendix E. No watercourses on site. No significant vegetation to be removed (refer BDAR in Appendix F). The site is mapped as being bushfire prone and Appendix G demonstrated the development complies with PBP. A Geotech report is provided in Appendix J to address slope issues.
5.2.3	Lot Sizes, Dimensions & Suitability	Minimum Lot Size
		The subdivision provides for a range of lot sizes, and generally provides for larger lot sizes to accommodate on site constraints. There are a few lots within the steeper areas (i.e., lots 5, 45-48) that will require bespoke designs in order to accommodate the slope constraints. The developer has specifically planned for this to occur. The Soil Landscapes (refer Section 3.7.4.6) indicate the land would present low to moderate limitations for urban development.
		<u>Urban Areas</u>
		 The public roads have been designed to address section 5.7 of the DCP (below). The site is located in an area geographically/topographically removed from most of the surrounding existing residential subdivision. The subdivision layout and lot sizes and shapes have been largely dictated by the site constraints, whilst being respective of surrounding development style where possible. Lots have been designed to be as regular in shape as possible or where not, to ensure an appropriately sized building envelope is provided. The lot widths have been designed to provide for ease of access and servicing and to ensure the future dwellings can
		 address the street without dominating it. The depth to width ratios provided are suitable to accommodate future vehicle access, manoeuvring, and a range of standard building types/layouts with relevant setbacks.
5.2.4	Access & Entrances	Each allotment will be provided with direct access/frontage to a public road.
5.2.5	Utilities/ Easements	 Concept servicing plans are provided in Appendix E. Each lot is to be connected to reticulated water and sewer in accordance with Council's requirements. Each allotment will be provided with an electricity connection in accordance with the service providers' requirements.



	DCP Provision	Comments
5.2.6	Siting and Visibility of Utilities	Concept servicing plans are provided in Appendix E. Servicing will be provided in accordance with the relevant service provider's requirements and have been designed to be provided in an efficient manner.
5.2.7	Staging	It is not proposed to stage the DA.
5.3	Urban Residential Subdivision	
5.3.1	Lot Size & Arrangements – General	 All lots (apart from Proposed Lot 15) will be connected to reticulated sewer in accordance with Council's requirements The development provides for a range of lot sizes to facilitate dwelling diversity. All lots will achieve the required minimum lot widths. The site is highly constrained, however, lots have been designed to ensure a suitable dwelling orientation can be achieved.
5.3.2	Access to Lots with Limited or No Road Frontage	 A minimum number of battle axe allotments have been provided due to site constraints. Each battle axe lot will achieve a minimum handle width of 4.5m width or greater. No access handle will exceed 60m. No shared handles proposed.
5.4	Urban Release Areas & South Bowenfels	
5.4.1	Corner Lots	Not applicable
5.4.2	Battle-Axe Lots	Not applicable
5.4.3	Public Open Space & Facilities	Not applicable
5.5	Large Lot Residential & Rural Subdivision	
5.5.1	Access & Road Design	Not applicable
5.5.2	Access to Lots with Limited or No Road Frontage	Not applicable
5.5.3	Lots for the Purpose of Agriculture	Not applicable
5.6	Commercial, Industrial or Community Use Subdi	vision
5.6.1	Lot Size & Arrangement	Not applicable
5.7	New or Upgraded Public Roads	



	DCP Provision	Comments
5.7.1	Guidelines	The new roads will be designed to comply with the relevant guidelines
5.7.2	Surrounding Road Patterns & Access	 The subdivision has been designed to integrate with the adjacent road network and to provide for ease of navigation The road pattern has attempted to retain a grid pattern whilst responding the terrain and existing road connection opportunities Pedestrian connections will be provided throughout the site in order to retain an existing informal pedestrian connection across the site and provide for access for new residents. Due to terrain and existing constraints, it is not expected the that site will be required to connect into adjacent lands. No rear lanes proposed. Open space areas have been provided with road frontages to ensure safety, access, and maintenance access.
5.7.3	Road Hierarchy & Design	 The subdivision layout and design provides for a clear hierarchy for ease of navigation and connectivity for all forms of transport. Traffic impacts have been considered in Section 4.3.
5.7.4	Terminating Roads (Cul-de-sacs)	 Two small cul-de-sacs are to be provided as a result of topography. The cul de sacs will be less than150m in length and serve a maximum of six (6) lots each. The cul de sac has been designed to facilitate the turning of a standard waste collection vehicle.
5.7.5	Crown Roads	N/A
5.7.6	Safety and Surveillance	 The subdivision has been designed to provide lots that will facilitate natural surveillance of the streets. Lighting of streets and open space will be provided in accordance with the authority's requirements. Clear boundaries will be provided between public and private spaces. Landscaping will be provided in accordance with Council's requirements.
5.7.7	Public Domain Landscaping & Street Trees	Landscaping and street trees will be provided in accordance with Council's requirements. Details will be provided at Subdivision Works Certificate (SWC) stage.
5.7.8	Naming of New Roads	Noted.
Chapt	er 6: Residential Development	
		Not applicable
Chapt	er 7: Commercial, Community & Industrial Develo	pment (including Advertising/Signage)
		Not applicable



DCP Provision	Comments
Chapter 8: Rural & Other Land Uses	
	Not applicable
Chapter 9: Location Specific Controls	
	Nil



4 IMPACTS OF THE DEVELOPMENT

4.1 Introduction

The potential impacts of the proposed development are considered in this section of the report.

4.2 Context and Setting

The site is located at the southern entrance to Wallerawang. It is located opposite Lake Wallace, and adjacent to Wallerawang Public School and the 1950s subdivision of the Lyons Parade area. **Plate 8** to **Plate 14** shows the site and its surrounds.

Section 2.1 provides a constraints analysis demonstrating how the development has been designed to respond. In addition, the layout has been designed to provide for lots that will provide for vertical separation to the existing development along Lyons Parade in order to preserve views for the existing dwellings.

It is considered that the development is consistent with the existing and desired context and setting.



Plate 8: View north along Lyon Parade near Cannelite Street





Plate 9: View north along Lyon Parade near Cannelite Street



Plate 10: View east from south western part of the site towards the school and lake





Plate 11: View north east from south western part of the site towards the school and lake



Plate 12: View north east from south western part of the site towards the lake and park





Plate 13: View north east from south western part of the site

4.3 Access, Transport & Traffic

4.3.1 Existing Environment

Figure 13 shows the local road network surrounding the subject site. The site has direct access to Lyon Parade, Cannelite Street and Barton Avenue. Each of the roads and intersections in the vicinity of the site likely to be utilised as part of the development are described in the following sections.





Figure 10: Local Road Network



4.3.1.1 Roads

Barton Avenue

Table 12: Barton Avenue

Item	Road Details			
Road Classification	Regional Classified Road (Main Road No. 531)			
Connectivity	From the Great Western Highway in the south to the intersection with Tweedie Street/Pipers Flat Road at Wallerawang			
Number of lanes	One lane in each direction of travel			
Road type	Sealed road with ~1m shoulder on both sides			
Road width	Generally, 7m in width			
Posted speed limit	50km/h in the vicinity of the site.			



Plate 14: Barton Avenue looking south from intersection with Blackett Drive



Lyon Parade

Table 13: Lyon Parade

Item	Road Details
Road Classification	Local Road
Connectivity	From the Barton Avenue in the north to Lane Street in the south
Number of lanes	One lane in each direction of travel
Road type	Sealed road
	Kerb on both side to #64 Lyon Parade, then only on western side further south
Road width	~ 9m in width (back of kerb to back of kerb) between Barton Ave and McKenzie St
	~7m in width (back of kerb to back of kerb) between McKenzie St and Lane Street
Posted speed limit	50km/h



Plate 15: Lyon Parade looking north from intersection with Cannelite Street

Cannelite Street

Table 14: Cannelite Street

Item	Road Details
Road Classification	Local Road



Item	Road Details		
Connectivity	From the Lyon Parade in the east to Oxley Street in the west		
Number of lanes	One lane in each direction of travel west of Lyon Parade. Unformed east of Lyon Parade.		
Road type	West of Lyon Parade		
	Sealed road		
	Kerb on both sides		
Road width	~ 8m in width (back of kerb to back of kerb)		
Posted speed limit	50km/h		

Table 14: Cannelite Street



Plate 16: Cannelite Street east of Lyon Parade





Plate 17: Cannelite Street looking west from Lyon Parade

4.3.1.2 Intersections

Barton Avenue/Lyon Parade

Barton Avenue/Lyon Parade intersection is a T intersection, with Lyon Avenue controlled by a giveaway sign. The highway is a BAR style intersection treatment. Lyon Avenue is a single lane in each direct at the intersection, however, two vehicles can sit side by side to enable simultaneous left and right turns out of Lyon Avenue. Refer **Figure 14**.

Whilst constrained, the intersection achieves the Safe Intersection Sight Distance (SISD) of 97m as required by Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections for an 50km/h speed limit.





Figure 11: Intersections of Barton Avenue/Lyon Avenue



Plate 18: View south along Lyon Parade at the intersection with Barton Avenue





Plate 19: View east along Barton Avenue at the intersection with Lyon Parade

Cannelite Street/Lyon Parade

The Cannelite Street/Lyon Parade intersection is a four-way intersection; however, it operates as a T intersection as the eastern leg of the intersection is not constructed as a through road. Refer **Figure 15**.

The intersection achieves the Safe Intersection Sight Distance (SISD) of 97m as required by Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections for an 50km/h speed limit.





Figure 12: Intersection of Cannelite Street/Lyon Avenue

Barton Avenue/Charles Darwin Park

The intersection of Barton Avenue/Charles Darwin Park is a T intersection, with the park access road controlled by a giveaway sign. The highway is a BAR/BAL style intersection treatment. The park access road is a single lane in each direct at the intersection, however, two vehicles can sit side by side to enable simultaneous left and right turns out of the park. Refer **Figure 16**.

The intersection achieves the Safe Intersection Sight Distance (SISD) of 97m as required by Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections for an 50km/h speed limit.





Figure 13: Intersection of Barton Avenue/Charles Darwin Park

4.3.2 Safety

A review of the Transport for NSW (TfNSW) Centre for Road Safety's Crash and Casualty Statistics Website has shown that for the available period (2015-2019) no crashes have occurred in the vicinity of the site as shown in **Figure 17**. It can be seen that there is no recurrent pattern of crashes in the locality.





Source: (Transport for NSW 2021)

Figure 14: Crash Map

4.3.3 Existing Traffic Generation

4.3.3.1 Daily Traffic

Existing traffic counts have been obtained for Barton Avenue from Lithgow City Council at the nearest available location to the site as shown in **Figure 13**. This count has been indexed at a rate of 2% cumulative per annum to 2022 and are provided in **Table 15**.

Table 15: Daily Traffic Volumes

Road	Count Location	Count Year	Daily Volume	Annual Indexation Rate (cumulative)	2022 Calculated Daily Volume
Barton Avenue	North of Forest Ridge Drive	2010	2,882	2%	3655

The daily vehicle data showed a 50/50 split north/south. This is likely to reflect the daily commute to and from Wallerawang.

4.3.3.2 Peak Hour Traffic

From the traffic count data provided the following peak hours have been identified:

• AM Peak 09:00 – 10:00am with 7.1% of vpd, and



• PM Peak 15:00- 16:00 with 8.8% of vpd.

Unfortunately, there was no directional split data available from the council data provided.

4.3.4 Development Generated Traffic

The following table outlines the expected peak traffic to be generated by the development. The traffic generation is based on 55 residential allotments.

Table 16: Development	Traffic	Generation	(Trips)
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Component	Number/Area	VPD		VPH			
		Rate	Number -	AM Peak		PM Peak	
				Rate	Number	Rate	Number
Residential Lots							
	55 lots	7.4/lot	407	0.71/lot	39	0.78/lot	43
Total			407		39		43

Notes:

A Expected that 50% of the traffic generation would be internally from the subdivision as passing trade and 50% would be new traffic generated by the development.

- # Expected that 20% of the traffic generation would be internally from the subdivision as passing trade and 80% would be new traffic generated by the development.
- 1 VPD calculated from VPH being 10% of VPD

In apportioning traffic to the local road network, the following assumptions are used:

- Residential traffic
 - 20% in/80% out during the AM peak, and vice versa in the PM peak.
 - 80% traffic destination/origin towards the Great Western Highway and 20% toward Wallerawang.
 - It is assumed that most of the residential traffic would utilise the new intersection with Barton Avenue to access Wallerawang, with only the northern most lots (i.e., Lots 1-14) likely to use the Lyon Avenue intersection for access to Wallerawang.

4.3.5 Traffic Impact

4.3.5.1 Generation

The proposed development is expected to generate a maximum 43 peak hour vehicle trips and 407 daily trips as outlined in **Section 4.3.4**. The following figures show the AM and PM peak hour development traffic at the intersection of the new road and Barton Avenue.

Conservatively, for the purpose of this assessment it is assumed that all traffic generated by the development would utilise the Barton Avenue intersection. This provides a buffer for other traffic from the north of the which may use the development as a "rat run" which cannot at this stage be reasonably quantified.





Figure 15: AM Peak Development Traffic



Figure 16: PM Peak Development Traffic

Table 17: Development Traffic & Traffic Change 2022

	Existing Volume	Development Volume	Post Development Volume	Change
Daily Traffic	3,655	407	4,062	11%
Peak Hour Traffic	366^	43	409	12%
Notes:				
^ 10% of daily traffic				

The traffic volumes generated by the development is not significant. Whilst proportionally the increase in traffic from the development may appear to be high, this is because the background traffic levels are low.



A ten year horizon (2032) consideration is also provided in the table below.

	Existing Volume	Development Volume	Post Development Volume	Change
Daily Traffic	4456	407	4,863	9%
Peak Hour Traffic	446^	43	489	10%
Notes: ^ 10% of daily traffic				

Table 18: Development Traffic & Traffic Change 2032

Expectedly with an increase in background traffic, the percentage increase the development would provide is less than the 2022 scenario.

4.3.5.2 Capacity & Functioning

The Mid-block capacity of Barton Avenue is expected (Austroads 2020) to be 900 passenger cars/hour per lane (1,800 total). Barton Avenue would remain well below these thresholds post development (~25% of capacity).

Given the low background traffic volumes and low development traffic generation, it is not expected that the development would adversely impact upon the functioning or capacity of the intersections within the affected transport routes. On this basis, a capacity analysis using SIDRA (or other relevant application) is considered unnecessary as the Level of Service (LOS) is not likely to be unacceptable.

4.3.5.3 Intersection Warrants

In terms of the turn treatment warrants in Austroads Guide to Traffic Management Part 6, the following commentary is provided. The purpose of the warrants is to focus on safety outcomes.

Figure 20 shows the warrants for turning treatments for roads with design speeds between \leq 70kmh. The assessment has been carried out for the worst case 2032 scenario. It can be seen that for both the AM and PM peaks a BAR/BAL treatment is required.



Source: (Austroads 2020)

Figure 17: Warrants for turn treatments on major roads at unsignalised intersections (≤70km/h) – AM Peak





Source: (Austroads 2020)

Figure 18: Warrants for turn treatments on major roads at unsignalised intersections (≤70km/h) – PM Peak

4.3.5.4 Intersection Design

The development will have three access points with the existing road network:

- The new intersection of Barton Avenue and the new internal road (intersection 1);
- The existing intersection of Cannelite Street and Lyons Parade (intersection 2); and
- A new driveway to proposed Lot 15 (Driveway 1).

Consistent with the Austroads intersection warrants, Intersection 1 is to be constructed to a BAR/BAL standard.

Intersection 2 will be constructed to Council's requirements for standard urban road intersections.

Driveway 1 will be constructed as a driveway for a single dwelling in accordance with Council's requirements. It is to be located to the southern extent of the road frontage to maximise sight distances to the north along Lyon Parade.

For a 50km/h speed limit, Austroads (Austroads 2021) requires a Safe Intersection Sight Distance (SISD) of 97m. Intersections 1 and 2 will be designed to achieve the required SISD.

4.3.6 Public Transport

The #600 and #636 bus services operate along Barton Avenue, providing access between Wallerawang and Lithgow (and Bathurst for the latter service). It is expected that the proposed development would only enhance the viability of this service through the additional residential population base.

Footpaths will be provided through the development site to connect to the existing network of footpaths in order to provide connectivity to the public transport network.

4.4 Public Domain

The subdivision has been designed to retain the informal pedestrian connectivity through the site which provides connection from the residential development to the west of the site to the reserve around Lake Wallace. Pedestrian linkages will be provided by way of footpaths within the road reserves as shown on the civil plans (refer **Appendix E**).



Additional informal recreational activities will be provided as part of the development through the open space areas provided in Lots 56 and 57.

4.5 Utilities

4.5.1 Electricity

Each of the new residential allotments will be connected to electricity prior to the issue of the requisite Subdivision Certificate in accordance with Endeavour Energy's requirements.

4.5.2 Water Supply

The allotments will be connected to the reticulated water supply system as shown in the concept servicing plans provided in **Appendix E** and in accordance with Council's requirements.

4.5.3 Sewerage

The allotments will be connected to the reticulated sewerage system as shown in the concept servicing plans provided in **Appendix E** and in accordance with Council's requirements.

4.6 Heritage

4.6.1 Aboriginal Heritage

An Aboriginal Due Diligence Assessment has been undertaken for the site, which is provided in **Appendix K**. It identified that:

No Aboriginal objects or areas of potential archaeological depots were identified within the study area (AREA Environmental Consultants & Communication 2020)p. 17.

Based on this conclusion, the following recommendations were made:

- No further assessment is required, and works can progress to Stage 2
- If any objects of suspected Aboriginal heritage origin be encountered during the proposed works, work in the area of the find should cease and the unexpected finds protocols (Appendix B) should be implemented
- If suspected human remains are located during any stage of the proposed works, work must stop immediately, and the NSW police must be notified.

4.6.2 European Heritage

A review of the LEP and the State Heritage Register has revealed that the site is not mapped as containing any items of European Heritage Significance. Therefore, the development will not impact on any items of European Heritage Significance.

4.7 Flora & Fauna

A BDAR has been prepared for the development and is provided in **Appendix F**. It identifies that the existing vegetation on site is consistent with Plant Community Type (PCT) 351, being Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion. The condition of the vegetation on site was predominantly (99.8%) in poor condition (Zone 1) as the middle and upper storeys have been previously removed. The remainder of the site is in moderate condition (Zone 2). No threatened fauna species were identified as being present on site. One (1) threatened flora species, Black Gum (*Eucalyptus aggregate*) was identified on site.

The development has been designed to avoid and minimise impact on the Zone 2 areas. The existing Black Gum will be retained in a tree protection zone (TPZ) which extends to encompass the root and crown areas.



As outlined in the BDAR, the development requires one (1) ecosystem offset credit for the Zone 2 PCT 351 area of impact. The development would not result in any indirect or prescribed impacts that would remain after measures to avoid, minimise, and mitigate have been applied, and consequentially further offsetting is not required. No candidate Serious and Irreversible Impacts were identified for the development.

4.8 Waste

4.8.1 Solid Waste

Each allotment will be serviced by kerbside waste collection.

4.8.2 Effluent

All lots will be serviced by the reticulated sewerage system apart from proposed Lot 15 which will utilise a future on-site effluent management system. This system will be subject to a separate section 68 approval. The proposed lot has an area of 1.9 hectares which provides for sufficient area for the system, including any required setbacks and buffers.

4.9 Natural Hazards

4.9.1 Bush Fire

The site is mapped on Council's Bush Fire Prone Lands Map as being bushfire prone (refer Figure 7).

A Bush Fire Assessment Report, prepared by a Level 3 BPAD Consultant, is provided in **Appendix G** demonstrating that the development complies with the requirements of *Planning for Bush Fire Protection* 2019.

4.9.2 Flooding

The site is not mapped on the LEP Flood Planning Area Map as being within a Flood Planning Area.

4.10 Safety, Security & Crime Prevention

4.10.1 Introduction

The former Department of Urban Affairs and Planning prepared the *Crime prevention and the assessment of development applications* (Department of Urban Affairs and Planning 2001) to assist Councils identify crime risk and minimise opportunities for crime through the appropriate assessment of development proposals. The Guidelines identify four (4) Crime Prevention through Environmental Design (CPTED) principles that need to be utilised in the design of development to minimise the opportunity for crime:

- Surveillance
- Access control
- Territorial reinforcement
- Space management

Each of these principles are outlined below in relation to the proposed development.

4.10.2 Surveillance

The subject site has areas that are relatively steep which has resulted in suitable locations for road connections being fairly limited. Nevertheless, the road layout has been designed to provide for through roads, apart from two short cul-de-sacs. Furthermore, the vast majority of allotments have been designed to provide for future dwellings to have direct street frontage to ensure natural surveillance is maximised.



Suitable lighting will be provided internally within the public areas of the site in order to enable surveillance. Landscaping has been designed to avoid areas where people can hide or entrap victims.

4.10.3 Access Control

Suitable access control (i.e. fencing) will be able to be provided by occupants of the future dwellings to make it clear where people are permitted to go.

4.10.4 Territorial Reinforcement & Space Management

It is expected that the areas of public open space will be well maintained to ensure site cleanliness, rapid repair of vandalism and graffiti, and repair/replacement of damaged infrastructure. This will aid with maximisation of territorial reinforcement and encourage ownership and use of the spaces.

4.11 Social Impacts in the Locality

This area is zoned for large lot residential development. The design of the development is considered to provide for a suitable development with high amenity and will improve connectivity, both pedestrian and vehicular, through the suburb. The development is not expected to result in any adverse social impacts in the locality.

4.12 Economic Impacts in the Locality

The development is not expected to result in any adverse economic impacts in the locality.

4.13 Construction

The development has the potential to cause some minor adverse temporary impacts during construction such as noise, air quality and sedimentation of runoff.

Noise impacts will be temporary and associated with construction works. Construction works are only to be carried out during daytime hours.

Construction works have the potential to adversely impact on air quality, in particular through the generation of dust. It is recommended that measures be implemented to minimise the generation of dust, including minimisation of vegetation removal, watering of dust generating surfaces, reduction of vehicle speeds on unsealed roads.

Erosion and sediment control measures are to be implemented in accordance with the Council approved Erosion and Sediment Control Plan as required by the DCP.

With the above mentioned mitigation measures, it is considered that any adverse impacts can be appropriately ameliorated.

4.14 Cumulative Impacts

The development is not expected to result in any adverse cumulative impacts.



5 CONCLUSION

5.1 Suitability of the Site

As outlined throughout **Section 4** of this report, the proposed development is not considered to have any significant adverse impacts. On the basis of this, the site is considered to be suitable for the proposed development.

5.2 Public Interest

The proposed development will facilitate development of the site consistent with the land use zoning and intended density of development for the site as outlined with the LEP. The development will provide for formalised connectivity, for both pedestrians and vehicles, from the existing areas of Wallerawang to the public open space areas of Charles Darwin Park. The development is considered to be in the public interest.

5.3 Conclusion

The proposed development is for large lot residential subdivision of 19 Barton Avenue, Wallerawang. The development is permissible with consent under Lithgow LEP. The development complies with the requirements of the LEP, Biodiversity & Conservation SEPP, Resilience & Hazards SEPP, Transport & Infrastructure SPP, and the DCP. As outlined in **Section 4**, the development is not expected to result in any adverse impacts providing it is undertaken in accordance with the recommended mitigation measures. As outlined above, the development is considered to be suitable for the site and in the public interest. In this regard the Development Application is suitable for approval by Council.



6 **REFERENCES**

- AREA Environmental Consultants & Communication. 2020. "Stage 1 Lot 1 DP 1253903 Barton Ave Wallerawang: Aboriginal Cultural Heritage Due Diligence Assessment." Dubbo: AREA Environmental Consultants & Communication, October.
- Austroads. 2021. Guide to Road Design Part 4A: Unsignalised and Signalised Intersections. Sydney: Austroads.
- Austroads. 2020. Guide to Traffic Management Part 3: Transport Study and Analysis Methods. Sydney: Austroads.
- Austroads. 2020. Guide to Traffic Management Part 6: Intersections, Interchanges & Crossings Management. Sydney: Austroads.
- Department of Urban Affairs and Planning. 2001. "Crime prevention and the assessment of development applications: Guidelines under section 79C of the 'Environmental Planning and Assessment Act 1979'." NSW Government, April.

Endeavour Energy. 2017. Easements and Property Tenure. Seven Hills: Endeavour Energy.

Endeavour Energy. 2020. General Restrictions for Overhead Power Lines. Endeavour Energy.

- NSW Government. n.d. "Cullen Bullen Soil Landscape." *ESpade.* Accessed November 30, 2022. https://www.environment.nsw.gov.au/Salis5app/resources/spade/reports/8931cb.pdf.
- —. 2020. SEED Sharing and Enabling Environmental Data. Accessed March 5, 2020. https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU.
- —. n.d. Sharing and Enabling Environmental Data (SEED). Accessed August 6, 2019. https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU.
- NSW Rural Fire Service. 2019. Planning for Bush Fire Protection: A guide for councils, planners, fire authorieis and developers. Granville: NSW RFS.
- Tenterfield Shire Council. 2017. Section 79C(1) Matters for Consideration in Submitting a Development Application. 13 December 2017. http://www.tenterfield.nsw.gov.au/sites/tenterfield/files/public/images/documents/tenterfield/mig/ 17685-Section79C.pdf.
- TransGrid. n.d. "Easement guidelines: Living and working with electricity transmission lines." Accessed April 1, 2022. https://www.transgrid.com.au/media/3tkdd5lr/easement-guidelines.pdf.
- TransGrid. nd. TransGrid Easement Guide. TransGrid.
- TransGrid. nd. TransGrid Easement Guidelines: Third Party Development. TransGrid.
- TransGrid. nd. TransGrid Fencing Guidelines: Earthing and isolation of fences in easements. TransGrid.
- Transport for NSW. 2021. Centre for Road Safety Crash and Casualty Statistics. 13 April. Accessed August 20, 2021.

https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tablga=4.

—. 2018. Traffic Volume Viewer. Accessed September 2, 2021. https://roadswaterways.transport.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadtmap/index.html#/?z=6.

