



POTTERY ESTATE LITHGOW

Urban Design Analysis and Structure Plan

Prepared for submission with the site-specific DCP for the Pottery Estate at Silcock Street in Lithgow, NSW.

We acknowledge the traditional custodians of the land, and pay our respects to their elders past present and emerging, recognising their continuing connection to land, waters and culture.

Issue	Title	Date	Prepared	Checked
1	Draft Issue for Review	01.04.2021	JC	-
2	Draft Issue for Review	27.04.2021	JC	JK
3	Draft Issue for Review	27.04.2021	JC	-
4	Revised heritage map	10.06.2021	JC	-
5				
6				
7				
8				

CONTENTS

LITHGOW POTTERY ESTATE	5	CONTEXT & SITE ANALYSIS	25
LITHGOW	7	THE SITE	26
REGIONAL CONTEXT & SITE LOCATION	9	SITE CHARACTER	27
LOCAL GEOLOGY	10	LAND USE & BUILT FORM	28
LOCAL ECOLOGY	11	BUILT FORM CHARACTER	29
ABORIGINAL HISTORY AND HERITAGE	12	ACCESS & CONNECTIVITY	30
URBAN HISTORY AND HERITAGE	13	STREETScape	31
LITHGOW TODAY	14	HERITAGE	32
LOCAL CONTEXT	15	THE POTTERY ESTATE	33
STRATEGIC CONTEXT	17	TOPOGRAPHY & HYDROLOGY	34
STATE GOVERNMENT STRATEGY AND VISION	18	TOPOGRAPHICAL CONSTRAINTS	35
Central West and Orana Regional Plan 2036	18	BIODIVERSITY	36
Urban Design for Regional NSW	18	ECOLOGICAL CONSTRAINTS	37
Better Placed	18	MINING & SUBSIDENCE	38
Connecting with Country Draft Framework	18	CONTAMINATION	39
		BUSHFIRE	40
LOCAL GOVERNMENT STRATEGY AND VISION	19	DEVELOPABLE AREA	42
The Community Strategic Plan 2030	19	OPPORTUNITIES	43
Draft Lithgow 2040 LSPS	19	STRUCTURE PLAN	45
LOCAL ENVIRONMENT PLAN	20	VISION & OBJECTIVES	46
LAND ZONING DEFINITIONS	21	URBAN DESIGN PRINCIPLES	48
SITE-SPECIFIC LEP CONTROLS	22	Access and Circulation	48
		Open Space	49
		Principle 3:	49
		Expand Lithgow's green network by creating new recreational opportunities	49
		Resiliency	50

LITHGOW POTTERY ESTATE

Overview

This report was prepared on behalf of Ceedive Pty Ltd to support a site-specific DCP for 21 Willowbank Avenue, Sheedys Gully and Silcock Street, Pottery Estate.

The primary purpose of this report is to outline contextual and site analysis to support the development of the structure plan. The report provides detailed analysis of the features and character of the site, its opportunities and constraints and potential for redevelopment.

The Site

The site comprises two lots: 21 Willowbank Avenue, Sheedys Gully and Silcock Street Pottery Estate. These lots fall within the Lithgow City Council LGA.

Lot 1:

Site address 21 Willowbank Avenue
Sheedys Gully NSW 2790

Lot/Section/DP 26/-/DP1244557

Site Area 54.5 ha

Lot 2:

Site address Silcock Street
Pottery Estate NSW 2790

Lot/Section/DP 4,5,6/-/DP1005128

Site Area 5140 sqm + 54.5 ha

Total site area 55 ha







LITHGOW

01

REGIONAL CONTEXT & SITE LOCATION

The Pottery Estate is located on the southern periphery of Lithgow, approximately 150 km west of Sydney.

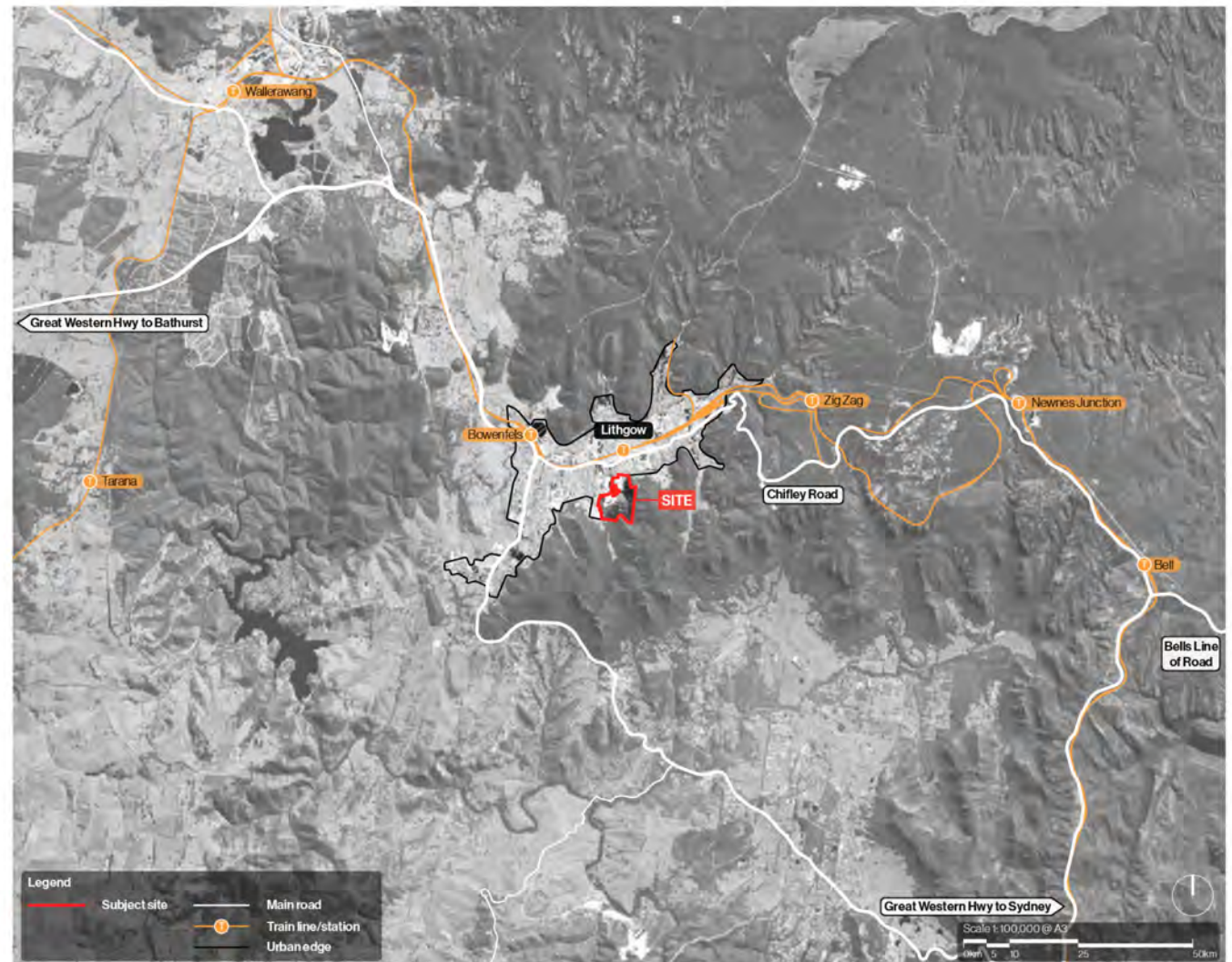
The site and its immediate surrounds are enclosed by steep vegetated slopes that define the edges of the Lithgow Valley.

The site falls entirely within the Lithgow City Council LGA.

Regional Connectivity

The town is connected to Western Sydney by train via Katoomba, the Great Western Highway and Bells Line of Road. Local bus routes connect Lithgow to Bathurst and other surrounding urban centres west of the Dividing Range.

The project site is located within walking distance of these bus and train services, and proximal to major roads connecting the town to the region.

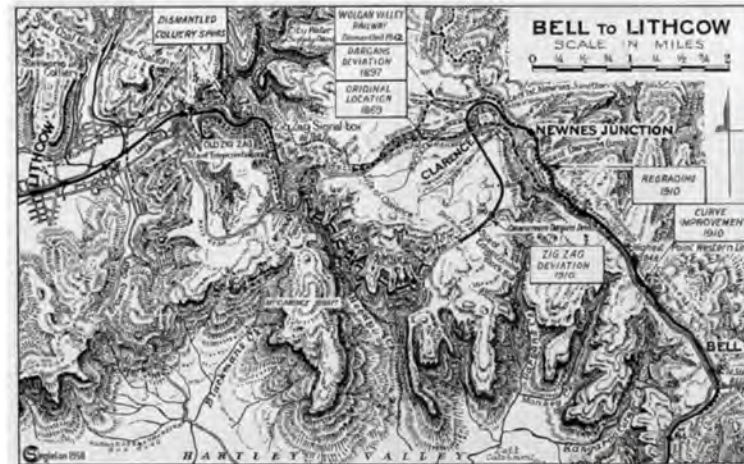


LOCAL GEOLOGY

The site is located in the Lithgow Valley, on the western edge of the Great Dividing Range.

The striking landscape of the Great Dividing Range surrounds the town of Lithgow and dominates views within it. The site's southern edge is characterised by vegetated steep sandstone escarpments.

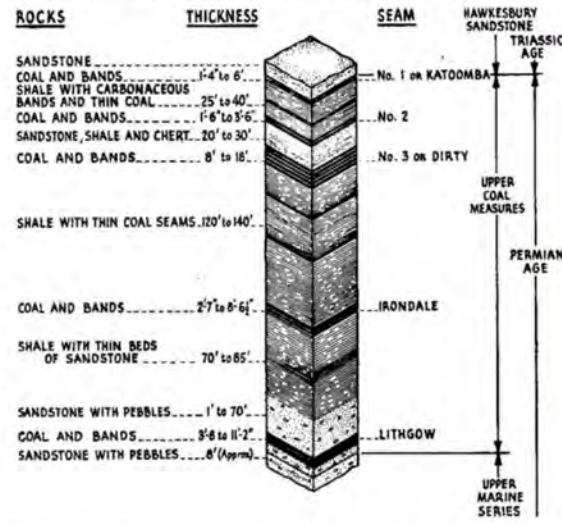
Lithgow is also located on the Western Coalfield. Lithgow's low elevation compared with its surrounding context means the coal seam is very close to the surface. As such, the Lithgow area has been mined extensively for coal since the 1850s.



1. Lithgow Zig Zag Railway and Deviation showing the severe topography



3. Western Coalfield of New South Wales, Australia. (Department of Planning, Industry and Environment)



2. Illustration of the coal seams in Lithgow (from Coal Mining in Australia by E. Ford and McKeown)



4. View to vegetated slopes of the Great Dividing Range, to the south of Lithgow

LOCAL ECOLOGY

Sheltered by steep escarpments and slopes, Lithgow is home to unique flora and fauna.

The steep vegetated slopes that surround Lithgow are predominantly eucalypt woodlands. Those surrounding and intersecting the site are comprised of silvertop ash, narrow leaved peppermint and Sydney peppermint.

The rural and forested perimeter of Lithgow are home to native and exotic flora and fauna, including the Purple Copper Butterfly and the Gang-gang cockatoo which are endemic to the area.



1. Purple Copper Butterfly (*Paralucia spinifera*).



2. Gang-gang cockatoo (*Calocephalon imbricatum*).



3. Dry sclerophyll forest on the subject site.

ABORIGINAL HISTORY AND HERITAGE

“ Aboriginal culture has survived in the Lithgow area despite two centuries of continuous occupation. Today, Lithgow is predominately recognised as falling within Wiradjuri country, but historian Jim Smith and the late anthropologist Dianne Johnson have concluded that much of the Greater Lithgow region was part of the lands used by the Gundungurra people, after close reading of primary sources and early anthropological accounts, including the work of RH Matthews and Norman Tindale. It seems Lithgow was shared country.”

From: Christison & Parry (2014) Lithgow Migration History

The Lithgow LGA lies almost wholly within the Wiradjuri Aboriginal nation, with the Gundungurra nation to the south and the Darug nation to the east.

Culture and Country

The Aboriginal name for Lithgow has been lost to history. However, Aboriginal people have a longstanding connection to places in and around Lithgow.

The Aboriginal Heritage Assessment carried out by RMS earlier this year for the Great Western Highway upgrade program identified numerous significant sites between Lithgow and Mt Victoria, including scarred trees, rock shelters, grinding grooves, camp sites and open scatters. Archaeological investigations undertaken during the 1990s identified large ceremonial grounds located along the valley of the Cocks River in the location of Lake Lyell to Lithgow's west. Burial grounds have been identified in Bowentels, 6km north west of Lithgow.

Colonial conflict

The region surrounding Lithgow was the site of the Australian frontier wars between local Aboriginal tribes and British colonists in the early years of colonial expansion. Aboriginal populations were also decimated in the region with the introduction of smallpox in the 1830s. While Wiradjuri people largely deserted Lithgow and its surrounding areas during this time, and Gundungurra people moved into the Megalong Valley, accounts from the 1830s-1880s report the sustained presence of Aboriginal peoples in Lithgow and the surrounding area.

The Gully, on the western edge of Katoomba, became a refuge for Aboriginal peoples forced from their land with the expansion of the colony. Here,

Darug and Gundungurra people mixed with Wiradjuri and Ngunnawal. The Gully survived until the 1950s, when occupants were displaced for the construction of a car racing track.

Contemporary culture and heritage

Despite two centuries of conflict and colonial occupation, Aboriginal people continue their longstanding cultural connection to Lithgow and its surrounding region.

Lithgow has a higher-than-average proportion of the population claiming Aboriginal or Torres Strait Islander descent. In the 2016 census, 668 people in Lithgow identified as being of Aboriginal and/or Torres Strait Islander descent. This population accounts for 5.8% of Lithgow's total population - versus 2.8% claiming Aboriginal or Torres Strait ancestry in New South Wales.

Lithgow's Aboriginal and Torres Strait Islander population is growing faster than the non-Aboriginal population. The period 2006-2016 saw Lithgow's Aboriginal and Torres Strait Islander population nearly double, accounting for half of the town's population growth.

Several nearby Aboriginal heritage and historic sites have been protected under the National Parks & Wildlife Act 1974. For example, Maiyngu Marragu (Blackfellows Hand Cave) in Wolgan Valley (approximately 20km north of Lithgow) has been declared an Aboriginal Place under the Act. The site is highly valued by members of local tribes, including Gandangara, Darug and Dharkinjung people. Maiyngu Marragu continues to hold cultural significance for Lithgow's Aboriginal community. The site is currently used as a 'bush school room' where Elders pass on their knowledge of Culture and Country to the younger generations.

Lithgow falls within the boundaries of the Bathurst Local Aboriginal Land Council.



White ochre stencil hands and boomerang, Maiyngu Marragu (Blackfellows Hand Cave) in Wolgan Valley (from: Office of Environment & Heritage)

URBAN HISTORY AND HERITAGE

From pastoral way-station to industrial powerhouse, Lithgow's history registers the economic, ethnic and political transformation of early Australia.

1813-1838: Colonial settlement and pastoral expansion

Following the first European crossing of the Blue Mountains by Blaxland, Wentworth and Lawson in 1813, wealthy free-settlers and convict labourer transformed the landscape of the Lithgow valley into pastoral land.

Lithgow was founded in 1824. The town lies at the junction of two mountain crossings - Cox's Great Western Road (constructed -in 1815) and Bells Line of Road (constructed in 1823). The town's strategic location along these two roads meant the little way station of Lithgow became fundamental for westward colonial expansion.

1838-1928: Coal-led urbanisation

Lithgow is located on the Western Coalfield. As a centre of coal extraction, Lithgow was an important industrial and agricultural outpost for the expanding New South Wales colony.

The accessibility of high energy thermal coal (suitable for fueling steam engines) in Lithgow led to the expansion of local industrial activity in the second-half of the nineteenth century. By the 1850s, local coal was powering flour and textile mills, as well as iron, steel and copper smelting in Lithgow and beyond.

Coal-fuelled industry was central to Lithgow's early expansion, transforming it from a way-station to a major industrial centre. The town was connected to Sydney by rail in 1869 - facilitating the expansion of coal extraction and opening up the town to larger

labour and commodity markets. Compounded by Gold rush migration, Lithgow saw a boom in migrants from China, Italy, Germany, Scotland, Northern England and Wales. Anglo-Celtic members of Lithgow's new working class formed labour unions, community organisations and the Lithgow Co-operative Society - many of which were antagonistic toward other ethnic groups. By Federation, Lithgow had grown to be the fourth largest city in Australia and the nation's only inland industrial centre - reaching 13500 people by 1921.

Industrial agglomeration in Lithgow around coal saw the establishment of the Lithgow Valley Colliery Company in 1876 - producing bricks to build the town. In 1879, Staffordshire potter James Silcock established the Colliery's pottery works - producing industrial and domestic pottery for the burgeoning town.

The Lithgow Small Arms Factory, which opened in 1912 and is still in operation, continues to keep this industrial heritage alive.

1928-1970: Economic restructuring and post-war migration

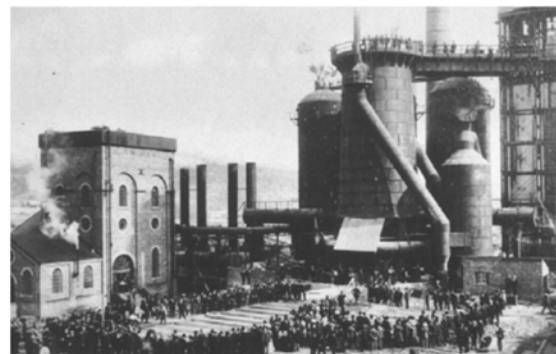
The post-war slowdown in arms manufacturing saw the contraction of Lithgow's steel industry and a labour crisis. Steel production was ceased in Lithgow in 1928 - with Hoskins relocating their iron smelter to Port Kembla. Nevertheless, the late 1920s saw an increase in Italian migration to Lithgow - catalysed by the ascent of fascism in Italy.

The post-war period saw the influx of migrants from central and eastern Europe, many of whom were employed in the textile industry. By the 1970s, Lithgow was a much more diverse town than before.

The post-war period also saw Federal industrial policy focus on developing targeted regional centres, of which Lithgow was one. Migrant hostels were constructed to house returned servicemen and migrant workers. However, by the 1960s, Lithgow's population had begun to decline.



1. Aerial photo of Lithgow looking westwards (taken c.1953-1956)



2. 1907: Opening of William Sandford's blast furnace



4. 1857: Andrew Brown's woollen mill

LITHGOW TODAY

“ It is widely acknowledged at a State level that regional cities will experience the highest rates of population growth over the next 20 years.

Regional centres like Lithgow will be industry, business and service hubs, providing access to jobs and, at a broader community level, health and education services.”

- Invest Lithgow website, Lithgow City Council

Local population

As of 2016, Lithgow is home to 11,689 people.

Lithgow's population increased in the period 2006-2016 by 661 persons (6% increase from 11,028 to 11,689).

Local Economy

In Lithgow, civic spaces, retail and commercial activity centre on the town centre which is concentrated along Main street, between Mort Street and the train line. Shop fronts are generally occupied, signifying a vibrant and successful town centre.

While once a major employment centre, Lithgow's proportion of full-time employed people has declined in recent years, with the number of part-time and unemployed persons increasing 2011-2016. Jobs in mining and manufacturing have also declined in the period 2006-2016. Jobs in public sector services and retail have increased over the same timeframe.

While extractive and manufacturing industries have been declining, construction has increased. 572 additional dwellings between 2006 and 2016 have been produced to meet the demands of the growing population.



1. View south along Eskbank Street, looking toward the vegetated escarpment east of the Pottery Estate



2. View west along Main Street, Lithgow



3. Lithgow Train Station



4. Cook Street Plaza



5. Houses along Bent Street

LOCAL CONTEXT

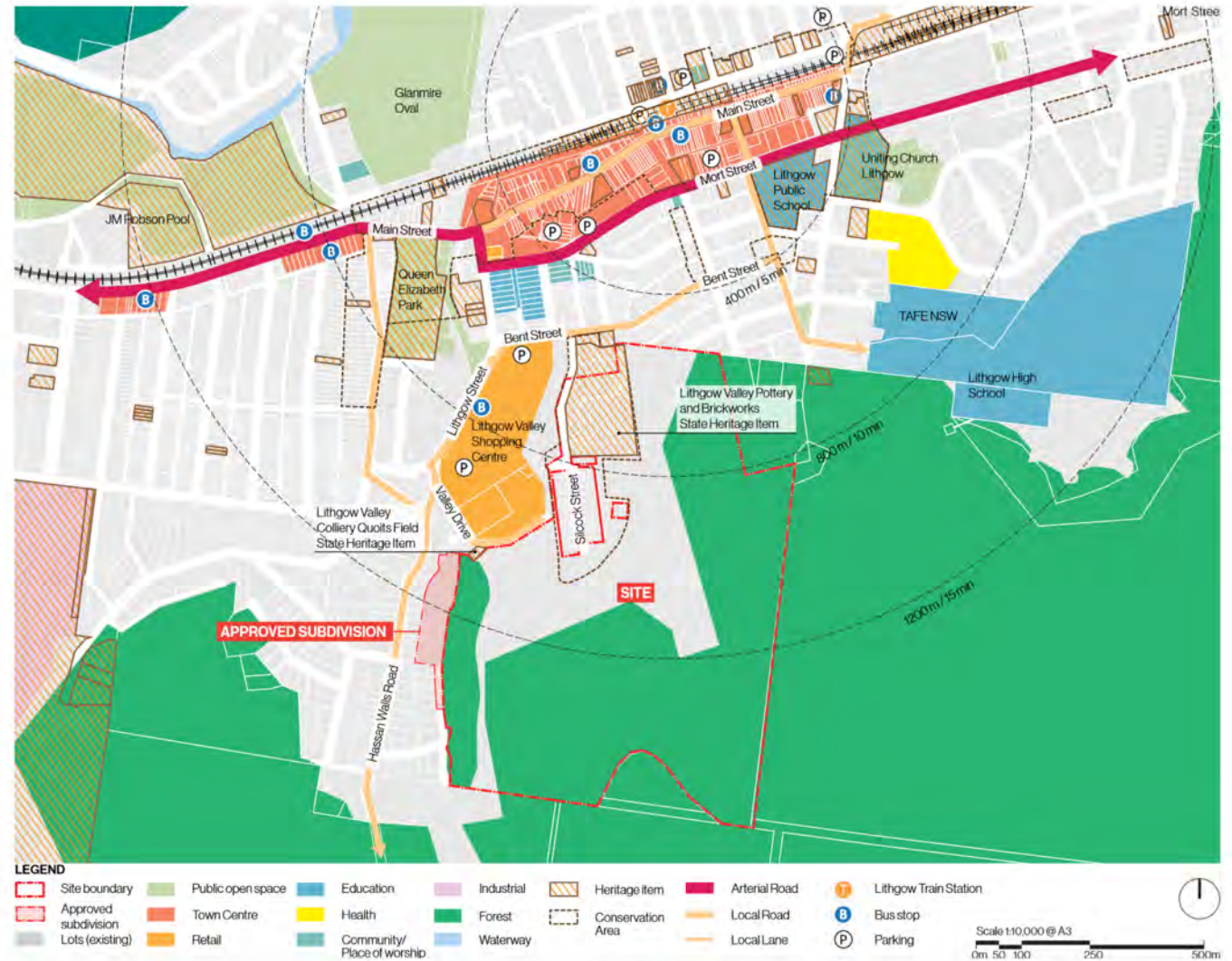
The Pottery Estate is one of the last large parcels of undeveloped land close to Lithgow's town centre and local amenities. The site has the potential to add a significant number of new residences and retail uses, creating jobs and housing for Lithgow's growing population.

Convenient location

The site is located on Lithgow's southern periphery, approximately 7 minutes walk from the site's most northern point to Lithgow's Main Street shops, buses and train station. The site is also in close proximity to Lithgow Valley shopping centre, Queen Elizabeth Park and several schools and places of worship.

Urban morphology

Lithgow's streets lack a consistent pattern. The surrounding context is characterised by differently-oriented grid fragments bound by topographically-defined connector roads. Large and irregular lots supporting large retail, industry and institutional uses intersect otherwise relatively consistently-sized residential lots.







**STRATEGIC
CONTEXT**

02

STATE GOVERNMENT STRATEGY AND VISION

Our approach to the development of the structure plan responds to the aims and aspirations of NSW state government strategic plans and guidelines.



Central West and Orana Regional Plan 2036

Department of Planning, Industry and Environment

The Central West and Orana Regional Plan 2036 is a 20-year blueprint for the future of the Central West and Orana region.

The Regional Plan outlines planning priorities for the Lithgow LGA, including:

- Maintain the primacy of Lithgow's main street and central business district.
- Develop transport and freight connections that capitalise on Lithgow's proximity to Sydney.
- Leverage opportunities from the Local Government Area's location and rural character to support diverse industries such as tourism.



Urban Design for Regional NSW

Government Architect NSW

Urban Design for Regional NSW provides guidance for everyone involved in the design, planning, and development of the built environment across regional NSW. The guide outlines urban design strategies for regional NSW, including:

- Engaging with the history and culture of places
- Integrating with the natural environment and landscape
- Revitalise main streets and town centres
- Prioritise connectivity, walkability, and cycling
- Balance urban growth
- Increase options for diverse and healthy living
- Respond to climatic conditions and their impacts

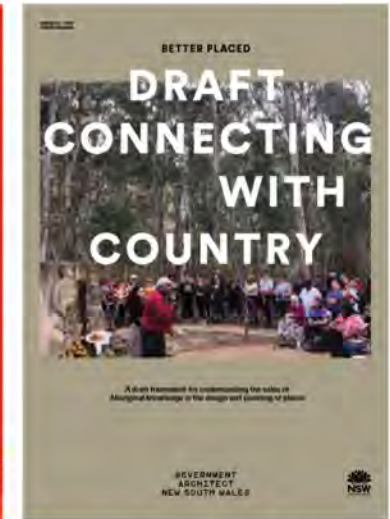


Better Placed

Government Architect NSW

Better Placed is a state mandated document that sets a clear approach to ensure good design across architecture, public places and environments. It articulates seven principles as a means to value and improve our built environment and public domain.

- Better fit - contextual, local and of its place
- Better performance - sustainable, adaptable and durable
- Better community - inclusive, connected, diverse
- Better for people - safe, comfortable and liveable
- Better working - functional, efficient and fit for purpose
- Better Value creating and value adding
- Better Look and feel engaging inviting and attractive



Connecting with Country Draft Framework

Government Architect NSW

This document is a draft framework for developing connections with Country to inform the planning, design, and delivery of built environment projects in NSW. Its principles for action will help to realise projects that:

- protect the health and wellbeing of Country and therefore of Aboriginal communities, and by extension all communities
- embed Aboriginal knowledge into the design and planning of our built environment to make NSW a better place for all its citizens.

LOCAL GOVERNMENT STRATEGY AND VISION

Our approach to the development of the structure plan responds to the aims and themes of Lithgow City Council's strategic plans and the local community's aspirations.



The Community Strategic Plan 2030 Lithgow City Council 2017

Community Strategic Plan 2030 (CSP) sets out the community's vision for the strategic direction of the Lithgow local government area.

The Plan is divided into 5 key themes and addresses social, environmental, economic and civic leadership issues in an integrated manner.

The Themes are:

- Caring for our Community
- Strengthening our Economy
- Developing our Built Environment
- Enhancing our Natural Environment
- Responsible Governance & Civic Leadership



Draft Lithgow 2040 LSPS

Lithgow City Council 2020

The Draft Lithgow 2040 Strategic Planning Statement provides an overarching strategic direction of how Lithgow City Council is planning for the present and the future. The statement identifies the local issues and needs of the community drawn from previous consultations, our alignment to regional and local strategies, and establishes land use priorities to which planning instruments will need to be amended or reinforced to facilitate future planning directions. It is from the identification of local issues and needs that give rise to the priorities found within the LSPS which is further broken down in to four themes:

- Our Lifestyle
- Our Infrastructure
- Our Economy
- Our Environment

Council will "Encourage medium density development that is of high design standard, can be supported by existing or planned infrastructure and respects local character and amenity."

LOCAL ENVIRONMENT PLAN

Lithgow City Council Local Environmental Plan 2014

The Local Environment Plan controls that pertain to the site are shown below;

Lot/Section/DP	4.56/-/DP1005128	26/-/DP1244557
Land Zoning	R1 - General Residential	B4 - Mixed Use E3 - Environmental Management R1 - General Residential
Height Of Building	N/A	
Floor Space Ratio	N/A	
Minimum Lot Size	400 m ²	40 ha/ 400 m ² / 600 m ²
Heritage	Lithgow Valley Pottery and Brickworks Significance: State Pottery Estate Significance: State	
Land Reservation Acquisition	N/A	
Foreshore Building Line	N/A	
Drinking Water Catchment	Sub Catchment Boundaries Subject Land	
Land Reclassification	Operational Land	
Local Provisions	Former LEP Boundaries Pottery Estate	
Riparian Lands and Watercourses	Environmentally Sensitive Areas - Groundwater	
Terrestrial Biodiversity	Biodiversity	
Bushfire Prone Land		Vegetation Buffer Vegetation Category
Local Aboriginal Land Council	Bathurst	
Mine Subsidence Development	Guideline: 1	Guideline: 1 Guideline: 7
Mine Subsidence District	Lithgow	
State Heritage Register Curtilage	Lithgow Valley Colliery & Pottery Site	



Land Zoning

B1	Neighbourhood Centre
B2	Local Centre
B4	Mixed Use
B6	Enterprise Corridor
B7	Business Park
E1	National Parks and Nature Reserves
E3	Environmental Management
E4	Environmental Living
IN1	General Industrial
IN2	Light Industrial
IN3	Heavy Industrial
R1	General Residential
R2	Low Density Residential
R5	Large Lot Residential
RE1	Public Recreation
RE2	Private Recreation
RU1	Primary Production
RU2	Rural Landscape
RU3	Forestry
RU5	Village
SP2	Infrastructure

Heritage

	Conservation Area - General
	Item - General
	Item - Archaeological

Minimum Lot Size

	300
	400
	600
	800
	1500
	2000
	4000
	2 ha
	10 ha
	20 ha
	40 ha
	100 ha
	Area 1
	Area 2

LAND ZONING DEFINITIONS

The site contains R1 General Residential, B4 Mixed Use and E3 Environmental Management zones.

R1 General Residential

1 Objectives of zone

- To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To maintain or improve the water quality of receiving water catchments.

2 Permitted without consent

Home occupations; Roads

3 Permitted with consent

Attached dwellings; Backpackers' accommodation; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Caravan parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Emergency services facilities; Environmental protection works; Exhibition homes; Exhibition villages; Flood mitigation works; Group homes; Home-based child care; Home businesses; Hostels; Hotel or motel accommodation; Kiosks; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Residential flat buildings; Respite day care centres; Semi-detached dwellings; Seniors housing; Serviced apartments; Shop top housing; Tank-based aquaculture; Water recycling facilities; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

B4 Mixed Use

1 Objectives of zone

- To provide a mixture of compatible land uses.
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To promote development that does not detract from the role of the town centre core commercial precincts.
- To promote the retention and reuse of heritage items as well as the retention of established buildings that contribute positively to the heritage and cultural values of lands at Portland.
- To maintain or improve the water quality of receiving water catchments.

2 Permitted without consent

Roads

3 Permitted with consent

Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Medical centres; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Seniors housing; Shop top housing; Tank-based aquaculture; Water recycling facilities; Water reticulation systems; Any other development not specified in item 2 or 4

4 Prohibited

Advertising structures; Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Dual occupancies; Dwelling houses; Eco-tourist facilities; Electricity generating works; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; General industries; Heavy industrial storage establishments; Heavy industries; Helipads; Highway service centres; Hostels; Industrial retail outlets; Industrial training facilities; Jetties; Marinas; Mooring pens; Moorings; Multi dwelling housing; Open cut mining; Pond-based aquaculture Recreation facilities (major); Recreation facilities (outdoor); Resource recovery facilities; Rural industries; Rural workers' dwellings; Secondary dwellings; Sewage treatment plants; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Waste disposal facilities; Water recreation structures; Water storage facilities; Water treatment facilities; Wharf or boating facilities

E3 Environmental Management

1 Objectives of zone

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To facilitate the management of environmentally sensitive lands and riparian areas.
- To protect and conserve the vegetation and escarpment landscape surrounding Lithgow.
- To maintain or improve the water quality of receiving water catchments.

2 Permitted without consent

Extensive agriculture; Home occupations

3 Permitted with consent

Building identification signs; Business identification signs; Community facilities; Dual occupancies; Dwelling houses; Eco-tourist facilities; Emergency services facilities; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Information and education facilities; Oyster aquaculture; Pond-based aquaculture; Recreation areas; Research stations; Roads; Secondary dwellings; Tank-based aquaculture; Water recycling facilities; Water supply systems

4 Prohibited

Industries; Multi dwelling housing; Residential flat buildings; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

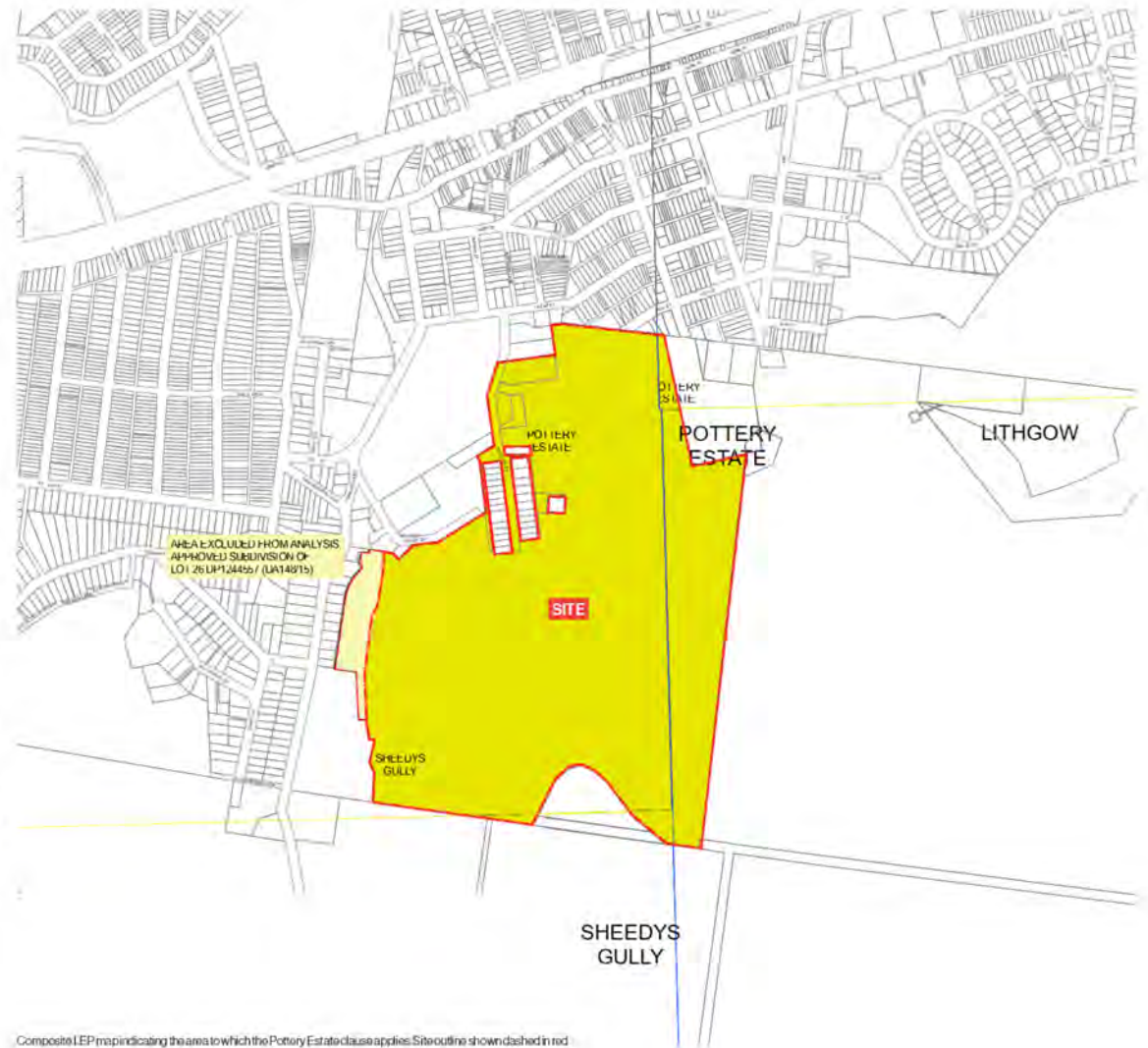
SITE-SPECIFIC LEP CONTROLS

Clause 7.12 of the Lithgow City Council LEP outlines key issues that the structure plan leading to a site-specific DCP must address.

7.12 Development in Pottery Estate

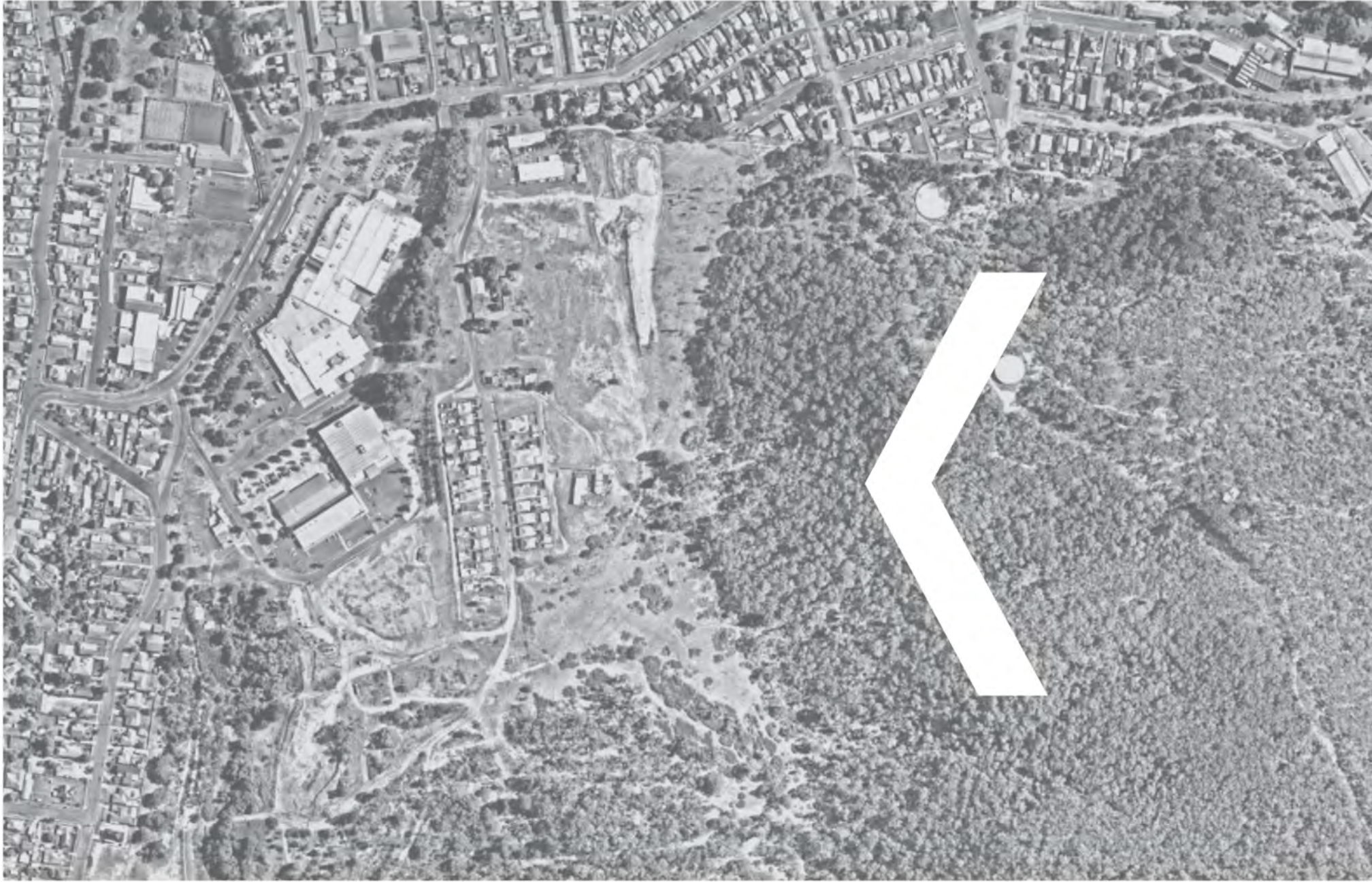
(3) Development consent must not be granted for development on land to which this clause applies unless the consent authority has taken into consideration a development control plan approved by the Council for that purpose that contains comprehensive provisions relating to, but not limited to—

- (a) the layout and design of both vehicular and pedestrian traffic through that land, and
- (b) the need to integrate the mixed land uses of the land through appropriate design and buffers, and
- (c) minimising the impact of development on the heritage significance of the cultural landscape, including both the built and archaeological heritage items on the land and proposed means of conservation management, and
- (d) any areas of land that may need restrictions due to the impact of mine subsidence, slope, bush fire, flooding or inundation or any other identifiable hazard, and
- (e) investigation and identification of any areas of land affected by contamination and the means to alleviate any risk of injury or harm, and
- (f) stormwater and water quality management, and
- (g) the conservation of natural watercourses, and
- (h) the protection of any potential habitat of any identified threatened species of flora and fauna, in particular the Purple Copper Butterfly (*Paralucia spinifera*), and
- (i) good design principles relating to building heights and setbacks, densities, materials, colours, form and scale, and
- (j) the servicing of the land, and
- (k) management of open space and public lands.



Composite LEP map indicating the areas to which the Pottery Estate clause applies. Site outline shown dashed in red.







**CONTEXT
& SITE
ANALYSIS**

03

THE SITE

The site incorporates a portion of the former Lithgow Valley Colliery and Pottery.

The site is just over 55 ha in area. It is comprised of two lots: Silcock Street, Pottery Estate (Lots 4,5,6/-/DP1005128) and 21 Willowbank Avenue, Sheedys Gully (Lot 26/-/DP1244557).

The site boundary for the site-specific DCP also incorporates lot 202/-/DP1138446 and lots 5,6/-/DP1005128, which contains the remains of the Lithgow Pottery. However, this lot is not owned by the applicant.

The site is distinctive in its context due to the size of the lots. A significant portion of the 21 Willowbank Avenue site is currently covered by forest.

A portion of the site to the south-west has been excluded from this analysis, as a subdivision has already been approved (DA148/15).

The site is an irregular form in large part due to the historic subdivision of the Lithgow Pottery Estate.

55 ha SITE AREA
R1/ B4/E3 LAND ZONING
N/A FSR
N/A HEIGHT



Pottery Estate, Lithgow



Queen Elizabeth Park
In walking distance

9 Mins



10 Mins

Lithgow Train Station
in walking distance



SITE CHARACTER

Backing onto the vegetated slopes of the Great Dividing Range, the site has seen several phases of development since Lithgow was founded and the land subdivided. It is currently characterised by varied landscape and built form conditions.

While the majority of the site is currently open space or forest, significant portions have been excavated, filled and levelled.

The site has excellent views of the vegetated slopes that define the Lithgow Valley to the south and north.

The site has varied edge conditions along its northern and western boundaries, incorporating residential and retail areas with notably different characters.

With the exception of the Lithgow Valley Pottery buildings (excluded from the site), there are only two permanent buildings located on the site; two unoccupied houses in the south-western corner.



Site map indicating photo locations



1. View east from the Valley Drive entry to the site, illustrating the level change between Silcock Street and Valley Drive



2. View to houses along Silcock Street from the south-west



3. Disused dwelling located at the south-western boundary of the site



4. Remains of the historic Lithgow Pottery, which the site surrounds on three sides



5. View south into the site from the end of Silcock Street

LAND USE & BUILT FORM

The area surrounding the site exhibits a diverse mix of building heights, setbacks, densities, forms, scales and land uses.

The site is bound by low density residential dwellings to the north and west, with 'big box' retail to the north-west along Lithgow Drive and Valley Drive. Entry to the site from Bent Street is marked by twenty-four detached dwellings along Silcock Street and the state heritage significant Lithgow Pottery. The site backs onto substantial forest leading to the steep sandstone escarpments along its southern and eastern boundaries.

Built form character

Residential areas around the site are characterised by predominantly single storey buildings, with pockets of two-storey terraces.

The area to the north of the site is characterised by a mix of detached and attached dwelling types. Street setbacks, building form and scale are varied.

Buildings along Silcock Street are consistent in form and scale. Single storey cottages line the southern half of Silcock Street. Newer cottages have been constructed in the style of older miners cottages on the site.

Valley Drive, on the other hand, is characterised by large retail buildings setback from the road to accommodate large car parks.

Silcock Street's higher elevation offers a buffer between the small scale of dwellings to the east and the large and dispersed big box retail buildings to the west.



LEGEND

Site boundary	Low Density Residential	Health Services	Public Open Space	Parking
Area excluded from analysis	Retail - Town Centre	Education	Local Services	
Lots (existing)	Retail - Big Box	Community Facilities	Infrastructure	



BUILT FORM CHARACTER

The areas surrounding the site exhibit a diverse range of building styles, materials, colours, forms and scales.

To the north of the site, a diverse mix of dwelling types line Bent and Waratah Streets - detached single storey dwellings sit adjacent to single and double storey terraces. Street setbacks, building form and scale are varied. Buildings also exhibit a mix of materials, although brick is commonplace.

Single storey cottages line the southern half of Silcock Street. Newer cottages have been constructed in the style of the older miners cottages on the site.

The big box retail along Valley Drive is consistent in scale with the Lithgow Valley Shopping Centre - high single storey buildings with limited street activation. This is consistent with the public realm in this area, which is oriented toward vehicular traffic rather than pedestrians.



Site map indicating photo locations



1. Example of big box retailers along Valley Drive



3. Detached dwelling on Bent Street



4. Single storey cottages along Silcock Street



2. Different scales and setbacks of terrace houses along Waratah Street



5. Single storey terraco houses along Waratah Street

ACCESS & CONNECTIVITY

The site is bordered by a diverse range of street patterns with an irregular distribution of access points.

Road Hierarchy

The site is bound by, and accessible from, local streets to the north and west. The local street grids to the north-east and north-west of the site are characterised by an alternating street-laneway pattern, facilitating access to the rear of residential lots.

Site entrance points

The site can be accessed via Valley Drive, Silcock Street, Mandie Street, and Hill Street.

Willowbank Avenue currently provides access to the approved subdivision to the site's west.

Public Transit

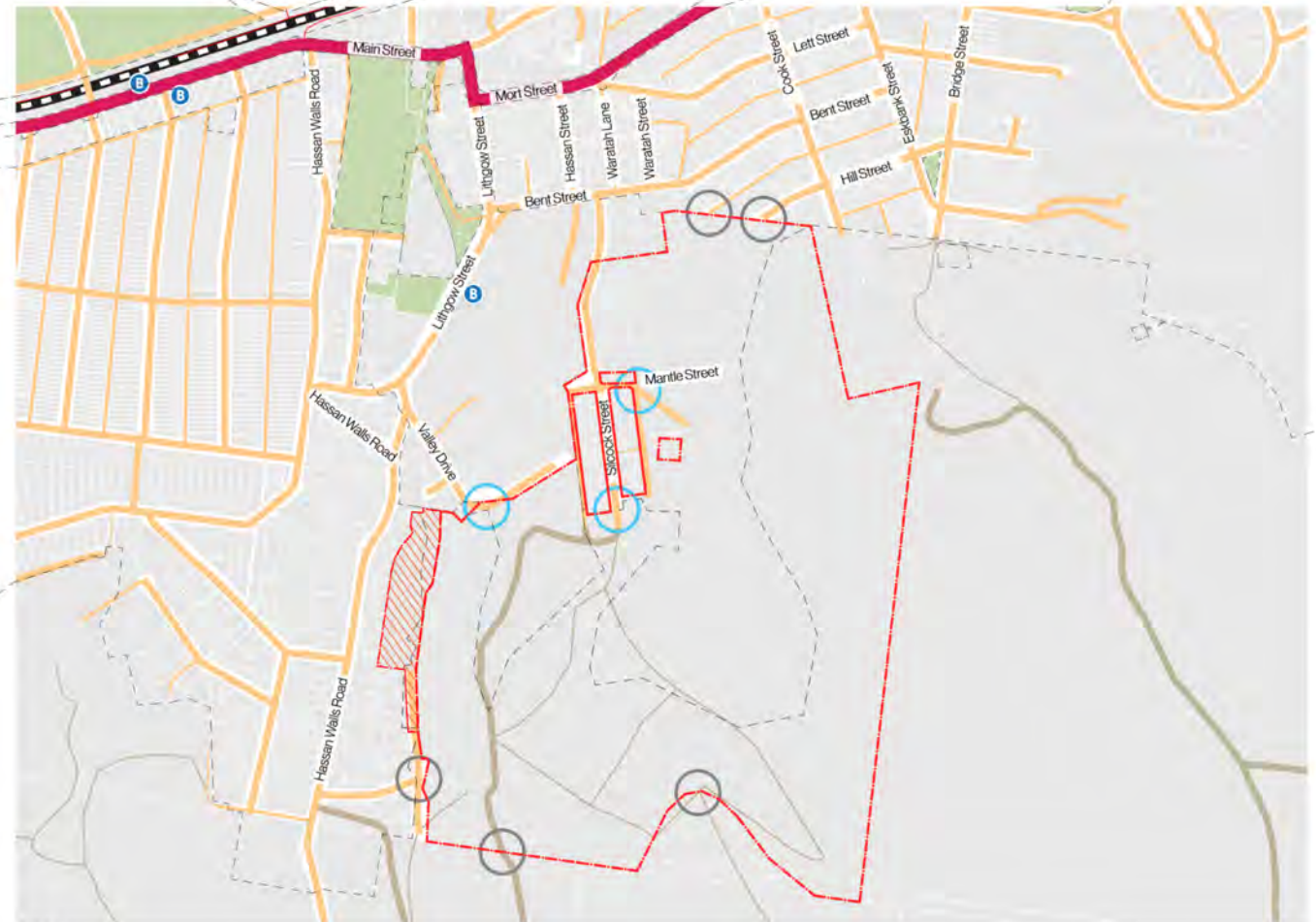
Access to the site by public transport is concentrated around Lithgow's town centre. There is a local bus stop at Lithgow Valley Shopping Centre.

Trails and fire trails

The site is bordered by a number of fire and nature trails, proffering unique experiences for avid bushwalkers.

A fire trail ascending to the Bracey Lookout lies to the east of the site.

A forest trail extends from the south-western corner of the site into Sheedy's Gully. Across Hassan Walls Road to the west, another trail extends 3.2km to Hassan Walls lookout.



LEGEND

- Site boundary
- Area excluded from analysis
- Lots (existing)
- Arterial Road
- Local Road
- Local Lane
- Fire trail/Dirt Road
- Trail
- Existing site access points
- Vehicular access terminates at site boundary
- Bus stop



STREETSCAPE

The site is bordered by different streetscape conditions, serving different purposes and users.

Bent and Waratah Streets

Bent and Waratah Streets to the site's north are characterised by an eclectic array of building types, styles and materials. Footpaths are narrow and bound by turf. Roadways, by contrast, are wide to accommodate on-street parking. Houses along these streets benefit from rear-lane access to garages for parking. There is a distinct lack of mature trees.

Silcock Street

Silcock street is characterised by a very wide roadway for a local road, and narrow turfed verges lacking footpaths for pedestrians. The roadway is made from compacted gravel. Houses along Silcock Street also benefit from rear lanes providing access to garages at the back of these sites.

The lack of pedestrian provisions around the Lithgow Valley Pottery is notable, given the building's historic significance. The result is a sense of disconnection from the residential areas to the north.

Valley Drive

Valley Drive is a car-oriented environment serving the large retailers behind Lithgow Valley Shopping Centre. Buildings are set back from the street for large open car parking areas. There are no footpaths and turf verges are interrupted by trees - making walking through this area very difficult for pedestrians.



Site map indicating photo locations



1. Valley Drive provides vehicular access to large retailers



3. Waratah Street



4. Entering the residential part of Silcock Street



2. The eclectic array of building types and setbacks along Bent St. Pedestrian spaces lack mature trees.



5. The remains of the Lithgow Valley Pottery lack public realm design befitting its historic significance.

HERITAGE

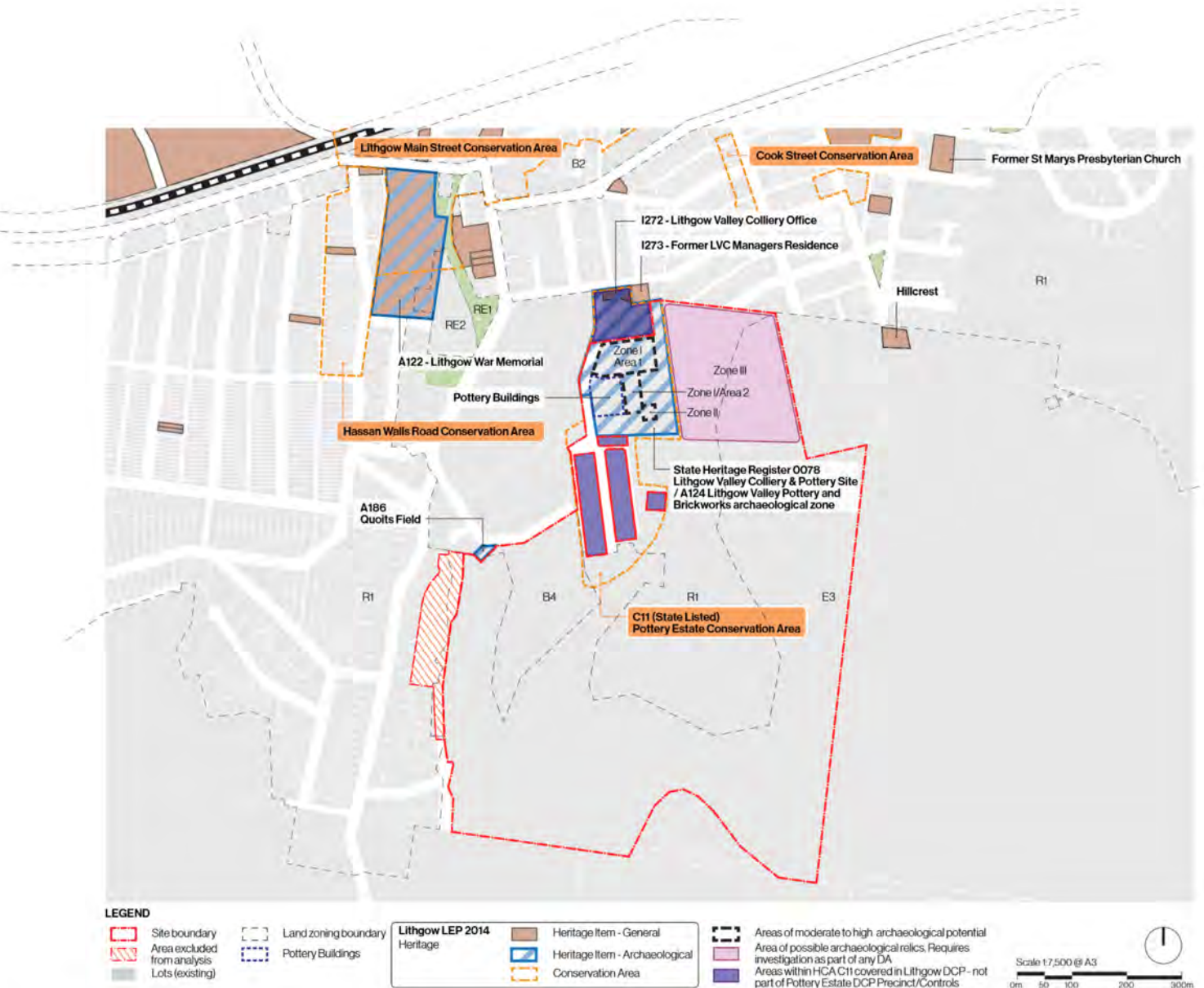
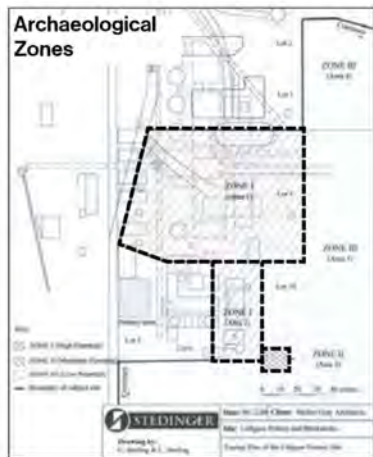
The site is located in close proximity to and includes state significant heritage items.

Pottery Estate

The Pottery Estate Conservation Area and Lithgow Valley Pottery and Brickworks archaeological item overlap the site boundary. These areas intersect the R1 - General Residential zone on the eastern portion of the site.

Further analysis of the archaeological potential of the areas surrounding the existing pottery buildings has been undertaken by Ray H Christison of High Ground Consulting. High Ground have identified Areas 1 and 2 hatched in the diagram below as having high archaeological potential, and area 3 having moderate potential.

Note Lot 203 DP1138446 or 1-36 Silcock Street houses are not part of the Pottery Estate DCP heritage controls.



THE POTTERY ESTATE

“ The site listed on the State Heritage Register No. 78 contains the archaeological remains of the clay products division of Lithgow Valley Colliery Co. Ltd. one of Lithgow’s most significant and long-lived industrial companies.”

- NSW Government, Office of Environment and Heritage, “Lithgow Valley colliery & Pottery Site”

A portion of the site contains part of the Lithgow Pottery Estate, an important place in the industrial development of Lithgow.

The Colliery

The Lithgow Valley Colliery was established in 1872-3. The brickworks was established in 1876, followed by pipe-making in 1878.

Brick production peaked at 50,000 bricks per day after 1901. These bricks found their way to many major public works across the state, as well as private and public buildings in Lithgow.

The Pottery

The first pottery kiln was built and operated by English potter James Silcock in 1879. The pottery produced domestic products until 1907. Commercial and construction products continued being produced through the Depression and the Second World War.

Production ceased in 1945.

On 31 July 1981 the Heritage Council of NSW in recognition of the sites State heritage significance placed a Permanent Conservation Order over the site. The site was transferred to the State Heritage Register on 2 April 1999.



1. Lithgow Valley Colliery and Pottery Works, 1889



2. Lithgow Valley Colliery & Pottery - present condition



3. Brick and drainpipe works, Lithgow Valley Colliery Co 1906



4. Earthenware jelly mould made by Lithgow Pottery (1876-96)

TOPOGRAPHY & HYDROLOGY

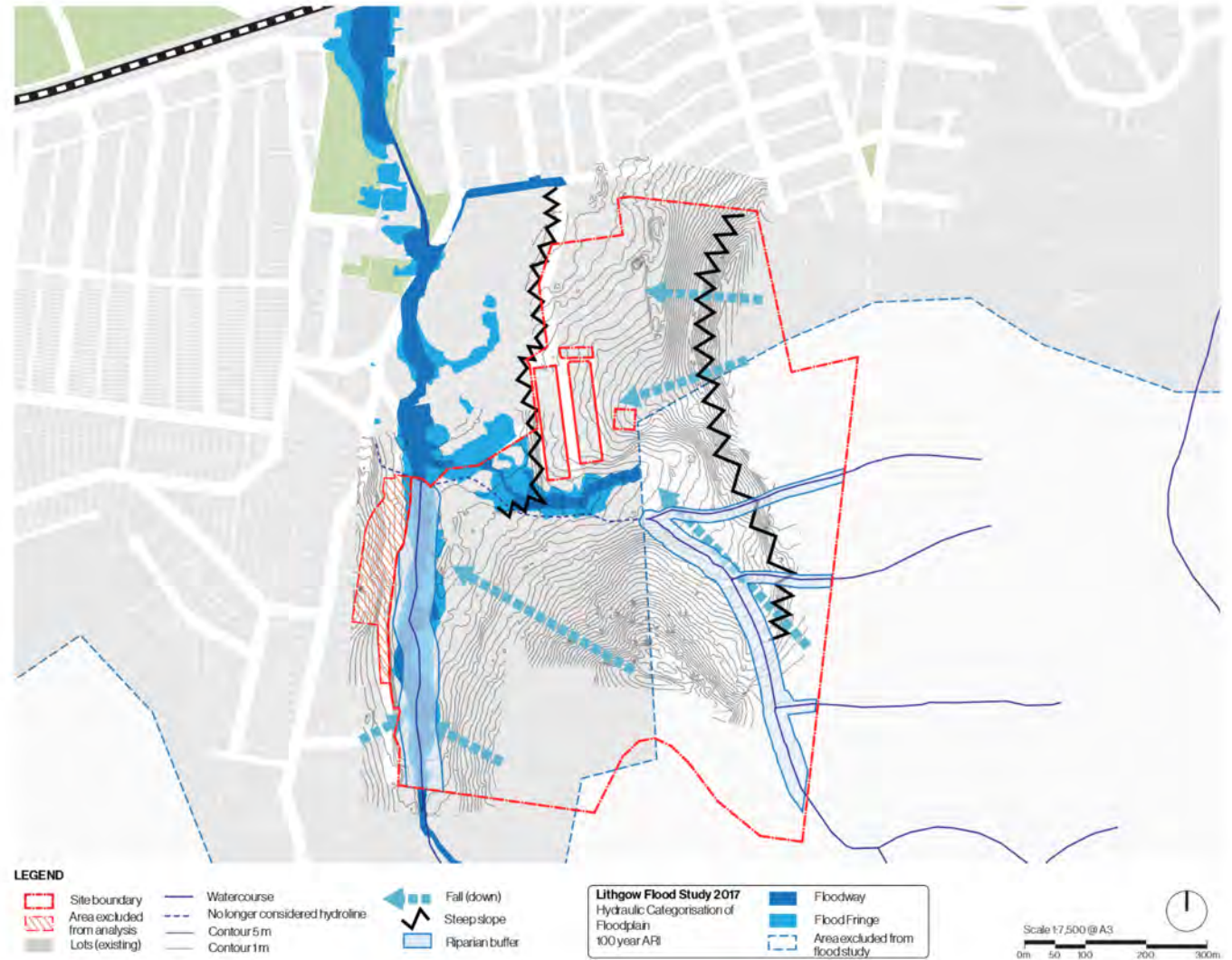
Existing watercourses on the site are subject to riparian buffers. Refer to ecological constraints report by Narla Environmental for details.

Flood hazard (Lithgow Flood Study Review 2017)

Eastern and central portions of the site are located in the 100 year ARI flood plain.

Floodway: "Those areas of the floodplain where a significant discharge of water occurs during floods. They are often aligned with naturally defined channels. Floodways are areas that, even if only partially blocked, would cause a significant redistribution of flood flow, or a significant increase in flood levels."

Flood fringe area: "The remaining area of flood prone land after floodway and flood storage areas have been defined."

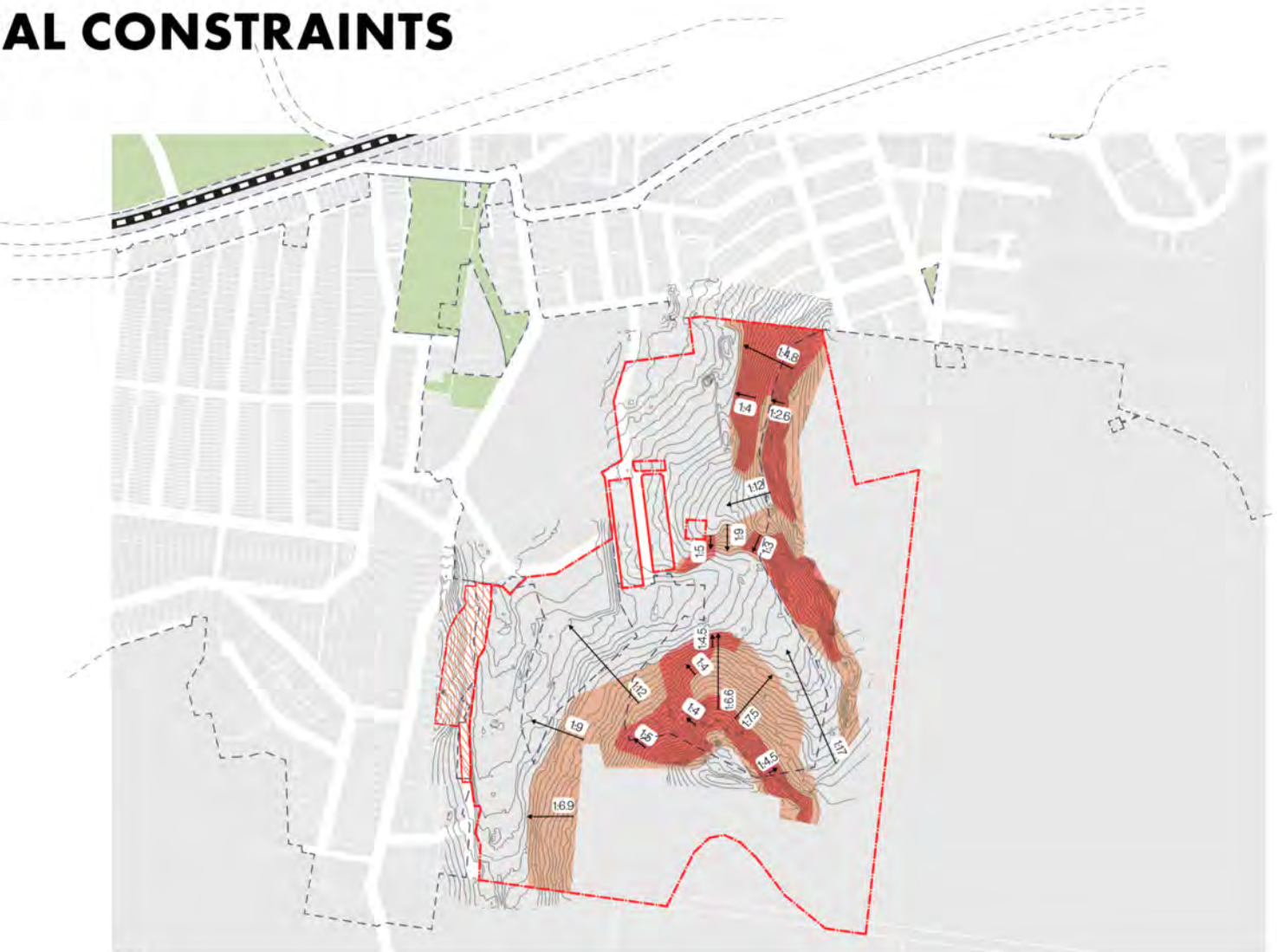


TOPOGRAPHICAL CONSTRAINTS

The site is characterised by steeply sloping land to the south and east, which forms the Sheedys Gully Tributary.

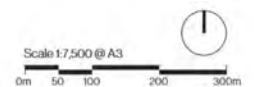
Steep slopes separate the R1 General residential zone from Valley Drive and the B4 Mixed Use zone.

Slopes with a gradient $>1:5$ ($<20\%$) have been identified. Further investigation of the viability of these sites for development will be required at the DA stage.



LEGEND

- | | | |
|-----------------------------|----------------|---|
| Site boundary | Contour 5m | 1X Fall (down) * Numbers indicate gradient (rise/run) |
| Area excluded from analysis | Contour 1m | Steep Slope ($>1:10$) |
| Lots (existing) | Zoning outline | Very Steep Slope ($>1:5$) |



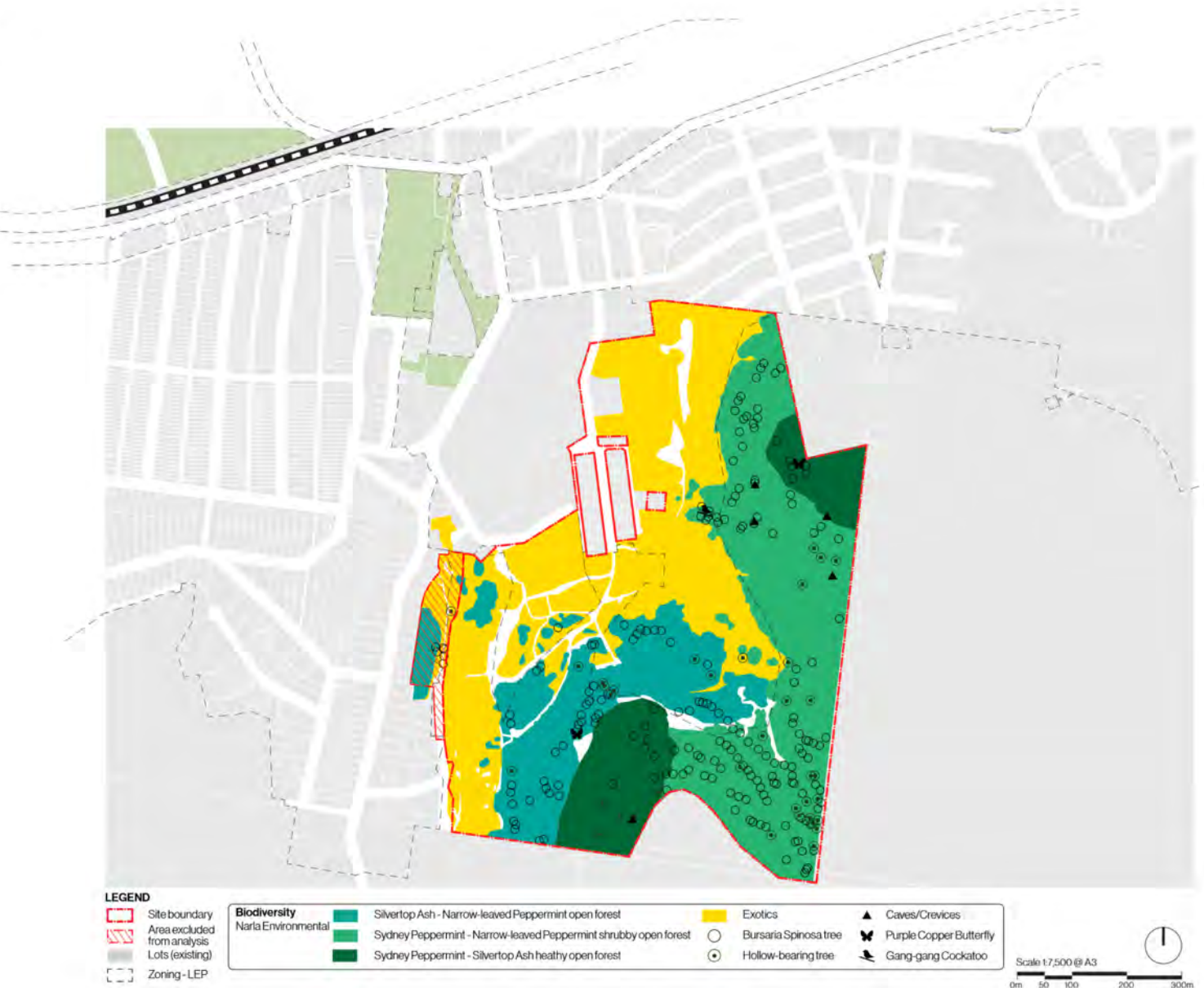
BIODIVERSITY

The site is characterised by a mix of native forested areas and large areas of previously cleared land.

Narla Environmental have completed a survey of Environmental Constraints.

Native forests exist largely outside the areas zoned R1 and B4, with the exception of areas of Silvertop Ash and Narrow-Leaf Peppermint open forest to the south of the site.

Bursaria Spinosa, a known habitat of the threatened Purple Copper Butterfly, are concentrated beyond the areas zoned R1 and B4.



ECOLOGICAL CONSTRAINTS

Development on the site is constrained by habitat and riparian protection areas.

Narla Environmental have provided advice on ecological constraints, which have been summarised in this site map and below.

Low Constraints Area - Green

This zone is deemed to have high potential for future development with accompaniment of the appropriate environmental assessments and implementation of appropriate restrictions and guidelines.

This zone encompasses: Exotic vegetation; and historically cleared land/developed areas.

Moderate Constraints Area - Orange

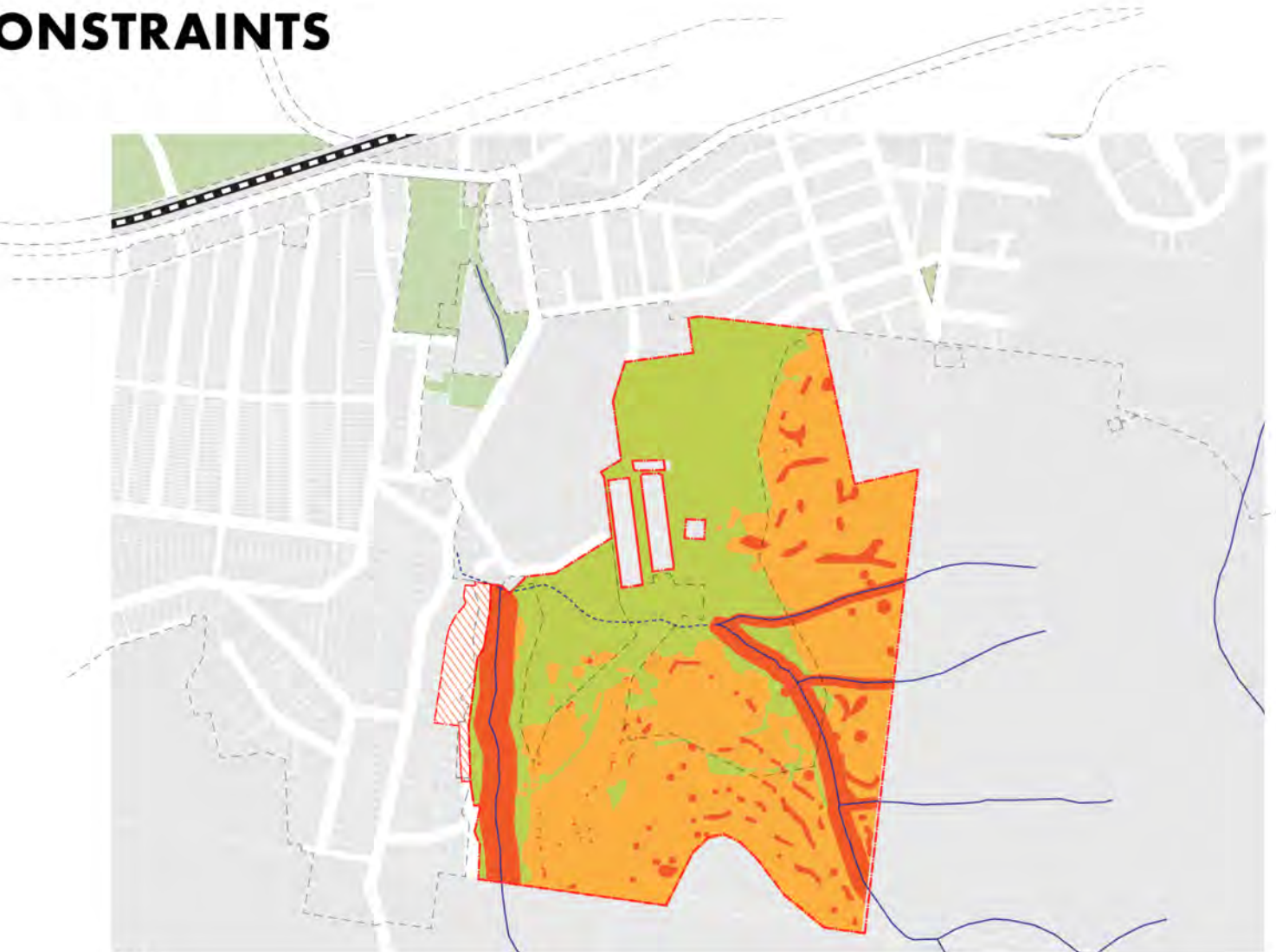
This zone is deemed to have a moderate potential for future development with accompaniment of the appropriate environmental assessments, with minor impact mitigation required (such as revegetation).

This zone encompasses: Vegetation mapped as PCT 1155, 1247 and 1248 excluding potential threatened species habitat.

High Constraints Area - Red

This zone is deemed to have a low potential for future development without the implementation of detailed impact mitigation strategies and/or potential offsets, and management plans.

This zone encompasses: Potential threatened fauna habitat (hollow-bearing trees, caves and crevices, *Bursaria spinosa* and location of Gang-gang Cockatoos); and riparian land.



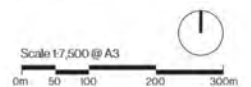
LEGEND

- Site boundary
- Area excluded from analysis
- Lots (existing)

Ecological Constraints

Narla Environmental

- Low constraints area
- Moderate constraints area
- High constraints area



MINING & SUBSIDENCE

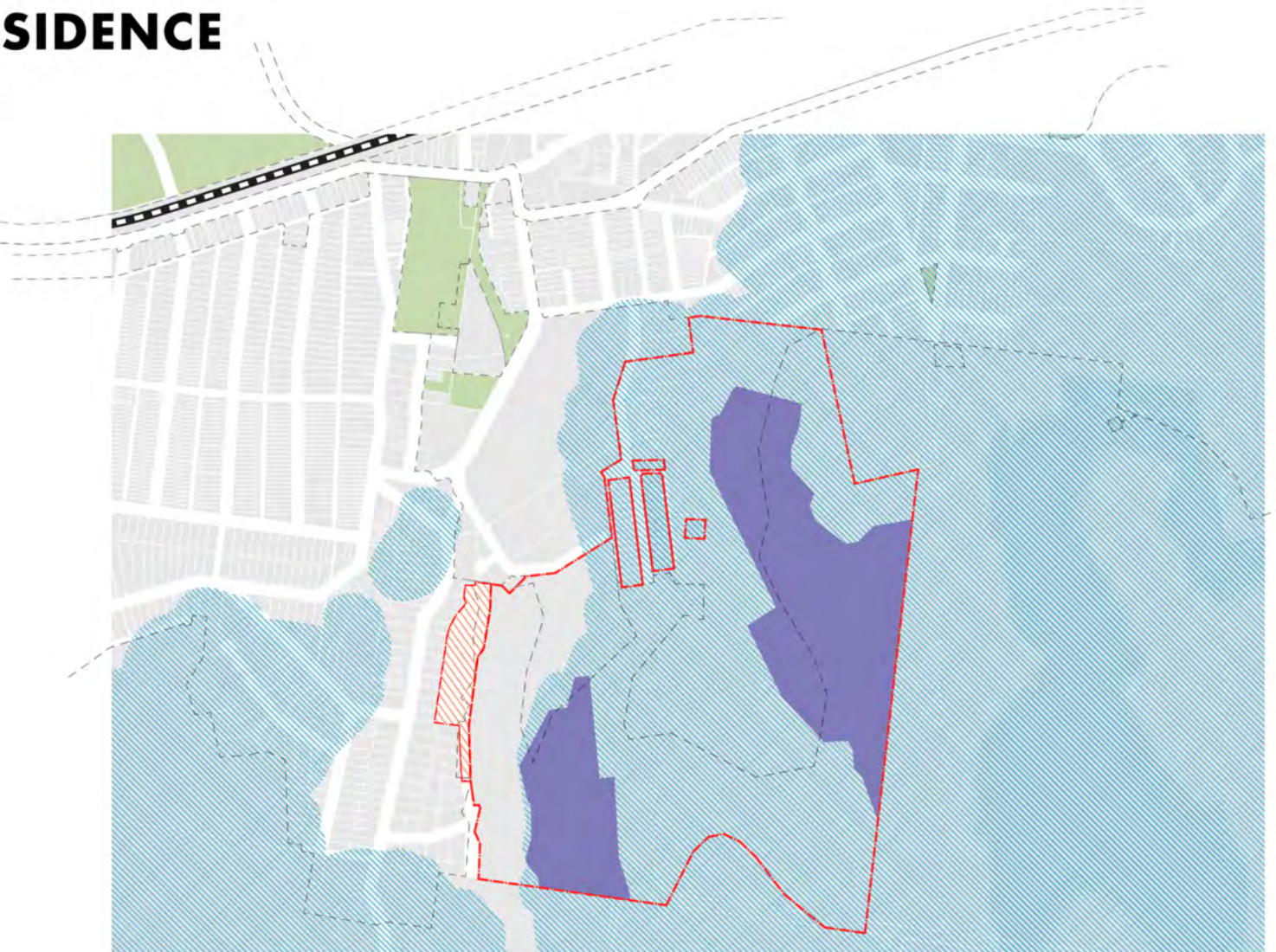
Historic mining uses have impacted the environmental conditions of the subject site.

Subsidence

A large portion of land extending across the east of the site and near the southern boundary have been identified as impacted by goaf areas. Development with the Pottery Estate - and particularly in or near goaf areas - will require geotechnical assessment to determine suitability for development prior to DA lodgement.



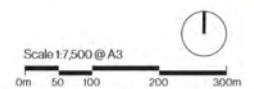
Extract from 1983 Geotech Stability Plan by Coffey & Partners



LEGEND

- Site boundary
- Area excluded from analysis
- Lots (existing)

- | | |
|----------------------------|---|
| Mine and subsidence | Underground Coal Mining - ePlanning Portal, Dec 2020. |
| | Goaf Areas - Geotech Report (Coffey), 1983. |
| | Land zoning boundaries |



CONTAMINATION

Two sections of the subject site contain known areas contaminated by historical mining uses.

Parcels 1 & 2 indicated in the diagram adjacent contain known areas of contamination.

Parcel 1

Parcel 1 comprises the northern portion of the R1 zone. The parcel incorporates the area of the former Pottery & Brickworks. Some areas of this parcel have been identified as containing coal chitter fill (which has been capped) and other areas have been partially remediated.

Development in this parcel will require further contamination investigation at DA. Note that the western portion of this area also contains archaeological relics.

Parcel 2

Parcel 2 comprises the B4 zone previously identified as having contamination. Development in this portion will require contamination investigation at DA.

Other sites

Contamination may have occurred elsewhere given previous uses. Preliminary investigations are required for remaining areas being developed with the Pottery Estate.



LEGEND

- Site boundary
- Area excluded from analysis
- Lots (existing)
- Land zoning boundaries
- Known areas of contamination



BUSHFIRE

The southern portion of the subject site currently consists of the vegetated hills associated with Hassan's Walls to the east and south-east.

Smaller pockets of remnant vegetation on site exist, including exotic vegetation aligning the creek to the west, which may be assessed as a bushfire hazard if retained/revegetated.

This land that has been identified as bushfire prone - Council have mapped the hazard as Category 1 (highest risk). A large portion of the remaining R1 and B4 zones are designated 'vegetation buffer' - a 100m deep zone abutting the Category 1 Forest area.

Much of the northern portion of the site, including the existing residential lots along Silcock Street and the remnants of the Lithgow Pottery and Brickworks, fall outside bushfire prone areas.



LEGEND

Site boundary	Vegetation Buffer
Area excluded from analysis	Vegetation Category 1: Forest
Lots (existing)	

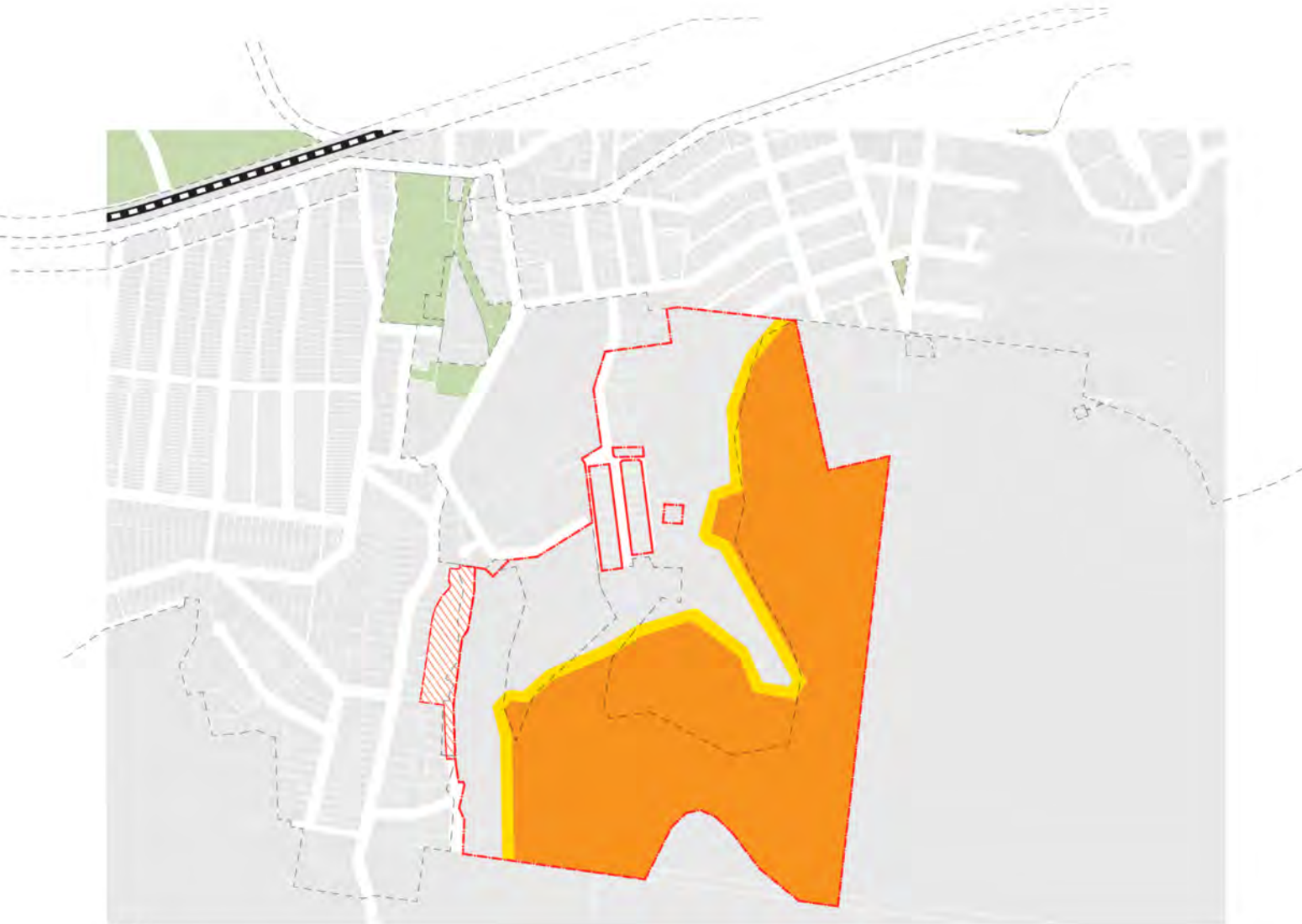
Bush Fire Prone Land
Lithgow Council
August 2020



Statewide bushfire Consulting have conducted a Stage 1&2 Bushfire Assessment, which responds to the Planning for Bush Fire Protection 2019 (PBP), Australian Standard AS 3959 Construction of buildings in bushfire-prone areas (AS3959) and the requirements of The Lithgow Council LEP.

Statewide's study has outlined indicative asset protection zones based on slope and existing vegetation.

Further determination of asset protection zones (APZ) and other primary constraints including road links - including their physical treatment - are to be conducted in future studies of the site.



LEGEND

-  Site boundary
-  Area excluded from analysis
-  Lots (existing)

- Bush Fire recommendations**
Statewide Bushfire Consulting, 17/12/2020
-  Asset Protection Zone
 -  Existing Native Vegetation



DEVELOPABLE AREA

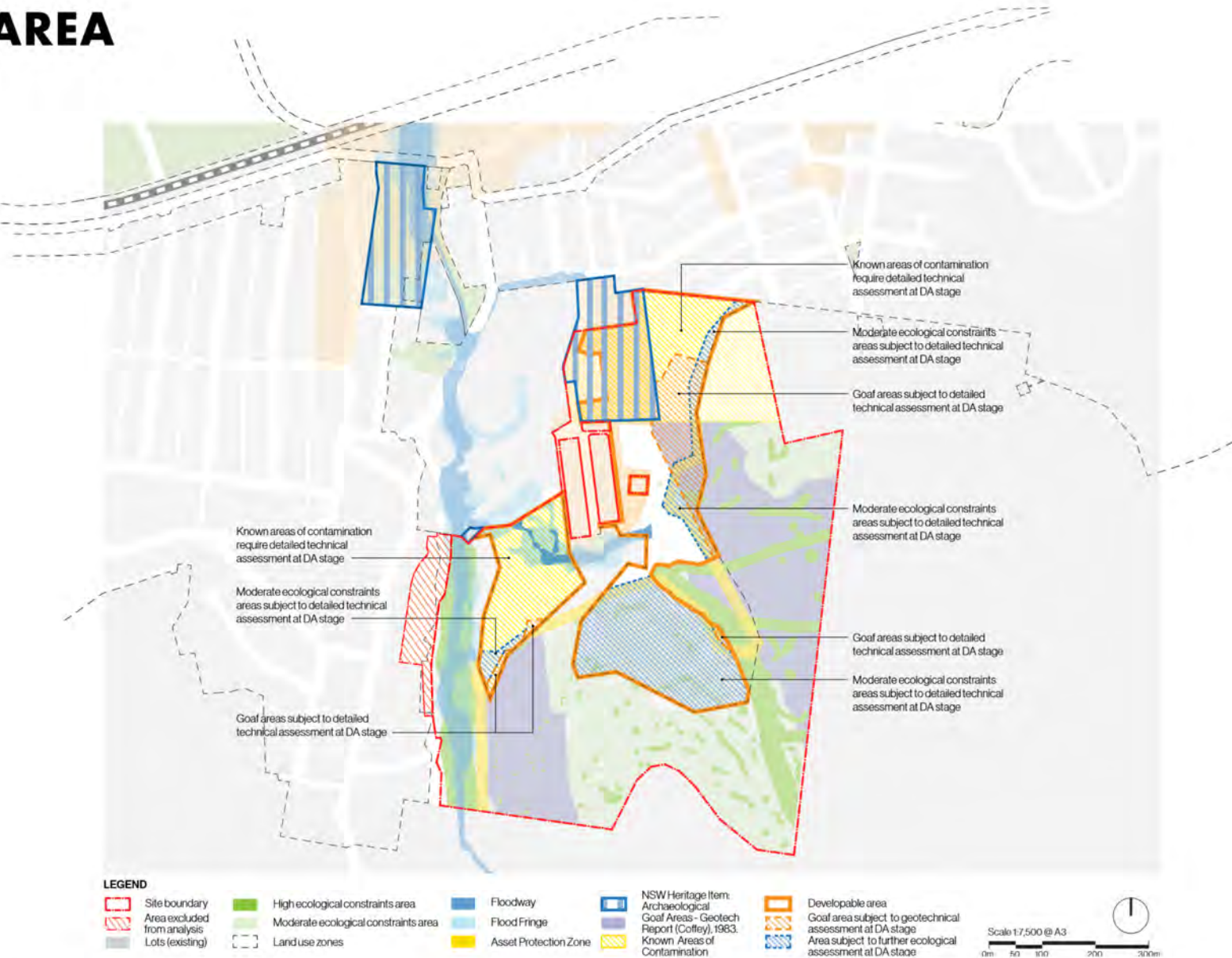
Based on constraints laid out above, the developable portion of the site has been identified.

This developable area is based on high level analysis compiled from a range of consultants. The developable area will inform the development of the structure plan.

Some parts of the developable area are subject to moderate ecological, flooding, contamination and heritage constraints. Constrained areas falling within the developable area will be addressed in the development of the structure plan.

GOAF areas falling within the R1 and B4 zones have been identified as areas requiring future detailed technical assessment to determine their suitability for development.

It is assumed that the proposed Asset Protection Zone will also be re-assessed at the DA stage.



OPPORTUNITIES

Based on the site analysis, a number of opportunities for the design response to the site have been identified.

Local connectivity

1. New local access roads can connect Hill Street, Silcock Street and Valley Drive.
2. New road to provide hard edge to existing watercourses and bushfire source features

Subdivision

3. Larger sites in the B4 zone offer maximum flexibility for development and are commensurate with the scale of adjacent lots in the zone
4. The subdivision of the R1 zone to include a large lot in the north-western corner of the zone could contain heritage and contamination constraints to a single development

Heritage

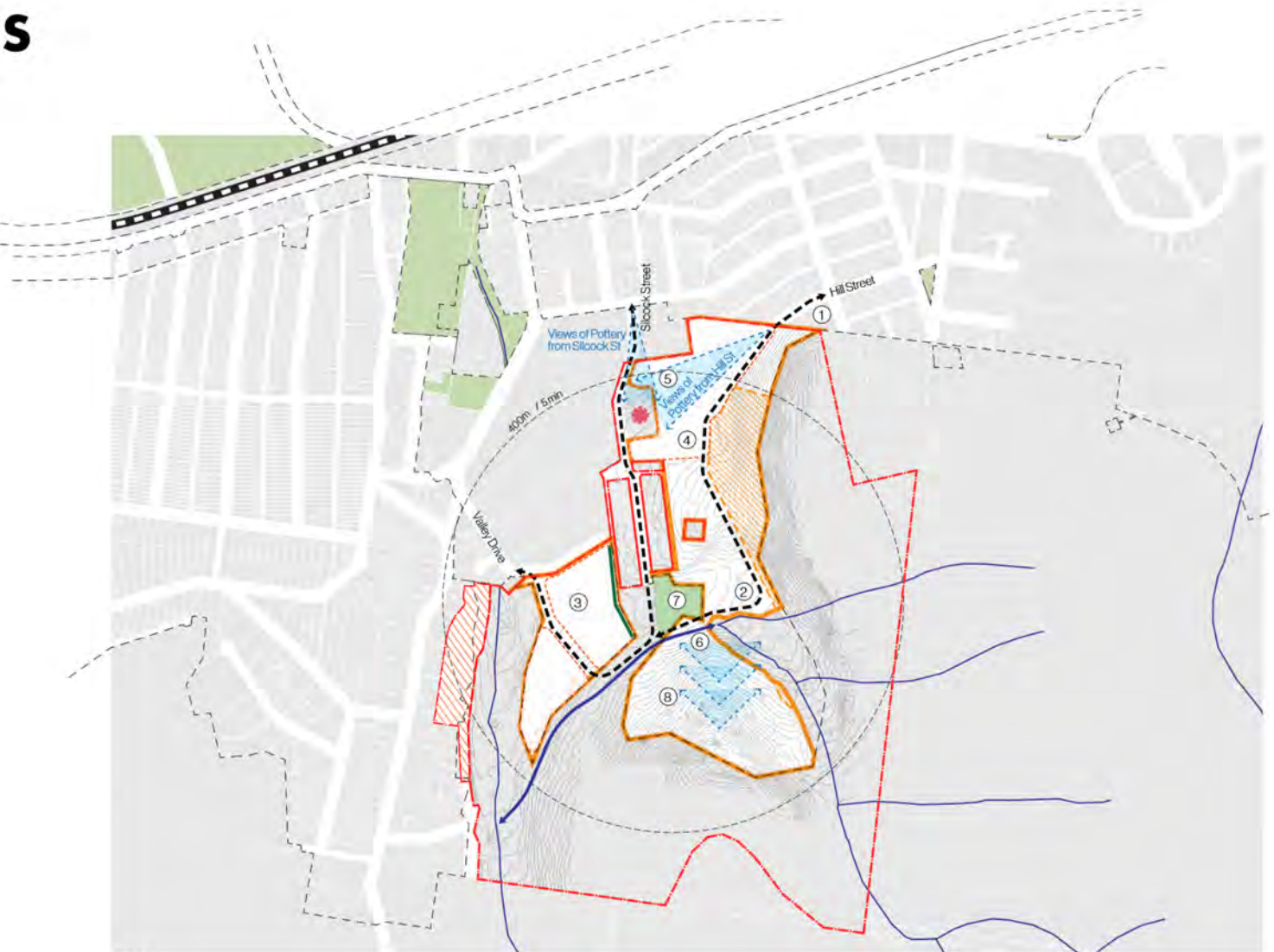
5. New built form and open space can frame district views of the Lithgow Pottery buildings

Hydraulic

6. New overland flow path to reconnect existing watercourses
7. A new park/public open space at the southern end of Silcock Street would provide on-site retention for storm water while creating a significant public amenity within 400m of the vast majority of dwellings on the site.

Private amenity

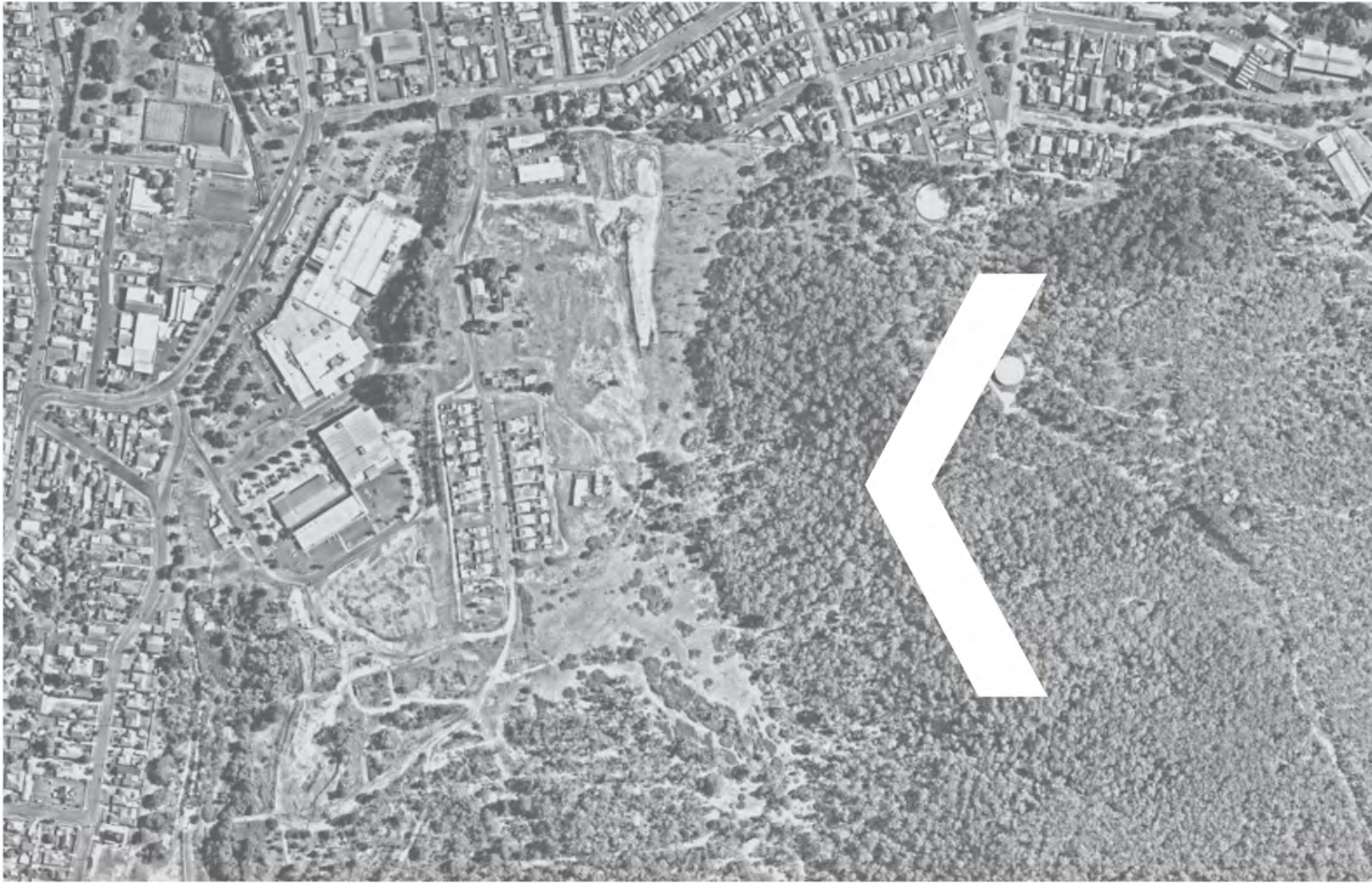
8. North-facing slopes at the southern end of the site offer opportunities for long distance views and excellent solar access.



LEGEND

Site boundary	Developable area	Hydroline (existing)	Potential vehicular access	Potential open space
Area excluded from analysis	Area subject to geotechnical assessment at DA stage	Potential Overland Flow Path	Principle views	Potential vegetation buffer
Lots (existing)	Potential large sites	LEP Zoning	Lithgow Pottery buildings	







STRUCTURE PLAN

04

VISION & OBJECTIVES

The redevelopment of the Pottery Estate is a significant opportunity to create new mixed use and residential precincts that will contribute to the growth of Lithgow.

Design Objectives

The design of the Pottery Estate structure plan is guided by a series of design objectives that have been formulated in response to the analysis of context and site constraints:

- Create new residential and mixed use precincts that expand and enhance their surrounding contexts
- Create new and engaging public open spaces that redress the current lack of recreational spaces in the area
- Create development that is safe, healthy and resilient to environmental hazards
- Create spaces for engaging with cultural heritage
- Create ecologically sensitive new districts which protect existing natural assets

Methodology

Key to our urban design approach is the formulation of urban design principles specific to the Pottery Estate.

These principles underpin the proposed structure plan and provide a foundation to test the brief against the built form outcomes to ensure a robust master plan in the future.

Urban Design principles maintain key place based elements for Lithgow Pottery Estate including but not limited to;

- Streets and connectivity
- Open space networks
- Environmental resiliency

Within these, built form typologies, new and evolving uses, staging and phasing and other development scenarios can be tested and confirmed in a flexible and robust way without altering the overall integrity of the project.

The Vision

Located among historic residential fabric, large retailers and bushland, the proposal seeks to reconcile these complex conditions in ways that celebrate the site's natural and cultural heritage assets.

A new, connected, residential precinct

For new and existing residents, the Pottery Estate will become an integrated part of southern Lithgow. Residential development will be commensurate with the scale of surrounding neighbourhoods so that the boundaries between the site and the town are dissolved.

Expanded retail offerings

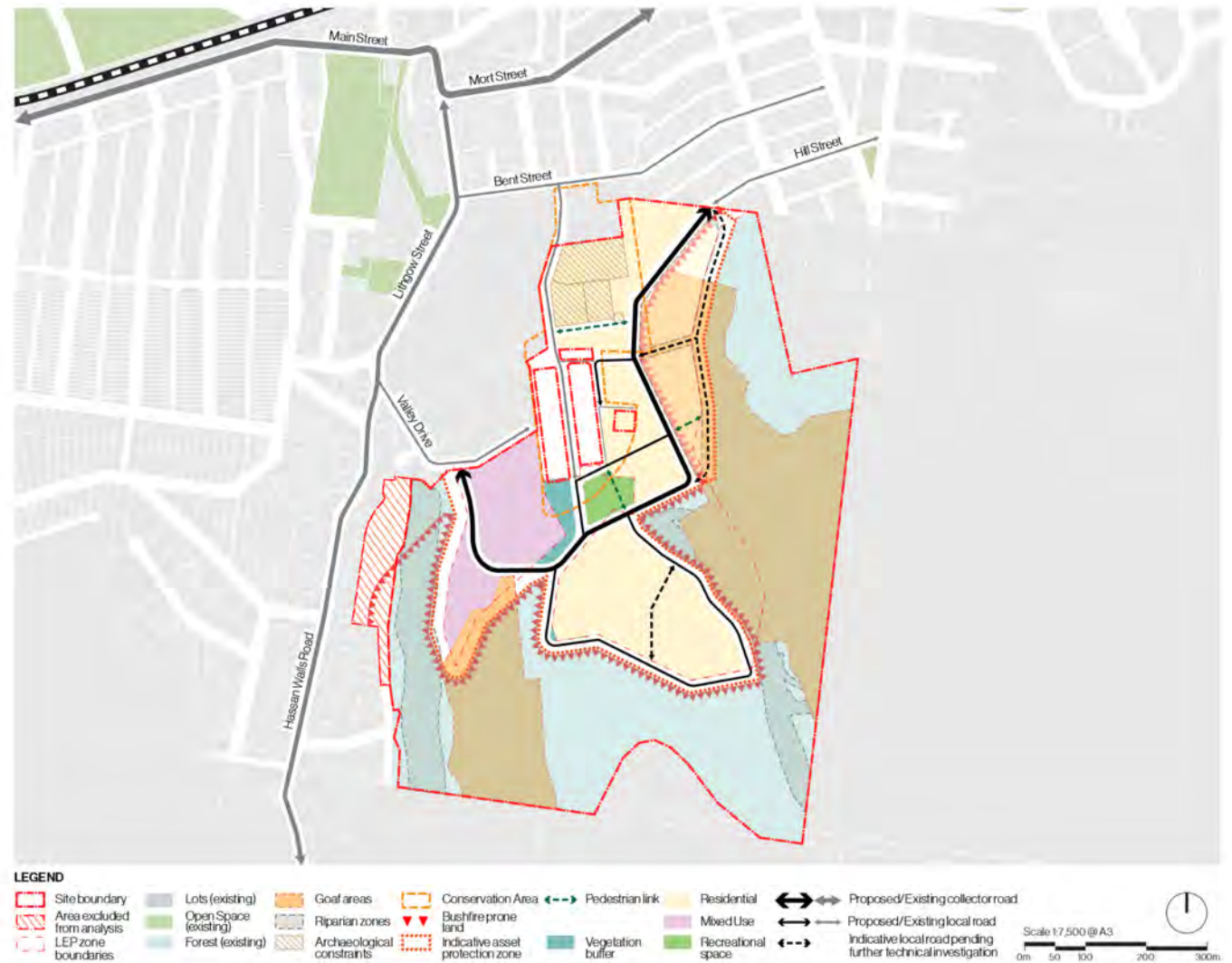
The southward extension of the Valley Drive retail precinct will expand land offerings for large retailers, creating new employment and retail opportunities. Residential amenity will be protected from this expanded retail precinct through new landscaping.

New opportunities for recreation

The new Pottery Estate will feature new public open space that takes advantage of the unique landscape and heritage assets.

Ecologically sensitive and resilient

The redevelopment of the Pottery Estate offers a unique opportunity to protect and enhance the site's natural systems. Historically damaged waterways will be re-instated and contaminated soils will be made suitable for human occupation – guaranteeing long term resilience against key environmental hazards affecting the site.



URBAN DESIGN PRINCIPLES

Access and Circulation

Principle 1:

Establish primary road connections that connect the site to its context

New local roads will extend from Hill Street, Silcock Street and Valley Drive to integrate new neighbourhoods into Lithgow's existing urban fabric.

Opportunities

- Extend the existing street network to connect the site to its context
- Street network is responsive to topography

Principle 2:

Increase site permeability by creating a network of streets

Where possible, leverage the existing street pattern to define connections across the site and preserve existing built form character. New streets will be oriented to ensure residential amenity and maximise lot efficiency.

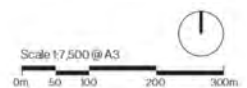
Opportunities

- Local street pattern maximises connectivity across the site with pedestrian links providing opportunities for active transit
- A pedestrian link to the south of the Pottery archaeological areas offers a buffer between historical and future structures.
- Where possible, the street pattern follows and defines conservation area boundaries.
- Street types and dimensions conform to the Lithgow Engineering Standards 2012.



LEGEND

Site boundary	Lots (existing)	Conservation Area	Existing collector road	Proposed collector road	Proposed pedestrian link
Area excluded from analysis	Open Space (existing)	Archaeological constraints	Existing local road	Proposed local road	Riparian zones
LEP zone boundaries	Forest (existing)	Goal areas	Existing laneway	Indicative local road pending further technical investigation	Indicative asset protection zone



Open Space

Principle 3:

Expand Lithgow's green network by creating new recreational opportunities

Build upon the existing landscape character on the site to provide a network of public domain elements that are opportunities for activities and destinations in their own right.

Opportunities

- Create new recreational opportunities for new and existing residents that embrace the site's ecological assets and celebrate local heritage
- Provide open space reserves where topography or zoning constrain development
- Protect and restore habitat for local threatened and endangered species
- Vegetation buffers are located to demarcate land uses and preserve amenity for residents.

Principle 4:

Celebrate local history and culture through the design of public spaces

New public offer spaces should offer members of the public opportunities to enjoy the historical structures of the Lithgow Pottery. The site's historical assets also offer possible educational opportunities for engaging with local Aboriginal and industrial histories.

Opportunities

- Create a public domain plan that increases opportunities to engage with local heritage
- Create opportunities for connecting Aboriginal heritage through community consultation, public art, place naming, public space design and ongoing custodianship
- Provide adequate transitions to heritage items to ensure minimal overshadowing and visual impact.



LEGEND

Site boundary	Lots (existing)	Conservation Area	Residential	Open Space Reserve
Area excluded from analysis	Open Space (existing)	Archaeological constraints	Mixed Use	Vegetation buffer
LEP zone boundaries	Forest (existing)	Possible lots subject to future technical investigation	Recreational space	



Resiliency

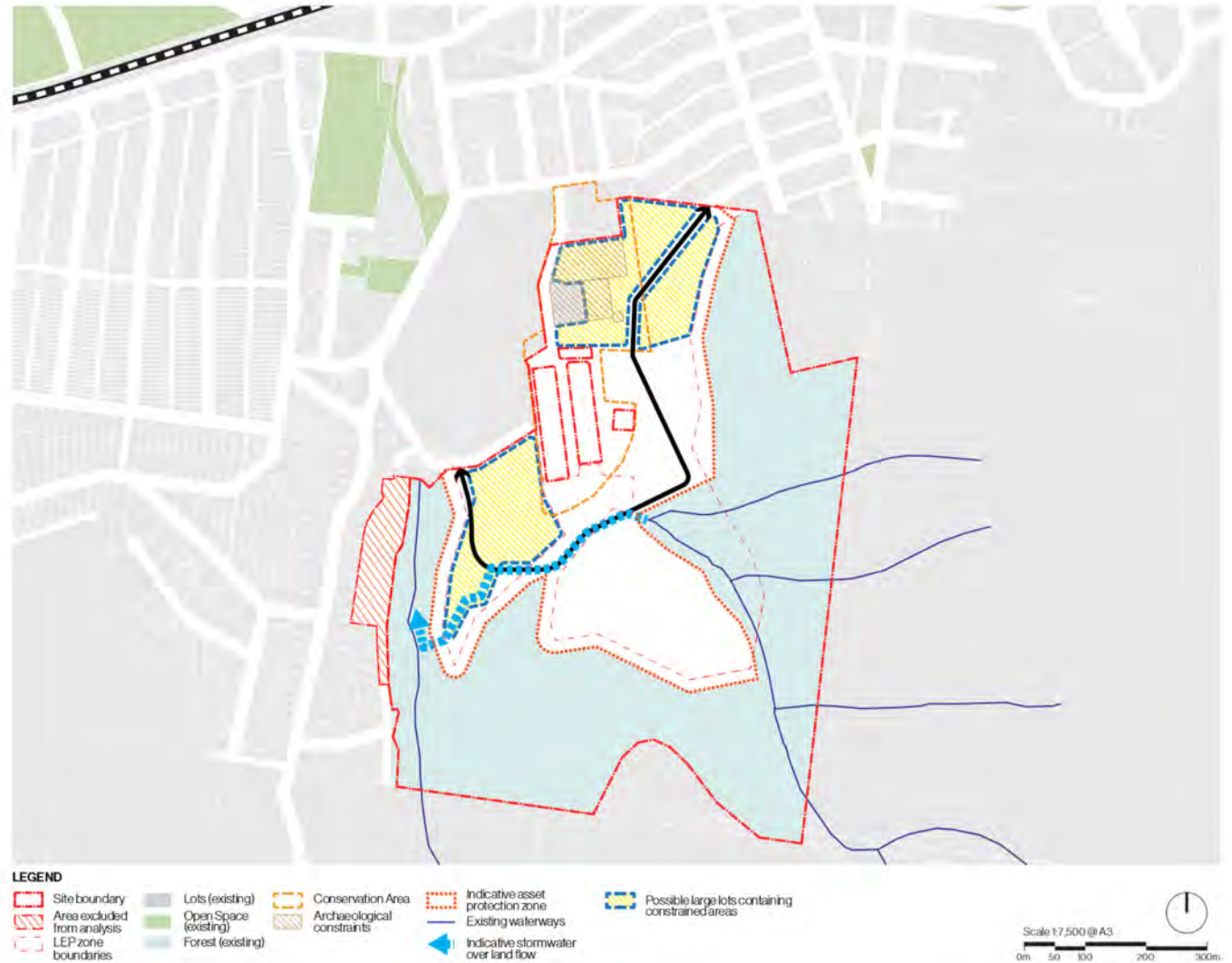
Principle 5:

Ensure safety and resilience measures are well integrated with the public domain

Where possible, storm water, bushfire and ecological protection measures should be integrated into the design of the public realm to create amenable and attractive environments that enhance and restore ecological systems.

Opportunities

- Street network defines edges of highly constrained areas, providing hard edges to riparian areas, bush fire prone land, conservation areas and identified goal areas.
- Streets at the periphery of the developable area ensure APZs are accessible and integrated into the design of the public realm
- Reconnect damaged waterway systems using integrate vegetated swales and other flood mitigation measures into roads where overland flow paths are indicated
- Lot size and staging is to be determined by constraints following future further technical studies
- Ensure contaminated areas are contained within larger lots in order to minimise risk to residents.





GROUPSA
www.groupsa.com

SYDNEY

Level 7, 80 William Street
East Sydney NSW 2011
Australia

MELBOURNE

Level 1, 104 Exhibition Street
Melbourne VIC 3000
Australia

BRISBANE

Level 14, 100 Edward Street
Brisbane QLD 4000
Australia

PERTH

Level 2, 307 Murray Street
Perth WA 6000
Australia

SHANGHAI

Room 407, No. 71, Xi Suzhou Road, Jingan District
Shanghai 200041
PR China

HO CHI MINH CITY

19th Floor – Havana Tower, 132 Ham Nghi,
Ben Thanh Ward, District 1, Ho Chi Minh City
Vietnam

