

# Marrangaroo Structure Plan

Lithgow City Council

REVISION A

APRIL 2017



## **Introduction**

- 1. The Structure Plan Process 6**

## **Structure Plan**

- 1. Structure Plan 14**
- 2. Structure Plan Views 16**

## **Appendix**

- 1. Bulky Goods Comparison Study 20**
- 2. Site Analysis 26**



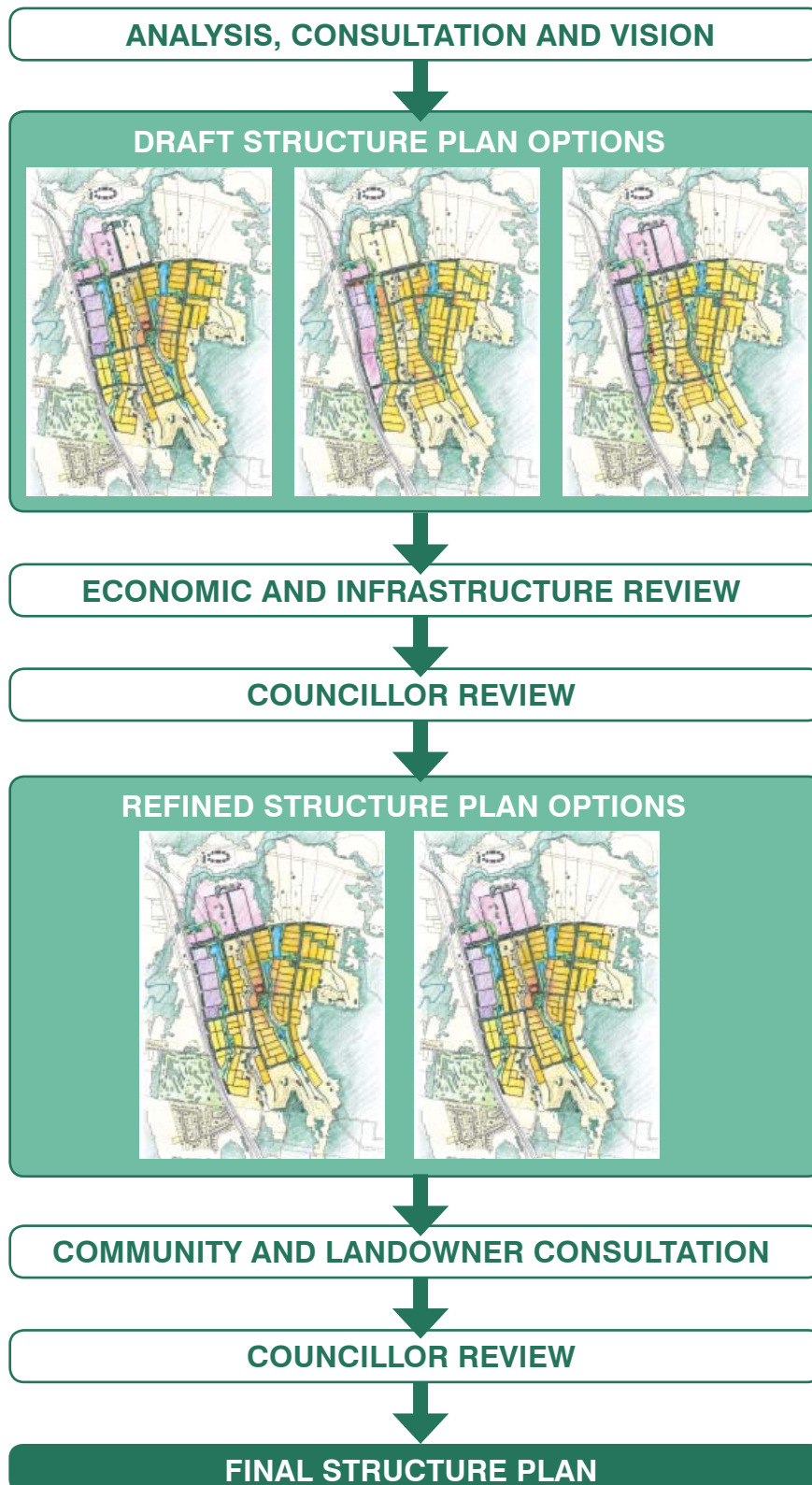
# Introduction

The Structure Plan for Marrangaroo has been developed to provide an overall physical structure for the Marrangaroo precinct. The plan incorporates all of the background analysis, principles and vision into a cohesive diagram that will provide the structure for the Marrangaroo precinct moving forward.

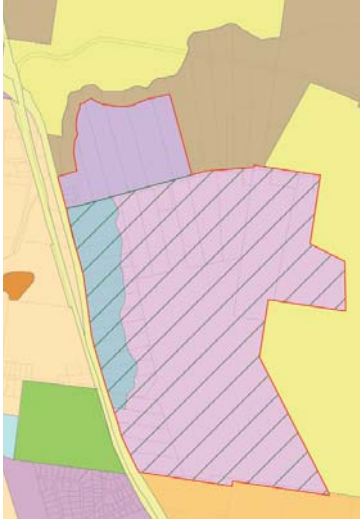
The following pages outline the thorough process that was undertaken leading up to the creation of a final structure plan as well as explaining the plan itself and its key features.

# 1. The Structure Plan Process

## 1.1 Structure Plan Process Outline



## 1.2 Analysis, Consultation and Vision



### LEP Rezoning

In 2006, Lithgow City Council zoned the area of IN1 employment lands located north of Reserve Road and immediately east of the Great Western Highway and created an Urban Release Area at Marrangaroo. This was based on a full Local Environmental Study and Structure Plan prepared by Geolyse Pty Ltd in 2006.

The current land zoning and studies leading up to it form the starting point for the Marrangaroo Structure Plan work.



### Site Analysis

Comprehensive site analysis has been undertaken for the site area, which confirms, revises and builds on the 2006 work. The preliminary analysis covers topography and landform, key views, hydrology and flooding, infrastructure, land uses and ownership, vegetation and bushfire.



### Community, Stakeholder and Landowner Consultation

Several rounds of community, stakeholder and landowner consultation were undertaken before the Structure Plan Options were produced.

A Briefing Session held on the 3 November 2016, informing attendees of the project aims and gathering any initial feedback.

The second was a Vision Workshop held on the 24 November 2016, which established high level values, principles and a vision for Marrangaroo. These principles and vision set a benchmark for the masterplan and guidelines that will continue to be referenced throughout the process to ensure outcomes meet the expectations of the community.

One-on-one consultation with landowners was also carried out in December 2016 to gain a greater understanding of individual concerns and approaches to development.



**Option 1**



**Option 2**



**Option 3**

### **1.3 Draft Structure Plan Options**

Three Draft Structure Plan options were produced for Marrangaroo (above), taking into consideration all of the background analysis and feedback.

Given the constraints of the site there were a lot of similarities between the options. The most significant differences between options were the location of the 'village centre' and the arrangement and quantity of the employment lands.

### **1.4 Economic and Infrastructure Review**

SGS undertook an economic assessment of the three options which takes into account a number of key criteria that are critical to successfully delivering a sustainable local community that is a viable place to live and work in the long term.

The analysis found that while all options had their relative strengths and weaknesses, the multi-criteria analysis has found that overall, Options 1 and 3 offer the greatest range of potential benefits, with Option 3 also having the fewest downsides. Option 2 potentially offers up more problems than strengths, including a disconnect between the village centre and residential and a greatly reduced availability of employment lands.

Cardno has conducted a review of the infrastructure for the site, with the major constraints identified being the supply of water and sewerage infrastructure to development and the necessity for 2-3 access points from the Highway. Further infrastructure input will be considered moving from the preferred structure plan to a resolved master plan.

### **1.5 Councillor Review**

The three options along with the economic and infrastructure reviews were presented to Lithgow Councillors for consideration.

It was decided that the full extent of IN1 land should be retained for future industrial uses, and that Option 2 shouldn't be considered moving forward, given the negative aspects mentioned previously.

In accordance with Council direction, two refined structure plan options were produced.

### **1.6 Refined Structure Plan Options**

The following two options represent the refined structure plan options to be presented to the community and council.



**Option 1**



- Site Boundary
- General Industrial - 49 ha
- Enterprise Corridor - 22 ha
- 'Urban' residential - 133 ha, 1250 lots (10/ha)
- 'Large Lot' residential - 127 ha, 262 lots (2/ha)
- Open space / drainage reserve - 57 ha
- Village Centre - 1 ha

**Key Strengths:**

- Strong perception of arrival, with road access to neighbourhood separated from industrial precinct
- Great accessibility for local residents to retail and services with the centre located in the central location
- Buffering - no direct boundary between residential and industrial uses
- Strong Activity Centre amenity with pleasant aspect to the eastern looking across lakes and bluff
- Accessibility of the industrial precinct, with dedicated road access for heavy vehicles
- Central location of the Activity Centre minimised vehicle kilometres travelled by cars over long term
- Provides the full extent of industrial land supply

**Key Weaknesses:**

- Residential areas with an interface to the highway will have lower quality of amenity
- Activity Centre's retail stores will struggle to attract trade from highway traffic as it is centralised within the development area
- Activity Centre is isolated from other commercial precincts, so little opportunity for agglomeration

## Option 2



- Site Boundary
- General Industrial - 49 ha
- Enterprise Corridor - 31 ha
- 'Urban' residential - 125 ha, 1250 lots (10/ha)
- 'Large Lot' residential - 131 ha, 262 lots (2/ha)
- Open space / drainage reserve - 52 ha
- Village Centre - 1 ha

### Key Strengths:

- Residential development is buffered from highway and focused on creek line – good housing amenity
- Strong exposure for bulky goods and/or business park uses along the highway with multiple access points
- Provides the largest supply of commercial land for both bulky goods and other commercial activities.
- Good, potential dedicated road for heavy vehicle access into the industrial precinct.
- Provides the full extent of industrial land supply

### Key Weaknesses:

- Lack of a direct access off the highway into the residential community

## **1.7 Community and Landowner Consultation**

The two refined structure plan options were presented to community and landowners on 9th March 2017.

A limited amount of feedback was provided which largely reflected the key strengths and weaknesses presented against each options. There was a slight preference for a centralised town centre, reduced enterprise corridor and 3 points of access to the Highway (all shown in Option 1). Concerns included the staging / access to residential areas in Option 2 (through business lands) and the views of the rocky outcrops being lost.

## **1.8 Councillor Review**

A councillor presentation was undertaken on the 22nd March 2017 where a preference was shown for the Village Centre as Option 1 but no clear preference was shown on the extent of the Enterprise Corridor. A further Councillor presentation will be undertaken on 28th of April 2017 to obtain this direction.

## **1.9 Final Structure Plan**

The final structure plan shown in the next section of this report depicts the overall desired structure for the Marrangaroo precinct, incorporating the project's principles and vision into a physical structure. Note that a final direction on the extent of the Enterprise Corridor is to be provided by Council by early May.

## **1.10 Next Steps**

Upon receiving the final direction from Council and finalising the overall structure for the precinct, the next step in the project is to produce a more detailed Master Plan and a Development Control Plan that will ensure the creation of a well designed and cohesive precinct to live, work and visit.



# Structure Plan

# 1. Structure Plan



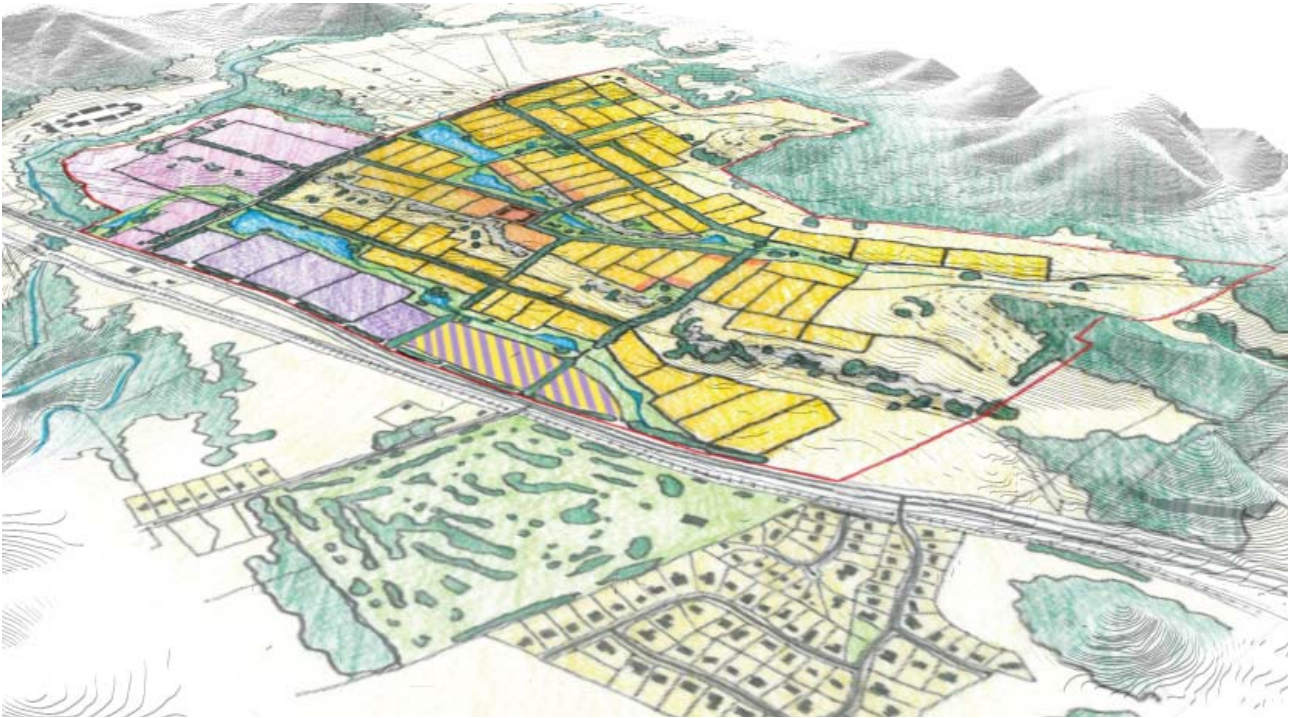
- - - Site Boundary
- General Industrial - 49 ha
- Enterprise Corridor - 22 ha
- 'Urban' residential - 133 ha, 1250 lots (10/ha)
- 'Large Lot' residential - 127 ha, 262 lots (2/ha)
- Open space / drainage reserve - 57 ha
- Village Centre - 1 ha
- TBC by council (Enterprise or Residential) - 9ha



### **Structure Plan**

1. Retain significant existing vegetation where possible
2. Roads to terminate on views to hills and creekline vegetation
3. Green streets within industrial lands
4. Drainage reserve as public open space with ephemeral creek
5. Strong tree planting to mark Reserve Road entry
6. Detention basins within public drainage reserve as a feature along Reserve Road
7. Larger lots to accommodate slope, rocky outcrops and easements
8. Enterprise corridor
  - planted setback to Highway
  - frontage and road along open space corridor
9. Village Centre - small grocer, preschool, community and cafe/retail
  - central position provides greater access to all future residents
  - access to Highway via central access road and intersection
  - adjacent town park / open space corridor
10. Key north-south street connection (adjacent gas easement)
11. Intersection with road access from Highway
12. Drainage reserve open space - minimum 40m wide
13. Local park on top of ridgeline
14. Road connection through break in rocky outcrops
15. Smaller lots on lower, flatter land
16. Larger lots on hill to preserve views and vegetation / rural character
17. E-W streets terminate on open space corridor, creeklines and rocky outcrops
18. Larger lots on hill and adjacent defence / bushfire risk areas
19. Park containing existing mature trees and drainage
20. Key road incorporates existing row of trees
21. Detention basin within public drainage reserve
22. Final extent of Enterprise Corridor to be confirmed by Council

## 2. Structure Plan Views



View from south-west // views to the hill



View from north-west // Reserve Rd intersection





View from north-east // eastern landscape corridor



View from south-east // eastern interface



# Appendix

# 1. Bulky Goods Comparison Study

## BULKY GOODS COMPARISON - MARRANGAROO

### CITY OF LITHGOW LOCAL GOVERNMENT AREA

Population: 21,416 (2015)

Area: 455,100 ha

#### OPTION 1

B6 Enterprise Corridor Zoning: 22 ha ■

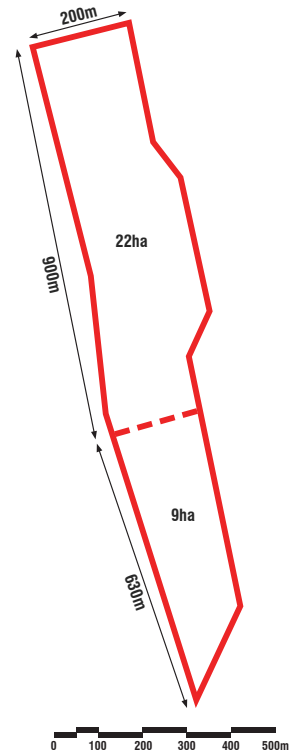


#### OPTION 2

B6 Enterprise Corridor Zoning: 31 ha ■



#### KEY DIMENSIONS - B6 ZONING



### BULKY GOODS COMPARISON - ORANGE

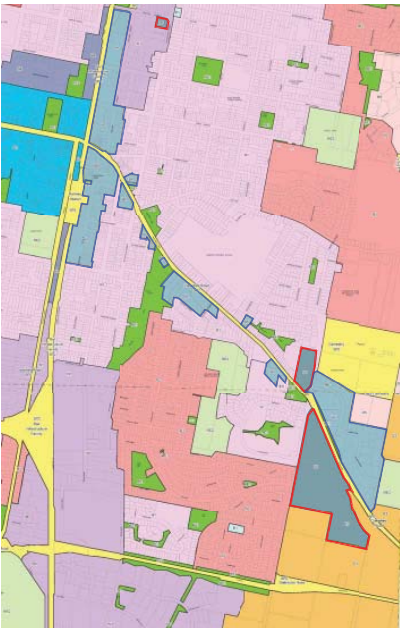
**CITY OF ORANGE LOCAL GOVERNMENT AREA**

Population: 41,809 (2015)

Area: 28,500 ha

B5 Business Development Zoning (incl. Bulky Goods): 20 ha ■

B6 Business Enterprise Zoning ('Permitted uses' doesn't include Bulky Goods): 45 ha ■



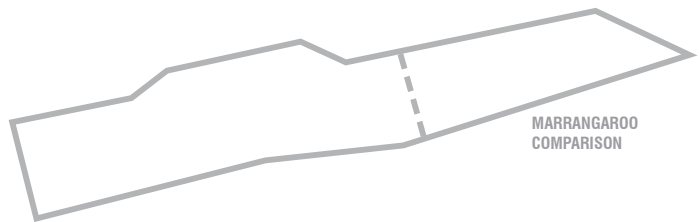
### BULKY GOODS COMPARISON - BATHURST

**BATHURST REGIONAL COUNCIL AREA**

Population: 42,231 (2015)

Area: 382,000 ha

B5 Business Development Zoning (incl. Bulky Goods): 54.6 ha ■



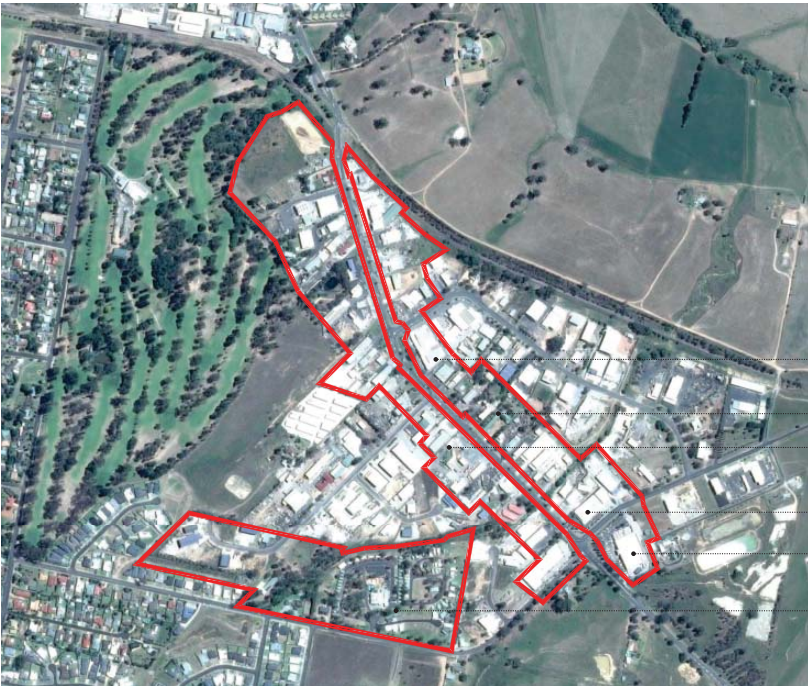
### BULKY GOODS COMPARISON - MUDGEE

**MID WESTERN REGIONAL COUNCIL AREA**

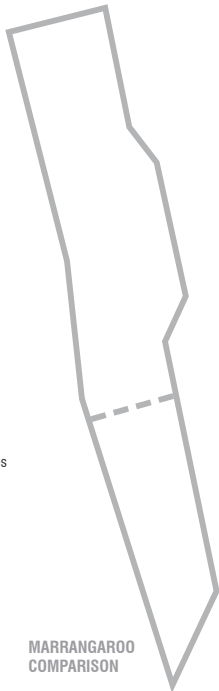
Population: 22,318 (2011)  
Area: 873,700 ha

**MUDGEE**

Population: 9,830 (2011)  
B5 Business Development Zoning (incl. Bulky Goods): 41.7 ha ▣



- Supercheap Auto
- Engineering, automotive services
- Repco, service station, mechanics, storage, car sales
- Harvey Norman
- Bunnings
- Holiday Park, mechanical sales



## **BULKY GOODS COMPARISON - KEY FINDINGS**

### **ZONING PERMISSIONS**

- Bulky goods premises are permitted within the B5 Zoning for all 3 councils in the study
- Orange Council was the only council to use a B6 Zoning, which doesn't include Bulky goods under 'permitted with consent', however it isn't listed under 'prohibited' either.

### **BULKY GOODS ZONING PER CAPITA**

- Looking at ha of bulky goods zoning (B5) as a percentage of total LGA population gives the following:
  - Orange = 1.7ha / 1000 people
  - Bathurst = 1.3ha / 1000 people
  - Mudgee = 1.9ha / 1000 people
  - Marrangaroo = 1ha (Op 1) or 1.4 ha (Op 2) / 1000 people

### **BULKY GOODS SUPPLY**

- Within the zones permitting Bulky Goods, only a percentage of the total area was taken up with Bulky Goods uses, ranging from approx 6% for Mudgee, 37% for Bathurst and 40% for Orange.
- Other uses included commercial, car sales, automotive and mechanical services, and holiday accommodation
- Orange and Bathurst both have large areas of vacant / undeveloped land within the B5 land zoning
- Mudgee's B5 land area is generally automotive and industrial focused with Harvey Norman and Bunnings making up the only Bulky Goods component

### **BULKY GOODS DEMAND AT MARRANGAROO**

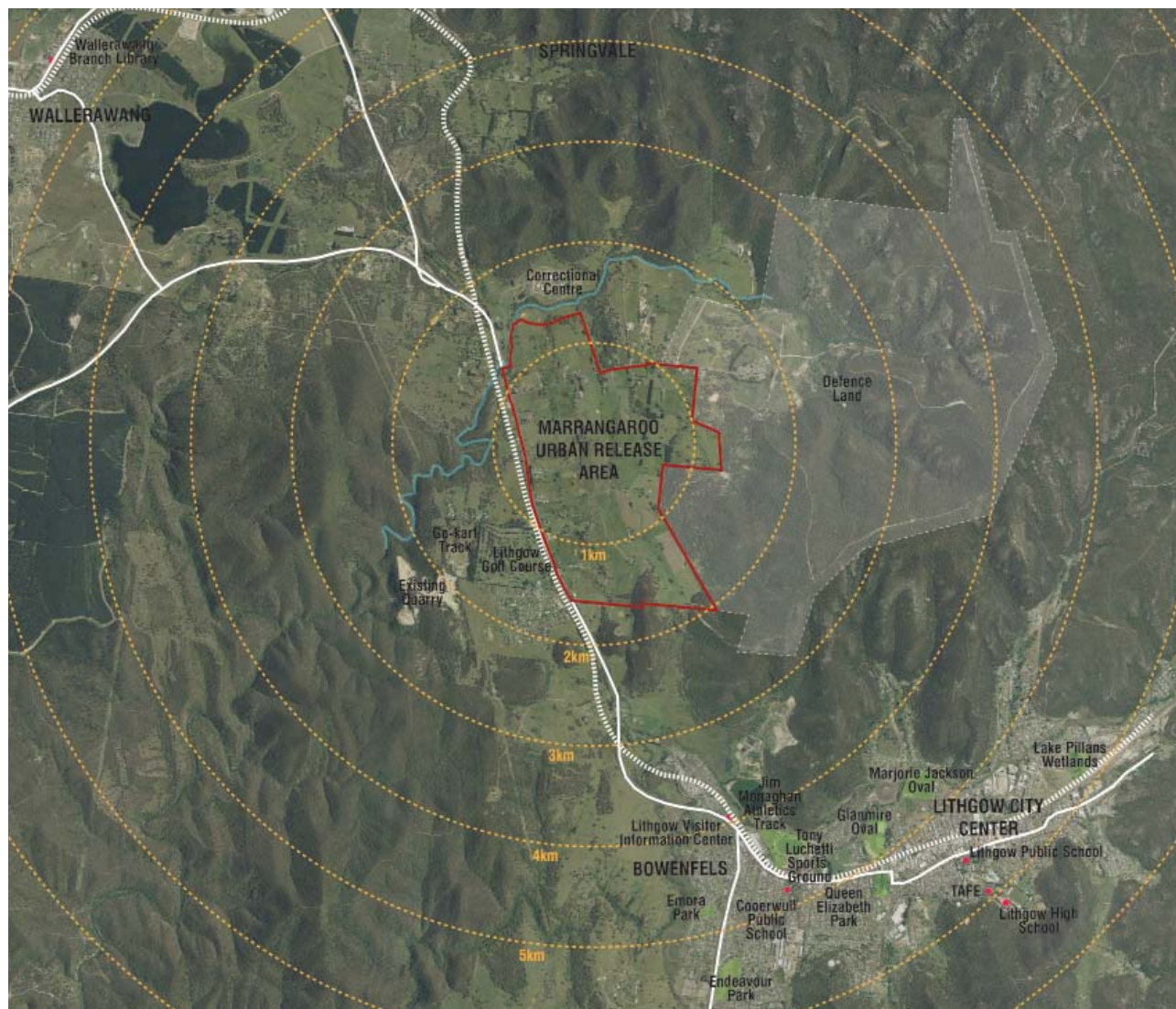
The following key points are taken from the SGS economic study for Marrangaroo and should be taken into account when determining final B6 zoning. Refer to full report for more details.

- Bulky Goods demand - Marrangaroo only: 3,300 sqm floorspace, 8.9ha site area
- Bulky Goods demand - Lithgow LGA: 16,000 sqm floorspace, 43ha site area
- Potential for competition with established bulky goods nodes elsewhere (e.g. Bathurst)
- Other uses such as tourism may be possible but would require additional studies and projections.





## 2. Site Analysis



### 2.1 Location and Context

The Marrangaroo Project Area is located approximately mid way between the urban centres of Lithgow and Wallerawang and approximately 150km west-north-west of Sydney.

The area and immediate surrounds are enclosed by steep and vegetated slopes and the area is bounded on the east by the Great Western Highway.

The project area is predominantly semi rural in character with scattered rural lifestyle development and highway service land use including a motel and service station. A maximum security correctional centre adjoins the employment lands to the north with the western most boundary of the project area

adjoining a defence facility.

The project area comprises 339.22ha of land within the Marrangaroo Urban Release Area (URA) and 54.85ha of IN1 zoned land (employment lands as mapped in Lithgow Local Environmental Plan 2014). Within the URA there is 41.22 ha of land zoned for B6 Business Corridor and 298 ha of land zoned R1 General Residential.

The Project Area has approximately 38 individual landowners with one land holding of 143.9ha in single ownership in the centre of the URA representing 36.4 % of the project land area or 42.4% of the URA land area.

Figure 1: Site Context and Location



Recent Industrial Development



Ephemeral creeks



Open farmland and rolling hills



Rocky scarps



Highway service station



Rural residential houses



Mature vegetation and surrounding woodland



Heritage chapel

Figure 2: Existing Character

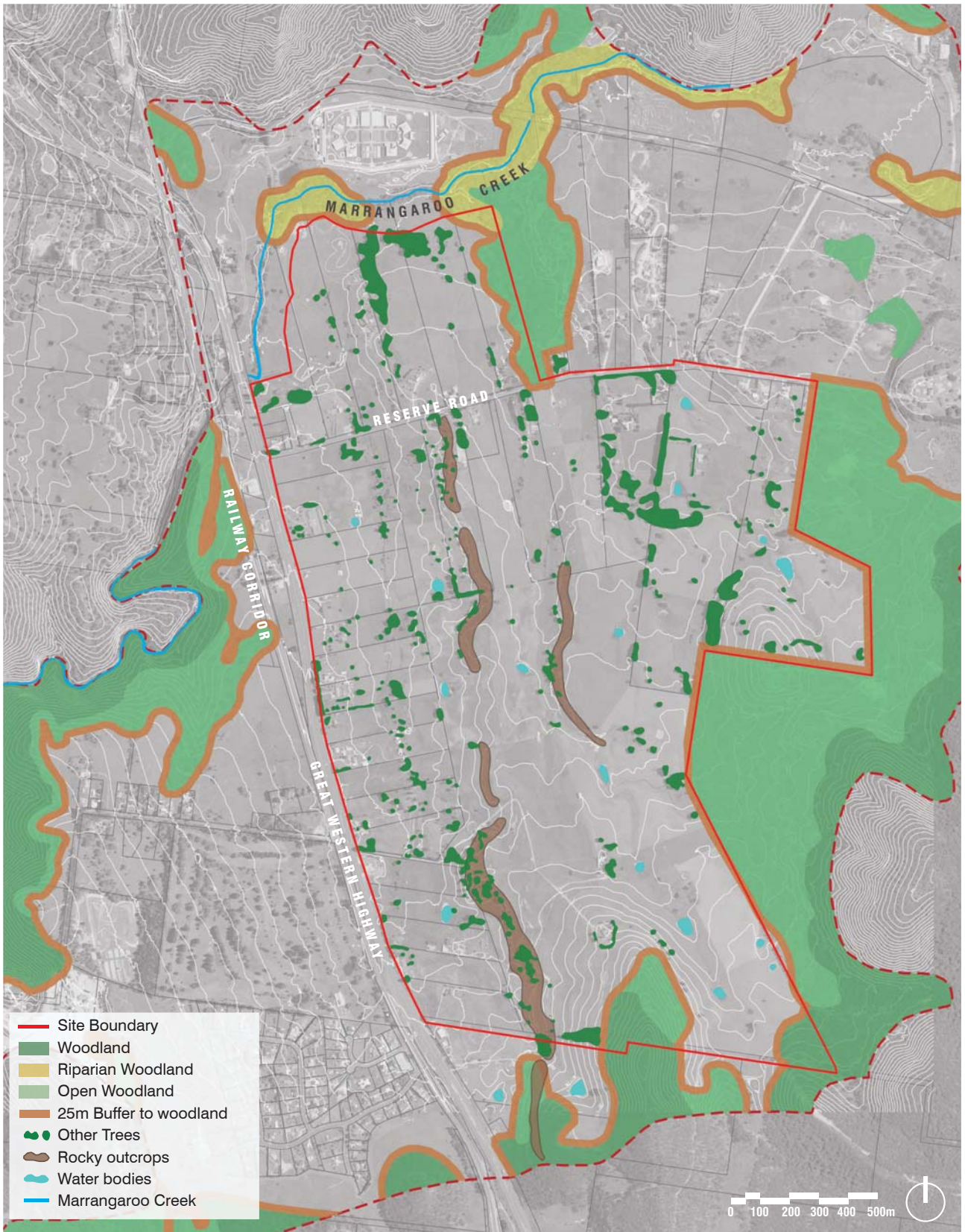


Figure 3: Natural Features

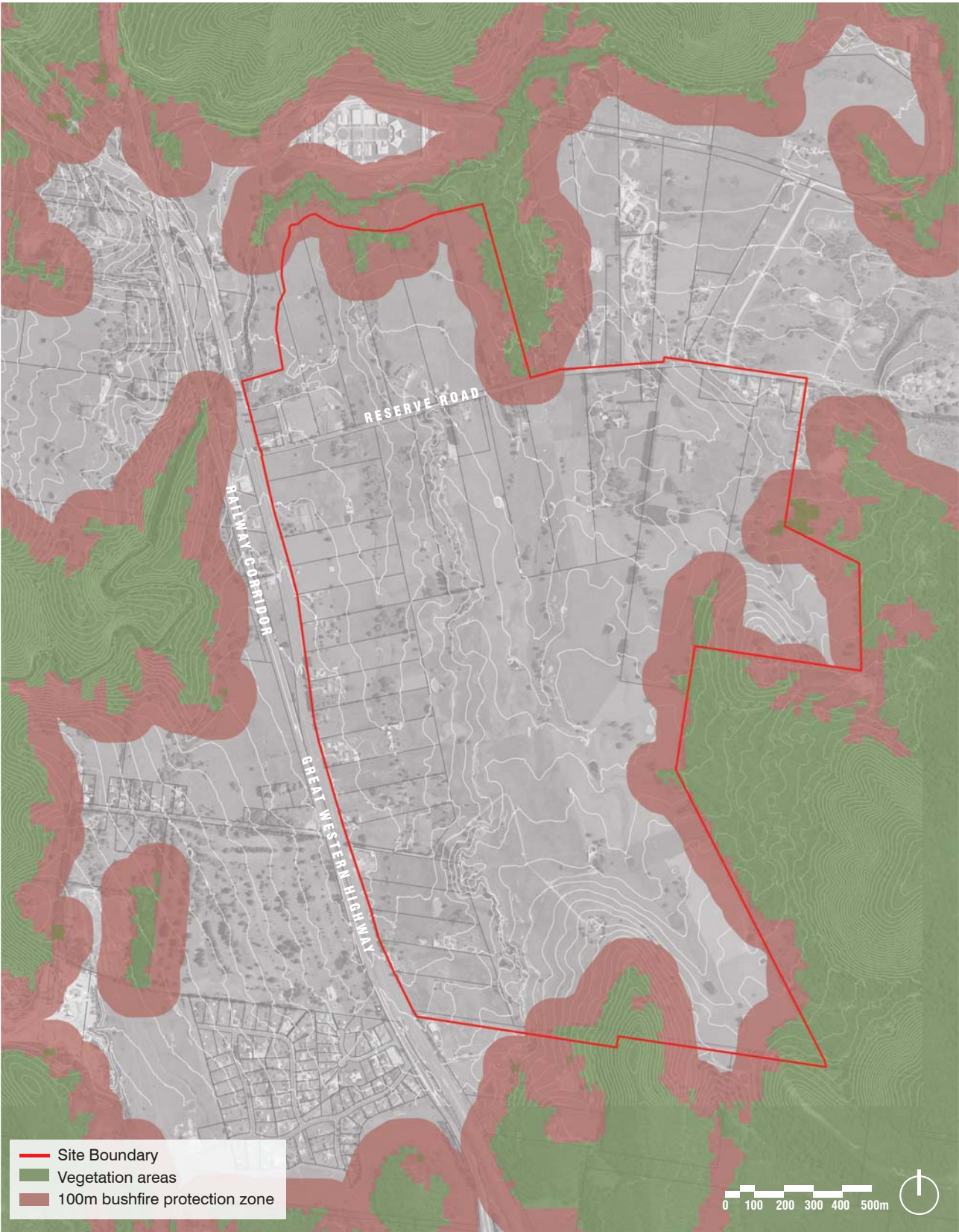


Figure 4: Bushfire Assessment

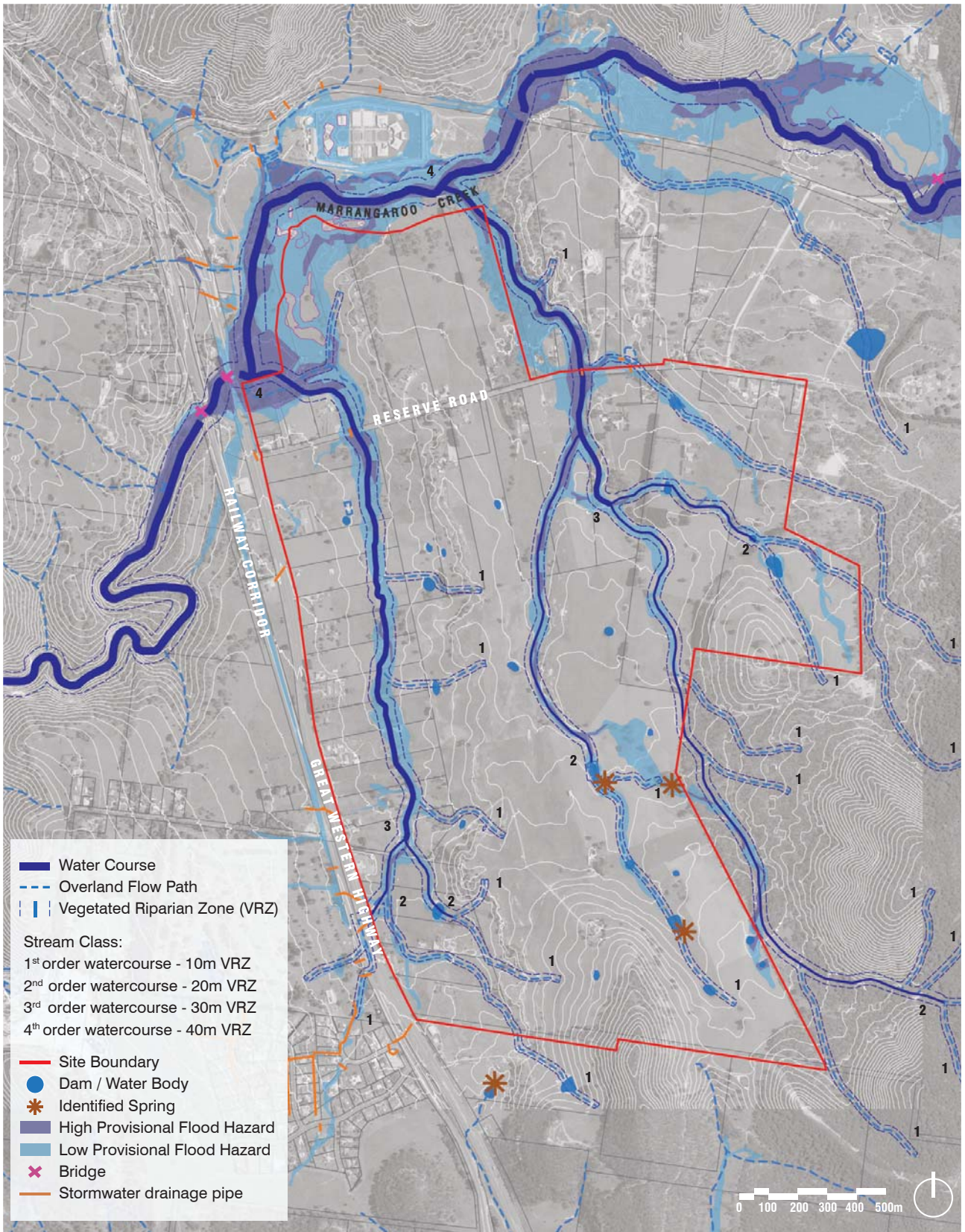


Figure 5: Hydrology, Flooding and Stormwater Management

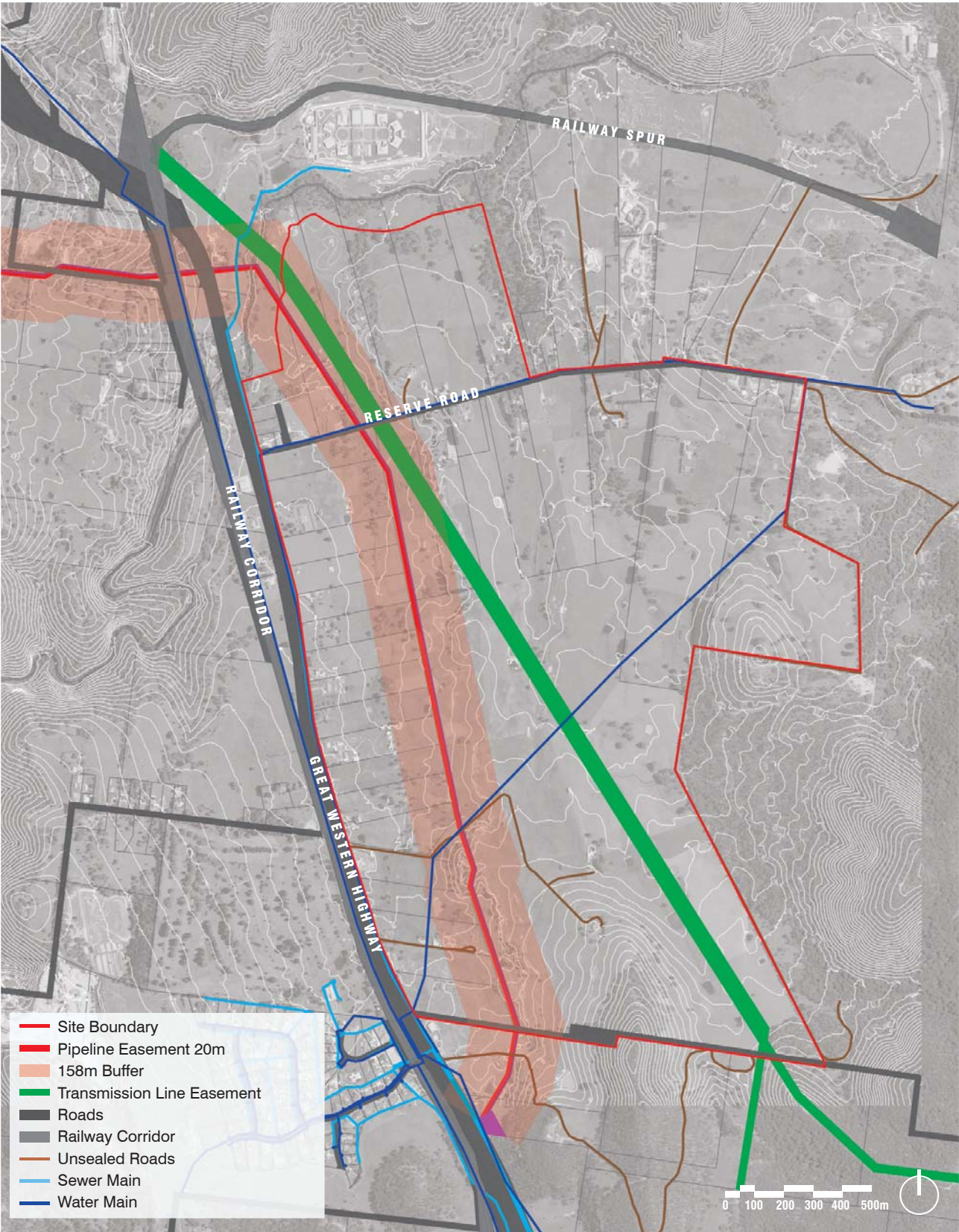


Figure 6: Infrastructure

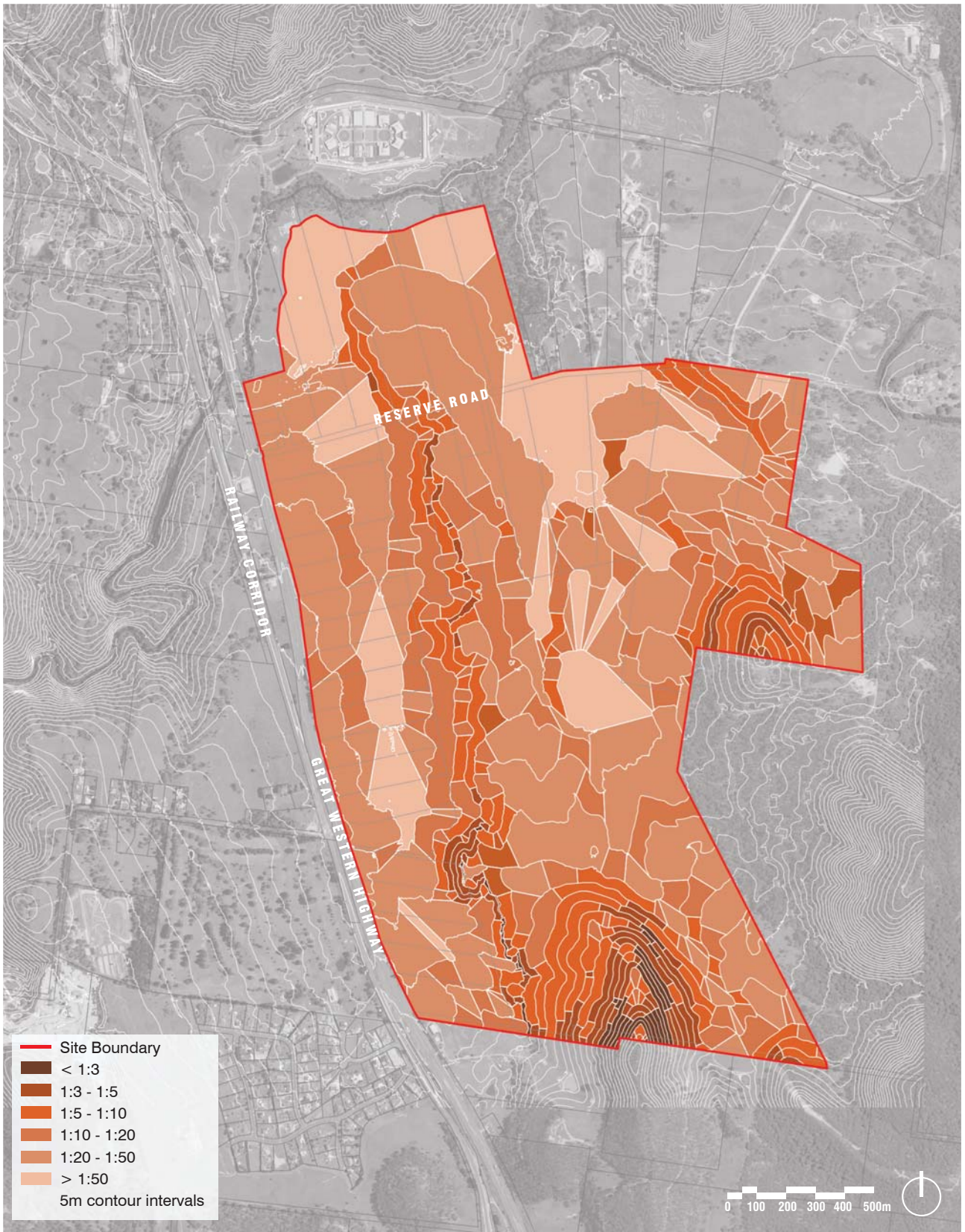
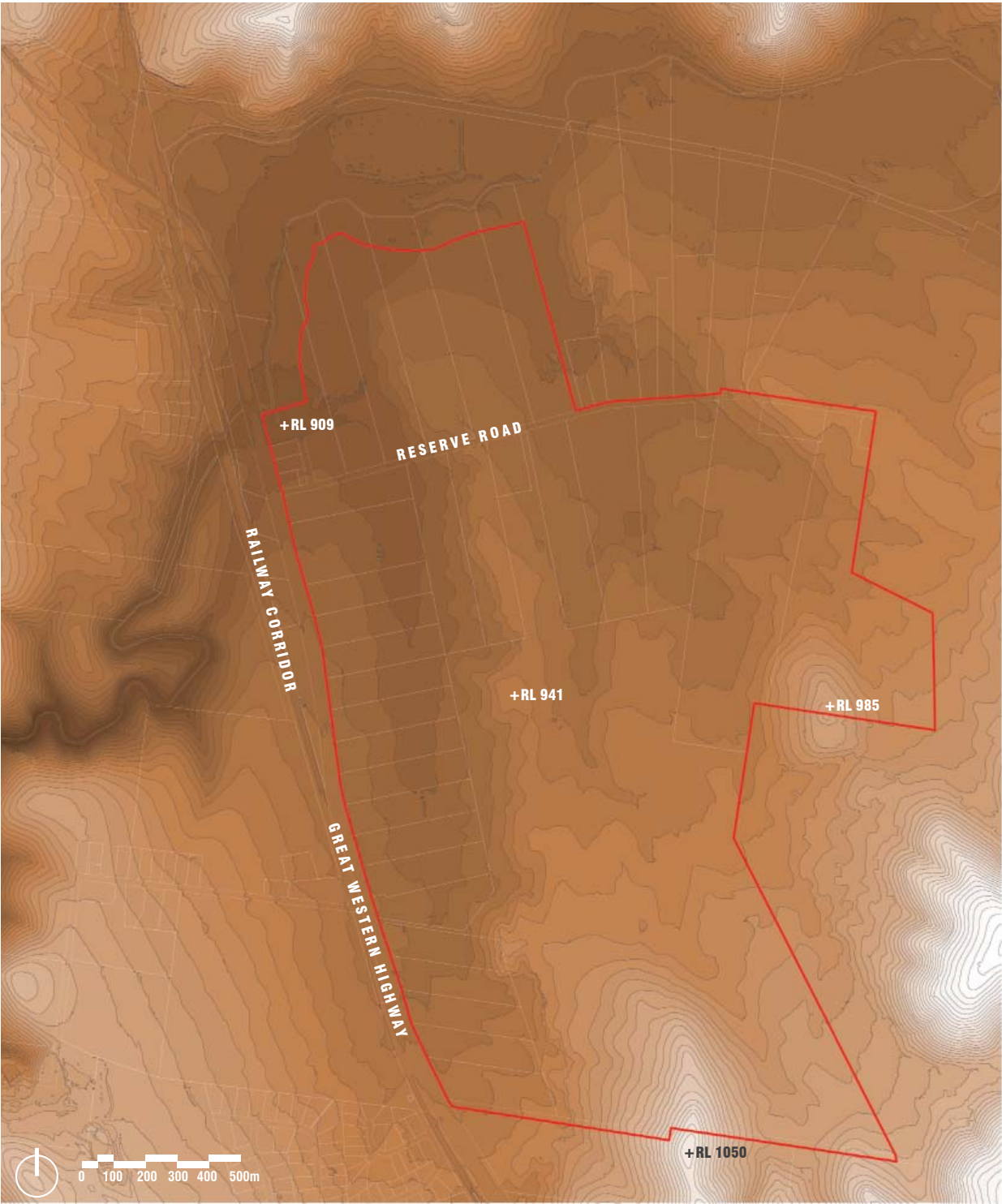


Figure 7: Slope Analysis





— Site Boundary  
5m contour intervals

Figure 8: Topography

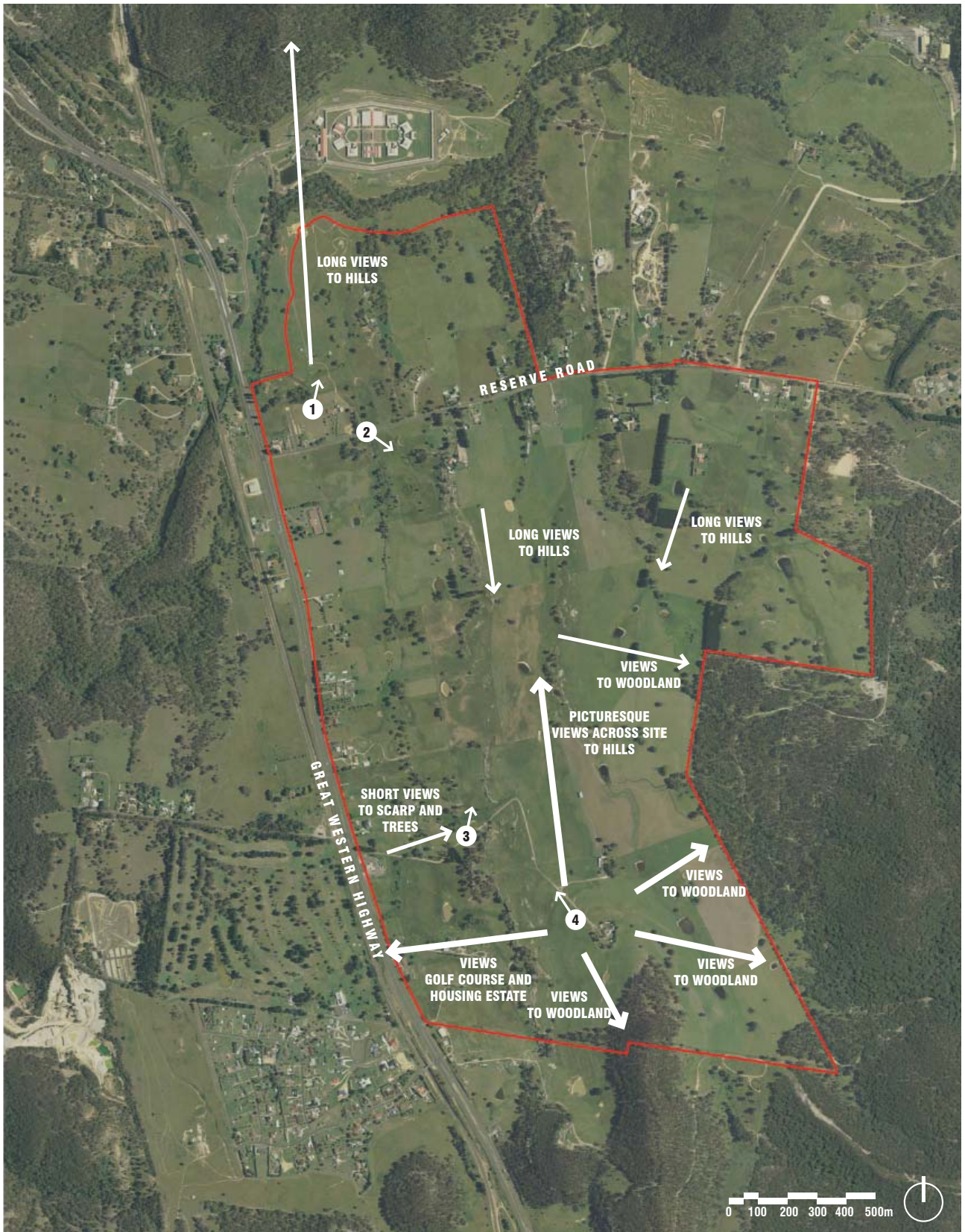


Figure 9: Views



Figure 10: Views

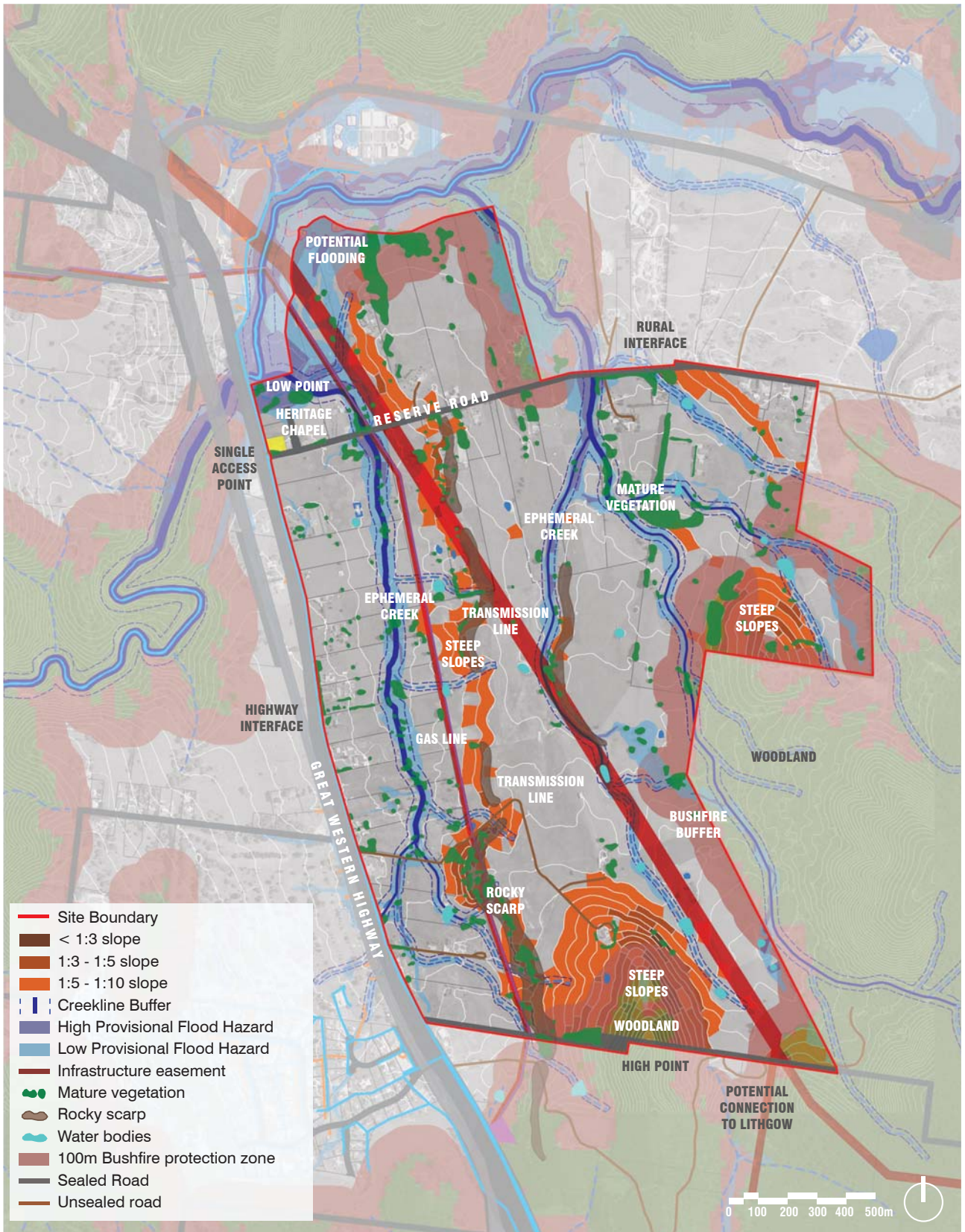


Figure 11: Constraints

## 2.2 Constraints and Considerations

### Location and Context

- The site is physically separated from Lithgow with the topography providing a visual and physical barrier and car access available only via the Great Western Highway. This provides the opportunity to make Marrangaroo a distinct place of its own.
- The site's projected population and proximity to Lithgow mean that the development will rely on Lithgow for many essential services, including schools and community facilities.

### Land Ownership

- Existing lot boundaries and ownership will impact on staging and future development boundaries. Individual landowner's stances on development to be acknowledged.
- Having one landowner for 36% of the site area reduces the constraints on the site.

### Heritage

- The chapel at the corner of Reserve Road and the highway is the only heritage constraint.

### Natural Features

- The site has significant woodland areas to the north, south and east with associated environmental protection and bushfire buffers. These areas also provide a picturesque backdrop to any future development.
- There are a large number of mature trees on site that should be retained where possible.
- Rocky outcrops create a natural feature that should be retained where possible.
- Several ephemeral feeder creeks run north-south across the site. These have associated environmental protection buffers that pose a constraint to development.

### Slope and Topography

- Steep slopes occur across parts of the site, including a north-south stretch of land that divides the site as well as two hills to the south and east.
- The topography generally slopes down to the north, resulting in the best views across the site and to surrounding areas from the south.

- The topography creates a natural division between the site and Lithgow, with potential future pedestrian and/or vehicle access via a saddle to the south of the site.

### Drainage and Hydrology

- Potential flood zones occur along the creek lines.
- Existing creeks, dams/water bodies and overland flow paths to be incorporated into the overall drainage strategy.
- Any increased drainage load resulting from development will need to be accommodated in water sensitive design measures across the site.

### Infrastructure

#### Roads

- Reserve Road is currently the only sealed road within the site.
- Access from Great Western Highway to be limited to Reserve Road and one other left-in / left-out access point.

#### Water

- Limited water infrastructure - Current water infrastructure under councils control includes 100mm water main along Reserve Road and 250mm water main along the Great Western Highway.
- Additional reservoir required north of the site (no smaller than 20ML)

#### Sewer

- Dedicated trunk infrastructure to Lithgow STP required for future development (current infrastructure at capacity)

#### Gas

- Existing gas line with 20m easement runs N-S through the site and constrains development
- 160m buffer zone to gas line to be confirmed - this would be a major constraint to development

#### Electricity

- Minor transmission lines run across the site - potential to redirect with development to be explored