

infrastructure & development consulting

Mamre Road Precinct Development Contributions Plan 2021

Background Report

March 2022

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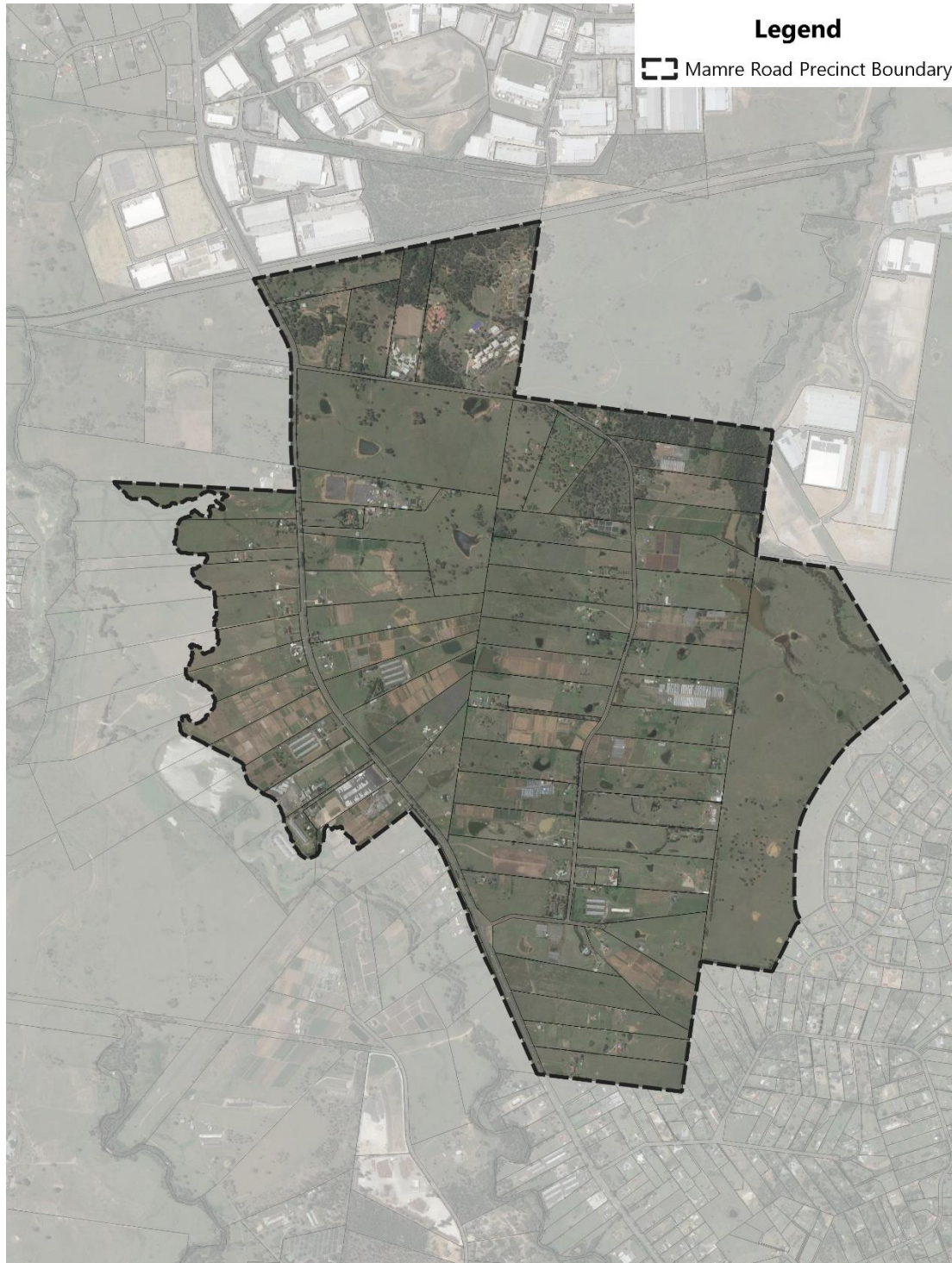
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Project Number	20-501	Date	24 March 2022
Project Name	Mamre Road S7.11	Status	Post Exhibition Report
Client	Penrith City Council	Revision	H
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1 Introduction

This report has been prepared by Infrastructure & Development Consulting (IDC) for Penrith City Council to assist in the preparation of a Section 7.11 Development Contributions Plan (S7.11 Plan) to meet the cost of local infrastructure across the Mamre Road Precinct. The study area is shown in Figure 1.

Figure 1 - Mamre Road Section 7.11 Plan Area



2 Purpose & Assumptions

2.1 Purpose

The Mamre Road Precinct will require a range of new and augmented local infrastructure which needs to be planned, programmed, funded and delivered to support development.

This local infrastructure includes:

- Open space and recreation facilities
- Traffic and transport management facilities

The provision of local infrastructure will be funded using contributions received from developers of land in the Precinct. Penrith City Council has prepared the Mamre Road Precinct Development Contributions Plan 2021 for this purpose.

This Background Report provides information informing the preparation of the contributions plan, including:

- the planning context
- the relationship between the expected development and the infrastructure to service that development
- the infrastructure to be provided and justification for including that infrastructure in the Section 7.11 plan
- the basis for determining infrastructure costs
- the formulas for determining contribution rates

2.2 Assumptions

A number of assumptions have been made to assist in the preparation of this Section 7.11 Plan:

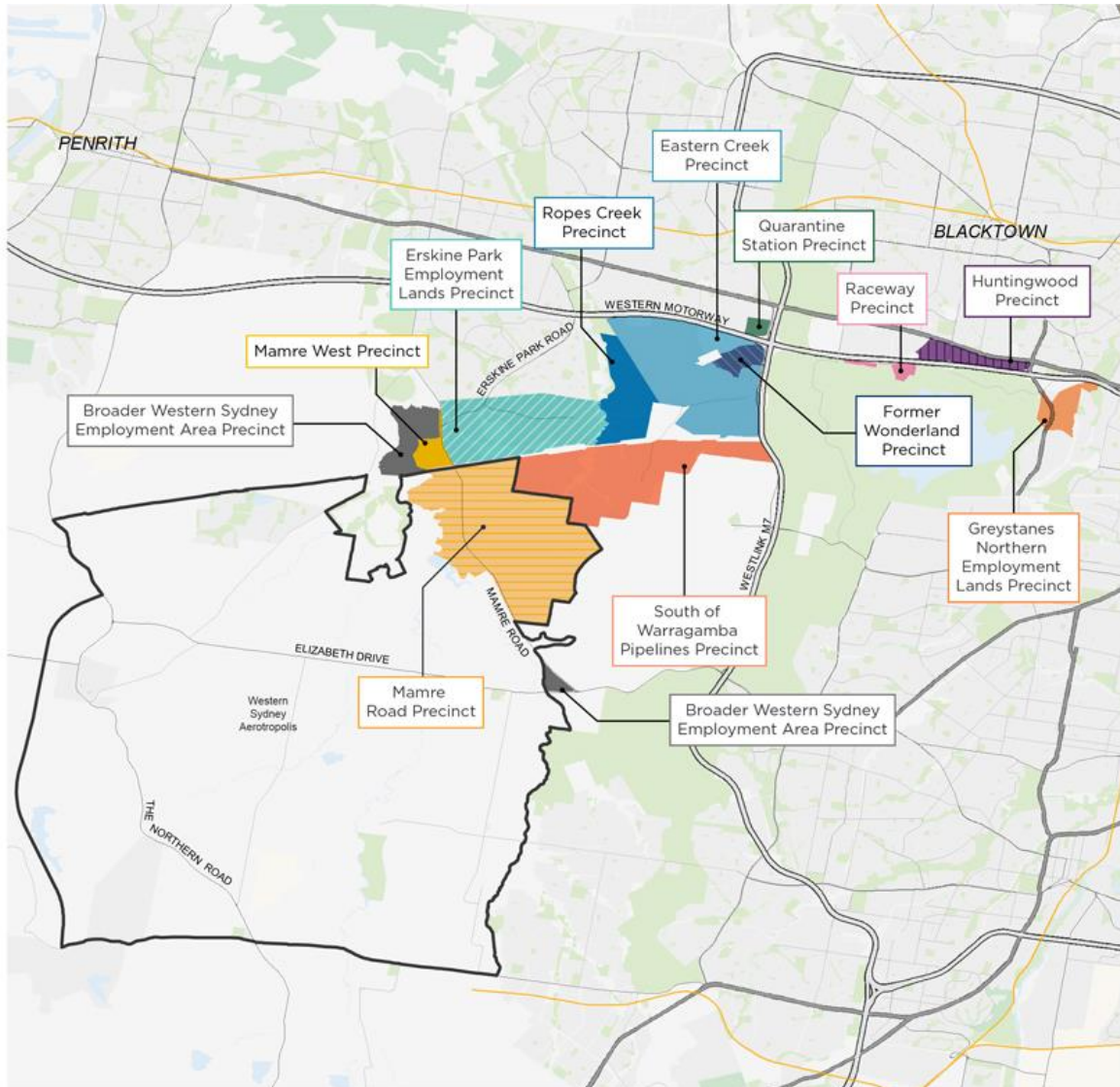
- This Section 7.11 Plan only applies to land contained within the Mamre Road Precinct as outlined in Figure 1.
- The Net Developable Area (NDA) excludes all land zoned SP2, RE1, RE2 and E2 as well as transport investigation corridors and the approved State Significant Development (SSD) site as indicated on Figure 4.
- The NDA also excludes land to be acquired for roads infrastructure as part of the plan, which is further detailed in Section 6.1.
- Typical road cross sections have been extracted from the Mamre Road Development Control Plan 2021 supplied by DPIE.
- Land Acquisition for road corridors are estimates only and subject to detailed design.
- Allowances for intersection treatments are estimates only and subject to detailed design.
- Land acquisition rates were provided by Curtis Valuations in March 2022.
- A plan administration allowance of 1.5% of the cost of works has been applied in line with IPART recommendations outlined in the *Local Infrastructure Benchmark Costs – Costing Infrastructure in Local Infrastructure Plans* report.

- Utility costs have been reduced from the previous revision based on agency feedback regarding lead-in requirements for inclusion in road costs as part of the Section 7.11 Plan and requirements to be provided by developers.
- A design cost allowance of 12% of the cost of works has been applied to road projects in line with IPART recommendations outlined in the *Local Infrastructure Benchmark Costs – Costing Infrastructure in Local Infrastructure Plans* report, which recommends up to 15% be applied to road projects.

3 Mamre Road Precinct Regional Context

The proposed Section 7.11 Plan applies to land within the Mamre Road Precinct in the Western Sydney Employment Area (WSEA). The WSEA is located within the Penrith City Council Local Government Area (LGA) and contains a number of precincts which will help create future employment and growth in the area. The WSEA is shown in Figure 2 below.

Figure 2 - Western Sydney Employment Area Precincts



Source: DPIE (2021)

4 Zoning & Land Use

The Mamre Road Precinct contains a number of zoning types as summarised in Table 1 below.

Table 1 - Proposed Land Zoning

Zone	Code	Description
General Industrial	IN1	IN1 zoning will permit a wide range of industrial and warehousing uses in line with the existing IN1 General Industrial zone under the WSEA SEPP
Environmental Conservation	E2	E2 zoning will protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values
Public Recreation	RE1	Land within the precinct that will provide publicly accessible passive open space and recreation facilities
Private Recreation	RE2	Land within the precinct that will provide privately owned open space and recreation facilities

The Mamre Road Precinct was rezoned under the WSEA State Environmental Planning Policies (SEPP). The proximity of the precinct to the M4 Motorway and Elizabeth Drive makes it suitable for employment and logistics uses. The precinct is also affected by aircraft noise and therefore not suitable for sensitive land uses.

Surrounding rural residential areas will be protected from industrial activities with buffers between homes and the industrial hub. Built and natural heritage is protected with the preservation of environmentally sensitive land.

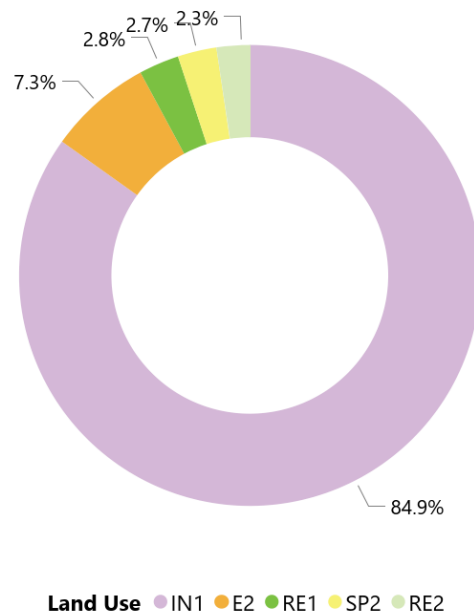
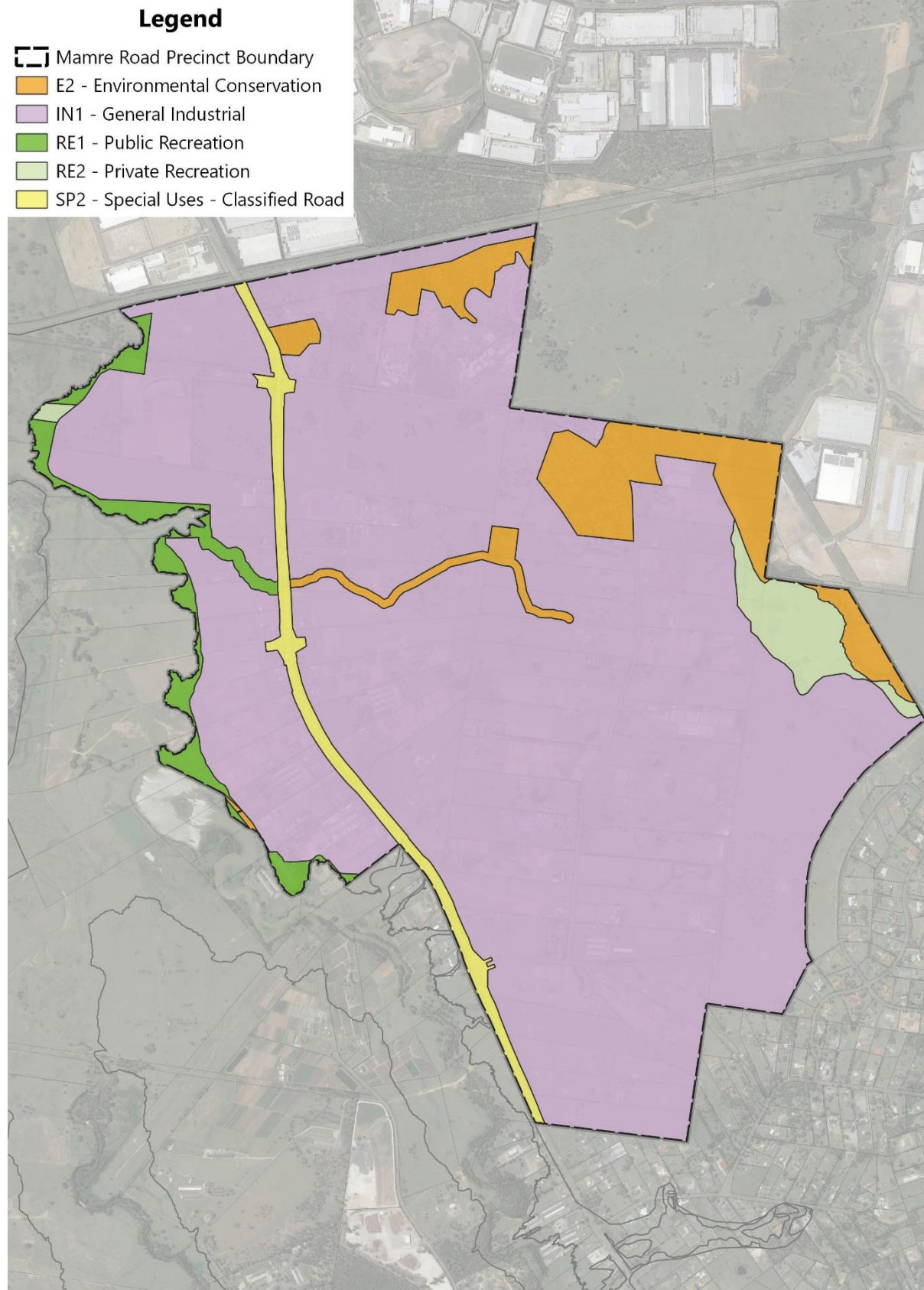


Figure 3 - Mamre Road Precinct Zoning



4.1 Land Zoning Summary

Table 2 below summarises the total area of each zoning type within the Mamre Road Precinct.

Table 2 - Land Use Summary

Code	Zoning	Area (Ha)
E2	Environmental Conservation	72.9
IN1	General Industrial	849.8
RE1	Public Recreation	28.2
RE2	Private Recreation	23.2
SP2	Special Purpose – Classified Road	27.3
Total		1,001.4

4.2 Net Developable Area

The Section 7.11 Contributions Plan contains a definition of Net Developable Area (NDA) that has been used for this study.

For the purpose of this Section 7.11 Plan, all land zoned E2, RE1, RE2 and SP2 has been excluded from the NDA. The land required for Collector Roads as identified in the Road Hierarchy Plan contained in the DCP has also been excluded. These areas are further detailed in Section 6.1 and shown on Figure 4.

4.2.1 NDA Exclusions

A State Significant Development (SSD) site located in the north west corner of the precinct has received development approval for the first stage of the development. The site covers an area of 91.7 hectares and is shown in Figure 4.

At the date of development approval, the site was subject to the current Section 7.12 Plan with an associated levy of 1% of the total development costs. Therefore, this Section 7.11 Plan has excluded the site and infrastructure located within the site, including a collector road and open space. No additional levies will be collected for development within the site boundary, and all infrastructure located within is expected to be provided by the developer.

In addition to the SSD site, the Mamre Road Precinct includes a number of transport investigation corridors, as shown in Figure 4. These areas have been excluded from the NDA.

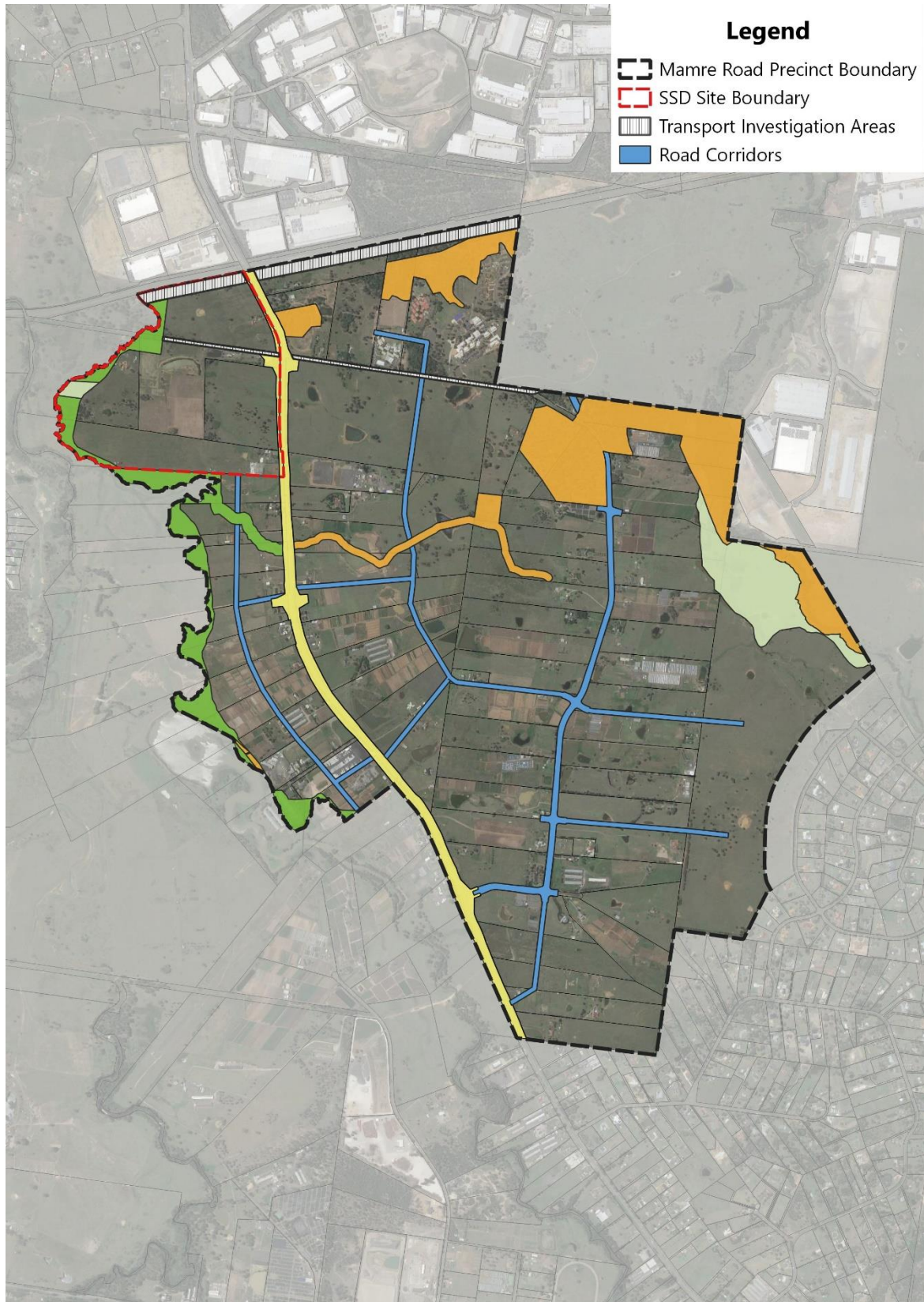
4.2.2 NDA Summary

A summary of the NDA for the Mamre Road Precinct is provided in Table 3.

Table 3 - Net Developable Area

Land Type	Area (Ha)
IN1 – General Industrial	849.8
SSD Site	91.7
Transport Investigation Corridors (Outside SSD Site)	11.1
Road Infrastructure Area	32.2
Net Developable Area	725.3

Figure 4 - NDA Exclusion Areas

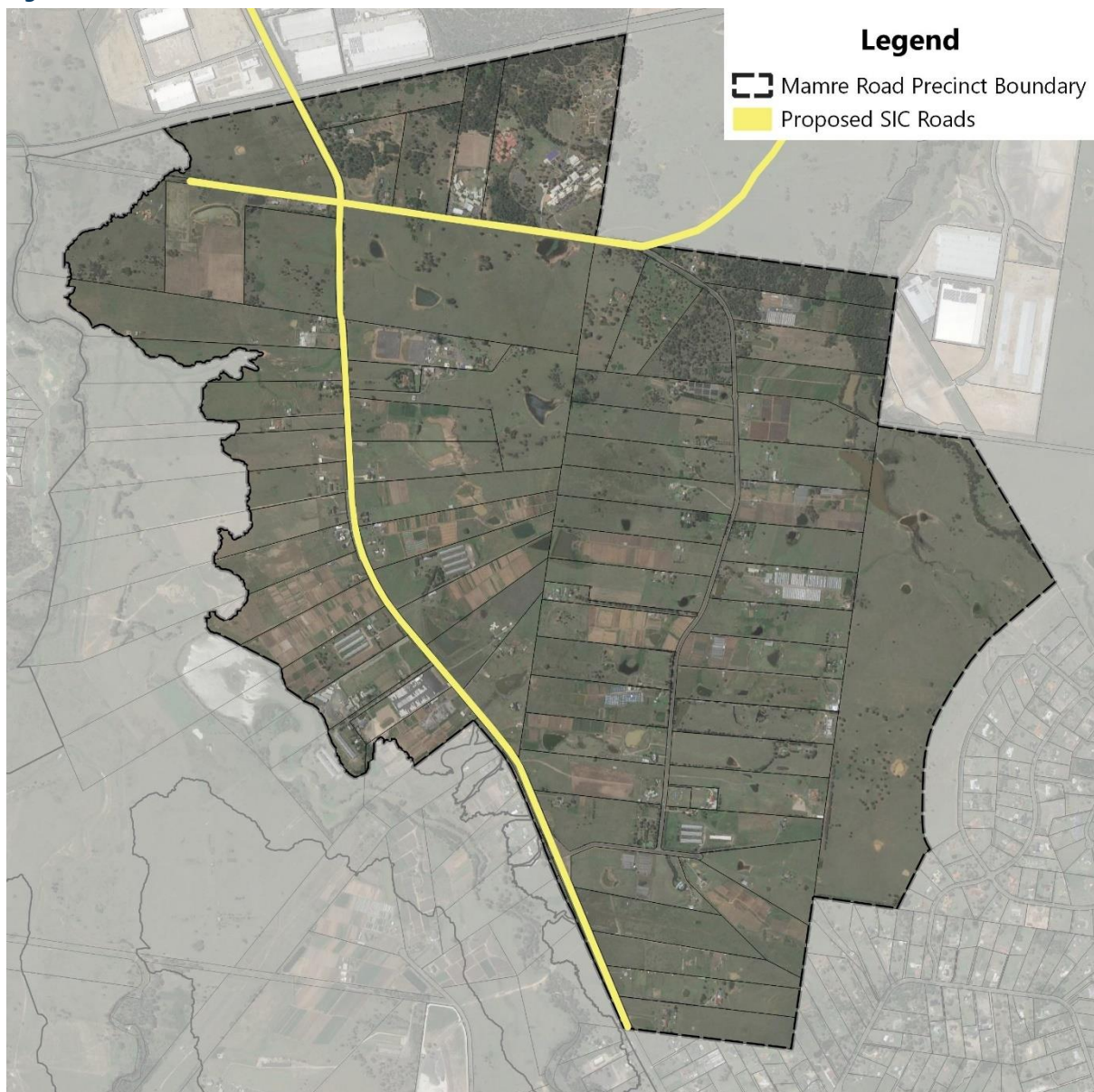


5 SIC Infrastructure

The *Western Sydney Aerotropolis Plan* outlines the future transport network to link the Aerotropolis with greater Sydney. A Special Infrastructure Contribution (SIC) is proposed to help fund the delivery of infrastructure to support the Aerotropolis. The proposed SIC was exhibited between November 2020 and February 2021. DPIE are currently reviewing submissions before finalising the plan.

The proposed SIC includes the upgrade of Mamre Road and the Southern Link Road. These roads are shown in Figure 5 below and have been excluded from this Section 7.11 Plan.

Figure 5 – Mamre Road SIC Roads



6 Proposed Infrastructure

The following sections outline the approach taken to determine the infrastructure requirements to support the proposed land uses within the Mamre Road Precinct.

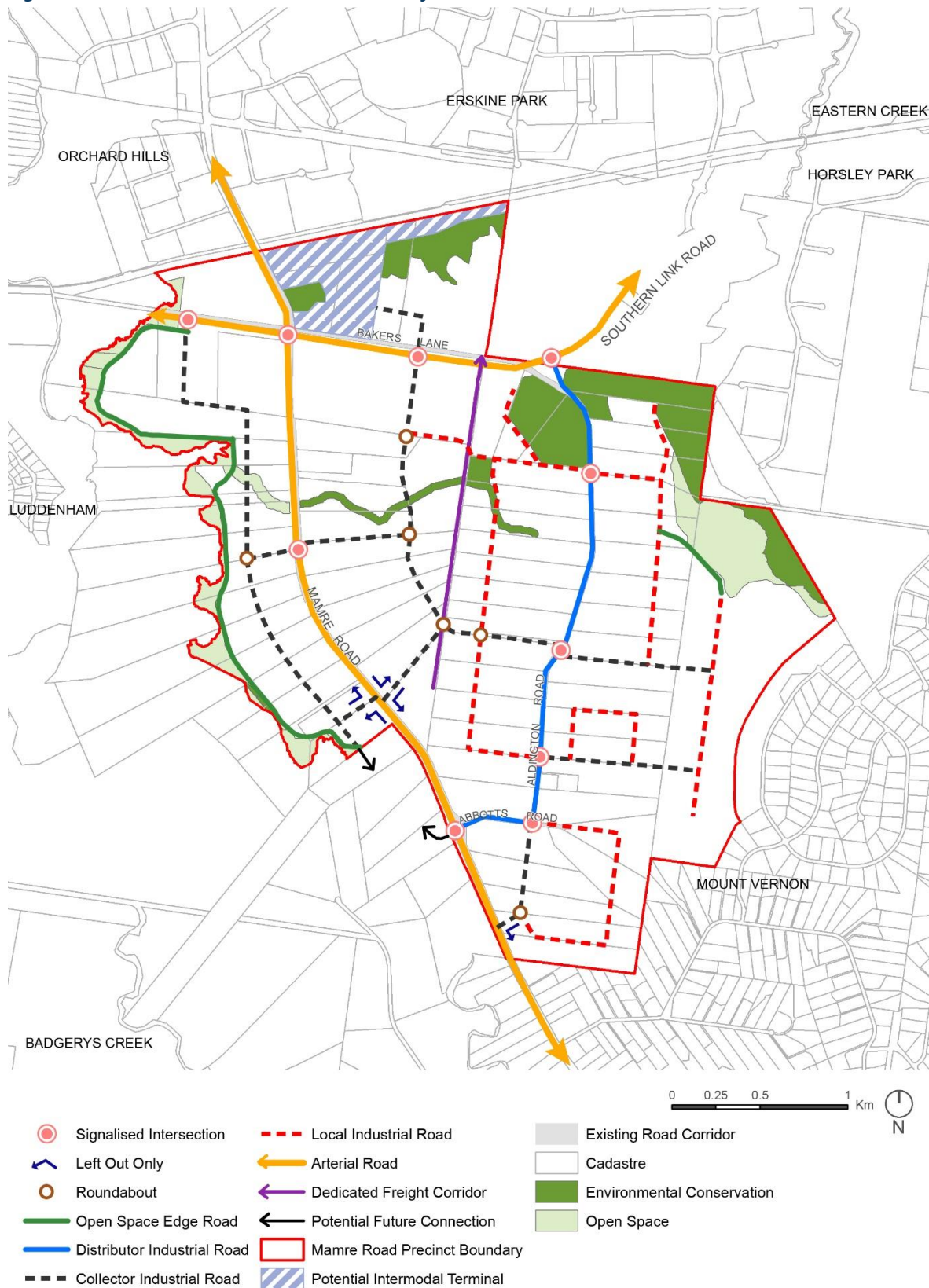
6.1 Transport Infrastructure

Collector roads will be funded through this Section 7.11 Plan. The proposed road hierarchy for the Mamre Road Precinct is shown in Figure 6. For the purpose of this plan, it has been assumed that *Collector Industrial Roads* and *Distributor Industrial Roads* are classified as collector roads and will be funded through Section 7.11 contributions. *Arterial Roads* and the *Dedicated Freight Corridor* will be the responsibility of state government to fund and deliver. All *Local Industrial Roads* and *Open Space Edge Roads* are assumed to be funded and delivered by developers and do not form part of this Section 7.11 Plan.

In addition to collector roads, the Section 7.11 Plan includes an allowance for intersection treatments. It has been assumed that intersection costs are attributable to the higher order road, therefore, where there is an intersection between a collector and arterial road, the intersection costs are assumed to be attributable to the arterial road.

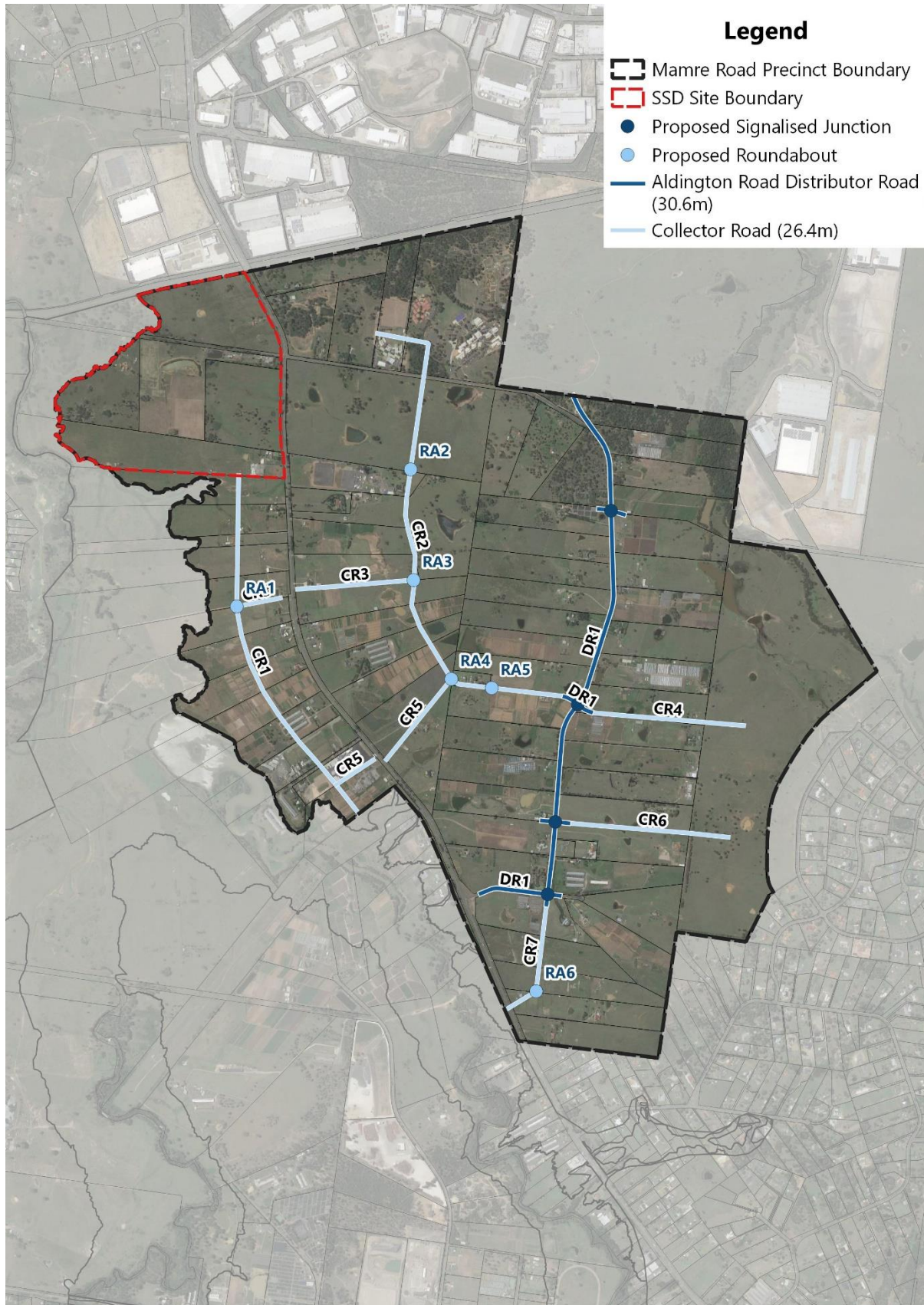
A number of signalised intersections are proposed for Aldington Road. As Aldington Road has undergone strategic design, the costs of these intersections have been included in the overall road construction costs, rather than as standalone items.

Figure 6 - Mamre Road Precinct Road Hierarchy



Source: *Mamre Road Precinct Development Control Plan 2021* – NSW Department of Planning, Industry & Environment (2021)

Figure 7 - Section 7.11 Transport Infrastructure



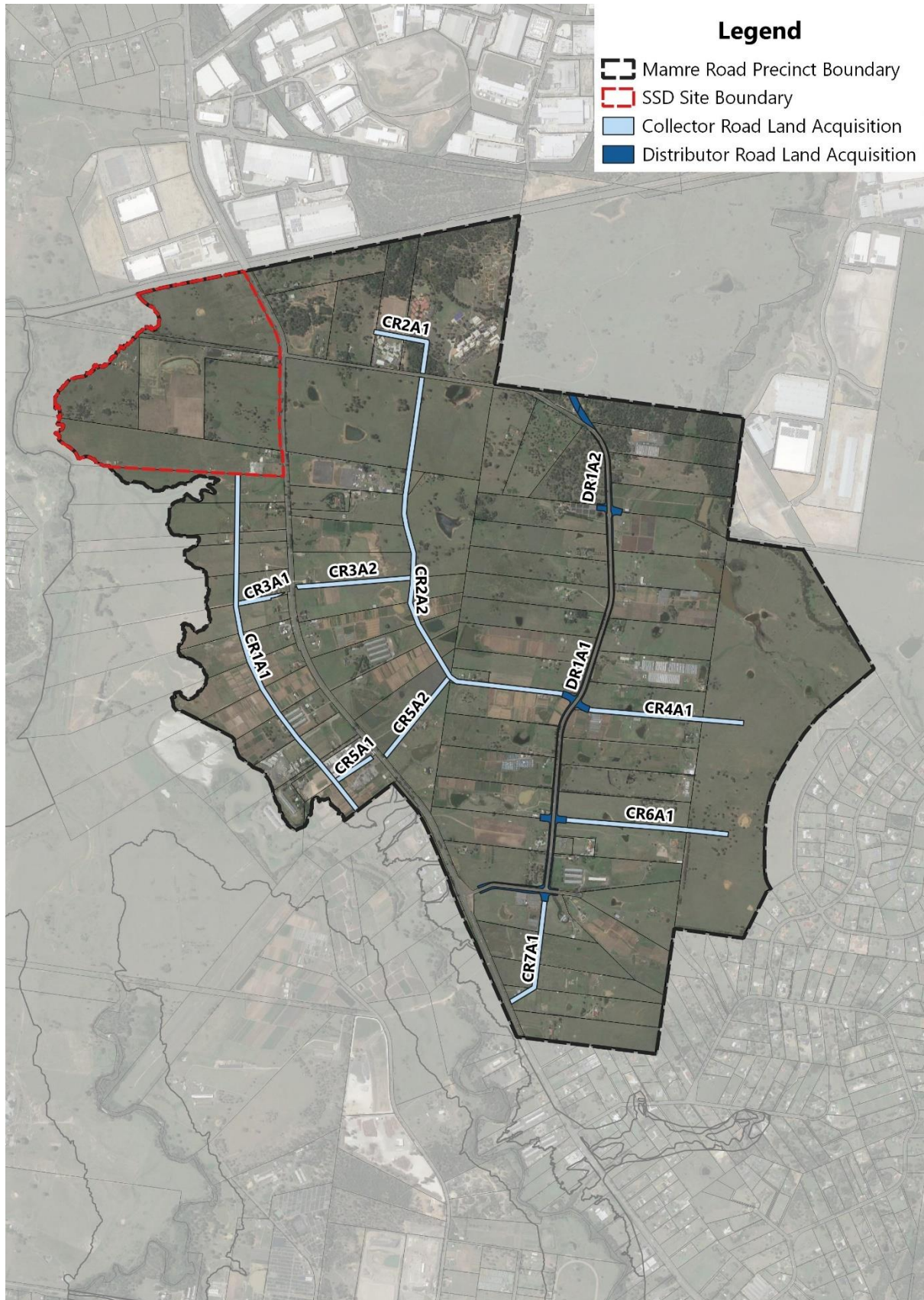
6.1.1 Land Acquisition

The land to be acquired for road corridors is shown in Figure 8. It should be noted that Aldington Road is an existing road with a 20m wide reserve. The proposed cross section for Aldington Road includes a 30.6m total reserve width. This assessment has assumed only the additional width outside the existing road corridor will be acquired.

The land acquisition requirements for Aldington Road has been informed by the latest strategic design, which includes four intersections along the length of the road.

No designs have been prepared for the remaining collector roads or associated intersections. It has therefore been assumed that a continuous 25.6m wide corridor will be acquired for each road. Additional acquisition allowances have been made for roundabouts. In lieu of more detailed information, pro-rated areas for each leg of the intersection have been adopted.

Figure 8 - Section 7.11 Transport Infrastructure Land Acquisition



6.1.2 Quantities

The transport infrastructure included in this Section 7.11 Plan is summarised in Table 4.

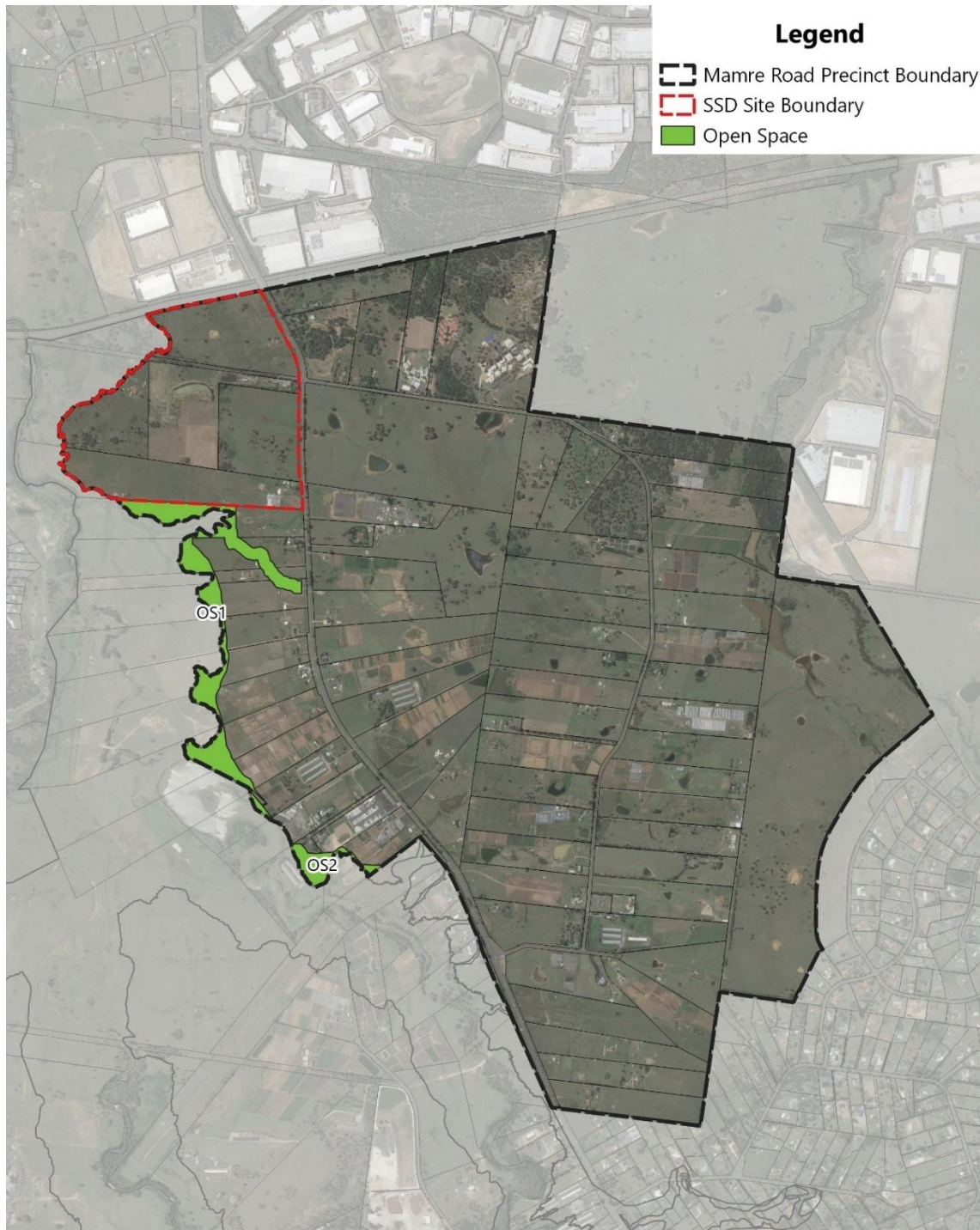
Table 4 - Section 7.11 Transport Infrastructure

Code	Infrastructure Type	Quantity
CR1	Collector Road	1,966m
CR2	Collector Road	2,703m
CR3	Collector Road	844m
CR4	Collector Road	802m
CR5	Collector Road	774m
CR6	Collector Road	840m
CR7	Collector Road	640m
DR1	Distributor Road (Aldington Road) incl. intersections	3,629m
RA1	Roundabout	1
RA2	Roundabout	1
RA3	Roundabout	1
RA4	Roundabout	1
RA5	Roundabout	1
RA6	Roundabout	1

6.2 Open Space Infrastructure

The *Mamre Road Precinct Structure Plan* includes the provision of land zoned RE1 – Public Recreation. It has been assumed that this land will be acquired by Council as part of this Section 7.11 Plan, in accordance with the amendment to the SEPP which lists Council as the acquisition authority for RE1 land in the Mamre Road Precinct. The open space included in the plan is shown in Figure 9.

Figure 9 - Section 7.11 Open Space Infrastructure



6.2.1 Quantities

The open space infrastructure included in this Section 7.11 Plan is summarised in Table 5.

Table 5 - Section 7.11 Open Space Infrastructure

Code	Area (m²)
OS1	180,100
OS2	31,653
Total	211,753

7 Cost Estimates

7.1 Collector Roads

It is anticipated that all new collector roads will be constructed in accordance with the *Mamre Road Precinct Development Control Plan 2021*. For the purpose of this assessment it has been assumed that Aldington Road will adopt the “Typical Distributor Road (Type 3)” typology while all other roads included in the Section 7.11 Plan will adopt the “Typical Collector Road (Type 2)” typology.

It should be noted the *Mamre Road Precinct Development Control Plan 2021* also includes a typical section for local industrial roads and open space edge roads. These road typologies have not been included as they are assumed to fall outside the scope of the Section 7.11 Plan. Sub-arterial roads are assumed to be included in the Special Infrastructure Contributions Plan, and lower order roads will be provided by developers at their own cost in accordance with current practice.

A typical section for the for the Distributor Road and Collector Road typologies is provided in Figure 10 and Figure 11 respectively. Cost rates for collector roads were determined using contractor rates provided to IDC on past projects. A summary of the cost rates are presented in Table 7. Costs are provided on a per metre basis.

For Aldington Road, a cost estimate was prepared based on the latest strategic design. This estimate includes costs for the four signalised intersections located along the length of the road. The cost for Aldington Road is provided in Table 11, in the Schedule of Works.

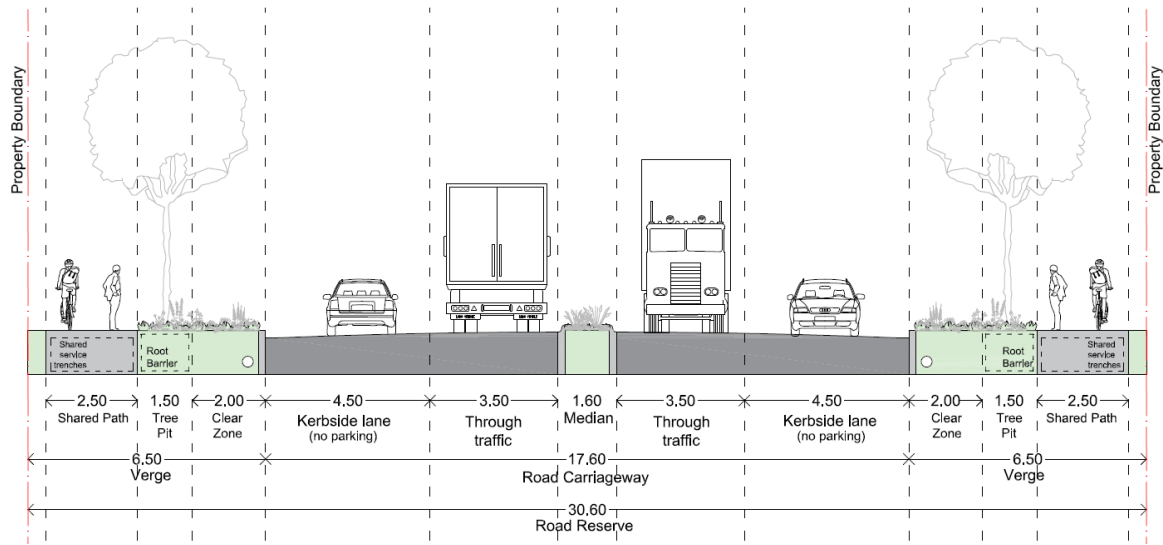
Contingencies for road construction costs have been applied in line with the *Local Infrastructure Benchmark Costs – Costing Infrastructure in Local Infrastructure Plans* report prepared by IPART in 2014. These rates are listed in Table 6. IPART recommends a 30% contingency for road projects in the Strategic Review stage. This rate has been applied to all road projects.

Table 6 - IPART Recommended Contingency Allowances for Benchmark Items

Project Stage	Open Space Embellishment	Community Facilities	Roads	Stormwater
Strategic Review	20%	15%	30%	30%
Business Case	15%	10%	20%	20%

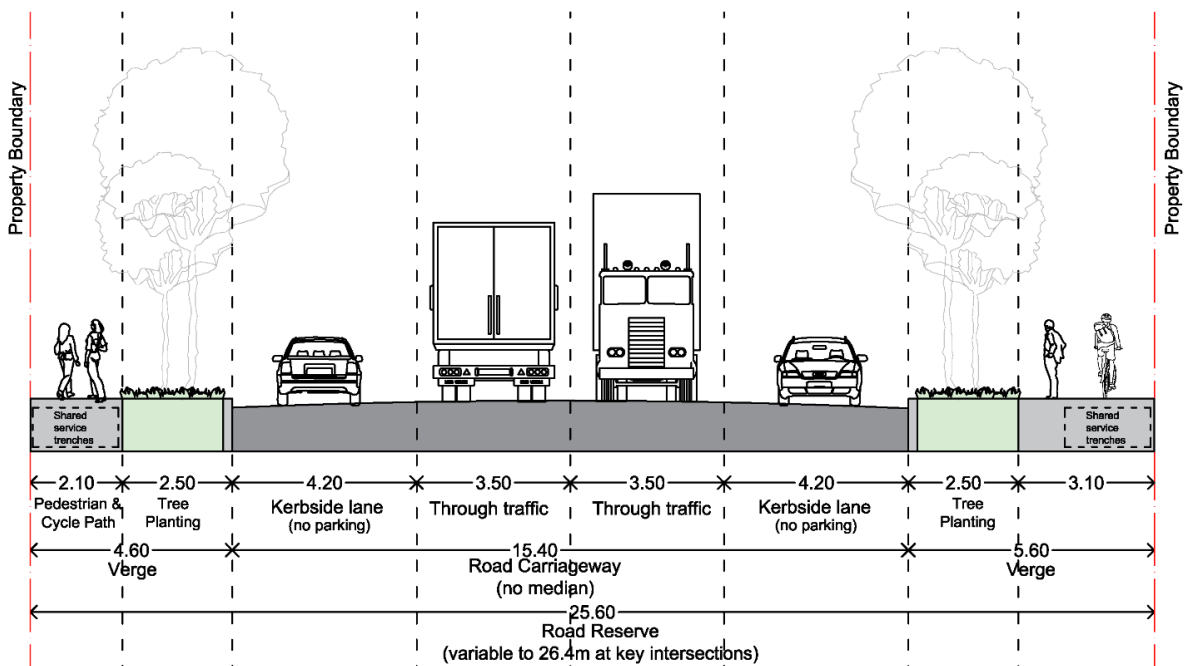
Source: Local Infrastructure Benchmark Costs – Costing Infrastructure In Local Infrastructure Plans – IPART (2014)

Figure 10 - Distributor Road (Type 3) Typical Section



Source: Mamre Road Precinct Development Control Plan 2021 – NSW Government (2021)

Figure 11 - Collector Road (Type 2) Typical Section



Source: Mamre Road Precinct Development Control Plan 2021 – NSW Government (2021)

Table 7 - Collector Road Cost Rate

Item	Rate (\$/m)
Earthworks	\$96
Carriageway	\$2,971
Utilities & Stormwater	\$1,385
Verge	\$1,506
Design, Project Management, Legal etc.	\$715
Contingency (30%)	\$1,787
Total	\$8,460

7.2 Open Space

Open space embellishment cost rates were provided by Penrith City Council. A summary of the rates is provided in Table 8.

Table 8 - Open Space Infrastructure Cost Rates

Facility	Description	Unit	Rate
Base grassed area not irrigated	Grassed area with some trees/basic landscaping	m ²	\$75
Landscape	Trees (assumed one every 20m ²)	m ²	\$100
Exercise equipment	Assumed one every 800m along length of park frontage (4 total)	Item	\$120,000

Contingencies have been applied in line with the IPART recommendations listed in Table 6. For open space embellishment projects in the Strategic Review stage, a 20% contingency is recommended. This rate has been applied to all open space projects.

7.3 Land Acquisition

Land acquisition rates were provided by Curtis Valuations in March 2022. The rates adopted for the Section 7.11 Plan are summarised in Table 9.

Table 9 - Land Acquisition Rates

Land Type	Acquisition Rate (\$/m ²)
Developable	\$575
Constrained	\$90

For the purpose of this plan, the following assumptions have been made regarding land acquisition:

- Where a proposed road aligns with or crosses over an existing road reserve, only the additional land outside the existing reserve will be acquired
- Where a proposed collector/distributor road is located on land with an E2 zoning, the land will be acquired at the constrained land rate
- All other road infrastructure is assumed to be located within developable land
- All open space infrastructure is assumed to be located within developable land

8 Section 7.11 Plan Contribution Rate

A summary of the infrastructure costs and applicable Section 7.11 contribution rate is provided in Table 10.

Table 10 - Proposed Section 7.11 Contribution Rate

Component	Total
Transport Infrastructure	\$ 130,375,587
Open Space Infrastructure	\$ 20,904,288
Infrastructure Total	\$ 151,279,875
Transport Infrastructure Land Acquisition	\$ 159,339,690
Open Space Infrastructure Land Acquisition	\$ 121,757,975
Land Acquisition Total	\$ 281,097,665
Plan Administration	\$ 2,269,198
Infrastructure, Land Acquisition & Administration Total	\$ 434,646,738
Section 7.11 Contribution Rate (\$/ha)	\$ 599,225

The proposed schedule of works is summarised in Table 11.

Table 11 - Schedule of Works

Code	Description	Length	Area	Cost of Works	Cost of Land	Plan Administration	Total	Staging/Priority
Transport Infrastructure								
CR1	Collector Road	1,966		\$ 16,632,360.00		\$ 249,485.40	\$ 16,881,845.40	Medium (5-10 yr)
CR2	Collector Road	2,703		\$ 22,867,380.00		\$ 343,010.70	\$ 23,210,390.70	Medium (5-10 yr)
CR3	Collector Road	844		\$ 7,140,240.00		\$ 107,103.60	\$ 7,247,343.60	Medium (5-10 yr)
CR4	Collector Road	802		\$ 6,784,920.00		\$ 101,773.80	\$ 6,886,693.80	Medium (5-10 yr)
CR5	Collector Road	774		\$ 6,548,040.00		\$ 98,220.60	\$ 6,646,260.60	Medium (5-10 yr)
CR6	Collector Road	840		\$ 7,106,400.00		\$ 106,596.00	\$ 7,212,996.00	High (0-3yr)*
CR7	Collector Road	640		\$ 5,414,400.00		\$ 81,216.00	\$ 5,495,616.00	Medium (5-10 yr)
DR1	Distributor Road (Aldington Road) incl. Intersections	3,629		\$ 55,181,847.00		\$ 827,727.71	\$ 56,009,574.71	High (0-5 yr)
RA1	Roundabout			\$ 450,000.00		\$ 6,750.00	\$ 456,750.00	Medium (5-10 yr)
RA2	Roundabout			\$ 450,000.00		\$ 6,750.00	\$ 456,750.00	Medium (5-10 yr)
RA3	Roundabout			\$ 450,000.00		\$ 6,750.00	\$ 456,750.00	Medium (5-10 yr)
RA4	Roundabout			\$ 450,000.00		\$ 6,750.00	\$ 456,750.00	Medium (5-10 yr)
RA5	Roundabout			\$ 450,000.00		\$ 6,750.00	\$ 456,750.00	Medium (5-10 yr)
RA6	Roundabout			\$ 450,000.00		\$ 6,750.00	\$ 456,750.00	Medium (5-10 yr)
CR1A 1	Collector Road - Land Acquisition		50,312		\$ 28,929,400.00	\$ -	\$ 28,929,400.00	Medium (5-10 yr)
CR2A 1	Collector Road - Land Acquisition		11,520		\$ 6,624,000.00	\$ -	\$ 6,624,000.00	Medium (5-10 yr)

CR2A 2	Collector Road - Land Acquisition	57,435	\$ 33,025,125.00	\$ -	\$ 33,025,125.00	Medium (5-10 yr)
CR3A 1	Collector Road - Land Acquisition	5,429	\$ 3,121,675.00	\$ -	\$ 3,121,675.00	Medium (5-10 yr)
CR3A 2	Collector Road - Land Acquisition	15,320	\$ 8,809,000.00	\$ -	\$ 8,809,000.00	Medium (5-10 yr)
CR4A 1	Collector Road - Land Acquisition	20,858	\$ 11,993,350.00	\$ -	\$ 11,993,350.00	Medium (5-10 yr)
CR5A 1	Collector Road - Land Acquisition	5,682	\$ 3,267,150.00	\$ -	\$ 3,267,150.00	Medium (5-10 yr)
CR5A 2	Collector Road - Land Acquisition	13,512	\$ 7,769,400.00	\$ -	\$ 7,769,400.00	Medium (5-10 yr)
CR6A 1	Collector Road - Land Acquisition	21,832	\$ 12,553,400.00	\$ -	\$ 12,553,400.00	Medium (5-10 yr)
CR7A 1	Collector Road - Land Acquisition	15,447	\$ 8,882,025.00	\$ -	\$ 8,882,025.00	Medium (5-10 yr)
DR1A 1	Distributor Road - Land Acquisition (Good Developable Land)	50,037	\$ 28,771,275.00	\$ -	\$ 28,771,275.00	High (0-5 yr)
DR1A 2	Distributor Road - Land Acquisition (Constrained Land)	6,571	\$ 591,390.00	\$ -	\$ 591,390.00	High (0-5 yr)
RA1	Roundabout - Land Acquisition	1,500	\$ 862,500.00	\$ -	\$ 862,500.00	Medium (5-10 yr)
RA2	Roundabout - Land Acquisition	1,500	\$ 862,500.00	\$ -	\$ 862,500.00	Medium (5-10 yr)
RA3	Roundabout - Land Acquisition	1,500	\$ 862,500.00	\$ -	\$ 862,500.00	Medium (5-10 yr)
RA4	Roundabout - Land Acquisition	1,500	\$ 862,500.00	\$ -	\$ 862,500.00	Medium (5-10 yr)
RA5	Roundabout - Land Acquisition	1,200	\$ 690,000.00	\$ -	\$ 690,000.00	Medium (5-10 yr)
RA6	Roundabout - Land Acquisition	1,500	\$ 862,500.00	\$ -	\$ 862,500.00	Medium (5-10 yr)

Sub Total			\$ 130,375,587	\$ 159,339,690	\$ 1,955,633	\$ 291,670,910	
Open Space Infrastructure							
OS1	Public Open Space	180,100	\$ 17,721,600.00	\$ 103,557,500.00	\$ 265,824.00	\$ 121,544,924.00	Low (10+ yr)
OS2	Public Open Space	31,653	\$ 3,182,688.00	\$ 18,200,475.00	\$ 47,740.32	\$ 21,430,903.32	Low (10+ yr)
Sub Total			\$ 20,904,288	\$ 121,757,975	\$ 313,564	\$ 142,975,827	
Total			\$ 151,279,875	\$ 281,097,665	\$ 2,269,198	\$ 434,646,738	

* subject to sufficient contributions being available to enable the construction of the road.