

Technical Memorandum

Title	Carseldine Urban Village Stage 2			
	Stage 2 Traffic Assessment			
Client	SEQ Development, Economic Development Queensland			
Date	20/07/2020			
Author	Daniel Chui-Clark / Tetteh Anang			
Reviewer	Alice Shi			

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL



Approval no:DEV2020/1118Date:02 September 2020

Project No	CEB06857
Status	Draft
Discipline	Traffic and Transport
Office	Brisbane

1 Introduction

Cardno has been commissioned by SEQ Development, Economic Development Queensland (EDQ) to provide traffic and transportation advice in relation to the proposed Carseldine Urban Village (CUV) development, which falls within Precinct 1 of the Fitzgibbon Priority Development Area (PDA).

The Queensland Government has prepared a development scheme for the Fitzgibbon PDA detailing the proposed land uses, yields and internal road network for the CUV. The land uses include special purpose, mixed use centre, residential, civic and open space and bushland and open space. The mixed use areas comprise of residential, commercial and retail uses.

This traffic statement has been prepared to support the DA for Stage 2 of the CUV, and includes:

- > Appendix A—Proposed development plans
- > Appendix B— Approved masterplan road cross sections
- > Appendix C— Refuse collection vehicle swept paths

1.1 Background

On 18th December 2018, the Minister for Economic Development Queensland (MEDQ) granted a change to the CUV masterplan approval (DEV2018/932). This approval was supported by the Cardno Traffic Impact Assessment (TIA) dated 1st May 2018, however the TIA did not form an approved document.

Since the time of the changed approval, SEQ Development, EDQ has proposed additional changes to the CUV masterplan, including adjustments to the staging boundaries. A second change to the CUV masterplan approval has been submitted to the MEDQ. The second change approval is supported by the amended Cardno TIA dated 2 August 2019. In this TIA, Cardno highlighted the external roadworks required in accordance with the traffic impacts.

A number of the external roadworks outlined by the development scheme are triggered by Stage 1 of Precinct 1. As a result, Stage 2 of Precinct 1 does not trigger any external roadworks and it is anticipated the relevant works to the external network will be completed as part of Stage 1.



2 Development Proposal

As indicated on Figure 2-1, Stage 2 includes the area in the northeast of CUV, immediately south-east of Balcara Avenue, and an area immediately west of the Main Boulevard.



Figure 2-1 Precinct 1 – CUV Stage 2

Source: Nearmap

2.2 Development Yields

2.2.1 Original Stage 2 Yields

At the time of preparing the original TIA dated 1st May 2018 for the CUV masterplan approval, the yields proposed for Stage 2 were proposed to be as follows:

- > North-eastern parcel: 43 terrace dwellings
- > Western parcel: 100 units

2.2.2 Proposed Stage 2 Yields

Development plans for Stage 2 indicate that some changes have been introduced which deviate from the originally proposed yields. The proposed Stage 2 site is set to incorporate the following land uses:

- > North-eastern parcel: 48 terrace dwellings
- > Western parcel: 2 master allotments

Details for the dwelling numbers proposed for the two master allotments have not been determined at this stage and therefore, the assessment assumes that the 100 units assessed as part of the approved masterplan will be retained. Should there be a change in the yields, this will be assessed as part of a future ROL application for the lots.

This results in a small increase in the yield by five (5) terrace dwellings.



2.3 Access

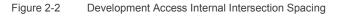
2.3.1 External Access

Access for Stage 2 will be via an upgraded form of the Beams Road / Balcara Avenue intersection provided as part of the Stage 1 development. This intersection upgrade has been discussed and approved with Council.

2.3.2 Internal Road Network

In accordance with Queensland Streets, the desirable minimum intersection spacing for Local Roads / Access Streets should be 60m on the same side and 40m on opposite sides.

A review of the internal layout of the proposed development (Appendix A) has been undertaken, and the intersection spacing across the entire Stage 2 internal road network complies with the minimum spacing requirements for local roads, with all internal intersections spaced at least 60m apart. This is demonstrated on Figure 2-2.





Source: Nearmap, RPS

Access for the western parcel is proposed to be gained via the main boulevard. The location and form of this access will be assessed as part of a future ROL application of the lots.



2.4 Active Transport Facilities

Pedestrian facilities will be provided for throughout Stage 2. New pedestrian paths are proposed to connect the uses in Stage 2 to Stage 1 facilities and the sporting facilities constructed as part of Stage S.



Figure 2-3 Stage 2 Active Transport Facilities

Source: Nearmap, RPS

With regards to Access places, footpaths will be provided with a minimum width of 1.5m. Refer to Appendix B for cross sections approved as part of the CUV masterplan.



3 Traffic Impact

The peak traffic generated by the Stage 2 development was assessed as part of the original CUV masterplan TIA produced by Cardno on the 1st May 2018 which indicated that no external works were triggered by Stage 2. Since that assessment, development yields for Stage 2 have changed, with a minor increase to 48 terrace dwellings. A comparison of the yields and trip generation is provided in Table 3-1.

Table 3-1	Stage 2 - Proposed Yields and Trip Generation
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Land Use	Yield		Peak Trip Generation	Peak Trip Generation	
	Approved	Proposed	Rate	Approved	Proposed
Terrace	43 dwellings	48 dwellings	0.575 vph/dwelling	25 vph	28 vph
Master allotments (high density residential)	100 dwellings	100 dwellings*	0.23 vph/dwelling	23 vph	23 vph
Difference	+5 dwellings			+3 vph	

Note * Yield assumed to be consistent with the approved plan, if different, this will be assessed as part of a future ROL application.

Table 3-1 illustrates that the proposed yields result in a minor difference of three (3) additional vehicle trips in the peak periods compared to the original assessment. This is a very marginal increase in the trip generation and expected to have little impact compared to the original assessment. Thus, detailed assessment of the external intersections is not deemed to be necessary as they have been designed based on the ultimate CUV trip demands which are far greater than the increased Stage 2 scenario. The ultimate CUV yields have been assessed as part of the Masterplan TIA.

Therefore, the additional peak trip generated by the site in Stage 2 on the surrounding road network will be negligible and should not change the findings from the masterplan traffic assessment.

Should there be a change in the yields of the master allotments, the impact will be assessed at the ROL application for these lots.



4 Parking

4.1 Car Parking Provision

The development falls within the Fitzgibbon Priority Development Area and as such, the Fitzgibbon Development Scheme has been referred to in order to determine the appropriate parking rates required for the development. Application of the parking rates for Stage 2 are summarised in Table 4-1.

It is noted that the parking provision for the master allotments will be provided on-site and as such, has not been included in this assessment. This will be assessed in detail as part of the ROL application for these lots.

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Land Use	and Use Yield F		Parking Requirement	Parking Provision
Terrace (house)	48 dwellings	1 spaces per dwelling unit	48 spaces#	24 (on street) + 48 (on site)*
Total			48 spaces	72 spaces

Note # Terrace dwellings classed as a house and as the site is within 400m of a railway station, the reduced rate of 1 space per dwelling applies to the site; * Parking spaces to be provided on-site, assessed as part of future applications

Stage 2 proposes to provide 72 car parking spaces combined across on street spaces and on-site spaces as part of the terrace dwellings. On site spaces are indicated on the Residential Lots Plan of Development (RPS drawing 128180-76A).

In accordance with Fitzgibbon PDA development scheme, the minimum parking required is 48 spaces based on the proposed land uses. The development proposes 72 spaces through on-site terrace spaces and on street spaces. Thus, there will be sufficient parking provided for the proposed uses.

4.2 Car Parking Design

Table 4-2 outlines the compliance with TAPS parking design standards and Australian Standards for parking facilities (AS2890.1 Off-Street Parking and AS2890.5 On-Street Parking).

Design Criteria	TAPS Standard Requirement	AS2890 Requirement	Proposed Design	TAPS PSP Compliance	AS2890.5 Compliance
Bay length – Parallel (enclosed end)	6.3m	6.3m	6.0m	×	×
Bay length – Parallel (intermediate)	6.0m	6.0m	6.0m	\checkmark	\checkmark
Bay width – Parallel	2.4m	2.3m	2.5m	\checkmark	\checkmark

Table 4-2 Parking Design Compliance

As indicated the proposed design of the parking areas are in compliance with TAPS and AS2890, with the exception of the length of the end bays. While the development plans indicate that the end parking bays are 6.0m long, these will be updated as part of the detailed design stage and delivered to comply with the standards, such that they are at least 6.3m long. Each parallel parking space is to be a minimum of 2.4m wide to comply with TAPS.



4.3 Servicing Design

Additionally, design service vehicle requirements are defined in TAPS Table 3. Although terraces (classed as houses) are proposed for the development, TAPS does not specify a design service vehicle for houses and as such, Cardno has assumed a refuse collection vehicle (RCV) will be required for the development.

A swept path assessment has been completed for a BCC standard RCV, which demonstrates that the service vehicle can enter / exit in a forward motion, and manoeuvre safely and efficiently through the site. Refer to drawings CEB06857-SK64_SK65-A attached at Appendix C.

Furthermore, to ensure a refuse collection vehicle is able to service Stage 2, an indicative servicing route has been prepared and is illustrated in Figure 4-1. This assumes a standard side loading RCV servicing from the left side of the truck. Bins are proposed to be presented on the laneway at the lot frontage.

Servicing for the master allotments will be assessed in detail as part of the ROL application for these lots.



Figure 4-1 Servicing Route

Source: Nearmap, RPS



5 Summary

Following the approval of the CUV masterplan (DEV2018/932), a development application for Stage 2 has been prepared to demonstrate compliance with the approved masterplan and provide further detailed information. This traffic report outlines the traffic related aspects of the stage. The key outcomes of this assessment are as follows:

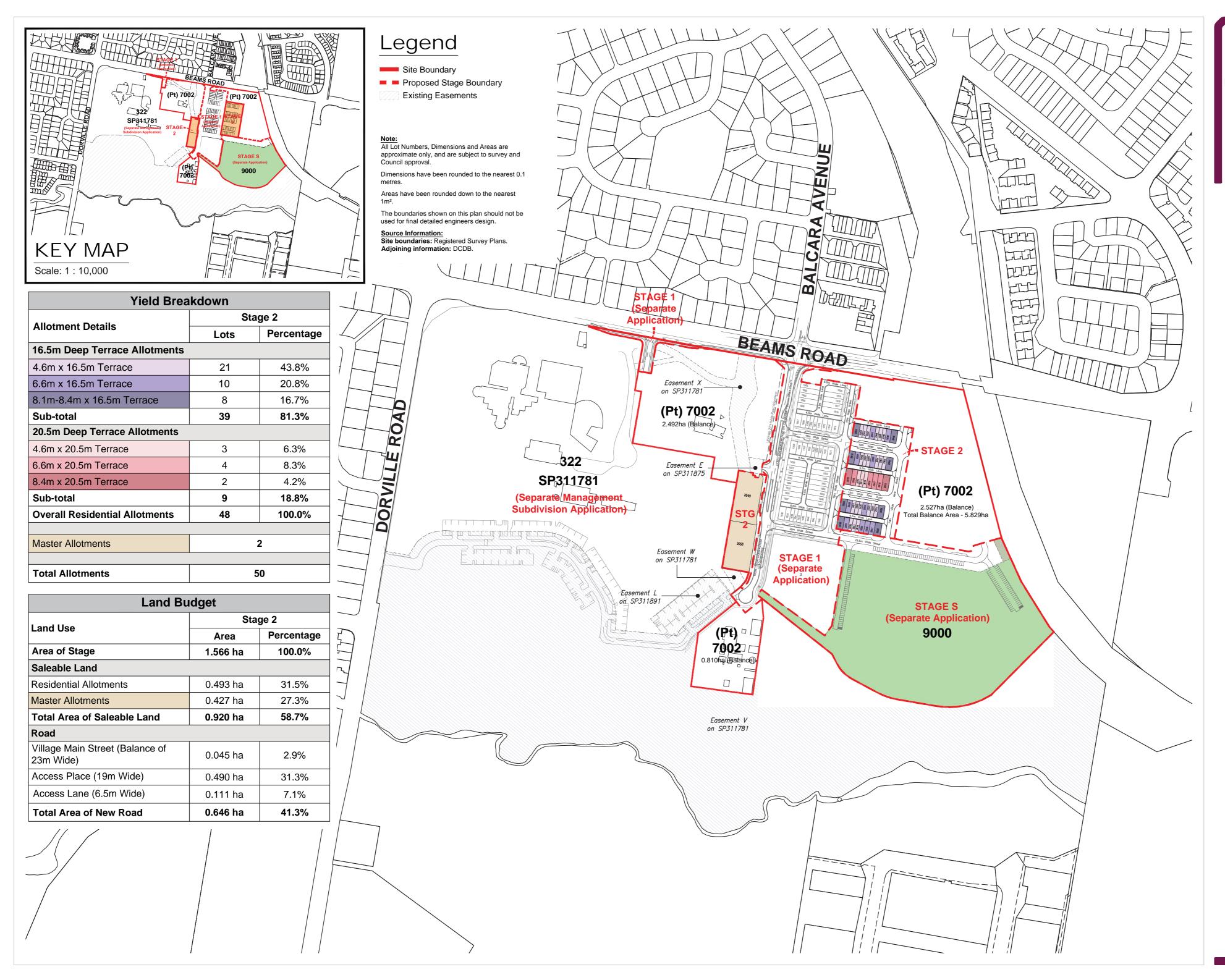
- Access has been confirmed to be consistent with the masterplan arrangement, with access being provided via an upgraded Beams Road / Balcara Avenue intersection
- > Active transport facilities are in accordance with the masterplan providing for footpaths on access streets and shared paths along recreational routes
- > The traffic impact for Stage 2 has been determined to be within the traffic carrying capacity of the external and internal intersections, given the traffic generation is similar to the original assessment and the intersections have been designed for the ultimate CUV yields
- Parking provision has been determined to be suitable in terms of the requirements as set out in the Fitzgibbon Development Scheme
- > The design of on-street parking has been determined to be largely compliant with relevant standards and where not compliant, shall be rectified as part of the detailed design stages
- > Refuse collection through the site has been demonstrated to be suitable with swept paths (refer to Appendix C).

Therefore, it is considered that the traffic impact, car parking, access, and servicing aspects of the proposed Stage 2 of the Carseldine Urban Village development meet the appropriate standards and will not compromise the safety or efficiency of the existing transport network.

Carseldine Urban Village Stage 2

APPENDIX A PROPOSED DEVELOPMENT PLAN





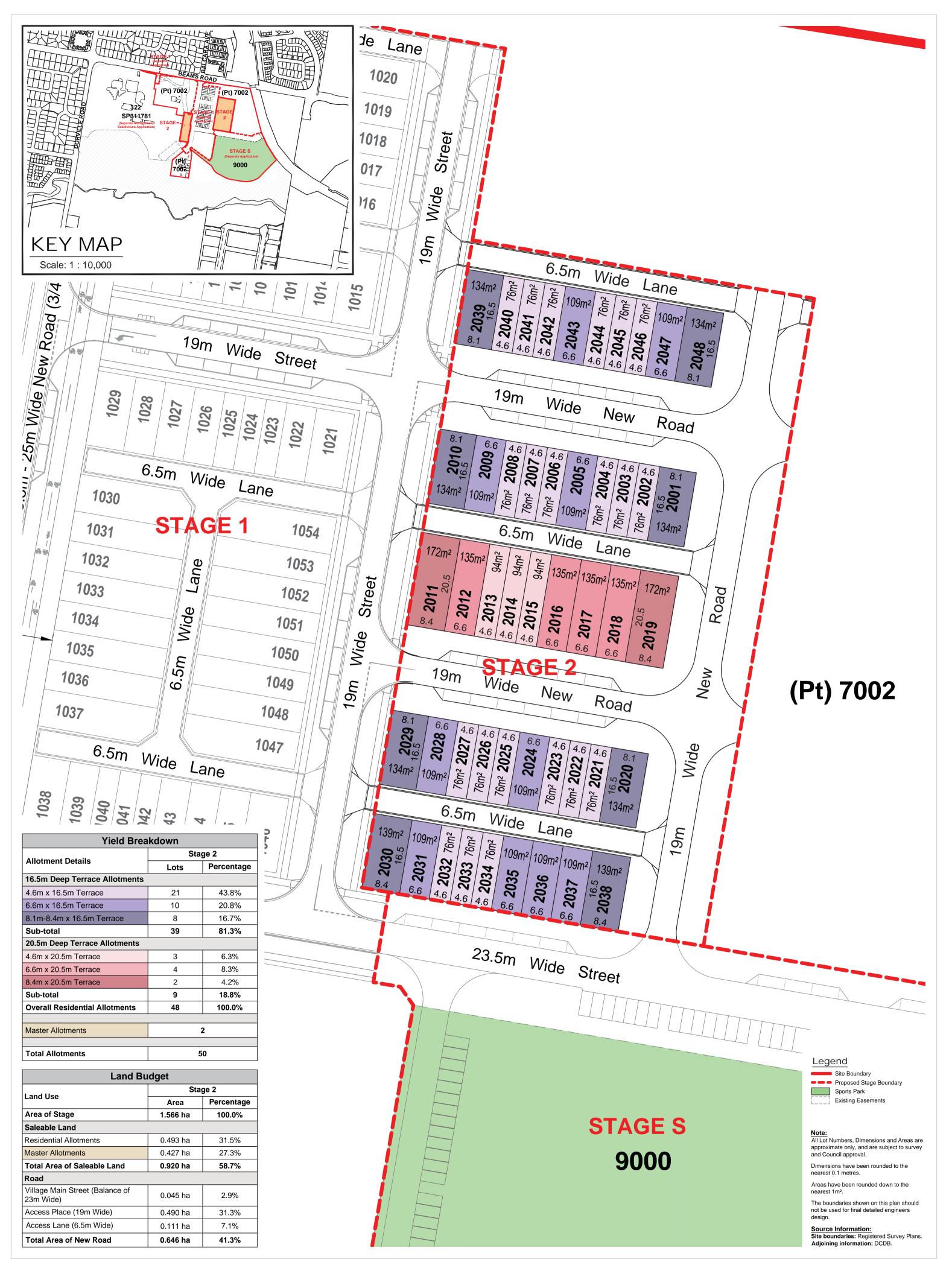
CARSELDINE URBAN VILLAGE PLAN OF SUBDIVISON STAGE 2 -OVERALL

PLAN REF:128180-73Rev No:CDATE:08 JULY 2020CLIENT:EDQDRAWN BY:LZ/JCCHECKED BY:MD

URBAN DESIGN Level 4 HQ South 520 Wickham Street PO Box 1559 Fortitude Valley QLD 4006 T+617 3539 9500 W rpsgroup.com



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 08 JULY 2020

 CLIENT:
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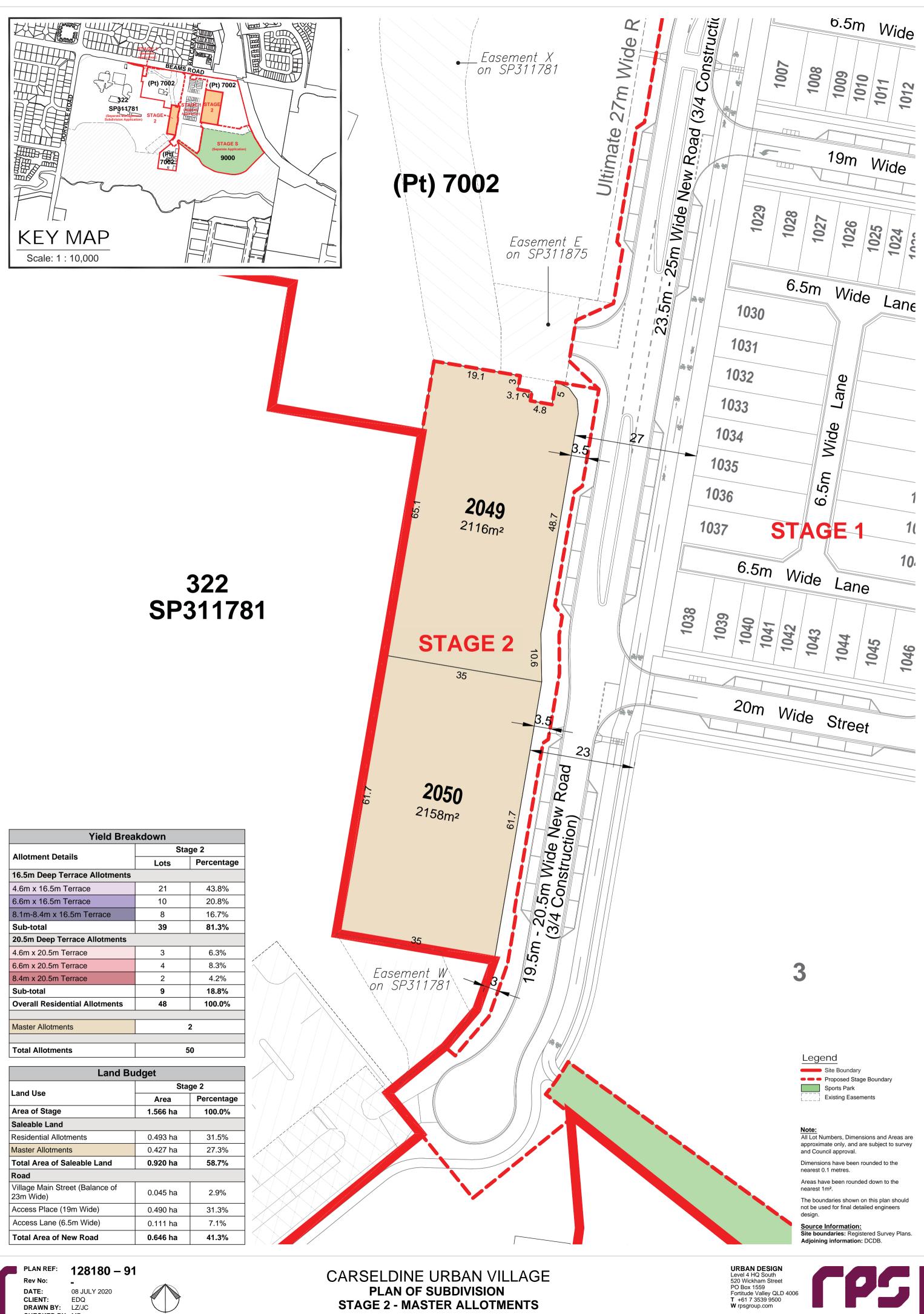
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CARSELDINE URBAN VILLAGE PLAN OF SUBDIVISION STAGE 2 - TERRACE ALLOTMENTS





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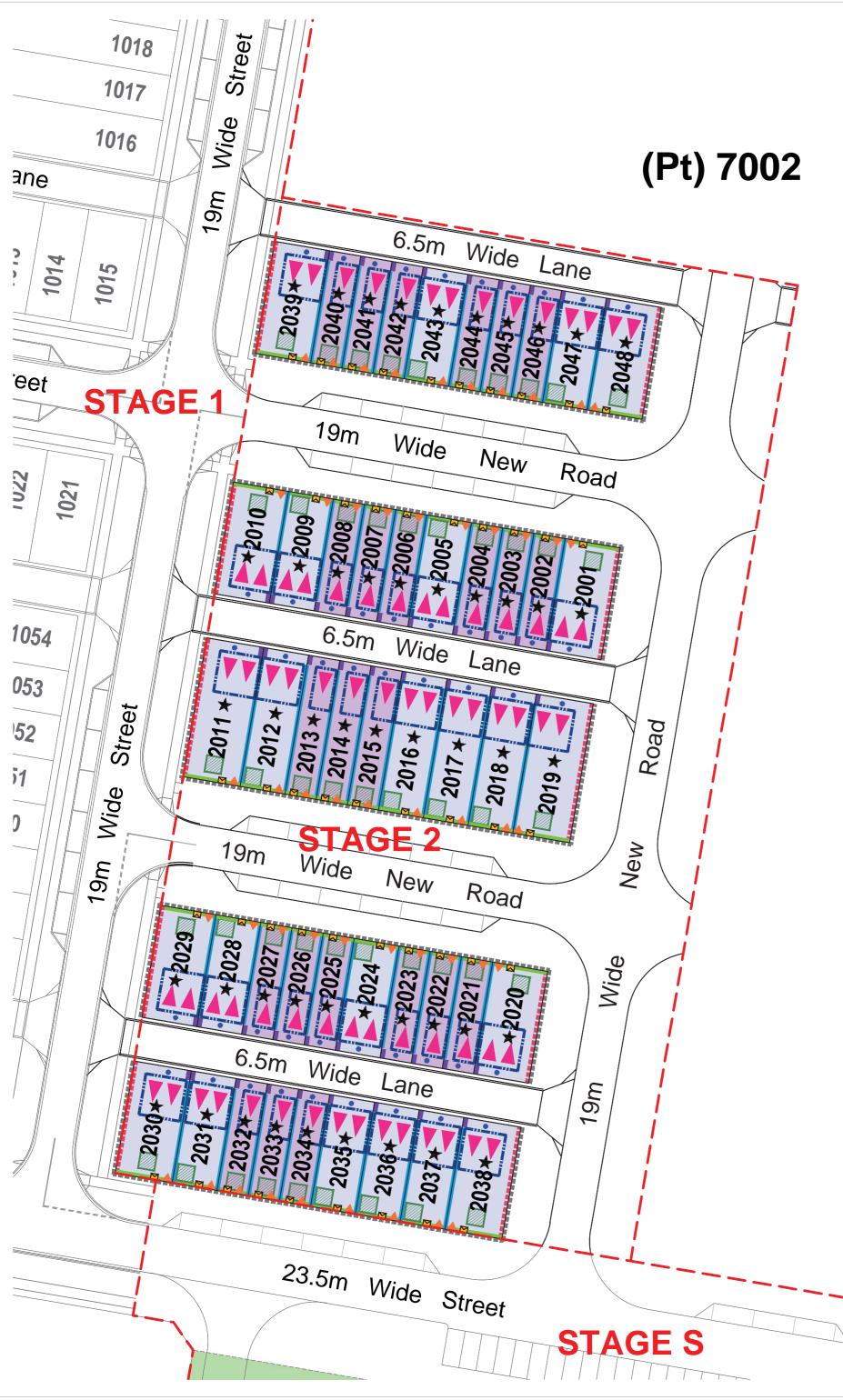
Yield Breakdown			
	Stage 2		
Allotment Details	Lots	Percentage	
16.5m Deep Terrace Allotments			
4.6m x 16.5m Terrace	21	43.8%	
6.6m x 16.5m Terrace	10	20.8%	
8.1m-8.4m x 16.5m Terrace	8	16.7%	
Sub-total	39	81.3%	
20.5m Deep Terrace Allotments			
4.6m x 20.5m Terrace	3	6.3%	
6.6m x 20.5m Terrace	4	8.3%	
8.4m x 20.5m Terrace	2	4.2%	
Sub-total	9	18.8%	
Overall Residential Allotments	48	100.0%	
Master Allotments	2		
Total Allotments		50	

Land Budget				
Land Use	Stage 2			
	Area	Percentage		
Area of Stage	1.566 ha	100.0%		
Saleable Land				
Residential Allotments	0.493 ha	31.5%		
Master Allotments	0.427 ha	27.3%		
Total Area of Saleable Land	0.920 ha	58.7%		
Road				
Village Main Street (Balance of 23m Wide)	0.045 ha	2.9%		
Access Place (19m Wide)	0.490 ha	31.3%		
Access Lane (6.5m Wide)	0.111 ha	7.1%		
Total Area of New Road	0.646 ha	41.3%		

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Setback Requirements Primary Frontage (minimum) Garage / Carport (minimum) Rear (minimum) Side Built to Boundary (maximum) Mandatory BTB Wall Length (ma (% of boundary length) Non Built to Boundary (minimum Corner Lots - Secondary Frontag (minimum) Other Requirements Site Cover (maximum) Primary Private Open Space Requ

Street Frontage Landscape Requirements (minimum)

Notes: * 0.0 metres to verandah/balcony

Notes:

- General All development is to be undertaken in accordance with the Development Approval.
- 2. All Class 1A dwellings are mandated to achieve a minimum Silver Final Certification under the Australian Liveable Housing Design Guidelines.
- 3. A home based business up to 50m² is allowed within each dwelling. A gross floor area (GFA) in excess of 50m² will require additional EDQ approval.
- 4. The relevant Bushfire Report must be considered and mitigation strategies adopted where deemed necessary by the Building Certifier
- Carseldine Village does not have a reticulated gas supply. Gas bottles serving a dwelling are strictly prohibited
- 6. Refer to Stage 2 Landscape Plans for locations and extent of footpaths.
- High-density Development Easements (HDEs) will be registered by Economic Development Queensland on mandatory built to boundary walls on lots under 250m². HDEs are not shown on this Plan of Development.
- The minimum building height is two (2) storeys.
 - The maximum building height is three (3) storeys. 10. Ground floor height (finished floor level to ceiling) must
 - be a minimum of 2.7m and subsequent floor heights (finished floor level to ceiling) must be a minimum of 2.55m

Setbacks

- 11. Setbacks are as per the Plan of Development Table unless otherwise dimensioned
- 12. Setbacks are measured to the wall of the structure. 13. The location of built to boundary walls are indicated on the Plan of Development
- 14. Feature end treatment of the built to boundary wall is required where abutting the site boundary at the primary frontage.
- 15. Where optional built to boundary walls are not adopted, the following applies: - side setbacks shall be in accordance with the Plan of
- Development Table:
- to provide privacy for residents, only high level linear windows are permitted; - EDQ approved solid fencing is installed where
- providing privacy for residents in their private open space areas, and must positively contribute to the streetscape. 16. Mandatory built to boundary walls must have a maximum
- setback of 50mm to facilitate a gutter overhang. 17. Where two neighbouring build to boundary walls are not
- adopted, EDQ approved privacy screening must be erected.

Building Articulation

- 18. All Primary Frontages must be articulated to provide diversity in building form and respond to the local climate. This must be achieved through the incorporation of two of the following design elements: - verandahs / balconies; - roof overhangs;
 - window hoods / screens;
- awnings and/or shade structures. 19. All dwellings must include a clearly identifiable and
 - addressed front door. Front door must be visible from the 34. On-site car parking is to be provided in accordance with Street. Front door access must not be via a Lane. Sliding doors do not constitute a front door.
 - 20. Front door must be sufficiently sheltered from the elements, preferably utilising the structure of the first floor.

of Development Table	Terrace Allotment < 99m ²		Terrace Allotment 100m ² - 170m ²	
	Ground Floor	First / Second Floor	Ground Floor	First / Second Floor
	1.5m *	1.0m *	1.5m *	1.0m *
	1.5m	n/a	1.5m	n/a
	1.5m	0.0m	1.5m	0.0m
	0.05m	0.05m	0.05m	0.05m
naximum)	100%		100%	
m)	0.9m	0.9m	0.9m	0.9m
age to Street	n/a	n/a	1.2m *	1.2m *
	95%		90%	
quirements (minimum)	Studio / 1 Bedroom - 5m ² (minimum dimension of 1.2m); 2 Bedroom - 9m ² (minimum dimension of 2.4m);			

3+ Bedroom - 12m² (minimum dimension of 2.4m). 5% of lot area; minimum 1.5% 1% of lot area; vertical solution on ground at Street frontage vertical solutions encouraged at front entry required. for remaining 3.5%.

- 21. Buildings must be designed to ensure the privacy of occupants, but also allow for overlooking of the Street and Lane to promote casual surveillance.
- 22. Secondary frontages must be orientated to provide casual surveillance of the Street and articulated to reduce the mass of the building. This must be achieved by the incorporation of verandahs / porches or the inclusion of window openings, plus one more of the following design elements awning and shade structures
- variation to roof and building lines;
- use of varying building materials. 23. Design of dwellings with Secondary frontages to Street must visually 'wrap' around the corner, providing activation of the corner and passive surveillance of the Street through the form of porch/alfresco openings
- and/or glazing. 24. If provided, privacy screening must be either of solid material (e.g. timber, steel), opaque screens, perforated panels, or trellises that are permanently fixed, and are to have a maximum of 50 per cent openings.
- 25. Carports and garages are to be compatible with the main building design in terms of height, roof form, detailing, materials and colours.
- 26. For carports, the facade construction, appearance and treatment must be visually consistent with that of a garage, and must be compatible with the main building design. No prefabricated facades permitted.
- 27. All building materials must be suitably coloured, stained or painted, including retaining, fences, walls and roofs. Untreated materials, such as zinc coated steel, bare metal, concrete block or masonry panels are not permitted.
- 28. Dwellings must include landscaping along the Street frontage to reinforce the dwelling entry, and to positively contribute to the streetscape. Turf is prohibited; ground covers are required where turf would typically be installed
- 29. Air-conditioners, hot water systems, clothes lines and other household services must be screened and/or located to minimise visual impact to the Street. Services may be visible from the lane, but must be screened.
- 30. Bin storage is to be provided where identified on the Plan of Development. Bin storage must be screened from the lane, and be visually compatible with the main building design

Private Open Space

- 31. Primary private open space must be provided in accordance with the Plan of Development Table. This area may be roofed and take the form of an upper floor balcony or rooftop terrace.
- 32. Primary private open space must be directly accessible from a living space. There must be adequate space to accommodate a table and chairs, planting and a BBQ. Shade should also be provided.
- 33. Secondary private open space may be accessed off a bedroom, multi-purpose area or a home-based business

On-site Car Parking and Driveways

- the following minimum requirements: a. Studio, 1 and 2 Bedrooms - 1 space per dwelling;
- b. 3 or more Bedrooms 2 spaces per dwelling.
- 35. Car parking may only be provided in tandem on lots 25m deep or greater.

- 36. At least one car park per dwelling must be covered. Carports are permitted.
- 37. Garages / carports are to be located as indicated on this Plan of Development.
- 38. Single car garage / carports must achieve a minimum garage door opening of 2.4m when open. 39. Double garages must feature a singular garage door and
- opening; two separate garage doors are not permitted. 40. Vehicle access to a dwelling is only permitted from a
- Lane; vehicle access from a Street is prohibited.

Fencina

- 41. Fencing erected by Economic Development Queensland must not be altered, modified or removed without prior written approval from Economic Development Queensland.
- 42. Feature fencing identified on the Plan of Development is mandatory.
- 43. Feature fencing is to be: constructed of "Good Neighbour" style capped timber fencing, with a minimum 10mm gap between slats; - maximum height of 1800mm; and
- must be painted in Colorbond Woodland Grey. 44. Feature fencing must be setback from the front dwelling wall by a minimum of 1.0m, and must not prohibit the ability for the design of the dwelling to visually 'wrap' around the corner
- 45. Fencing to Primary Frontages must be in the form of planter boxes and/or privacy screening for residents. in particular where there is a front open space.
- 46. Fencing on Lane frontages must be solid fencing and be compatible with the main building design in terms of height, form, detailing, materials and colour.

Acoustics

47. The relevant Acoustic Report must be considered and mitigation strategies adopted where deemed necessary by the Building Certifier. Lots 2001 - 2048 are subject to acoustic constraints. Information regarding building form treatments required to habitable rooms to ensure compliance is outlined under the TTM Acoustic Report, Section 9. Noise categories for each lot are outlined in Table 11 within the TTM Acoustic Report. Associated sound reduction requirements and acceptable forms of construction have been outlined within the TTM Acoustic Report (Table 12 and Appendix D) and can also be found within QDC MP4.4 Schedules 1 and 2.

Definitions

Street - A public road (generally 14m wide or greater) providing vehicle access and services to the wider community and open space.

Lane (or Laneway) - A narrow public road (6.5m wide) providing vehicle access and services to the wider community and open space.

CARSELDINE URBAN VILLAGE PLAN OF DEVELOPMENT **STAGE 2**

PLAN REF: 128180-75 Rev No С DATE: 08 JULY 2020 CLIENT: EDQ DRAWN BY: LZ./MD CHECKED BY: MD

Legend

Site Boundary Stage Boundary Sports Park

Allotment Controls

- Mandatory Built to
- Boundary Wall
- No Vehicle Access Primary Frontage
- Feature Fencing
- Indicative Double Garage / Carport Location
- Indicative Single Garage
- Preferred Primary Private Open
- Space Location (Upper Levels Indicative Letterbox Location
- Indicative Front Door Location
- Bin Storage Location
- Proposed Sewer Access Point
- Acoustic Treatment may be required -refer TTM Acoustic Report

All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

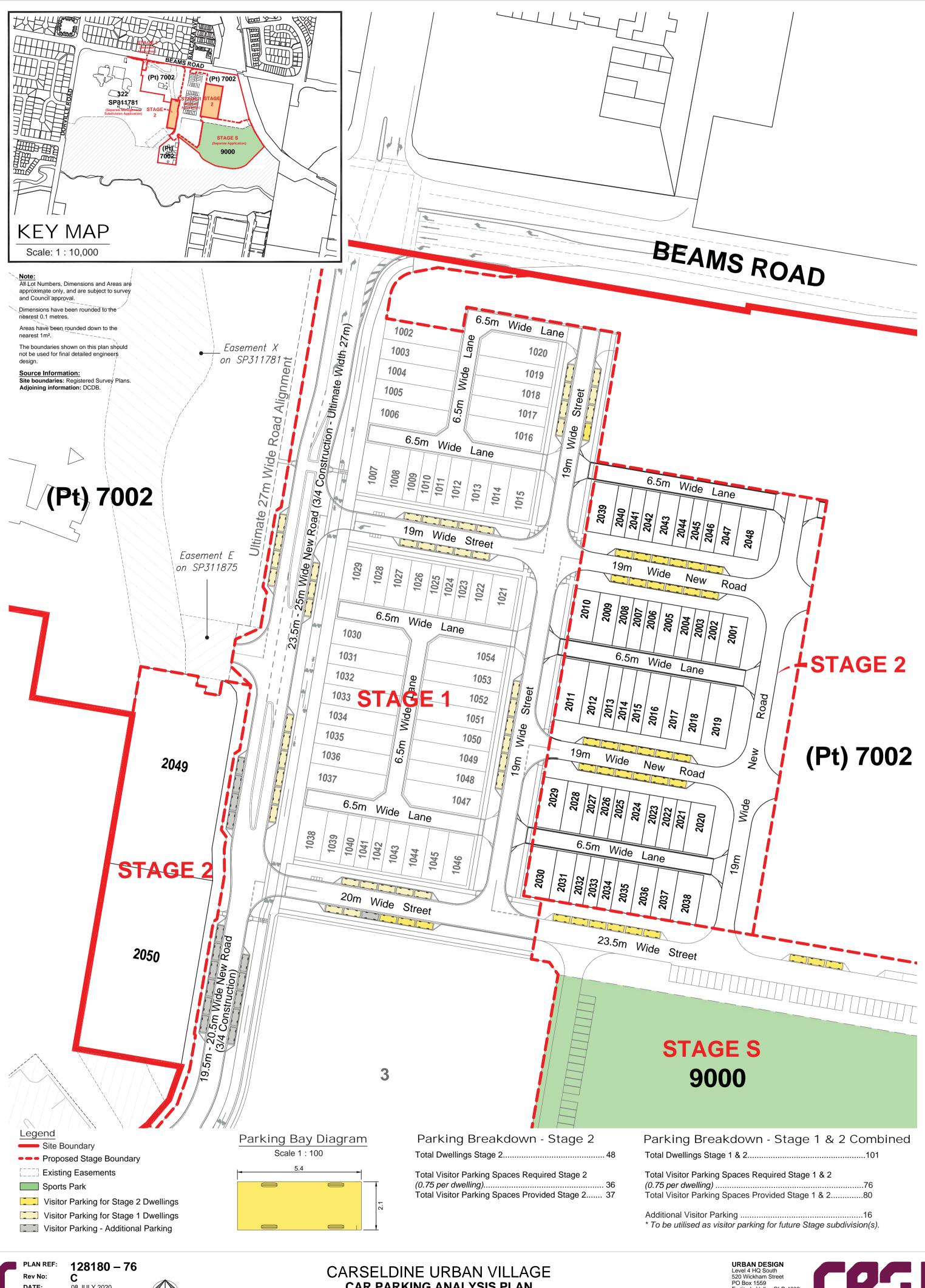
Areas have been rounded down to the nearest 1m².

The boundaries shown on this plan should not be used for final detailed engineers design



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CAR PARKING ANALYSIS PLAN STAGE 2

08 JULY 2020

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EDQ

DRAWN BY: LZ/JC CHECKED BY: MD

DATE: CLIENT:

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Carseldine Urban Village Stage 2

APPENDIX B APPROVED MASTERPLAN ROAD CROSS SECTIONS



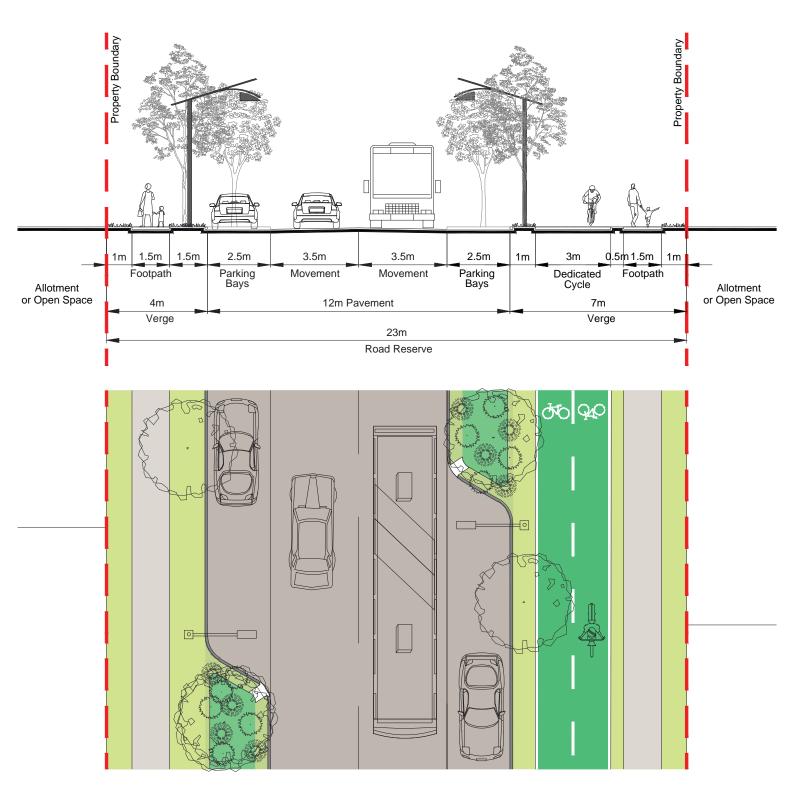
Village Main Street - 27m Wide Road Reserve



Disclaimer: Cross Sections are indicative only and subject to detail design. Location of pavement subject to change through detailed design of landscape and servicing.



Carsledine Urban Village

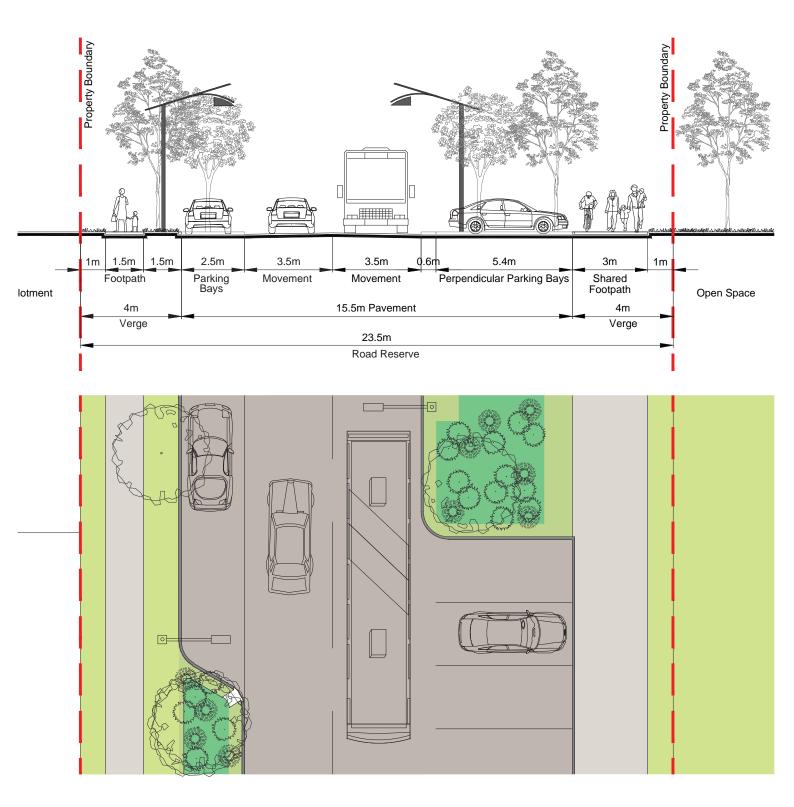




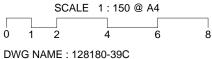


Western Access Road / Shared Busway - 23m

Carseldine Urban Village







Residential Park Esplanade - 23.5m

Carseldine Urban Village



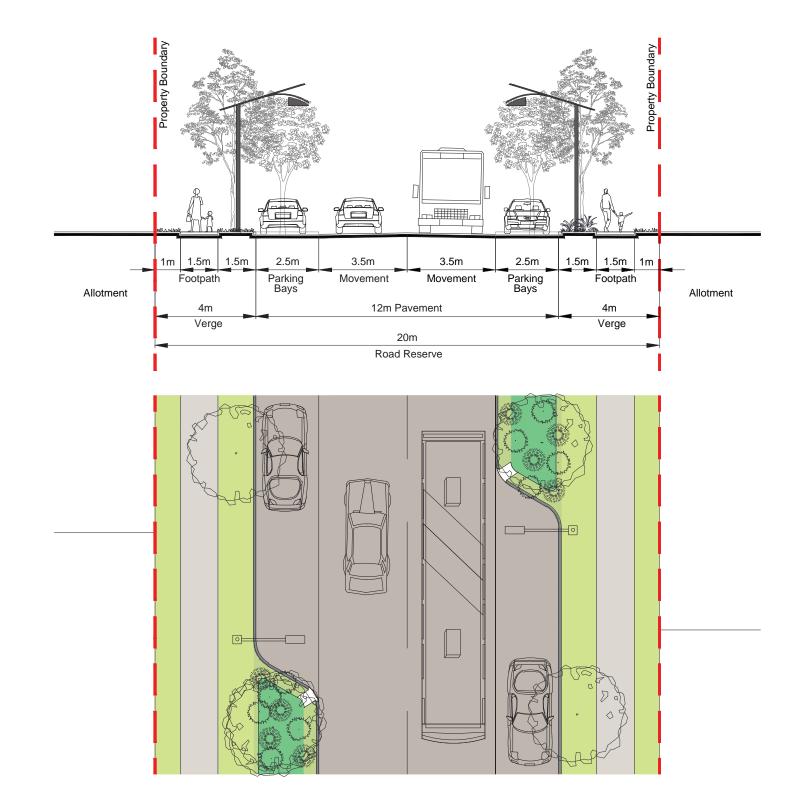


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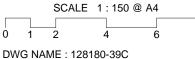
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Railway Esplanade - 23.5m + 10.5m Buffer

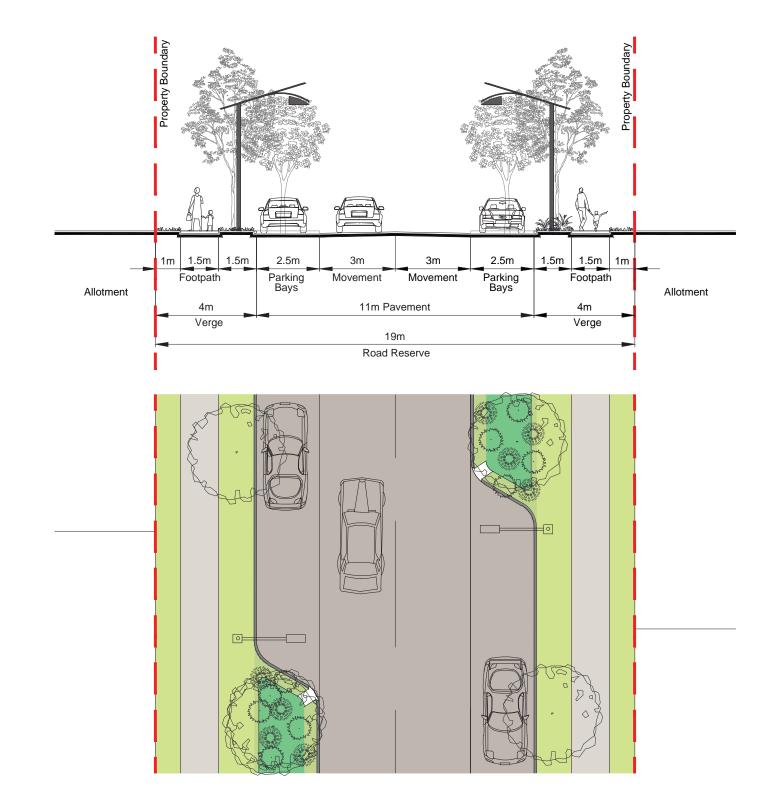




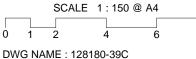


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Loop Road - 20m Carseldine Urban Village



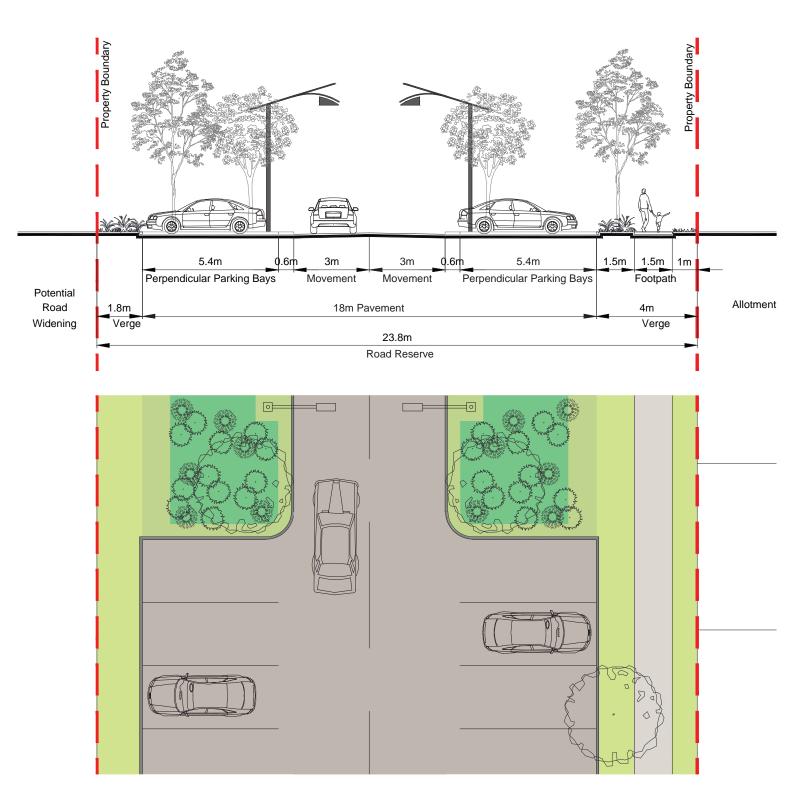




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Access Place - 19m Carseldine Urban Village



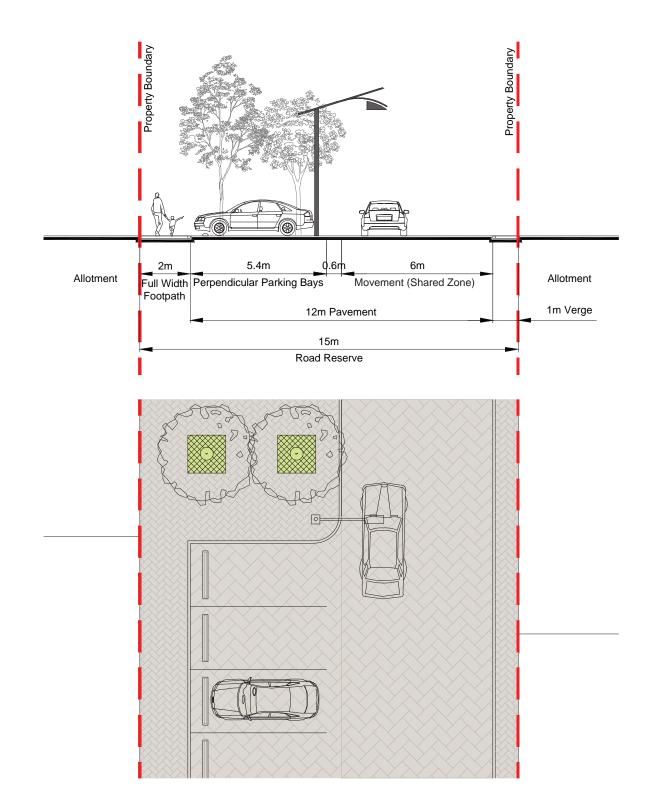


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Access Place (Parking) - 23.8m Carseldine Urban Village

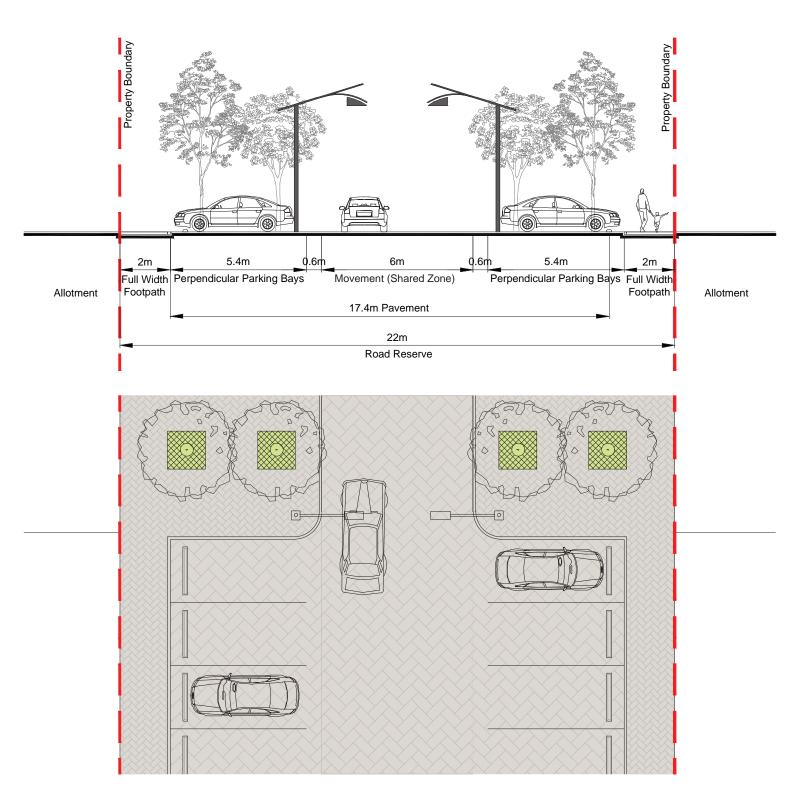






Shared Access Lane (Parking One Side) - 15m

Carseldine Urban Village

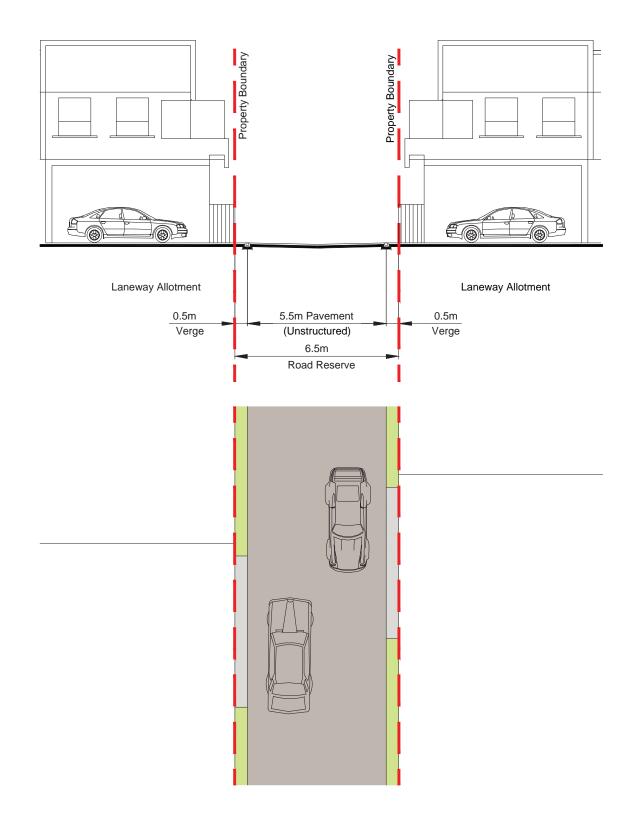






Shared Access Lane (Parking Two Sides) - 22m

Carseldine Urban Village







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Access Lane - 6.5m Carseldine Urban Village Carseldine Urban Village Stage 2

APPENDIX C REFUSE COLLECTION VEHICLE SWEPT PATH



