





 Approval no:
 DEV2021/1183

 Date:
 09/09/2021

EDQ DA/TS NOTE THAT STAGE 3B IS SUBJECT TO FURTHER ASSESSMENT

Technical Memorandum

Title	Carseldine Village	
	Stage 3 Traffic Assessment	
Client	Urban Development, Economic Development Queensland	
Date	13 August 2021	
Author	Bradley Fuller	
Reviewer	Andy Johnston (RPEQ: 24764)	

Project No	CEB06857
Status	Final
Discipline	Traffic and Transport
Office	Brisbane

1 Introduction

Cardno has been commissioned by Urban Development, Economic Development Queensland (EDQ) to provide traffic and transportation advice in relation to the proposed Carseldine Village (CV) 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 CV. 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 3 of the CV, and includes:

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

1.1 Background

On 18th December 2018, the Minister for Economic Development Queensland (MEDQ) granted a change to the CV 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, Urban Development, EDQ has proposed additional changes to the CV masterplan, including adjustments to the staging boundaries. A second change to the CV 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 3 of Precinct 1 does not trigger any external roadworks and the relevant works to the external road network have now been completed as part of Stage 1.



2 Development Proposal

2.1 Overview

As indicated on Figure 2-1, Stage 3 comprises two sections, Stage 3A located towards the eastern edge of the precinct and Stage 3B located centrally within the precinct.

It is noted that the south western parcel (Stage 3B) was originally located with Stage 1 of the CV precinct, part of Lot 3 of the masterplan. Stage 3B will be developed in the future, while the southern portion of Stage 1 (Lot 3) has since been approved for a vertical 150 bed aged care facility.



Figure 2-1 Precinct 1 – CV Stage 3

Source: Nearmap

2.2 Development Yields

2.2.1 Original Stage 3 Yields

At the time of preparing the original TIA dated 1st May 2018 for the CV masterplan approval, the yields proposed for the Stage 3A and 3B areas currently being developed were proposed to be as follows:

- > Stage 3A (eastern parcel): up to 80 dwelling terraces
- > Stage 3B (south-western parcel): 110 terraces and 150 retirement / aged care units

The yields for the Stage 3A area relate to a larger parcel than is currently being applied for. Therefore, the 80 dwellings yield represents an upper limit.

As mentioned above, Stage 3B was originally included in the Stage 1 area, which was planned to deliver 110 terraces and 150 retirement / aged care units. The Stage 1 DA application only sought to deliver 53 terraces out of the 110 terraces. Therefore, a balance of 57 terraces remain.

The subsequent Stage 2 area was approved to deliver 43 terraces however the DA application sought to deliver 48 terraces. This is five in excess of the approved plan. However, when accounting for the surplus from Stage 1, this results in an overall balance of 52 terraces.



2.2.2 Proposed Stage 3 Yields

Development plans for Stage 3 indicate that some changes have been introduced which deviate from the originally proposed yields. The proposed Stage 3 site is set to incorporate the following land uses:

- > 33 terrace dwellings
- > One (1) future development site

A comparison of the approved and proposed yields across Stages 1 to 3 is outlined in Table 2-1.

Table 2-1	Comparison of	Yields - Stages 1 to 3	
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	Land Use	Stage 1	Stage 2	Stage 3	Stages 1-3 Total
Approved	Terraces	110	43	80*	233
Masterplan	Retirement / aged care units	150	-		150
Proposed	Terraces	53	48	33	134
Development	Retirement / aged care units	150**	-	-	150
Difference	Terraces	-57	+5	-47	-99
	Retirement / aged care units	0	-	-	0

* 80 yield related to a larger parcel of land than is currently being applied for

** Delivered as part of a separate application

As shown, the combination of Stages 1 to 3 result in 99 less terrace dwellings than originally proposed.

For Stage 3 in particular, the proposed development will deliver up to 47 less terrace dwellings. This indicates that the development yield is lower than what has been approved for the masterplan, which was defined as a maximum limit, and is therefore considered to be appropriate.

2.3 Access

2.3.1 External Access

Access for Stage 3 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 and is now constructed and operational.

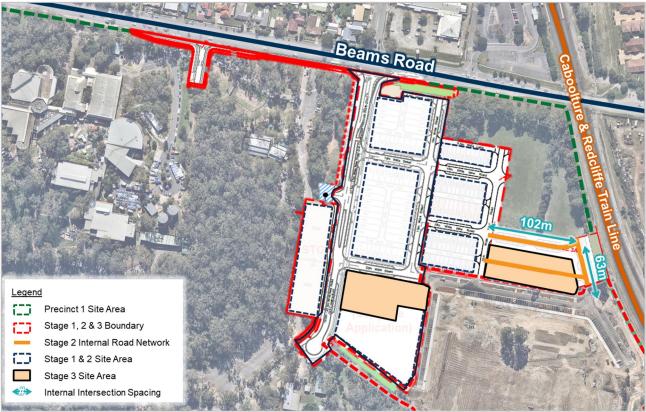
2.3.2 Internal Road Network

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 Stage 3 internal road network with all internal intersections spaced at least 60m apart. This is demonstrated on Figure 2-2.

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Figure 2-2 Development Access Internal Intersection Spacing



Source: Nearmap, RPS

2.4 Laneway Design

The laneways have been designed with 6.5m width, comprising 5.5m wide pavement and 0.5m wide verges. These provide access for resident garages and carports and refuse collection.

In terms of design standards, the laneway width complies with the EDQ Practice Note 12: Rear Lanes which outlines that 6.5m wide laneways are permitted. There are no Council standards for laneways however it is noted that BSD 1021 outlines that road widths for local roads are 5.5m wide, although the verge width is noted as 4.25m. This is applicable for public roads, rather than laneways, and as such the full verge width is not considered to be required in this scenario. The design has been able to accommodate services (stormwater, sewer and water) within the laneway, making the design fit for purpose.

2.4.1 Laneway Accessibility

The laneway is intended to service movements by residents accessing garages and servicing vehicles only. Residents would be entering the laneway to access their garages. The swept path assessments at Appendix B demonstrate that a B99 vehicle is able to suitably access the garages. It is noted that a B99 vehicle represents the largest design vehicle for access into the garages, though it is anticipated that resident's vehicles will more commonly be a smaller B85 vehicle.

There would be almost no need for residents to turn around within the lane, and if there was a desire to, this could be undertaken with the use of the vacant garage space.

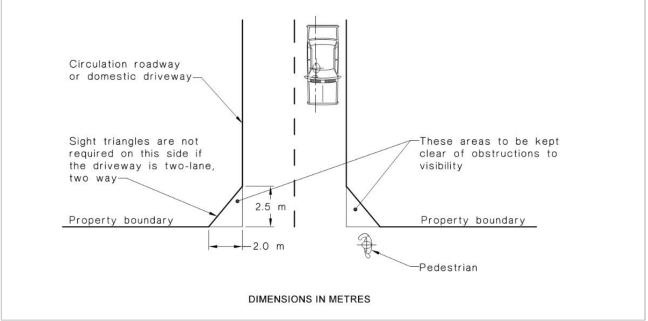
Furthermore, visitor parking is adequately provided on the road network along the lot frontages and therefore, visitors would not be travelling into the laneways.

2.4.2 Pedestrian Sightlines

Australian Standard 2890.1 (AS2890.1) outlines standards for pedestrian sightlines at accesses. With reference to Figure 3.3, the pedestrian sight splays should measure 2.5m long and 2.0m wide from the property boundary. A copy of this figure is shown on Figure 2-3.



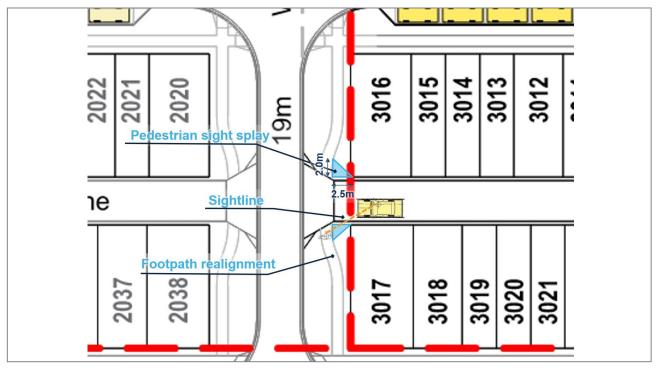
Figure 2-3 AS2890.1 Pedestrian Sight Splays



Source: AS2890.1 Figure 3.3

The laneways at Stage 3 have been designed to meet this requirement, with footpaths aligned away from laneway entrances to increase the distance between vehicles and pedestrian paths, as outlined in Figure 2-4. The footpath alignments have been designed such that sight splays are achieved.





Source: RPS

2.4.3 Garage Design

Stage 3 plans to develop a mixture of 1 car and 2 car garages for lot access. To ensure the design is suitable for residents, a swept path assessment has been completed of a B99 entering and leaving the proposed garages attached in Appendix B. The assessment indicates that a B99 vehicle is able to safely and efficiently access the proposed garages. It is noted that a B99 vehicle represents the largest design vehicle



for access into the garages, though it is anticipated that resident's vehicles will more commonly be a smaller B85 vehicle.

With regards to potential conflicts between vehicles reversing out of garages and refuse collection vehicles servicing the laneways, Cardno does not believe this to be of major concern. Apart from being a common arrangement within residential areas, the low number of trips from residential garages coupled with the once (or at most twice) weekly servicing route outside of peak periods would mean that the likelihood of potential coinciding vehicles is low.

Furthermore, any risks that may arise are reasoned to be tempered when considering the following factors:

- Laneways have been designed with narrowed widths to encourage slow speeds. Any vehicle movements occurring within the lane, and especially when reversing out of garages, will be appropriately slow enough to minimise the likelihood of conflicts occurring
- > Refuse collection vehicles are constantly stopping when servicing residential lots and therefore will be travelling at very slow speeds
- > The noise generated by a refuse collection vehicle will serve as a clear indicator to drivers that a vehicle is in the lane, and will proceed cautiously

The consideration of all of these factors in combination mean that the risks associated with vehicles reversing from garages is low. Furthermore, EDQ Practice Note 12 Rear Lanes identifies that 0m setback from the laneway is acceptable for garages. The Stage 3A Plan of Development (POD) outlines the requirement for all garages to be setback 1.5m from the laneway, which ensures an even safer design outcome.

2.5 Active Transport Facilities

Pedestrian facilities will be provided for throughout Stage 3. New pedestrian paths are proposed to connect the uses in Stage 3 to the sporting facilities constructed as part of Stage S and the broader CV precinct.





Source: Nearmap, RPS

For the Residential Park Esplanade at the eastern border of Stage 3A, a 3m wide shared path and a footpath of a minimum 1.5m width will be provided. With regards to Access places, footpaths will be provided with a minimum width of 1.5m. Refer to Appendix D for cross sections approved as part of the CV masterplan.



3 Traffic Impact

The peak traffic generated by the Stage 3 development was assessed as part of the original CV masterplan TIA produced by Cardno on the 1st May 2018 which indicated that external works was required. Since that assessment, development yields for Stage 3 have changed to reduce the number of dwellings proposed.

The trip generation for both approved and proposed yields are shown in Table 3-1.

Table 3-1 Proposed Yields and Trip Generation

	Yield		Peak Trip Generation	Peak Trip Generation		
Land Use	Original	Proposed	Rate	Original	Proposed	
Terrace	80 dwellings	33 dwellings	0.575 vph/dwelling	46 vph	19 vph	
Total				46 vph	19 vph	
Difference				-27 vph		

As shown, the proposed yields result in an approximate 27 vehicle trip reduction in the peak periods compared to the original assessment.

Therefore, considering the peak trips generated by the site in Stage 3 on the surrounding road network is a reduction from the original assessment, the findings from the masterplan traffic assessment will stand.



4 Parking

4.1 Car Parking Provision

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

Table 4-1	Minimum Parking	Requirement

Land Use	Yield	Parking Rate	Parking Requirement	Parking Provision
Terrace (house)	33 dwellings	On site: 1 spaces / dwelling unit On street: 0.75 spaces /	On site: 33 spaces [#] On street: 25	50 (on site)
	oo aweningo	dwelling unit*	spaces	39 (on street)

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;

* Although not specified in the Fitzgibbon PDA Development Scheme, recommended on street parking rate is outlined in EDQ's PDA Guideline 5: Neighbourhood Planning and Design

Stage 3 proposes to provide 89 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 Plan of Development (RPS drawing 128180-93).

In accordance with Fitzgibbon PDA Development Scheme and the PDA Guideline 5: Neighbourhood Planning and Design, the minimum parking required is 33 on site spaces and 25 on street spaces, based on the proposed land uses. The development proposes 50 spaces for residents through on site terrace spaces and 39 on street spaces for visitors. Of the on street parking, the surplus 14 spaces are reserved as parking for the balance stages in the precinct. These spaces are generally indicated on the Car Parking Analysis Plan Stage 3 (RPS drawing 128180-94).

Therefore, the development site provides sufficient parking 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 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
Bay length – 90 degree	5.4m	5.4m	5.4m	\checkmark	\checkmark
Bay width – 90 degree	2.6m	2.6m	2.6m	\checkmark	\checkmark
Aisle width – 90 degree	6.2m	5.8m	6.2m	\checkmark	\checkmark

Table 4-2Parking 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, a 45 degree taper is provided adjacent to the end bays to facilitate easier manoeuvring into and out of these bays. Therefore, the proposed design is considered to be suitable. 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.

4.3.1 Refuse Collection

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-SK82-D attached at Appendix C.

Furthermore, to ensure a refuse collection vehicle is able to service Stage 3, 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 within the 1.5m setback or the laneway verge. The swept paths illustrate that the refuse collection vehicle will be able to manoeuvre through Stage 3 while keeping the vehicle body outside the verge, demonstrating that servicing will be able to occur without manual handling.

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

4.3.2 Emergency Vehicles

In addition to refuse collection, emergency vehicle access with a fire truck has been reviewed with a swept path assessment. Refer to drawings CEB06857-SK99-C attached at Appendix C. This assessment demonstrates that the Stage 3 laneway designs are suitable for accommodating fire trucks in the case of an emergency.

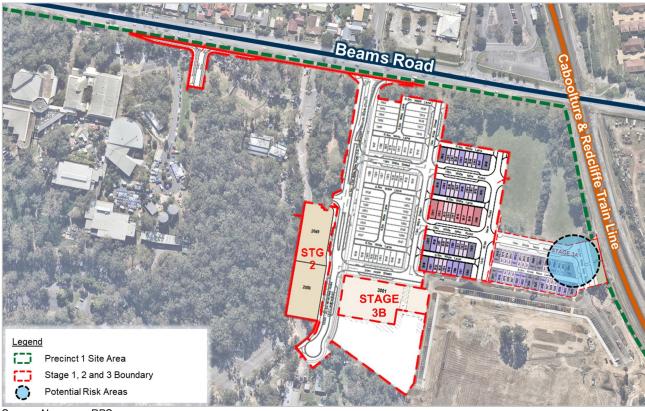


5 Safety Review

Potential Risk Areas

Figure 5-1

A safety assessment has been completed to identify the potential risks associated with the proposed Stage 3 development arrangement. One potential risk area has been identified for further review. This is indicated on Figure 5-1.



Source: Nearmap, RPS

The risk area has been highlighted due to the potential conflicting movements between vehicles using the on-street parking and other vehicles on the road. The area at Stage 3A relates to the 90 degree parking along the eastern boundary of the site, particularly at the internal intersections.

5.1 Stage 3A Safety Overview

The internal intersections within Stage 3A will operate as a priority controlled intersection, with the northsouth local access road as the major approach and the east-west local access roads as the minor approach.

The design is considered to be safe due to the following factors:

- > Clear priority of movements
- > Low traffic volumes
- > Low speeds through the intersection
- > Clear sight lines

5.1.1 Priority Movements

As described above, the intersection is proposed to allow priority to the north-south traffic with the western approach giving way. The parking spaces are located on the north-south road which gives the vehicles undertaking parking manoeuvres on the carriageway clear priority over the traffic entering from the west. This means that any vehicles entering the intersection would know that they need to give way to the vehicles manoeuvring in and out of parking spaces, allowing these manoeuvres to be undertaken safely. This will also be reinforced by the fact that residents will be familiar with the road conditions as they will be regularly driving through these streets and will be able aware of potential traffic movements.



5.1.2 Low Traffic Volumes

The intersection serves a portion of the residential catchment to the north however will not function as a critical route for residents as the parallel north-south routes provide more convenient access in and out of the precinct.

Furthermore, it should be noted that the on-street parking is associated with overflow parking for the sports fields it is unlikely to be at its highest use at the peak hours so the likelihood of opposing vehicles meeting will be low.

5.1.3 Low Speeds

All approaches to the intersection are expected to have a low speed environment of 50km/h, given the function of the roads serving a local catchment. Drivers travelling along the north-south road are anticipated to naturally reduce their speed due to the friction accorded with 90 degree on-street parking (as well as sports field patrons trying to navigate to on-street parking spaces). It is also noted during sporting events, residents will be aware of the typical traffic conditions and will drive cautiously. Furthermore, the vehicles approaching from the west will be slowing to navigate the intersection, as they will need to give way to other vehicles.

5.1.4 Clear Sight Lines

Drivers traversing the north-south road have unobstructed sightlines and thus clear visibility of upcoming traffic conditions such as vehicles parking. Drivers on the western approach also have clear sightlines to the north-south road approaches and to the parking spaces directly opposite, and can easily determine safe times to travel through the intersection. Furthermore, the drivers exiting the parking spaces will have direct line of sight up the minor road when reversing out or driving forward out of the spaces, allowing drivers to clearly see opposing traffic.

5.2 Safety Risk Assessment

A risk assessment has been prepared for the identified risks. This has been based on the Department of Transport and Main Roads (TMR) Guide to Traffic Impact Assessments (GTIA) safety risk score matrix (Figure 9.3.2(a)), a copy of which is shown below on Figure 5-2.

		Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5)
-	Almost certain (5)	м	М	н	н	н
Potential likelihood	Likely (4)	м	м	М	н	н
	Moderate (3)	L	м	м	м	н
	Unlikely (2)	L	L	М	м	м
	Rare (1)	1	E	L	м	М

Figure 5-2 Safety Risk Score Matrix

Source: TMR GTIA Figure 9.3.2(a)

The rating descriptors are defined as the following in Table 5-1.



Table 5-1 Kisk Rating I							
Rating Measure	Descriptor						
Potential Likelihood of Incident Occurring							
Almost Certain (5)	Very likely. The event is expected to occur in most circumstances						
Likely (4)	There is a strong possibility the event will occur						
Moderate (3)	The event might occur at some time						
Unlikely (2)	Not expected, but there's a slight possibility it may occur at some time						
Rare (1)	Highly unlikely, but it may occur in exceptional circumstances. It could happen, but probably never will.						
Potential Consequence	of Incident Occurring						
Property Only (1)	Minor Injury (2) Medical Treatment (3) Hospitalisation (4) Fatality (5)						
Potential Risk of Incide	nt Occurring						
High	Should be corrected or the risk significantly reduced, even if the treatment costs is high						
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high.						
Low	Should be corrected or the risk reduced, if the treatment cost is low						

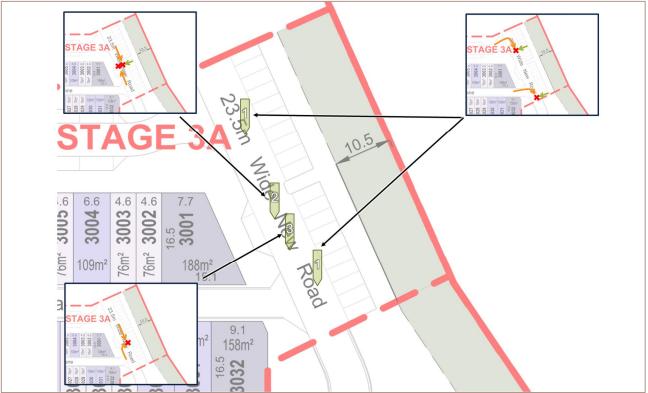
Table 5-2 outlines the risk assessment for the proposed arrangement of 90 degree on-street parking spaces located on the eastern border of Stage 3A (adjacent lot 3001, as indicated on Figure 5-3). The assessment identifies potential risks with the proposed arrangement and assigns the likelihood and consequence of each issue.

Table 5-2 Risk Assessment

Risk	Description	Risk Level			
RISK	Description	Likelihood	Consequence	Risk	
1	Reversing vehicle colliding with vehicle undertaking a right turn manoeuvre	2	2	LOW	
2	Reversing vehicle colliding with through vehicle	2	2	LOW	
3	Vehicle entering parking space colliding with through movement	2	2	LOW	



Figure 5-3 Stage 3A Identified Risks with Proposed Arrangement



Source: Nearmap, RPS

Three types of risks have been identified with the proposed arrangement in Table 5-2 with each of the risks identified considered low level risks. The likelihood of any of the conflicts occurring is unlikely due to the lower speed environment, low traffic volumes, clear sight lines and relatively flat grades. The consequence of the risks occurring is considered to result in minor injury, due to the low speed of manoeuvres.

Therefore, it is considered that the proposed arrangement will operate with a reasonable level of safety.



6 Summary

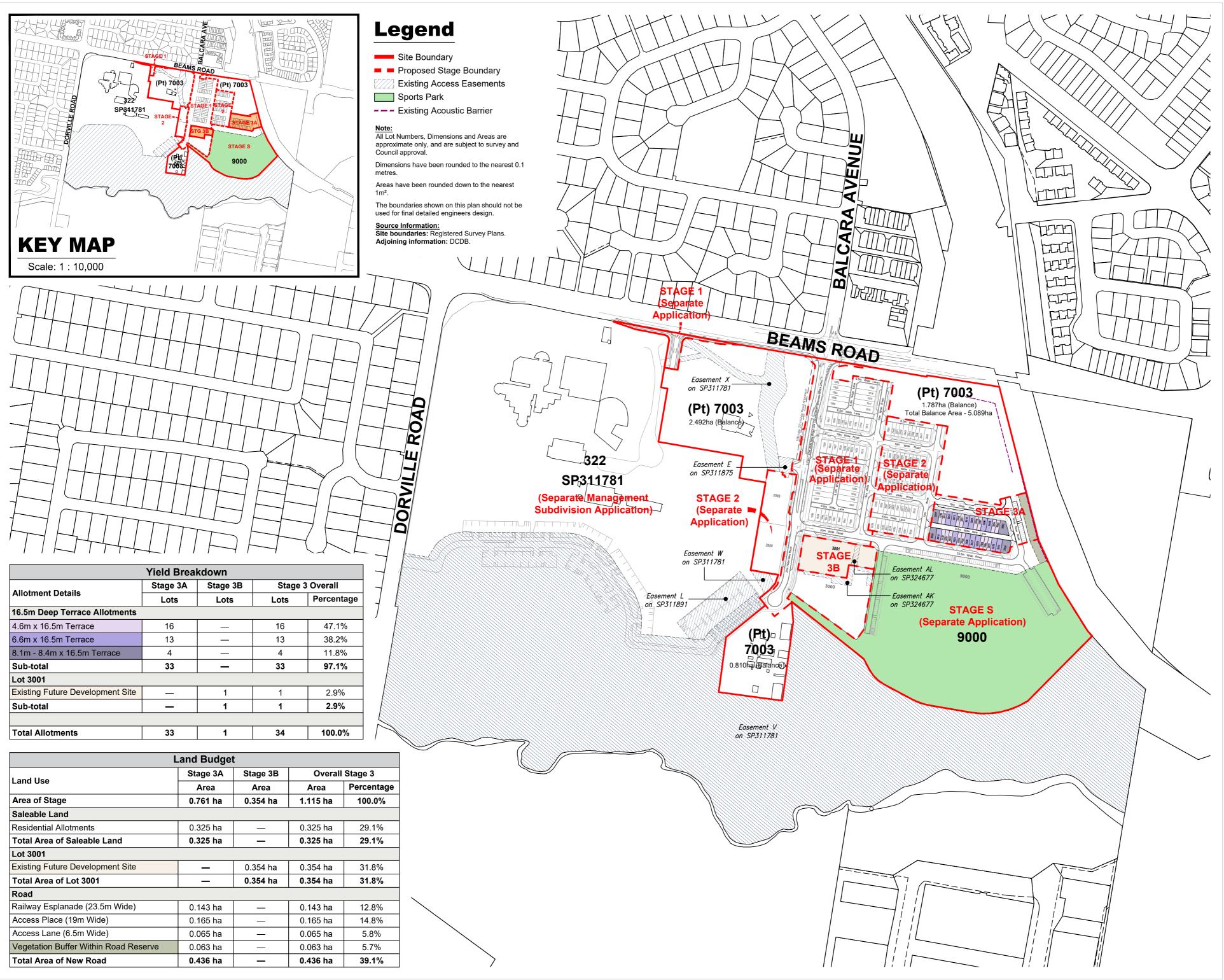
Following the approval of the CV masterplan (DEV2018/932), a development application for Stage 3 has been prepared to demonstrate compliance with the approved masterplan and provide further detailed information. This traffic report outlines the transport related aspects of the stage. The key outcomes of this assessment are as follows:

- > Access has been confirmed to be consistent with the masterplan arrangement, with external access being provided via an upgraded Beams Road / Balcara Avenue intersection, and a left in / left out intersection on Beams Road
- > Active transport facilities are in accordance with the masterplan providing for footpaths on access streets, a shared path along the recreational park esplanade and a separated cycleway along the Village Main Street
- > The traffic impact for Stage 3 has been determined to be within the traffic carrying capacity of the external and internal intersections, given the traffic generation is consistent with the original assessment and the intersections have been designed for the ultimate CV yields
- Parking provision has been determined to be suitable in terms of the requirements as set out in the Fitzgibbon PDA Development Scheme
- > The design of on-street parking has been determined to be largely compliant with relevant standards and where not compliant, deemed to be fit or purpose.
- Refuse collection through the site has been demonstrated to be suitable with swept paths (refer to Appendix C)
- Fire truck access through the site has been demonstrated to be suitable with swept paths (refer to Appendix C)
- > A safety assessment of the internal arrangements has been prepared and indicates that the design presents a low risk for road users.

Therefore, it is considered that the traffic impact, car parking, access, and servicing aspects of the proposed Stage 3 of the Carseldine Village development meet the appropriate standards and will not compromise the safety or efficiency of the existing transport network.

APPENDIX A PROPOSED DEVELOPMENT PLAN





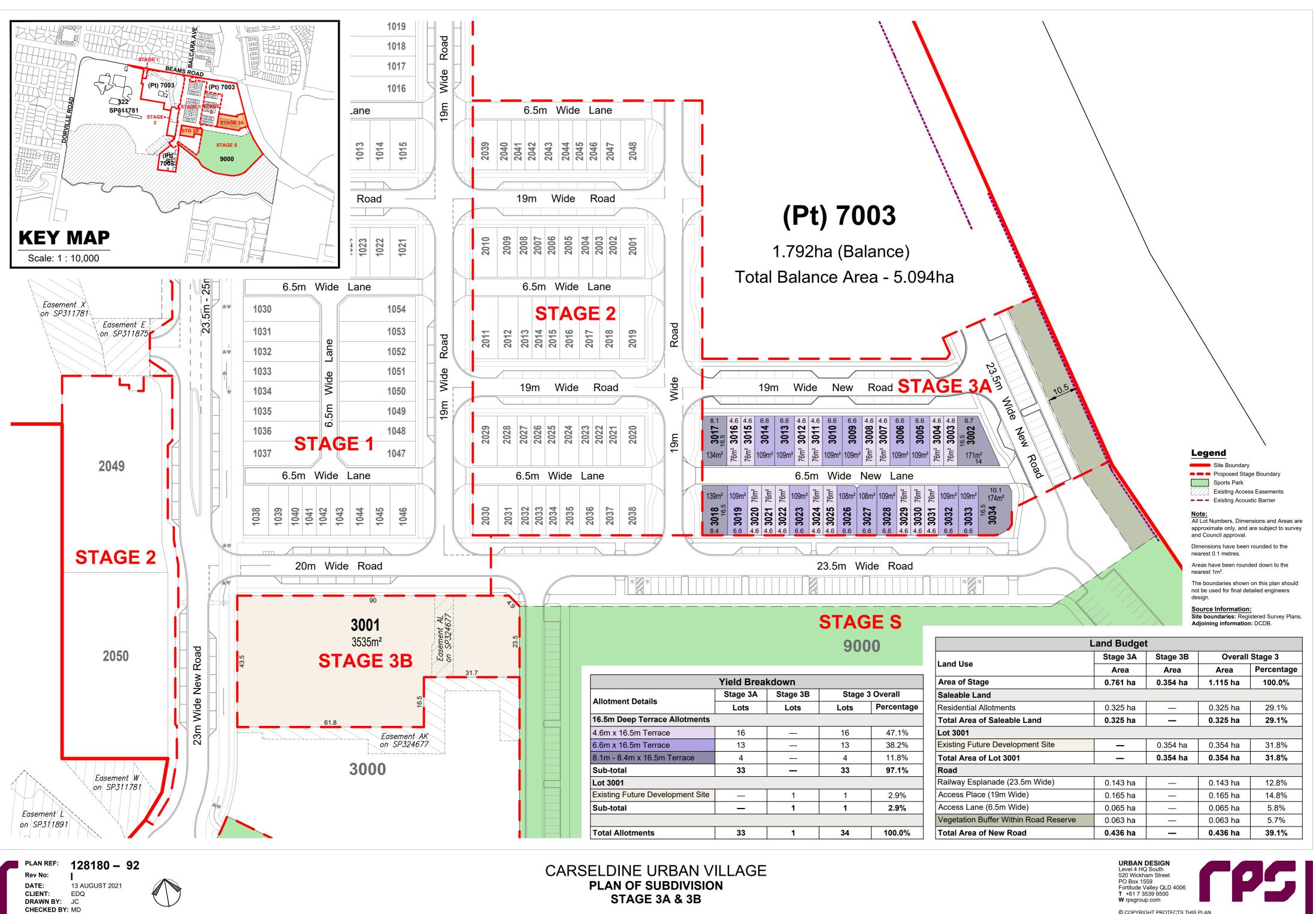
CARSELDINE URBAN VILLAGE

PLAN OF SUBDIVISON **STAGE 3 - OVERALL**

PLAN REF: 128180 - 91 Rev No: 13 AUGUST 2021 DATE: CLIENT: EDQ DRAWN BY: JC CHECKED BY: MD



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Yield Breakdown								
Stage 3A	Stage 3B	Stage	3 Overall					
Lots	Lots	Lots	Percentage					
16	—	16	47.1%					
13	—	13	38.2%					
4	—	4	11.8%					
33	—	33	97.1%					
	•		•					
—	1	1	2.9%					
—	1	1	2.9%					
	·		·					
33	1	34	100.0%					
	Stage 3A Lots 16 13 4 33 	Stage 3A Stage 3B Lots Lots 16 13 4 33 1 1 1	Stage 3A Stage 3B Stage Lots Lots Lots 16 — 16 13 — 13 4 — 4 33 — 33 — 1 1 — 1 1 — 1 1					

Land Budget							
Land Use	Stage 3A	Stage 3B	Overall Stage 3				
Land Use	Area	Area	Area	Percentage			
Area of Stage	0.761 ha	0.354 ha	1.115 ha	100.0%			
Saleable Land	•	•		-			
Residential Allotments	0.325 ha	_	0.325 ha	29.1%			
Total Area of Saleable Land	0.325 ha	_	0.325 ha	29.1%			
Lot 3001		•	•				
Existing Future Development Site	-	0.354 ha	0.354 ha	31.8%			
Total Area of Lot 3001	_	0.354 ha	0.354 ha	31.8%			
Road	•		•				
Railway Esplanade (23.5m Wide)	0.143 ha	—	0.143 ha	12.8%			
Access Place (19m Wide)	0.165 ha	—	0.165 ha	14.8%			
Access Lane (6.5m Wide)	0.065 ha	_	0.065 ha	5.8%			
Vegetation Buffer Within Road Reserve	0.063 ha	_	0.063 ha	5.7%			
Total Area of New Road	0.436 ha	_	0.436 ha	39.1%			

Plan of Development Table		Allotment 9m²	Terrace Allotment 100m ² - 201m ²		
	Ground Floor	First / Second Floor	Ground Floor	First / Second Floor	
Setback Requirements		•	•	•	
Primary Frontage (minimum)	1.5m *	1.0m *	1.5m *	1.0m *	
Garage / Carport (minimum)	1.5m	n/a	1.5m	n/a	
Rear (minimum)	1.5m	0.0m	1.5m	0.0m	
Side					
Built to Boundary (maximum)	0.05m	0.05m	0.05m	0.05m	
Mandatory BTB Wall Length (maximum) (% of boundary length)	100%		1(100%	
Non Built to Boundary (minimum)	0.9m	0.9m	0.9m	0.9m	
Corner Lots - Secondary Frontage to Street (minimum)	n/a	n/a	1.2m *	1.2m *	
Other Requirements		•	•	•	
Site Cover (maximum)	95	5%	g	0%	
Primary Private Open Space Requirements (minimum)	Studio / 1 Bedroom - 5m ² (minimum dimension of 1.2m); 2 Bedroom - 9m ² (minimum dimension of 2.4m); 3+ Bedroom - 12m ² (minimum dimension of 2.4m).				
Street Frontage Landscape Requirements (minimum)	5% of lot area; minimum 1			Street frontage,	

Notes: * 0.0 metres to verandah/balcony

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DATE:

CLIENT:

DRAWN BY: JC CHECKED BY: MD

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- All development is to be undertaken in accordance with the
- Development Approva All Class 1A dwellings are mandated to achieve a minimum Silver Final Certification under the Australian Liveable Housing Design
- Guidelines. 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. 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.
- Refer to Stage 3 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 20. Front door must be sufficiently sheltered from the elements. 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. 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.

etbacks

- Setbacks are as per the Plan of Development Table unless otherwise dimensioned Setbacks are measured to the wall of the structure. The location of built to boundary walls are indicated on the Plan of
- Development Feature end treatment of the built to boundary wall is required where abutting the site boundary at the primary frontage. Feature end
- treatment to be in a material consistent with materials used on the 24. primary frontage building facade. 15. Where optional built to boundary walls are not adopted, the following 25. If provided, privacy screening must be either of solid material (e.g.
 - 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.



CARSELDINE URBAN VILLAGE PLAN OF DEVELOPMENT **STAGE 3A - TERRACE ALLOTMENTS**

- **Building Articulation**
- elements: - verandahs / balconies; - roof overhangs;

23.

50mm to facilitate a gutter overhang

17. Where two neighbouring build to boundary walls are not adopted, EDQ approved privacy screening must be erected

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 three of the following design

- window hoods / screens

- awnings and/or shade structures that vary the horizontal mass created by the row of terrace houses. 19. All dwellings must include a clearly identifiable and addressed front

door. Front door must be visible from the Street. Front door access must not be via a Lane. Sliding doors do not constitute a front door.

preferably utilising the structure of the first floor. 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.

Design of dwellings with Secondary frontages to Street must visually 35. Tandem parking is prohibited.

'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.

Corner lots on each side of the block are to be comprised of varied housing designs to ensure diversity in the streetscape.

timber, steel), opaque screens, perforated panels, or trellises that are permanently fixed, and are to have a maximum of 50 per cent openinas.

26. Carports and garages are to be compatible with the main building design in terms of height, roof form, detailing, materials and colours. 27. 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

- 16. Mandatory built to boundary walls must have a maximum setback of 28. 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.
 - 29. 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.
 - 30 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.
 - 31. Bin storage is to be provided where identified on the Plan of Development. Bin storage must be screened from the lane, and be 45. Feature fencing must be setback from the front dwelling wall by a visually compatible with the main building design.

Private Open Space

- 32. 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.
- 33. 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 is to be provided to the area by being at least 40% roofed.

On-site Car Parking and Driveways

- 34. On-site car parking is to be provided in accordance with the following minimum requirements
 - a. Studio, 1 and 2 Bedrooms 1 space per dwelling;
 - b. 3 or more Bedrooms 2 spaces per dwelling.
- 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.
- Double garages must feature a singular garage door and opening; 39 two separate garage doors are not permittee
- 40. Vehicle access to a dwelling is only permitted from a Lane; vehicle access from a Street is prohibited.

Fencing

- 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 Type A is to be:
- 1.8m high good neighbour style capped timber fence with a minimum 10mm gap between slats. Must be painted in Colorbond Woodland Grey
- 44. Feature Fencing Type B is to be:
- 1.5m high lapped and capped timber fence. Must be painted in Colorbond Woodland Grey.
- minimum of 1.0m, and must not prohibit the ability for the design of the dwelling to visually 'wrap' around the building corner.
- 46. 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.
- 47. 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

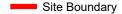
48. The relevant Acoustic Report must be considered and mitigation strategies adopted where deemed necessary by the Building Certifier. Lots 3002 - 3034 are subject to acoustic constraints. Information regarding building form treatments required to habitable rooms to ensure compliance is outlined under 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.

Legend



Proposed Stage Boundary

Allotment Controls

—	Mandatory Built to Boundary Wall
	No Vehicle Access
	Primary Frontage
	Feature Fencing Type A
	Feature Fencing Type B
VV	Indicative Double Garage / Carport Location
	Indicative Single Garage / Carport Location
	Preferred Primary Private Open Space Location
	Indicative Letterbox Location
	Indicative Front Door Location
	Indicative Bin Storage Location

- Indicative Bin Storage Location
- Proposed Sewer Access Point
- Indicative Proposed Street Light (Within Laneway)

Acoustic Treatment may be required refer I IM Acoustic Repor

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

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



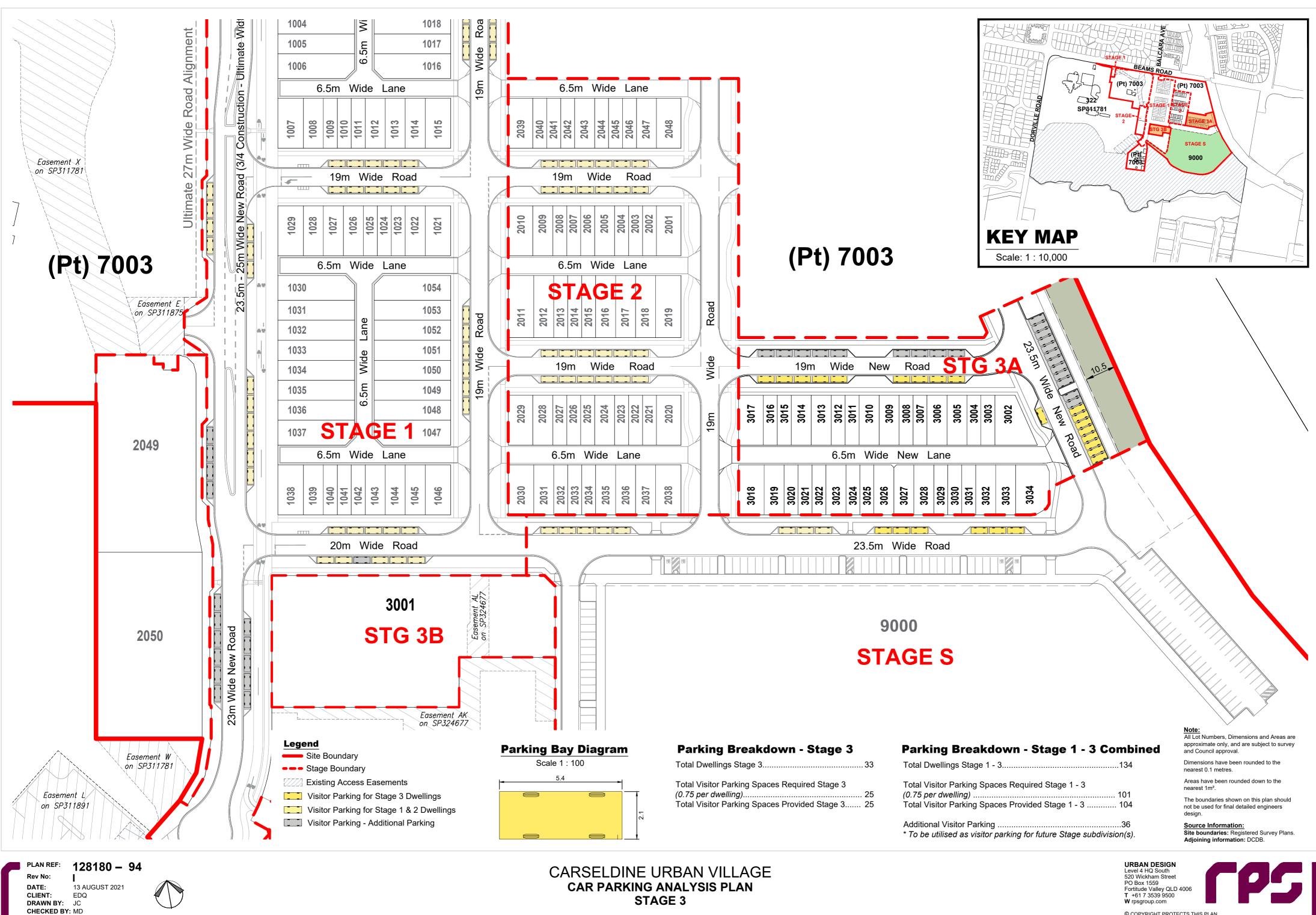
URBAN DESIGN

Fortitude Valley QLD 4006 **T** +61 7 3539 9500

Level 4 HQ South 520 Wickham Stree

W rpsgroup.com

PO Box 1559

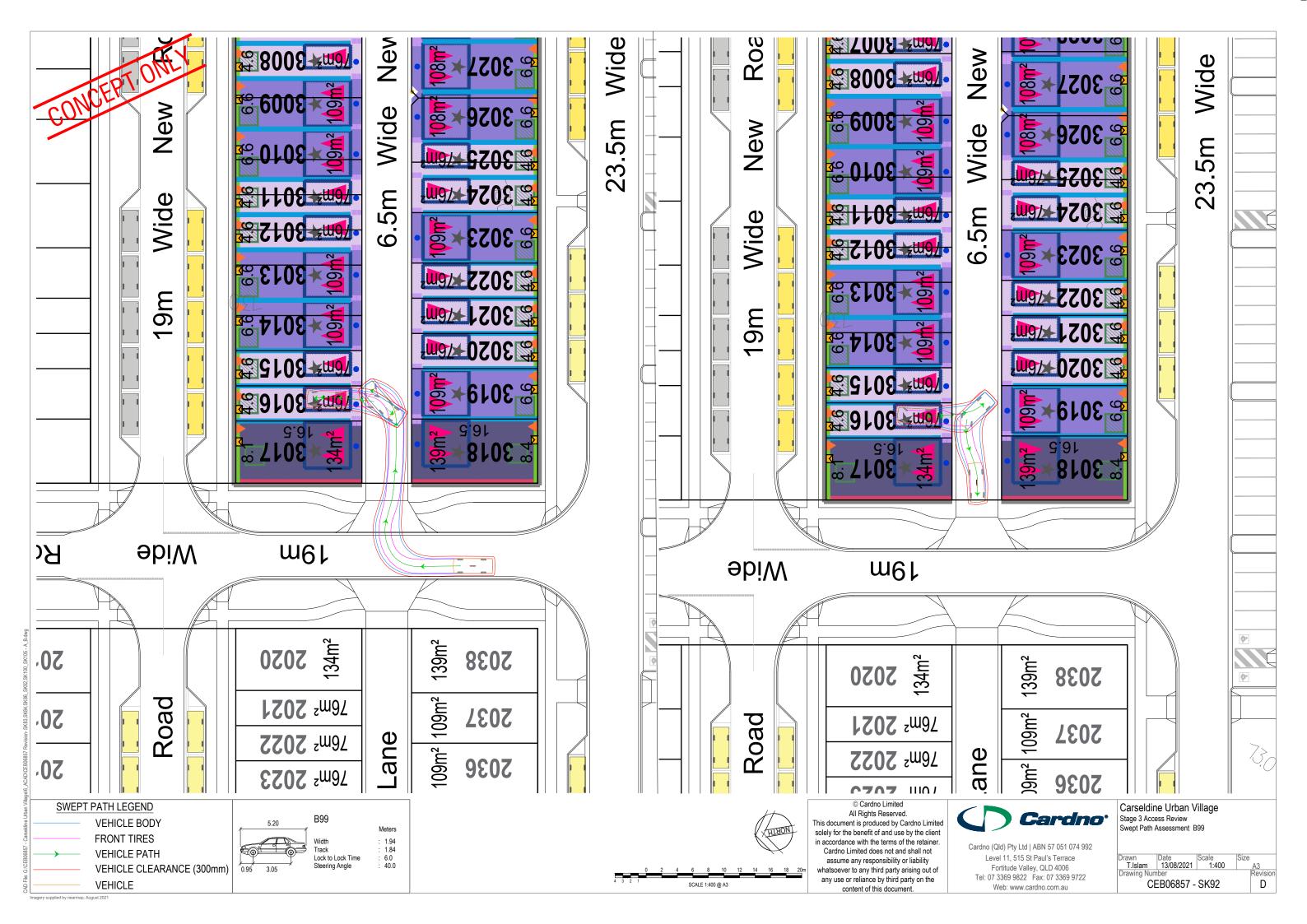


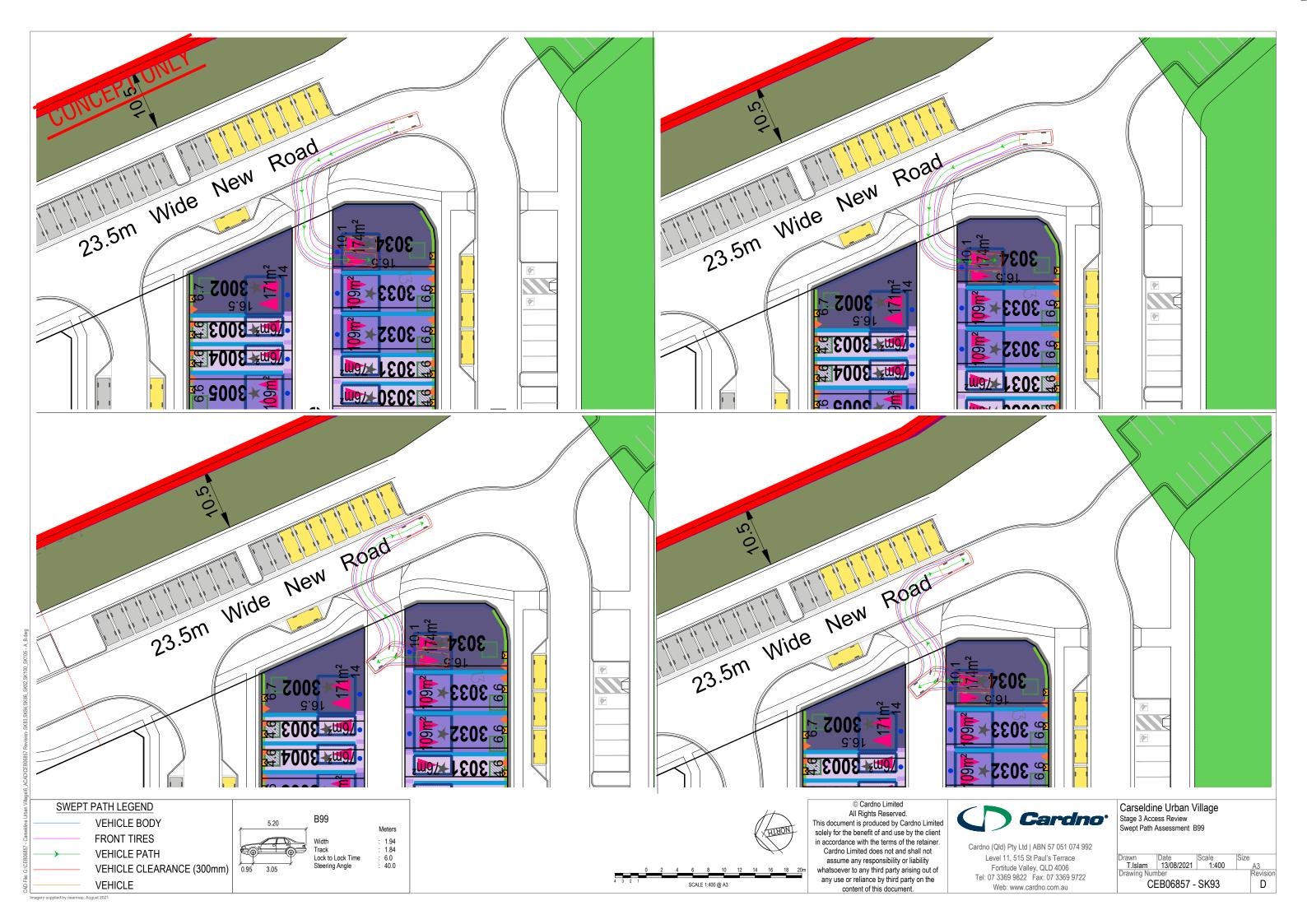
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APPENDIX B GARAGE SWEPT PATHS

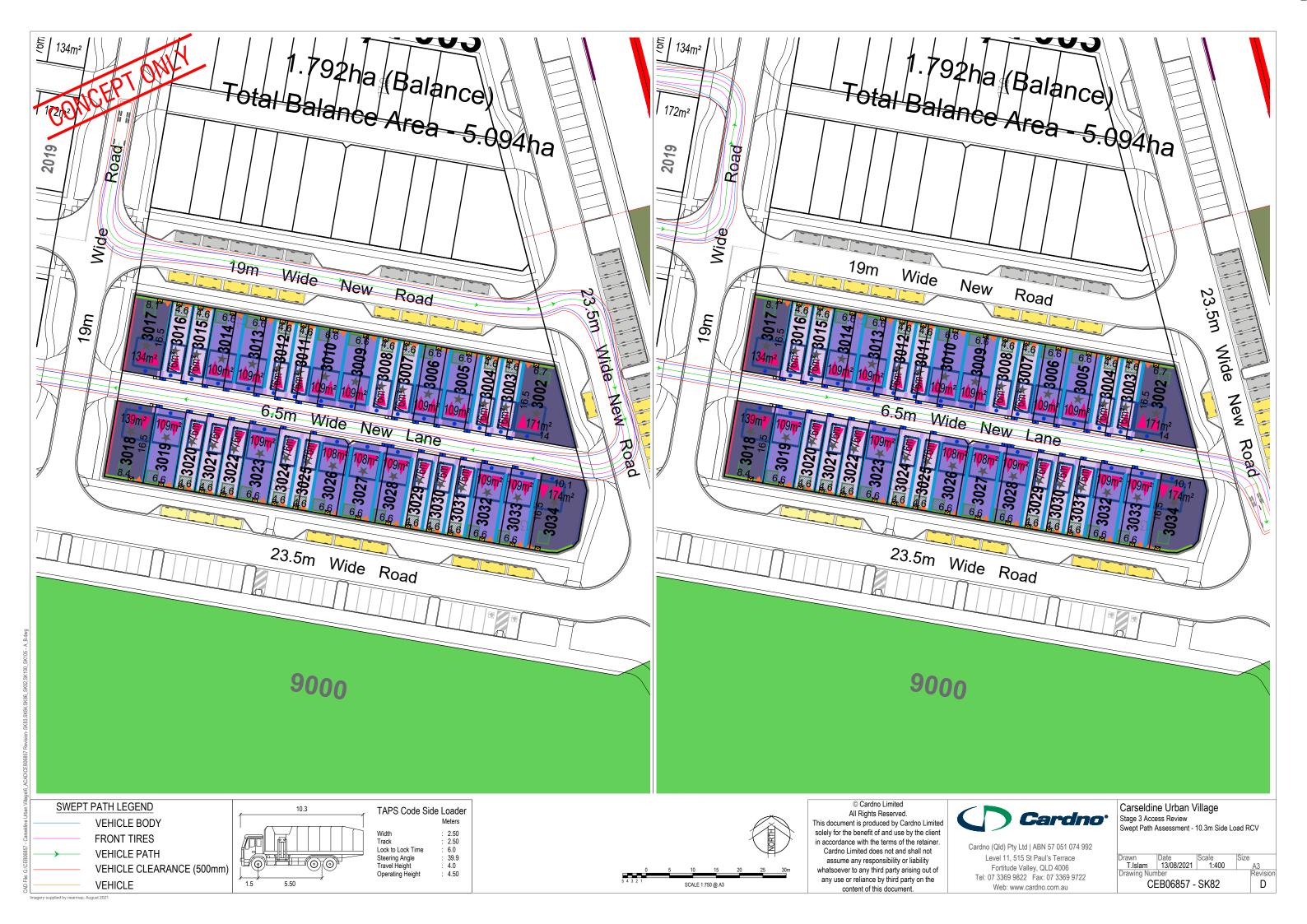


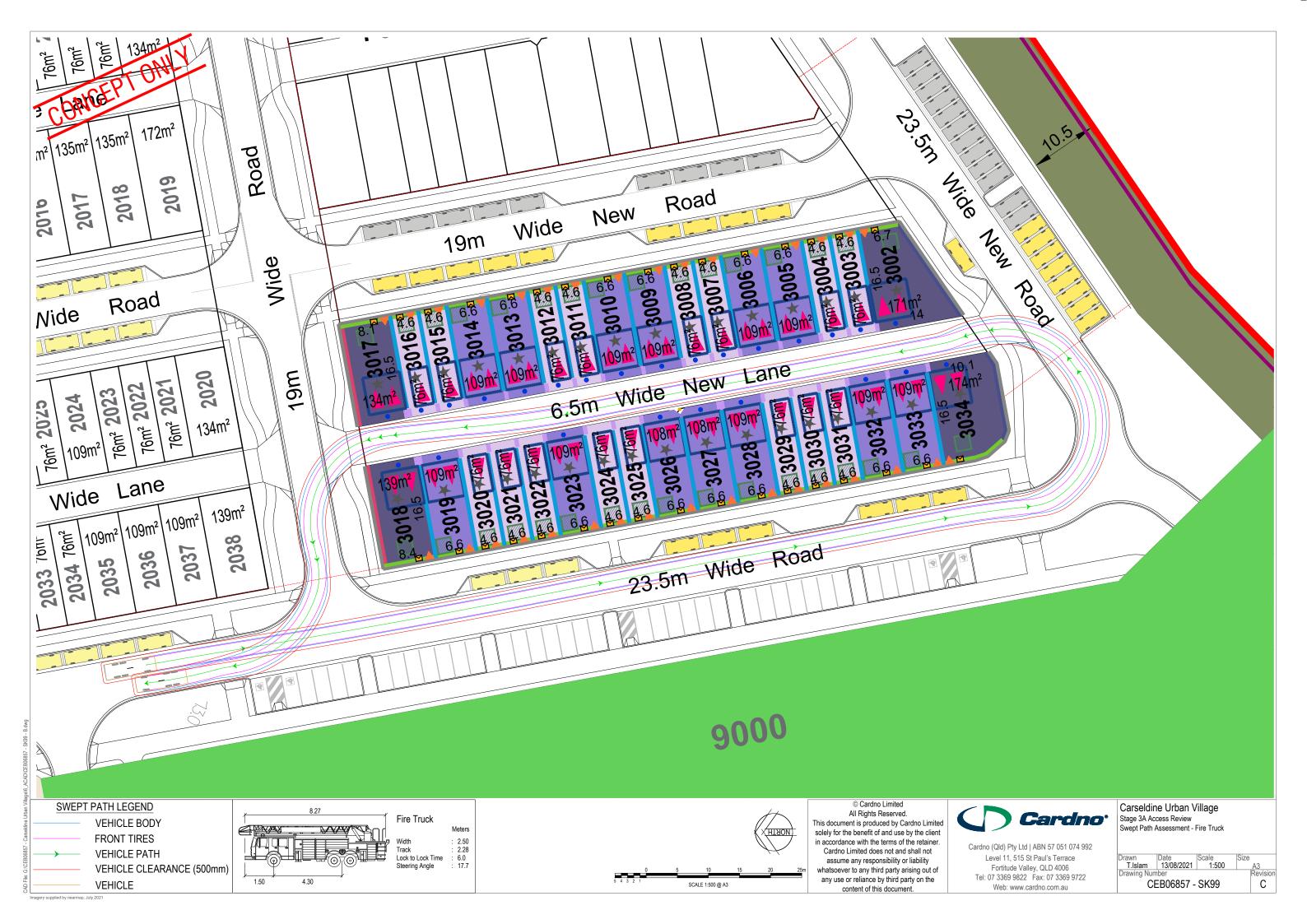




APPENDIX C REFUSE COLLECTION VEHICLE AND FIRE TRUCK SWEPT PATH

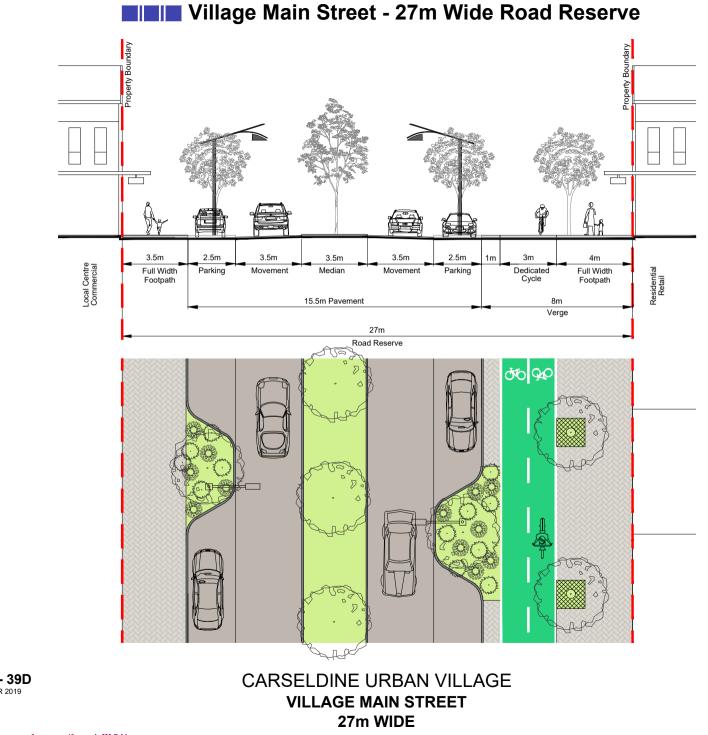






APPENDIX D APPROVED MASTERPLAN ROAD CROSS SECTIONS

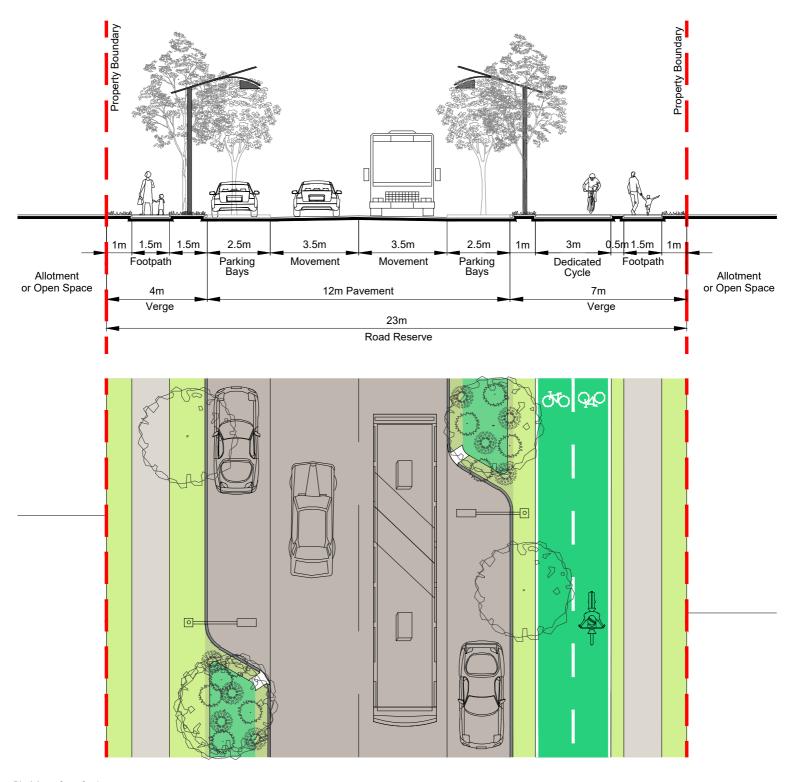








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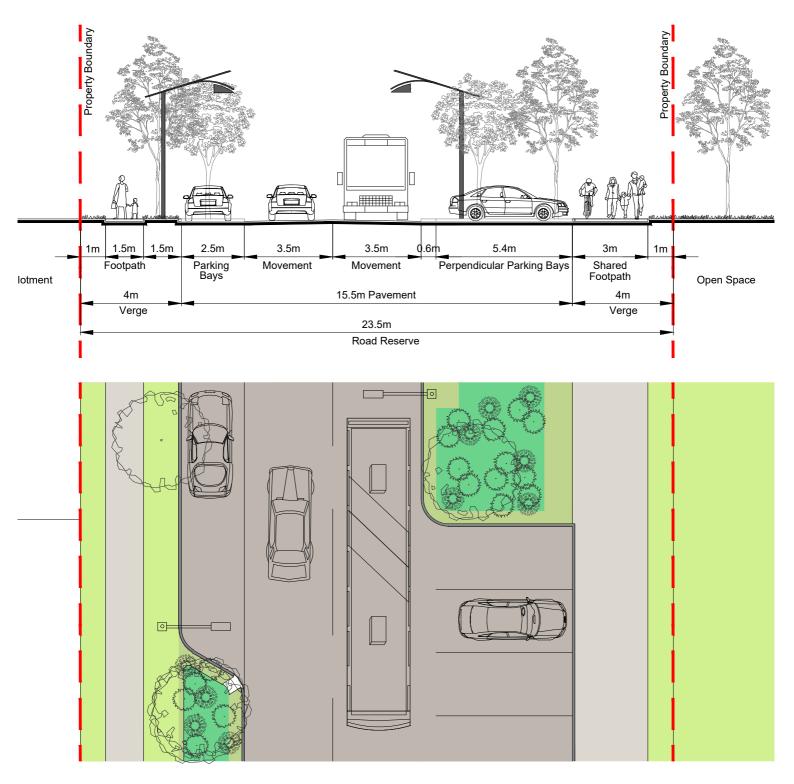
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 MD

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 MD / DG

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CARSELDINE URBAN VILLAGE WESTERN ACCESS ROAD / SHARED BUSWAY - 23m WIDE URBAN DESIGN Level 4 HQ South 520 Wickham Street PO Box 1559 Fortlude Valley OLD 4006 T +617 4539 9500 W rpsgroup.com



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 128180 - 39D

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 09 SEPTEMBER 2019

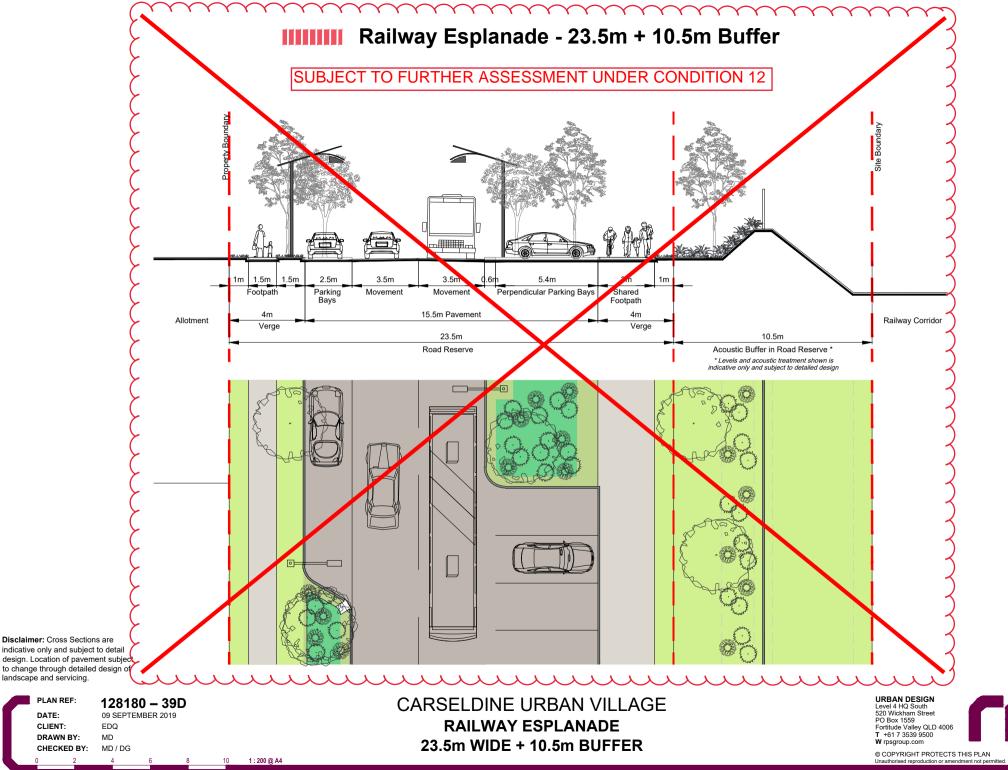
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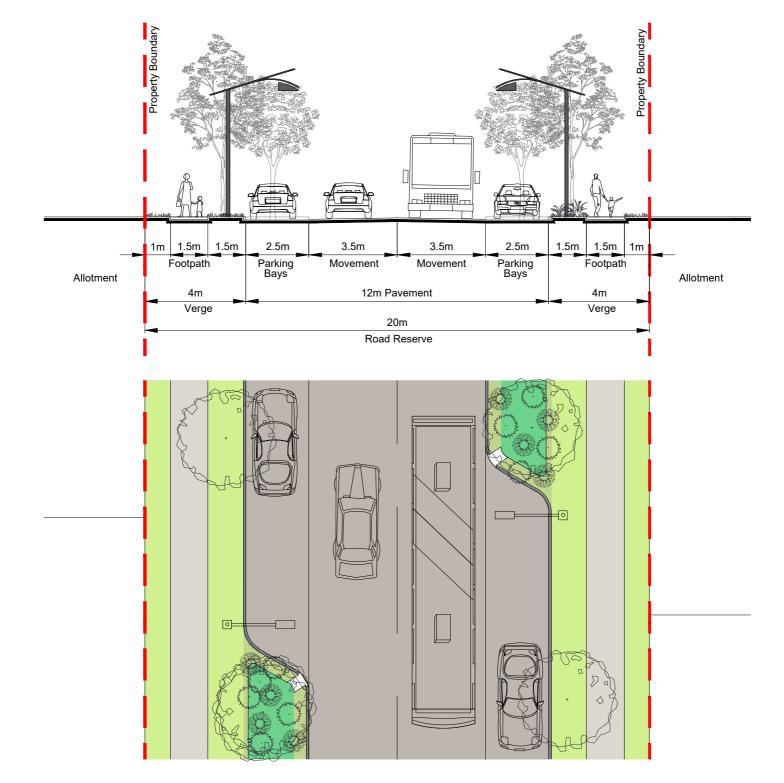
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CARSELDINE URBAN VILLAGE RESIDENTIAL PARK ESPLANADE 23.5m WIDE URBAN DESIGN Level 4 HQ South 520 Wickham Street PO Box 1559 Fortitude Valley QLD 4006 T +61 7 353 9500 W rpsgroup.com



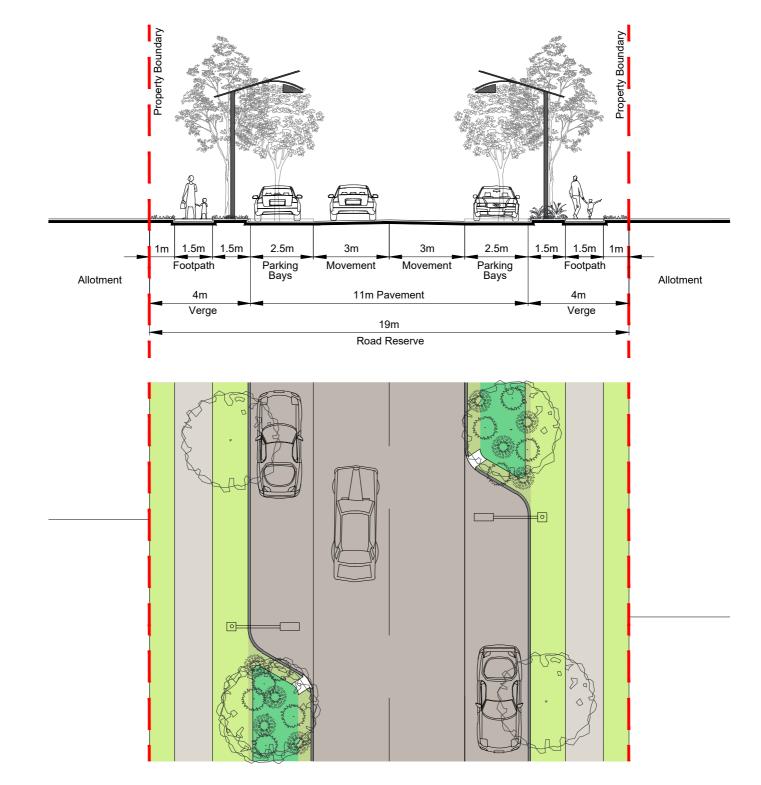
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CARSELDINE URBAN VILLAGE LOOP ROAD 20m WIDE URBAN DESIGN Level 4 HQ South 520 Wickham Street PO Box 1559 Fortiude Valley OLD 4006 T +61 7 353 9500 W rpsgroup.com

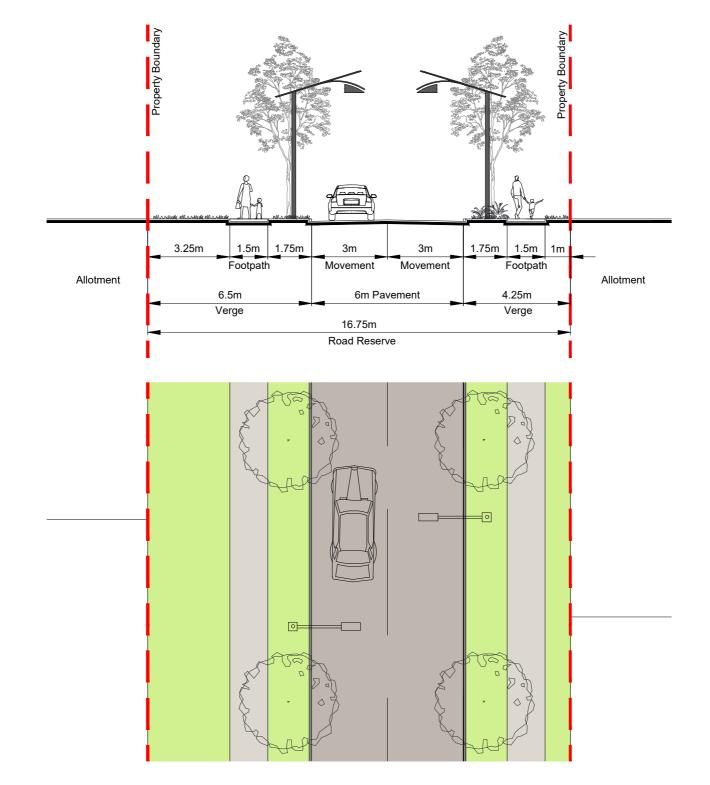


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CARSELDINE URBAN VILLAGE ACCESS PLACE 19m WIDE



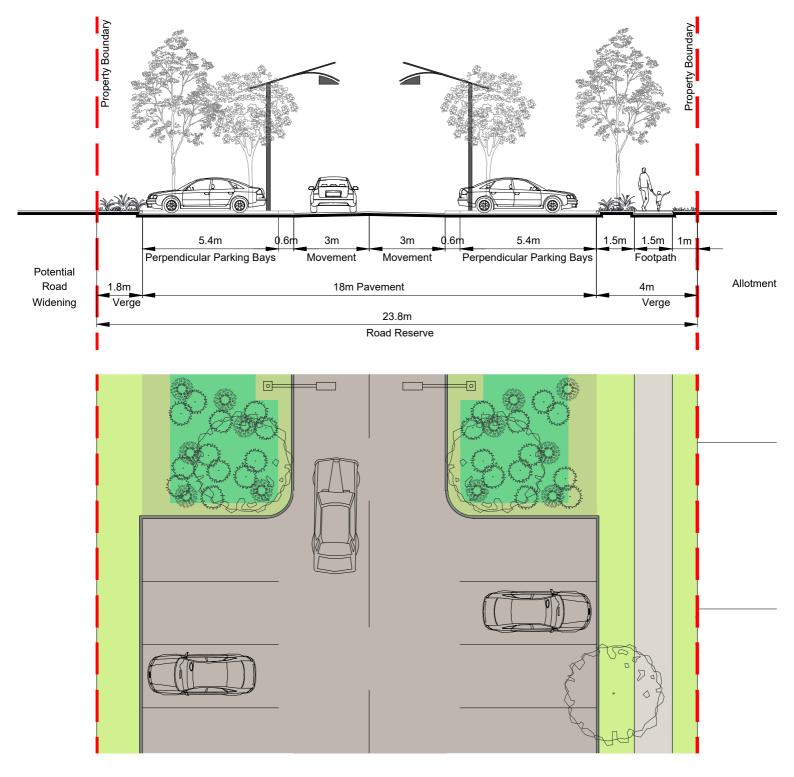


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CARSELDINE URBAN VILLAGE ACCESS PLACE (NO PARKING) 16.75m WIDE URBAN DESIGN Level 4 HQ South 520 Wickham Street PO Box 1550 Fortiude Valley QLD 4006 T +61 7 353 9500 W rpsgroup.com



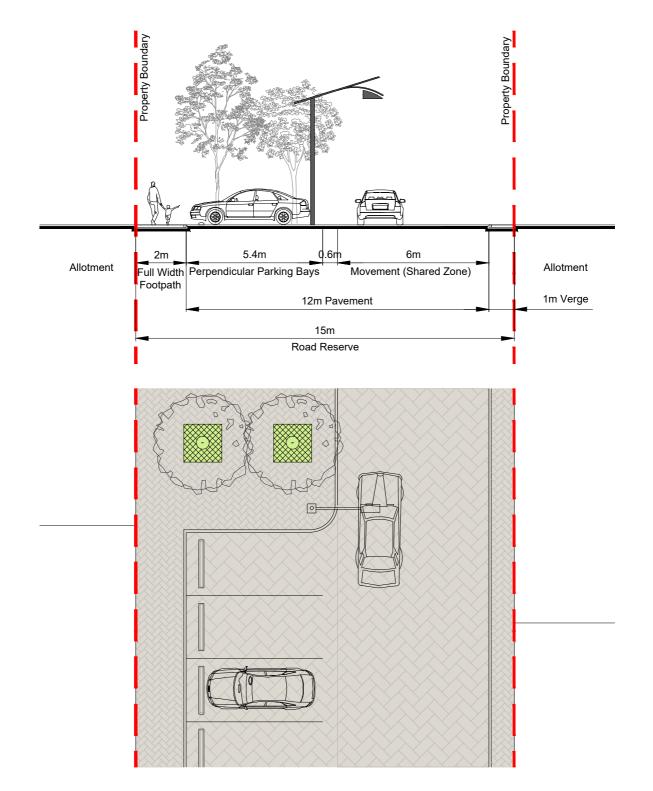


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CARSELDINE URBAN VILLAGE ACCESS PLACE (PARKING) 23.8m WIDE

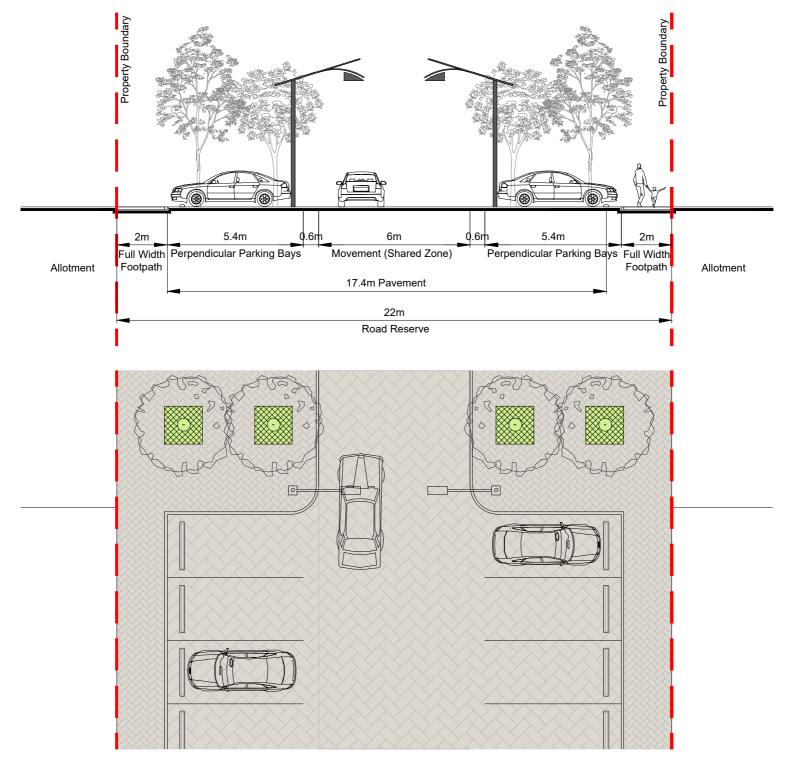




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CARSELDINE URBAN VILLAGE SHARED ACCESS LANE (PARKING ONE SIDE) - 15m WIDE



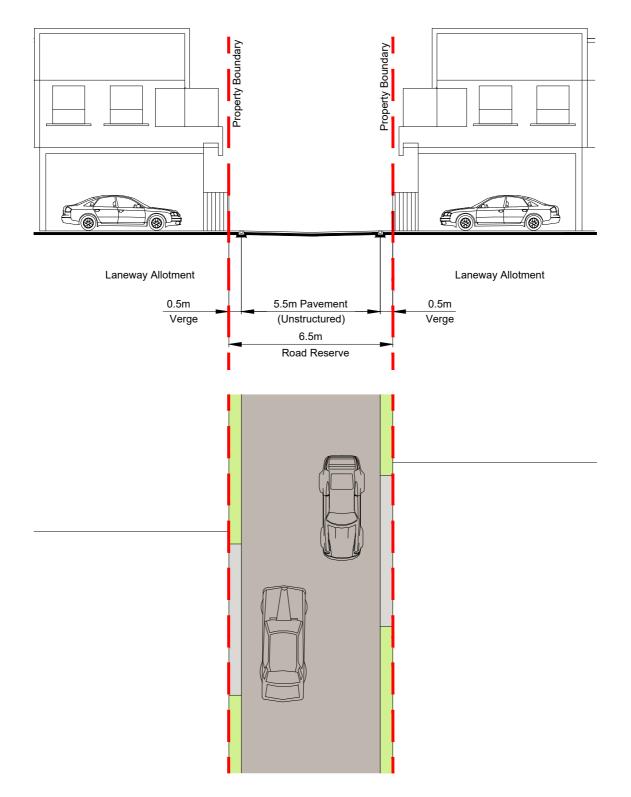


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CARSELDINE URBAN VILLAGE SHARED ACCESS LANE (PARKING TWO SIDES) - 22m WIDE





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CARSELDINE URBAN VILLAGE ACCESS LANE 6.5m WIDE

