Technical Memorandum

Title	**Carseldine Village** **Stage V Traffic Assessment**		
Client	Urban Development, Economic Development Queensland	**Project No**	CEB06857
Date	15 July 2022	**Status**	Final
Author	Bradley Fuller	**Discipline**	Traffic and Transport
Reviewer	Andy Johnston (RPEQ: 24764)	**Office**	Brisbane

1 Introduction

Cardno has been commissioned by Economic Development Queensland (EDQ) – Urban Development 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 V Village Heart of the CV, and includes:

- Appendix A—Proposed development plans
- Appendix B—Approved masterplan road cross sections
- Appendix C—Refuse collection vehicle swept paths
- Appendix D—Heavy rigid vehicle swept paths
- Appendix E—Small rigid vehicle swept paths

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 proposed further changes to the CV masterplan, including adjustments to the staging boundaries. A second change to the CV masterplan was approved by the MEDQ. The second change approval was 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 were triggered by Stage 1 of Precinct 1. As a result, Stage V 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.

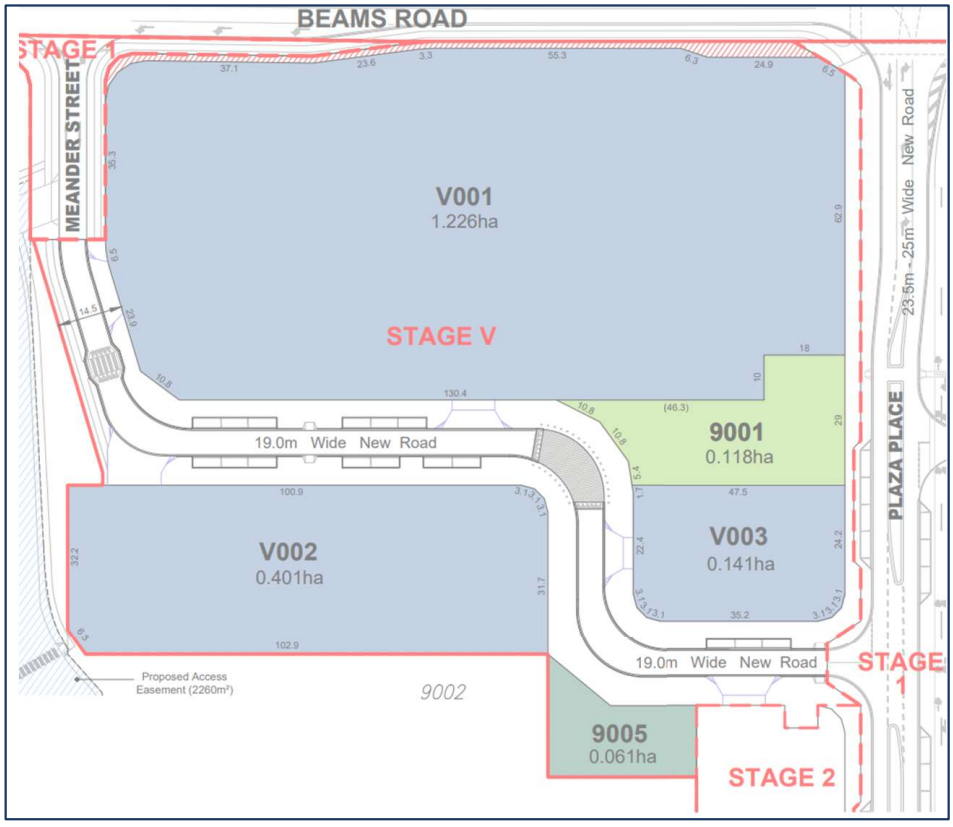
2 Development Proposal

2.1 Overview

The Stage V Village Heart development plans are illustrated on Figure 2-1. The proposed Stage V Village Heart development will comprise five (5) land parcels at the Carseldine Village site, each of which will consist of the following land uses:

- Mixed Use Allotment (Retail, Commercial, Residential Units)
  - Land Parcel V001
  - Land Parcel V002
  - Land Parcel V003
- Civic Plaza
  - Land Parcel 9001
- Bushland
  - Land Parcel 9005

Figure 2-1 CV Stage V Village Heart – Development Plans



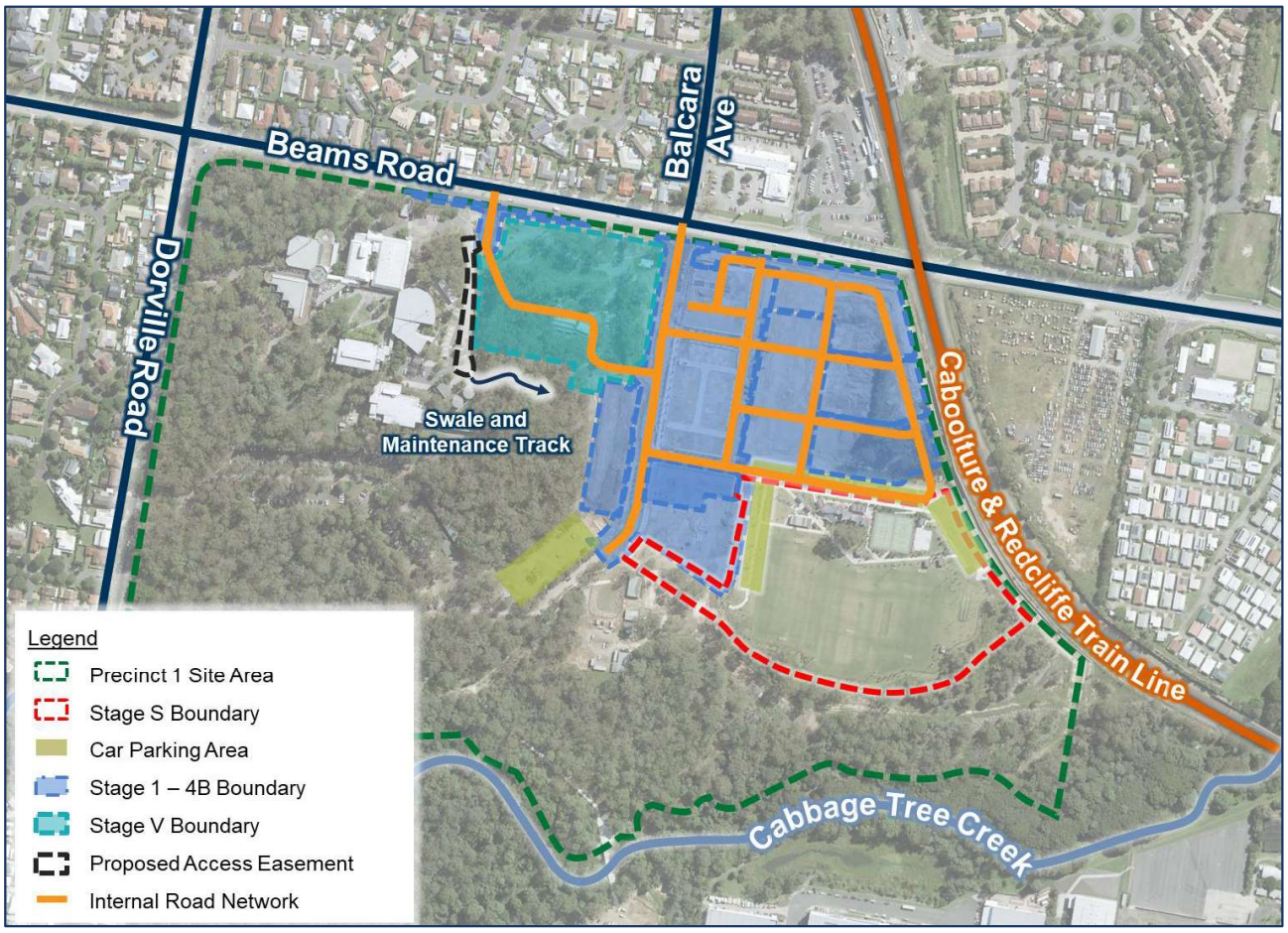
Source: RPS

The Stage V development will provide an access easement over the existing driveway in Lot 322 on SP311781 in favour of Brisbane City Council to access the proposed bushland Phase 2 swale works and maintenance track, which connects into the Phase 1 swale works and maintenance track.

The Phase 2 portion is immediately south of proposed Lot V002 and the Phase 1 portion is to the immediate west of Lots 2049 and 2050 on SP311913 (created as part of Stage 2).

Further detail regarding the proposed access easement can be found in Section 2.4 of this report.

Figure 2-2 Precinct 1 – CV Stage V Village Heart



Source: Metromap

2.2 Development Yields

2.2.1 Proposed Development Yields

Cardno has previously conducted a detailed Traffic Impact Assessment (TIA) to inform the CV masterplan approval, dated 2nd August 2019. Since the development of the original TIA in 2019 for the CV masterplan approval, some changes have been introduced which deviate from the originally proposed yields.

At time of writing this CV Stage V Village Heart traffic statement, EDQ Urban Development have provided indicative development yields, that could be accommodated in the Stage V Village Heart development these yields are subject to change as the master planning for lots V001, V002 and V003 have yet to be completed by the end developers. However, it is anticipated that the finalised Stage V Village Heart yields will be roughly equal to the approximate yields that EDQ Urban Development have provided. On this basis, Cardno has conducted the assessment herein based on the Stage V Village Heart indicative development yields.

The original yields proposed for the Stage V Village Heart area as informed by the original TIA and some indicative yields are outlined in Table 2.1.

Table 2-1 CV Masterplan 2019 Original and Proposed Stage V Village Heart Yields

Land Use	Yield		Difference
	Original	Indicative*	
Residential	33 dwellings & 60 units	171 units	*+ 78 units*
Retail	4,000 sq.m	4,000 sq.m	*+ 0 sq.m*
Commercial	1,765 sq.m	1,765 sq.m	*+ 0 sq.m*
Childcare	100 children#	-	*Existing childcare centre to be relocated to Lot 3001 on SP324677*

** Approximate Stage V Village Heart yields as informed by EDQ Urban Development's current planning*
 # Existing childcare centre to be relocated.

Therefore, the proposed Stage V Village Heart development will consist of an additional 78 residential units, although the childcare centre will be relocated to Lot 3001 on SP324677.

While it is acknowledged that the proposed yields will exceed those outlined in the original TIA, it is acknowledged that the dwelling yields for Stages 1 to 4B of the CV residential precinct are fewer than those within the approved CV masterplan, and the total overall dwelling yield is less than the approved 606 dwellings outlined in the CV masterplan approval. This is outlined in Table 2-2.

Table 2-2 Comparison of Yields – Stages 1 to 4B

	Stages 1 to 4B
Approved Masterplan	211 dwellings
Revised Indicative Development	182 dwellings
Difference	***-29***

**Yields described for Zones 6, 7, 9, 10 and 11 as part of the Traffic Impact Assessment prepared by Cardno in 2019*

Therefore, the indicative development yields for Stages 1 to 4B are 29 fewer dwellings than those envisaged within the approved CV masterplan.

Furthermore, the increase of the residential units and retail component are balanced by the removal of the existing childcare centre.

Further details regarding the traffic impacts between the original yields and proposed yields are outlined in Section 3 of this report.

2.2.2 Land Parcel Yields

The approximate land use development yields for each of the Stage V Village Heart land parcels as informed by current planning by EDQ Urban Development are outlined in Table 2-3. It is noted that land parcels 9001 and 9005 will comprise of civic plaza and bushland open spaces, and hence have not been included within the assessment herein.

Table 2-3 Stage V Village Heart – Land Parcel Indicative Development Yields

Land Parcel	Stage V Village Heart Development Yields*		
	Residential	**Retail**	**Commercial**
V001	-	3,000 sq.m	1,765 sq.m
V002	108 units	700 sq.m	-
V003	63 units	300 sq.m	-
Total	***171 units***	***4,000 sq.m***	***1,765 sq.m***

** Approximate Stage V Village Heart yields as informed by EDQ Urban Development's current planning*

2.3 Land Parcel V001 Frontage

The proposed V001 land parcel will have frontage onto Beams Road to the north, as well as Plaza Place to the east.

It is acknowledged that the northern frontage onto Beams Road is anticipated to be impacted by the roading widening along Beams Road. As a result of this road widening, the existing verge to the north of the V001 land parcel will be impacted. On this basis, Council are committed to delivering the ultimate verge treatment as part of the Beams Road widening works.

Provided that no direct vehicular accesses are proposed from Beams Road to land parcel V001, the proposed works are not anticipated to largely impact on traffic operations at the V001 land parcel. Further discussions regarding the access arrangement are outlined in the subsequent sections.

2.4 Access

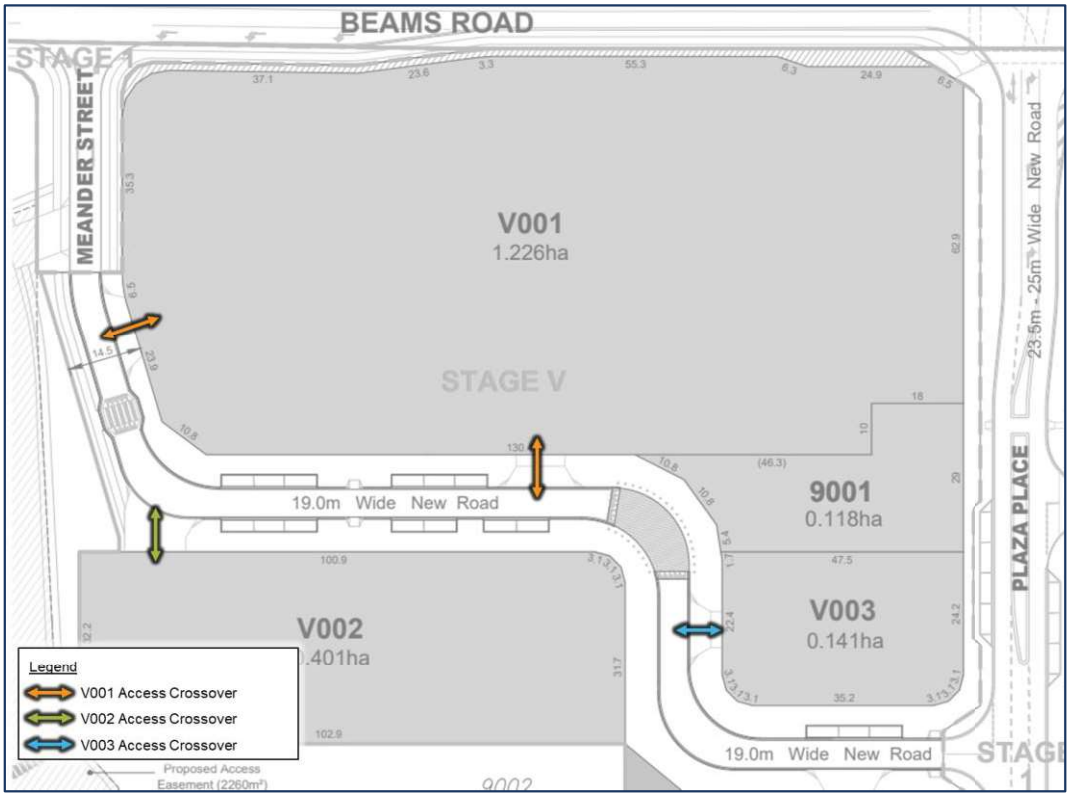
2.4.1 External Access

Access for the Stage V Village Heart development will be via the Beams Road / Meander Street intersection as well as the upgraded form of the Beams Road / Balcara Avenue / Plaza Place 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.

2.4.2 Land Parcel Access Crossover Design

The indicative access crossovers for the subject land parcels are outlined on Figure 2-3, and the indicative crossover designs are detailed in Table 2-4.

Figure 2-3 CV Stage V Village Heart Land Parcel Access Crossovers



Source: RPS

Table 2-4 CV Stage V Village Heart Land Parcel Access Crossover Design

Land Parcel	Number of Crossovers	Access Crossover Width
V001	2	Western Crossover: 12m Southern Crossover: 9.5m
V002	1	12m
V003	1	7m

The proposed access crossovers for each of the subject land parcels have been assessed in accordance with the Brisbane City Council City Plan TAPS PSP to ensure the crossover design can accommodate the number of private vehicles and the type of service utilizing each crossover.

2.4.2.2 Car Parking Supply

As per the Stage V Village Heart development yields, EDQ Urban Development have provided the approximate car parking supply for each of the development land parcels. It is anticipated that the finalised Stage V Village Heart car parking supply will be roughly equal to the approximate yields that EDQ Urban Development have provided. On this basis, Cardno has conducted the assessment herein based on the

Stage V Village Heart approximate car parking supply. Further information regarding the Stage V Village Heart car parking supply can be found in Section 4 of this report.

The Stage V Village Heart approximate car parking supply indicates that each of the subject land parcels will provide between 100 – 220 car parking spaces. In accordance with Table 8 of the Brisbane City Council City Plan TAPS PSP, this indicates that the access crossovers are to provide Type C1 (9.5m) crossovers given a high turnover rate and access via a minor road.

However, provided that the V003 land parcel consists of a retail component of only 300 sq.m and instead largely consists of residential units, Cardno considers the car parking turnover rate to be low/medium.

On this basis, in accordance with Table 8 of the Brisbane City Council City Plan TAPS PSP, the V003 land parcel is to provide a Type B2 (6.0m) access crossover for a low/medium turnover rate and access via a minor road.

2.4.2.3 Service Vehicle Requirements

In addition to the approximate car parking supply, Cardno has assessed the service vehicle requirements for each land parcel to inform the access crossover designs.

It is acknowledged that the minimum access crossover design requirements for the Stage V Village Heart are governed by the car parking supply instead of the proposed service vehicles, and hence the proposed access crossover design has been assessed against the car parking supply access requirements.

Further details regarding the service vehicle requirements, as well as the proposed service vehicle routes, are outlined in Section 5 of this report.

As such, the minimum requirements for the access crossovers and the proposed access crossovers for the Stage V Village Heart development are outlined in Table 2-5.

Table 2-5 Stage V Village Heart – Access Crossover Design Compliance

Land Parcel	Crossover	Minimum Access Crossover Design	Proposed Access Crossover Design	Compliance
V001	Western Crossover	C1 (9.5m)	C2 (12m)	✓
	Southern Crossover	C1 (9.5m)	C1 (9.5m)	✓
V002	Northern Crossover	C1 (9.5m)	C2 (12m)	✓
V003	Western Crossover	B2 (6.0m)	B2 (7.0m)	✓

Therefore, the proposed access crossover designs meet the minimum access crossover design requirements of the Brisbane City Council City Plan TAPS PSP.

2.4.3 Land Parcel Access Crossover Location

To ensure the land parcel access crossovers are located to provide safe movements for vehicles and pedestrians, the vehicle and pedestrian sight lines from each crossover have been assessed in the subsequent sections.

2.4.3.1 Vehicle Sight Lines

For the purposes of this assessment, Cardno has reviewed the Stopping Sight Distance (SSD) on all approaches to and from the land parcel access crossovers. The application of the SSD is pertinent for vehicles travelling along a road to have sufficient sight distance to observe, react and brake to a stop before reaching a hazard on the road.

The following parameters were adopted to determine the minimum SSD:

- Reaction time of 1.5 sec, based on the restricted low speed urban area (as indicated in Austroads Guide to Road Design Part 3 Table 5.2)
- Driver sightline taken from 2.5m behind the edge of the carriageway (as indicated in Australian Standard 2890.1) for domestic driveways

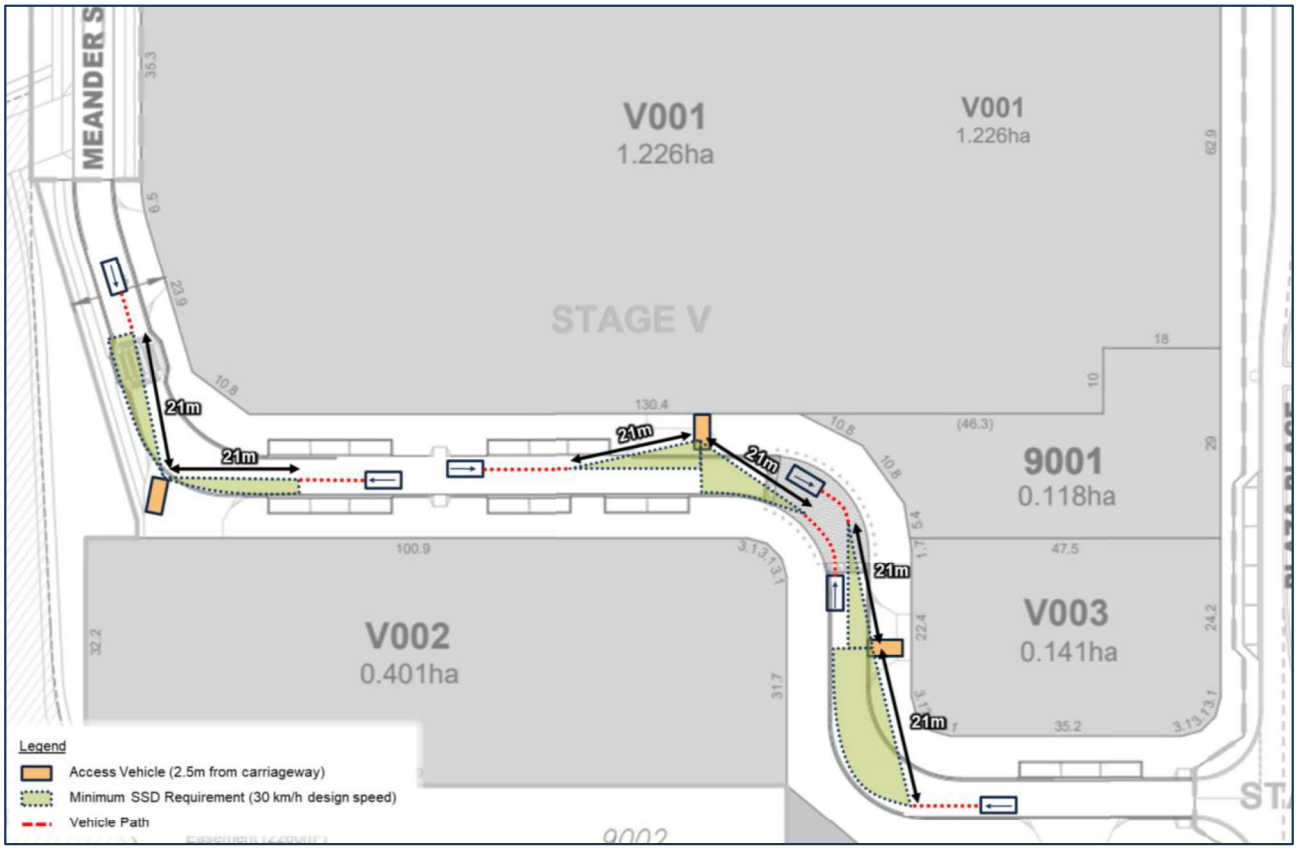
Furthermore, Cardno has considered two (2) anticipated design speeds for vehicles travelling through the High Street internal road.

It is anticipated that vehicles travelling through the High Street internal road between the Plaza Place / High Street intersection and the V001 western land parcel crossover will travel at a design speed of 30 km/h. Alternatively, the vehicles travelling from the Beams Road / Meander Street intersection to the V001 western land parcel crossover are anticipated to travel at a design speed of 40 km/h due to the posted speed limit of 60 km/h along Beams Road.

As such, the minimum SSD requirements for a design speed of 30 km/h and 40km/h are 21m and 31m respectively in accordance with the Austroads Guide to Road Design Part 3 document.

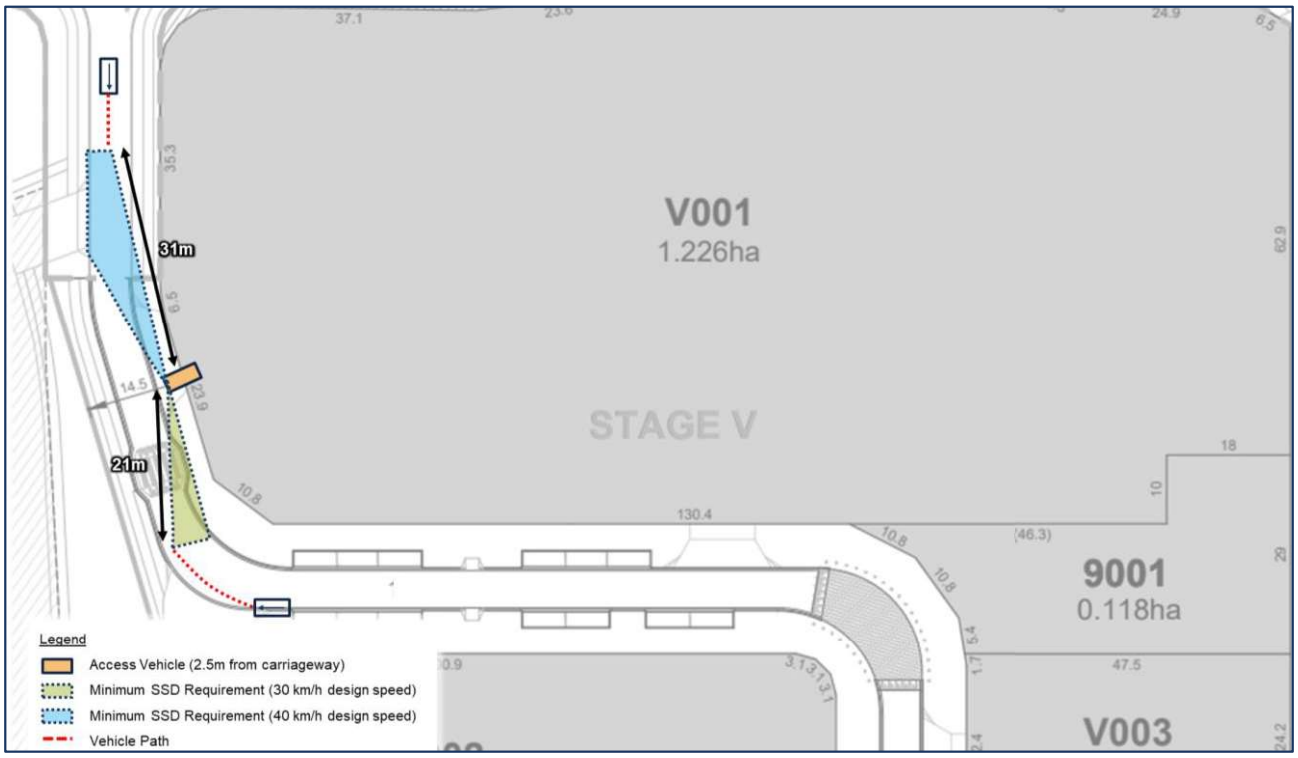
Figure 2.4 demonstrates the minimum SSD for the V001 southern crossover as well as the V002 and V003 crossovers. Figure 2.5 demonstrates the minimum SSD for the V001 western crossover.

Figure 2-4 CV Stage V Village Heart Land Parcel V001 Southern Crossover, V002 & V003 Access Crossovers SSD Review



Source: RPS

Figure 2-5 CV Stage V Village Heart Land Parcel V001 Western Crossover SSD Review



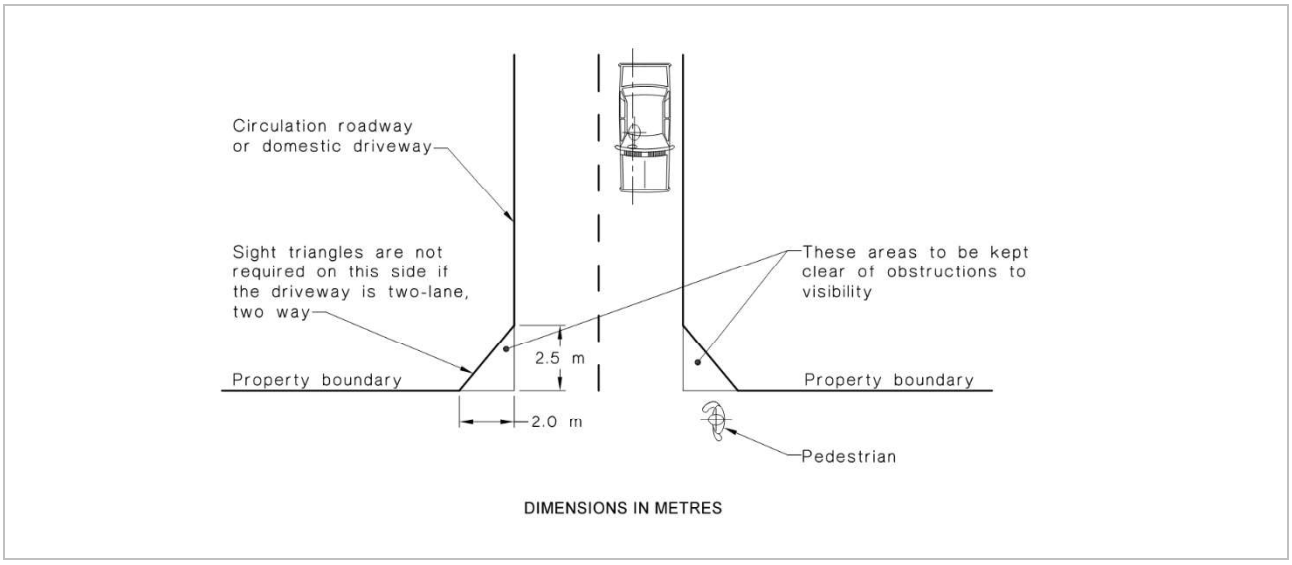
Source: RPS

Therefore, the indicative Stage V Village Heart crossovers are considered acceptable and provide the minimum SSD requirements for vehicle sight lines.

2.4.3.2 Pedestrian Sight Lines

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 2-6.

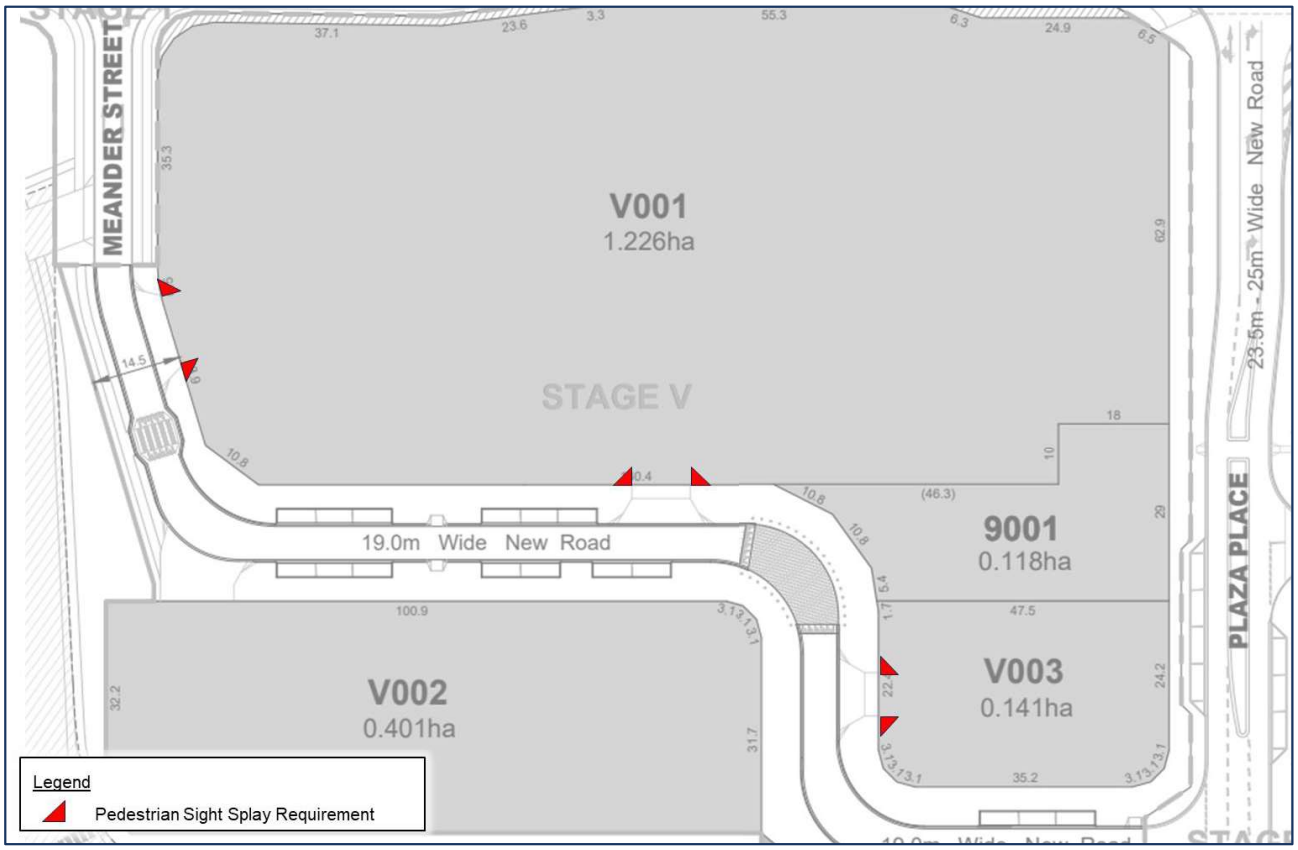
Figure 2-6 AS2890.1 Pedestrian Sight Splays



Source: AS2890.1 Figure 3.3

Provided that the development layouts on each land parcel have not been finalised, Cardno advises that the pedestrian sight splays on Figure 2-7 are to be clear of obstructions when developing the land parcel layouts.

Figure 2-7 Stage V Village Heart Pedestrian Sight Splay Requirements



Source: RPS

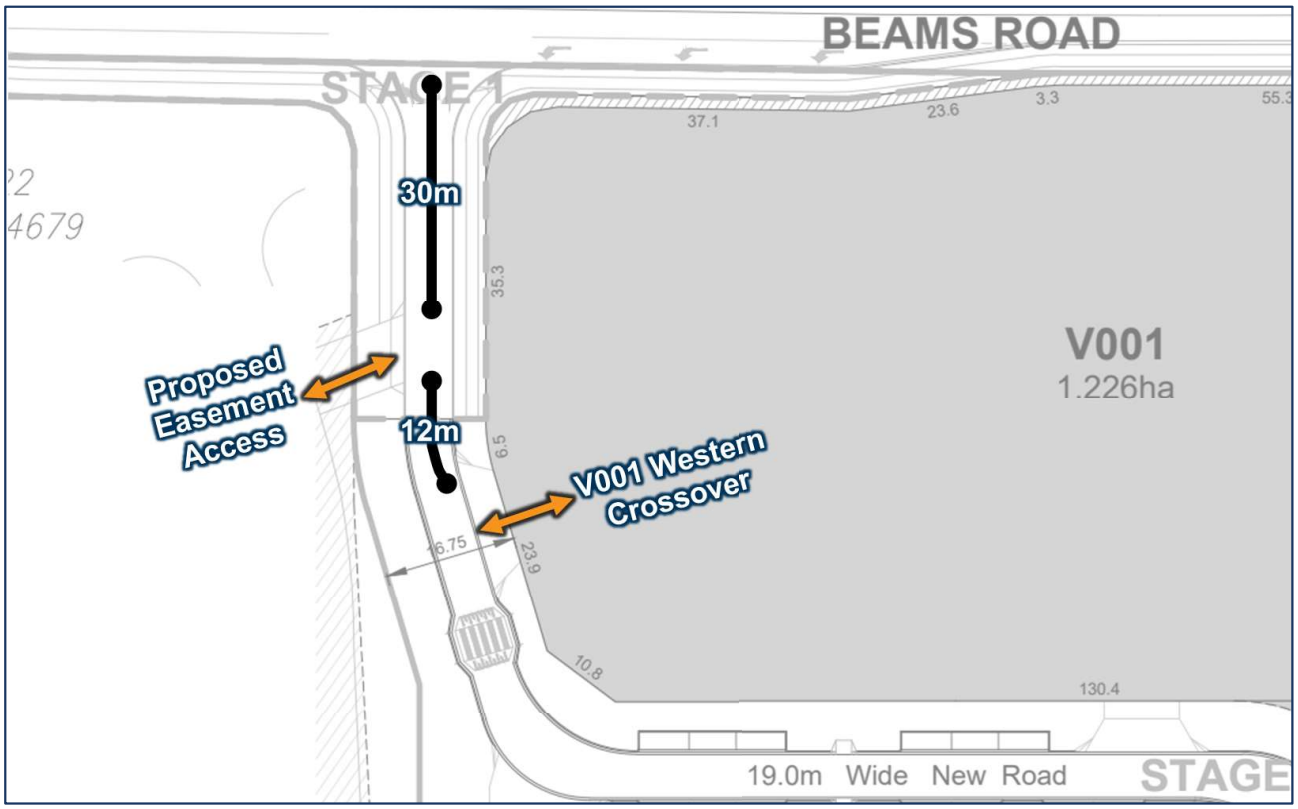
2.5 Proposed Access Easement

The Stage V development will provide an access easement over the existing driveway in Lot 322 on SP311781 in favour of Brisbane City Council to access the proposed bushland Phase 2 swale works and maintenance track, which connects into the Phase 1 swale works and maintenance track. The Phase 2 portion is immediately south of proposed Lot V002 and the Phase 1 portion is to the immediate west of Lots 2049 and 2050 on SP311913 (created as part of Stage 2).

It is noted that the driveway crossover off the new Meander Street intersection with Beams Road for the proposed easement was constructed in the Stage 1 development of the CV site, where Cardno has reviewed this existing arrangement to confirm the driveway location is appropriate for the continued operation of the adjoining Government Office Precinct.

The proposed access easement relies upon the Government Office Precinct driveway in Stage 1 which is located 30m south of the Beams Road / Meander Street intersection, and achieves a 12m separation to the indicative V001 western crossover as outlined on Figure 2-8.

Figure 2-8 Proposed Access Easement Intersection Separation **(PLANS TO BE UPDATED AS PER FINAL REV)**



Source: RPS

In accordance with the Brisbane City Council City Plan TAPS PSP, the minimum separation distance for a minor access from a major road intersection is 20m. Therefore, the intersection separation of 30m from the Beams Road / Meander Street intersection is acceptable.

Additionally, the Brisbane City Council City Plan TAPS PSP indicates that the minimum separation distance for a minor access to a minor intersection is 10m. Provided that the V001 western crossover achieves a 12m separation from the proposed access easement, this therefore indicates that the minimum separation requirement is achieved.

Furthermore, Cardno has conducted a swept path assessment for the proposed Phase 2 swale works and maintenance track to confirm the largest anticipated design vehicle is able to safely and efficiently to, within and out of the maintenance track. Further detail regarding this swept path assessment is provided in Section 5 of this report.

On this basis, the proposed access easement to the swale and maintenance track is considered acceptable.

2.6 Road Reserve Design

2.6.1 High Street Access Place Design

The High Street internal road through the Stage V Village Heart development has been designed for a 16.75m wide road reserve consisting of a 6m wide carriageway, with an additional 2.5m wide on each verge for the provision for on-street car parking equating to a total road reserve of 19m.

This arrangement largely complies with the approved masterplan road cross sections for an Access Place, provided at **Appendix B** of this report.

However, it is acknowledged that the approved masterplan road cross sections include a 1.5m pedestrian pathway on both verges, where this is not proposed for the High Street internal road. It is noted that the future third party developer of Lots V001, V002 and V003 will deliver the finished verge treatments to the High Street (extension of Meander Street) as well as the western verge of Plaza Place. The ultimate treatment will create a high-quality environment for pedestrian movements.

On this basis, the absence of the 1.5m pedestrian pathway on both verges is considered acceptable. Further discussion regarding the active transport facilities is outlined in Section 2.7 of this report.

In terms of design standards, it is acknowledged that the carriageway width for to allow for service vehicles is required to be 6.5m in accordance with the Brisbane City Council City Plan TAPS PSP. However, Cardno has conducted a swept path assessment to assess whether a service vehicle and B85 design vehicle are able to safely and efficiently manoeuvre through the High Street internal road at the same time. A copy of this swept path assessment has been provided at **Appendix C** and **Appendix D** of this report.

The swept path assessment demonstrates that the 6m wide carriageway can accommodate a B85 design vehicle and service vehicle through the High Street internal road. Further information detailing the servicing requirements for the Stage V Village Heart are outlined in Section 5 of this report.

2.6.2 Plaza Place Road Reserve Design

Furthermore, the Stage V Village Heart development will also maintain the approved road reserve conditions along Plaza Place. The approved road cross sections for Plaza Place are also provided in **Appendix B** of this report.

2.6.3 Refuse PSP Arrangements

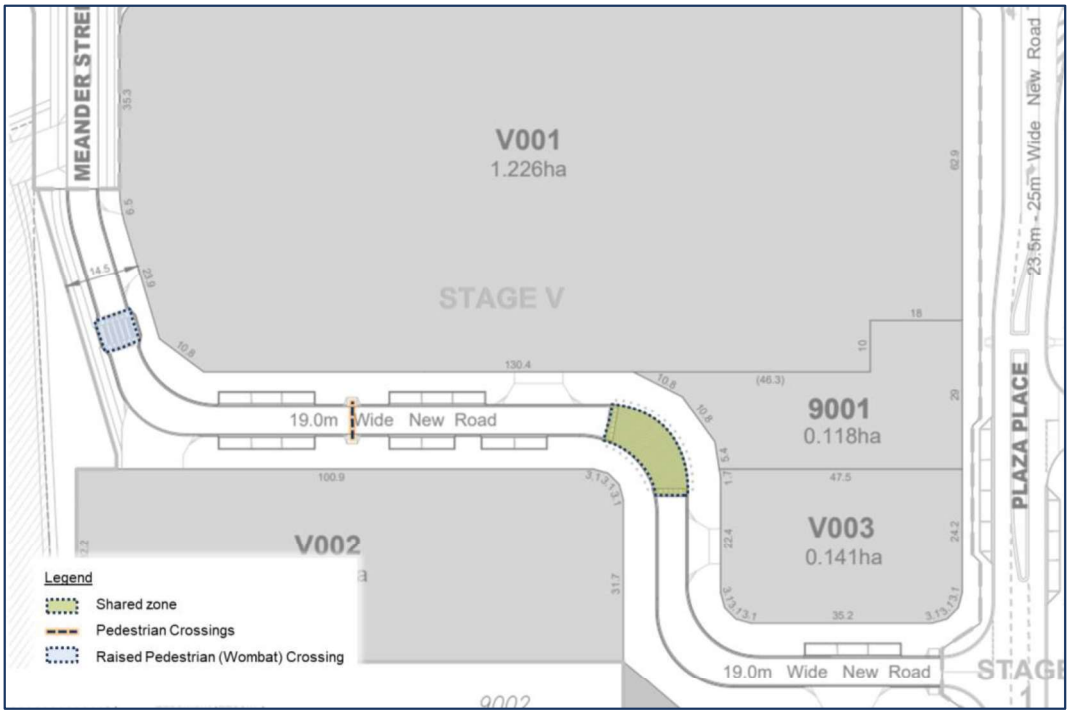
Cardno acknowledges that Clause 3.2 of the BCC Refuse Planning Scheme Policy (Refuse PSP) stipulates that development carriageways trafficked by a Refuse Collection Vehicle are to have a minimum width of 6.5m. However, previous discussions with BCC has indicated that the proposed 6.0m wide arrangements are acceptable for the proposed Carseldine development, as per previous BCC waste approvals.

Further information detailing the proposed Refuse Collection servicing arrangements is outlined in Section 5 of this report.

2.7 Active Transport Facilities

Pedestrian facilities will be provided for throughout the Stage V Village Heart development, as outlined on Figure 2-9.

Figure 2-9 Stage V Village Heart Development Pedestrian Facilities



Source: RPS

It is further noted that the future third party developer of Lots V001, V002 and V003 will deliver the finished verge treatments to the High Street (extension of Meander Street) as well as the western verge of Plaza Place. The ultimate treatment will create a high-quality environment for pedestrian movements.

2.7.2 Shared Zone Arrangement

The provision of the shared zone through the High Street internal road allows safe movements and operations for vehicles, cyclists and pedestrians through the internal road as well as providing a pedestrian link to the V001 and V002 land parcels.

In accordance with the Department of Transport and Main Roads (TMR) *Manual of Uniform Traffic Control Devices (MUTCD) Part 4 Speed Controls*, a shared zone is appropriate on the following conditions:

- The road is not used as a through route,
- Pedestrian movement predominates,
- Reasonable vehicle movements (parking, loading, unloading) are required,
- It is described to clearly establish the priority of pedestrian movement.

Provided that High Street provides direct access to the proposed development and the Carseldine Village closed catchment, the road will not be used as a through route. The presence of on-street parking ensures that vehicle movements along High Street will be reasonable and will not impede on the shared zone arrangements.

Furthermore, there is an existing pedestrian presence in the surrounding locality due to the surrounding land uses outlined below:

- Government Office Precinct (housing a significant number of government workers),
- TMR customer service centre,
- Schools,
- Parks,
- Residential precincts,
- Public transport facilities.

As such, it is anticipated that pedestrian movements to and from the site will be substantial and will be the predominate mode of transport.

On this basis, Cardno is of the opinion that the proposed shared zone is appropriate. As per the MUTCD Part 4 Speed Controls, it is recommended that a posted speed limit of 10 km/h is implemented.

2.7.3 Raised Pedestrian (Wombat) Crossing

In addition to the shared zone, the Stage V Village Heart will also provide a raised pedestrian (wombat) crossing to provide a pedestrian connection from the V001 land parcel to the Government Office Precinct west of the CV Stage V Village Heart development.

The suitability of providing a raised pedestrian (wombat crossing) crossing is outlined in Table 8.2 of the Austroads Guide to Traffic Management Part 6 document, which indicates that a raised pedestrian (wombat crossing) crossing is suitable for low speed environments with low traffic volumes where good sight distance on both approaches to the crossing is available.

Provided that the raised pedestrian (wombat crossing) crossing location is able to accommodate a minimum SSD of 21m on the southern approach and 31m on the northern approach, in addition to a low speed environment throughout the High Street internal road, this therefore supports the provision and location of the raised pedestrian (wombat crossing) crossing.

Furthermore, the Government Office Precinct will implement future pedestrian connections to the Stage V development in the form of a ramp and / or stair connection that connects to the raised pedestrian (wombat) crossing. This will further expand on the pedestrian connectivity capabilities in and around the Stage V development site.

2.8 Stage 1 and Stage 2 Development Integration

It is acknowledged that the Stage V Village Heart development will integrate with the internal and intersections developed within the Stage 1 and Stage 2 development stages.

As these intersections are already existing at the CV village site, no additional works will be required at these intersections to accommodate the Stage V Village Heart development land uses and / or yields.

3 Traffic Impact

The peak traffic generated by the development in the Stage V Village Heart development was assessed as part of the original CV masterplan TIA produced by Cardno on the 2nd August 2019 which indicated that external works were required.

Since that assessment, development yields for the Stage V Village Heart have changed as per the approximate development yields informed by EDQ Urban Development.

The trip generation for both approved and proposed yields of the Stage V Village Heart development are shown in Table 3-1. To ensure a consistent assessment, the trip generation rates utilised in the original CV masterplan TIA have been adopted for the proposed Stage V Village Heart development yields.

Table 3-1 Proposed Yields and Trip Generation

Land Use	Yield		Peak Trip Generation Rate	Peak Trip Generation	
	Original	Indicative*		Original	indicative
Residential Dwellings	33 dwellings	-	0.575 vph / unit^	19 vph	-
Residential Units	60 units	171 units	0.23 vph / unit^	14 vph	40 vph
Retail	4,000 sq.m	4,000 sq.m	12.3 vph / 100 sq.m^	492 vph	492 vph
Commercial	1,765 sq.m	1,765 sq.m	2 vph / 100 sq.m^^	35 vph	35 vph
Childcare	100 children#	-	0.8 vph / child^	80 vph	-
			Difference	***-73 vph***	

** Approximate Stage V Village Heart yields as informed by EDQ Urban Development's current planning*
 # Existing childcare centre to be relocated
^ Peak trip generation adopted as per original CV masterplan TIA produced by Cardno on the 2nd August 2019
^^ Adopted from RMS Guide to Traffic Generating Developments 2002

As shown, the proposed approximate developments yields for the Stage V Village Heart development will likely result in an approximate 73 vehicle trip reduction in the peak periods compared to the original assessment.

Therefore, considering the peak trips generated by the site in the Stage V Village Heart development 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

As previously discussed, EDQ Urban Development have provided the approximate car parking supply for each of the development land parcels. It is anticipated that the finalised Stage V Village Heart car parking supply will be roughly equal to the approximate yields that EDQ Urban Development have provided. On this basis, Cardno has conducted the assessment herein based on the Stage V Village Heart approximate car parking supply.

The approximate car parking supply for each of the development land parcels as advised by EDQ Urban Development are outlined in Table 4-1.

Table 4-1 Stage V Village Heart – Likely Land Parcel Parking Supply

Land Parcel	Likely Car Parking Supply
V001	197 spaces
V002	199 spaces
V003	104 spaces
Total	***500 spaces***

The development falls within the Fitzgibbon Priority Development Area and as such, the Fitzgibbon Development Scheme is referred to in order to determine the appropriate parking rates required for the development.

It is acknowledged that the Fitzgibbon Development Scheme does not outline visitor car parking rates for residential land uses, and as such Cardno has adopted the visitor car parking rates outlined in Table 14 of the Brisbane City Council City Plan TAPS PSP.

Application of the parking rates for the Stage V Village Heart are summarised in Tables 4-2 to 4-4 for the V001, V002 and V003 land parcels respectively.

Table 4-2 Minimum Parking Requirement – Stage V Village Heart Land Parcel V001

V001 Land Uses	Yield	Parking Rate	Parking Requirement
Retail	3,000 sq.m	1 space per 20 sq.m GFA	150 spaces
Commercial	1,765 sq.m	1 space per 50 sq.m GFA*	36 spaces
		Total	***186 spaces***

Source: Fitzgibbon Development Scheme Table 1
 # Site is within 400m of a railway station

Table 4-3 Minimum Parking Requirement – Stage V Village Heart Land Parcel V002

V002 Land Uses	Yield	Parking Rate	Parking Requirement
Multiple Residential	108 units	1 space per unit 1 visitor space per 4 units^	108 spaces 27 visitor spaces
Retail	700 sq.m	1 space per 20 sq.m GFA	35 spaces
		Total	***170 spaces***

Source: Fitzgibbon Development Scheme Table 1, ^ Adopted from Table 14 of the BCC TAPS PSP
 # Site is within 400m of a railway station

Table 4-4 Minimum Parking Requirement – Stage V Village Heart Land Parcel V003

V003 Land Uses	Yield	Parking Rate	Parking Requirement
Multiple Residential	63 units	1 space per unit 1 visitor space per 4 units^	63 spaces 16 visitor spaces
Retail	300 sq.m	1 space per 20 sq.m GFA	15 spaces
		Total	***94 spaces***

Source: Fitzgibbon Development Scheme Table 1, ^ Adopted from Table 14 of the BCC TAPS PSP
 # Site is within 400m of a railway station

Therefore, the approximate car parking supply for each of the Stage V Village Heart development land parcels exceed the minimum car parking rates outlined in the Fitzgibbon Development Scheme and Brisbane City Council City Plan TAPS PSP.

4.2 On-Street Parking Provision

In addition to the car parking spaces provided within each Stage V Village Heart development land parcels, the Stage V Village Heart provides a total of 13 on-street car parking spaces along the High Street internal road. To determine the minimum on-street car parking spaces, the *EDQ PDA Guideline 5: Neighbourhood Planning and Design* and *EDQ PDA Guideline 8: Medium and High-Rise Buildings* documents have been referenced.

The *EDQ PDA Guideline 5: Neighbourhood Planning and Design* document outlines that multiple-residential land uses are to provide 0.75 on-street car parking spaces for developments up to six (6) dwelling units. Provided that the residential components of each land parcel exceed six (6) dwelling units, the requirement for on-street car parking is governed through this document.

Furthermore, the *EDQ PDA Guideline 8: Medium and High-Rise Buildings* document does not specify minimum on-street car parking rates, where the document instead indicates that car parking is to be either integrated within or under buildings.

On this basis, there is no requirement for on-street car parking for the Stage V Village Heart development. However, the provision of on-street car parking ensures a safer environment where vehicles will travel slower through High Street to either access a vacant on-street car parking space or observe an outbound vehicle from an on-street car parking. Furthermore, given the various land uses across the Stage V Village Heart development, the provision of on-street car parking spaces will provide car parking for visitors who will only occupy a car space for a short duration, and hence will not manoeuvre throughout the internal car parking layouts of each development land parcel.

Therefore, Cardno considers the proposed on-street car parking provisions to be acceptable.

4.3 Car Parking Design

Table 4-5 outlines the compliance with TAPS parking design standards and Australian Standard *AS2890.1* document for the on-street parking facilities. Provided that the car parking design for each development land parcel has not been provided, Cardno has only assessed the on-street car parking facilities. It is recommended that all

Table 4-5 Parking Design Compliance

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

As indicated, the proposed design of the parking areas comply with the TAPS and *AS2890.1* requirements.

5 Servicing Design

Cardno has assessed the indicative service vehicle requirements for each land parcel to inform the access crossover designs.

Provided that each land parcel consists of various land use definitions, Cardno has selected the largest service vehicle required for the given land uses in each land parcel in accordance with Tables 1, 2 and 3 of the Brisbane City Council City Plan TAPS PSP. The largest service vehicles required for each land parcel is outlined in Table 5-1.

Table 5-1 Stage V Village Heart – Land Parcel Development Yields

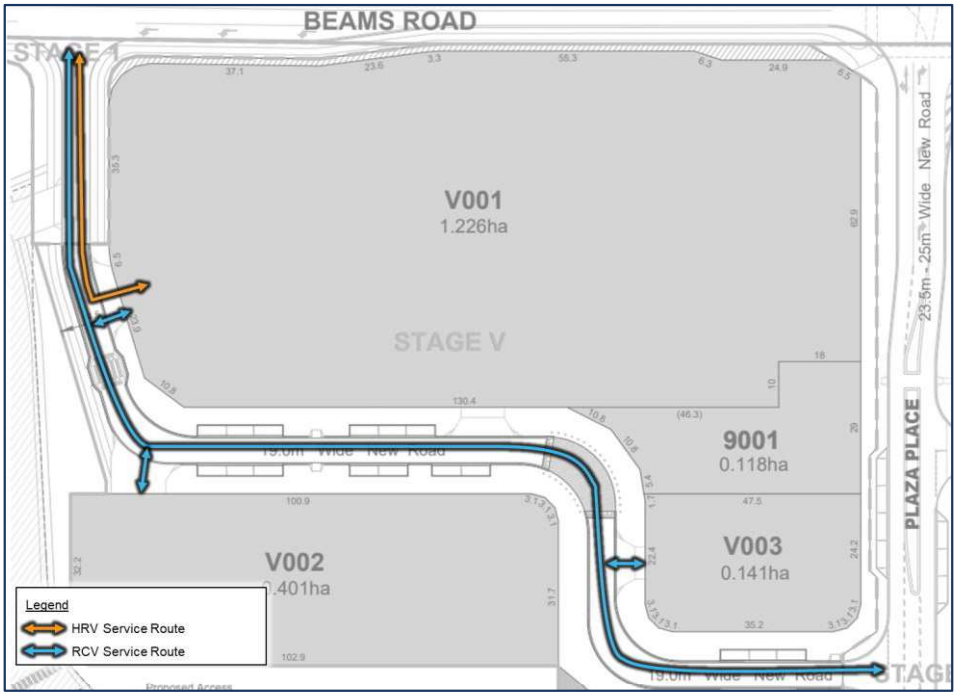
Land Parcel	Stage V Village Heart Development Yields*			Largest Service Vehicle Required	BCC TAPS PSP Reference
	Residential	Retail	Commercial		
V001	-	3,000 sq.m	1,765 sq.m	HRV	*Table 3 (Shop GFA between 2,800 – 3,599 sq.m)*
V002	108 units	700 sq.m	-	RCV	Table 1, Column 4 *(Multiple Dwelling)*
V003	63 units	300 sq.m	-	RCV	

Therefore, the largest service vehicles required for the Stage V Village Heart development are an HRV and RCV.

It is proposed that the HRV service vehicle will access the V001 land parcel via the Beams Road / Meander Street intersection and utilise the western crossover for inbound / outbound access. This is to ensure that the HRV service vehicle does not traverse through the CV access via Plaza Place where a large number of private vehicles will be accessing Stages 1 to 4B to the east. Provided that RCV service vehicles already utilise the Plaza Place CV access to service Stages 1 to 4B, it is anticipated that RCV service vehicles will access land parcels V002 and V003 from the Plaza Place / High Street intersection as well as the Beams Road / Meander Street intersection.

On this basis, the anticipated service vehicle routes through the Stage V Village Heart development are illustrated on Figure 5-1.

Figure 5-1 CV Stage V Village Heart Service Routes



Source: RPS

Therefore, the V001 western crossover is to accommodate up to an HRV design vehicle, while the V001 southern crossover in addition to the V002 and V003 crossovers are to accommodate up to an RCV design vehicle.

To ensure the proposed access crossover designs are suitable for the HRV and RCV design vehicles, Table 9 of the Brisbane City Council City Plan TAPS PSP has been referenced.

The minimum access crossover requirements for the HRV and RCV design vehicles, as informed by Table 9 of the Brisbane City Council City Plan TAPS PSP, and the proposed access crossover designs are outlined in Table 5-2.

Table 5-2 Stage V Village Heart – Access Crossover Design Compliance

Land Parcel	Crossover	Minimum Access Crossover Design	Proposed Access Crossover Design	Compliance
V001	Western Crossover	B2 (7m)	C2 (12m)	✓
	Southern Crossover	B2 (6.5m)	C1 (9.5m)	✓
V002	Northern Crossover	B2 (6.5m)	C2 (12m)	✓
V003	Western Crossover	B2 (6.5m)	B2 (7.0m)	✓

Therefore, the indicative access crossover designs meet the minimum access crossover design requirements of the Brisbane City Council City Plan TAPS PSP.

It is acknowledged that the proposed access crossovers have increased widths in comparison to the minimum access crossover design to meet the minimum car parking supply requirements for the access crossover design. Furthermore, the increased widths are provided to ensure the HRV and RCV design vehicles are able to safely and efficiently access / egress from each of the land parcel as discussed in the subsequent section.

5.1.2 Swept Path Assessment

A swept path assessment has been completed for a BCC Standard Front Lift RCV and HRV manoeuvring through the High Street internal road, as well as into and out form the Stage V Village Heart land parcels.

The swept path assessment for the RCV design vehicle is provided at **Appendix C**, and the swept paths for the HRV design vehicle are provided at **Appendix D**.

The swept path assessments indicate that both service vehicles are able to safely and efficiently manoeuvre through the High Street internal road while allowing a B85 design vehicle to safely pass.

Furthermore, the swept path assessment indicates that the RCV and HRV design vehicles are able to safely manoeuvre into and out from the proposed land parcel crossovers.

5.1.3 Proposed Access Easement

Additionally, as swept path assessment has been completed for the largest design vehicle to and from the Phase 2 swale works and maintenance track. RPS have indicated that the largest anticipated design vehicle is a Small Rigid Vehicle (SRV) associated with maintenance and civil works in and around the swale area.

The swept path assessment for the SRV design vehicle is provided at **Appendix E**, and indicated that the SRV is able to safely and efficiently manoeuvre to and from the Phase 2 swale works and maintenance track

6 Summary

Following the approval of the CV masterplan (DEV2018/932/3), a development application for Stage V 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 the Beams Road / Meander Street intersection as well as the upgraded form of the Beams Road / Balcara Avenue / Plaza Place intersection provided as part of the Stage 1 development,
- Active transport facilities are in accordance with the masterplan providing for footpaths on access streets, ample verge widths for future footpaths to delivered by third party developers of the Village Heart mixed-use lots, and include provisions for raised pedestrian crossing and shared zone arrangements,
- The traffic impact for Stage V has been determined to be within the traffic carrying capacity of the external and internal intersections, given the traffic generation is lower than 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 Development Scheme
- The design of on-street parking has been determined to be compliant with relevant standards,
- Refuse collection through the site has been demonstrated to be suitable with swept paths (refer to Appendix D)

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

Carseldine Village

APPENDIX A
PROPOSED DEVELOPMENT PLANS

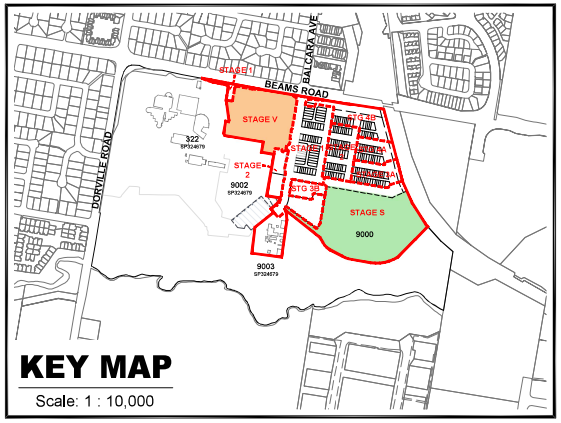
Cardno
Shaping the Future

CARSELDINE URBAN VILLAGE

PLAN OF SUBDIVISON STAGE V - OVERALL

PLAN REF: 128180 – 123
Rev No: I
DATE: 26 JULY 2022
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

0 15 30 45 60 90 1 : 3,000 @ A2



KEY MAP

Scale: 1 : 10,000

Legend

- Site Boundary
- Proposed Stage Boundary
- Existing Easements
- Proposed Access Easement
- Beams Road Resumption

Note:
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.

Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.

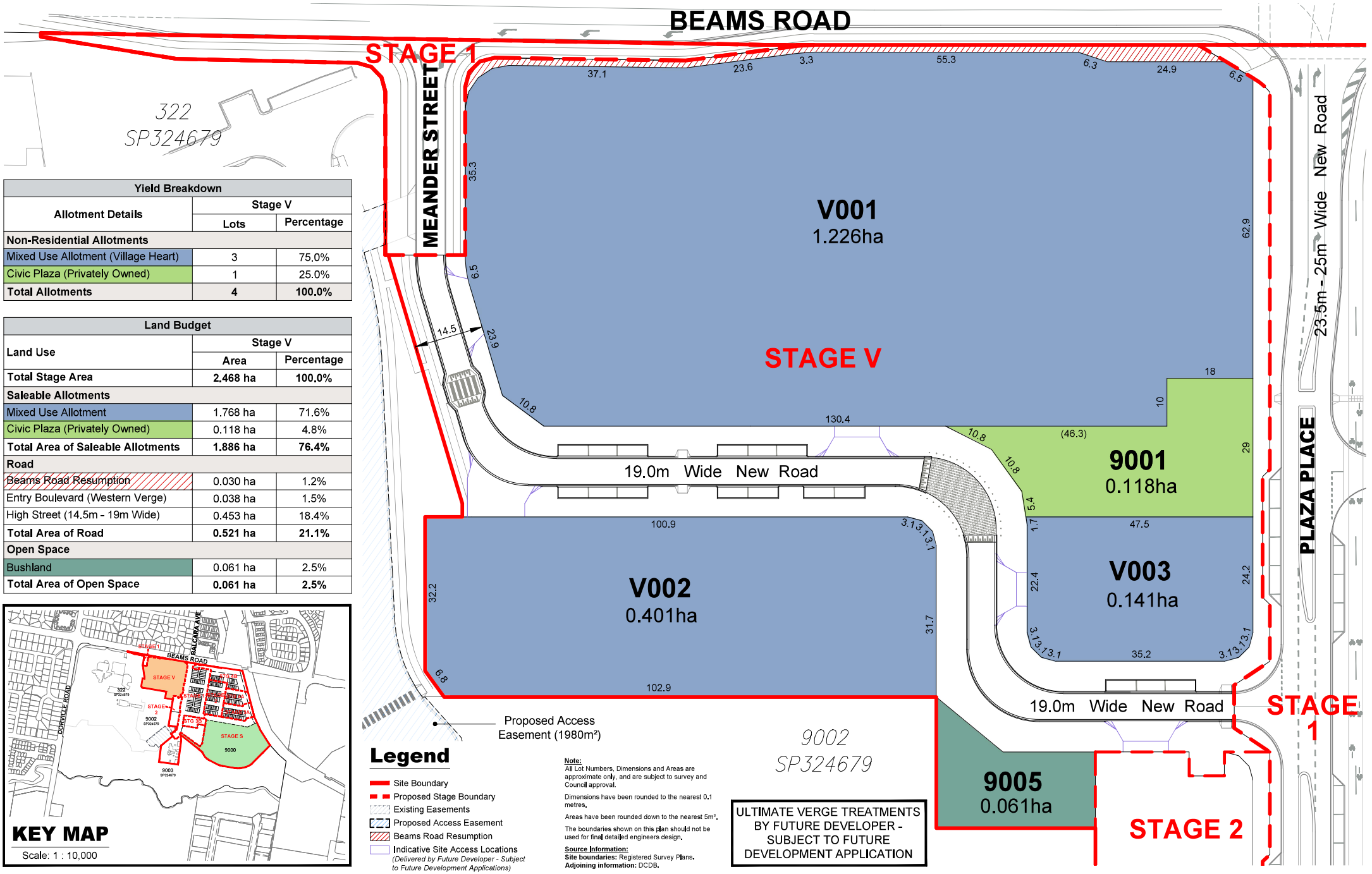
ULTIMATE VERGE TREATMENTS BY FUTURE DEVELOPER - SUBJECT TO FUTURE DEVELOPMENT APPLICATION

Yield Breakdown		
Allotment Details	Stage V	
	Lots	Percentage
Non-Residential Allotments		
Mixed Use Allotment (Village Heart)	3	75.0%
Civic Plaza (Privately Owned)	1	25.0%
Total Allotments	**4**	**100.0%**

Land Budget		
Land Use	Stage V	
	Area	Percentage
Total Stage Area	**2.468 ha**	**100.0%**
Saleable Allotments		
Mixed Use Allotment	1.768 ha	71.6%
Civic Plaza (Privately Owned)	0.118 ha	4.8%
Total Area of Saleable Allotments	**1.886 ha**	**76.4%**
Road		
Beams Road Resumption	0.030 ha	1.2%
Entry Boulevard (Western Verge)	0.038 ha	1.5%
High Street (14.5m - 19m Wide)	0.453 ha	18.4%
Total Area of Road	**0.521 ha**	**21.1%**
Open Space		
Bushland	0.061 ha	2.5%
Total Area of Open Space	**0.061 ha**	**2.5%**

BEAMS ROAD
BALCARA AVENUE
DORVILLE ROAD
STAGE 1 (Separate Application)
V001
STAGE V
V002
V003
9001
9005
Proposed Access Easement (1980m²)
322 SP324679
STAGE 2 (Separate Application)
(Separate Management Subdivision Application)
9002 SP324679
Easement L on SP311891
STG 4B (Separate Application)
STAGE 1 (Separate Application)
STAGE 2 (Separate Application)
STG 4A (Separate Application)
STAGE 3A (Separate Application)
STG 3B (Separate Application)
STAGE S (Separate Application)
9000
9003 SP324679

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com



Yield Breakdown		
Allotment Details	Stage V	
	Lots	Percentage
Non-Residential Allotments		
Mixed Use Allotment (Village Heart)	3	75.0%
Civic Plaza (Privately Owned)	1	25.0%
Total Allotments	**4**	**100.0%**

Land Budget		
Land Use	Stage V	
	Area	Percentage
Total Stage Area	**2.468 ha**	**100.0%**
Saleable Allotments		
Mixed Use Allotment	1.768 ha	71.6%
Civic Plaza (Privately Owned)	0.118 ha	4.8%
Total Area of Saleable Allotments	**1.886 ha**	**76.4%**
Road		
Beams Road Resumption	0.030 ha	1.2%
Entry Boulevard (Western Verge)	0.038 ha	1.5%
High Street (14.5m - 19m Wide)	0.453 ha	18.4%
Total Area of Road	**0.521 ha**	**21.1%**
Open Space		
Bushland	0.061 ha	2.5%
Total Area of Open Space	**0.061 ha**	**2.5%**

KEY MAP

Scale: 1 : 10,000

Legend

- Site Boundary
- Proposed Stage Boundary
- Existing Easements
- Proposed Access Easement
- Beams Road Resumption
- Indicative Site Access Locations *(Delivered by Future Developer - Subject to Future Development Applications)*

Note:
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 5m².

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

Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.

ULTIMATE VERGE TREATMENTS BY FUTURE DEVELOPER - SUBJECT TO FUTURE DEVELOPMENT APPLICATION

PLAN REF: 128180 – 124
Rev No: I
DATE: 26 JULY 2022
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

0 5 10 15 20 25 1 : 500 @ A2

CARSELDINE URBAN VILLAGE
PLAN OF SUBDIVISION
STAGE V - VILLAGE HEART SUBDIVISION

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
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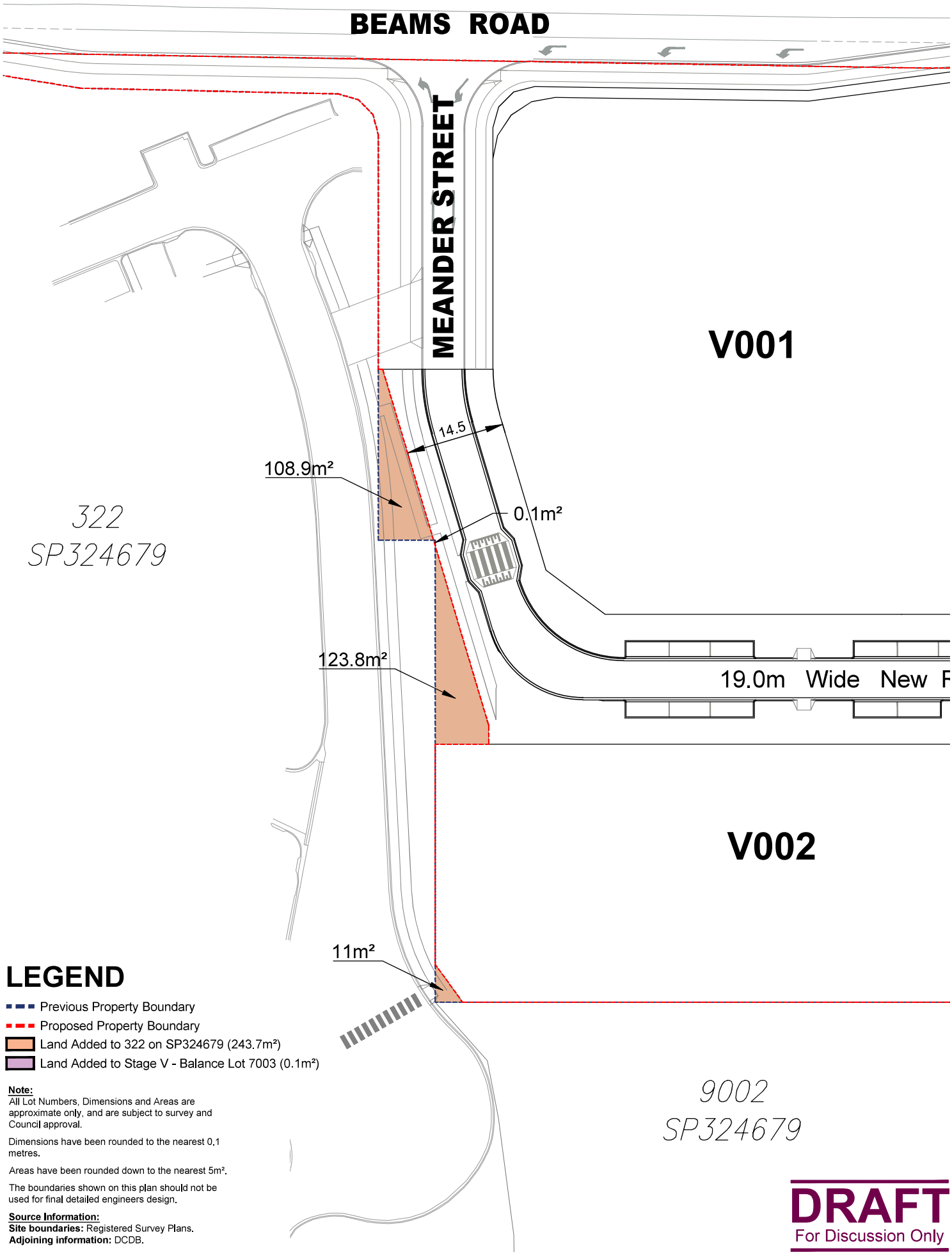

LEGEND

- Previous Property Boundary
- Proposed Property Boundary
- Land Added to 322 on SP324679 (243.7m²)
- Land Added to Stage V - Balance Lot 7003 (0.1m²)

Note:
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 5m².

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

Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.

DRAFT
For Discussion Only

PLAN REF: 128180 – 150
Rev No: C
DATE: 26 JULY 2022
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD/DG

0 5 10 15 20 25 1 : 500 @ A3

CARSELDINE URBAN VILLAGE
STAGE V - VILLAGE HEART
BOUNDARY REALIGNMENT

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
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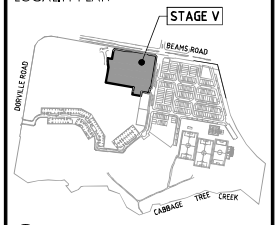
FUNCTIONAL LAYOUT - STORMWATER PLAN
SCALE 1:500

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR INFORMATION	24.06.2022	RW

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
FUNCTIONAL LAYOUT
CARSELDINE VILLAGE
STAGE V

kn group
ABN 35 112 53 611
L1, 62 Astor Tce
Spring Hill Q 4000
07 3017 1900
www.kngroup.com.au

Approved

Drawing Title
FUNCTIONAL LAYOUT
STORMWATER

Drawn	Designed	Checked	Date
RW	JB	MS	May '22

Scale	Sheet
AS SHOWN	4 of 10

A1	Drawing No	Revision
	21-121- FL04	A

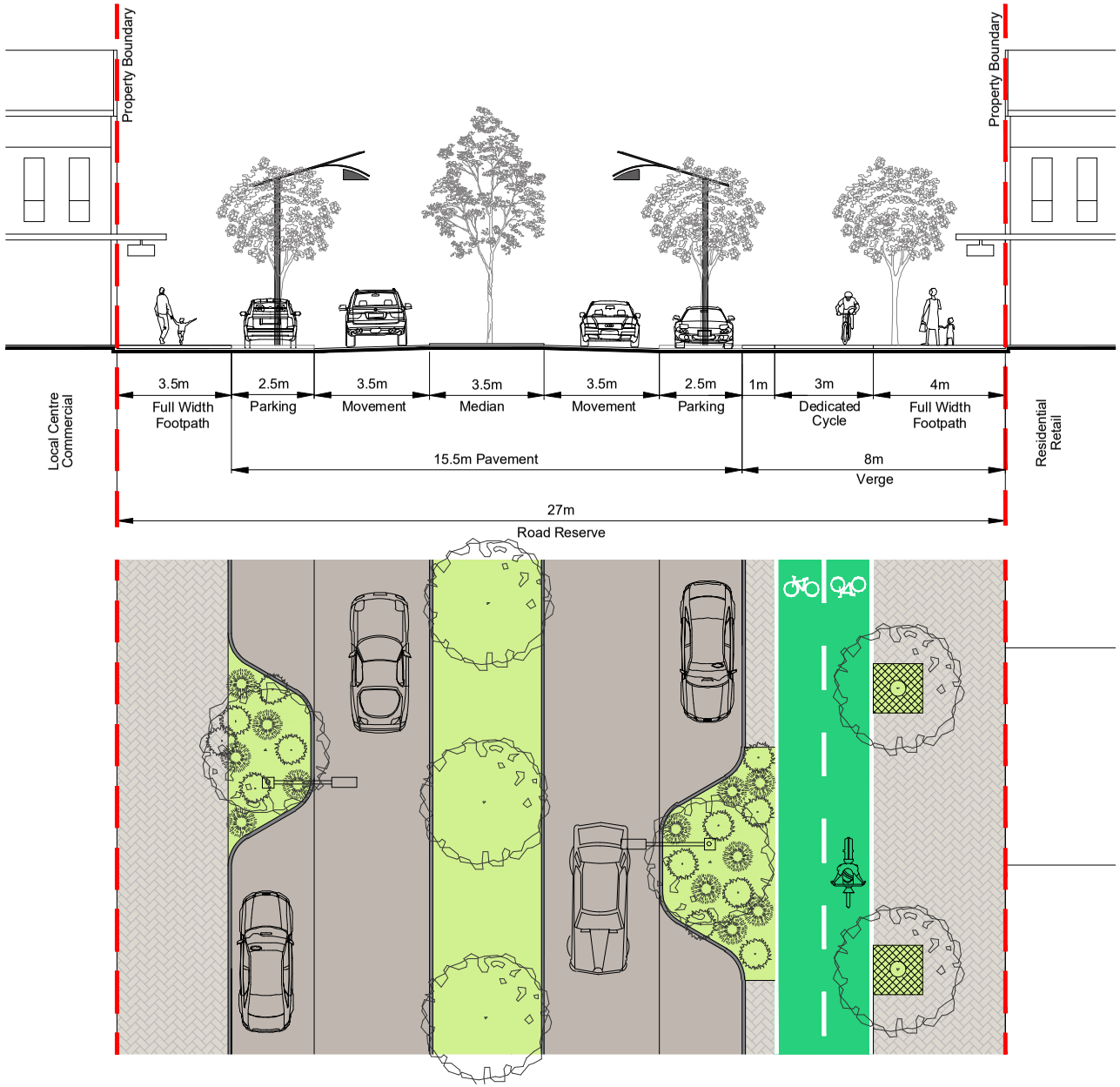
M:\2021\21121 Carseldine Village Stage V\Engineering\ACAD\FUNCTIONAL\21-121-04-STORMWATER.dwg Plotted by: RW on 8/07/2022 3:07:27 PM

Carseldine Village

APPENDIX B
APPROVED MASTERPLAN ROAD CROSS SECTIONS

Cardno
Shaping the Future

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.

PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

0 2 4 6 8 10 1 : 200 @ A4

CARSELDINE URBAN VILLAGE
VILLAGE MAIN STREET
27m WIDE

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
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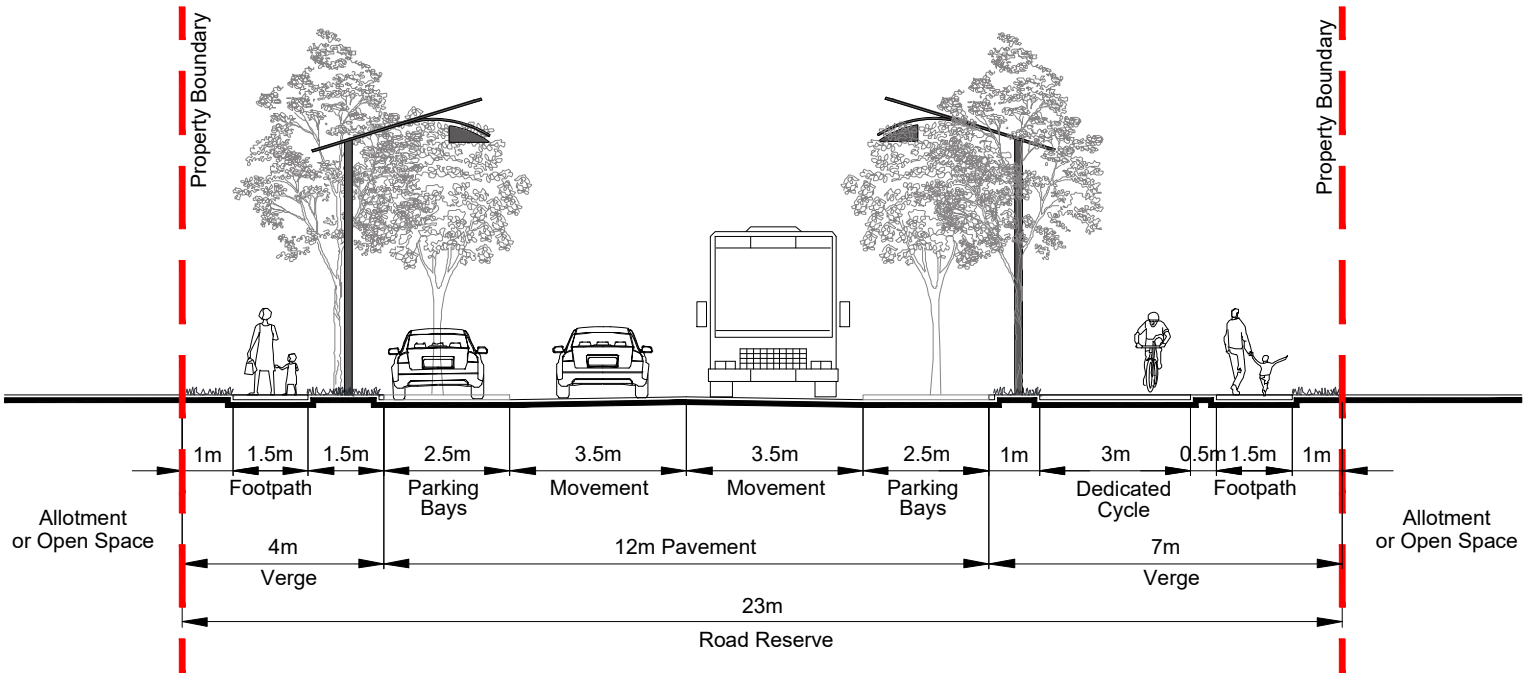
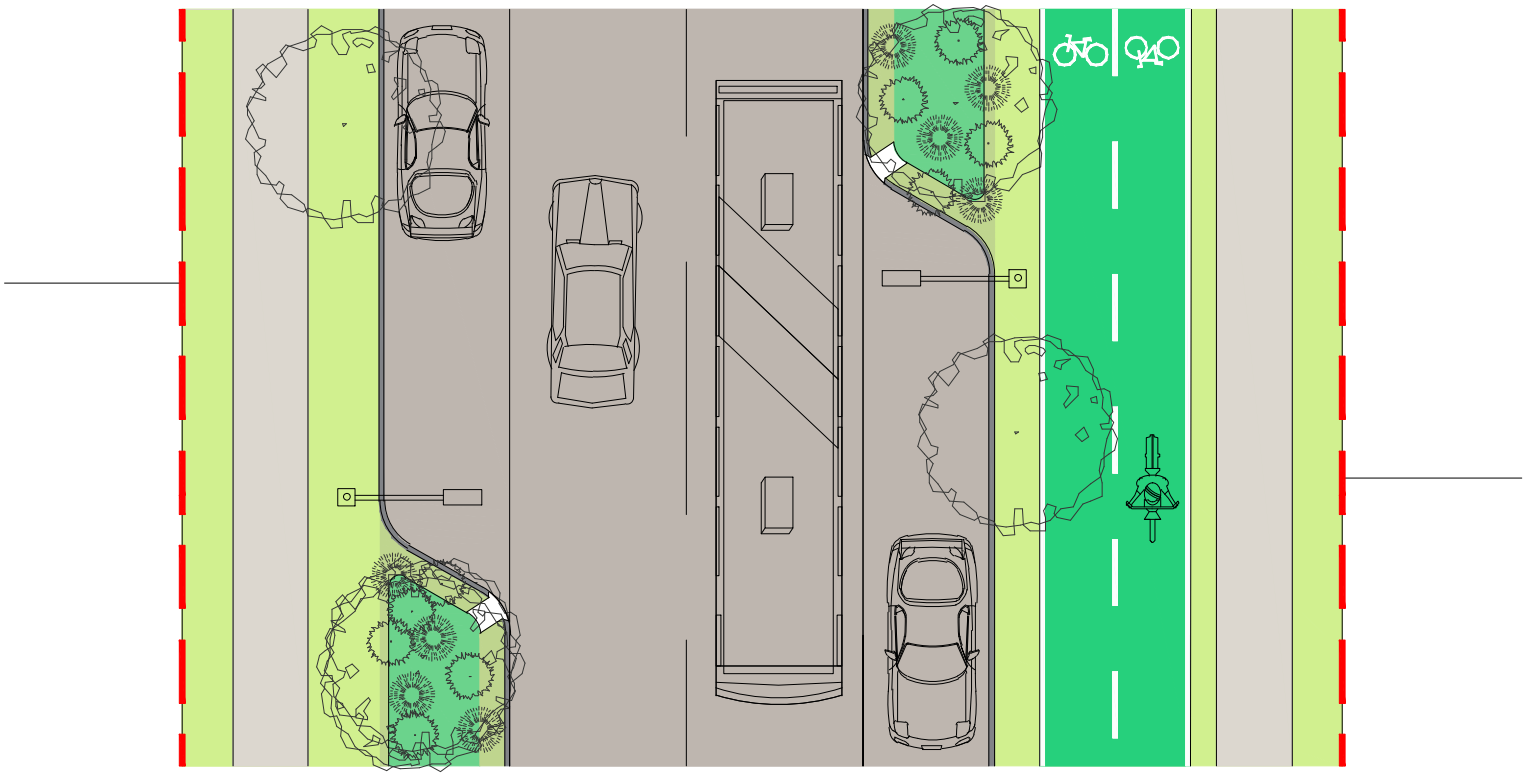
Western Access Road / Shared Busway - 23m





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

PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
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0 1 2 3 4 5 1 : 150 @ A4

CARSELDINE URBAN VILLAGE
WESTERN ACCESS ROAD / SHARED BUSWAY - 23m WIDE

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Level 4 HQ South
520 Wickham Street
PO Box 1559
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T +61 7 3539 9500
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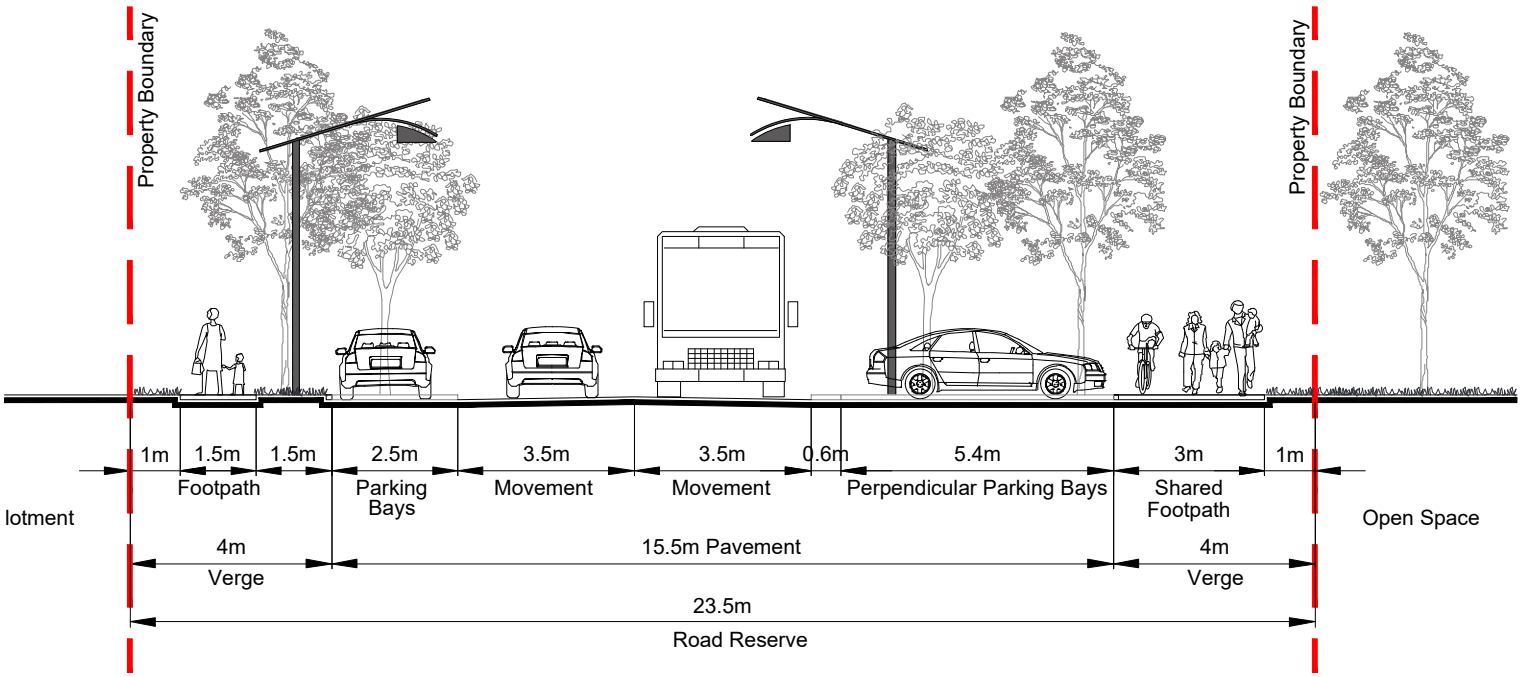
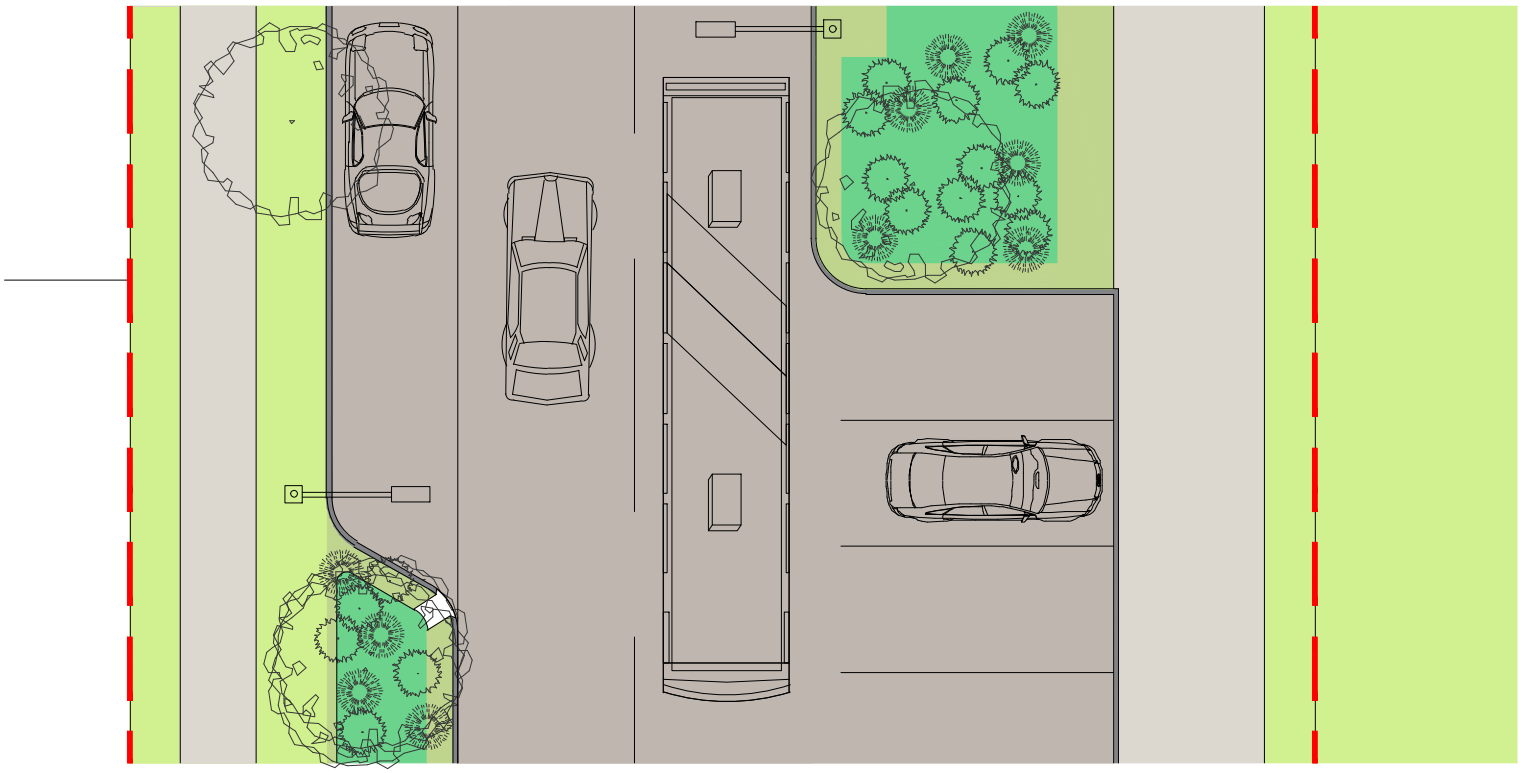
Residential Park Esplanade - 23.5m





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

PLAN REF:	**128180 – 39D**
DATE:	09 SEPTEMBER 2019
CLIENT:	EDQ
DRAWN BY:	MD
CHECKED BY:	MD / DG

0 1 2 3 4 5 **1 : 150 @ A4**

CARSELDINE URBAN VILLAGE

RESIDENTIAL PARK ESPLANADE

23.5m WIDE

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Level 4 HQ South
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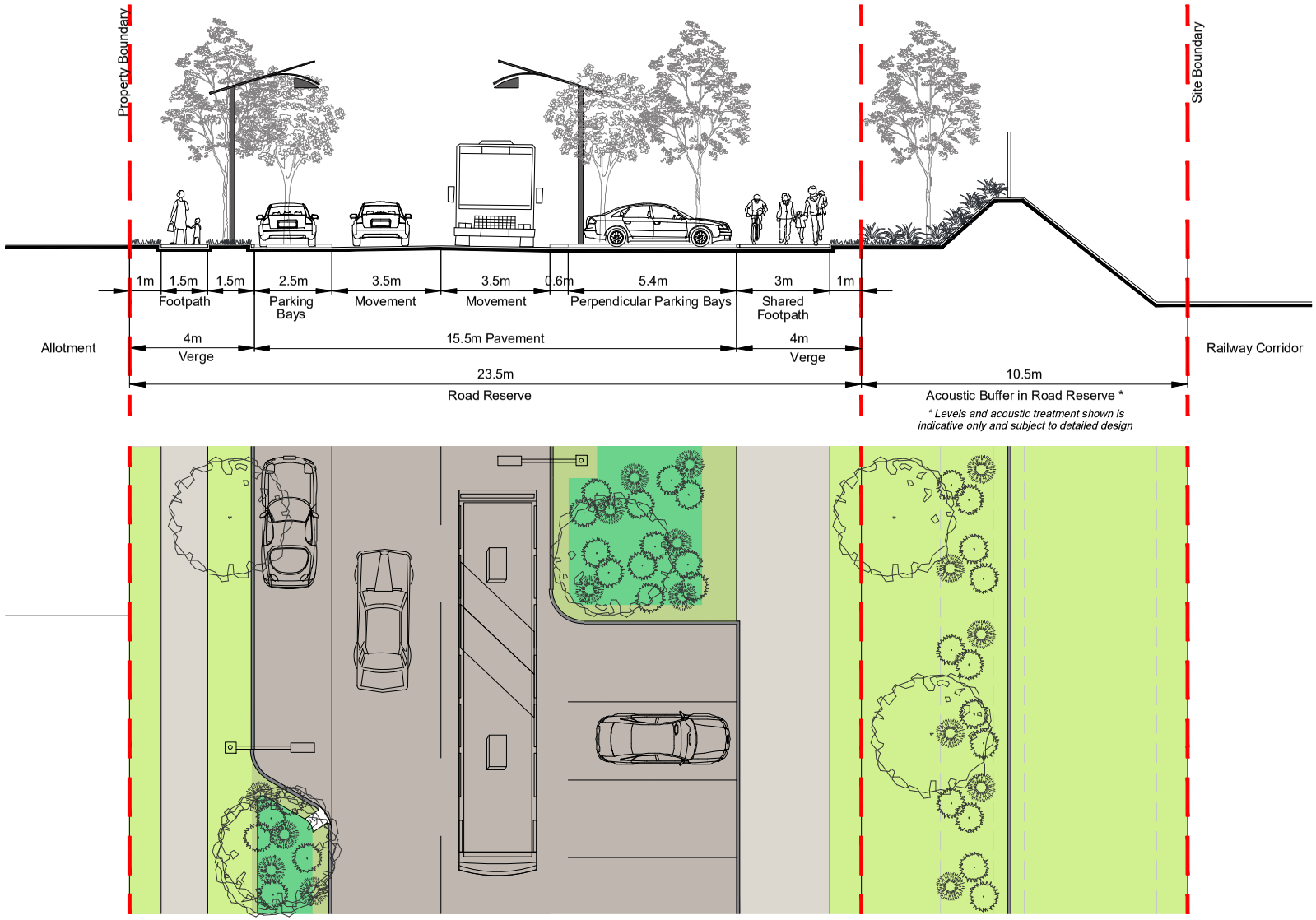
Railway Esplanade - 23.5m + 10.5m Buffer



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

PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
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0 2 4 6 8 10 1 : 200 @ A4

CARSELDINE URBAN VILLAGE
RAILWAY ESPLANADE
23.5m WIDE + 10.5m BUFFER

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
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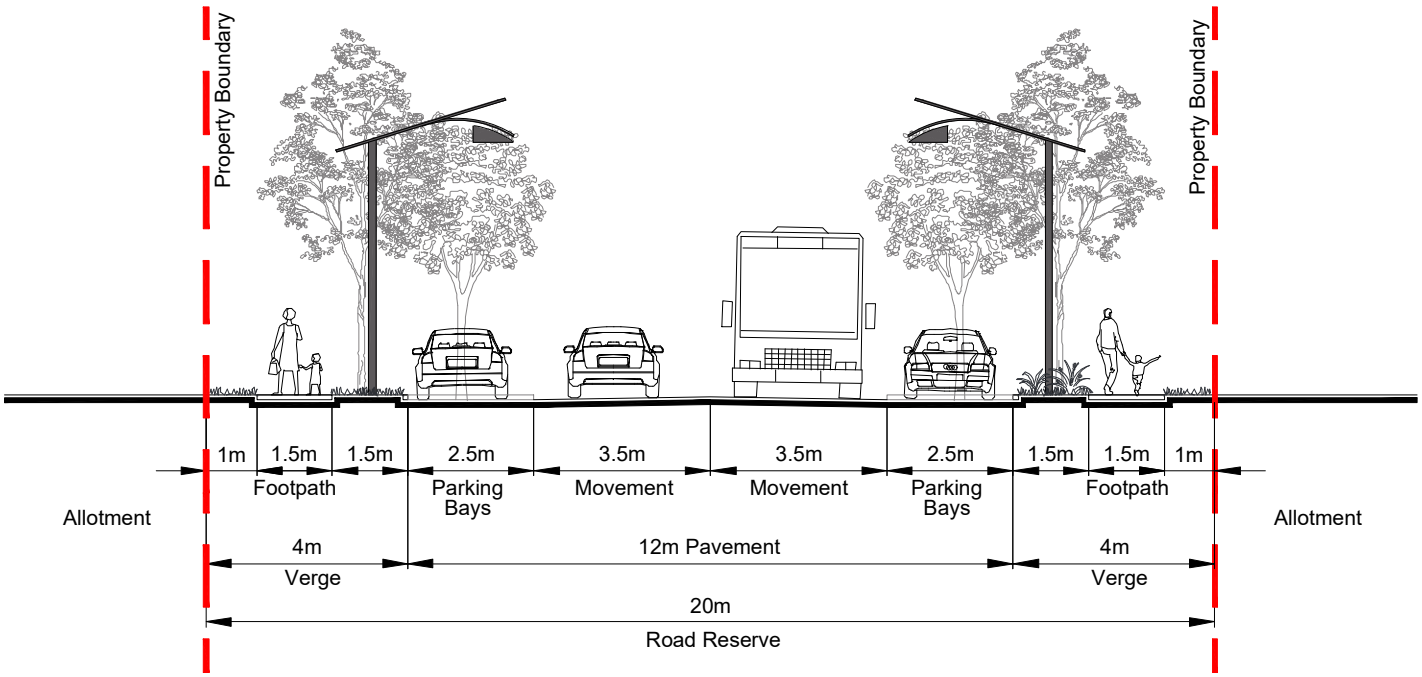
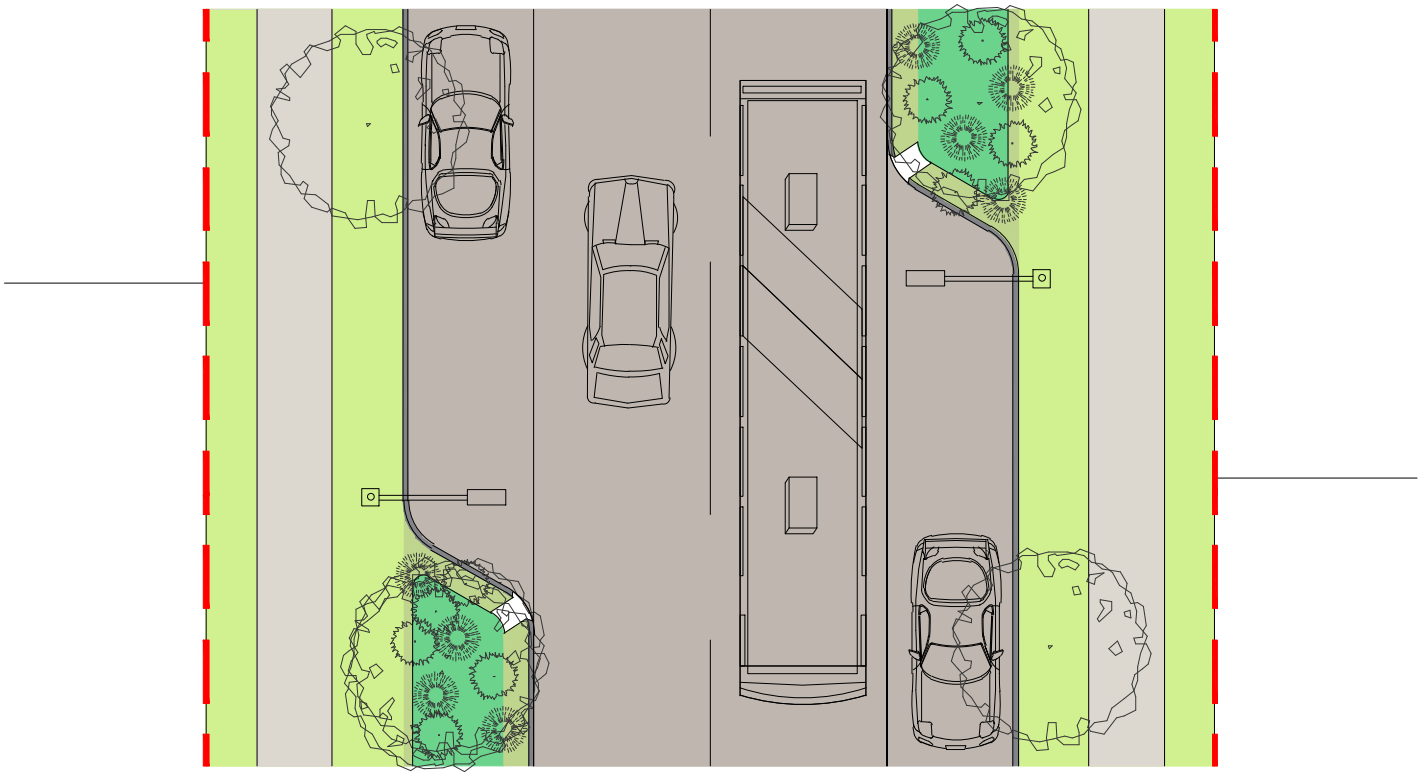
Loop Road - 20m





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

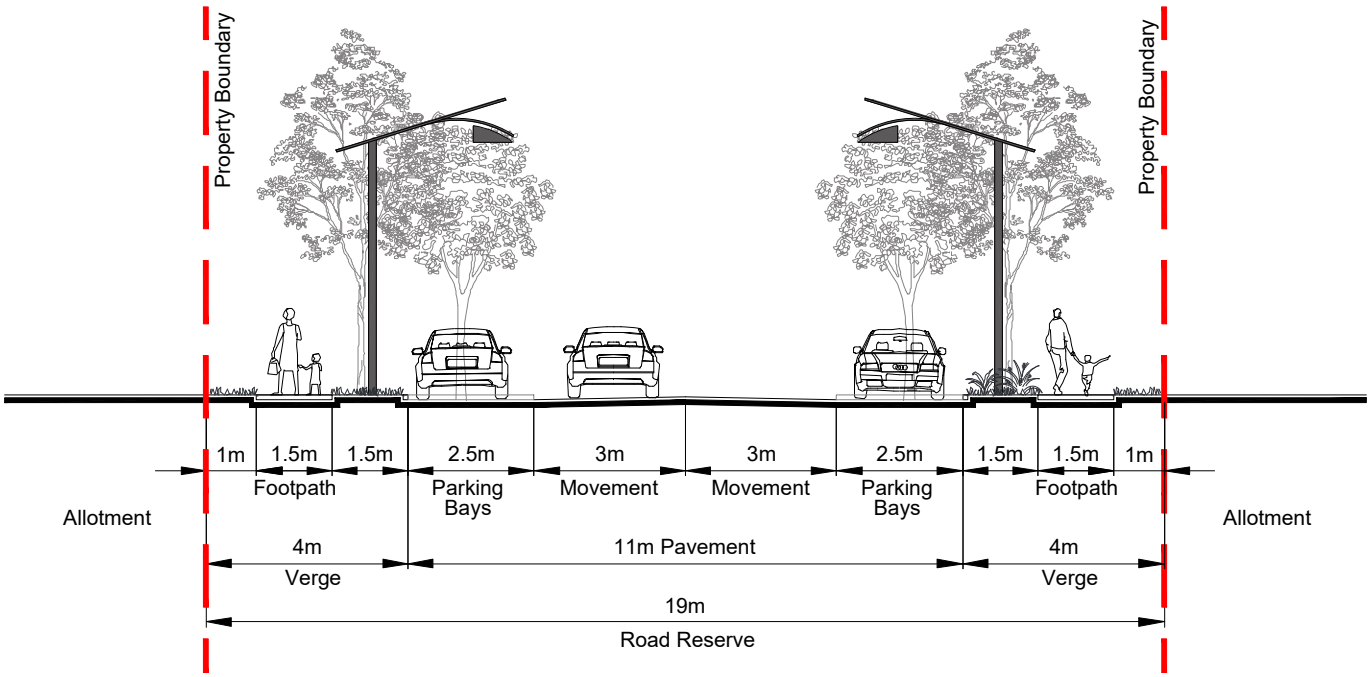
PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

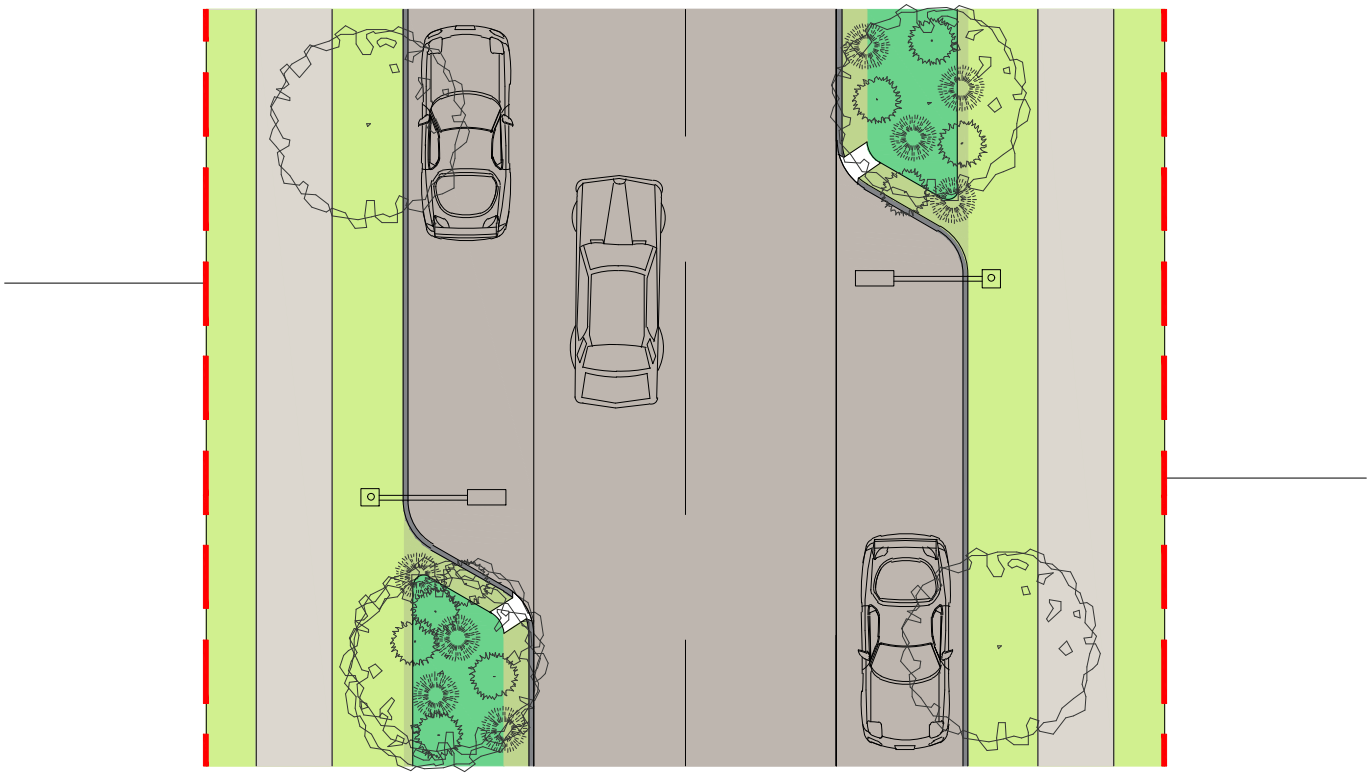
0 1 2 3 4 5 1 : 150 @ A4

CARSELDINE URBAN VILLAGE
LOOP ROAD
20m WIDE

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

Access Place - 19m





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

PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

0 1 2 3 4 5 1 : 150 @ A4

CARSELDINE URBAN VILLAGE
ACCESS PLACE
19m WIDE

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
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T +61 7 3539 9500
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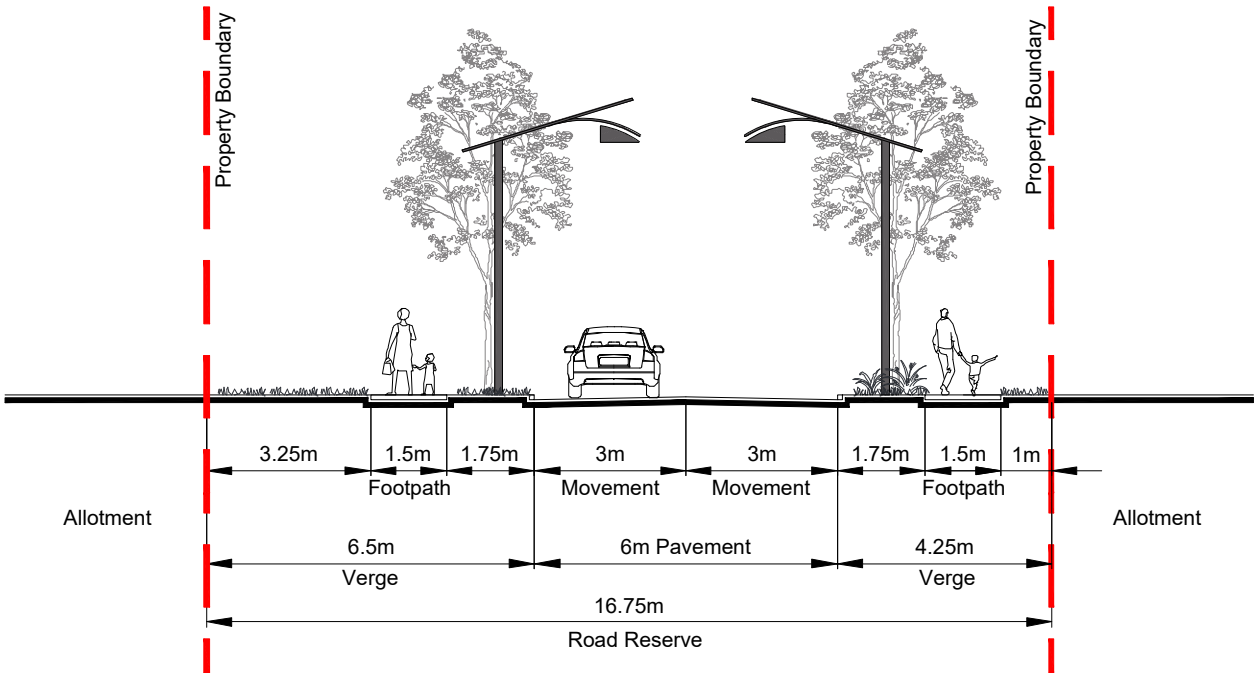
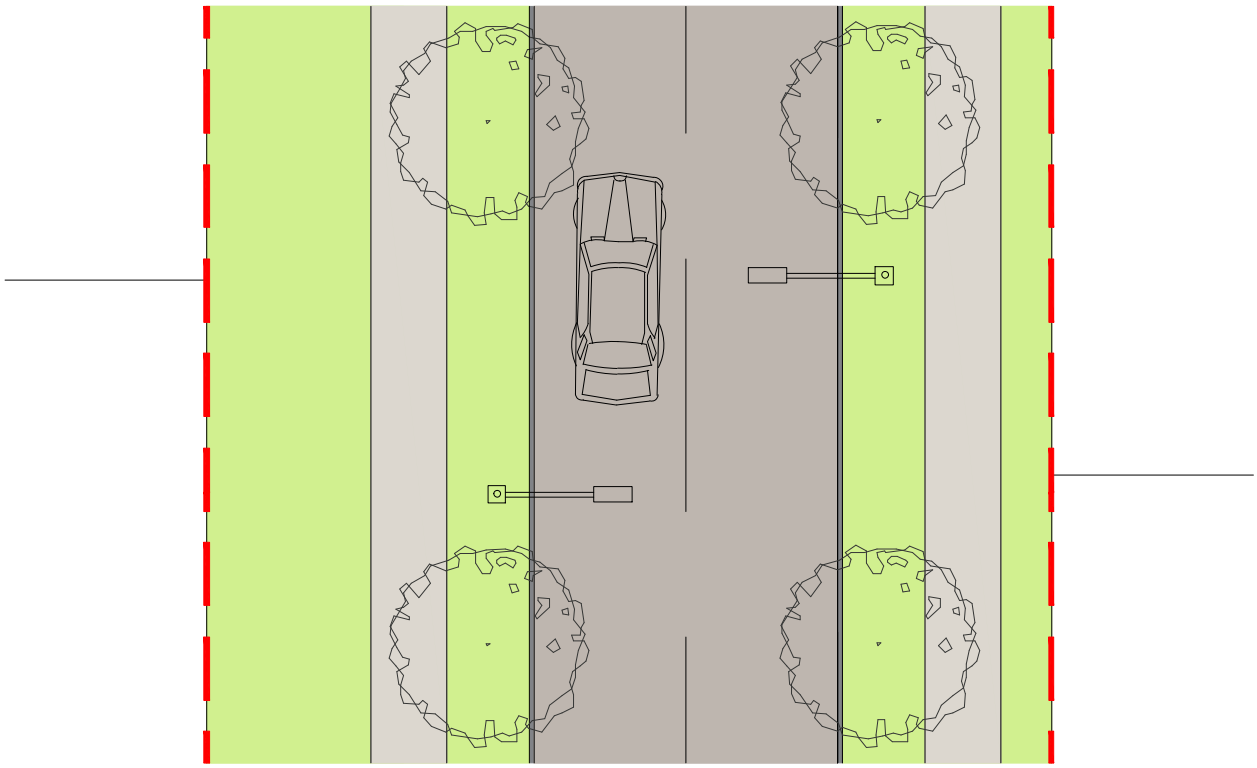
Access Place (No Parking) - 16.75m





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

PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

0 1 2 3 4 5 1 : 150 @ A4

CARSELDINE URBAN VILLAGE
ACCESS PLACE (NO PARKING)
16.75m WIDE

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
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T +61 7 3539 9500
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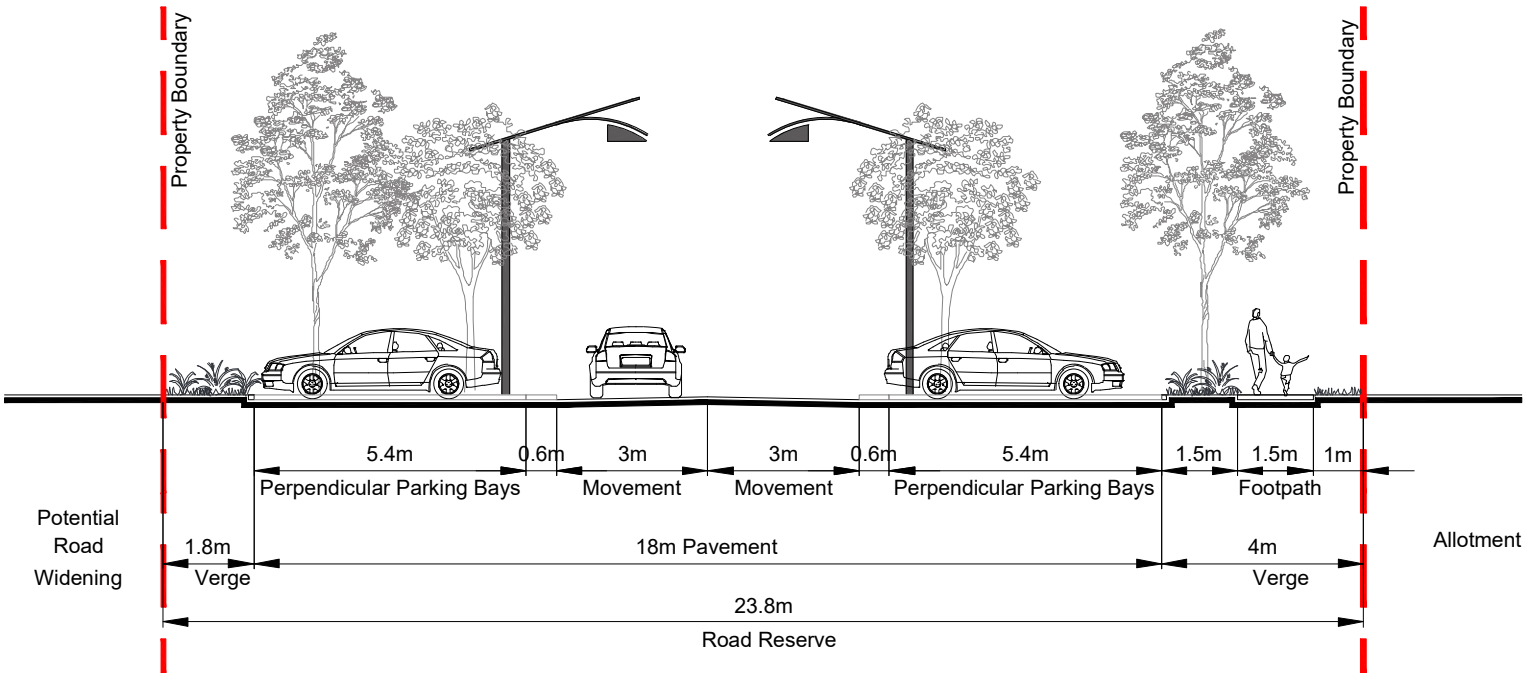
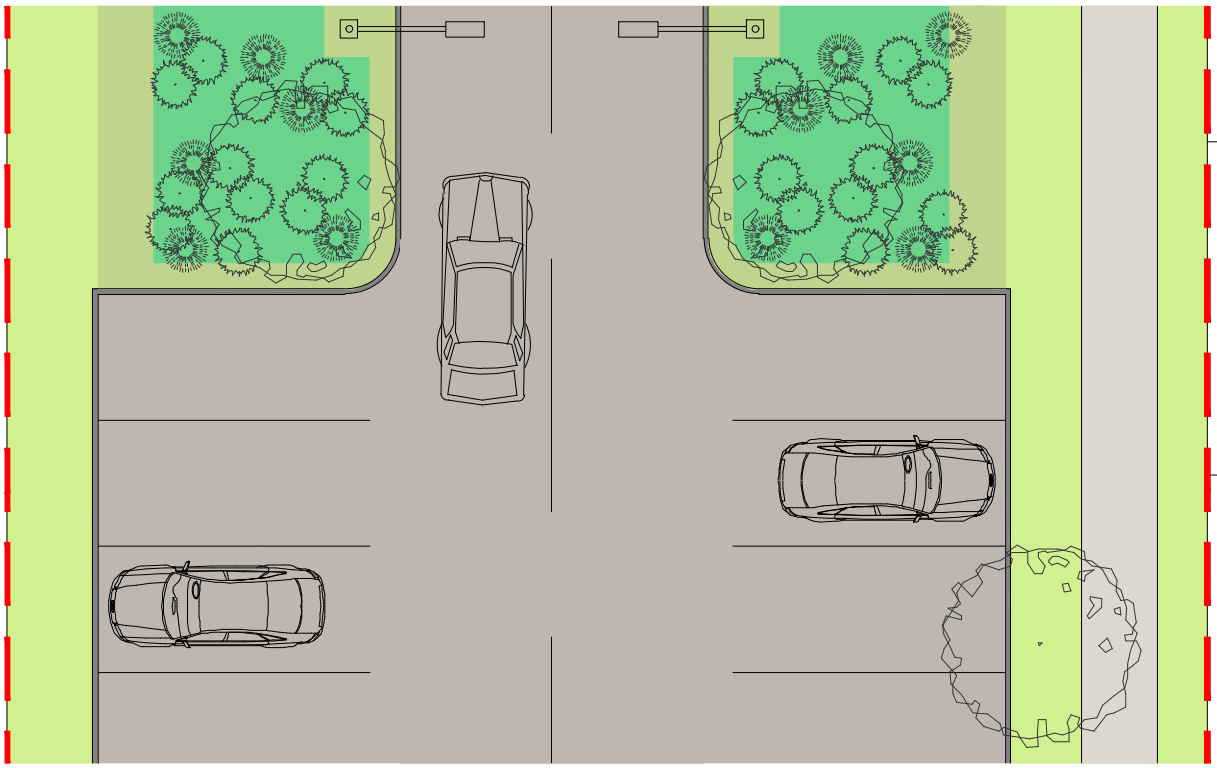
Access Place (Parking) - 23.8m





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

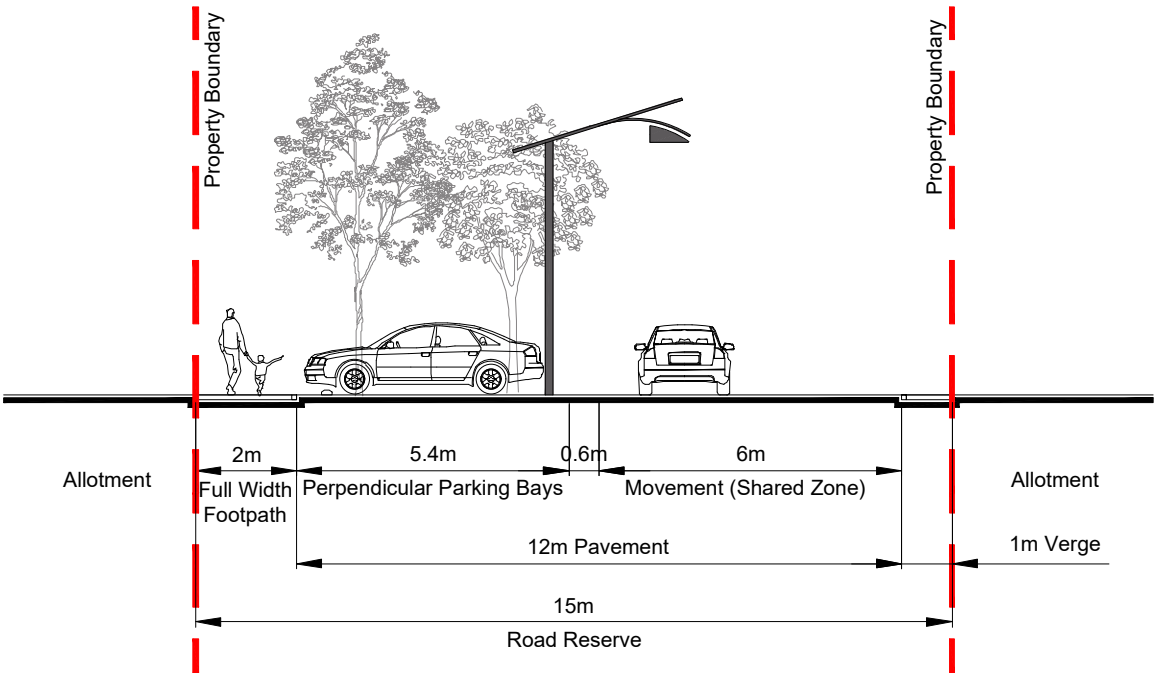
PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

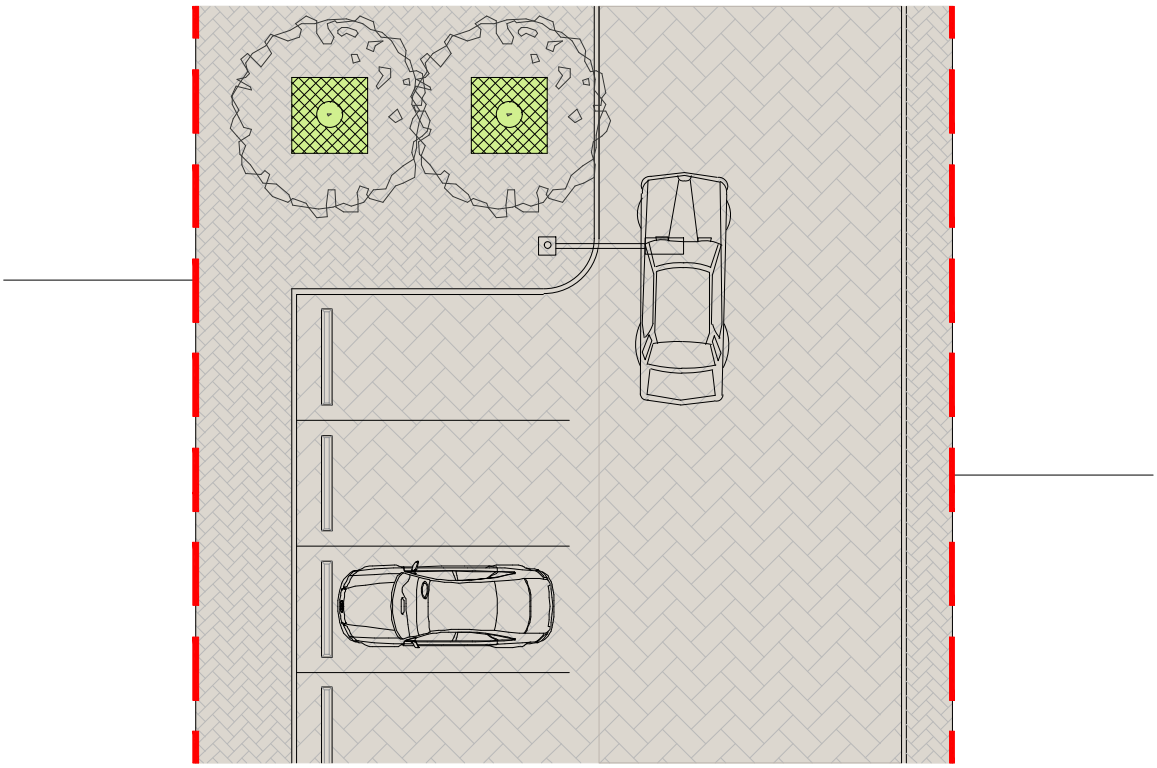
0 1 2 3 4 5 1 : 150 @ A4

CARSELDINE URBAN VILLAGE
ACCESS PLACE (PARKING)
23.8m WIDE

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

Shared Access Lane (Parking One Side) - 15m





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

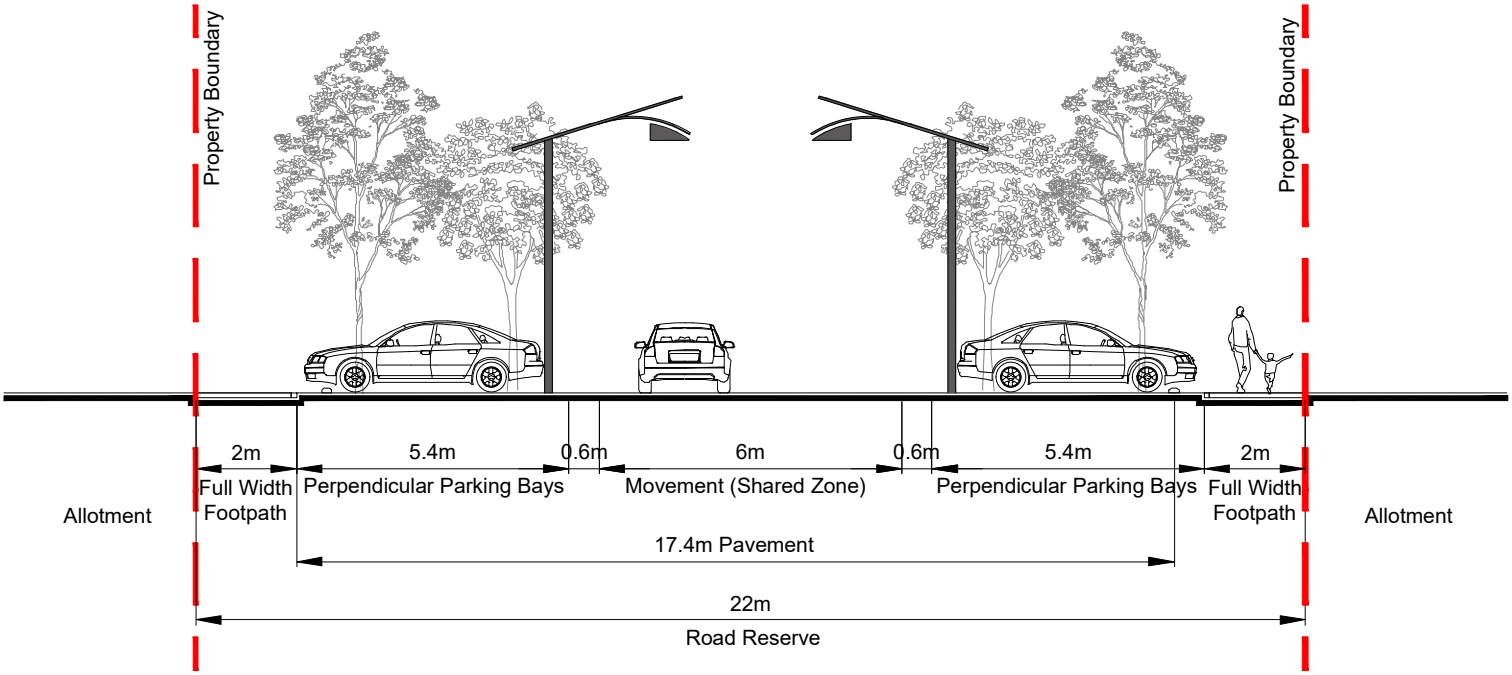
PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

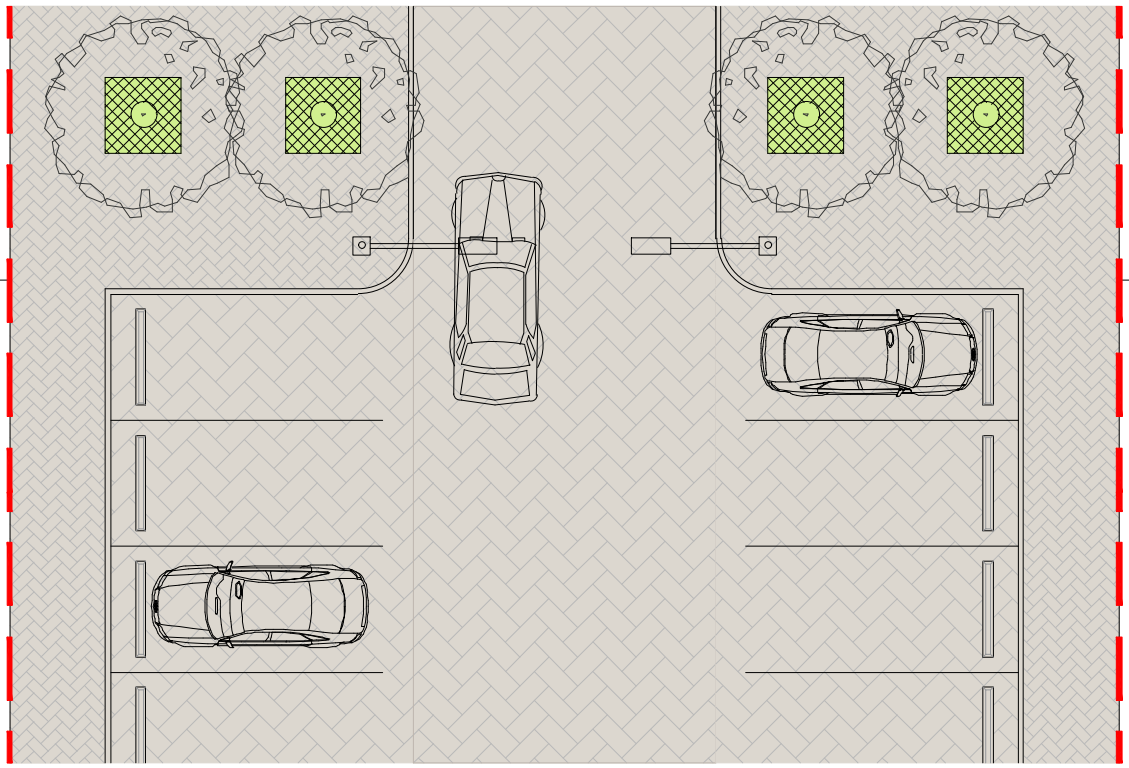
0 1 2 3 4 5 1 : 150 @ A4

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

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

Shared Access Lane (Parking Two Sides) - 22m





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

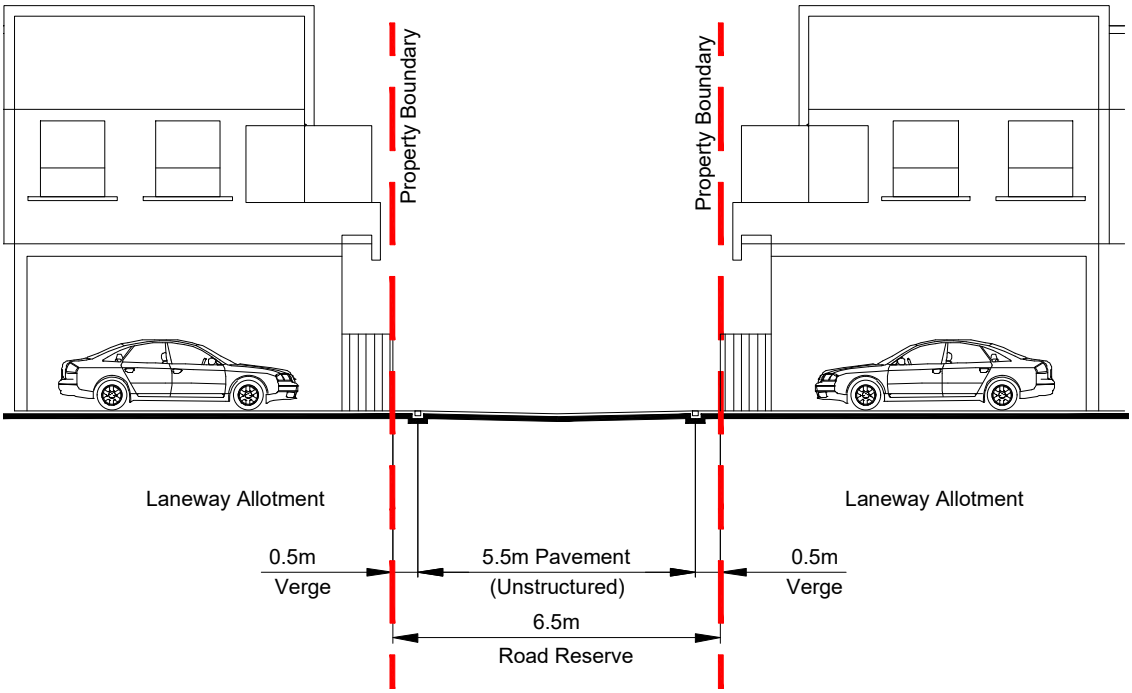
PLAN REF:	**128180 – 39D**
DATE:	09 SEPTEMBER 2019
CLIENT:	EDQ
DRAWN BY:	MD
CHECKED BY:	MD / DG

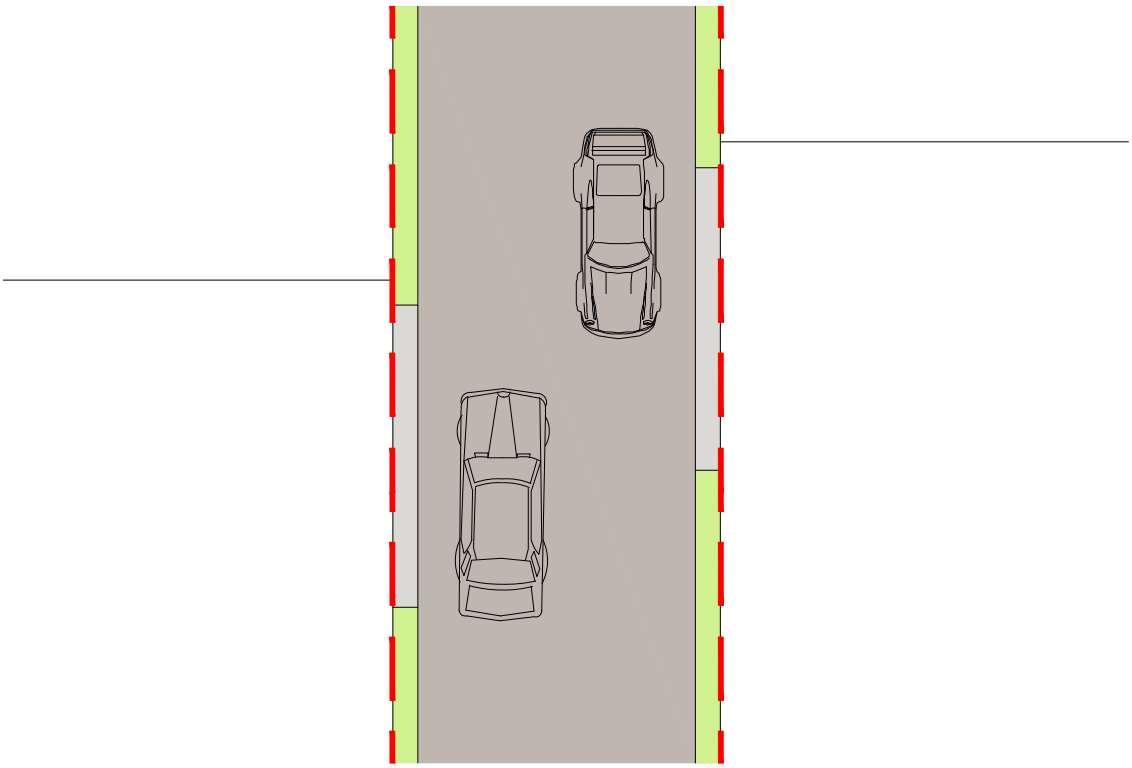
0 1 2 3 4 5 **1 : 150 @ A4**

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

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

Access Lane - 6.5m





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

PLAN REF: 128180 – 39D
DATE: 09 SEPTEMBER 2019
CLIENT: EDQ
DRAWN BY: MD
CHECKED BY: MD / DG

0 1 2 3 4 5 1 : 150 @ A4

CARSELDINE URBAN VILLAGE
ACCESS LANE
6.5m WIDE

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

Carseldine Village

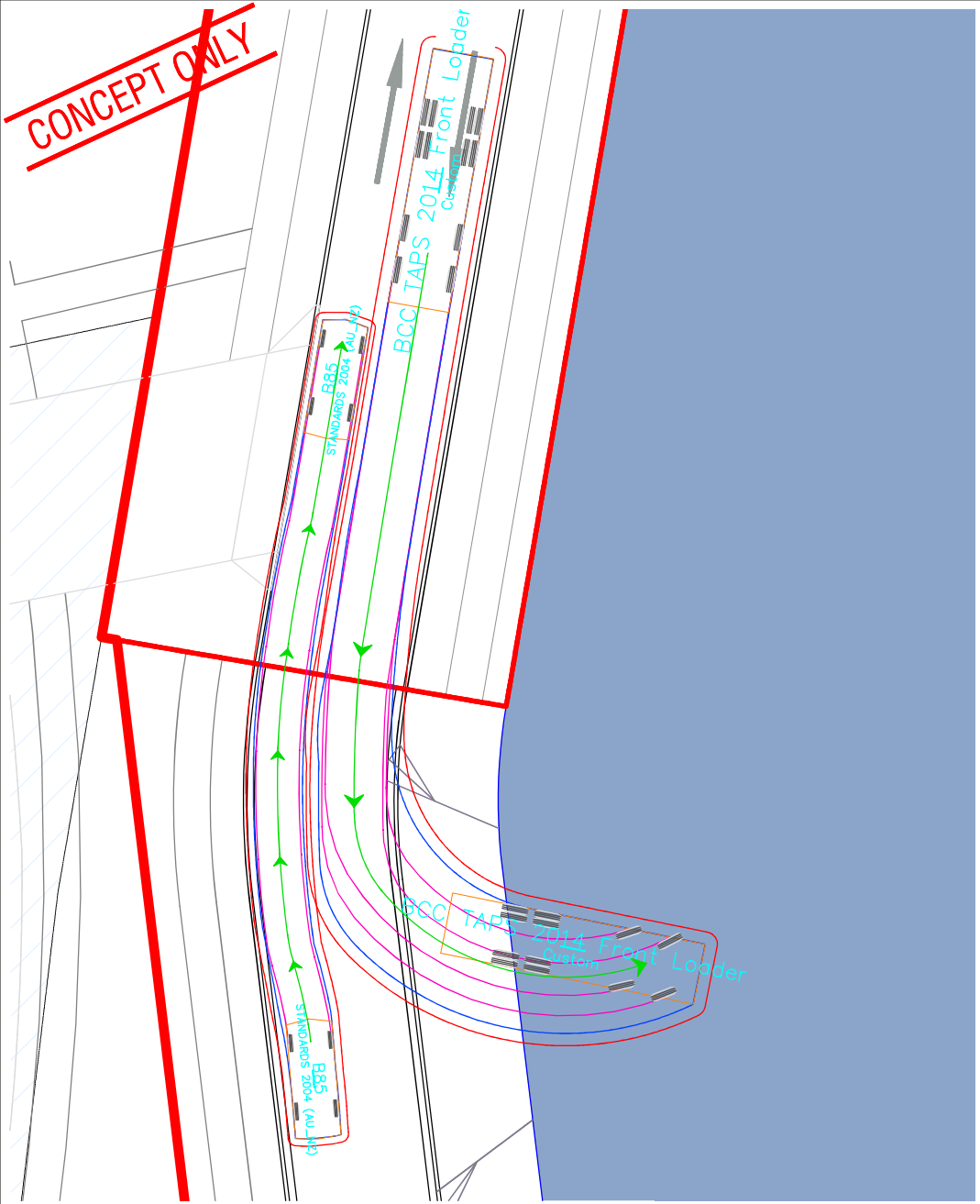
APPENDIX C
RCV SWEPT PATH ASSESSMENT

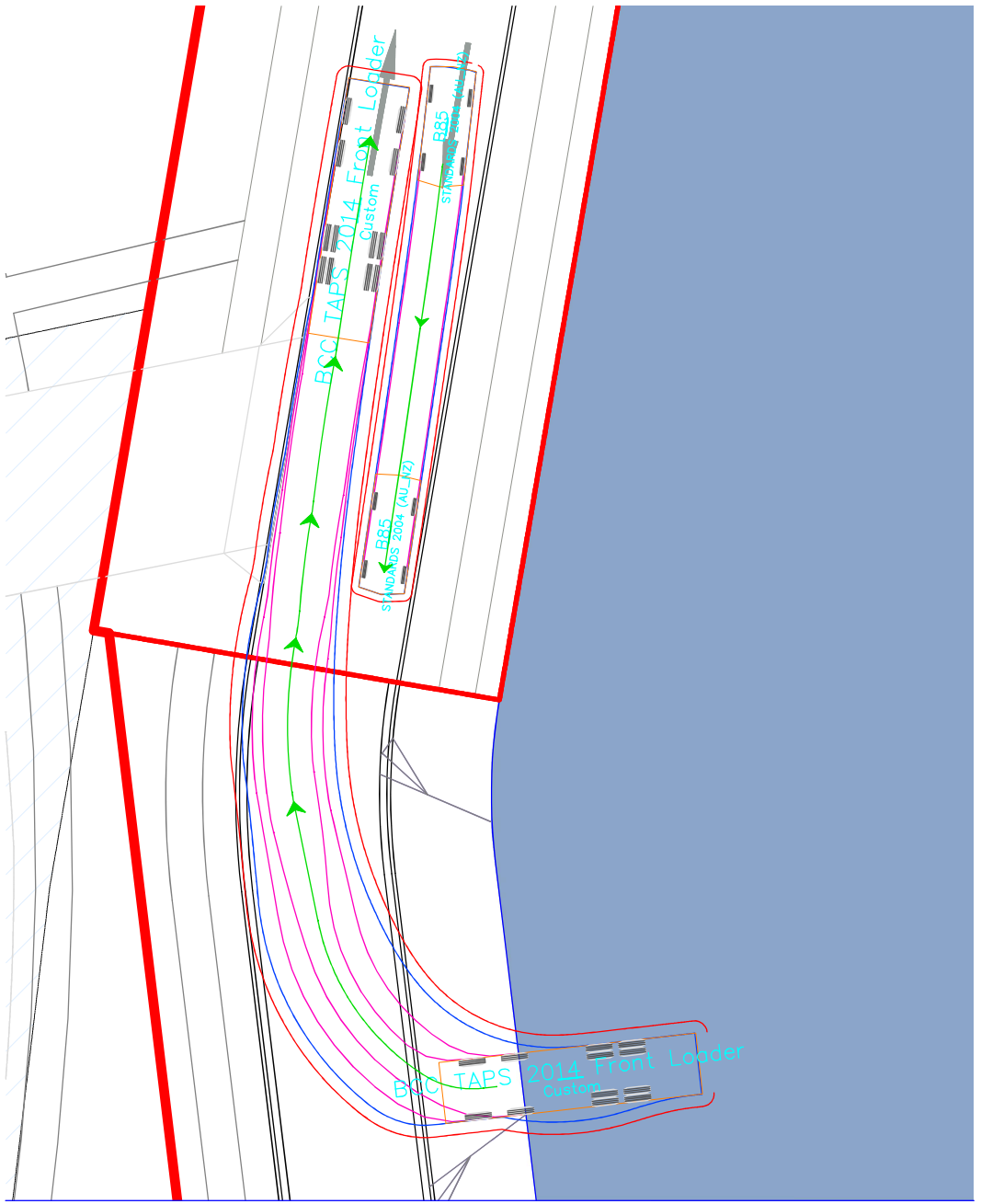
Cardno
Shaping the Future

DATE PLOTTED: 24 June 2022 8:25 AM BY: BRADLEY FULLER

CAD File: G:\CEB06857 - Carseldine Urban Village\0_ACAD\CEB06857 - SK132_SK133 - A.dwg

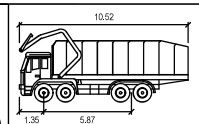
CONCEPT ONLY





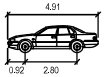
SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (500mm)
- VEHICLE



TAPS Code Front Lift

	Meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 31.0
Travel Height	: 4.20
Operating Height	: 6.0



B85

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

NORTH

0 1 2 3 4 5 6 7 8 9 10m

2 1.5 1 0.5

SCALE 1:200 @ A3

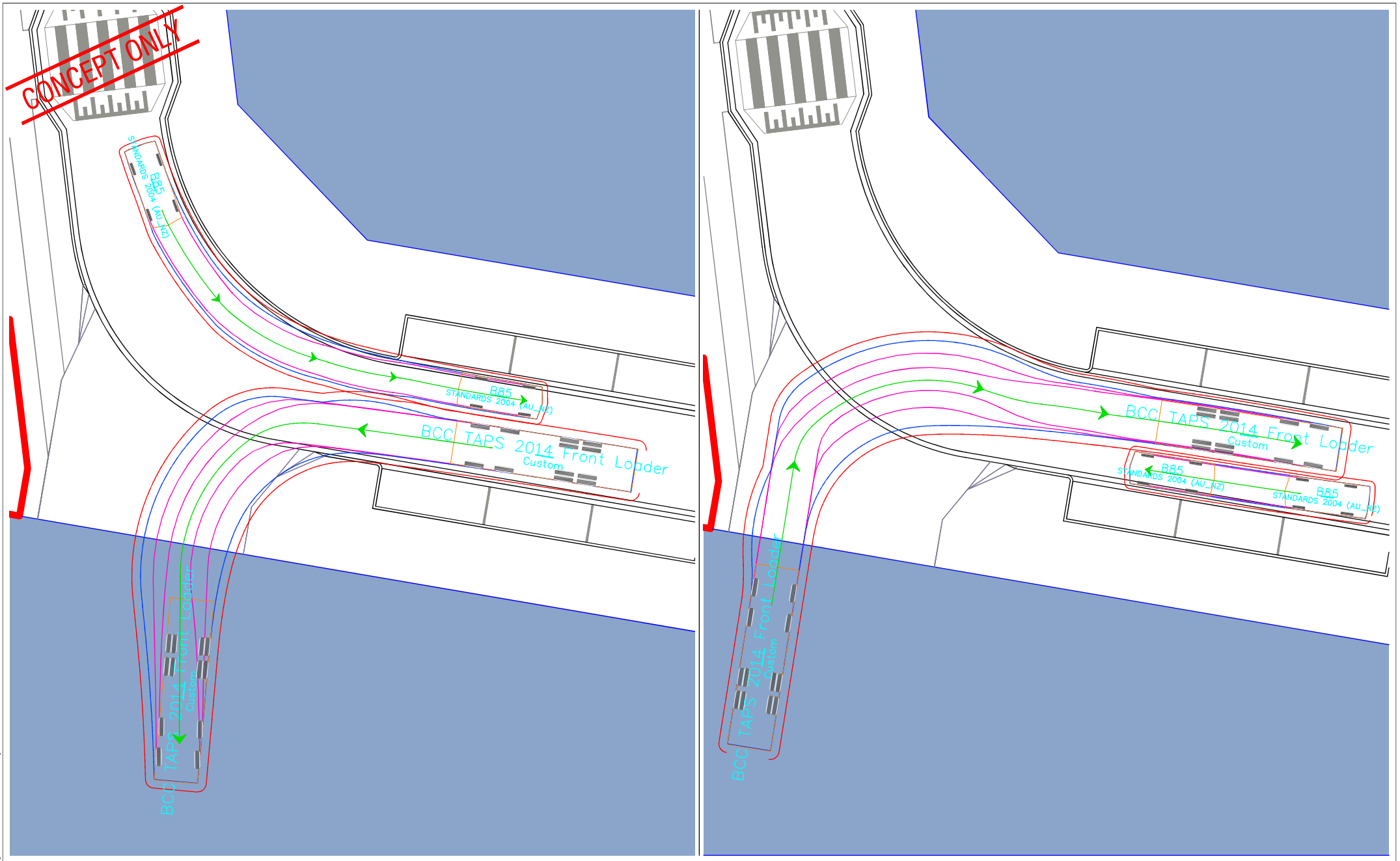
Cardno
Shaping the Future
Cardno (Qld) Pty Ltd | ABN 57 051 074 992
Level 11, 515 St Paul's Terrace
Fortitude Valley, QLD 4006
Tel: 07 3369 9822 Fax: 07 3369 9722
Web: www.cardno.com.au

Carseldine Urban Village
Stage V Development
V001 Access Swept Path Assessment
RCV & B85 Design Vehicle

Drawn	Date	Scale	Size
B.Fuller	24/06/2022	1:200	A3

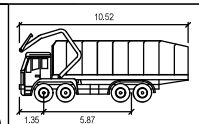
Drawing Number: CEB06857 - SK136
Revision: B

Imagery supplied by nearmap, July 2015



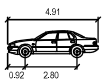
SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (500mm)
- VEHICLE



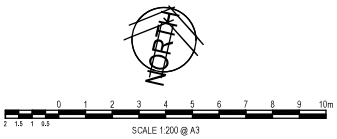
TAPS Code Front Lift

	Meters
Width	2.50
Track	2.50
Lock to Lock Time	6.0
Steering Angle	31.0
Travel Height	4.20
Operating Height	6.0



B85

	Meters
Width	1.87
Track	1.77
Lock to Lock Time	6.0
Steering Angle	34.0



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Web: www.cardno.com.au

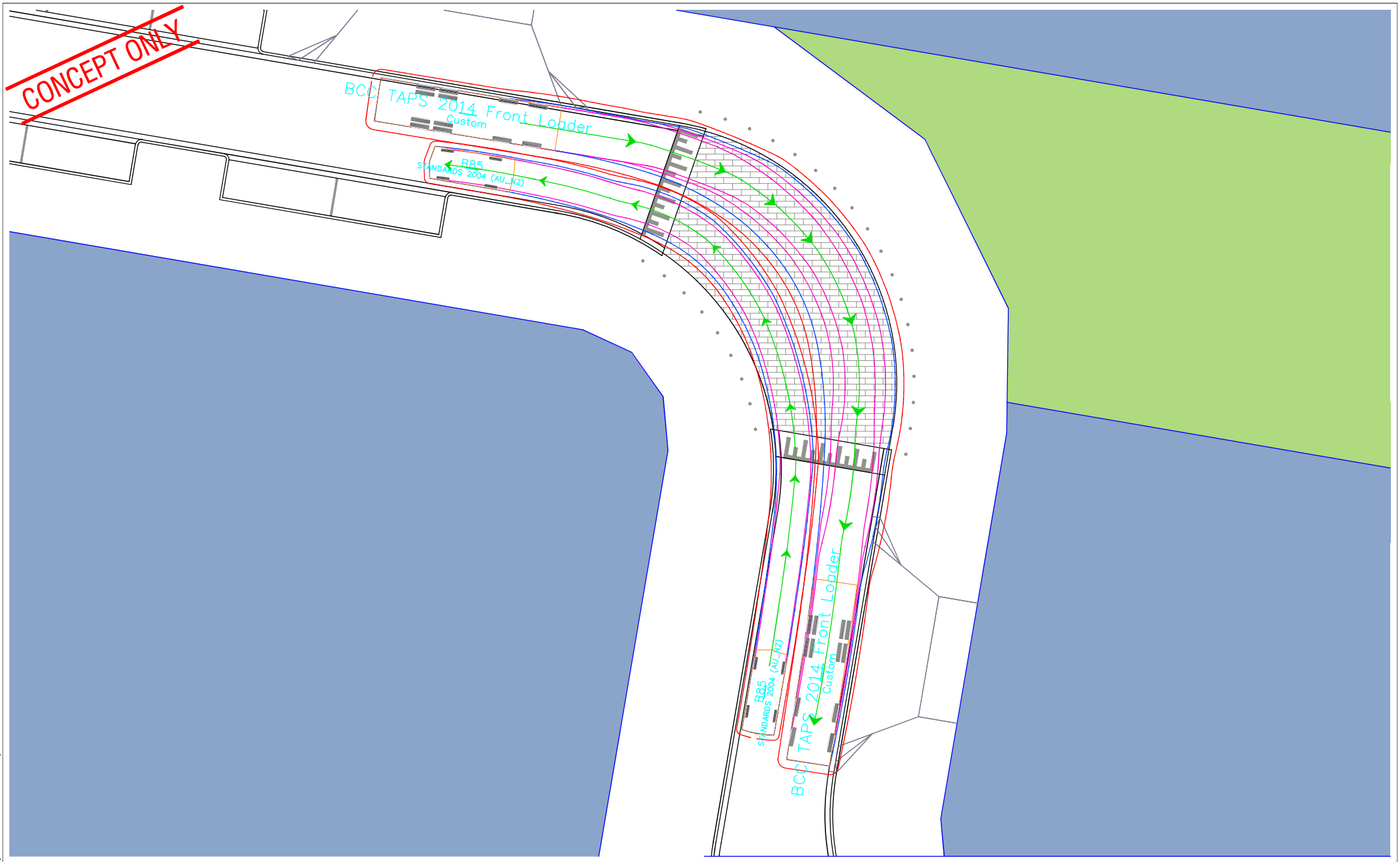
Carseldine Urban Village
Stage V Development
V002 Access Swept Path Assessment
RCV & B85 Design Vehicle

Drawn	Date	Scale	Size
B.Fuller	24/06/2022	1:200	A3

Drawing Number: CEB06857 - SK137
Revision: B

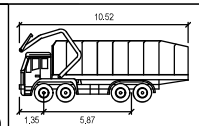
Imagery supplied by nearmap, July 2015

DATE PLOTTED: 24 June 2022 8:26 AM BY: BRADLEY FULLER
CAD File: G:\CEB06857 - Carseldine Urban Village\5_ACAD\CEB06857 - SK132_SK133 - A.dwg



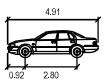
SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (500mm)
- VEHICLE



TAPS Code Front Lift

	Meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 31.0
Travel Height	: 4.20
Operating Height	: 6.0



B85

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

NORTH

SCALE 1:200 @ A3

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Web: www.cardno.com.au

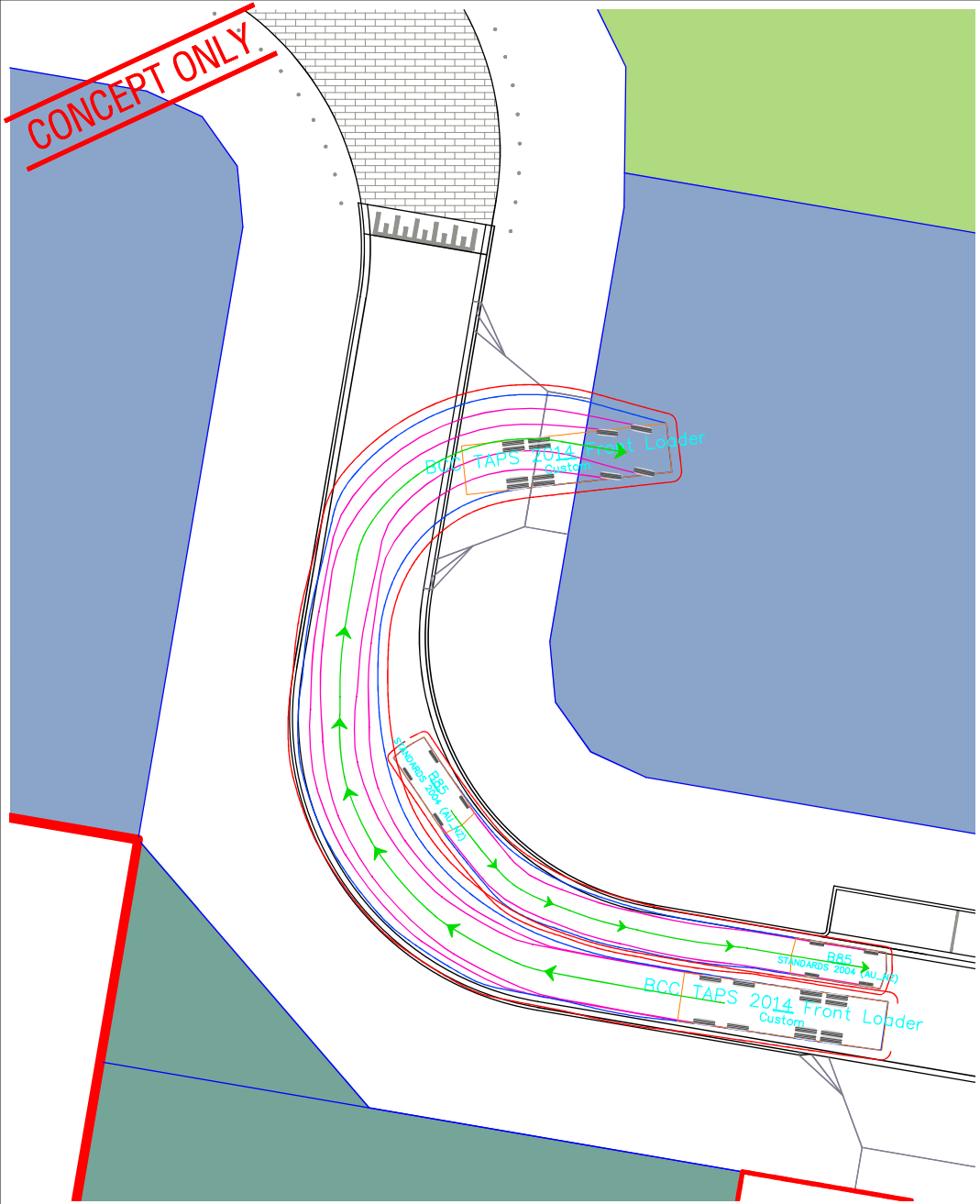
Carseldine Urban Village
Stage V Development
Shared Zone Swept Path Assessment
RCV & B85 Design Vehicle

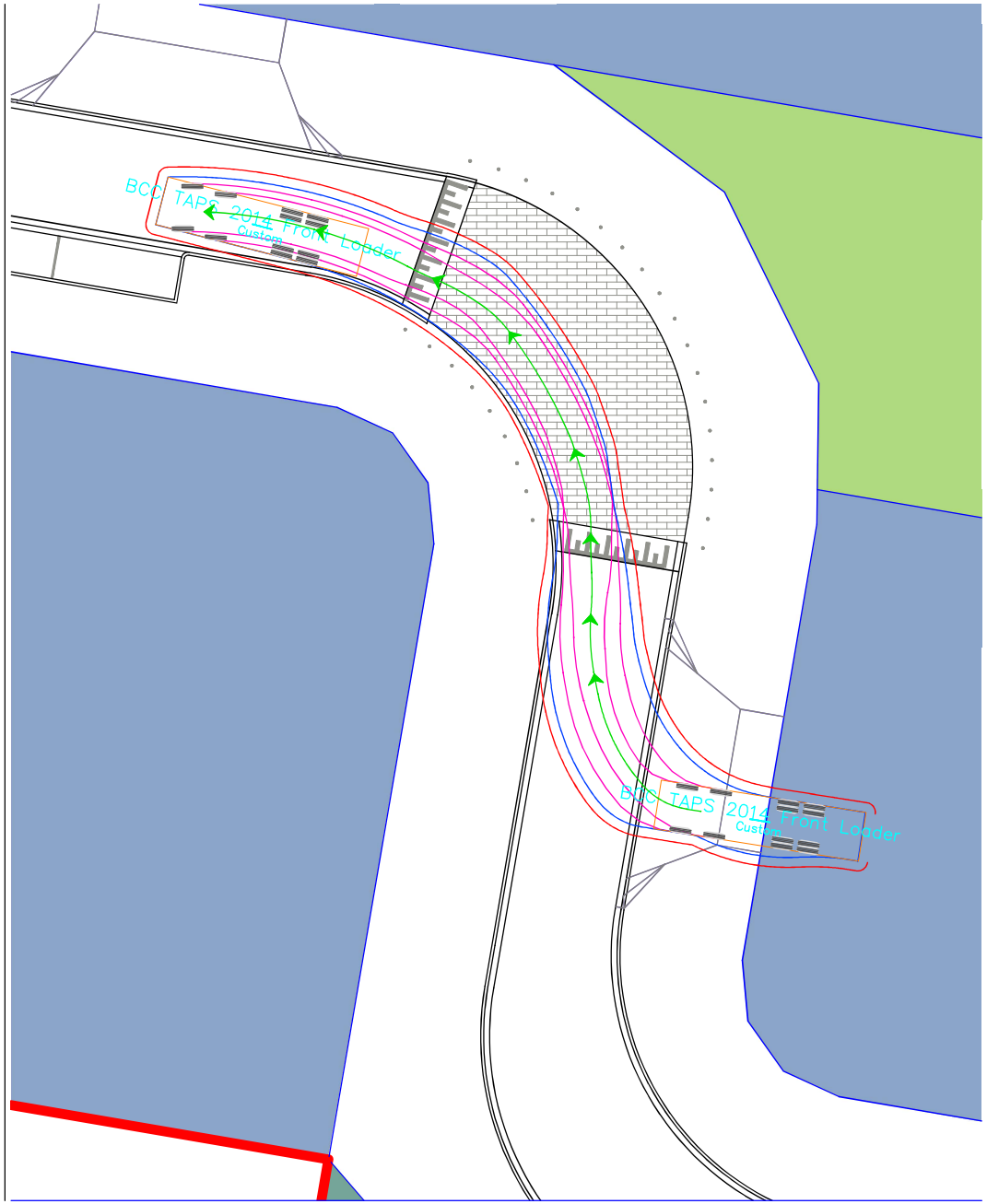
Drawn	Date	Scale	Size
B.Fuller	24/06/2022	1:200	A3

Drawing Number: CEB06857 - SK138
Revision: B

DATE PLOTTED: 24 June 2022 8:27 AM BY: BRADLEY FULLER
CAD File: G:\CEB06857 - Carseldine Urban Village\5_ACAD\CEB06857 - SK132_SK133 - A.dwg
Imagery supplied by nearmap, July 2015

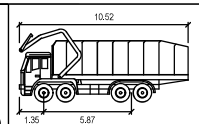
CONCEPT ONLY





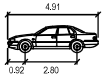
SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (500mm)
- VEHICLE



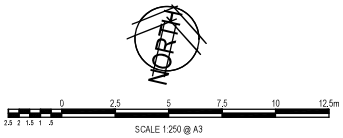
TAPS Code Front Lift

	Meters
Width	2.50
Track	2.50
Lock to Lock Time	6.0
Steering Angle	31.0
Travel Height	4.20
Operating Height	6.0



B85

	Meters
Width	1.87
Track	1.77
Lock to Lock Time	6.0
Steering Angle	34.0



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Carseldine Urban Village
Stage V Development
V003 Access Swept Path Assessment
RCV & B85 Design Vehicle

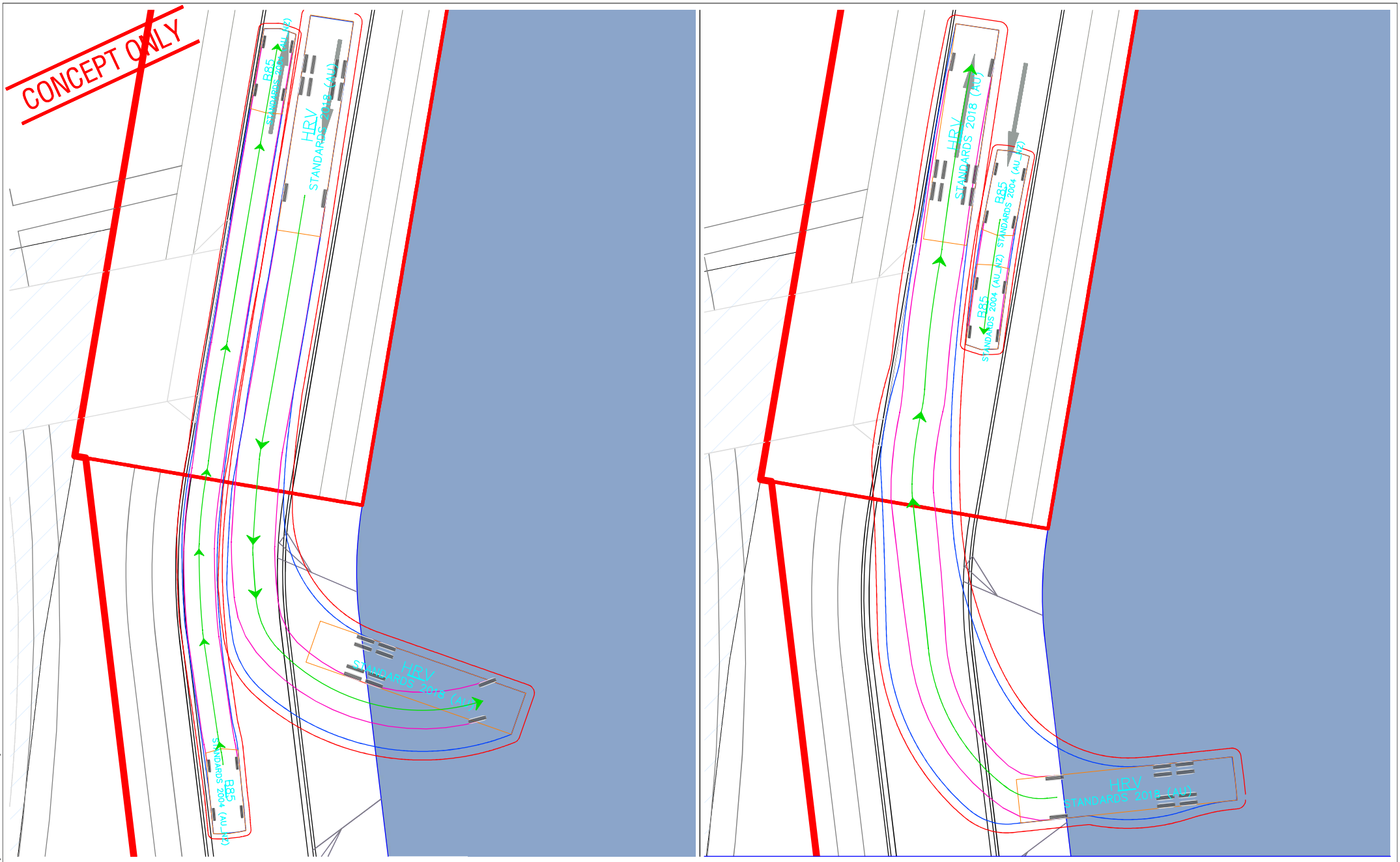
Drawn	Date	Scale	Size
B.Fuller	24/06/2022	1:250	A3

Drawing Number: CEB06857 - SK139
Revision: B

DATE PLOTTED: 24 June 2022 9:31 AM BY: BRADLEY FULLER
CAD File: G:\CEB06857 - Carseldine Urban Village\5_ACAD\CEB06857 - SK132_SK133 - A.dwg
Imagery supplied by nearmap, July 2015

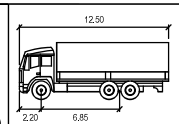
Carseldine Village

APPENDIX D
HRV SWEPT PATH ASSESSMENT



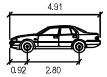
SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (500mm)
- VEHICLE



HRV

	Meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6



B85

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

NORTH

0 1 2 3 4 5 6 7 8 9 10m

2 1.5 1 0.5

SCALE 1:200 @ A3

Cardno
Shaping the Future
Cardno (Qld) Pty Ltd | ABN 57 051 074 992
Level 11, 515 St Paul's Terrace
Fortitude Valley, QLD 4006
Tel: 07 3369 9822 Fax: 07 3369 9722
Web: www.cardno.com.au

Carseldine Urban Village
Stage V Development
V001 Access Swept Path Assessment
HRV & B85 Design Vehicle

Drawn	Date	Scale	Size
B.Fuller	24/06/2022	1:200	A3

Drawing Number: CEB06857 - SK135
Revision: B

DATE PLOTTED: 24 June 2022 8:19 AM BY: BRADLEY FULLER

CAD File: G:\CEB06857 - Carseldine Urban Village\5_ACAD\CEB06857 - SK132_SK133 - A.dwg

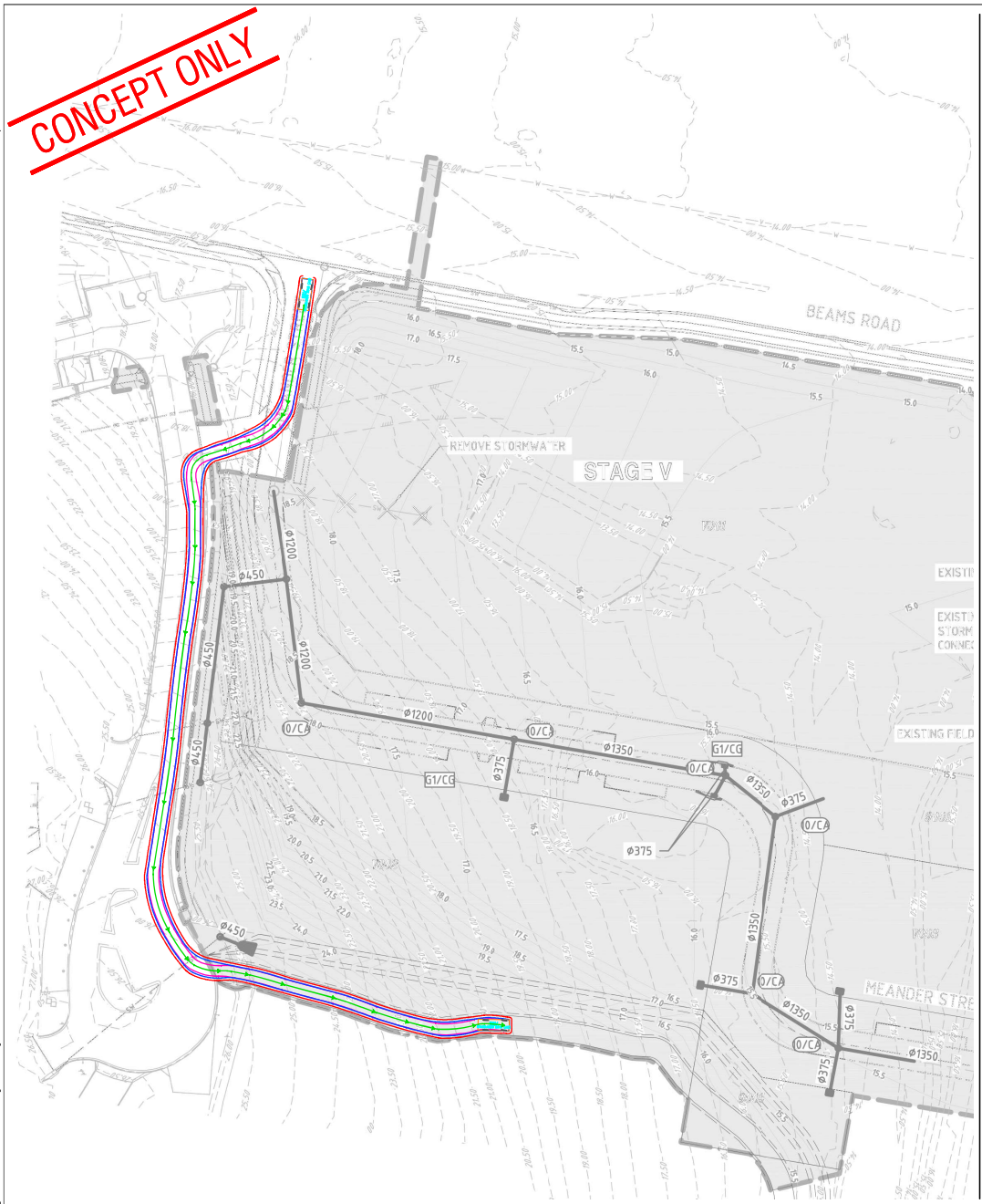
Imagery supplied by nearmap, July 2015

Carseldine Village

APPENDIX E
SRV SWEPT PATH ASSESSMENT

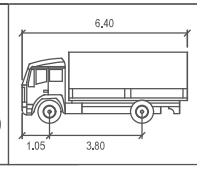
Cardno
Shaping the Future

CONCEPT ONLY



SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE



SRV

	Meters
Width	2.30
Track	2.30
Lock to Lock Time	6.0
Steering Angle	38.0

NORTH

0 10 20 30 40 50m

SCALE 1:1000 @ A3

Cardno
Shaping the Future
Cardno (Qld) Pty Ltd | ABN 57 051 074 992
Level 11, 515 St Paul's Terrace
Fortitude Valley, QLD 4006
Tel: 07 3369 9822 Fax: 07 3369 9722
Web: www.cardno.com.au

Carseldine Urban Village
Stage V Development
Phase 2 Swale and Maintenance Track Swept Path
SRV Design Vehicle

Drawn	Date	Scale	Size
B.Fuller	14/07/2022	1:1000	A3

Drawing Number: CEB06857 - SK139
Revision: A

DATE PLOTTED: 14 July 2022 6:41 PM BY: BRADLEY FULLER
CAD File: G:\CEB06857 - Carseldine Urban Village\5_ACAD\CEB06857 - SK140 Stage V Swale.dwg
Imagery supplied by nearmap, July 2015