



AURA LAND LEASE COMMUNITY

Engineering Services Report

PREPARED FOR STOCKLAND DEVELOPMENT PTY LTD

DOCUMENT CONTROL

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Executive Summary

Calibre Professional Services Pty Ltd has been commissioned by Stockland Development Pty Ltd to prepare this engineering services report in support of the Development Application for a Land Lease Community (LLC), consisting of 230 dwelling units.

The LLC is confined within Precinct 10 of the Aura development, located approximately 1km from the future Aura Town Centre. At the time of this report, approximately 650 residential allotments and supporting infrastructure have already been constructed north of the proposed LLC site. A number of constraints outlined below needs to be managed and are discussed in this report:

- The Aura Boulevard (Interim and Ultimate);
- The CAMCOS Corridor; and
- The Aura Brook.

In addition to the above constraints, the development must be in accordance with a number of Federal, State and Local Government Approvals, Planning Documents, Investigations and Studies, which are detailed in Section 1.1 of this report.

The proposed management of the site constraints and civil infrastructure required to service the proposed LLC development is summarised below:

Earthworks

The preliminary site earthworks modelling indicates site levels between RL7.0m AHD and RL9.0m AHD. This achieves the required flood immunity to the adjoining Aura Brook and Bells Creek South.

The CAMCOS corridor which runs along the southern boundary of the site was investigated by Calibre in 2015 and based upon this investigation and the preliminary earthworks grading of the site in this area 1 to 3 metre level separation. During both the interim and ultimate phases, the level separation will be accounted for through earthworks embankments contained within the CAMCOS Corridor. Refer to Fig 3.1 for typical cross-sections through the LLC site, interfacing with the CAMCOS corridor.

The Aura Boulevard located of the eastern boundary of the site provides connectivity between the Aura Town Centre and the Lakes District. Aura Boulevard will have an interim and ultimate phase, as it is required to cross the CAMCOS Corridor, which at the time of this report is not yet constructed. During the interim scenario the earthworks grading indicates the site interfaces well. During the ultimate scenario when a grade separated crossing of the CAMCOS corridor is required, the model indicates there is 0m to 10m level difference. As stated within the State Transport Infrastructure Agreement the management of the level separation will be DTMR's responsibility and is not discussed within this report. Refer to Fig 3.2 for typical cross-sections showing how the LLC site interfaces with the interim phase of the proposed Aura Boulevard.

The Aura Brook located on the western boundary of the site, is an engineered channel running through the centre of Precincts 11, 12 and 14. The Brook is 130m wide with WSUD devices, a main low flow channel and partly adjoining a linear park. Based on the preliminary earthworks grading, the site interfaces well with the Brook.

Traffic Movements:

The site access is proposed off the northern road running parallel to the site. This access will be a tee intersection configuration. Internally, the site is to be serviced by an inverted concrete road network. Provision has been made to ensure safe and adequate vehicle movements within and out of the site.

The proposed LLC traffic volumes are accounted for in the road network traffic analysis undertaken by PwC.

Drainage and SW Quality:

Stormwater flows generated by the internal catchments are to be conveyed by a drainage network connected to lawful points of discharge, consistent with the wider Aura strategy. The Aura wide Stormwater Quality Management Plans (by DesignFlow) states that all stormwater treatment of pollutants generated by the Land Lease Community will be treated by end of line treatment trains (external to the site) within the Aura Brook and Bells Creek South Riparian.

Utilities:

The underlying development is currently serviced with NBN, electrical reticulation, water reticulation and sewage reticulation. Provision for utility services for the proposed LLC development has been allowed for and in accordance with the final precinct network plan.

The following sections of this report demonstrate that the proposed development can be supported by the existing infrastructure surrounding the site, serviced by new infrastructure and that the proposed development is compliant with the Sunshine Coast Planning Scheme, Queensland Streets, Australian Standards and other relevant development guidelines.

1 Introduction

Calibre Professional Services Pty Ltd has been commissioned by Stockland Development Pty Ltd to prepare this engineering services report in support of the Development Application for a Land lease community, consisting of 244 dwelling units.

This report addresses issues related to civil infrastructure servicing the site, as demonstrated on the drawings provided in Appendix A. The civil infrastructure to be addressed includes the following:

- Earthworks;
- Access and Movement;
- Stormwater Drainage; and
- Utilities.

The objective of this report is to demonstrate that the proposed development can be supported by the existing infrastructure, serviced by new infrastructure and that the proposed development is compliant with the Sunshine Coast Planning Scheme 2014, Queensland Streets, Australian Standards and other relevant guidelines.

1.1 Existing Planning and Approvals

Calibre's concept design has been developed in accordance with a number of Federal, State and Local Government Approvals, Planning Documents, Investigations and Studies.

These documents include but are not limited to:

- Caloundra South Priority Development Area Infrastructure Agreement – State Transport Infrastructure (STIA, 2015);
- Caloundra South Priority Development Area Infrastructure Agreement - Local Government Infrastructure (LGIA, 2015);
- Caloundra South Infrastructure Agreement (Water and Wastewater Infrastructure) (UWIA, 2017);
- Caloundra South Development: Flood Risk Management Strategy (BMT WBM, 2015);
- Construction Environment Management Plan (Calibre, Oct 2017);
- Infrastructure Master Plan (Water and Sewer) (Parsons Brinckerhoff, Aug 2016);
- Aura Precincts 6 – 10 and 16 Stormwater Quality Management Plan; and
- CAMCOS Corridor Alignment Study (Calibre, Dec 2015).

2 Site Characteristics

2.1 Location

Aura is situated in the Sunshine Coast Council (SCC) local government area and is part of the Caloundra South Priority Development Area (PDA). The Master Plan was approved by the (former) Urban Land Development Authority (ULDA reference No. DEV2011/200) now Economic Development Queensland (EDQ).

The proposed Land Lease Community is contained within Precinct 10. The site is located approximately 1km south west of the Aura Town Centre and is bound by the future Aura Brook to the West, Precinct 10 Stage works to the North, Aura Boulevard to the east and Future CAMCOS Corridor to the South.

The Land Lease Community extent is shown indicatively in Figure 2.1 below.



Figure 2.1 – Proposed Land Lease Community Site

3 Earthworks

At the time of this report, the development site is contracted to be filled as part of the wider Aura Development earthworks operations (underlying approval DEV2013/469). The bulk earthworks level for the site is constrained by the surrounding floods levels within Bells Creek South and the Aura Brook. The 100-YEAR ARI levels contained within these major stormwater conveyance networks are RL5.03m AHD and RL6.34m AHD respectively.

The preliminary site levels are currently between RL7.0m AHD and RL9.0m AHD. In accordance with the Sunshine Coast Council Flood Hazard Overlay Code, a minimum of 500mm freeboard to the finished floor level for regional flood immunity has been provided.

A preliminary earthworks design has been carried out and is shown on drawings 19-000573-DA002 and DA003 in Appendix A. Although bulk earthworks will have been completed, minor site works will be required for shaping of roadways and building pads. It is expected that excess material will be generated by the development from road box excavations, trench spoil, and minor cut/fill operations in general. All material requiring removal from the site will be disposed at an approved location within the wider Aura Development via an appropriate haul route to be determined at the time of construction.

The preliminary earthworks design indicates that the site will interface well with the existing levels to the north of the site. The southern (CAMCOS Corridor), eastern (Aura Boulevard) and western (Aura Brook) boundary interfaces are discussed below.

CAMCOS Corridor Interface

An investigation into the CAMCOS horizontal and vertical geometry was undertaken by Calibre and is documented in the CAMCOS Corridor Alignment Study (Dec 2015). Based on this investigation and the preliminary earthworks grading of the Land Lease community there is a 1 to 3m level separation. It is proposed that the level separation is to be accounted for by providing a 1 in 6 embankments, wholly contained within the CAMCOS Corridor.

Due to development phasing, the LLC site will be completed prior to the CAMCOS corridor development. As such an interim arrangement is required. The State Transport Infrastructure Agreement (2015) outlines Stockland's obligations which is to provide a surface similar to the surrounding earthworks platform. In the ultimate phase, some adjustments in the interim batter (wholly contained within the CAMCOS Corridor) might be required, to account for the level separation.

Appropriate acoustic treatment will be constructed within the CAMCOS corridor in accordance with acoustic modelling, Queensland Rail standards and approved fencing requirements.

The interface with the CAMCOS Corridor during the interim and ultimate phases is shown indicatively in Figure 3.1 below.

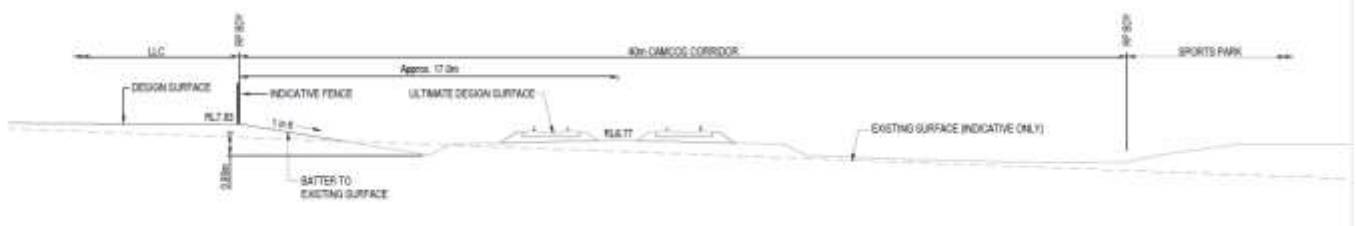


Figure 3.1 – CAMCOS Corridor Interface

Aura Boulevard Interface

The Aura Boulevard located at the eastern boundary of the site, is a Sub-Arterial Road which will provide connectivity between the Aura Town Centre and the Lakes District. Aura Boulevard will be required to cross the proposed CAMCOS Corridor which at the time of this report is not yet constructed, hence, an interim and ultimate road configuration has been developed.

During the interim road configuration Aura Boulevard will continue to grade towards Bells Creek South at approximately 0.5%. In this phase the preliminary earthworks grading indicates the site will interface well with Aura Boulevard.

The ultimate configuration of Aura Boulevard is triggered when the CAMCOS land dedication is made to DTMR. The State Transport Infrastructure Agreement (2015) states that upon the land dedication, all crossings along the CAMCOS corridor must be grade separated.

Based upon this investigation and the preliminary earthworks grading, it indicates that at the northern edge of Aura Boulevard is approximately 0m level difference. As the road continues south it begins to grade up at circa 7% until it reaches the CAMCOS corridor where there is a 10m level difference.

The State Transport Infrastructure Agreement (STIA) states that DTMR will be responsible for the following:

- Bridge over the CAMCOS Corridor;
- Associated bridge wing walls; and
- Abutting 25m earthworks embankment to protect the structural integrity of the bridge.

As such the management of the level separation will be DTMR's responsibility, hence discussion associated with the above items are not included in this report.

The interface with Aura Boulevard during the interim phase is shown indicatively in Figure 3.2 below.

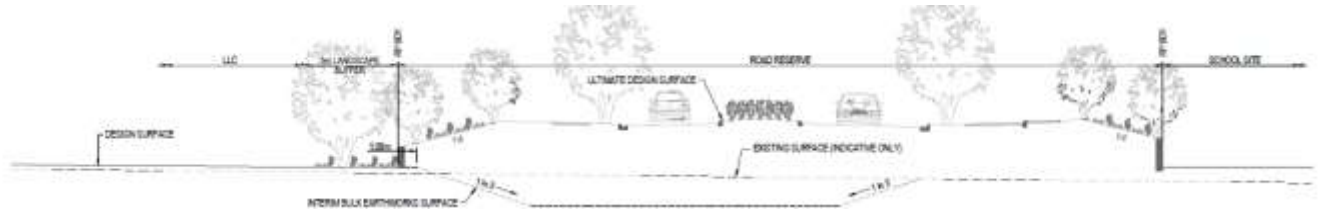


Figure 3.2 – Aura Boulevard Interface

Aura Brook

The Aura Brook located on the western boundary of the site, is an engineered channel running through the centre of Precincts 11, 12 and 14. The Brook is designed to convey all minor and major ARI flows from the aforementioned precincts and ultimately discharge into Bells Creek South. The Brook consists of four (4) major elements which are:

- a low flow channel;
- WSUD devices;
- lakes and parks.

To allow for all these elements, the brook's width varies from 100 to 130 metres. Based on the preliminary earthworks grading, the site interfaces well with the Brook.

The interface is indicatively shown in Figure 3.3 below.

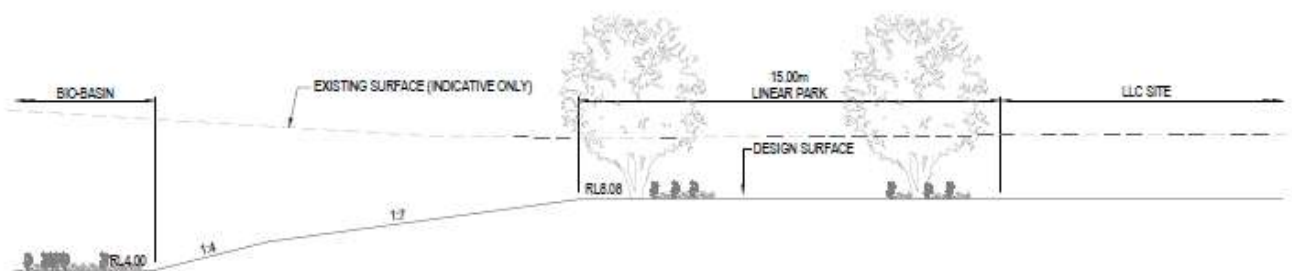


Figure 3.3 – Aura Brook Interface

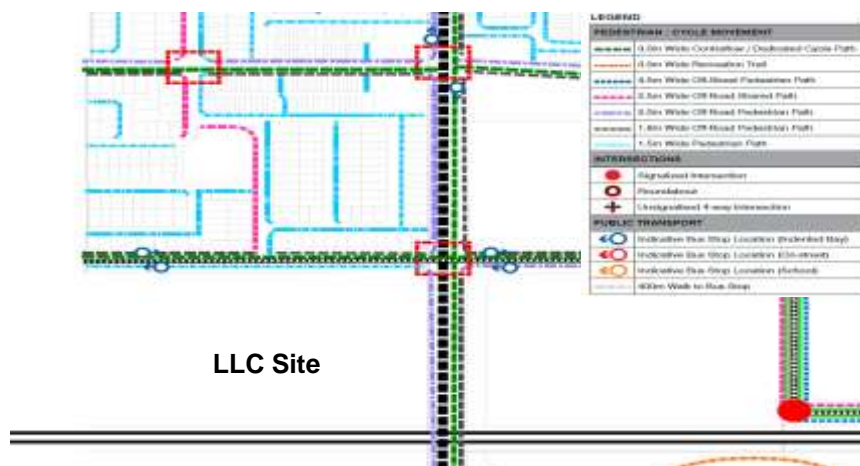


Figure 4.1 - P7 to 10 PoD Connectivity Plan

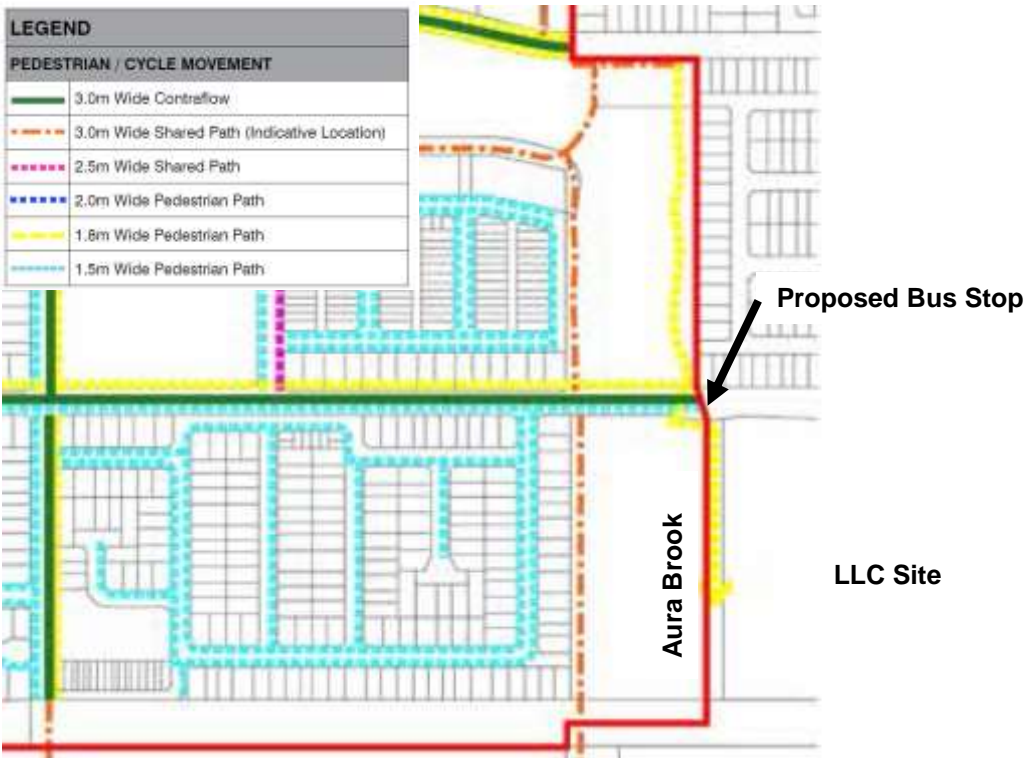


Figure 4.2 – P11-14 PoD Connectivity Plan

An approved bus stop is located immediately adjacent to the north-western corner of the site as per the Plan of Development which will provide Public Transport Service for the development.

4.4 Internal Vehicle Turn Paths

Provision has been made to ensure adequate and safe movements within the site and out of the site. Three vehicles movement have been analysed which are as follows:

- 5.2m Standard Car;
- 8.8m Service Vehicle;
- 12.5m Waste Collection Vehicle; and

The table below outlines the movements analysed for each vehicle.

Table 4.1 Vehicle Movement Analysed

Vehicle	Movements
5.2m Standard Car	- Entry and exit of the site - All movements within the site - Reversing manoeuvres out of garages as per AS2890 requirements
8.8m Service Vehicle	- Entry and exit of the site - Service of Clubhouse including turnaround facility
12.5m Waste Collection Vehicle	- Entry and exit of the site - Refuse is proposed to be collected at individual lots, as such all vehicle movements within the site have been analysed

Refer to drawings 19-000573-DA008 to DA011 in Appendix A for detailed vehicle profiles and swept paths.

Figure 4.3 – Emergency Access

5 Stormwater Drainage

5.1 Impervious Area

The proposed relative increase in impervious area resulting from the increase in cover from 70% to 80% is consistent with the Stormwater Management Plans associated with the LLC site.

Excerpts from the Stormwater Management Plans as defined in Section 5.2 and 5.3 below, validates impervious assumptions no less than 80%.

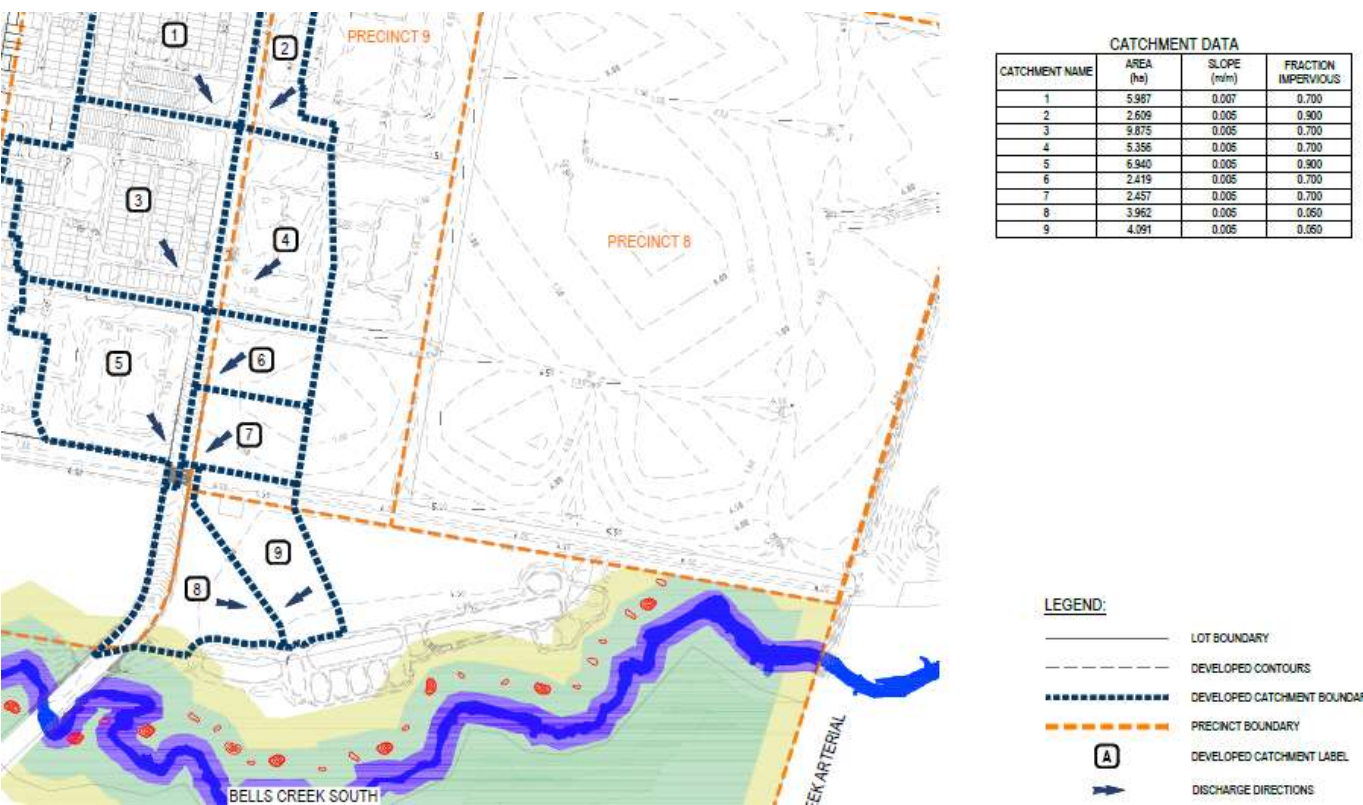


Figure 5.1 – Aura Blvd Catchment Delineation Plan

Part of LLC site (55%) ultimately discharging to Bells Creek South Riparian Zone is shown as Catchment 5 on the above image, with fraction impervious of 90%.

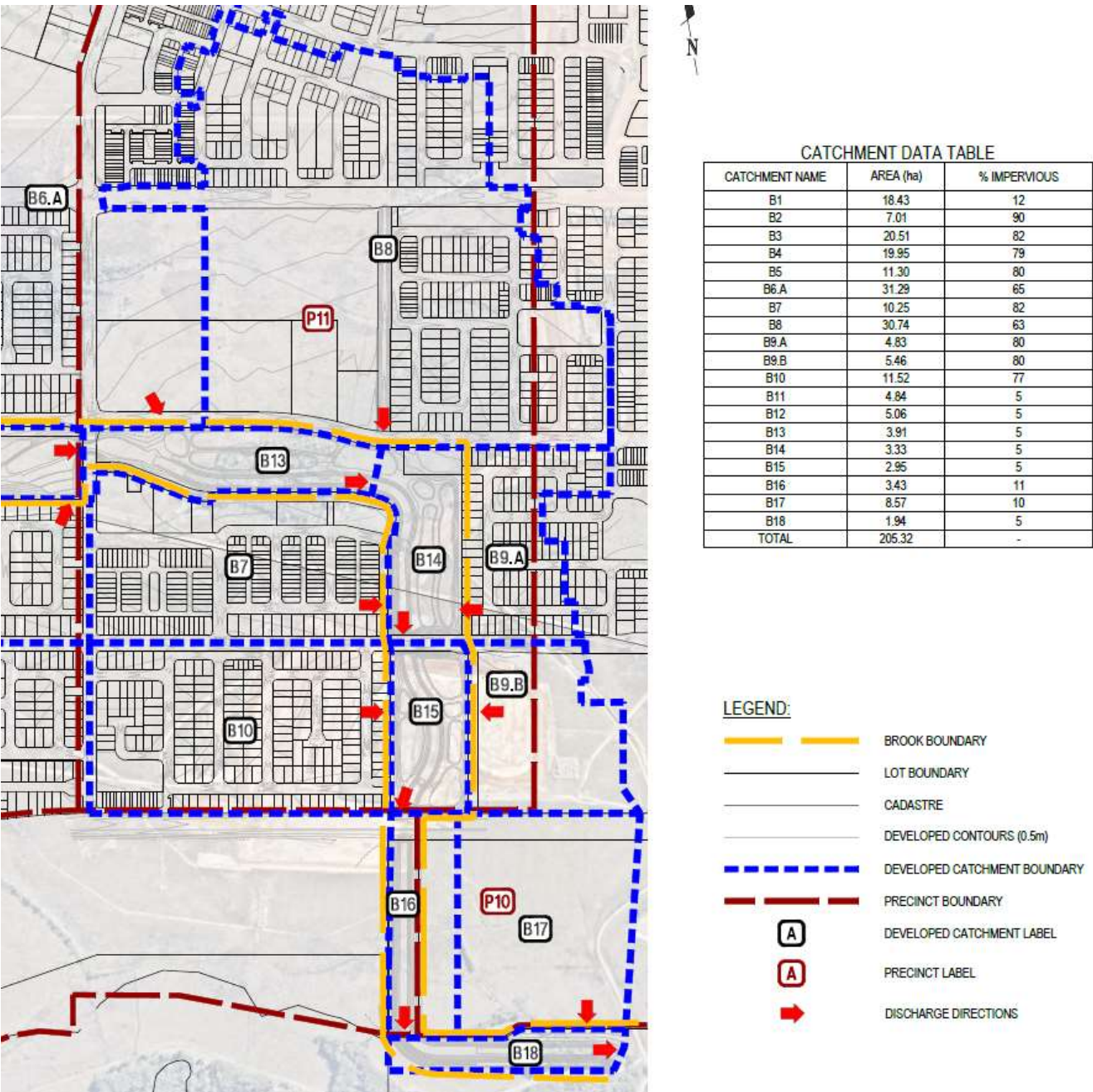


Figure 5.2 – Aura Brook Catchment Plan

Part of LLC site (45%) ultimately discharging to the Brook is shown as Catchment B9.A on the above image, with fraction impervious of 80%.

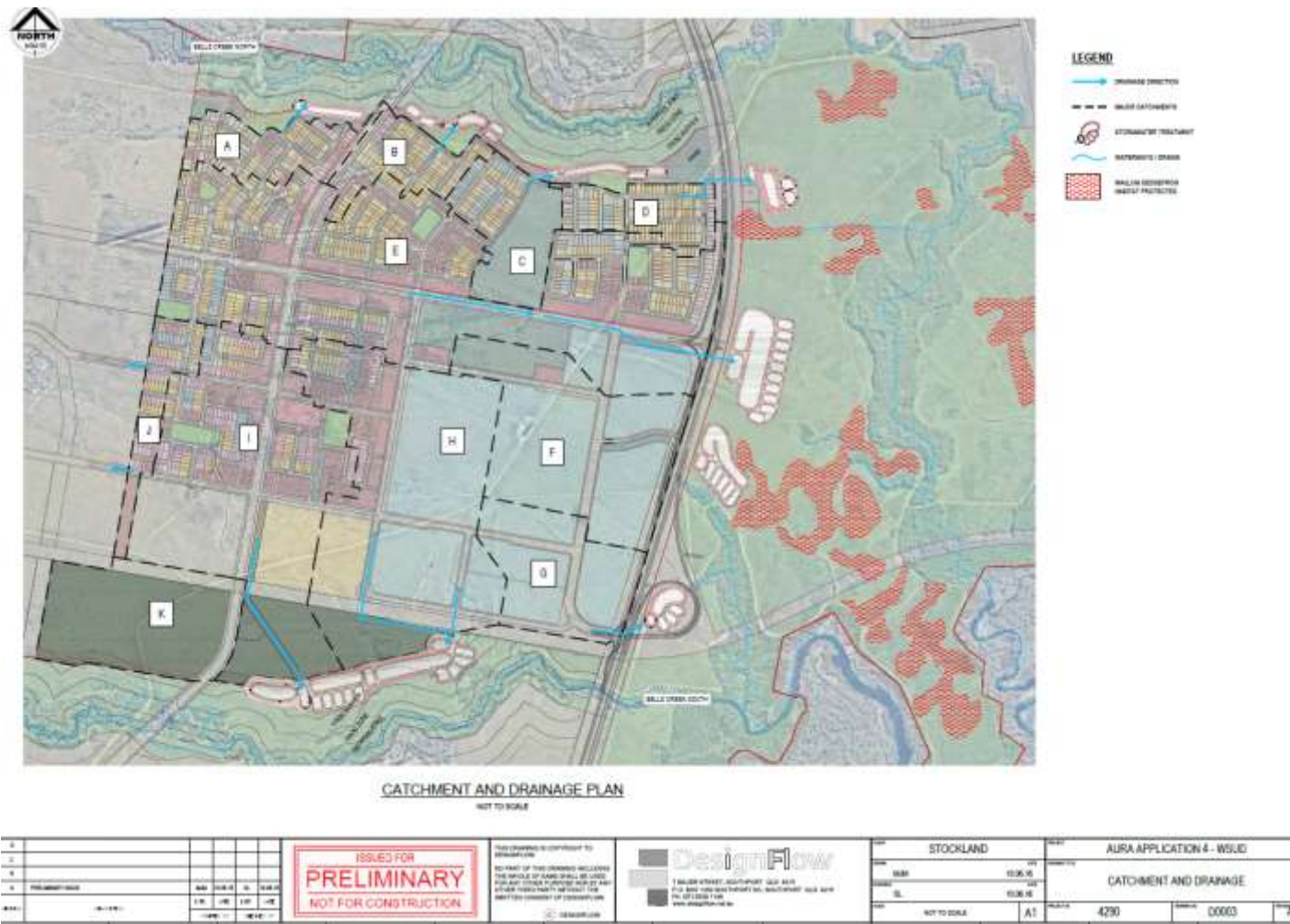


Figure 5.3 – Catchment areas for end of line treatment (Design Flow Reports, 2018 &2019)

Designflow

Table 5 Split catchment areas

Catchment ID	Commercial Lumped (ha)	Commercial Split		Residential Lumped (ha)	Residential Split				Park (ha)	Total (ha)
		Road (ha)	Ground/Road (ha)		Road to tank (ha)	Road to drain (ha)	Road (ha)	Ground (ha)		
A					1.89	1.89	2.13	2.13	1.50	9.39
B					1.67	1.67	1.87	1.87	1.00	7.94
C					1.00	1.00	1.12	1.12	7.30	11.45
D					1.73	1.73	1.94	1.94	2.00	9.19
E		3.15	3.15		13.51	13.51	15.20	15.20	4.10	66.68
F		11.39	5.69						2.70	25.78
G		7.16	7.16							14.31
H		15.25	12.55		2.2	2.02	2.10	2.3	4.10	43.0
I	5.6				7.44	7.44	7.75	8.37	6.4	43.0
J					1.35	1.35	1.51	1.51		5.61
K									17.50	17.50
Total		33.15	28.75		30.78	30.78	34.63	34.63	49.20	253.85

Figure 5.4 – Tabulated Catchment Areas

LLC is within Catchment I, as shown on the catchment plan above, with % Impervious = 80.53%

5.2 Quantity Management

The proposed Land Lease Community's stormwater drainage strategy has been developed in accordance with the greater Aura Stormwater Drainage Strategy. It is proposed that approximately 45% of the site flows will be directed west to the Aura Brook and the remaining 55% directed east to an open drainage channel running parallel to Aura Boulevard, directing flows to end of line WSUD devices within the Bells Creek South Riparian Zone.

Stormwater Management Plans for the drainage channels have been prepared by Calibre and as follows:

- Aura Boulevard Open Channel Stormwater Management Plan (Calibre, 2019)
- Aura Brook Flood Investigation Report (Calibre, 2019)

The major design rainfall event is the 100-year ARI and is proposed to be captured through a piped drainage network. Overland flow (exceeding 100-year ARI) will be conveyed through the internal road network discharging to Aura Brook and the Bells Creek South Riparian Zone.

Refer to the Overall Stormwater Drainage Catchment Plan 19-000573-DA006 in Appendix A for the indicative site catchments.

5.3 Quality Management

A robust and well considered stormwater quality management strategy for both construction and operational phases is a significant focus of the wider Aura development. As such, stormwater quality management plans have been developed which address the whole of site requirements which are detailed with in the following reports:

- Precincts 11 to 14 Stormwater Quality Management Plan (DesignFlow, 2019)
- Aura Precincts 6 -10 and 16 Stormwater Quality Management Plan (DesignFlow, 2018)

With specific reference to the proposed LLC site, the above reports outcomes are summarised below:

- All dwellings are to have a 1kL rainwater tank for water re-use (toilets, laundry's and outdoor taps); and
- Site pollutants are treated at end of line treatment trains contained within the Aura Brook and the Bells Creek South Riparian Zone.

With reference to the aforementioned Stormwater Quality Management Plan, all stormwater quality devices are located and sized at the end of line, external to the LLC Site.

6 Utilities

6.1 Water Supply and Sewerage Reticulation

Aura Precinct 7 - 10 has a Unitywater approved precinct network plan. This document is referenced below:

- Final Precinct Network Plan (FPNP) Aura – Precincts 6 (Part), 7, 8, 9, 10 and 16 (Part) (Calibre, 2019)

The above document determines the suitable staging of water and wastewater infrastructure to support the development and provides the servicing strategy.

It should be noted that the proposed servicing strategy for the LLC site is in accordance with the final precinct network plan and there is no departure from the network planning.

The site will be serviced by an existing water service connection located adjacent to the site entrance off the Future Centre Connector. A single Master meter will be provided at this location and will serve as the primary water main feed for potable and firefighting requirements of the development.

An existing sewer main runs parallel to the eastern boundary of the site. This sewer main services areas to the north of the site and drains to an existing sewer pump station located to the south-east of the site. An existing sewer main stub is located in the south east corner of the site and will serve as the site's sewerage connection point.

The internal water and sewer reticulation design will be subject to a plumbing and drainage approval.

6.2 Power and Communication

The underlying development is currently serviced with NBN and electrical reticulation allowing for the LLC development services requirements and in accordance with agreements with the relevant providers.

Electrical and communications reticulation proposed for the site will be completed by electrical and communication consultants.

7 Conclusion

This report has been prepared to provide the overarching engineering details to support the Development Application for the LLC development.

This report provides engineering details associated with Earthworks, roads and drainage, water and sewer, to service the proposed development.

We are of the opinion that the information contained within this report and the various technical reports prepared for the Development Application along with the accompanying engineering plans, demonstrates that the proposed development can be supported by the existing services infrastructure around the site and in accordance with Council's requirements.



ENGINEERING SERVICES REPORT

Appendix A Engineering Drawings

LEGEND



PROPOSED WETLAND

PROPOSED BIO BASIN

PROPOSED SEDIMENT BASIN

PROPOSED LIMIT OF WORKS

PROPOSED SURFACE CONTOURS

DESIGN LEVELS SHOWN ARE PRELIMINARY
ONLY AND SUBJECT TO DETAILED DESIGN

PRECINCT 10 SOUTH

FUTURE CENTRE CONNECTOR

FUTURE CENTRE CONNECTOR

FUTURE AURA BOULEVARD

STAGE 1

LLC SITE

LLC ACCESS

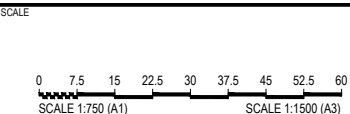
CAMCOS

FUTURE
CAMCOS
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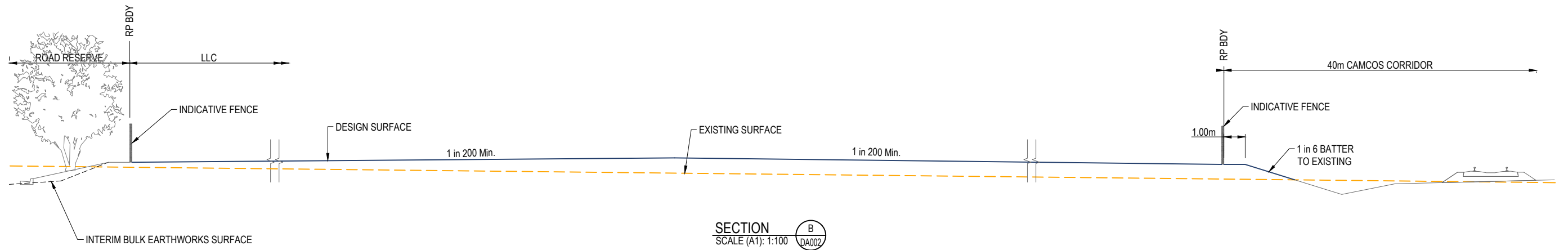
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Level 3, 16 Innovation Parkway
Birtinya QLD Australia 4575
Telephone 07 5314 2520
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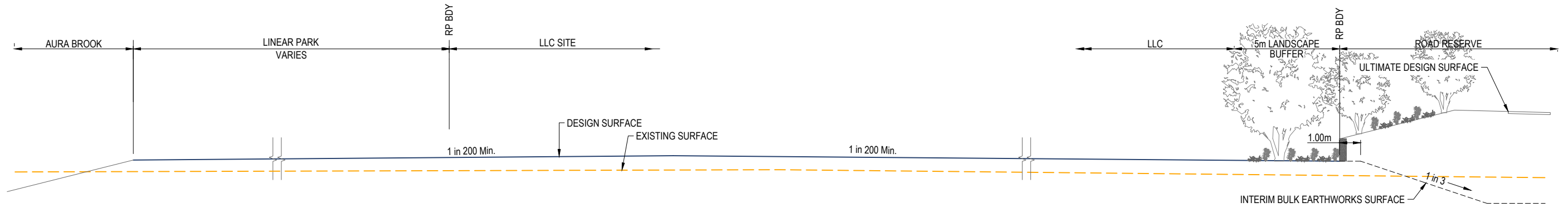
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PROJECT
**AURA LAND LEASE
COMMUNITY MASTER PLAN
(LLC)**

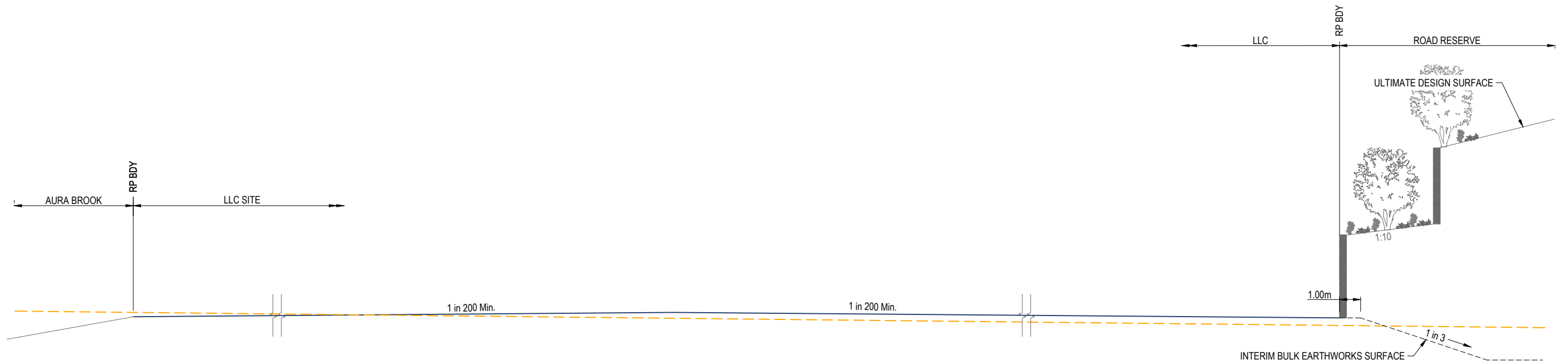
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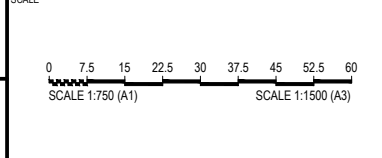
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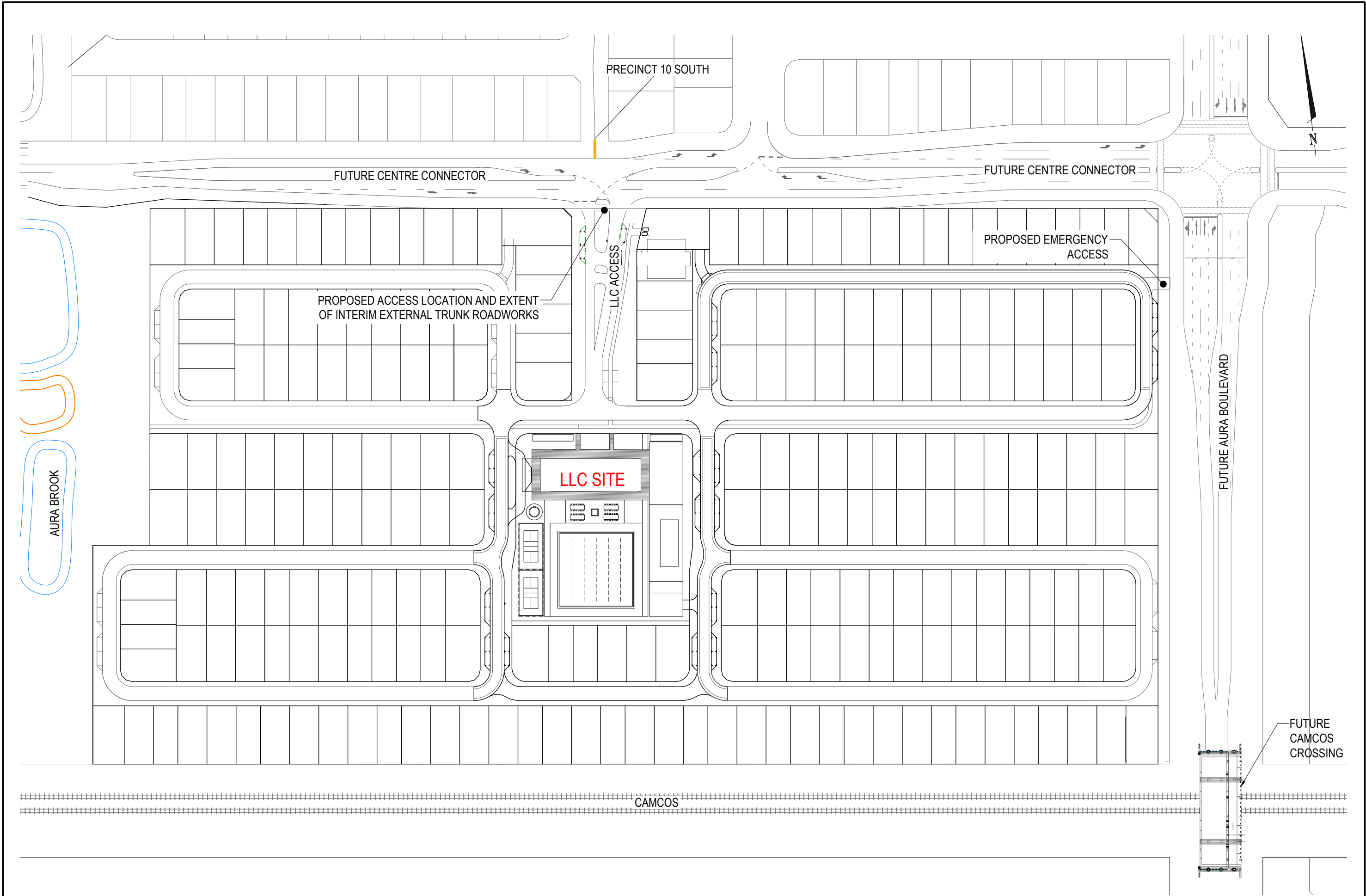
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PROJECT
**AURA LAND LEASE
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(LLC)**

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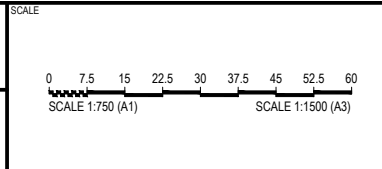
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PROJECT

**AURA LAND LEASE
COMMUNITY MASTER PLAN
(LLC)**

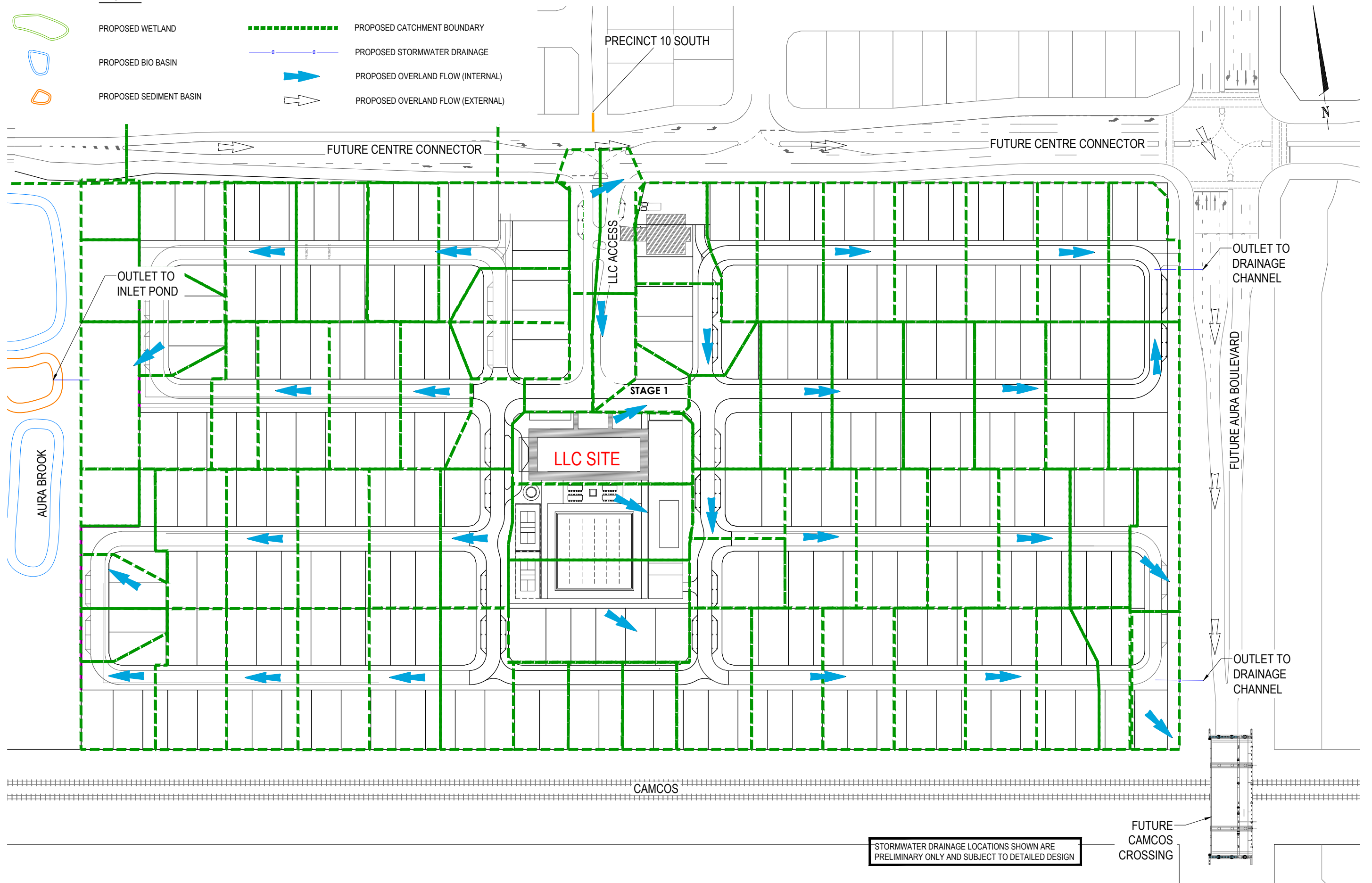
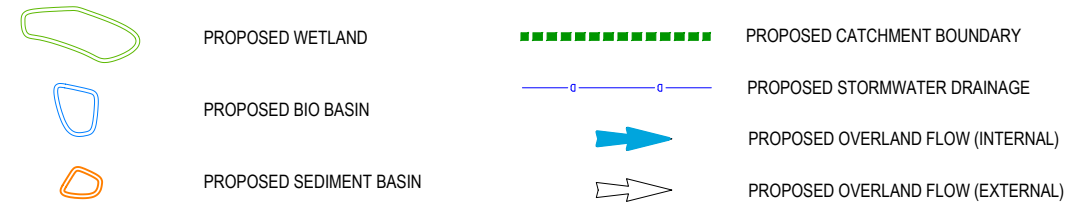
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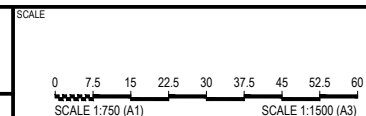
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XREFS: X:19-000573 - TITLE: X:19-000573-BASE, X:19-000573 - CONTS-DESIGN-250, X:19-000573 - CONTS-DESIGN, X:17-000934-1013-BASE, X:17-000934 - LOTS

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
A	CC	JR	PA	PA	30.08.19	
B	CC	DM	SH	MW	28.01.20	RESPONSE TO RFI FOR APPROVAL
C	CB	DC	SH	MW	07.05.20	LOT LAYOUT AMENDED
D						
E						
F						
G						

FOR APPROVAL NOT FOR CONSTRUCTION	
APPROVED BY:	
SIGN:	DATE:



CLIENT

STOCKLAND DEVELOPMENTS PTY LTD

Stockland AURA

Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway
Birtinya QLD Australia 4575
Telephone 07 5314 2520
Facsimile 07 5314 2522

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PROJECT

AURA LAND LEASE COMMUNITY MASTER PLAN (LLC)

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DRAWING TITLE		
OVERALL STORMWATER DRAINAGE CATCHMENT PLAN		
PROJECT No.	DRAWING No.	REVISION
19-000573	DA006	B

LEGEND

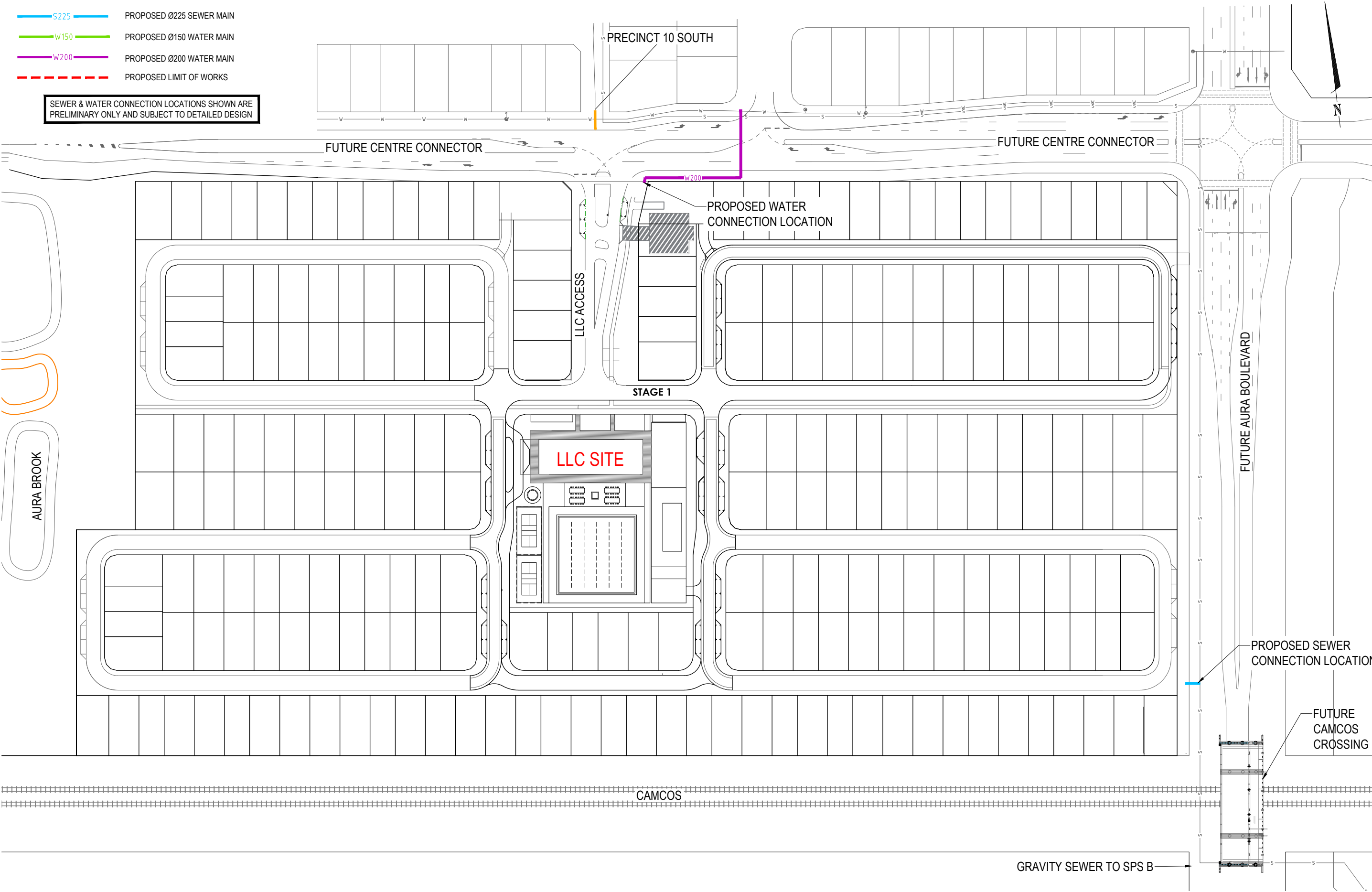
- S225

PROPOSED Ø225 SEWER MAIN
- W150

PROPOSED Ø150 WATER MAIN
- W200

PROPOSED Ø200 WATER MAIN
- PROPOSED LIMIT OF WORKS

SEWER & WATER CONNECTION LOCATIONS SHOWN ARE PRELIMINARY ONLY AND SUBJECT TO DETAILED DESIGN



FILE: DA007.dwg DATE: 01-08-2019 USER: DANIEL CULLING
XREFS: X:19-000573 - TITLE: X:19-000573-BASE, X:19-000573 - CONTS-DESIGN-250, X:19-000573 - CONTS-DESIGN, X:17-000934-1013-BASE, X:17-000934 - LOTS

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
A	CC	DM	SH	PA	30.08.19	
B	CB	DC	SH	PA	28.01.20	RESPONSE TO RFI FOR APPROVAL
C					07.05.20	LOT LAYOUT AMENDED
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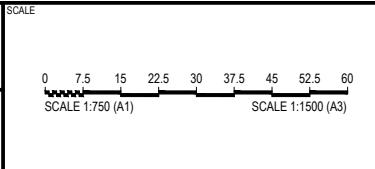
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DRAWING TITLE

SEWER AND WATER
SERVICE CONNECTION PLAN

PROJECT No.

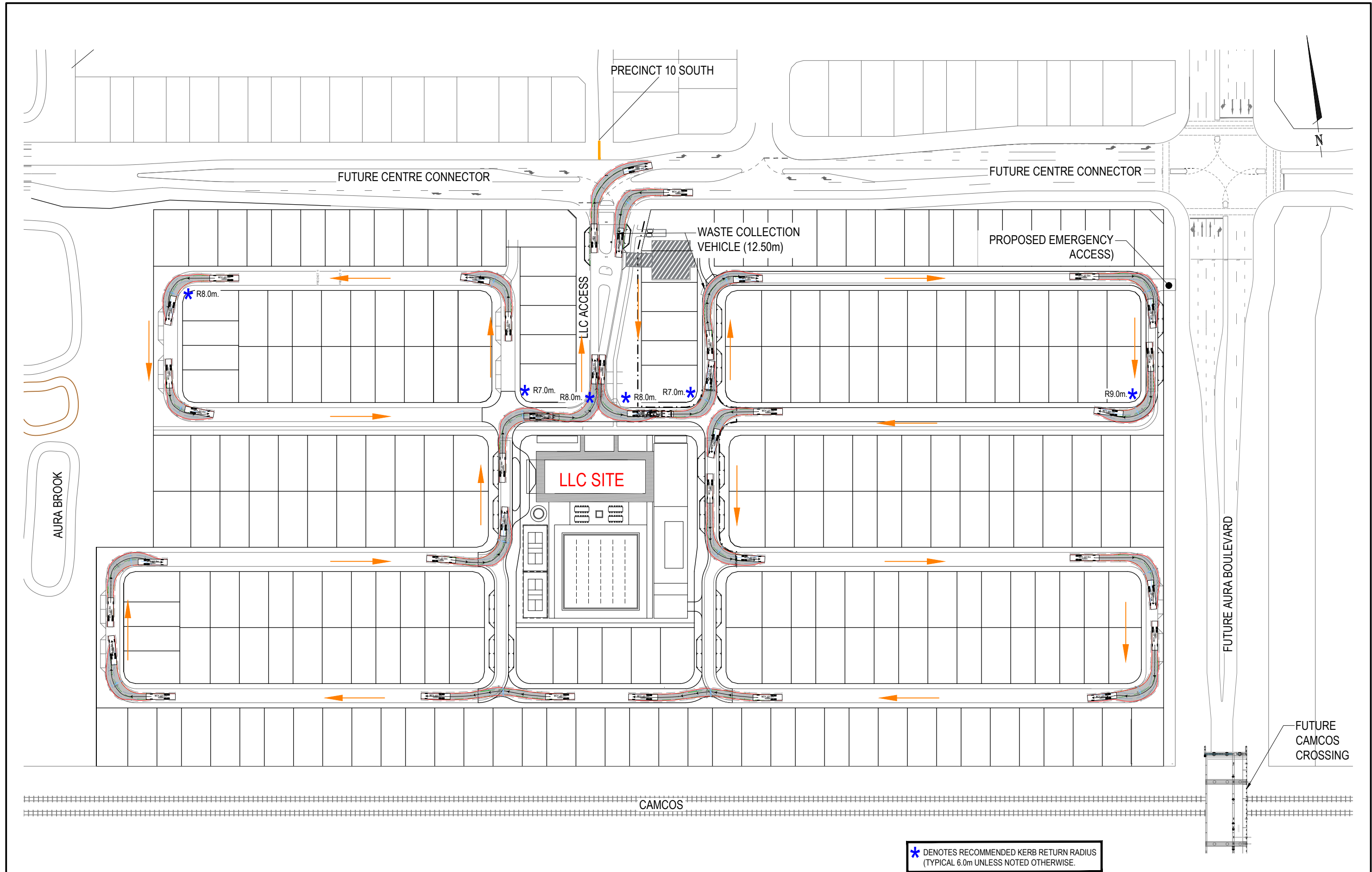
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REVISION

19-000573

DA007

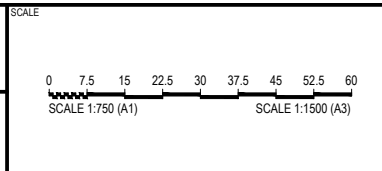
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FILE: DA008.dwg DATE: 01-08-2019 USER: DANIEL CULLING
XREFS: X:19-000573 - TITLE: X:19-000573-BASE, X:19-000573 - CONTENTS-DESIGN-250, X:19-000573 - CONTENTS-DESIGN, X:17-000934-1013-BASE, X:17-000934 - LOTS

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
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A	CC	DM	SH	MW	28.01.20	RESPONSE TO RFI FOR APPROVAL
B	CB	DC	SH	MW	07.05.20	LOT LAYOUT AMENDED
C						
D						
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FOR APPROVAL NOT FOR CONSTRUCTION	
APPROVED BY:	
SIGN:	DATE:



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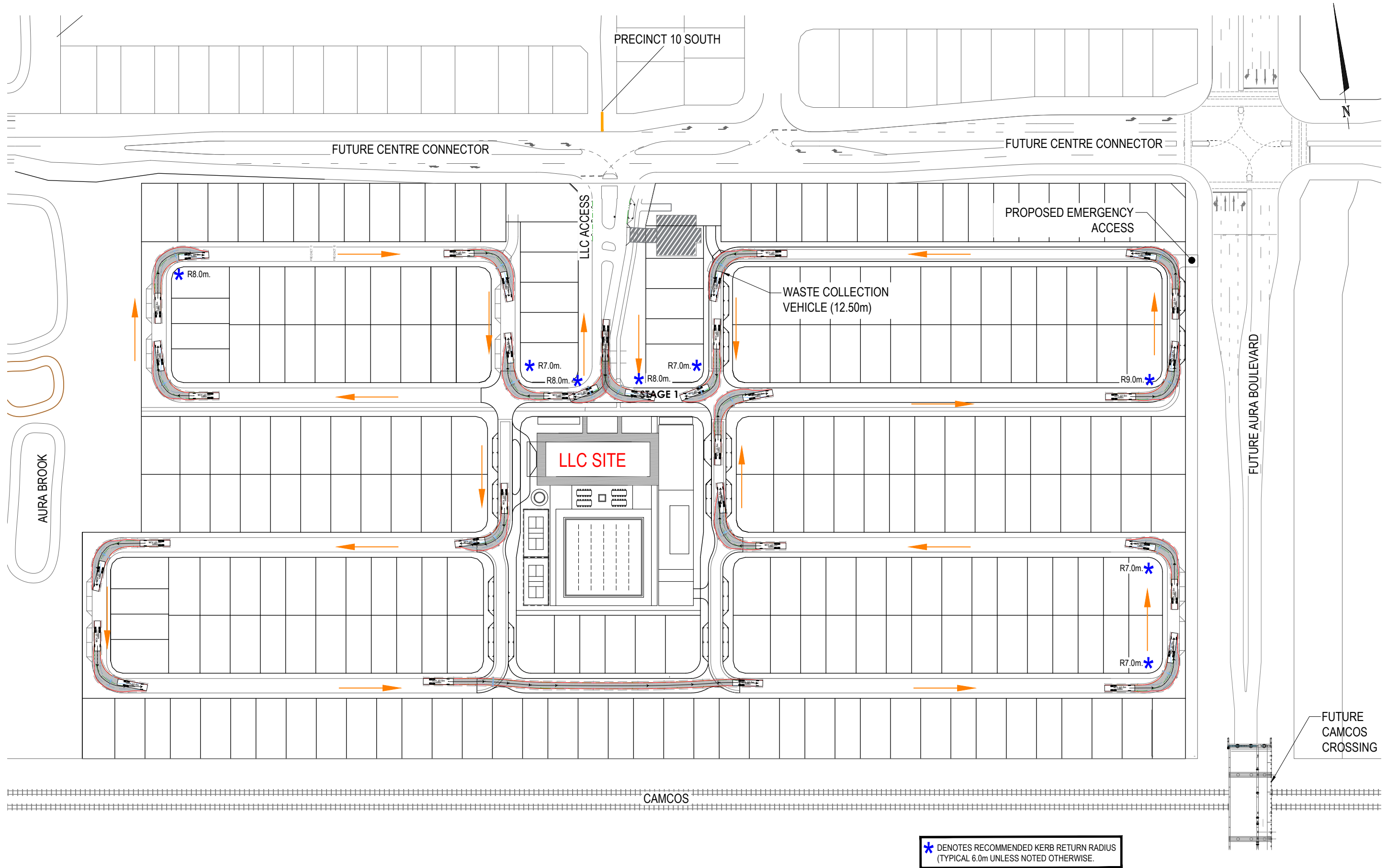
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DRAWING TITLE VEHICLE SWEEP PATH CONCEPT PLAN SHEET 1 OF 3	
PROJECT No. 19-000573	DRAWING No. DA008
REVISION B	

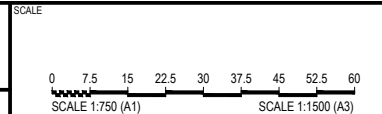


* DENOTES RECOMMENDED KERB RETURN RADIUS
(TYPICAL 6.0m UNLESS NOTED OTHERWISE.)

FILE: DA009.dwg DATE: 01-08-2019 USER: DANIEL CULLING
XREFS: X 19-000573 - TITLE: X19-000573-BASE, X 19-000573 - CONTS-DESIGN-250, X 19-000573 - CONTS-DESIGN, X17-000934 1013-BASE, X17-000934 - LOTS

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
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B	CB	DC	SH	MW	07.05.20	LOT LAYOUT AMENDED
C						
D						
E						
F						
G						

FOR APPROVAL NOT FOR CONSTRUCTION	
APPROVED BY:	
SIGN:	DATE:



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Birtinya QLD Australia 4575
Telephone 07 5314 2520
Facsimile 07 5314 2522

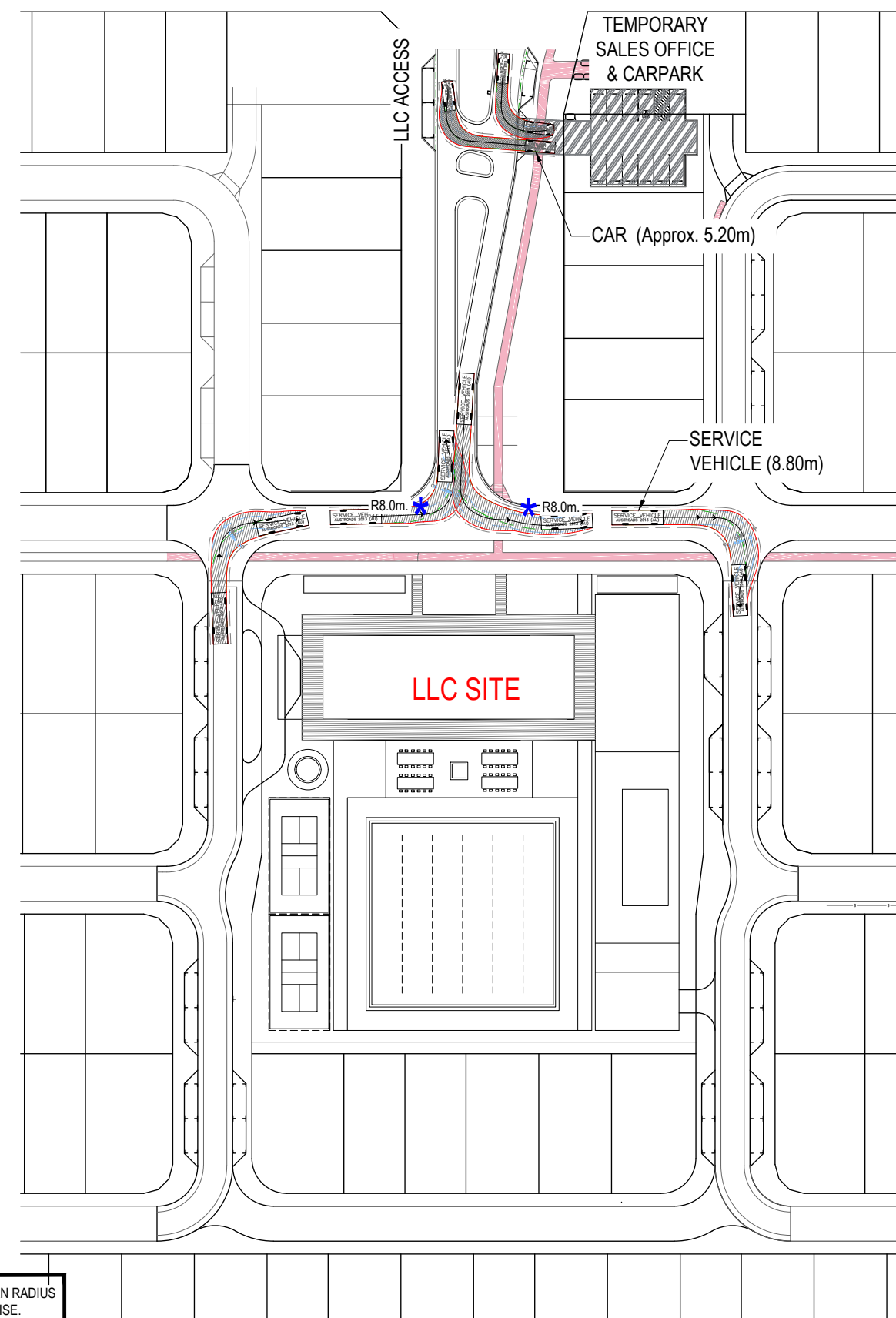
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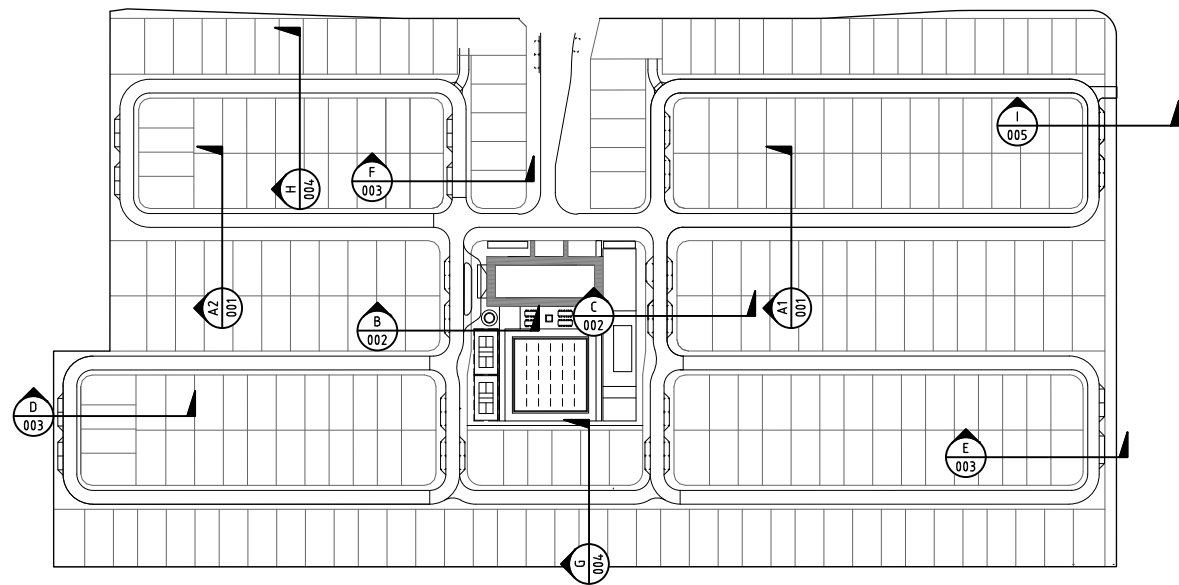
DISCLAIMER
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DRAWING TITLE VEHICLE SWEEP PATH CONCEPT PLAN SHEET 2 OF 3	
PROJECT No. 19-000573	DRAWING No. DA009
REVISION B	

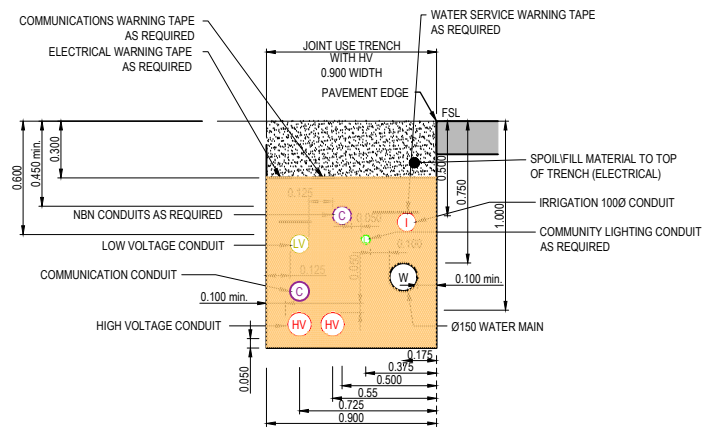
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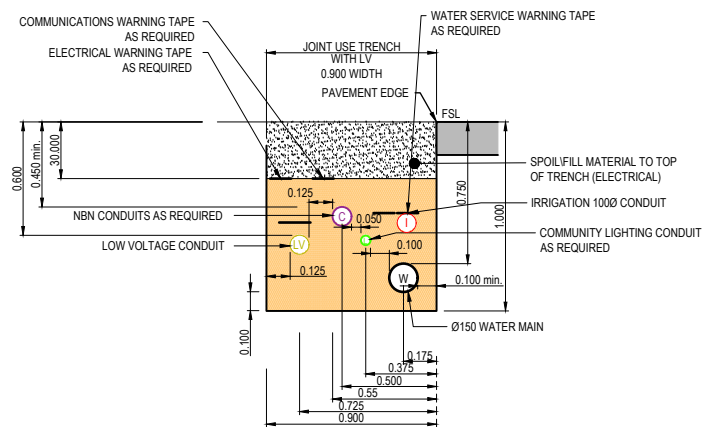
DRAWING TITLE		
VEHICLE SWEEP PATH CONCEPT PLAN SHEET 3 OF 3		
PROJECT No.	DRAWING No.	REVISION
19-000573	DA010	B



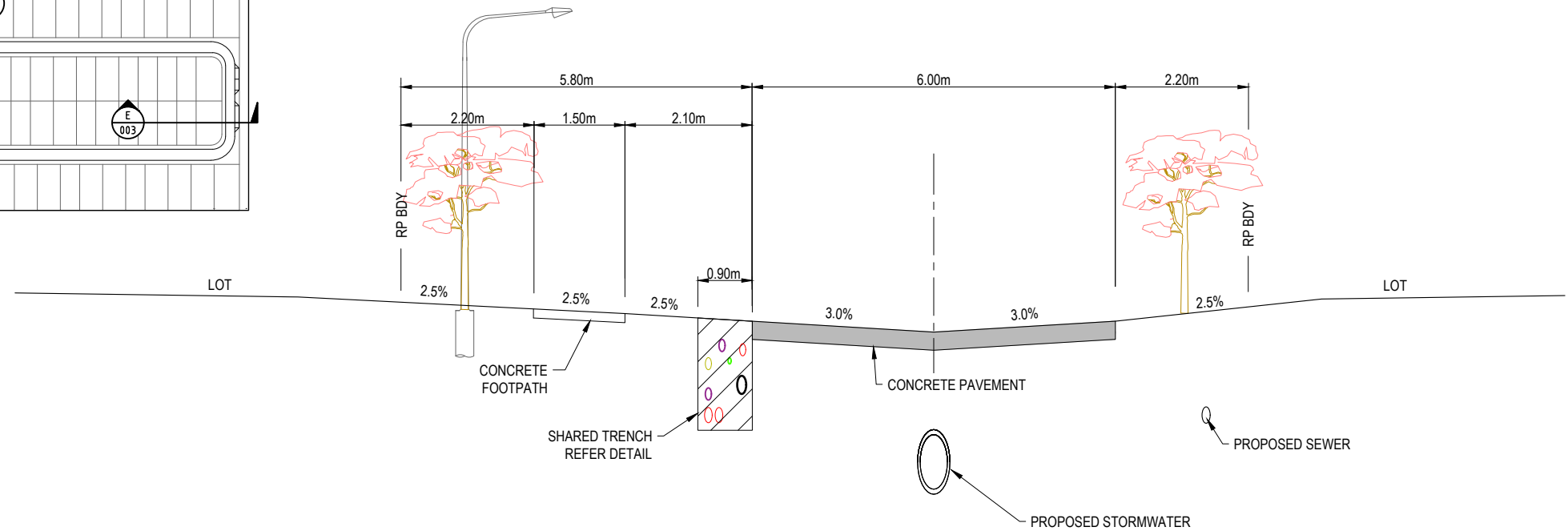
SECTIONAL LAYOUT PLAN



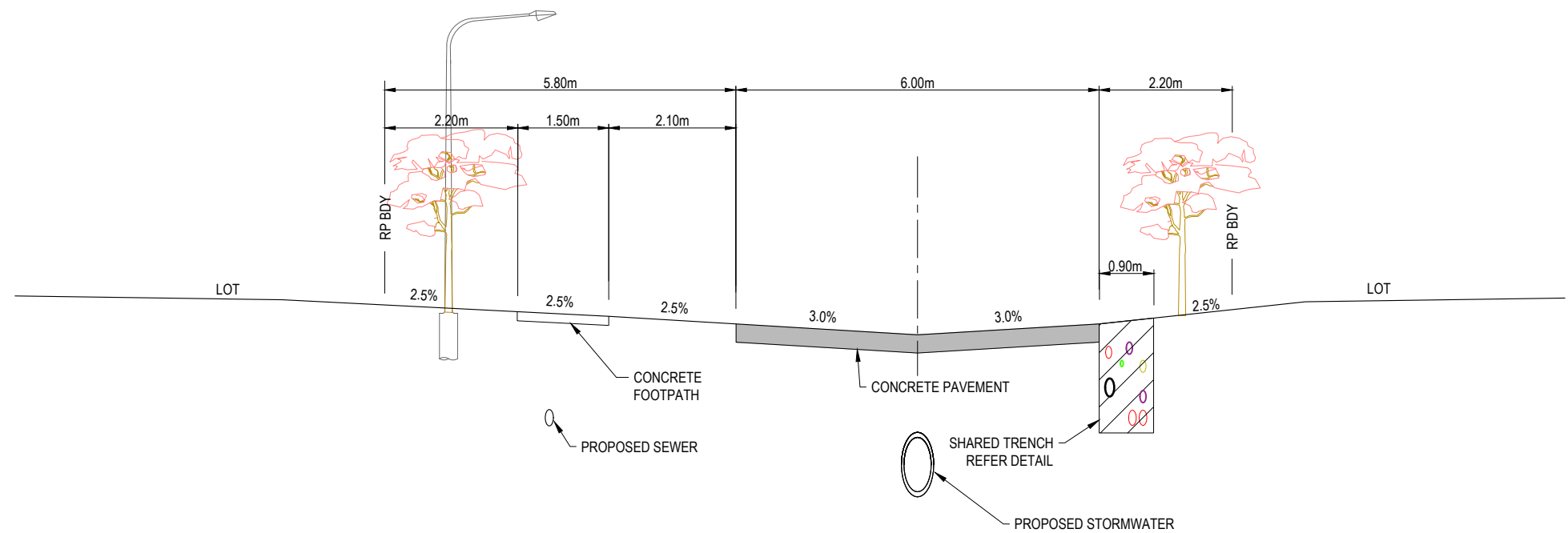
TYPICAL SERVICES TRENCH (HV)
SCALE 1 : 100 (A1)






TYPICAL SERVICES TRENCH (LV)
SCALE 1 : 100 (A1)

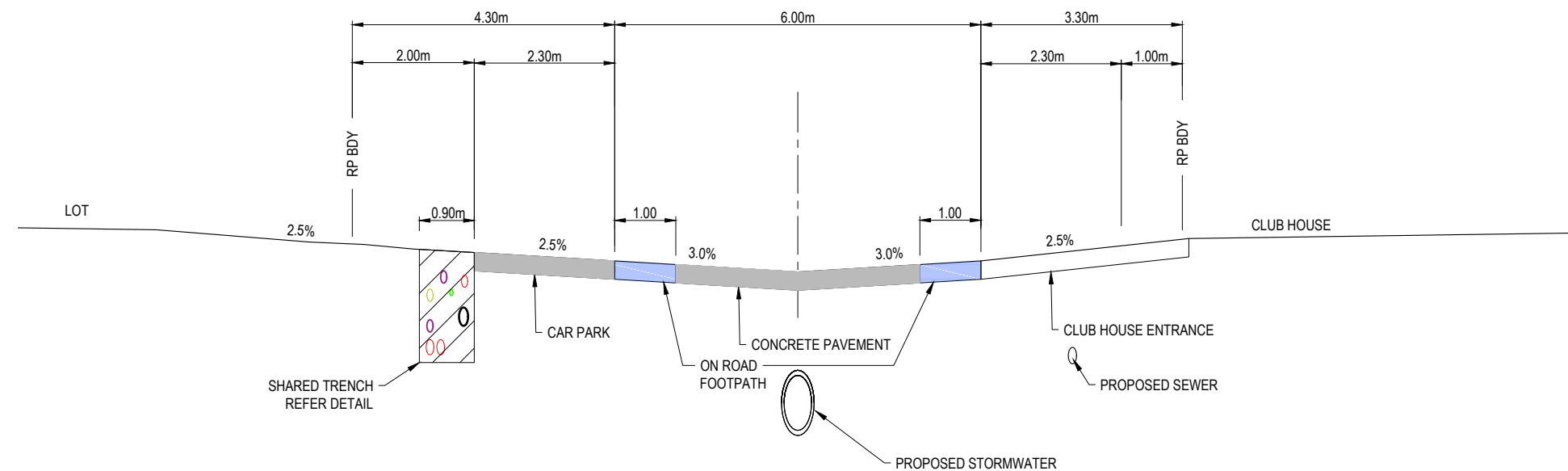


SECTION A1 TYPICAL 14 RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)

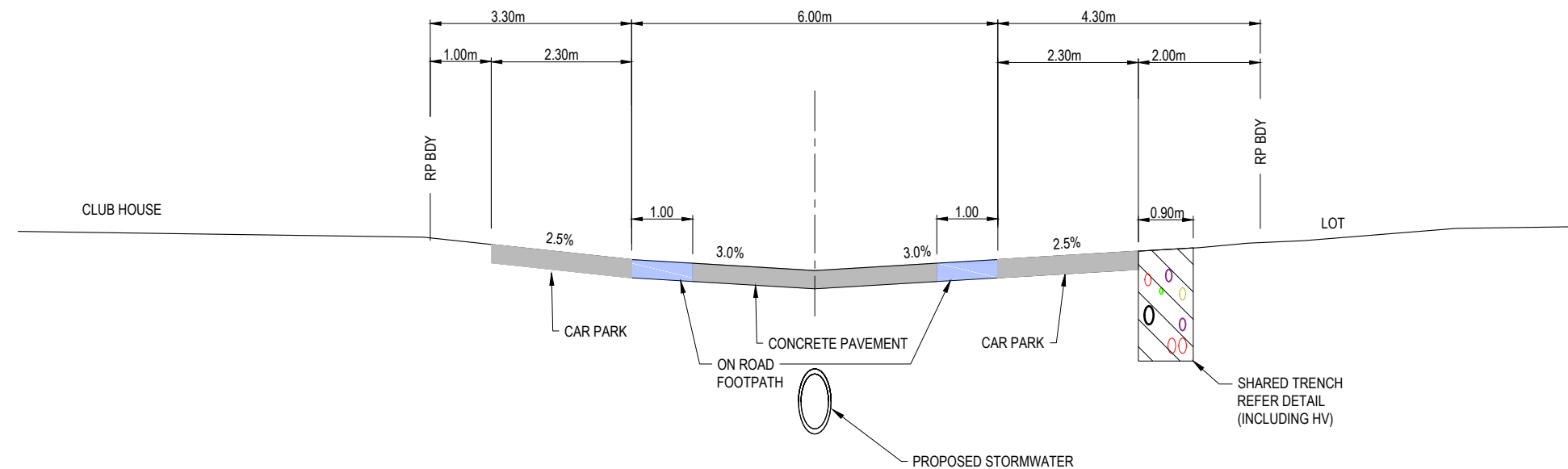


SECTION A2 TYPICAL 14m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)

FILE: SK001.dwg DATE: 01-08-2019 USER: DANIEL CULLING XREFS: X19-000573 - TITLE																		
AMENDMENTS	FIRST ISSUE	DESIGN CC	DRAWN DM	CHECK SH	APPROVED MW	DATE 01.08.19	AMENDMENT DETAILS		STATUS FOR APPROVAL NOT FOR CONSTRUCTION	SCALE 	CLIENT STOCKLAND DEVELOPMENTS PTY LTD 	 Calibre Consulting (Q/LD) Pty Ltd Level 3, 16 Innovation Parkway Birtinya QLD Australia 4575 Telephone 07 5314 2520 Facsimile 07 5314 2522 © calibregroup.com	PROJECT AURA LAND LEASE COMMUNITY MASTER PLAN (LLC) DISCLAIMER ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.	DRAWING TITLE TYPICAL SERVICES CONFIGURATION CONCEPT PLAN SHEET 1 OF 5 PROJECT No. 19-000573 DRAWING No. SK001 REVISION B				
	A	CC	DM	SH	MW	28.01.20											RESPONSE TO RFI FOR APPROVAL	
	B	CC	DC	SH	MW	07.05.20											LOT LAYOUT AMENDED	
	C																	
	D																	
	E																	
	F																	
	G																	




SECTION B TYPICAL 13.6m RESERVE WIDTH SECTION
 HORIZ. SCALE 1:100 (A1)
 VERT. SCALE 1:50 (A1)

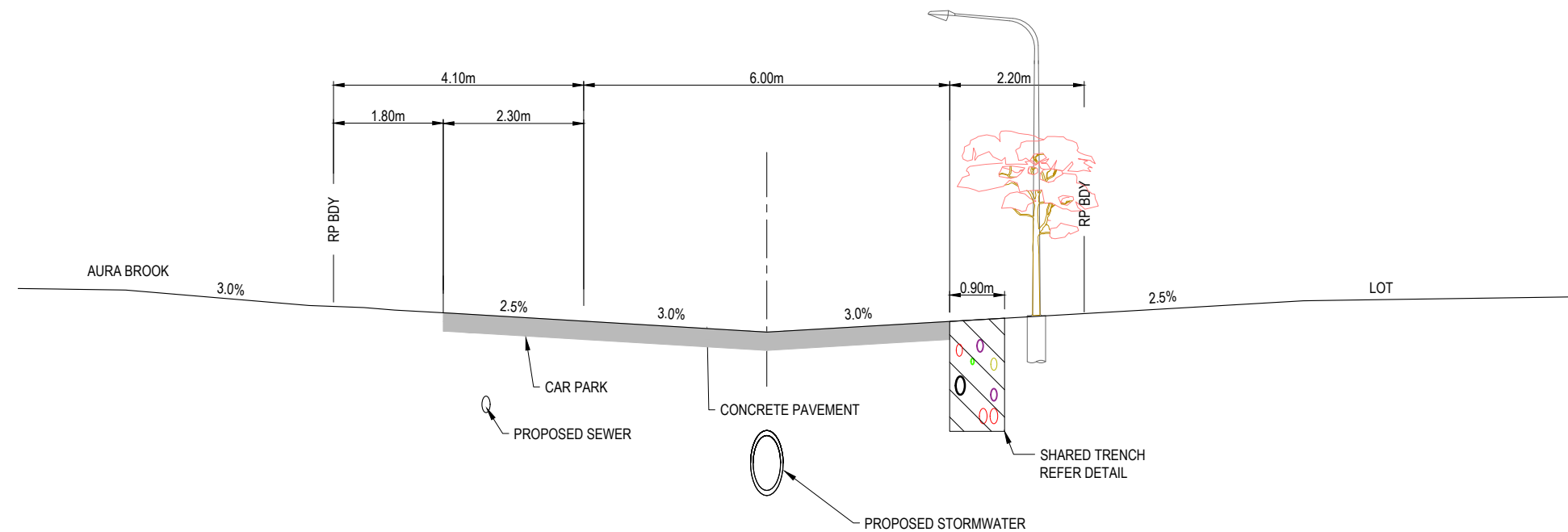


SECTION C TYPICAL 13.6m RESERVE WIDTH SECTION
 HORIZ. SCALE 1:100 (A1)
 VERT. SCALE 1:50 (A1)

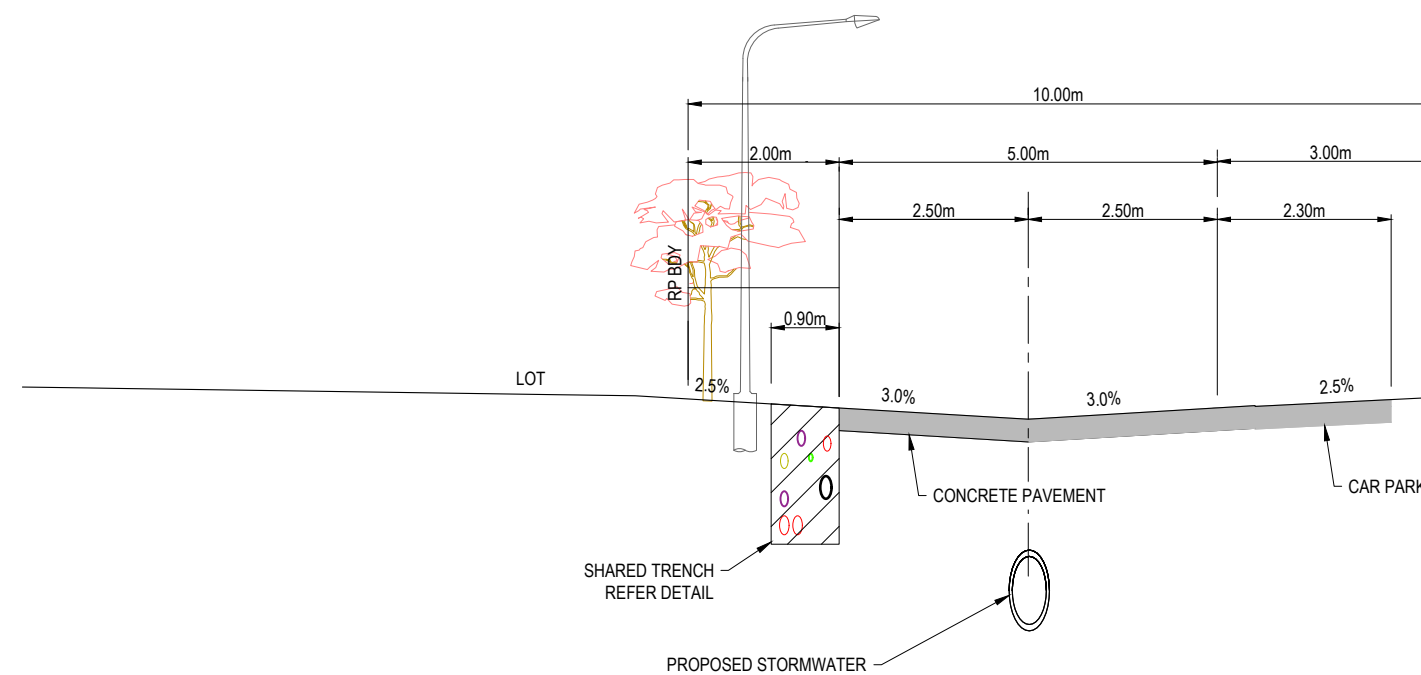
REFER 19-000573-SK001 FOR
 LAY OUT PLAN

FILE: SK002.dwg DATE: 01-08-2019 USER: DANIEL CULLING
 XREFS: X:19-000573 - TITLE

XREFS: X 19-000573 - TITLE						STATUS	SCALE	CLIENT	PROJECT	DRAWING TITLE		
FIRST ISSUE	DESIGN	CC	JR	MW	MM						DATE	
AMENDMENTS	A	CC	DM	SH	MW	28.01.20	FOR APPROVAL NOT FOR CONSTRUCTION				AURA LAND LEASE COMMUNITY MASTER PLAN (LLC)	TYPICAL SERVICES CONFIGURATION CONCEPT PLAN SHEET 2 OF 5
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	D											
	E											
	F											
	G											
	H											
	I											
	J											
RESPONSE TO RFI FOR APPROVAL												
LOT LAYOUT AMENDED												



SECTION D TYPICAL 12.3m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)



SECTION E TYPICAL 11.2m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)

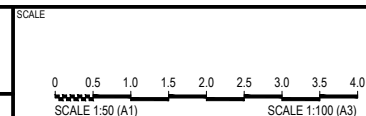
REFER 19-000573-SK001 FOR
LAY OUT PLAN

FILE: SK003.dwg DATE: 01-08-2019 USER: DANIEL CULLING

XREFS: X 19-000573 - TITLE

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
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B	CB	DC	SH	MW	28.01.20	RESPONSE TO RFI FOR APPROVAL
C					07.05.20	LOT LAYOUT AMENDED
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STATUS	FOR APPROVAL NOT FOR CONSTRUCTION
APPROVED BY:	
SIGN:	DATE:

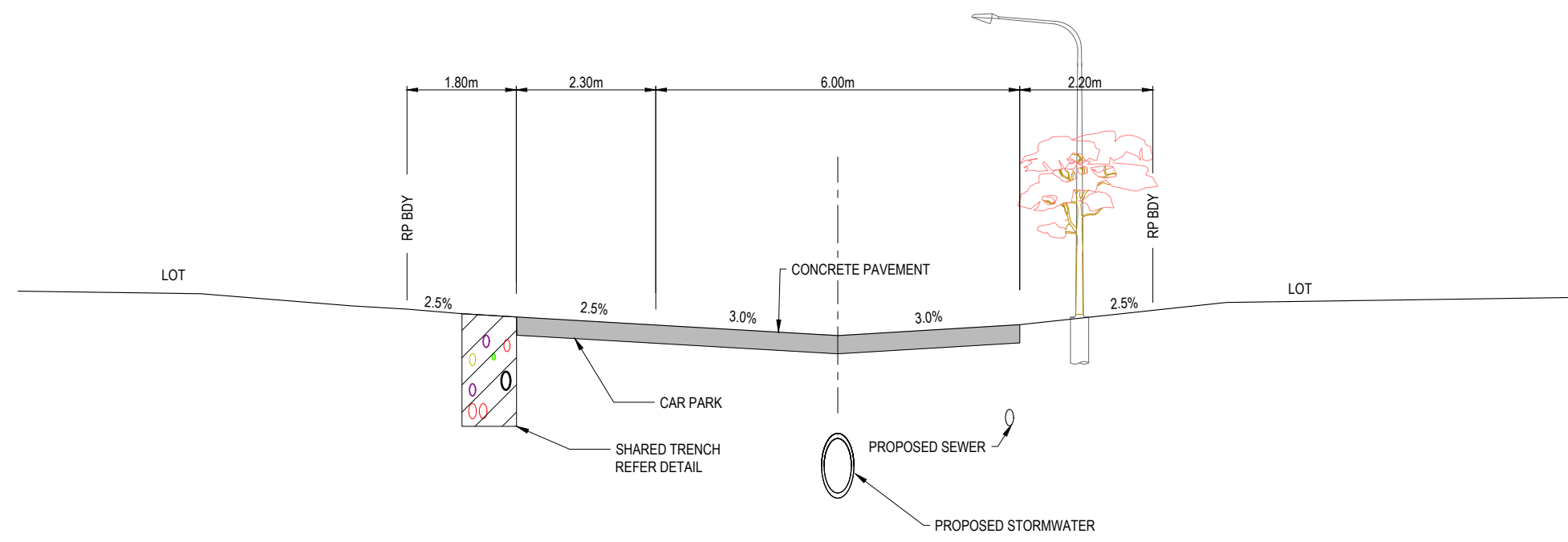


CLIENT	STOCKLAND DEVELOPMENTS PTY LTD

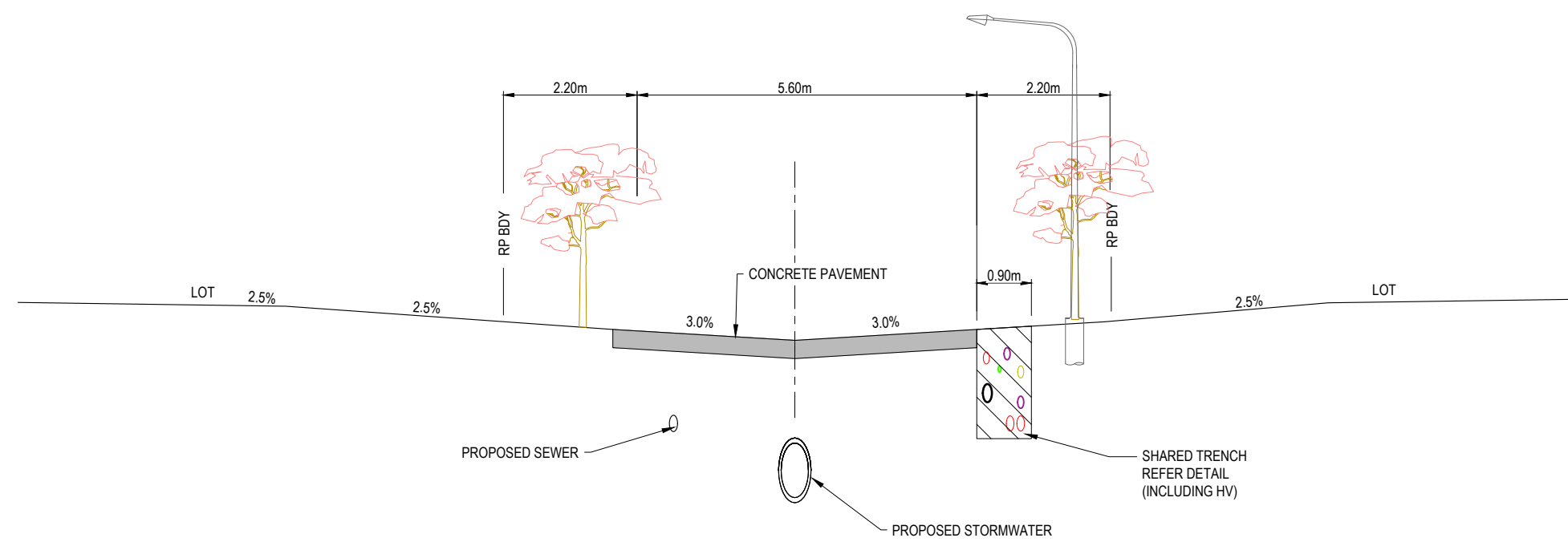
	Calibre Consulting (QLD) Pty Ltd Level 3, 16 Innovation Parkway Birtinya QLD Australia 4575 Telephone 07 5314 2520 Facsimile 07 5314 2522
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PROJECT	AURA LAND LEASE COMMUNITY MASTER PLAN (LLC)
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DRAWING TITLE	TYPICAL SERVICES CONFIGURATION CONCEPT PLAN SHEET 3 OF 5
PROJECT No.	19-000573
DRAWING No.	SK003
REVISION	B



SECTION F TYPICAL 12.1m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)



SECTION G TYPICAL 11.7m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)

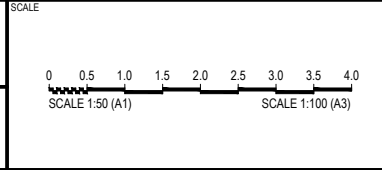
REFER 19-000573-SK001 FOR LAY OUT PLAN

FILE: SK004.dwg DATE: 01-08-2019 USER: DANIEL CULLING
XREFS: X:19-000573 - TITLE

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
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B	CB	DC	SH	MW	07.05.20	LOT LAYOUT AMENDED
C						
D						
E						
F						
G						

FOR APPROVAL
NOT FOR CONSTRUCTION

APPROVED BY: SIGN: DATE:



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STOCKLAND DEVELOPMENTS
PTY LTD

Calibre Consulting (QLD) Pty Ltd
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Birtinya QLD Australia 4575
Telephone 07 5314 2520
Facsimile 07 5314 2522

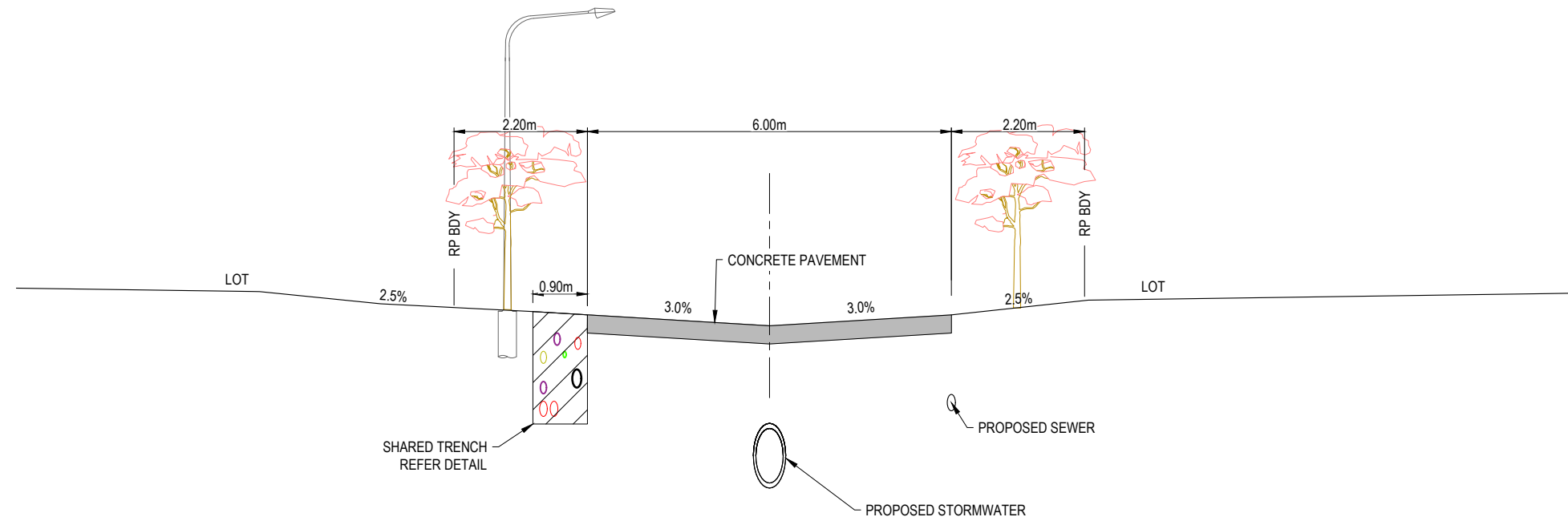
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PROJECT

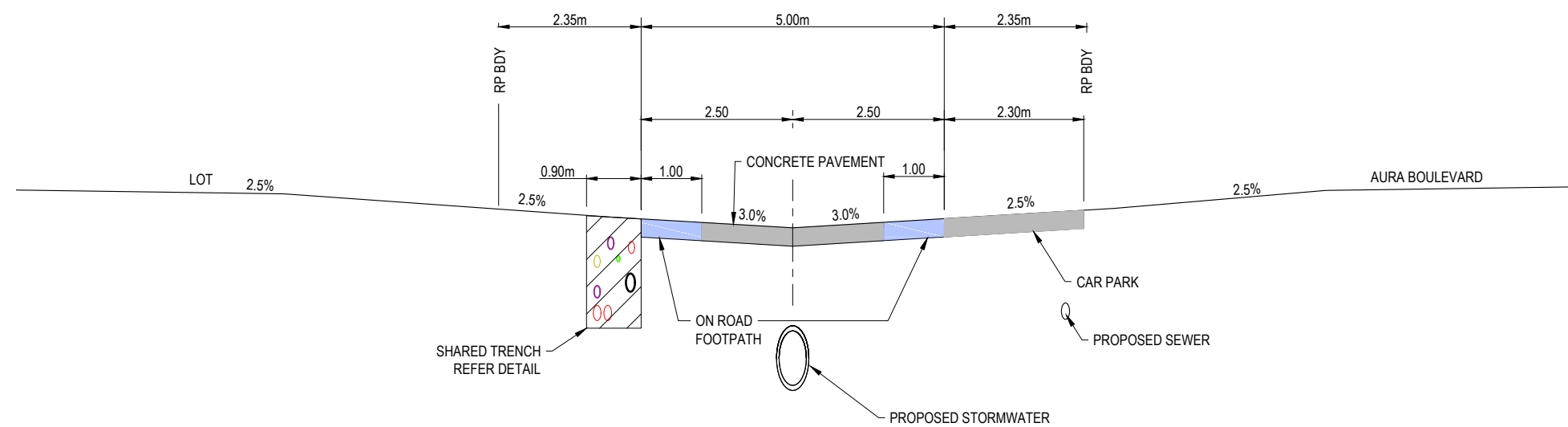
AURA LAND LEASE
COMMUNITY MASTER PLAN
(LLC)

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DRAWING TITLE		
TYPICAL SERVICES CONFIGURATION CONCEPT PLAN SHEET 4 OF 5		
PROJECT No.	DRAWING No.	REVISION
19-000573	SK004	B



SECTION H TYPICAL 10.4m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)



SECTION I TYPICAL 9.7m RESERVE WIDTH SECTION
HORIZ. SCALE 1:100 (A1)
VERT. SCALE 1:50 (A1)

REFER 19-000573-SK001 FOR
LAY OUT PLAN

FILE: SK005.dwg DATE: 01-08-2019 USER: DANIEL CULLING
XREFS: X 19-000573 - TITLE

AMENDMENT DETAILS						STATUS	SCALE	CLIENT	PROJECT	DRAWING TITLE		
FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE							
AMENDMENTS	A	CC	DM	MW	MW	01.08.19	FOR APPROVAL NOT FOR CONSTRUCTION		STOCKLAND DEVELOPMENTS PTY LTD	Calibre Consulting (QLD) Pty Ltd Level 3, 16 Innovation Parkway Birtinya QLD Australia 4575 Telephone 07 5314 2520 Facsimile 07 5314 2522	AURA LAND LEASE COMMUNITY MASTER PLAN (LLC)	TYPICAL SERVICES CONFIGURATION CONCEPT PLAN SHEET 5 OF 5
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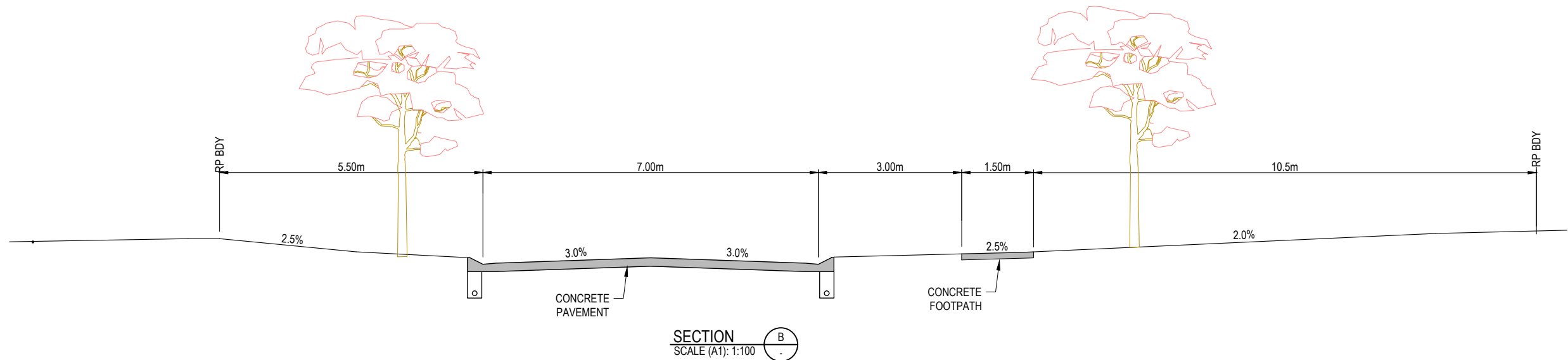
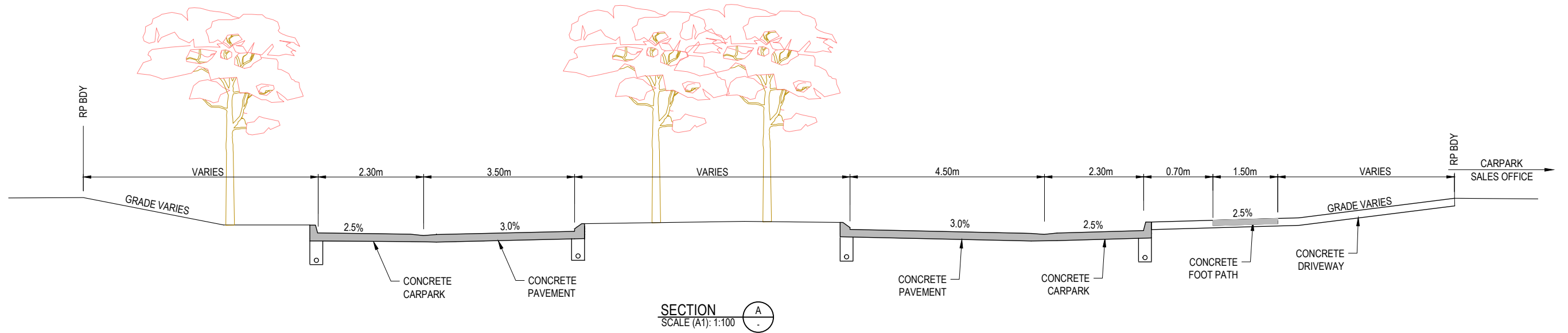
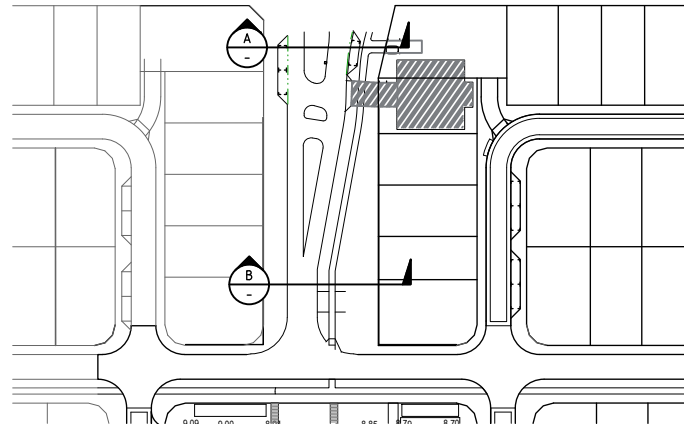
 **Stockland**  **AURA**

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PROJECT No. 19-000573	DRAWING No. SK005	REVISION B
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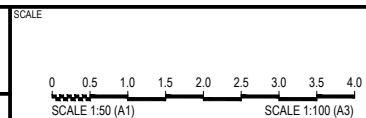
DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR
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FILE: SK006.dwg DATE: 01-08-2019 USER: DANIEL CULLING
XREFS: X 19-000573 - TITLE: X 19-000573-BASE, X 19-000573 - CONTS-DESIGN-250, X 19-000573 - CONTS-DESIGN

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPROVED	DATE	AMENDMENT DETAILS
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C						
D						
E						
F						
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STATUS	
FOR APPROVAL	
NOT FOR CONSTRUCTION	
APPROVED BY:	
SIGN:	DATE:



CLIENT
STOCKLAND DEVELOPMENTS PTY LTD

calibre

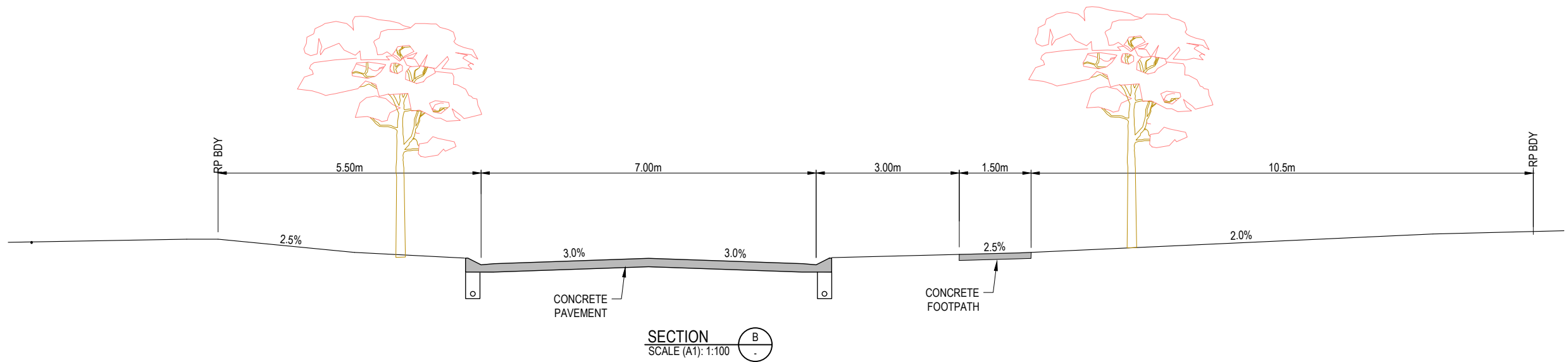
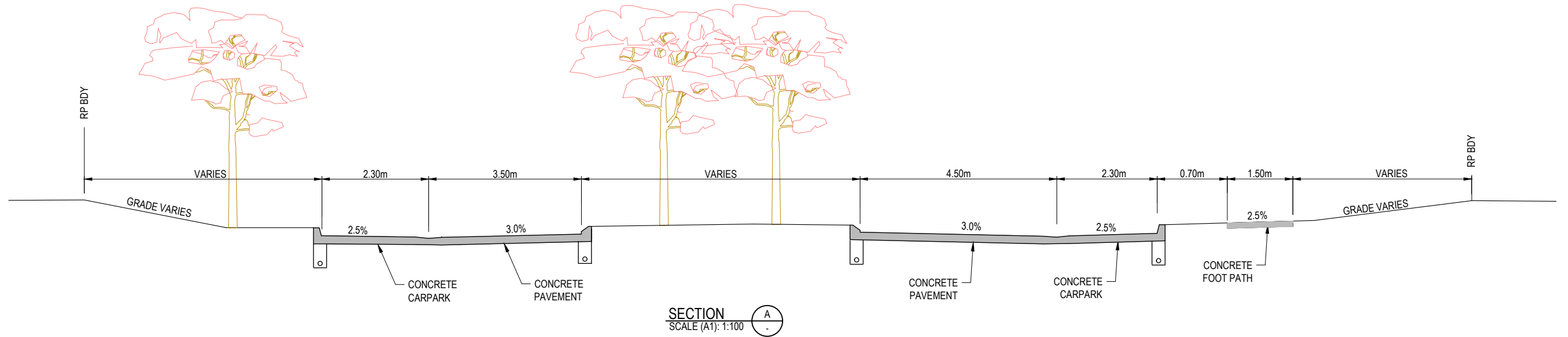
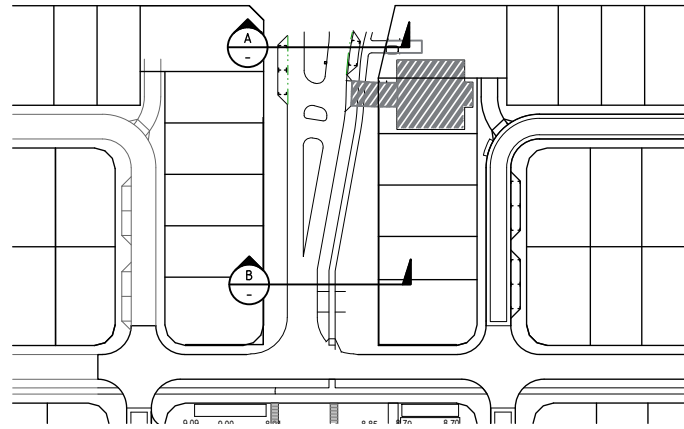
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Birtinya QLD Australia 4575
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DRAWING TITLE		
TYPICAL ENTRY ROAD CONFIGURATION CONCEPT PLAN (INTERIM)		
PROJECT No.	DRAWING No.	REVISION
19-000573	SK006	B



FILE: SK008.dwg DATE: 01-08-2019 USER: DANIEL CULLING XREFS: X 19-000573 - TITLE: X 19-000573-BASE, X 19-000573 - CONTS-DESIGN-250, X 19-000573 - CONTS-DESIGN									
FIRST ISSUE					AMENDMENT DETAILS				
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DM					NOT FOR CONSTRUCTION				
SH									
MW									
DATE									
28.01.20									
07.05.20									
APPROVED									
BY:									
SIGN:									
DATE:									
SCALE									
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0									
SCALE 1:50 (A1)									
SCALE 1:100 (A3)									
CLIENT									
STOCKLAND DEVELOPMENTS									
PTY LTD									
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PROJECT									
AURA LAND LEASE									
COMMUNITY MASTER PLAN									
(LLC)									
DISCLAIMER									
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR									
PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY,									
DO NOT SCALE.									
DRAWING TITLE									
TYPICAL ENTRY ROAD									
CONFIGURATION									
CONCEPT PLAN (ULTIMATE)									
PROJECT No.									
19-000573									
DRAWING No.									
SK008									
REVISION									
B									

CONTACT US

CALIBRE PROFESSIONAL SERVICES PTY LTD
55 070 683 037

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PO Box 997 Buddina, Queensland 4575
+61 7 5314 2520



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