

CEDAR RIDGE PRECINCT NORTH 3 (LOT 42)

PRELIMINARY ENGINEERING REPORT

Address: 260-266 Loganview Road North,
Logan Reserve

Lot & RP Description: Lot 42 RP229101

Local Government: Logan City Council

Prepared for: Australis Land Pty Ltd

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DATE: APRIL 2026



CIVIL ENGINEERING

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Prepared for:

CLIENT



DOCUMENT CONTROL

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Property Address:

260-266 Loganview Road
North, Logan Reserve,
Qld 4133

Real Property Description/s:

Lot 42 RP229101

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1.0 INTRODUCTION

This Preliminary Engineering Report has been prepared by Mortons - Urban Solutions on behalf of *Austalis Land Pty Ltd* and is supporting information to the ROL application for 260 – 266 Loganview Road North, Logan Reserve, over Lot 42 RP229101. The site is located within Logan City Council.

Mortons - Urban Solutions provide this Preliminary Engineering Report in association with the following consultants:

Consultant	Responsibilities
Colliers	Town Planning and Survey

2.0 THE SITE AND ITS CONTEXT

The subject site is approximately 1.19ha and is located on Lot 42 RP229101. The subject site is located within the Logan City Council.

2.1 Surrounding Land Uses

The site is bound by an existing residential development to the north, Loganview Road North to the east and vacant land to the west and south. The vacant land to the west (Lot 26 SP348491) and south (Lot 41 RP229101) currently has a development application in with Council and the Logan City Council application reference is COM/13/2021.

2.2 Site Analysis and Surrounds

2.2.1 Topography, Drainage and Dams

The subject site slopes to the south east corner where there is an existing dam which spans the common boundary with Lot 41 RP229101.

2.2.2 Geotechnical Investigation

At the time of preparing this report there has been no geotechnical investigation undertaken on the site.

2.2.3 Flooding

A search within the Logan Flood Portal was undertaken for the site and the search identified no flood risks within the development area.

2.2.4 Existing Water Services

There is an existing 150mm dia. PVC water main within the northern verge of McArthur Street and there is an existing 150mm dia. PVC water main water main within the western verge of Loganview Road North.

2.2.5 Existing Sewer Reticulation

There is an existing 150mm dia. PVC sewer main within the northern verge of McArthur Street and there is an existing 150mm dia. PVC sewer main water main within the western verge of Loganview Road North.

2.2.6 Existing Roads

Loganview Road is situated to the east of the subject site and this road is classified as an urban collector road. Loganview Road North in front of the subject site has recently been upgraded. There is no kerb and channel or footpath in the fronting road verge.

McArthur Street is located to the north of the subject site and this road is classified as an urban access street. McArthur Street is a 5.5m wide road pavement for the frontage of the site and has been built with kerb and channel. There is no footpath in the fronting road verge.

3.0 PROPOSED DEVELOPMENT AND ENGINEERING DESIGN

A sixteen (16) lot residential subdivision is proposed for the subject site. The lots will be freehold lots. The Proposed Reconfigurations of Lot plan is included as **Appendix A**.

3.1 Design Brief, Intents and Qualifications

The proposed development will be designed to the guidelines and requirements of Logan City Council and the SEQ Code.

3.2 Vegetation Clearing and Preservation

The site currently has trees on it which will need to be cleared to facilitate the proposed development. A vegetation management plan will be required to clear the existing trees.

3.3 Earthworks, Proposed Levels and Rock Walls

To facilitate the residential development earthworks are required on the site. A preliminary engineering design of the site has been undertaken and earthworks fill up to 3m in depth is proposed for the site. There is some minor cut within the external roads required to shape the road. The site will require the import of fill material to complete the earthworks. The site will be graded to the stormwater basin at the south east corner of the site.

It is anticipated that the retaining walls will be required along the internal boundaries to facilitate the site earthworks. Concrete sleeper retaining walls are proposed for the retaining walls and the maximum single tier height is 2.0m.

The preliminary earthworks design is shown in the preliminary engineering drawings included as **Appendix B**.

3.4 Sediment & Erosion Control

During civil construction sediment & erosion control measures will be implemented in accordance with a site specific CPESC plan. Sediment & erosion control measures will generally comprise of clean and dirty water diversion drains, a temporary sediment basin, silt fences, early stabilisation of disturbed areas where possible and other control measures as appropriate and/or required to meet best practice requirements.

The site specific CPESC plan will be prepared closer to the commencement of civil construction works and a copy of the CPESC plan will be provided to Council prior to works commencing on site. It is anticipated that the basin proposed as part of COM/40/2021 will be used as a temporary sediment basin during construction works and all flows from the subject site will be directed to this basin.

Appropriate dust suppression measures will also be implemented on site during construction works.

3.5 Roadworks

The proposed development will have a road connection to the existing McArthur Street and a road connection to the south will be provided to the future road proposed as part of COM/13/2021. The proposed roads will be urban access streets and will be constructed in accordance with the LCC planning scheme.

Lots 153, 154, 158 & 159 will front the existing McArthur Street. Lots 155 – 154 will front an access handle and will have a 5.5m wide concrete driveway constructed within road reserve to serve these lots. Lots 155 – 157 & 159 will require bin pads to be constructed on McArthur Street.

It is anticipated that Loganview Road North will require kerb and channel constructed along the verge fronting the subject site.

Preliminary roadworks design is shown in the preliminary engineering drawings included as **Appendix B**.

3.5.1 Footpaths

A footpath will be provided on new road in accordance with the Logan City Council Planning Scheme.

It is anticipated that a footpath will be required within the western verge of Loganview Road North.

The locations of footpaths are also shown on the preliminary engineering drawings included as **Appendix B**.

3.6 Water Reticulation

It is proposed that a 100mm dia. water main is constructed for the proposed development. This water main will connect to the existing 150mm. dia PVC water main within McArthur Street. There will also be a water connection to the south to a future water main proposed as part of COM/13/2021.

The subject sites proposed water main will be part of the low level water network.

The proposed water main will be designed in accordance with the SEQ Design Criteria and the SEQ Water Supply Code.

The preliminary water reticulation design is shown in the preliminary engineering drawings included as **Appendix B**.

3.7 Sewer Reticulation

It is proposed that a 150mm dia. sewer main is constructed for the proposed development. This sewer main will connect to the south to the future sewer main proposed as part of COM/13/2021.

Individual sewer house connections will be provide for each proposed lot. It is proposed that lots 158 & 159 will be connected to the existing 150mm dia. sewer main located within McArthur Street adjacent to Lot 902 SP338887.

The proposed water main will be designed in accordance with the SEQ Design Criteria and the SEQ Sewerage Code.

The preliminary water reticulation design is shown in the preliminary engineering drawings included as **Appendix B**.

3.8 Stormwater

As part of the proposed development an internal stormwater network will be designed and constructed. The site will be designed to convey stormwater flows to a stormwater basin located at the south east corner of the site.

It is noted that the existing development to the north conveys its stormwater flows to the existing stormwater basin located at Lot 902 SP338887. To maintain the stormwater flows from Lots 15 – 18 SP338887 flowing to this existing stormwater basin, a butterfly grated gully pit will be constructed within the driveway proposed for Lots 155 – 157 and this gully pit will be connected to the existing stormwater network.

The preliminary stormwater design and earthworks is shown on the preliminary engineering drawings included as **Appendix B**.

3.8.1 Stormwater Quality Management

Colliers have prepared a stormwater management plan that incorporates the subject site. This stormwater management plan is included as **Appendix C**.

The subject site will have its stormwater flows treated by a stormwater bioretention basin located at the south east corner of the subject site. It is noted that this stormwater bioretention basin is proposed as part of the COM/13/2021 development application. This stormwater basin has been designed to treat the stormwater flows from the subject site and the stormwater basin will be constructed as part of the COM/13/2021 works.

The indicative location of the stormwater basin is shown on the preliminary engineering drawings included as **Appendix B**.

3.8.2 Stormwater Quantity

Colliers have prepared a stormwater management plan that incorporates the subject site. This stormwater management plan is included as Appendix C.

The subject site will have its stormwater flows detained by a stormwater detention basin located at the south east corner of the subject site. It is noted that this stormwater detention basin is proposed as part of the COM/13/2021 development application. This stormwater basin has been designed to detain the stormwater flows from the subject site and the stormwater basin will be constructed as part of the COM/13/2021 works.

The indicative location of the stormwater basin is shown on the preliminary engineering drawings included as **Appendix B**.

4.0 CONCLUSION

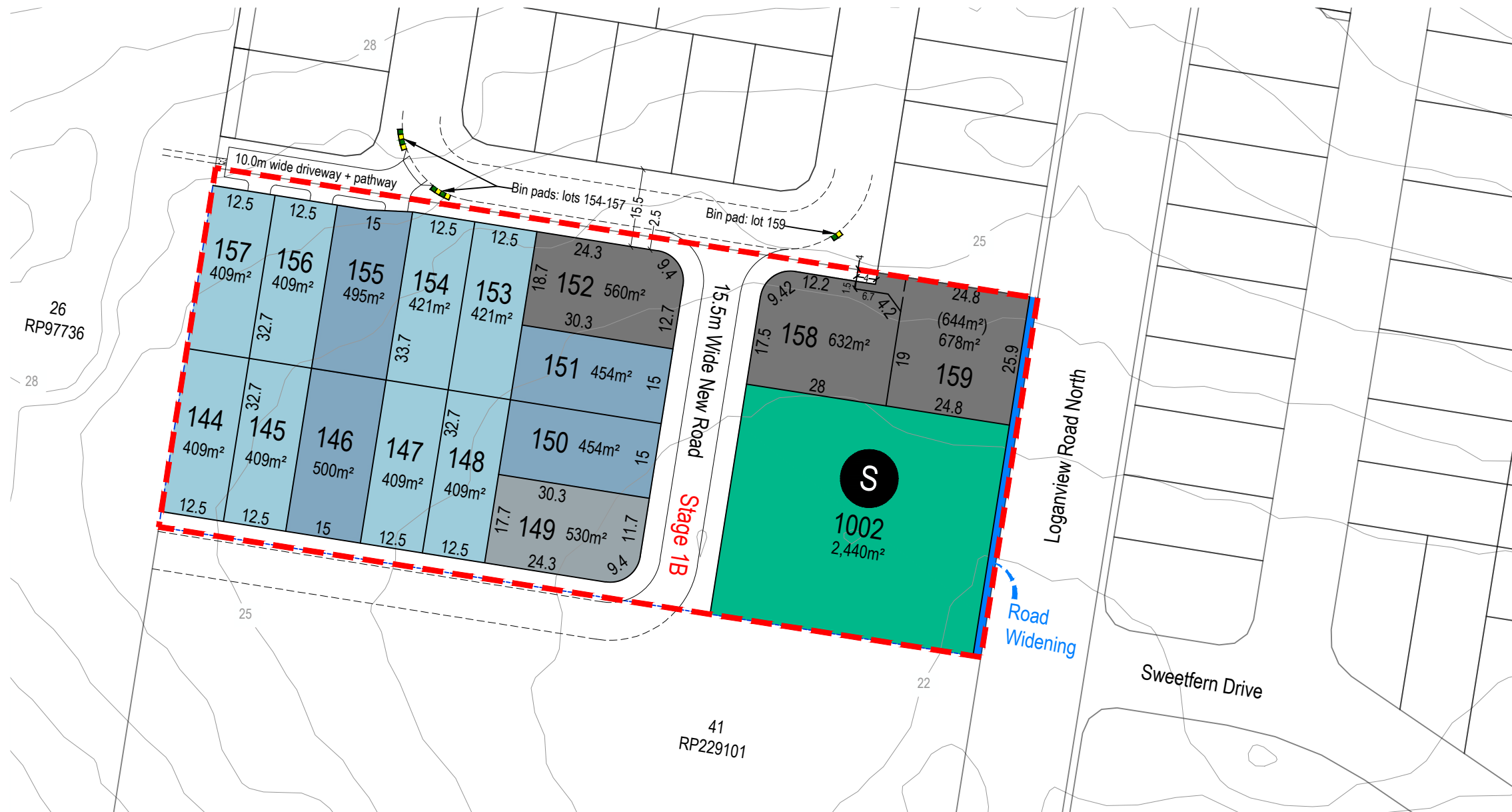
This preliminary engineering report has provided advice regarding the civil engineering aspects of the proposed development for the purpose of obtaining a development approval. We confirm that the development can be designed in accordance with the Logan City Council Planning Scheme guidelines.



APPENDIX A

Plan of Subdivision

(drawing no. 20-0136-PS6, dated 31 January 2025)
Prepared by Colliers



LEGEND

Site boundary	
Existing lot boundaries	
Stormwater Treatment	
Bin pads	
Pathway	

YIELD SUMMARY

Lot Frontage	Number of Lots	%
12.50-13.99m	8	50.0%
14.00-15.99m	4	25.0%
16.00-17.99m	1	6.3%
≥18.0m	3	18.8%
TOTAL	16	100%

DEVELOPMENT SUMMARY - Lots

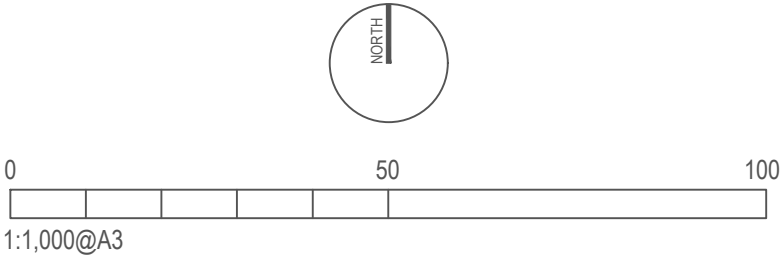
Residential lots	16
Stormwater Treatment lot	1
Total	17

DEVELOPMENT SUMMARY - DENSITY

Site Area approx. (excluding lots 1002)	1.19ha
Number of lots	16
Density	13.4du/ha

DEVELOPMENT SUMMARY - Ave. Area

Ave. lot area	474m²
Min. lot area	409m²



CLIENT
Baycrown Pty Ltd

PROJECT
PLAN OF SUBDIVISION

260-266 Loganview Road North,
Logan Reserve

Lot 42 on RP229101

AMENDMENTS:		DATE:
A	Original	31.01.2025
B		
C		
D		
E		
F		
G		
H		
DESIGNED:	KS	DATE: 31.01.2025
DRAWN:	KS	DATE: 31.01.2025
SCALE:	1:1,000 @ A3	1 of 1

IMPORTANT NOTES:

This note is an integral part of this plan. This plan may not be reproduced without this note.

This plan was prepared for a Development Application. This plan should not be used for any other purposes.

This plan remains subject to, but not limited to, authority approval, detail design and final survey.

The total number of lots shown on this plan is approximate only.

No relevance should be placed on the information on this plan for any financial dealings involving the land.

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Cadastral Boundaries:
DCDB © State of Queensland (Department of Natural Resources and Mines) 2020+2024



DRAWING NUMBER: 20-0136-PS6	ISSUE: A
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APPENDIX B

Preliminary Engineering Drawings

(drawing no. 31302-PREN3-000 to 500, dated 14 April 2026)
Prepared by Mortons Urban Solutions

CEDAR RIDGE

NORTH 3 PRELIMINARY ENGINEERING PROJECT NO: 31302-PREN3

SCHEDULE OF DRAWINGS		
NUMBER	REV. NO.	TITLE
GENERAL		
31302-PREN3-000	B	COVER SHEET
31302-PREN3-005	A	ROAD HIERARCHY STAGING PLAN
EARTHWORKS: BULK EARTHWORKS CUT FILL		
31302-PREN3-040	A	PLAN SHEET 01
EARTHWORKS: RETAINING WALL & DETAIL GRADING		
31302-PREN3-060	A	PLAN SHEET 01
31302-PREN3-061	A	PLAN SHEET 02
31302-PREN3-070	A	DETAILS SHEET 01
EARTHWORKS: COMBINED SERVICES		
31302-PREN3-090	A	PLAN SHEET 01
ROADS: ROADWORKS & SOTRMWATER		
31302-PREN3-100	B	PLAN SHEET 01
31302-PREN3-120	A	DETAILS SHEET 01
ROADS: LONGITUDINAL SECTIONS		
31302-PREN3-200	A	ROAD 03
31302-PREN3-201	A	ROAD 16
SEWER & WATER		
31302-PREN3-500	A	PLAN SHEET 01

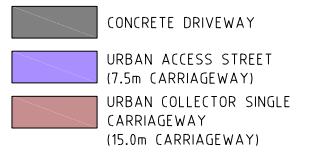


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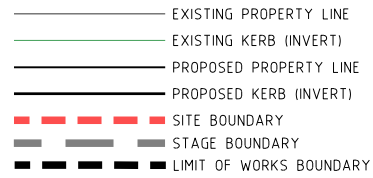


R. P. DESCRIPTION
LOT 115 & 117 SHOOL ROAD
LOGAN RESERVE
25 & 26 RP97736
LOCAL AUTHORITY- LOGAN CITY COUNCIL

LEGEND



REFER 120 DRAWINGS
SERIES FOR TYPICAL
SECTIONS



PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

R P DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

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0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

REV	DATE	DESCRIPTION	INT
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ROAD HIERARCHY
& STAGING PLAN



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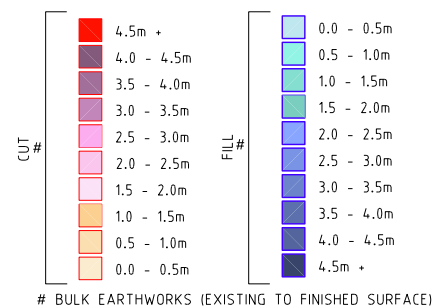
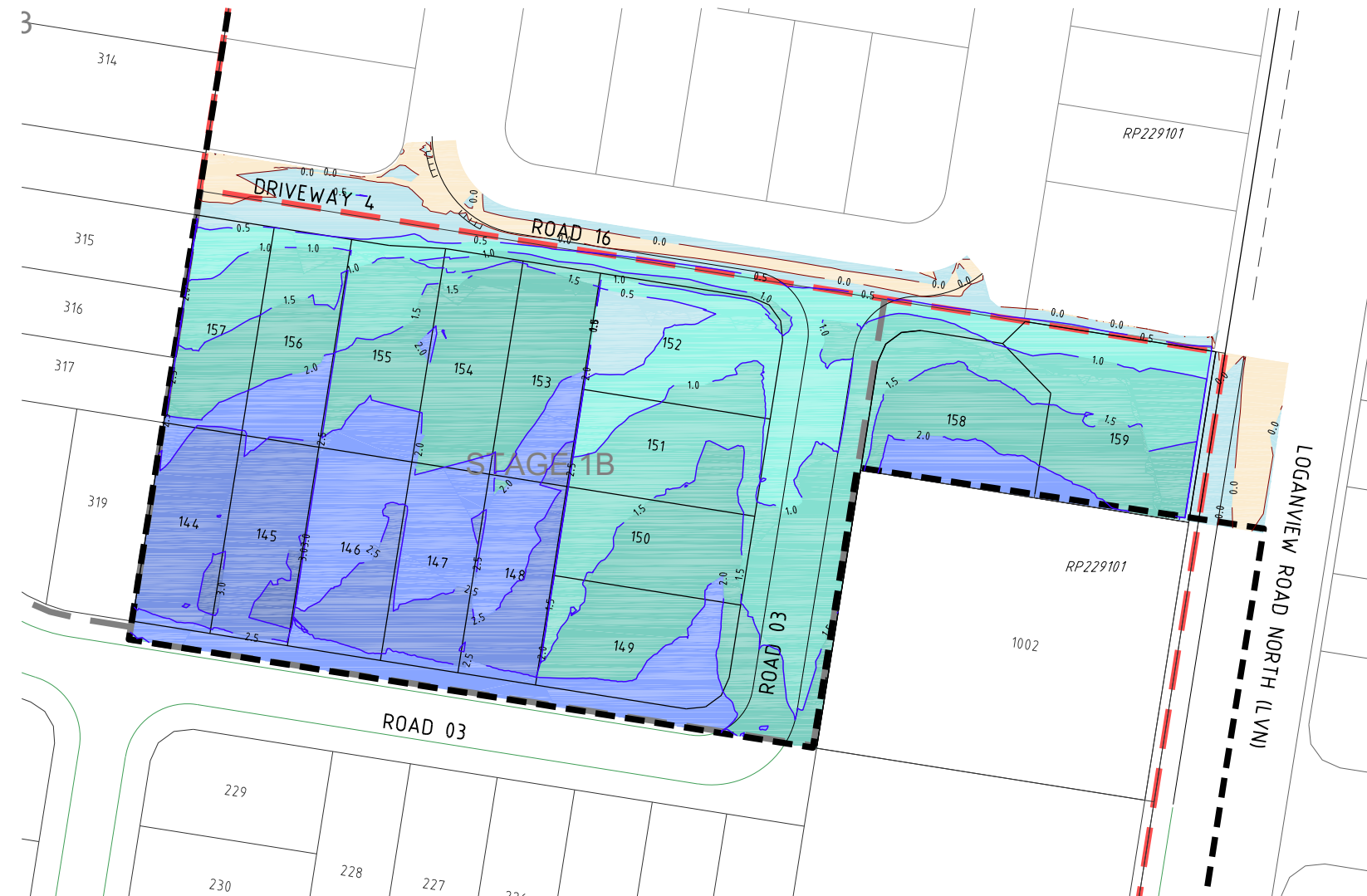


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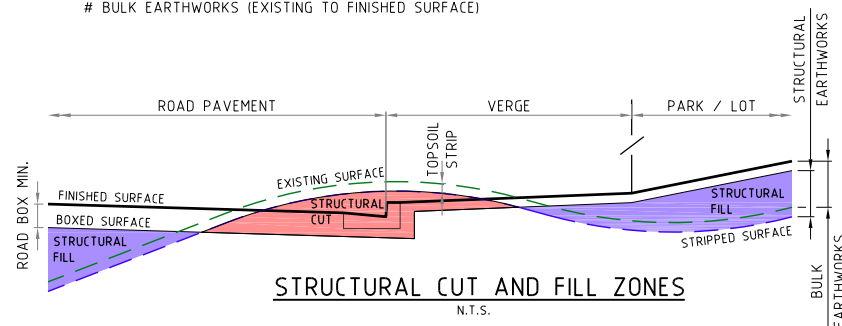
- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- SITE BOUNDARY
- STAGE BOUNDARY
- LIMIT OF EARTHWORKS BOUNDARY
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- 0.5 CUT CONTOUR
- 0.0 INTERFACE CONTOUR
- 0.5 FILL CONTOUR

NOTE:

CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING ALL WORKS.



BULK EARTHWORKS (EXISTING TO FINISHED SURFACE)



PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

CLIENT



0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

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EARTHWORKS
PLAN



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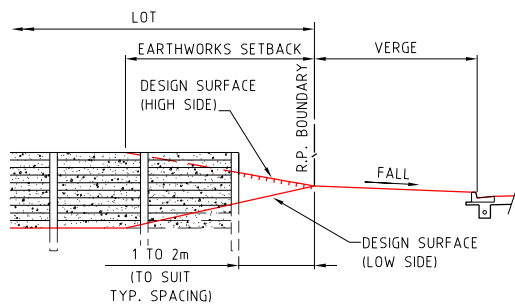
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LEGEND

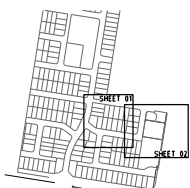
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- DESIGN CONTOURS
- EXISTING SINGLE TIER RETAINING WALL
- PROPOSED SINGLE TIER SLEEPER RETAINING WALL
- PL50.4 NOMINAL LOT PAD LEVEL
- R.H 1.0 INDICATIVE WALL HEIGHT
- DETAIL PAD FALL DIRECTION (CONTRACTOR TO ENSURE LOTS FALL TO ROAD AT 1:150 MIN. REFER DRG. 072)



TYPICAL SIDE BOUNDARY CONSTRUCTION

SCALE 1:100 - A1 (1:200 - A3)

SHEET LAYOUT



PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

CLIENT



0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

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RETAINING WALL
AND DETAIL GRADING PLAN



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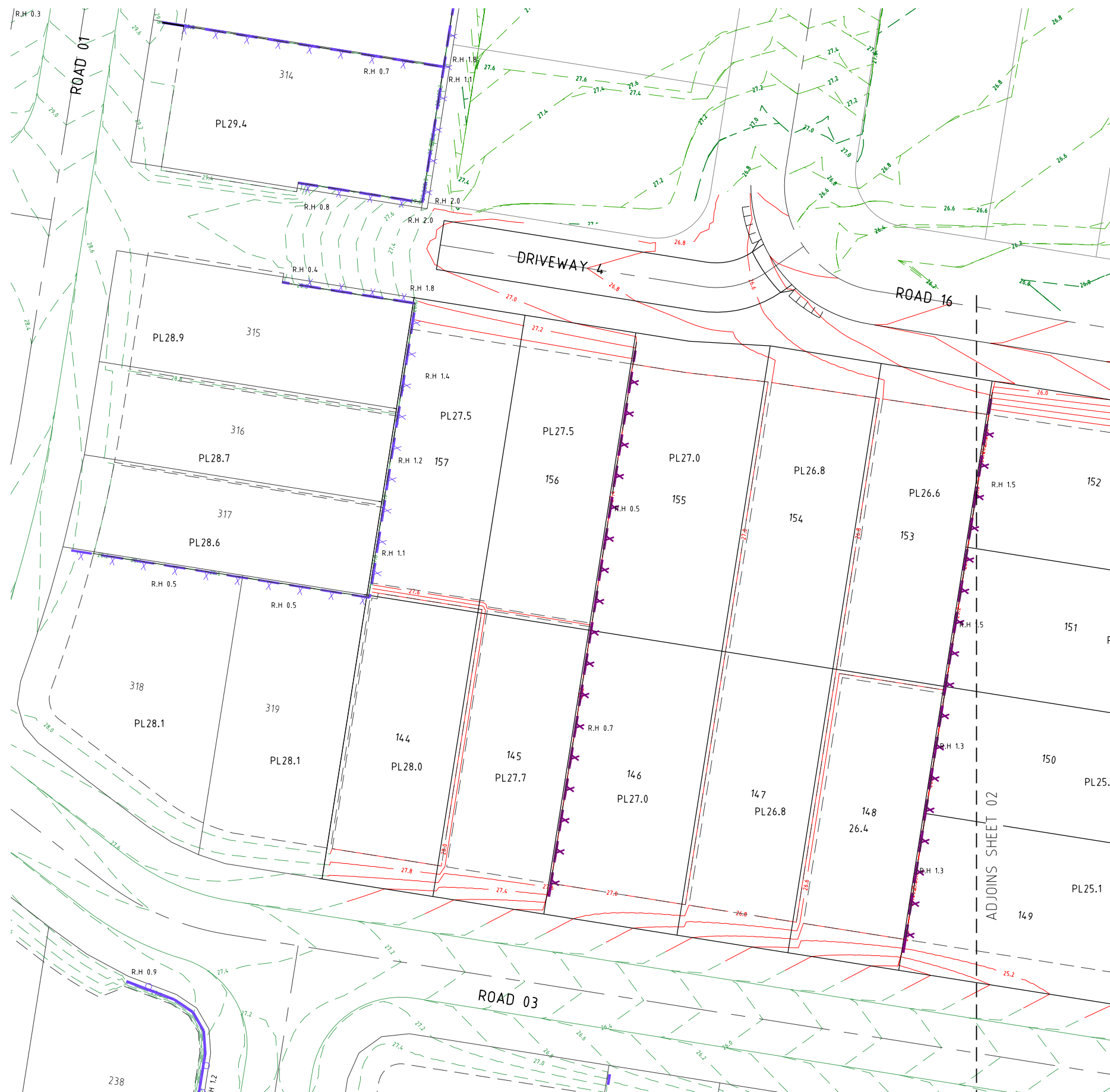
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DRAWING NUMBER
31302-PREN3-060

REV
A



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PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

CLIENT



0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

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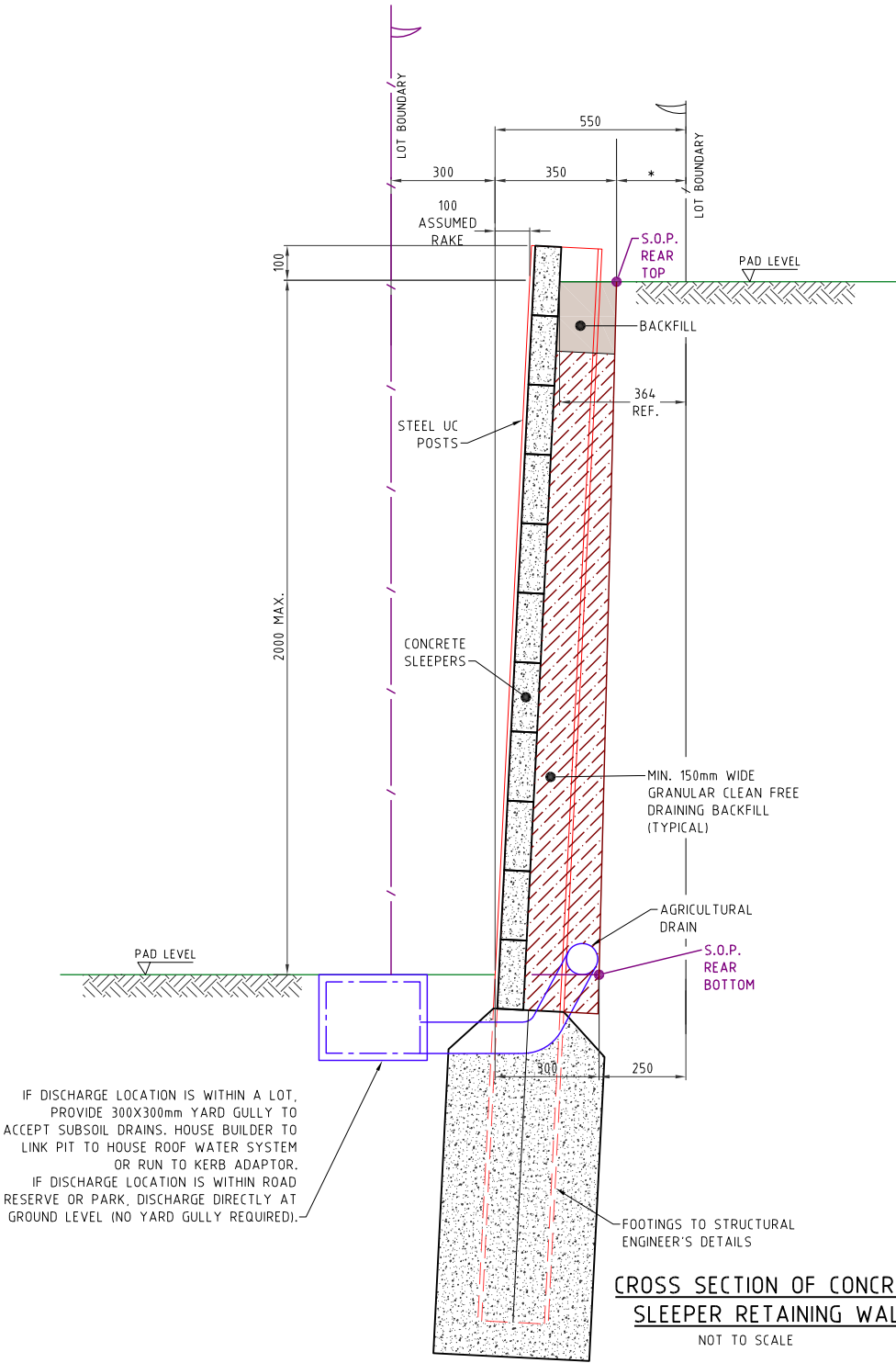
REV
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NOTES:

1. RETAINING WALL DETAILS ARE INDICATIVE ONLY.
2. CONTRACTOR TO ARRANGE FOR DESIGN & CONSTRUCTION OF WALLS BY RPEQ STRUCTURAL ENGINEER. CONTRACTOR TO PROVIDE STRUCTURAL CERTIFICATION OF DESIGN & FINAL CONSTRUCTION.
3. ALLOW FOR 5KPa LOADING TO WALLS EXCEPT ADJACENT TO ROADS WHICH REQUIRE A 10kPa LOADING.
4. CONTRACTOR TO CONFIRM LOCATION OF LOT BOUNDARY PRIOR TO COMMENCING WALL CONSTRUCTION.
5. THE BUILDING ON THE HIGHER SIDE OF THE RETAINING WALL MUST MAINTAIN AN OFFSET OR APPROPRIATE FOUNDATION STRUCTURES (EG, PIERS) IN ORDER TO ENSURE THE ENTIRE DEPTH OF THE RETAINING WALL IS FREE FROM THE ZONE OF INFLUENCE OF THE BUILDING/OVERBURDEN LOAD UNLESS OTHERWISE SPECIFIED BY STRUCTURAL ENGINEER.
6. STRUCTURAL ENGINEER TO DESIGN SLAB & PIER.
7. AGRICULTURAL DRAIN TO DISCHARGE TO 300x300mm STORMWATER PIT. HOUSE BUILDER TO CONNECT 300x300mm STORMWATER PIT TO ROOFWATER SYSTEM.
8. RETAINING WALL DESIGN TO ALLOW FOR ALL SERVICES (ADJACENT OR BELOW) & HAVE NO IMPACT.
9. SANDSTONE & PROPRIETARY RETAINING WALLS TO BE DESIGNED & CONSTRUCTED TO HAVE VERTICAL FACE UNLESS OTHERWISE AGREED BY THE SUPERINTENDENT.
10. ANY WALL GREATER THAN 0.9M HIGH TO INSTALL A FALL BARRIER AT THE TOP OF WALL. THE FALL BARRIER IS TO BE MAINTAINED UNTIL THE END OF THE MAINTENANCE PERIOD OR THE ASSOCIATED LOT IS SOLD BY THE DEVELOPER.
11. SETBACKS: LOT - LOT = 0.2m, LOT - ROAD RESERVE = 0.3m
12. WHERE RETAINING WALLS ARE LOCATED WITHIN 2m OF A PMT SITE THE RETAINING WALL IS TO BE DESIGNED & CONSTRUCTED TO ALLOW EXCAVATION OF THE FULL PMT SITE TO A DEPTH OF 1.3m.
13. FENCE BRACKETS TO BE ISNTALLED ON POSTS. NO BRACKET 5m FROM FRONT BOUNDARY.
14. ALL FOOTINGS MUST BE WHOLLY CONTAINED WITHIN THE LOT.

RETAINING WALL COLOUR AND FACE FINISH NOTE:

1. RETAINING WALL COLOUR AND FINISH IS TO BE AS NOMINATED ON RETAINING WALL PLANS



PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

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115 & 117 SCHOOL ROAD
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RETAINING WALL
DETAILS



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DRAWING NUMBER 31302-PREN3-070	REV A
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LEGEND

---	EXISTING PROPERTY LINE
---	EXISTING KERB (INVERT)
---	EXISTING FOOTPATH
RM	EXISTING RISING MAIN
S	EXISTING SEWER
SW	EXISTING STORMWATER
W100	EXISTING WATER
W150	EXISTING WATER
---	EXISTING WATER CONDUIT
---	PROPOSED PROPERTY LINE
---	PROPOSED KERB (INVERT)
---	PROPOSED FOOTPATH
RM	PROPOSED RISING MAIN
S	PROPOSED SEWER
SW	PROPOSED STORMWATER
RW	PROPOSED ROOFWATER
SS	PROPOSED SUBSOIL
W100	PROPOSED WATER
---	PROPOSED WATER CONDUIT
---	SITE BOUNDARY
---	STAGE BOUNDARY



PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

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0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

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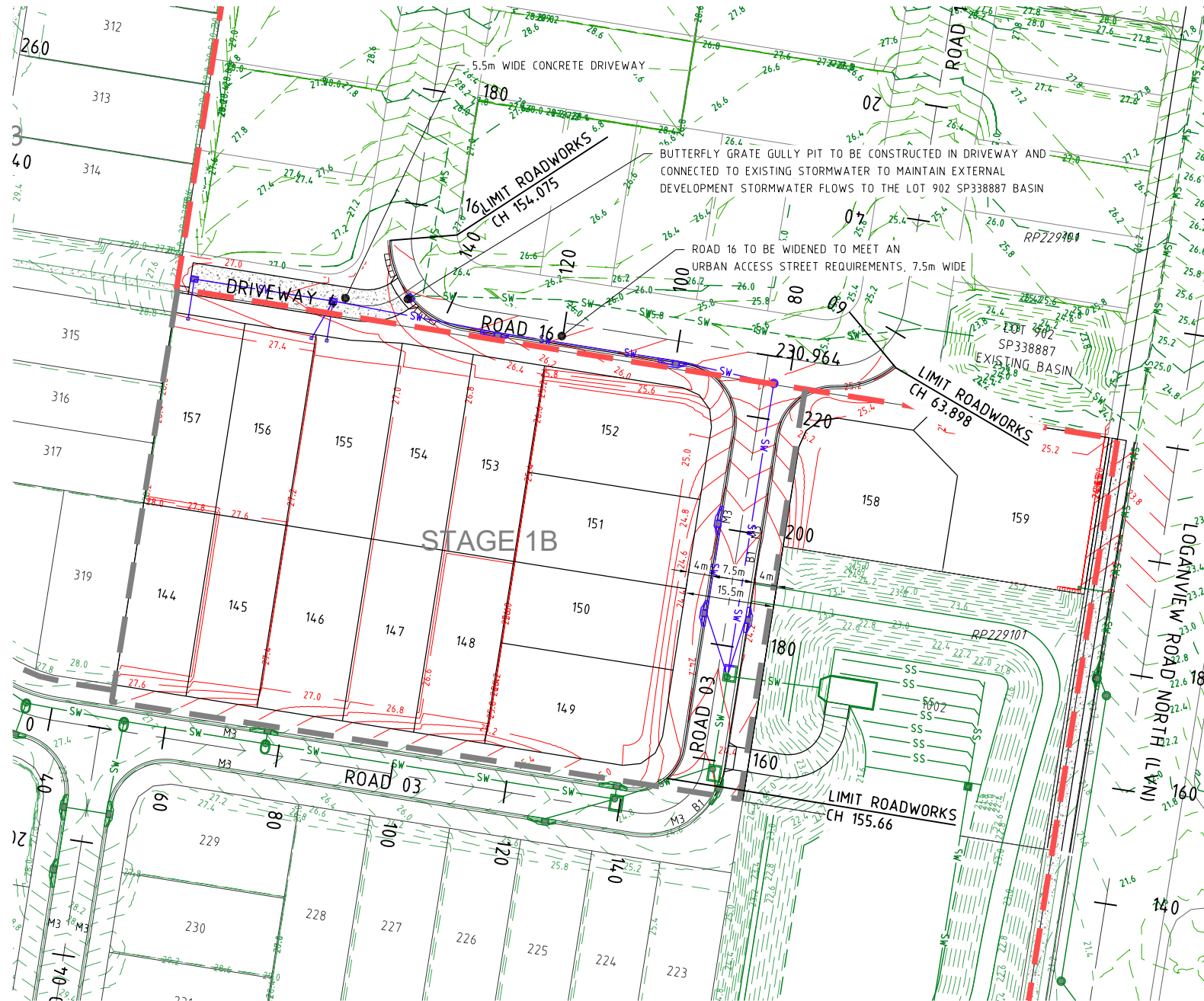
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 - PROPOSED FOOTPATH
 - PROPOSED PROPERTY LINE
 - 41.065 CENTRELINE CHAINAGE
 - SITE BOUNDARY
 - STAGE BOUNDARY
 - PROPOSED STORMWATER
 - EXISTING STORMWATER
 - MANHOLE
 - FIELD INLET
 - KERB INLET (ON GRADE) PIT
 - KERB INLET (SAG) PIT
 - HEADWALL



PROJECT NAME

CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

CLIENT



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Scale 1:500 - A1 (1:1000 - A3)

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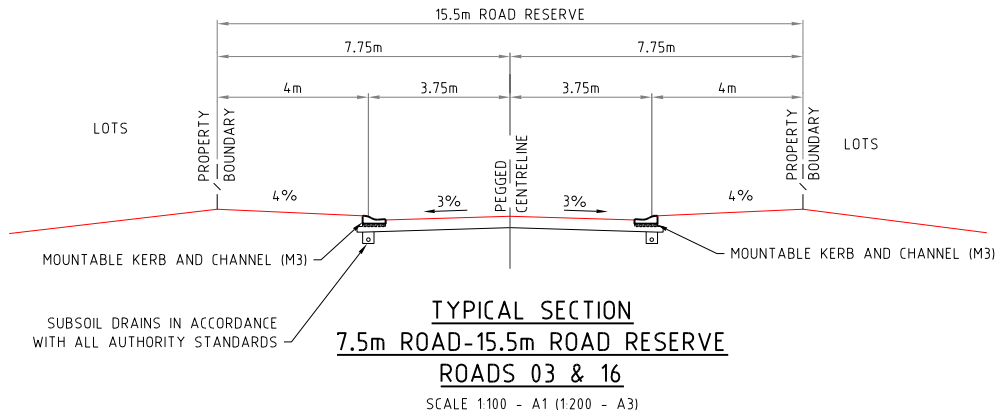
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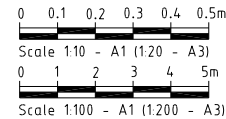
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NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

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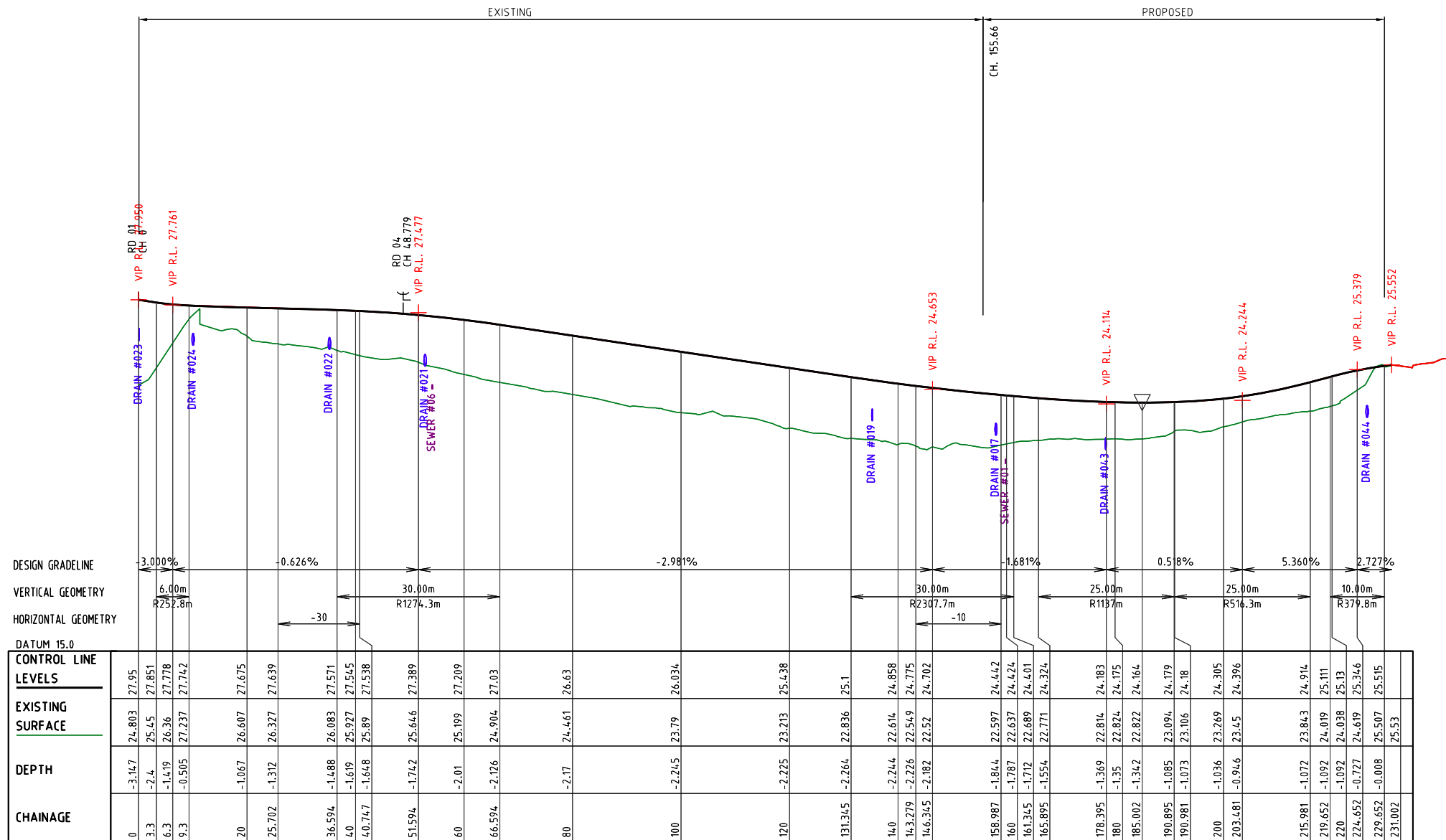
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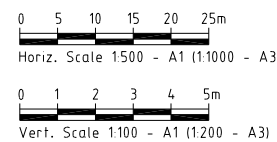
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CEDAR RIDGE

PRELIMINARY ENGINEERING
NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
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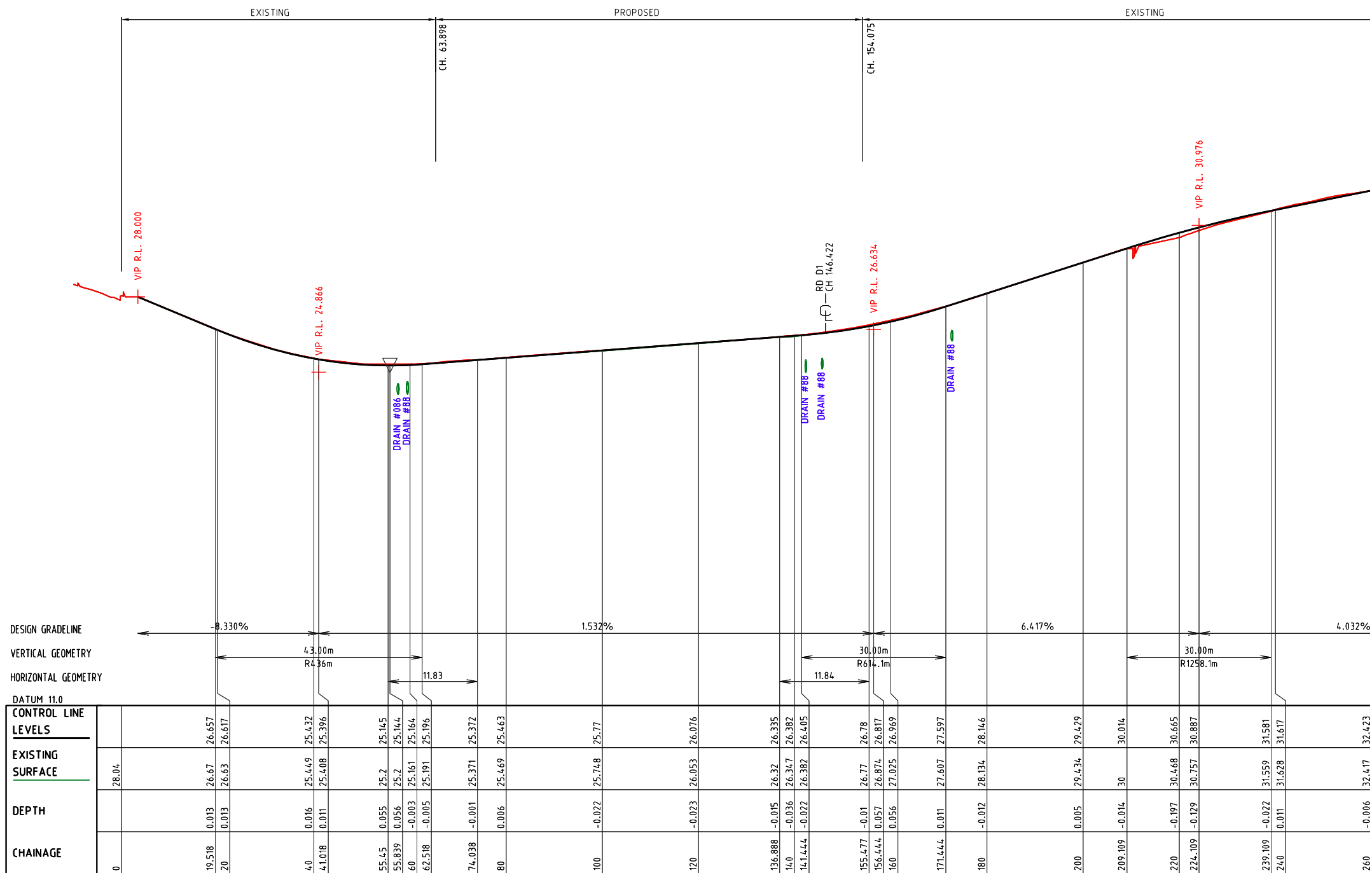
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LONGITUDINAL SECTION ROAD 16

PROJECT NAME

CEDAR RIDGE

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NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

CLIENT



0 5 10 15 20 25m

Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m

Vert. Scale 1:100 - A1 (1:200 - A3)

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PROJECT NAME

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NORTH 3

RP DESCRIPTION
115 & 117 SCHOOL ROAD
LOGAN RESERVE

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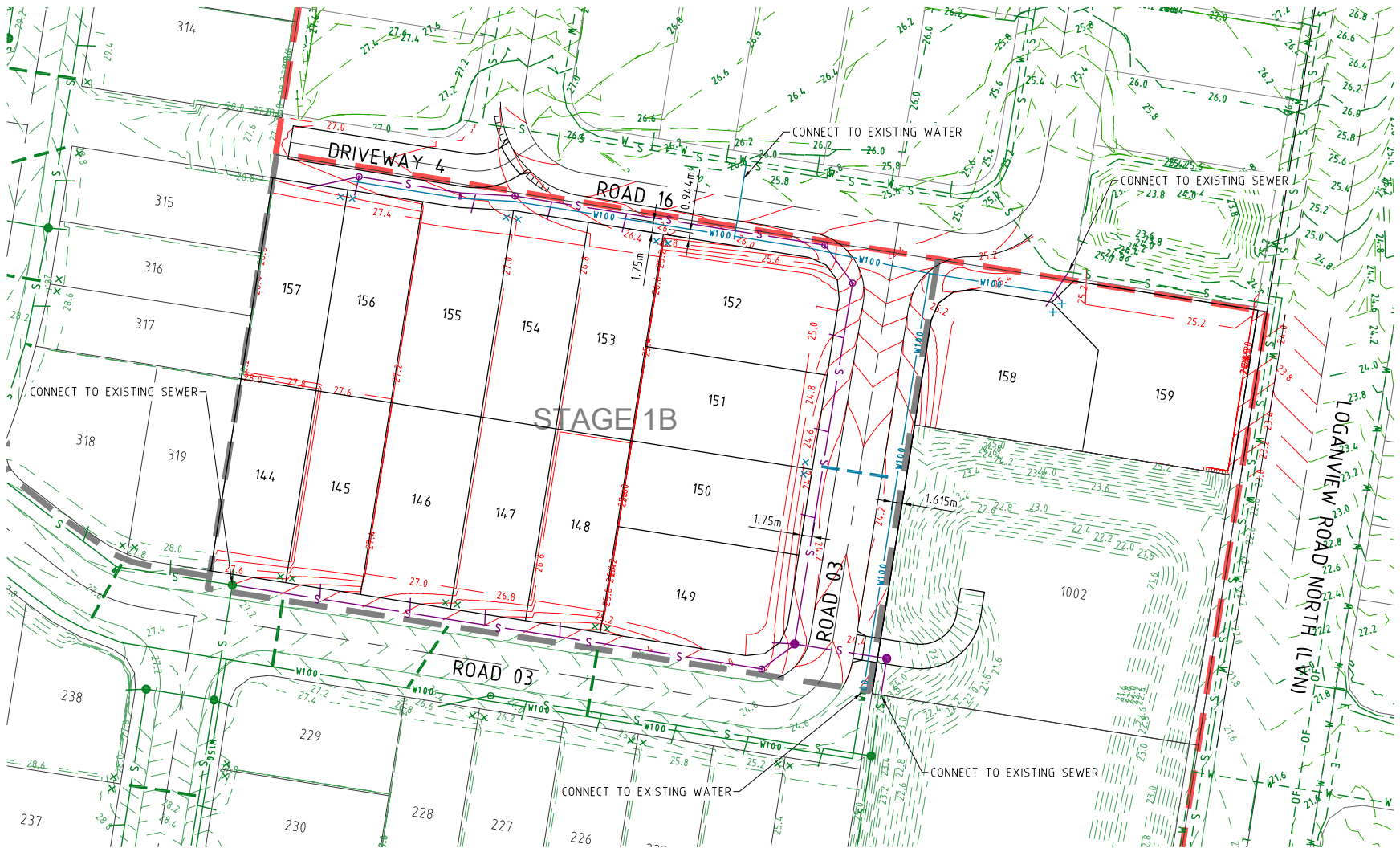
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- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- EXISTING SEWER
- EXISTING WATER
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- SITE BOUNDARY
- STAGE BOUNDARY
- PROPOSED RETAINING WALL
- DESIGN CONTOURS
- PROPOSED SEWER
- PROPOSED RISING MAIN
- 100Ø LOW LEVEL WATER MAIN

- SEWER MANHOLE
- SEWER RODDING END
- SEWER BEND
- SEWER MAINTENANCE SHAFT
- SEWER END CAP

NOTE:
UNLESS SPECIFIED ON THE PLANS
SEWER MAINS ARE 150mm DIA

APPENDIX C

Stormwater Management Plan

(Report reference 24-0711SMP01-V1, dated 2 April 2025)
Prepared by Colliers

115-125 School Road and 242-
266 Loganview Road North,
Logan Reserve

Australis Land Pty Ltd

Stormwater Management Plan

24-0711SMP01-V1

2 April 2025

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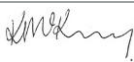
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Report Contact:

Name: Kelly McKendry
Position: Technical Director - Water & Environment
Phone: (07) 3532 1300

Document Control

24-0711SMP01-V1

Version	Date	Details	Prepared	Checked	Approved	Signed	RPEQ
V1	02/04/25	For Issue	MF	KM	KM		09298

Executive Summary

Colliers Engineering & Design have been engaged by Australis Land Pty Ltd to prepare a Stormwater Management Plan (SMP) in support of a development application to Logan City Council (LCC) over land located at 115-117 School Road and 242-258 Loganview Road North, Logan Reserve (Lot 25-26 on RP 97736 and Lots 40-41 on RP 229101).

This development application is for COM/13/2021, being a Material Change of Use – Primary Approval and Reconfiguring a Lot (4 lots into 92 lots, 3 balance lots, Open space and new road). The stormwater strategy outlined in this SMP is for the southern portion of the site considers the ultimate scenario and has been reported and modelled as such.

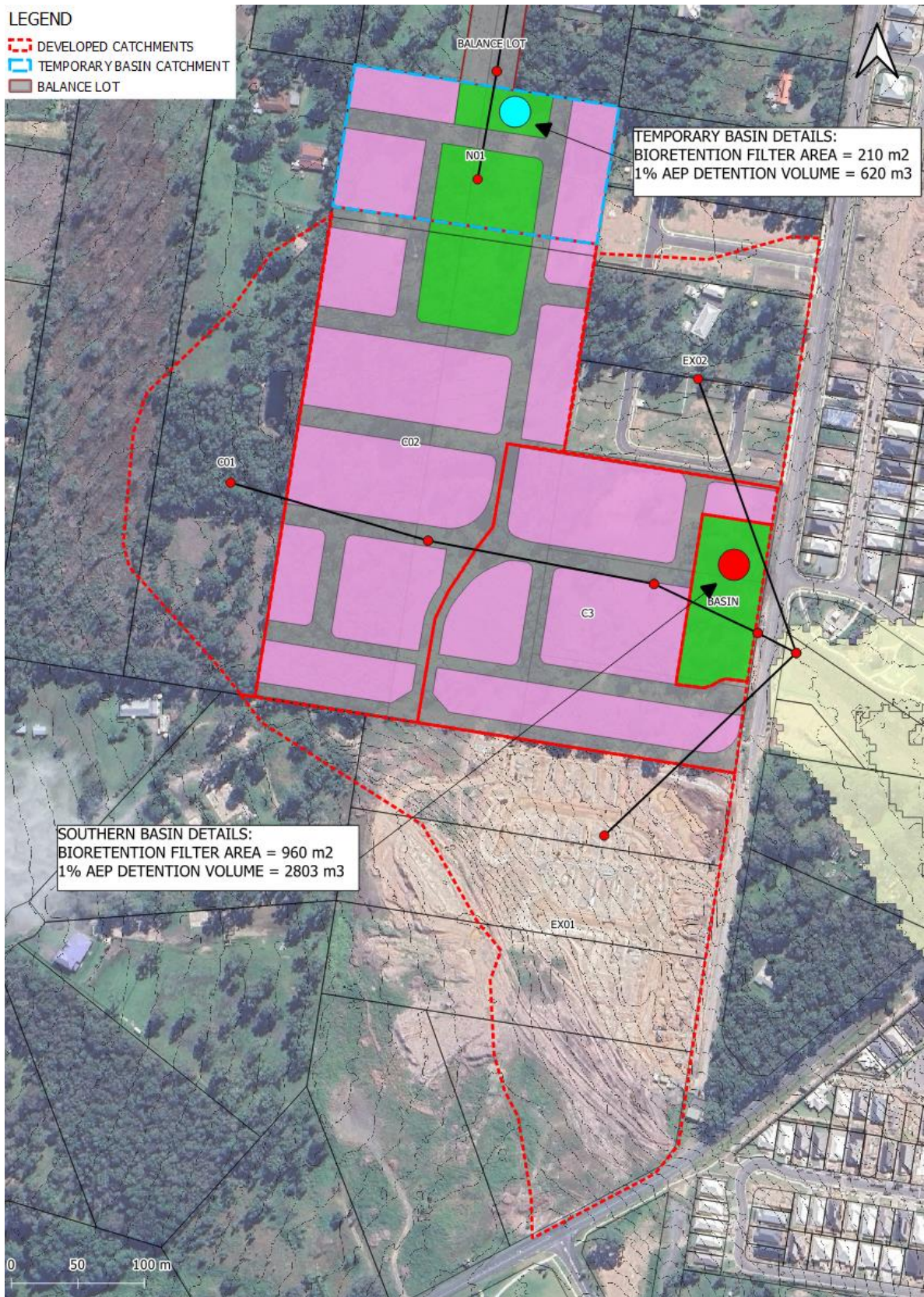
The location of the proposed development site is not influenced by an overland flow path. The site covers a total area of 15.04 ha and is located within the Emerging Community Zone.

Stormwater runoff from the site is proposed to be managed through two detention basins, one permanent and one temporary located in the south and north respectively within the development site. The stormwater detention strategy will ensure that the overall peak flows from the site are mitigated to predevelopment peak flows for all modelled events. The site will discharge to at two separate discharge points, north and south and will meet legal point of discharge requirements.

There are two sites that are located north and south of this development on Loganview Road North. These sites, and their respective catchments, have been developed and modified in accordance with their approved development applications. These catchments drain to their respective basins and then outlet to Loganview Road North bypassing the subject site. These catchments have not been included in the modelling and are shown on the catchment plan for information only.

The proposed Stormwater Quality Management Strategy achieves the Logan City Council's and State Planning Policy's water quality objectives (LCC,2015; SPP,2017). To reduce the pollutant loads associated with the proposed development, bioretention basins for the site will be designed in accordance the MUSIC Modelling Guidelines (2018) to meet reduction targets.

The strategy is summarised graphically below:



Stormwater Management Strategy

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Appendices

Appendix A	Reconfiguration of Lot Plan & Concept Engineering Drawings
Appendix B	Rational Method

1. Introduction

Colliers Engineering & Design have been engaged by Australis Land Pty Ltd to prepare a Stormwater Management Plan (SMP) in support of a development application to Logan City Council (LCC). This development application is for COM/13/2021, being a Material Change of Use – Primary Approval and Reconfiguring a Lot (4 lots into 92 lots, 3 balance lots, Open space and new road).

1.1. Proposed Development

The proposed development is situated at 115-117 School Road and 242-258 Loganview Road North, Logan Reserve (Lot 25-26 on RP 97736 and Lots 40-41 on RP 229101). It should be noted that Lot 2002, as depicted on the Plan of Subdivision in **Appendix A**, is designated as the Koala Conservation Lot and is being assessed under a separate application COM/40/2021.

1.2. Ultimate Development

The ultimate scenario will involve the addition of 2 lots, 119-125 School Road, Logan Reserve (Lot 27 on RP97736) and 260-266 Loganview Road North Logan Reserve (Lot 42 on RP229101), into the development footprint. Along with this the application being assessed under COM/40/2021 is considered to be completed and this area included in the ultimate layout.

The stormwater strategy in this SMP focuses on the southern part of the site and considers the ultimate scenario. The stormwater strategy is hence reported and modelled as such.

1.3. Site Location and Description

The proposed outcome of this document is to identify stormwater management options that could be implemented within the development to achieve the requirements and targets of Logan City Council (LCC) Planning Scheme as well as the relevant provisions of State Planning Policy (SPP 2017). The intent of the codes associated with these documents will be achieved through the appropriate integration of stormwater management options within the proposed residential land-use. The objectives of this Stormwater Management Plan are to:

- ▶ Detail the proposed stormwater quality management strategy and how the load reduction objectives specified by the State Planning Policy (SPP, DSDIP 2017) and the LCC Planning Scheme are achieved during the operational phase of the development;
- ▶ Consider suitable Stormwater Quality Improvement Devices (SQID's) based on Water Sensitive Urban Design (WSUD) principles;
- ▶ Outline the maintenance requirements for the proposed stormwater quality improvement devices;
- ▶ Ensure the development achieves non-worsening principles of stormwater flows downstream of the site and results in no off-site flood impacts; and
- ▶ Demonstrate how the lawful point of discharge requirements for the site will be achieved.

The proposed Plan of Subdivision and concept engineering plans can be found in **Appendix A**.

1.4. Site Location and Description

The proposed development site has a total land holding area covering 15.04 ha, with School Road located to the north, and approved developments to the west (COM/33/2024). The extent of the southern ultimate development footprint is shown in **Figure 1-1**. The site is zoned as Emerging Community use with portion of the site cleared with sporadic vegetation remaining.

There are two sites that are located north (application number: COM/30/2022) and south (application number: COM/27/2021) of this development on Loganview Road North. These sites, and their respective catchments, have been developed and modified in accordance with their approved development applications. These catchments drain to their respective basins and then outlet to Loganview Road North bypassing the subject site. These catchments have not been included in the modelling and are shown on the catchment plan for information only.

LEGEND

- ADJACENT DEVELOPMENT APPROVALS
- SOUTHERN ULTIMATE DEVELOPMENT FOOTPRINT
- LOTS INCLUDED IN THE ULTIMATE DEVELOPMENT
- FLOOD RISK OVERLAY
 - HIGH FLOOD RISK AREA
 - MODERATE FLOOD RISK AREA
 - LOW FLOOD RISK AREA

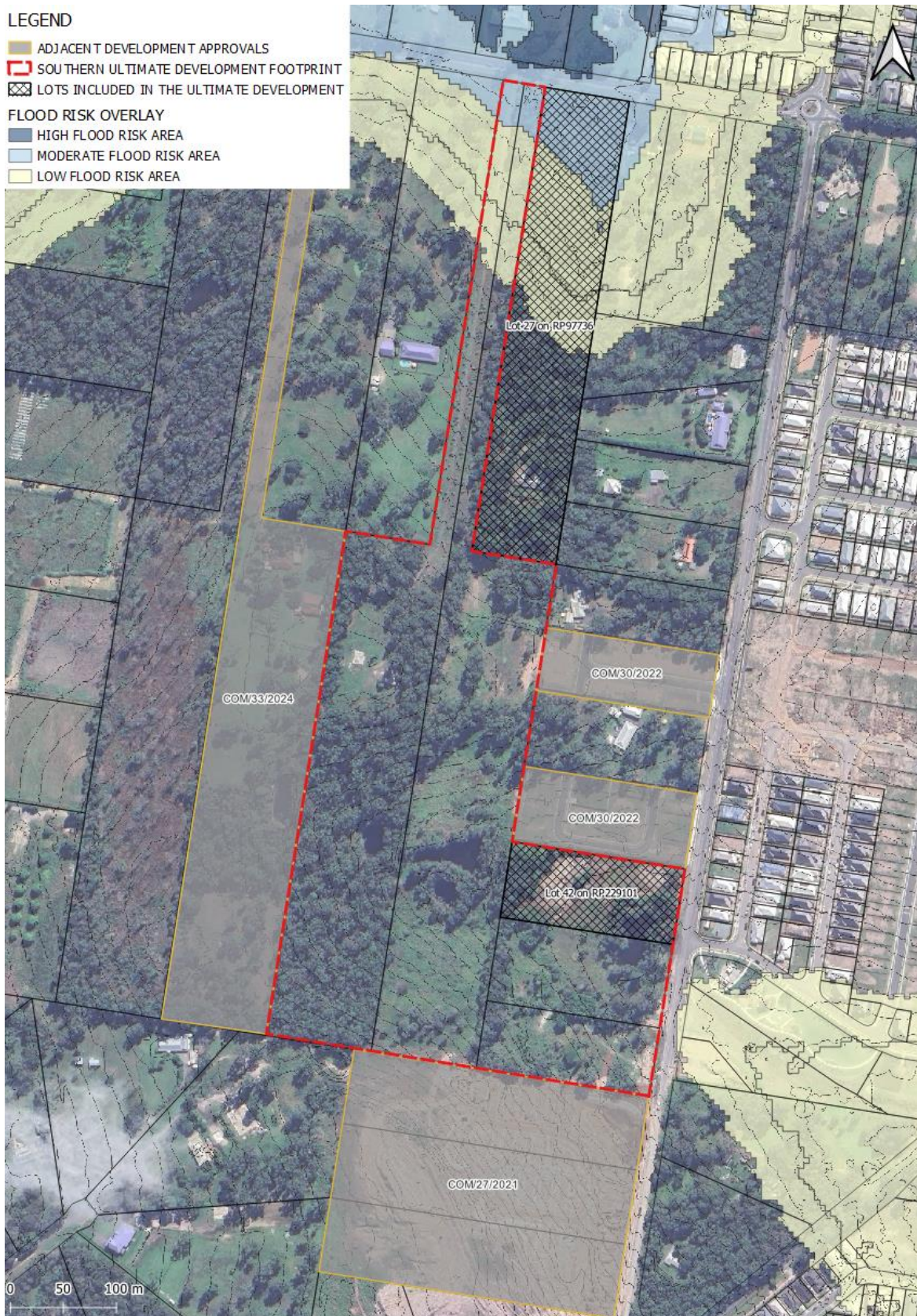


Figure 1-1: Site Location (Source: LCC Planning Scheme Flood Risk Overlay - LCC interactive mapping)

2. Stormwater Quantity

The objective of this component of the study is to investigate the potential impact that the proposed development will have on peak flows discharging downstream of the site and any mitigation measures that may be required to manage site runoff. A hydrologic analysis has been undertaken and is outlined below.

2.1. Hydrologic Model

A Water Bounded Network Model (WBNM) has been used to undertake a hydrologic assessment of the catchment. WBNM has been developed jointly by the University of Wollongong, Rienco Consulting and Balance R&D (Boyd et al, 2019). The 2019 version has been used for this investigation, which utilizes 2016 IFD data.

Modelling has been carried out for the 63.2%, 50%, 20%, 10%, 5%, 2% and 1% Annual Exceedance Probability (AEP) storm events. The following scenarios have been investigated:

1. Existing Scenario (E01)
2. Developed Scenario (D01)
3. Mitigation Scenario (M01)

2.1.1. Strategy

Stormwater runoff from the site is proposed to be managed through two detention basins, one permanent and one temporary located within the development site to the south and north respectively. The stormwater detention strategy will ensure that the overall peak flows from the site are mitigated to predevelopment peak flows for all modelled events. The site will discharge to at two separate discharge points, north and south, and will meet legal point of discharge requirements.

It is noted that to the north of the site a balance parcel is proposed between the northern reporting point and School Road. This portion of the site will not be developed as part of this application and will remain in the predevelopment condition. Hence is not included in the hydrological analysis.

2.1.2. Existing Scenario

Sub-catchments have been delineated using 1 m contours sourced from the Intergovernmental Committee on Surveying and Mapping (ICSM) Elvis Elevation and Depth Cloud System and with consideration of the proposed development layout. The modelling has been based on quantification of flows at the outlet of each basin – representing the site flow discharging from the site.

The fraction impervious values applied to the catchment, for the existing case scenario, are consistent with QUDM (2017). For the developed scenario, the percentage impervious has been applied to the catchments based on a weighted average calculated by the proposed land use, these values are within the range detailed in Table 4.5.1 within QUDM.

The catchment C01, which is part of the approved development (COM/33/2024) to the west of the site, will flow through the site into the detention basin proposed adjacent to the eastern boundary within the site. Flows from this catchment are assumed to be mitigated back to predevelopment levels and have been modelled as such.

There are two sites that are located north and south of this development on Loganview Road North. These sites, and their respective catchments, have been developed and modified in accordance with their approved development applications. These catchments drain to their respective basins and then outlet to Loganview Road North bypassing the subject site. These catchments have not been included in the modelling and are shown on the catchment plan for information only.

A catchment plan of the proposed development is shown in **Figure 2-1** showing these external catchments, with a summary of the catchment parameters detailed in **Table 2-1**.

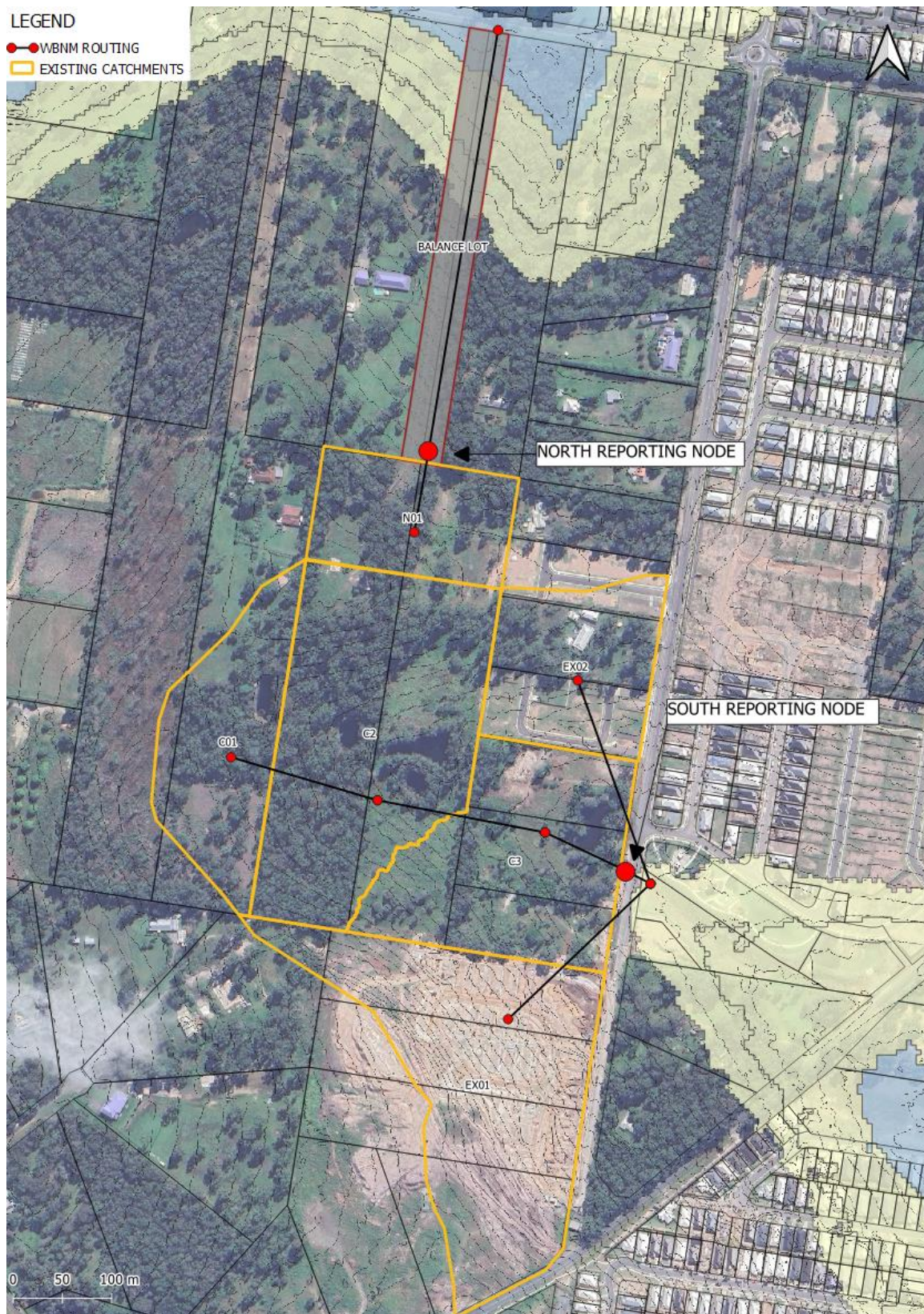


Figure 2-1: Existing Catchment Plan

Table 2-1: Sub-catchment Parameters

Existing Scenario (E01)			Developed Scenario (D01)		
Sub-catchment	Area (ha)	% Imp	Sub-catchment	Area (ha)	% Imp
C1	3.00	0	C1	3.00	0
C2	6.47	5	C2	6.21	63.3
C3	4.50	5	C3	4.25	70
N01	2.32	5	N01	2.32	70
			BASIN	0.60	0
EX01*	6.36	70	EX01*	6.36	70
EX02*	2.75	70	EX02*	2.75	70

*These catchments are not included in the WBNM modelling.

A WBNM catchment lag factor of 1.6 was applied which is within the recommended range. An initial and continuing loss of 20mm and 1.5mm/hr has been applied to the model as per the ARR2019 datahub for the site. The peak discharge values for the critical storm found from the modelling are summarised in **Table 2-4**.

Table 2-2: Existing Catchment Peak Flows

Event AEP (%)	63.2	50	20	10	5	2	1
North (m ³ /s)	0.17	0.21	0.34	0.46	0.57	0.71	0.82
South (m ³ /s)	0.73	0.88	1.47	1.99	2.51	2.98	3.49

2.1.3. Rational Method Check

Pre-development peak flows from the WBNM model have been verified against peak flows determined using the Rational Method, provided in **Appendix B**. The assumptions adopted for the calculations are in accordance with ARR and QUDM 2017. The catchment characteristics, seen in **Figure 2-1**, of the Existing scenario and WBNM model flows reported locally from a sub catchment denoted C3. The peak flows predicted being less than 15% for all of the storm events are considered acceptable. Refer to **Table 2-3** for a summary of rational method comparison.

Table 2-3: Comparison of WBNM and Rational Method Peak Flows

Event AEP (%)	63.2	50	20	10	5	2	1
C3 (m ³ /s)	0.29	0.36	0.58	0.79	0.98	1.24	1.43
Rational (m ³ /s)	0.33	0.40	0.61	0.76	0.92	1.17	1.35
Difference (%)	14%	11%	5%	-4%	-7%	-6%	-6%

2.1.4. Developed Scenario

The catchment areas and the percentage impervious for each was revised to reflect the changes in land use because of the proposed development. The catchment parameters are summarised in **Table 2-1** and shown

in **Figure 2-2**. This scenario is referred to as the 'Developed Scenario' herein. The Developed Scenario peak discharge for the critical storm has been summarised in **Table 2-4**.

Table 2-4: Developed Catchment Peak Flows

Event AEP (%)	63.2	50	20	10	5	2	1
North (m ³ /s)	0.37	0.42	0.60	0.75	0.90	1.06	1.20
South (m ³ /s)	1.19	1.38	1.99	2.37	2.82	3.60	4.11

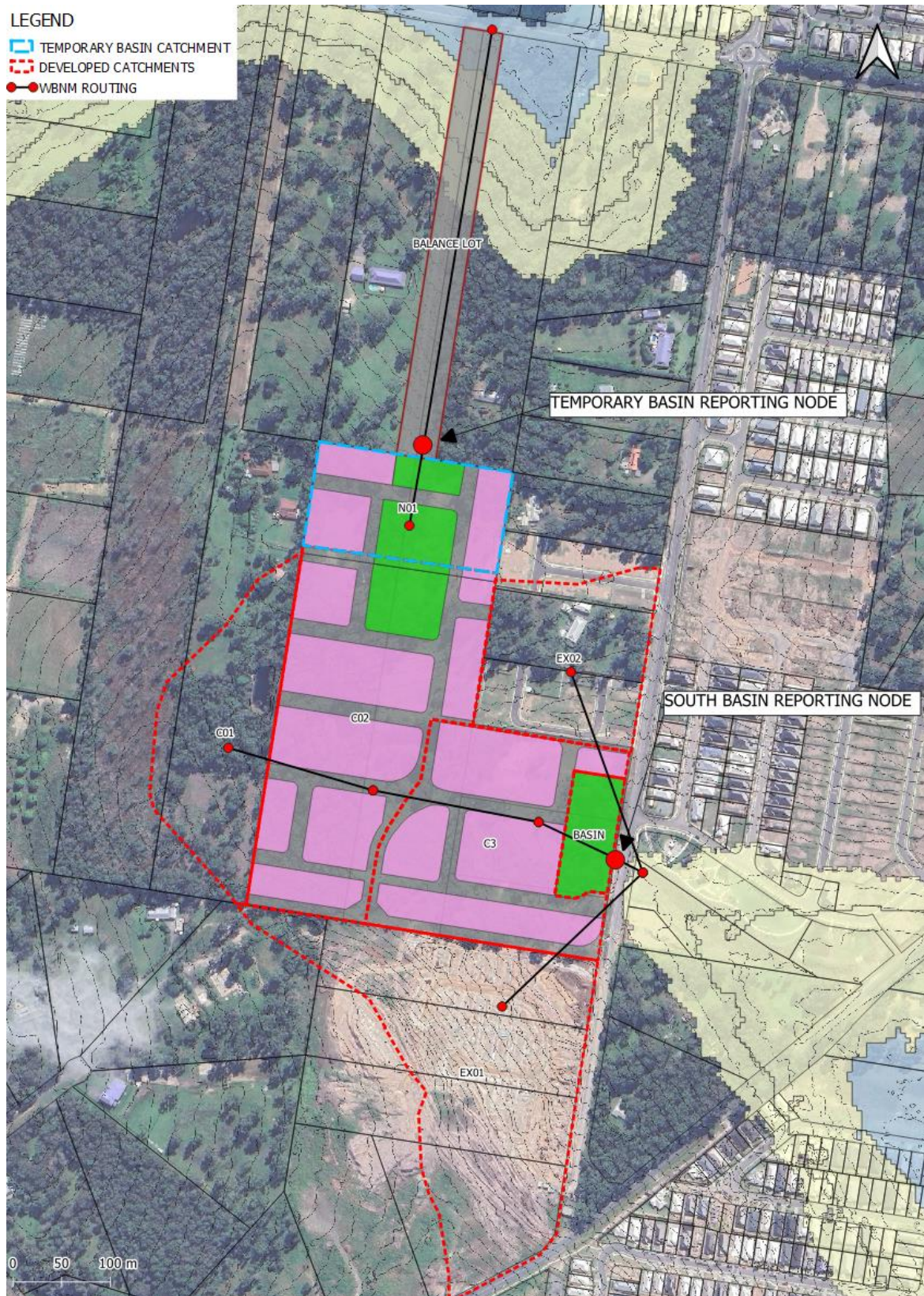


Figure 2-2: Developed Catchment Plan

This shows that the increases in the fraction imperviousness, associated with the change in land use, are predicted to result in increased peak flows to the outlet. Mitigation will be required to ensure non-worsening downstream is achieved and satisfy the lawful point of discharge requirements.

2.1.5. Mitigated Scenario

Two end-of-line detention basins have been proposed to attenuate peak flows discharging from the site to achieve non-worsening and meet legal point of discharge requirements.

All modelling parameters remain consistent between the developed and mitigated scenarios, with the addition of the detention basins at the outlet of the development.

2.1.5.1. South Ultimate Basin

The southern basin discharging to Loganview Road North will be permanent in nature and located adjacent to the south-eastern boundary of the subject site. The proposed basin structure details are summarised in **Table 2-5** with Concept Engineering Drawings included in **Appendix A**.

Table 2-5: Storage and Outlet Details of Detention Basin (South Ultimate)

South Ultimate - Basin	
Stage (m AHD)	Storage (m ³)*
21.2	0
21.5	1
21.7	461
21.9	964
22	1232
22.1	1510
22.3	2100
22.4	2412
22.5	2735
22.7	3413
22.9	4135
Parameter	
Outlet	3 x 375 mm diameter orifices at 0.3 m (RL 21.50 m)
Weir	1 x 900 x 900 mm field inlet pit at 0.80 m (RL 22.00 m) 1 x 15 m emergency weir at 1.35 m (RL 22.55 m)
Batter Slopes	1:4
Embankment Height	1.65 m

*The storage does not include EDD volume

A comparison of the critical duration peak flows between the existing and mitigated scenarios is presented in **Table 2-6** at the site outlet. The results show a minor decrease in peak flows for the critical duration across all modelled is predicted – achieving non-worsening.

Table 2-6: Comparison of Peak Discharge

Event AEP (%)	63.2	50	20	10	5	2	1
Existing (m ³ /s)	0.70	0.86	1.43	1.94	2.44	2.90	3.40
Mitigated (m ³ /s)	0.58	0.65	1.30	1.72	2.16	2.71	3.33
Difference (m ³ /s)	-0.12	-0.21	-0.13	-0.22	-0.28	-0.19	-0.07
Difference (%)	-17.61	-24.27	-9.09	-11.34	-11.48	-6.55	-2.06

A summary of the resulting depths predicted in the basin are shown in **Table 2-7**. It is shown that the predicted depth for the 5% AEP event is not greater than 1.2 m. This achieves the maximum recommended depth in the LCC Planning Scheme and QUDM for safety concerns without further risk mitigation measures for pedestrian safety.

Table 2-7: Detention Basin Results**

Parameter	Value
5% AEP Depth (m)	1.17 (RL 23.37)
1% AEP Depth (m)	1.34 (RL 22.54)
1% AEP Detention Volume (m ³)	2803
Minimum Required Top of Bund	1.65 (RL 22.85)

**Depths are taken from the filter media surface level

2.1.5.2. North Temporary Basin

The northern basin discharging to the balance lot located to the north within the subject site will be temporary in nature and located adjacent to the southern side of the balance lot. The proposed basin structure details are summarised in **Table 2-8** with Concept Engineering Drawings included in **Appendix A**.

Table 2-8: Storage and Outlet Details of Detention Basin (North Temporary)

North Temporary - Basin	
Stage (m AHD)	Storage (m ³)*
30.0	0
30.3 (EDD)	1
30.5	90
30.7	198
30.9	324
31.1	469
31.3	634
31.5	821
31.7	1029
Parameter	
Outlet	1 x 375 mm diameter outlet at 0.3 m (RL 30.30 m) 3 x 575 outlet at 0.9 m (RL 30.9 m)
Weir	7 m wide weir at 1.5 m (RL 31.5 m)
Batter Slopes	1:4

*The storage does not include EDD volume

A comparison of the critical duration peak flows between the existing and mitigated scenarios is presented in **Table 2-9** at the site outlet. The results show a minor decrease in peak flows for the critical duration across all modelled is predicted – achieving non-worsening.

Table 2-9: Comparison of Peak Discharge

Event AEP (%)	63.2	50	20	10	5	2	1
Existing (m ³ /s)	0.17	0.21	0.34	0.46	0.57	0.71	0.82
Mitigated (m ³ /s)	0.15	0.18	0.32	0.44	0.56	0.70	0.81
Difference (m ³ /s)	-0.02	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01
Difference (%)	-9.15	-13.67	-5.01	-4.03	-2.19	-1.99	-0.92

A summary of the resulting depths predicted in the basin are shown in **Table 2-10**. It is shown that the predicted depth for the 5% AEP event is not greater than 1.2 m. This achieves the maximum recommended depth in the LCC Planning Scheme and QUDM for safety concerns without further risk mitigation measures for pedestrian safety.

Table 2-10: Detention Basin Results**

Parameter	Value
5% AEP Depth (m)	1.20 (RL 31.20)
1% AEP Depth (m)	1.32 (RL 31.32)
1% AEP Detention Volume (m ³)	620
Minimum Required Top of Bund	1.62 (RL 31.62)

**Depths are taken from the filter media surface level

3. Lawful Point of Discharge

As outlined by the *Queensland Urban Drainage Manual* (4th Edition – Institute of Public Works Engineering Australasia, Queensland Division) a test can be undertaken to determine whether a lawful point of discharge exists:

The criteria for determining the lawful point of discharge are:

- (i) Will the proposed development alter the site's stormwater discharge characteristics in a manner that may substantially damage a third-party property (see Section 3.6)?
 - ▶ If not, then no further steps are required to obtain tenure for a lawful point of discharge (assuming any previous circumstances and changes were lawful).
- (ii) Is the location of the discharge from the development site under the lawful control of the local Government or other statutory authority from whom permission to discharge has been received? This will include park, watercourse, drainage or road reserve, stormwater registered drainage easement, or land held by local Government (including freehold lots).

Flows from each catchment will be discharged as follows:

- ▶ The northern catchment will be controlled via a basin and will discharge to the balance lot located in the northern part of the site before discharging into School Road.
- ▶ The southern catchment will be controlled via a basin discharging to Loganview Road North adjacent to the southeastern boundary of the site.

These points of discharge are not considered to be a risk to any third-party property with peak flows mitigated to predevelopment peak flows at each location. It is considered the discharge locations satisfy the requirements of achieving lawful points of discharge.

4. Stormwater Quality

4.1. Design Objectives

This section of the report identifies the stormwater quality management objectives for the operational phase (post-construction phase) of the proposed development. Construction based stormwater quality management objectives will need to be addressed as part of operational works documentation.

LCC Planning Scheme (2015 V9) defines the post-construction phase Water Quality Objectives for Emerging Communities is to be based on the load-based Water Quality Objectives (WQO's) stipulated in the State Planning Policy (DILGP, 2017) for the Southeast Queensland region, as shown in **Table 4-1**.

Table 4-1: Site Stormwater Quality Objectives (Operational Phase)

Minimum reductions in mean annual loads from unmitigated development (%)			
Total Suspended Solids (TSS)	Total Phosphorous (TP)	Total Nitrogen (TN)	Gross pollutants >5 mm
80	60	45	90

4.2. Stormwater Quality Treatment

4.2.1. Strategy

The objective of this report is to assess the stormwater quality measures required based on the development layout to support the development application. The development has been divided based on land use into source nodes within the site.

Runoff from the development will be collected in a stormwater drainage system and discharged into two separate bioretention basins prior to being discharged from the site. The bioretention basin for the northern catchment is temporary and will be removed at later stages of the overall development.

This report demonstrates that an overall treatment strategy can achieve the requirements of the planning scheme and the SPP (2017).

4.2.2. MUSIC Parameters

An assessment of stormwater runoff quality from the existing conditions and proposed developed conditions has been undertaken using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) – Version 6.3, released in 2018.

Climate data for the catchment was sourced from the MUSIC model database. The rainfall and evaporation data template for this site has been based on data from Shailer Park (40715) from 1/1/1990-31/12/1999 with six (6) minute rainfall duration.

Table 4-2 and **Table 4-3** outline the adopted source node parameters from “MUSIC Modelling Guidelines” (Water By Design, 2010) that were used in the MUSIC model.

The site density of 14 dwellings per hectare, with the source nodes being assigned percentage impervious values based on 15 dwellings per hectare. Based on the guidelines the adoption of these values will yield a conservative outcome for pollutant generation.

Table 4-2: Urban Land Use (Split Source Nodes) - Pollutant Export Parameters

Land Use	Parameter	Total Suspended Solids (Log ₁₀ mg/L)		Total Phosphorous (Log ₁₀ mg/L)		Total Nitrogen (Log ₁₀ mg/L)	
		Storm Flow	Base Flow	Storm Flow	Base Flow	Storm Flow	Base Flow
Ground	Mean	2.18	1.0	-0.47	-0.97	0.26	0.20
	Std Deviation	0.39	0.34	0.31	0.31	0.23	0.20
Road	Mean	2.43	1.0	-0.30	-0.97	0.26	0.20
	Std Deviation	0.39	0.34	0.31	0.31	0.23	0.20
Roof	Mean	1.30	N/A	-0.89	N/A	0.26	N/A
	Std Deviation	0.39	N/A	0.31	N/A	0.23	N/A

Table 4-3: MUSIC Runoff Generation Parameters

Parameter	Urban
Rainfall Threshold (mm)	1
Soil Capacity (mm)	500
Initial Storage (%)	10
Field Capacity	200
Infiltration Capacity Coefficient a	211
Infiltration Capacity Coefficient b	5
Initial Depth (mm)	50
Daily Recharge (%)	28
Daily Drainage (%)	27
Daily Deep Seepage Rate (%)	0

4.2.3. Catchment Areas

The development site has been split into catchment containing split source nodes (road, roof, ground, etc.) representing total developed area reporting to the bioretention basins. **Table 4-4** outlines the catchment areas and imperviousness represented within the MUSIC model. The stormwater quality catchments are provided in **Figure 4-1**.

Table 4-4: Catchment Areas

Catchment	Total Area (ha)	Roof (ha)	Ground (ha)	Road (ha)	Open Space (ha)	Basin (ha)
South	10.97	3.27	3.44	3.07	0.53	0.66
North Temporary	2.32	0.56	0.53	0.56	0.48	0.19
Imperviousness (%)		100	20	60	5	0



Figure 4-1: WSUD Catchment Locality Plan

4.2.4. MUSIC Model Layout

As the management of urban stormwater needs to take a holistic approach, specific management measures need to be implemented in series to form a treatment train. The correct utilisation of various devices within the treatment train is imperative to target the desired pollutants, from the gross solids to the fine colloidal partials. **Figure 4-2** and **Figure 4-3** show the MUSIC model layout for the south basin and northern temporary basin respectively.

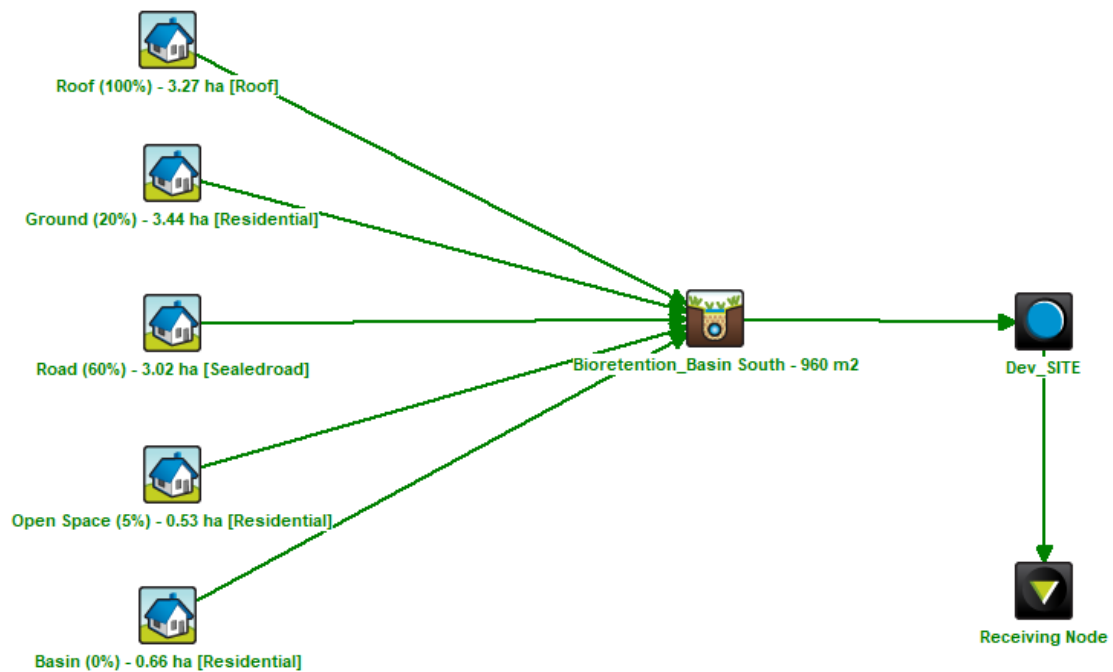


Figure 4-2: South Basin MUSIC Model Layout

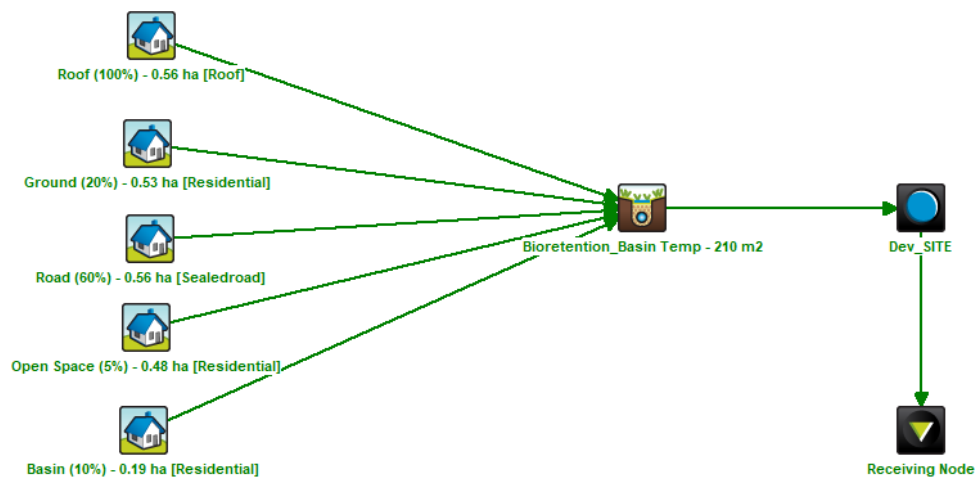


Figure 4-3: Northern Temporary MUSIC Model Layout

4.3. Treatment Measures

Two bioretention basins are proposed as part of the strategy in the catchment. The northern basin being temporary while the southern basin will be permanent. The proposed locality of the treatment devices servicing the development are shown in **Figure 4-1**.

4.3.1. Bioretention System



Bioretention systems use ponding above a treatment surface to maximise the volume of runoff flowing through the filtration media. They typically convey flows above the design event through overflow pits or a weir. The treatment system operates by firstly filtering surface flows through surface vegetation and then percolating runoff through prescribed filtration media. This media provides treatment through fine filtration, extended detention and biological uptake of nutrients.

As these systems take approximately 12-24hrs to drain, the maximum depth of pondage allowed to occur over the filter area has been limited to 300mm, with a minimum filter media depth of 500mm.

Table 4-5 summarises the proposed design parameters for the main bioretention system for this development. As noted above this may be split into several devices on detailed design. It is to be noted that the Orthophosphate content of the filter media has been reduced to 30mg/kg in line with recent advice from Healthy Waterways. (<http://healthywaterways.org/initiatives/waterbydesign/stormwater>).

Table 4-5: Bioretention Design Parameters

Parameter	South Basin	Temporary Basin
Extended Detention Depth (m)	0.30	0.30
Storage Surface Area (m ²)	960	210
Filter Media Area (m ²)	960	210
Unlined Filter Media Perimeter (m)	0.01	0.01
Saturated Hydraulic Conductivity (mm/hr)	200	200
Filter Depth (m)	0.5	0.5
TN Content of Filter Media (mg/kg)	400	400
Orthophosphate Content of Filter Media (mg/kg)	30	30
Exfiltration Rate (mm/hr)	0.0	0.0

4.3.2. Sediment Forebays

A sediment forebay will be required for both basins as the contributing catchment is larger than 2 ha.

4.4. Results

MUSIC modelling of the proposed treatment train for the development was performed to ensure the WQO's were achieved. **Table 4-6** presents the load-based outputs that are represented by this application. The results show the mitigated scenario, which achieves compliant load reductions set out within the LCC Planning Scheme. These results are reported at each basin outlet.

Table 4-6: South Ultimate – Load Based Pollutant Outputs

Pollutant	Unmitigated (kg/yr)	Mitigated (kg/yr)	Reduction Achieved (%)	Target Reduction	Compliance
TSS	12700	2480	80.5	80%	✓
TP	26.2	7.27	72.2	60%	✓
TN	152	76	50.1	45%	✓
GP	1660	0	100	90%	✓

Table 4-7: North Temporary – Load Based Pollutant Outputs

Pollutant	Unmitigated (kg/yr)	Mitigated (kg/yr)	Reduction Achieved (%)	Target Reduction	Compliance
TSS	2480	485	80.4	80%	✓
TP	5.02	1.34	73.2	60%	✓
TN	28.9	14.2	50.8	45%	✓
GP	294	0	100	90%	✓

5. Construction Phase Management

5.1. Erosion and Sediment Control

The management of the site during the construction phase is an important step in ensuring water quality standards are achieved. Implementation of best practice Erosion and Sediment Control techniques is imperative to managing the quality of runoff affected by construction works.

The following points provide general guidance on the management of stormwater during the construction phase. Detailed Erosion and Sediment Control Management Plans should be developed in conjunction with the Operational Works design prior to construction works commencing in accordance with the International Erosion Control Association (IECA) - *"Best Practice Erosion and Sediment Control (BPESC) document"* and overseen by a Certified Professional in Erosion and Sediment Control (CPESC) or Registered Professional Engineer Queensland (RPEQ).

1. Establish a single stabilised entry/exit point for the site works;
2. Construct a shake-down grid at the entrance to facilitate the removal of sediment from trucks leaving the site. The access road extending from the end of existing road or kerb to the grid should comprise a 150-200mm deep pad of 40mm crushed rock;
3. Install sediment fences along the lower boundaries of the site;
4. Construct one or more strategically placed sediment basins in the proposed drainage reserve and construct contour drains / bunds to direct disturbed runoff to the sediment basins;
5. Install bins and/or wind-proof litter areas on-site to minimise the dispersion of gross pollutants;
6. Maintain on site sufficient materials necessary for the emergency repair of all erosion control devices. This includes silt fences, clean crushed rock for reapplication to the entrance road and for replacement of rock within temporary drainage channels, and flocculants for settling sediment basins;
7. Following each day's construction works, ensure that any material on road surfaces is swept from the road, and not permitted to be washed down the gutters and piped drainage systems;
8. Quality of pooled water within sediment basins are to be monitored prior to dewatering, sufficient time should be given to allow sediment to settle (possible with the assistance of a suitable flocculent if necessary) &/or filtering during pumping operations; and
9. Final establishment of bioretention basin should not occur until full stabilisation of upstream catchment has occurred; preferably these should be temporarily turfed during the maintenance period while dwelling construction is occurring.

It shall be the responsibility of the developer, through their principal contractor, to ensure that temporary sediment and erosion controls are installed and maintained correctly.

6. Establishment and Operational Phase Management

6.1. Establishment

Experience shows that the critical periods in the life of WSUD vegetated stormwater systems are the construction and establishment phases. The timing and approach to these systems must be carefully considered to ensure successful establishment and long-term performance. Bioretention systems are now common stormwater treatment devices for new urban developments in Queensland. Successful construction and allowing adequate time for the systems to establish is critical to their long-term performance and function. Construction of the system is also linked to having suitable bioretention designs in place to ensure, civil contractors have appropriate plans to construct to. Applying due care in the design and construction phase will ensure the function of the system whilst also keeping on-going maintenance to a minimum. It is highly recommended that the constructed activities be completed in accordance with *the Construction and Establishment Guidelines: Swales, Bioretention Systems and Wetlands (Apr 2010)*. This will require a sacrificial turf layer to be installed to protect the filter media from the building phase.

6.2. Operational

It is not proposed for water quality monitoring of the bioretention system to be undertaken during the operational phase of its life. The *"Maintaining Vegetated Asset"* guideline highlights that water quality monitoring is not recommended to determine the performance of every vegetated stormwater asset, as it is a specialized field that is complex and costly. In line with this guideline the on-going monitoring of water quality from this device is not considered necessary considering the small size of the development.

The bioretention system will be maintained by the Logan City Council, who as the asset custodian, will be responsible for the on-going maintenance of the water quality device. Maintenance for the bioretention basin may involve the following:

1. Scheduled inspections;
2. Removal of noxious plants or weeds;
3. Maintaining the desired vegetation;
4. Repairing erosion;
5. Unblocking inlets and outlets;
6. Removing litter and debris;
7. Managing algal or moss growth; and
8. Maintaining the permeability of the filtration.

Operations and maintenance should be conducted in accordance with the *Maintaining Vegetated Stormwater Assets* (Feb 2012) guideline.

7. Conclusion

Colliers Engineering & Design have been engaged by Australis Land Pty Ltd to prepare a Stormwater Management Plan (SMP) in support of a development application to Logan City Council (LCC) over land located at 115-117 School Road and 242-258 Loganview Road North, Logan Reserve (Lot 25-26 on RP 97736 and Lots 40-41 on RP 229101).

This development application is for COM/13/2021, being a Material Change of Use – Primary Approval and Reconfiguring a Lot (4 lots into 92 lots, 3 balance lots, Open space and new road). The stormwater strategy outlined in this SMP is for the southern portion of the site considers the ultimate scenario and has been reported and modelled as such.

The location of the proposed development site is not influenced by an overland flow path. The site covers a total area of 15.04 ha and is located within the Emerging Community Zone.

Stormwater runoff from the site is proposed to be managed through two detention basins, one permanent and one temporary located in the south and north respectively within the development site. The stormwater detention strategy will ensure that the overall peak flows from the site are mitigated to predevelopment peak flows for all modelled events. The site will discharge to at two separate discharge points, north and south and will meet legal point of discharge requirements.

There are two sites that are located north and south of this development on Loganview Road North. These sites, and their respective catchments, have been developed and modified in accordance with their approved development applications. These catchments drain to their respective basins and then outlet to Loganview Road North bypassing the subject site. These catchments have not been included in the modelling and are shown on the catchment plan for information only.

The proposed Stormwater Quality Management Strategy achieves the Logan City Council's and State Planning Policy's water quality objectives (LCC,2015; SPP,2017). To reduce the pollutant loads associated with the proposed development, bioretention basins for the site will be designed in accordance the MUSIC Modelling Guidelines (2018) to meet reduction targets.

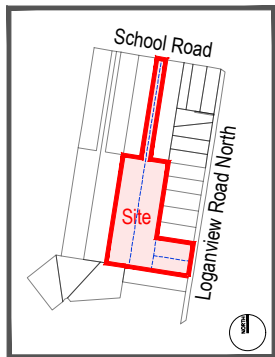
We therefore request Council approval of the engineering components for the proposed development with reasonable and relevant conditions. Detailed design may result in changes to the proposed strategy; however, the design objectives will be maintained.

8. References

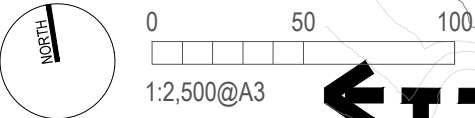
- ▶ Logan City Council (LCC) Planning Scheme 2015 V9;
- ▶ State Planning Policy (Department of Infrastructure, Local Government and Planning, 2017);
- ▶ MUSIC Modelling Guidelines Version 1.0 (Water by Design, 2010);
- ▶ Maintaining Vegetated Stormwater Assets (Water by Design, 2012); and
- ▶ Construction and Establishment Guidelines: Swales, Bioretention Systems and Wetlands (Water by Design 2012).

Appendices

Appendix A Reconfiguration of Lot Plan & Concept Engineering Drawings



DEVELOPMENT EXTENT (nts)



LEGEND

Site boundary	
Existing lot boundaries	
Core Koala Habitat Area + Category B on the regulated vegetation management map (TRACED) (subject to detail investigation)	
37.0m offset from Core Koala Habitat Area + Category B on the regulated vegetation management map (TRACED) (subject to detail investigation)	
Local Park	P
Stormwater Treatment	S
Balance lot	
Temporary turnaround	
Bin pads	
Pathway	
Temporary Stormwater Management Area	
Temporary road access	
Indicative future road network	
PRV	PRV

YIELD SUMMARY

Lot Frontage	Number of Lots	%
10.00-12.49m	11	11.7%
12.50-13.99m	38	40.4%
14.00-15.99m	25	26.6%
16.00-17.99m	13	13.8%
≥18.0m	4	4.3%
Duplex Lots	3	3.2%
TOTAL	94	100%

DEVELOPMENT SUMMARY - Lots

Residential lots	94
Balance lots	2
Stormwater Treatment lot	1
Local Park lot	1
Total	98

RESIDENTIAL LOTS PER STAGE

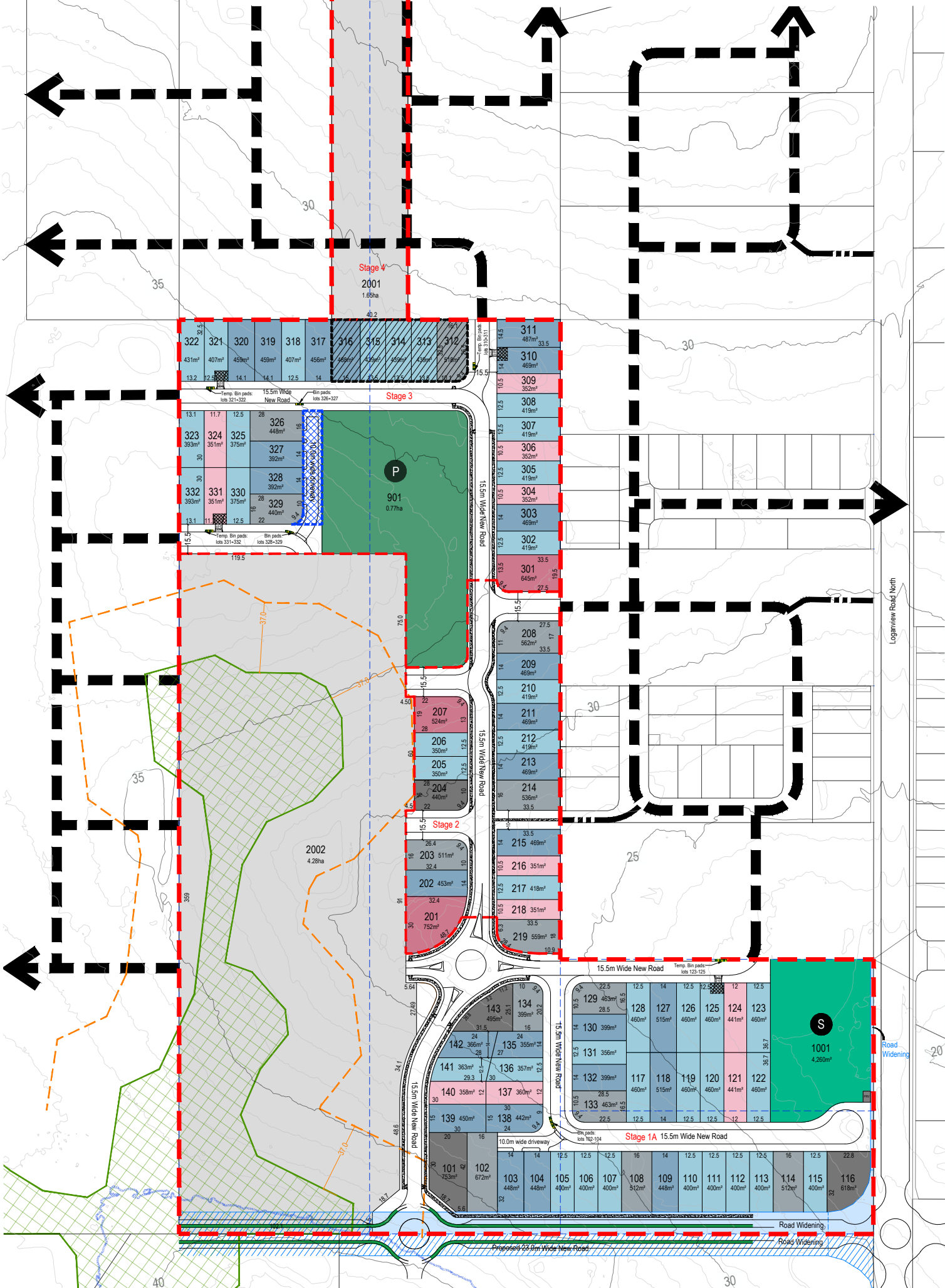
Stage 1	43
Stage 2	19
Stage 3	32
Total	94

DEVELOPMENT SUMMARY - Ave. Area

Ave. lot area	444m ²
Min. lot area	351m ²

DEVELOPMENT SUMMARY - DENSITY

Site Area approx. (excluding lots 2001+2002)	7.0ha
Number of lots	94
Density	13.4du/ha



CLIENT
Baycrown Pty Ltd

PROJECT
PLAN OF SUBDIVISION

115 + 117 School Road and
242-258 Loganview Road North,
Logan Reserve

25 + 26 RP97736 +
40 + 41 RP229101

AMENDMENTS:	DATE:
A Original	18.03.2021
B IR Response	25.08.2021
C Update layout	05.12.2024
D	
E	
F	
G	
H	
DESIGNED: KS	DATE: 05.12.2024
DRAWN: KS	DATE: 05.12.2024
SCALE: 1:2,500 @ A3	1 of 1

IMPORTANT NOTES:
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This plan remains subject to, but not limited to, authority approval, detail design and final survey.

The total number of lots shown on this plan is approximate only.

No relevance should be placed on the information on this plan for any financial dealings involving the land.

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Cadastral Boundaries:
DCDB © State of Queensland (Department of Natural Resources and Mines) 2020

ISO 9001
ISO 14001
AS/NZS 4801
GLOBAL CERTIFICATION PTY LTD



DRAWING NUMBER:

20-0136-PS1

ISSUE:

C

LEGEND

Application boundary	
Existing lot boundaries	
Current stage boundaries (subject to change)	
Stormwater Management Area	
Local Park	
Indicative future road network	
Temporary Basin	

YIELD SUMMARY - Applications 1 + 2

Lot Frontage	Application 1		Application 2	
	No. of Lots	%	No. of Lots	%
10.0-12.49m	11	12%	4	6%
12.5m-13.99m	38	40%	29	41%
14.0-15.9m	25	27%	21	30%
16.0-17.99m	13	14%	13	19%
≥ 18.0m	4	4%	1	1%
Duplex	3	3%	2	3%
Total	94	100%	70	100%

YIELD SUMMARY - Applications 3 + 4

Lot Frontage	Balance Lot Application 1 Lot 26 RP 97736		Lot 27 RP 97736		Lot 42 RP 229101		Total	
	No. of Lots	%	No. of Lots	%	No. of Lots	%	No. of Lots	%
12.5m-14.99m	15	63%	30	61%	8	57%	53	61%
15.0m/+	9	38%	19	39%	6	43%	34	39%
Total	24	100%	49	100%	14	100%	87	100%



0 50 100

1:2,500@A3

DRAFT FOR DISCUSSION
PURPOSES ONLY

CLIENT
Baycrown Pty Ltd

PROJECT
Concept Sketch Plan
Overall

AMENDMENTS:	DATE:
A Original	30.08.2023
B Add southern layout	02.11.2023
C Amend layout 119-125 to match adjoining layouts + amend basin lot 1002	18.12.2023
D Amend layout 119-125 to match adjoining layouts + amend basin lot 1002 + move park	07.06.2024
E Amend layout 119-125 to match adjoining layouts + amend basin lot 1002 + move park	03.09.2024
F Amend basin lot 1002 + associated lots	25.09.2024
G Move Park + new Application bdy's + amend roads	23.10.2024
H Amend lots 307 + 308	29.10.2024
I Update layout + summaries	05.12.2024
DESIGNED: KS	DATE: 05.12.2024
DRAWN: KS	DATE: 05.12.2024
SCALE: 1:3,000 @ A3	1 of 1

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ISO 9001
ISO 14001
AS/NZS 4801
GLOBAL CERTIFICATION PTY LTD



DRAWING NUMBER:
20-0136-SK6

ISSUE:
I

RESIDENTIAL DEVELOPMENT- LOGAN RESERVE

DEVELOPMENT APPLICATION (EAST)

115 & 117 SCHOOL ROAD, AND 250-258 LOGANVIEW ROAD NORTH

FOR 'AUSTRALIS LAND'

DRAWING LIST

EARTHWORKS, ROADWORKS AND DRAINAGE

- 21-0073-P100 COVER PLAN
- 21-0073-P101 OVERALL LAYOUT PLAN
- 21-0073-P102 CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 1 OF 3
- 21-0073-P103 CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 2 OF 3
- 21-0073-P104 CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 3 OF 3
- 21-0073-P105 CONCEPT BULK EARTHWORKS TYPICAL SECTIONS SHEET 1 OF 3
- 21-0073-P106 CONCEPT BULK EARTHWORKS TYPICAL SECTIONS SHEET 2 OF 3
- 21-0073-P107 CONCEPT BULK EARTHWORKS TYPICAL SECTIONS SHEET 3 OF 3
- 21-0073-P108 CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 4
- 21-0073-P109 CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 2 OF 4
- 21-0073-P110 CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 3 OF 4
- 21-0073-P111 CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 4 OF 4
- 21-0073-P112 CONCEPT TYPICAL ROAD CROSS SECTIONS

STORMWATER QUALITY

- 21-0073-P200 CONCEPT ULTIMATE BIO RETENTION BASIN LAYOUT PLAN
- 21-0073-P201 CONCEPT TEMPORARY BASIN LAYOUT PLAN
- 21-0073-P202 CONCEPT ULTIMATE BIO RETENTION BASIN SECTIONS
- 21-0073-P203 CONCEPT ULTIMATE BIO RETENTION BASIN TYPICAL NOTES AND DETAILS

SEWERAGE AND WATER RETICULATION

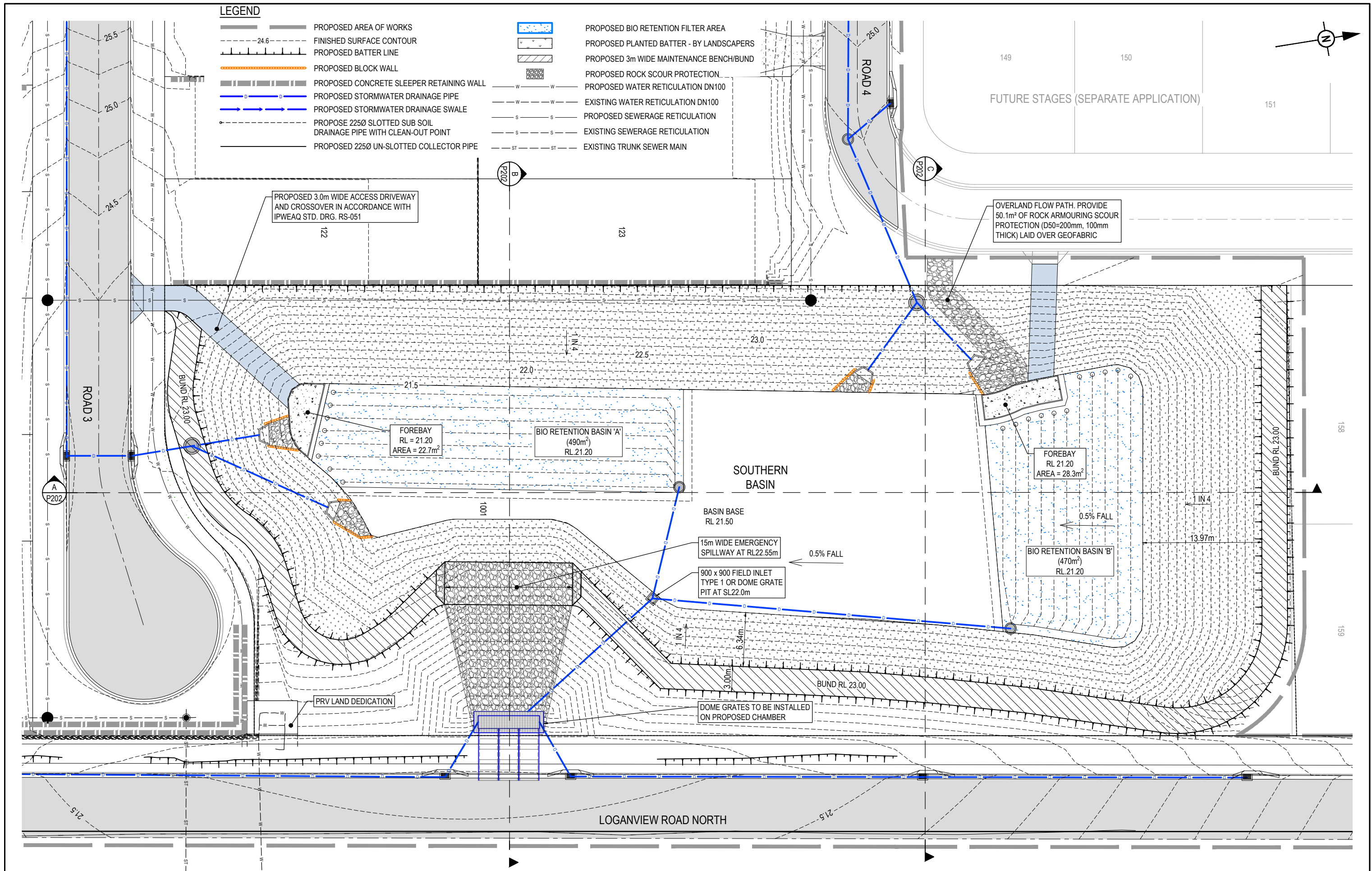
- 21-0073-P300 CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 1 OF 4
- 21-0073-P301 CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 2 OF 4
- 21-0073-P302 CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 3 OF 4
- 21-0073-P303 CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 4 OF 4



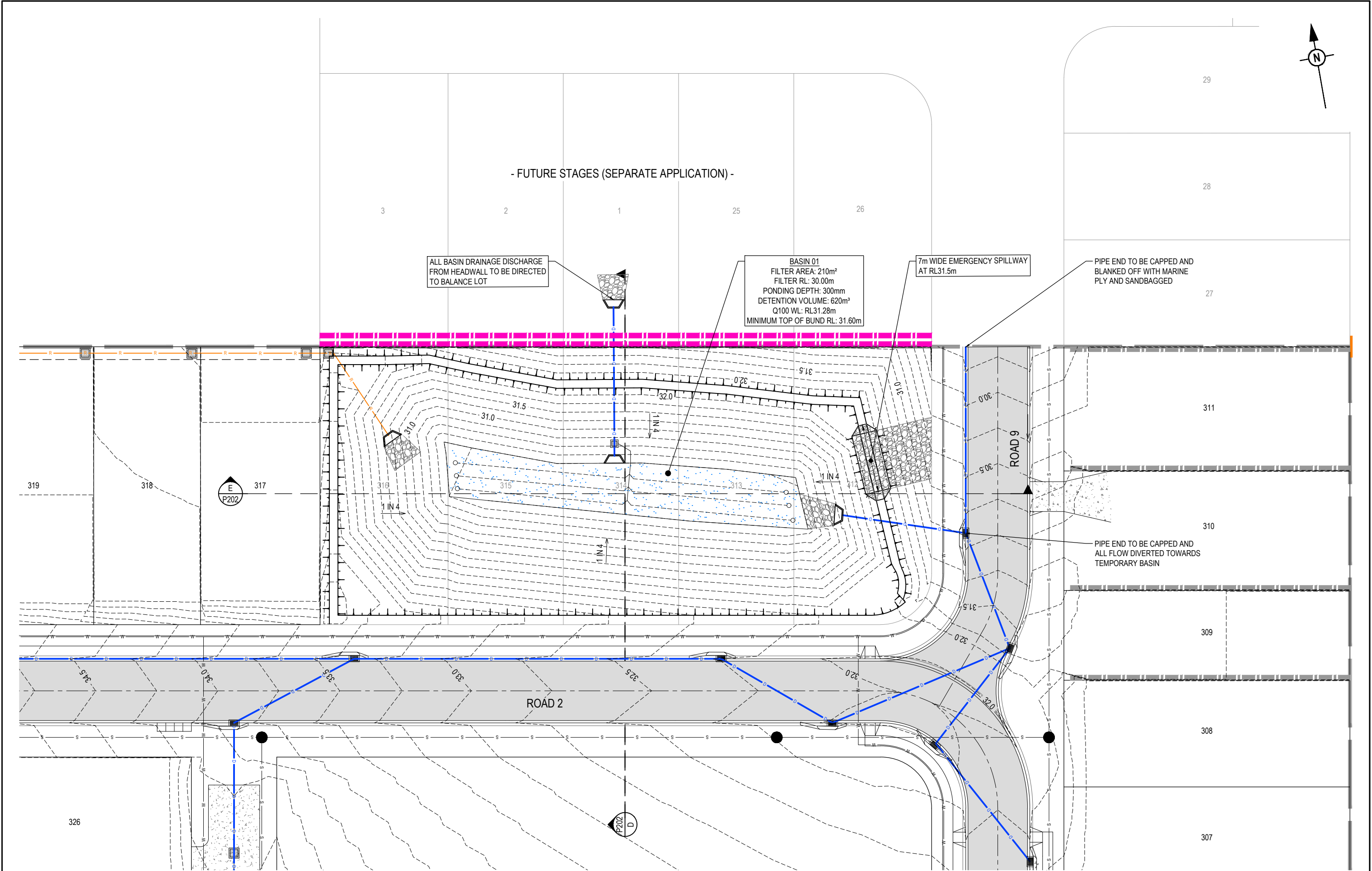
LOCALITY PLAN
SCALE 1:4000 (A1)
SCALE 1:8000 (A3)

PROJECT INFORMATION SUMMARY:	
No. OF LOTS = 99	
AREA OF SITE = 10.04 ha	
RP DESCRIPTION	
LOT 25 & 26 ON RP97736 LOT 40 & 41 ON RP229101	
DATUM LEVEL AND LOCATION	
P.S.M XXX RL XX.XXX AHD LOCATED LOCATED	
LOCAL AUTHORITY: LOGAN CITY COUNCIL	
COUNCIL REFERENCE NUMBER: COM/13/2021	

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS				CLIENT	PROJECT NAME	DRAWING TITLE		
A	20.03.25	LM	BP	ORIGINAL ISSUE			ISSUED FOR APPROVAL						COVER PLAN		
											AUSTRALIS LAND	RESIDENTIAL SUBDIVISION(EAST)			
											ASSOCIATED CONSULTANT RPS GROUP (07) 3539 9500	115 & 117 SCHOOL ROAD AND 250-258 LOGANVIEW ROAD NORTH	PROJECT No.	DRAWING No.	REVISION
													21-0073	P100	A
											FOR AND ON BEHALF OF COLLIER'S ENGINEERING AND DESIGN				

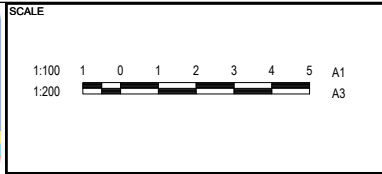


REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
A	20.03.25	LM	BP	ORIGINAL ISSUE		ISSUED FOR APPROVAL	1:200 1:400	AUSTRALIS LAND	RESIDENTIAL SUBDIVISION(EAST)	CONCEPT ULTIMATE BIO RETENTION BASIN LAYOUT PLAN
					DESIGN	APPROVED DANIEL COLLINS	2 0 2 4 6 8 10 A1 A3	ASSOCIATED CONSULTANT RPS GROUP (07) 3539 9500	115 & 117 SCHOOL ROAD AND 250-258 LOGANVIEW ROAD NORTH	PROJECT No. 21-0073
						RPEQ 18631				DRAWING No. P200
						DATE 20.03.25				REVISION A
						FOR AND ON BEHALF OF COLLIER'S ENGINEERING AND DESIGN				



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	20.03.25	LM	BP	ORIGINAL ISSUE

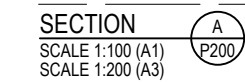
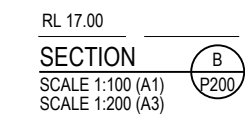
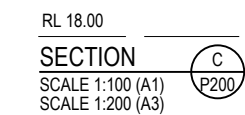
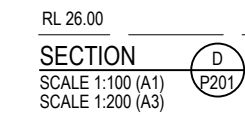
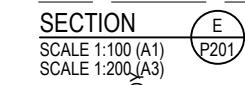
DRAWN	STATUS
	ISSUED FOR APPROVAL
DESIGN	APPROVED DANIEL COLLINS RPEQ 18631 DATE 20.03.25
FOR AND ON BEHALF OF COLLIER'S ENGINEERING AND DESIGN	



CLIENT
AUSTRALIS LAND
ASSOCIATED CONSULTANT RPS GROUP (07) 3539 9500

PROJECT NAME
RESIDENTIAL SUBDIVISION(EAST)
115 & 117 SCHOOL ROAD AND 250-258 LOGANVIEW ROAD NORTH

DRAWING TITLE		
CONCEPT TEMPORARY BASIN LAYOUT PLAN		
PROJECT No. 21-0073	DRAWING No. P201	REVISION A



REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS			SCALE 1:100 1 0 1 2 3 4 5 A1 1:200	CLIENT	PROJECT NAME	DRAWING TITLE		
A	20.03.25	LM	BP	ORIGINAL ISSUE			ISSUED FOR APPROVAL				DESIGN	APPROVED DANIEL COLLINS RPEQ 18631 DATE 20.03.25	AUSTRALIS LAND	RESIDENTIAL SUBDIVISION(EAST)	CONCEPT ULTIMATE BIO RETENTION BASIN SECTIONS
											ASSOCIATED CONSULTANT RPS GROUP (07) 3539 9500	115 & 117 SCHOOL ROAD AND 250-258 LOGANVIEW ROAD NORTH	PROJECT No. 21-0073	DRAWING No. P202	REVISION A
							FOR AND ON BEHALF OF COLLIER'S ENGINEERING AND DESIGN								

Appendix B Rational Method

RATIONAL METHOD SUMMARY & RAINFALL DATA

Project	115 School Road Logan Reserve							
Project #	24-0711							
Rainfall Intensity (mm/hr)								

CEDAR RIDGE

CHANGE OF LEVEL OF LAND NORTH 3

PROJECT NO: 31302-CLLN3

SCHEDULE OF DRAWINGS		
NUMBER	REV. NO.	TITLE
GENERAL		
31302-CLLN3-000	A	COVER SHEET
31302-CLLN3-003	A	SAFETY IN DESIGN
31302-CLLN3-004	A	RISK MATRIX & NOTES
EARTHWORKS: EXISTING FEATURES & DEMOLITION		
31302-CLLN3-020	A	PLAN
EARTHWORKS: BULK EARTHWORKS CUT/FILL		
31302-CLLN3-040	A	PLAN
EARTHWORKS: BULK EARTHWORK SECTIONS		
31302-CLLN3-050	A	EARTHWORKS SECTION KEY PLAN
31302-CLLN3-051	A	SECTIONS-SHEET
EARTHWORKS: RETAINING WALL & DETAIL GRADING		
31302-CLLN3-060	A	PLAN
31302-CLLN3-070	A	DETAILS
EARTHWORKS: FINAL SURFACE & SEDIMENT AND EROSION CONTROL		
31302-CLLN3-080	A	PLAN



CLIENT



R. P. DESCRIPTION
260-266 LOGANVIEW ROAD NORTH
LOGAN RESERVE
LOT 42 RP229101
LOCAL AUTHORITY- LOGAN CITY COUNCIL

DESIGN ITEM	POTENTIAL HAZARD	PHASE	THOSE AT RISK	PRE-TREATMENT RISK ASSESSMENT				TREATMENT OPTIONS	- ADOPTED TREATMENT - REASON - BY WHOM	RESIDUAL RISK ASSESSMENT				ONGOING RESPONSIBILITY
				SEVERITY	LIKELIHOOD (RISK)	Risk Product	RISK RATING			SEVERITY	LIKELIHOOD (RISK)	Risk Product	RISK RATING	
Public Access/ Public Entry to Site	Public wandering onto work site. Potential injury/ death within site due to public (Unlawful) entry to site.	Construction	Contractor & Public	Death	Unlikely	10	High	- Appropriate signage to be installed at public interface for the duration of works. - Fencing to discourage accidental access to site and warnings.	Contractor to prepare site specific Construction Management Plan to minimise risk of public access to the site.	Death	Rare	3	Low	On Going: Contractor to monitor until end of Construction Phase
Existing Services	Working on or near existing services - Electrocution, disrupt critical services, explosion. Machine Strike - Electrocution	Construction	Contractor, Public & Asset Owner	Death	Likely	20	Significant	- Design to consider existing services and include appropriate clearances or protection measures. - Dial Before You Dig to be performed prior to design commencing. - Developer provide survey of any critical existing infrastructure prior to design. - Design drawings to show known services, and Notes/labels on construction drawings. - Connection point to be detailed in accordance with the relevant standard.	Contractor to physically locate and confirm service location information. Dial Before You Dig logo to be added to drawings. Notes and labels on construction drawings. Connection details design and annotated on drawings in accordance with Water Authority requirements.	Death	Rare	5	Moderate	On Going: Contractor to monitor until end of Construction Phase
Demolition & Site Clearing	Potential for hazardous materials within structures (i.e. asbestos), structure collapse, falling debris & dangerous airborne agents	Construction	Contractor & Public	Death	Possible	15	Significant	- Known site features to be nominated on design drawings. - Appropriately qualified personnel to carry out the works with appropriate management plans in place.	Contractor to physically locate and confirm location of existing structures & services. Contractor to ensure that personnel undertaking demolition works are suitably qualified and are disposing of the waste materials to an approved off site tip.	Medical Treatment	Rare	3	Low	On Going: Contractor to monitor until end of Construction Phase
Asbestos	Existing pipes could be made of asbestos. Asbestos pieces could be located on the site.	Construction	Contractor & Public	Medical Treatment	Possible	9	High	- Appropriately qualified personnel to carry out the works with appropriate management plans in place.	Contractor to inspect existing pipes and surface to see if any asbestos is present.	Medical Treatment	Rare	3	Low	On Going: Contractor to monitor until end of Construction Phase
Existing roads	Condition and use of existing road could have potential to cause accident/ injury through vehicle / pedestrian Collision.	Construction	Contractors or Visitors	Death	Possible	15	Significant	Provide suitable parking areas for workers and visitor's. Undertake necessary traffic management during works within the vicinity of the existing road	Traffic Management Plan and Contractor to ensure suitable parking areas are allocated	Medical Treatment	Rare	3	Low	On Going: Contractor to monitor until end of Construction Phase
Emergency Access to Site	Emergency Vehicles may find access to site difficult.	Construction	Contractor, Public & Asset Owner	Medical Treatment	Possible	9	High	Provide unimpeded access to site at all times in case of emergency	Contractor to ensure there is always unimpeded access to site at all times.	Medical Treatment	Unlikely	6	Moderate	On Going: Contractor to monitor until end of Construction Phase
Flooding	Potential drowning or injury because of flooding of existing overland flow paths through the site	Construction	Contractors, Supervisors	Death	Possible	15	Significant	Contractor to install appropriate exclusion fencing to existing waterways. No work to be undertaken during periods of heavy rain.	Contractor to identify and install exclusion fencing to existing waterways. Contractors and Supervisors to ensure no work to be undertaken during periods of heavy rain.	Death	Unlikely	10	High	On Going: Contractor to monitor until end of Construction Phase
Earthworks Surface	Working on steep Batters	Construction and Maintenance	Contractor & Asset Owner	Medical Treatment	Possible	9	High	- Minimise the height of batters. - Minimise the number of locations. - Extend services up batters where possible to reduce future works on batter slopes.	Batters designed to minimum practical height in all locations practical. Services to be constructed up the batters to ensure future batter stability.	Medical Treatment	Rare	3	Low	On Going: Contractor to monitor until end of Construction Phase and Asset Owner to continue monitoring for future maintenance.
Deep excavation	Falling or collapse	Construction, Maintenance and demolition	Public, Client, Supervisors, Contractors	Permanent Disability	Possible	12	High	- Minimise depth of structure. - Bench deep trenches appropriately to minimise trench collapse risk. - Design in accordance with relevant standard. - Minimise the number of structures.	Structures designed in accordance with local authority requirements. Utilise RIGS sewer to reduce the number of access points. Graded pipelines as shallow as practical to reduce depth. Contractor to manage open excavations during construction in accordance with their Management Plans.	Permanent Disability	Rare	4	Low	On Going: Contractor to Monitor until end of Construction Phase
Rock on Site	Potential Injury due to blasting	Construction	Contractor	Medical Treatment	Possible	9	High	- Minimise blasting when not required. - Implement safety procedures for blasting.	Contractor to blast only as required. Contractor to ensure blasting is undertaken in accordance with regulations and safety procedures.	Medical Treatment	Rare	3	Low	On Going: Contractor to Monitor until end of Construction Phase
Temporary Stormwater Construction Sediment Ponds	Drowning	Construction and Maintenance	Public, Contractors & Council	Death	Possible	15	Significant	- Site fencing and warning signs to be installed. - Minimise depth - Design access and egress in accordance with QUDM and Asset Owner requirements.	Notes annotated on civil drawings for contractor to provide fencing and signage. Designed in accordance Qudm for access and egress. Depth minimised.	Death	Rare	5	Moderate	Monitor until end of Construction of Sediment Basins
Permanent Stormwater Basin Infrastructure	Drowning	Maintenance and demolition	Public	Death	Possible	15	Significant	- Site fencing and warning signs to be installed. - Minimise depth - Design access and egress in accordance with QUDM and Asset Owner requirements.	Notes annotated on civil drawings for contractor to provide fencing and signage. Designed in accordance Qudm for access and egress. Depth minimised.	Death	Rare	5	Moderate	Monitor until end of Construction of Sediment Basins
Traffic Management	Accidents at the interface between public and work site	Construction	Contractor & Public	Permanent Disability	Unlikely	12	High	- Traffic Management Plan to be prepared by suitable qualified consultant. - TMP to consider temporary lighting, signals, barriers/separation and other traffic management measures.	Contractor to prepare site specific TMP incorporating appropriate measures to minimise risk at interface of work site and public roads.	Permanent Disability	Rare	4	Low	On Going: Contractor to monitor until end of Construction Phase

PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND NORTH 3

R P DESCRIPTION

260-266 LOGANVIEW ROAD NORTH LOT 42 RP229101

CLIENT



A26-03-26COUNCIL ISSUEGC

REVDATEDESCRIPTIONINT

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ASSOCIATED CONSULTANTS

DRAWING TITLE

SAFETY IN DESIGN



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Tel: 07 5571 1099Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB

DRAWN GC

DRAWING NUMBER

31302-CLLN3-003

REV

A

NOTES:

1. THIS SID REGISTER IN NO WAY RELIEVES THE PRINCIPAL, CONTRACTOR, ASSET OWNER OR ANY OTHER PARTY OF THEIR OWN OBLIGATIONS UNDER THE WORKPLACE HEALTH AND SAFETY ACT AND THEIR DUTY OF CARE. THIS IS PROVIDED AS INFORMATION FOR PARTIES TO ASSIST IN MEETING THEIR OWN OBLIGATIONS AND IS BY NO MEANS A COMPLETE LIST. THIS SID REGISTER OR THE NOTES AND DETAILS INCLUDED WITHIN THE DESIGN DRAWINGS DO NOT RELIEVE THE PRINCIPAL CONTRACTOR OF ANY OBLIGATION UNDER ALL RELEVANT LEGISLATION OR GUIDELINE.
2. ALL CONTRACTORS AND ASSET OWNERS REMAIN RESPONSIBLE IN THE PREPARATION OF THEIR OWN SAFETY MANAGEMENT PLANS AND SUITABLE SAFE WORK METHOD STATEMENTS.
3. THIS SID REGISTER IDENTIFIES ATYPICAL FEATURES OF THE DESIGN. COMMON/TYPICAL FEATURES OF THIS DESIGN ARE NOT INCLUDED IN THIS SID REGISTER.

		Consequence				
		Minor / Insignificant (1)	First Aid Treatment (2)	Medical Treatment (3)	Permanent Disability (4)	Death (5)
Likelihood	Almost Certain (5)	Moderate	High	Significant	Significant	Significant
	Likely (4)	Low	Moderate	High	Significant	Significant
	Possible (3)	Low	Moderate	High	High	Significant
	Unlikely (2)	Low	Low	Moderate	Moderate	High
	Rare (1)	Low	Low	Low	Low	Moderate

Level of Risk
Significant 15 to 25
High 9 to 14
Moderate 5 to 8
Low 1 to 4

PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



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ASSOCIATED CONSULTANTS

DRAWING TITLE

RISK MATRIX
& NOTES



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Southport QLD 4215

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DRAWING NUMBER		REV	
31302-CLLN3-004		A	

- GENERAL**
- EXISTING SERVICES - EXTERNAL WORKS**
THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES & TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY BY THE CONTRACT WORKS.
 - EXISTING STRUCTURES**
ALL EXISTING STRUCTURES & ASSOCIATED INFRASTRUCTURE TO BE REMOVED & DISPOSED OF OFF SITE.
 - EXISTING DAMS**
EXISTING DAMS TO BE DEWATERED. ALL SILT & DEBRIS ARE TO BE REMOVED & LAWFULLY DISPOSED OF TO A TIP OFF SITE, OR INCORPORATED INTO THE SITE EARTHWORKS AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. REPLACEMENT FILL IS TO BE LOCATED & COMPACTED IN ACCORDANCE WITH LOCAL COUNCIL'S SPECIFICATIONS.

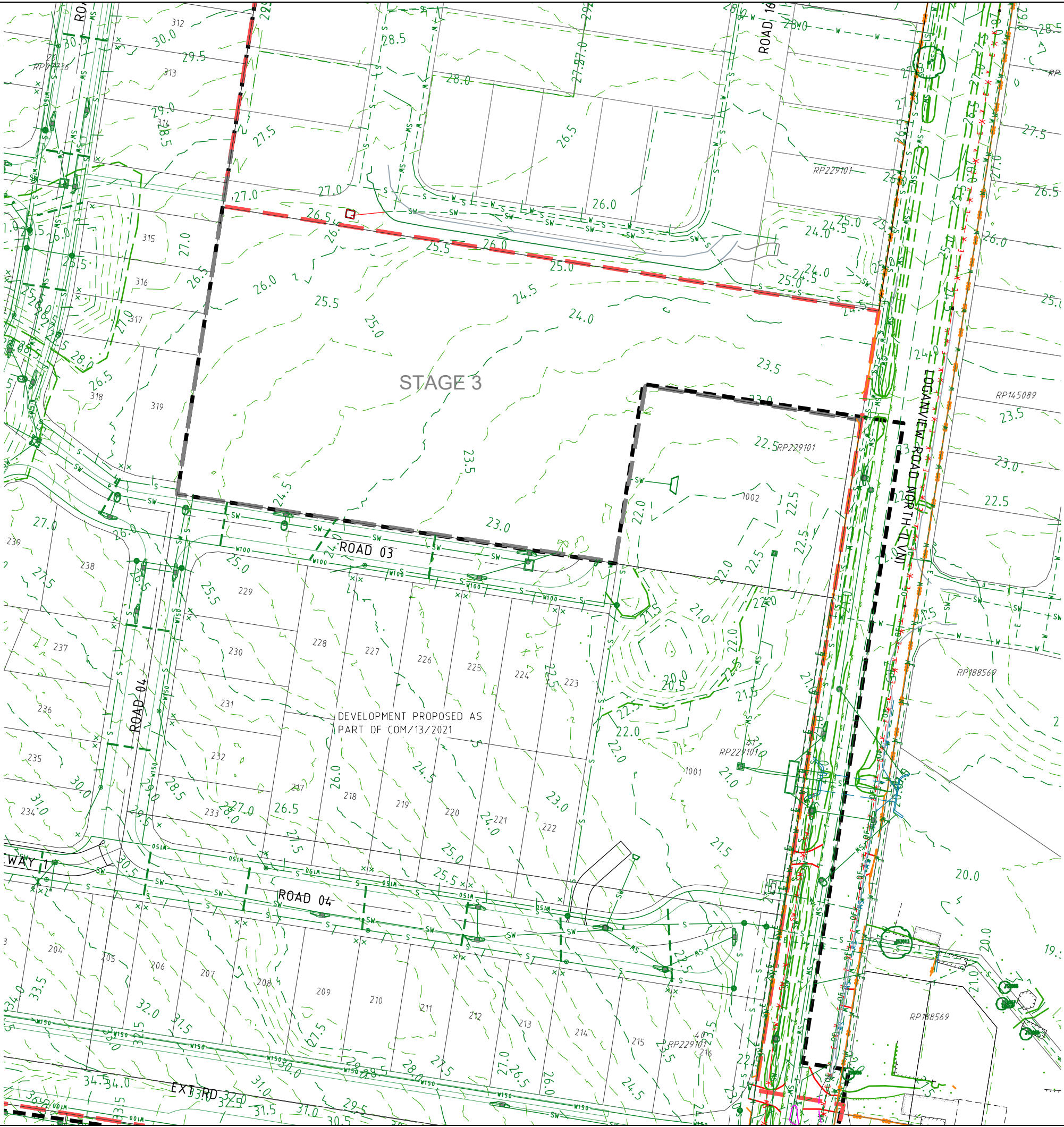
NOTE:
CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR LOCATION AND PROTECTION OF EXISTING SERVICES DURING WORKS.

LEGEND

- CONTROL LINE / CENTER OF ROAD
- EXISTING PROPERTY LINE
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- CONTROL LINE / CENTER OF ROAD
- EXISTING FOOTPATH
- EXISTING EDGE OF VEGETATION
- EXISTING RISING MAIN
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING WATER
- EXISTING GAS
- EXISTING UNDERGROUND ELECTRICITY
- EXISTING OVERHEAD ELECTRICITY
- EXISTING TELSTRA
- EXISTING COMMUNICATIONS
- EXISTING CONTOURS
- DEMOLISH RISING MAIN
- DEMOLISH SEWER
- DEMOLISH STORMWATER
- DEMOLISH WATER
- DEMOLISH UNDERGROUND ELECTRICITY
- DEMOLISH OVERHEAD ELECTRICITY
- SITE BOUNDARY
- STAGE BOUNDARY
- LIMIT OF WORKS BOUNDARY
- EXISTING TREES



NOTE:
TREE CLEARING IS INDICATIVE ONLY AND SUBJECT TO ITS OWN SPECIFIC DOCUMENTATION (BY OTHERS) AND APPROVAL..



PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT

Scale 1:500 - A1 (1:1000 - A3)

Scale 1500 - A1 (1:1000 - A3)

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ASSOCIATED CONSULTANTS

DRAWING TITLE

EXISTING FEATURES AND DEMOLITION PLAN

MORTONS
urbansolutions
Civil Engineering
Project Coordination

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31302-CLLN3-020	A

EARTHWORKS

1. TOPSOIL STRIPPING

TOPSOIL SHALL BE STRIPPED ACROSS THE ENTIRE LIMIT OF THE EARTHWORKS CUT & FILL AREAS & SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.

2. EARTHWORKS LEVELS

EARTHWORKS LEVELS SHOWN ON DRAWINGS ARE TO FINISHED SURFACE LEVELS & INCLUDE 100mm OF TOPSOIL.

3. COMPACTION STANDARD

SITE FILLING & TRENCH BACKFILL SHALL BE COMPACTED TO THE STANDARDS OUTLINED IN THE LOCAL AUTHORITY'S SPECIFICATIONS. FILL BATTER FACES ARE TO BE OVERFILLED, COMPACTED & CUT BACK TO DESIGN LEVELS. ALL CUT BATTERS ARE TO BE CUT BACK & TRIMMED TO DESIGN LEVELS.

4. PAVEMENT DEPTHS

THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS. THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY & MAY BE VARIED AFTER SUB GRADE TESTS ARE TAKEN & AUTHORITY APPROVAL.

5. TESTING & CERTIFICATION

ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS. THE CONTRACTOR IS TO PROVIDE ALL REQUIRED EARTHWORKS CERTIFICATIONS IN ACCORDANCE WITH THE APPROVAL CONDITIONS. THE CONTRACTOR IS TO PROVIDE A CONSTRUCTED EARTHWORKS SLOPE STABILITY CERTIFICATION CONFIRMING REQUIRED F.O.S. CERTIFIED BY A RPEQ.

6. TOPSOIL REPLACEMENT

ALL FOOTPATHS, BATTERS & ALLOTMENT CUT & FILL AREAS SHALL BE TOPSOILED WITH TOPSOIL FROM ONSITE STOCKPILES, & AMELIORATE SOIL AS NECESSARY TO ENSURE GRASS STRIKE.

7. GRASSING

ALL CUT/FILL AREAS, DISTURBED AREAS & TRENCHED AREAS SHALL BE GRASSED TO THE SATISFACTION OF THE SUPERINTENDENT & LOCAL AUTHORITY.

8. ROCK

THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS RATE.

9. EARTHWORKS ZONE

THE FOLLOWING ACTIVITIES ARE PROHIBITED OUTSIDE THE EARTHWORKS ZONE - STORAGE & MIXING OF MATERIALS, VEHICLE PARKING, LIQUID DISPOSAL, MACHINERY REPAIRS/REFUELING, PLACEMENT OF SITE OFFICES OR SHEDS, COMBUSTION OF ANY MATERIAL, STOCKPILING OF SOIL, RUBBLE OR DEBRIS, ANY FILLING OR EXCAVATION INCLUDING TRENCHES, TOPSOIL, SKIMMING AND/OR SURFACE EXCAVATION UNLESS OTHERWISE APPROVED BY THE RELEVANT AUTHORITY.

10. CONSTRUCTION - STOCKPILING

TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING. STOCKPILE SITE TO BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES. NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE, REFER VEGETATION MANAGEMENT PLAN FOR MORE DETAILS. THE CONTRACTOR SHALL NOT CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS DIRECTED BY THE SUPERINTENDENT. ALL MATERIALS ARISING FROM THE WORKS SHALL BE COMPACTED TO FUTURE FILL AREAS AS NOMINATED OR REMOVED FROM THE SITE.

11. TOPSOIL SCREENING

TOPSOIL SHALL BE SCREENED BY THE CONTRACTOR WHEN DIRECTED BY THE SUPERINTENDENT. ALL UNSUITABLE MATERIAL SCREENED FROM THE TOPSOIL WILL BE TAKEN TO AN OFFSITE TIP BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.

12. EARTHWORKS MATERIAL SIZE

ALL EARTHWORKS MATERIAL IS TO BE BROKEN DOWN TO AN ACCEPTABLE SIZE TO BE COMPACTED UNDER LEVEL 1 FILL. WHERE THE RELEVANT GUIDELINES DON'T SPECIFY AN ACCEPTABLE SIZE, EARTHWORKS MATERIAL IS TO BE BROKEN DOWN TO A SIZE NO LARGER THAN 75mm.

13. MOISTURE CONTENT

EARTHWORKS MOISTURE VARIATION TO NOT EXCEED ±2% OF THE OPTIMUM MOISTURE CONTENT.

14. SURFACE FINISH

THE FINISHED SURFACE LEVEL IS TO BE CAPPED WITH FINER MATERIAL & SMOOTH DRUM ROLLED & GRADED TO PROMOTE SURFACE WATER RUNOFF IN A CONTROLLED MANNER.

15. EARTHWORKS LIMITS

THE CONTRACTOR IS TO TIE IN TO THE NATURAL SURFACE AT THE LIMIT OF THE EARTHWORKS. THE TIE IN IS TO BE COMPLETED IN A MANNER TO ENSURE THERE IS NO PONDING OF SURFACE WATER.

16. IMPORTED MATERIAL

LOTS - ALL IMPORTED MATERIAL FOR PLACEMENT ON LOTS TO BE A MINIMUM CBR 10 MATERIAL & HAVE A SWELL % <1.5.

ROADS - ALL IMPORTED MATERIAL FOR PLACEMENT ON ROADS TO BE A MINIMUM CBR10 MATERIAL WITH A SWELL % <1.5, LIQUID LIMIT <70 & PLASTICITY INDEX <45.

SOIL PARAMETERS TO BE REVIEWED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT ON SITE.

17. REACTIVE SOILS

a) ALL REACTIVE TOPSOIL TO BE IDENTIFIED BY THE GEOTECHNICAL ENGINEER & BE SEPARATED FROM THE NON REACTIVE TOPSOIL.

b) ALL REACTIVE TOPSOIL TO BE RESPREAD IN THE OPEN SPACE AREA. WHERE REACTIVE TOPSOIL IS REQUIRED TO BE RESPREAD ON DEVELOPABLE AREAS THE CONTRACTOR SHALL LIME TREAT THE TOPSOIL TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

c) WHEN UNDERTAKING THE EARTHWORKS CUT, ALL MATERIALS SHOULD BE SELECTIVELY SORTED SO THAT THE REACTIVE SOILS ARE SEPARATED FROM THE LOW REACTIVE RESIDUAL SOILS & XW BEDROCK.

d) ALL REACTIVE SOILS ARE TO BE PLACED IN THE LOWER SECTIONS OF FILL WITH THE LESS REACTIVE RESIDUAL SOILS & XW BEDROCK TO BE PLACE IN THE UPPER FILLS. ALTERNATIVELY, THE REACTIVE SOILS CAN BE BLENDED WITH THE LESS REACTIVE SOILS & XW ROCK TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

e) NO REACTIVE CLAY SOILS SHOULD BE PLACED WITHIN THE UPPER 0.75M APPROX. FILL PROFILE WHERE POSSIBLE.

f) WHEN PLACING FILL OVER HIGHLY REACTIVE SOILS, TREATMENT MAY BE REQUIRED IF THE FILLS ARE ONLY MINOR, 0.3m APPROX. & THE REACTIVE SOIL PROFILE IS GREATER THAN 0.7m APPROX. IN THESE AREAS SUBGRADE REPLACEMENT OF AT LEAST 0.75m OF NON REACTIVE / LOW REACTIVE MATERIAL OVERLYING THE REACTIVE SOILS SHALL BE UNDERTAKEN.

g) ALL WORKS ASSOCIATED WITH THE IDENTIFICATION, PLACEMENT & TREATMENT OF REACTIVE SOILS SHALL BE UNDERTAKEN TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

18. VERTICAL FACES

WHERE VERTICAL EARTHWORKS FACES ARE PROPOSED AS PART OF THE EARTHWORKS DESIGN & RETAINING WALLS ARE NOT PROPOSED AS PART OF THE WORKS, THE CIVIL CONTRACTOR IS TO CONSTRUCT A TEMPORARY 1 in 2 BATTER.

19. EARTHWORKS VOLUMES

a. EARTHWORKS VOLUMES CONTAINED WITHIN THE CONTRACT DOCUMENTS ARE APPROXIMATE ONLY, CONTRACTOR TO VERIFY & ALLOW FOR ANY DISCREPANCY IN THE CONTRACT VALUE.

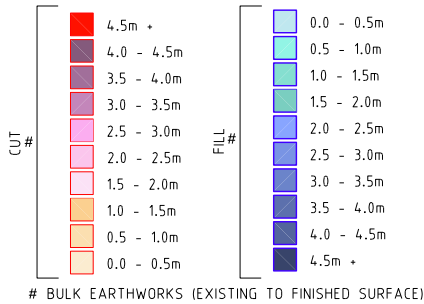
b. VOLUMES INDICATE THE STRUCTURAL QUANTITY OF EARTHWORKS, IE BETWEEN THE EXISTING SURFACE & THE UNDERSIDE OF THE MINIMUM BOX & OF THE FSL, AS PRESCRIBED IN THE CONTRACT DOCUMENTATION.

c. NO ALLOWANCE FOR COMPACTION OR BULKING FACTOR IS INCLUDED IN THE EARTHWORKS VOLUMES. THE CONTRACTOR IS TO MAKE ALLOWANCES FOR BULKING/COMPACTION AS PART OF THEIR CONTRACT WORKS.

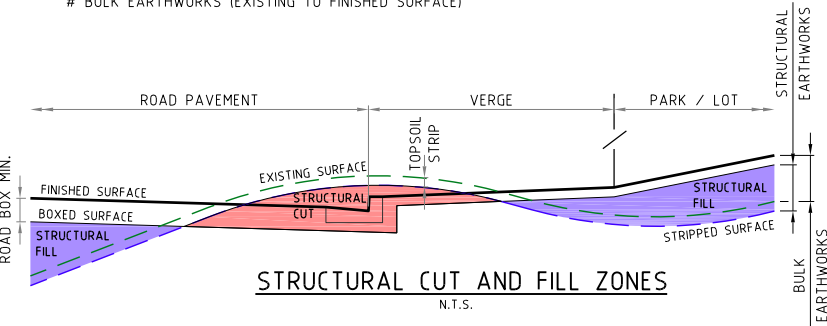
d. THE CONTRACTOR IS TO VERIFY EXISTING SURFACE & TOPSOIL DISTRIBUTION PRIOR TO SIGNING THE CONTRACT. THE CONTRACTORS PRICE FOR THESE WORKS IS DEEMED TO BE ACCEPTING OF THE NATURAL SURFACE & TOPSOIL DISTRIBUTION.

e. THE CONTRACTOR IS REQUIRED TO EXPORT / IMPORT AS NEEDED TO ACHIEVE THE FINAL SURFACE LEVELS. THE EXPORT/IMPORT AS REQUIRED TO COMPLETE EARTHWORKS FORMS PART OF THE CONTRACT WORKS.

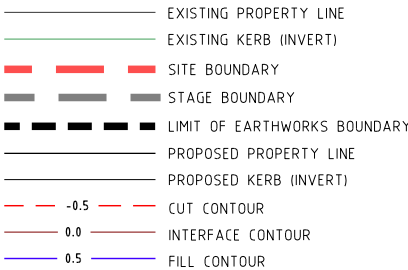
f. WHERE NO SPOIL AREA IS AVAILABLE WITHIN THE PROJECT FOOTPRINT, THE CIVIL CONTRACTOR SHALL EXPORT EXCESS MATERIALS TO A LICENCED TIP OFF SITE. THESE WORKS FORM PART OF THE CONTRACT WORKS.



BULK EARTHWORKS (EXISTING TO FINISHED SURFACE)



LEGEND



NOTE:
CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING ALL WORKS.



PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

A	26-03-26	COUNCIL ISSUE	GC
REV	DATE	DESCRIPTION	INT

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ASSOCIATED CONSULTANTS

DRAWING TITLE

EARTHWORKS
PLAN



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DESIGNED RB DRAWN GC

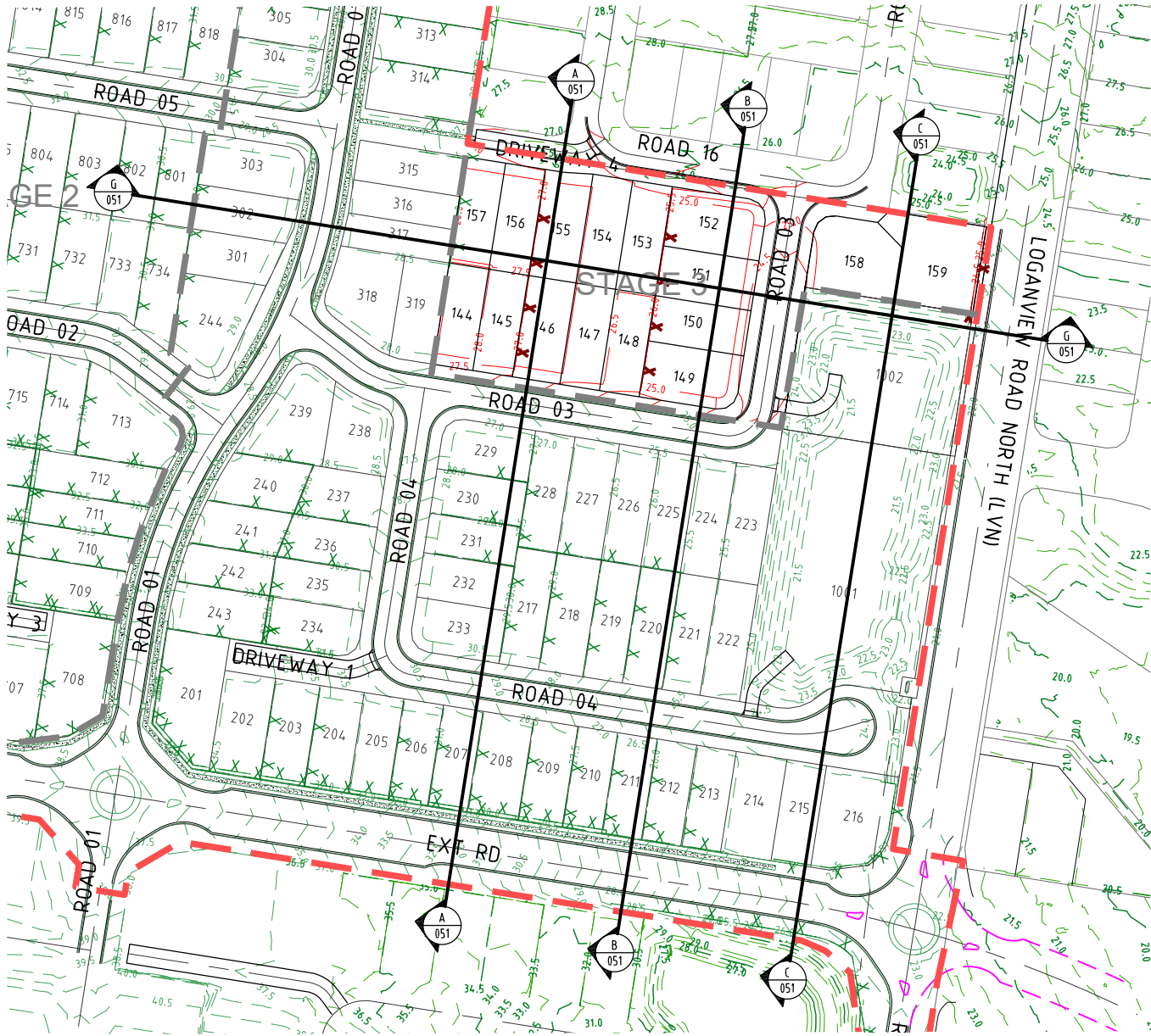
DRAWING NUMBER
31302-CLLN3-040

REV
A



LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- FUTURE CONTOURS
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- PROPOSED RETAINING WALL
- PROPOSED TWO TIER RETAINING WALL
- DESIGN CONTOURS
- SITE BOUNDARY



PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

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DRAWING TITLE

BULK EARTHWORKS
SECTION
KEY PLAN



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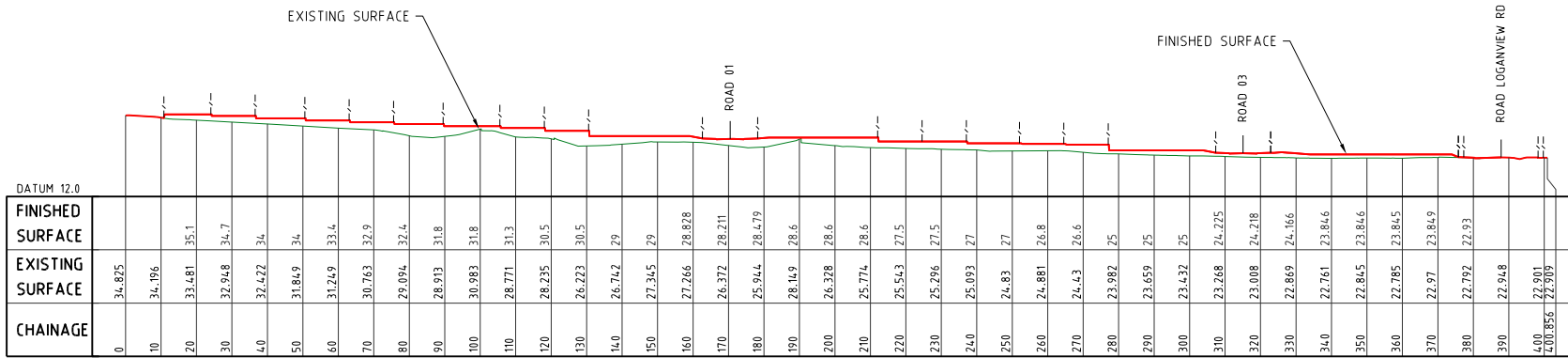
DESIGNED RB DRAWN GC

DRAWING NUMBER

31302-CLLN3-050

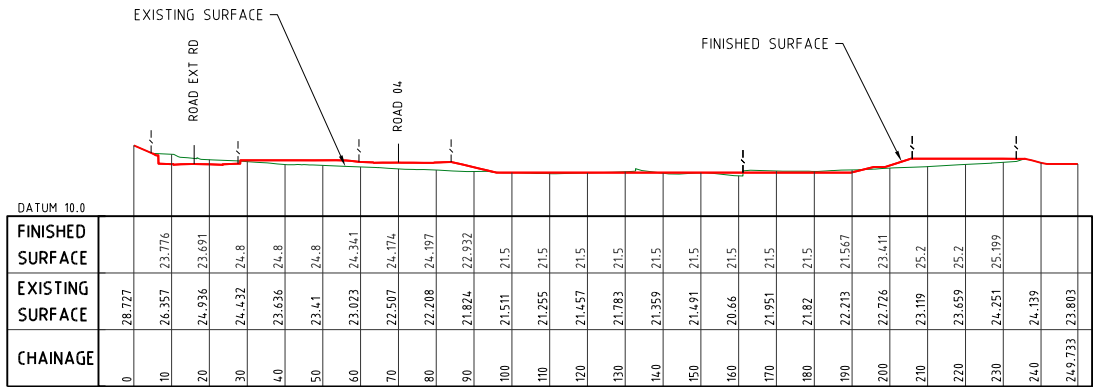
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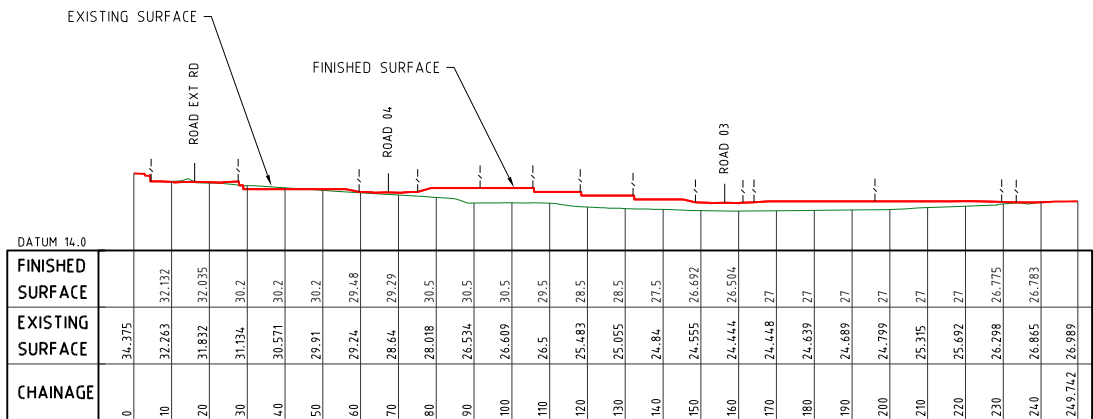
LONGITUDINAL SECTION G

Horizontal scale 1:1000
Vertical scale 1:1000



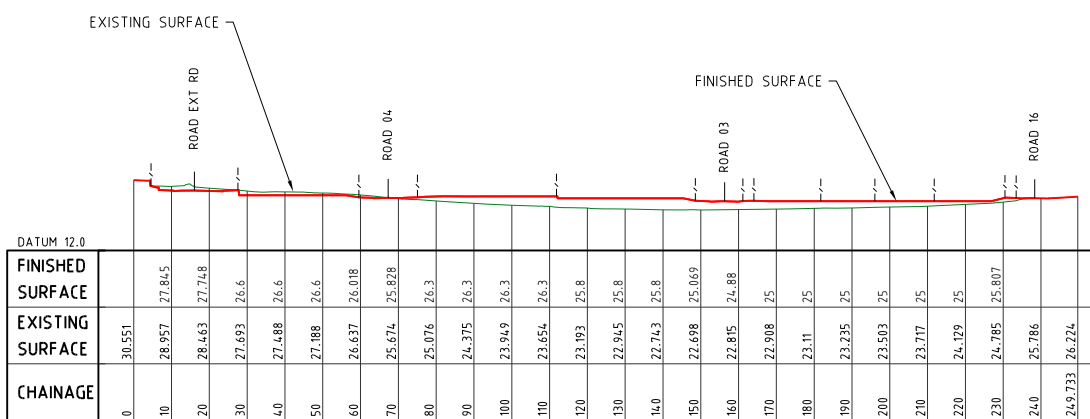
LONGITUDINAL SECTION C

Horizontal scale 1:1000
Vertical scale 1:1000



LONGITUDINAL SECTION A

Horizontal scale 1:1000
Vertical scale 1:1000



LONGITUDINAL SECTION B

Horizontal scale 1:1000
Vertical scale 1:1000

PROJECT NAME

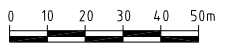
CEDAR RIDGE

CHANGE OF LEVEL OF LAND NORTH 3

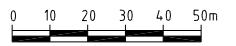
RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



Vert. Scale 1:1000 - A1 (1:2000 - A3)



Horiz. Scale 1:1000 - A1 (1:2000 - A3)

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ASSOCIATED CONSULTANTS

DRAWING TITLE

BULK EARTHWORKS SECTIONS



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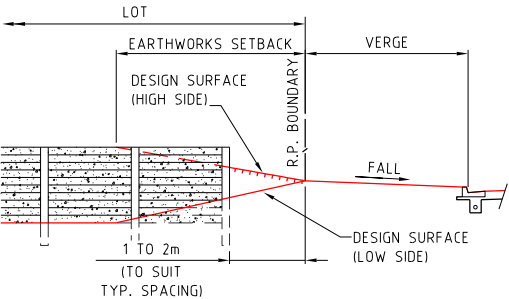
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GENERAL

- 1. CONTRACT SPECIFICATIONS
ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
- 2. SETOUT
SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
- 3. DATUM
LEVELS SHOWN ARE TO A.H.D.
- 4. EXISTING SERVICES - EXTERNAL WORKS
THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES & TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY BY THE CONTRACT WORKS.
- 5. ALL MATERIALS ARISING FROM RETAINING WALL CONSTRUCTION ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP.

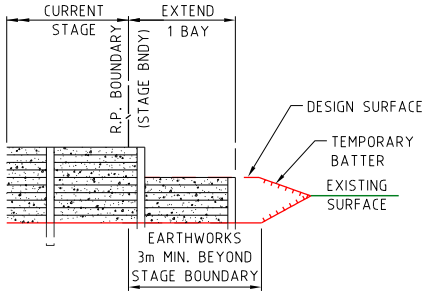
LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- DESIGN CONTOURS
- EXISTING SINGLE TIER RETAINING WALL
- PROPOSED SINGLE TIER SLEEPER RETAINING WALL
- PL50.4 NOMINAL LOT PAD LEVEL
- R.H 1.0 INDICATIVE WALL HEIGHT
- DETAIL PAD FALL DIRECTION (CONTRACTOR TO ENSURE LOTS FALL TO ROAD AT 1:150 MIN. REFER DRG. 072)



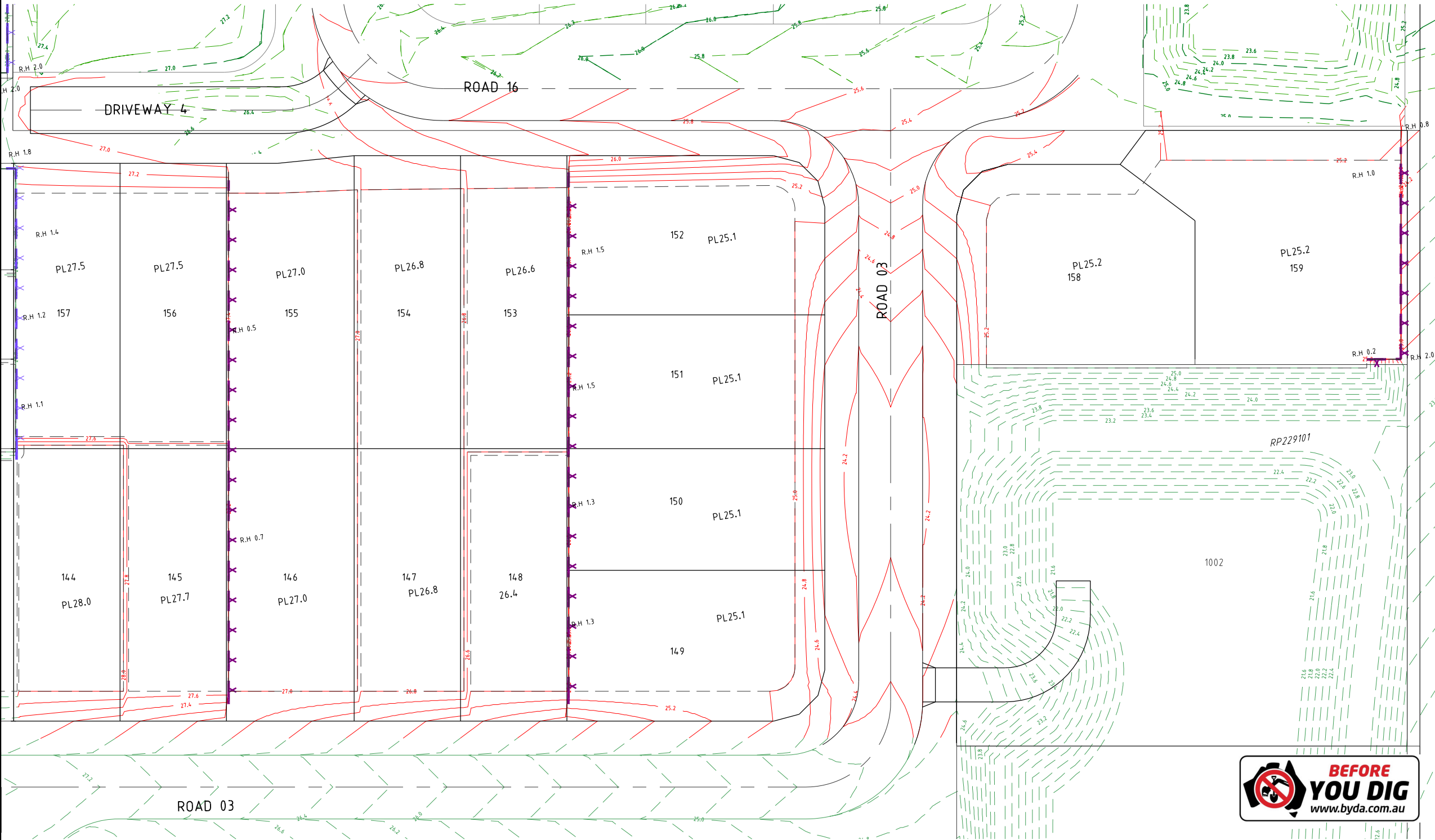
TYPICAL SIDE BOUNDARY CONSTRUCTION

SCALE 1:100 - A1 (1:200 - A3)



TYPICAL STAGE BOUNDARY CONSTRUCTION

SCALE 1:100 - A1 (1:200 - A3)



PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

REV	DATE	DESCRIPTION	INT
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ASSOCIATED CONSULTANTS

DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN



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DRAWING NUMBER

31302-CLLN3-060

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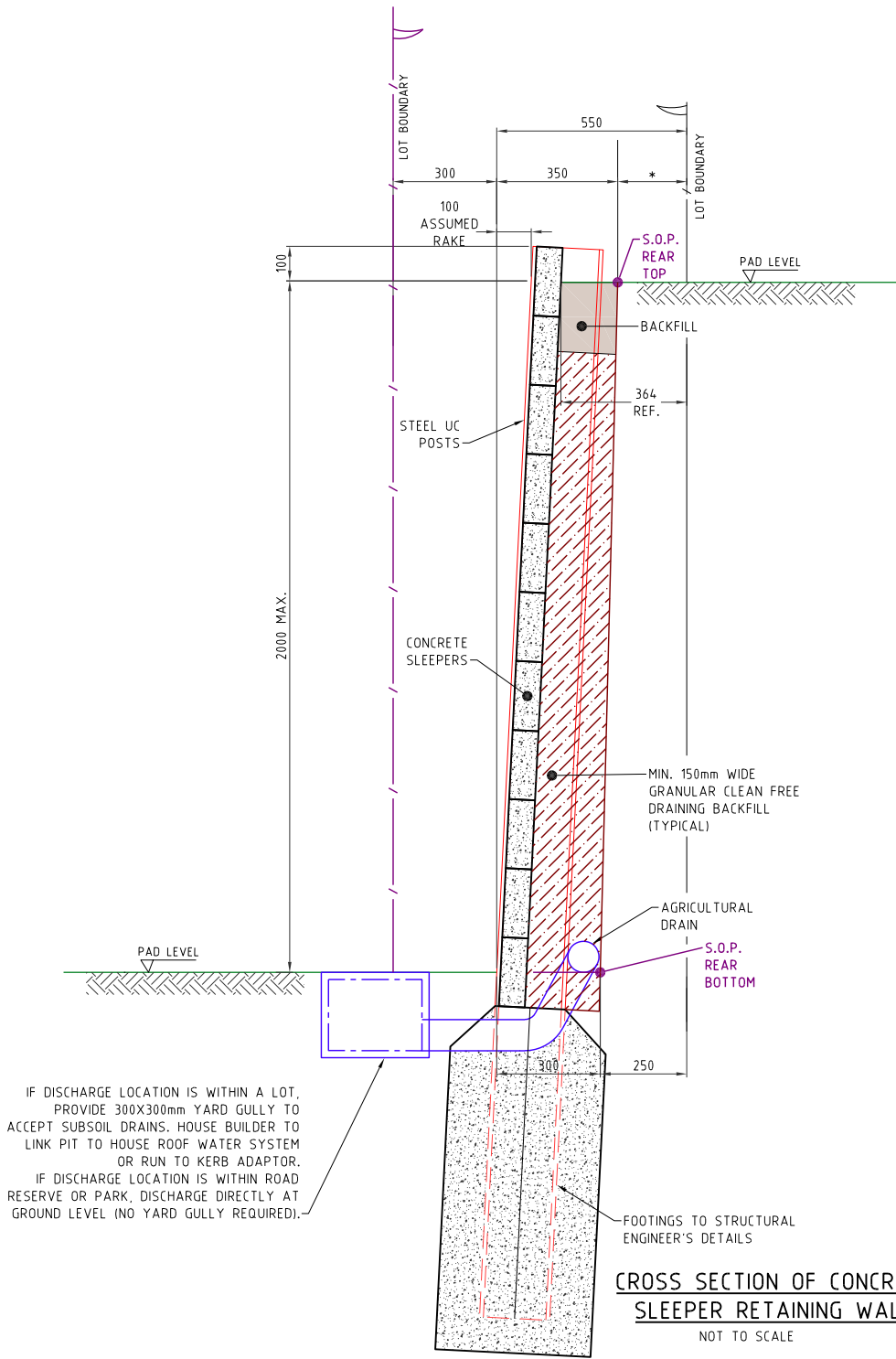
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NOTES:

1. RETAINING WALL DETAILS ARE INDICATIVE ONLY.
2. CONTRACTOR TO ARRANGE FOR DESIGN & CONSTRUCTION OF WALLS BY RPEQ STRUCTURAL ENGINEER. CONTRACTOR TO PROVIDE STRUCTURAL CERTIFICATION OF DESIGN & FINAL CONSTRUCTION.
3. ALLOW FOR 5KPa LOADING TO WALLS EXCEPT ADJACENT TO ROADS WHICH REQUIRE A 10kPa LOADING.
4. CONTRACTOR TO CONFIRM LOCATION OF LOT BOUNDARY PRIOR TO COMMENCING WALL CONSTRUCTION.
5. THE BUILDING ON THE HIGHER SIDE OF THE RETAINING WALL MUST MAINTAIN AN OFFSET OR APPROPRIATE FOUNDATION STRUCTURES (EG. PIERS) IN ORDER TO ENSURE THE ENTIRE DEPTH OF THE RETAINING WALL IS FREE FROM THE ZONE OF INFLUENCE OF THE BUILDING/OVERBURDEN LOAD UNLESS OTHERWISE SPECIFIED BY STRUCTURAL ENGINEER.
6. STRUCTURAL ENGINEER TO DESIGN SLAB & PIER.
7. AGRICULTURAL DRAIN TO DISCHARGE TO 300x300mm STORMWATER PIT. HOUSE BUILDER TO CONNECT 300x300mm STORMWATER PIT TO ROOFWATER SYSTEM.
8. RETAINING WALL DESIGN TO ALLOW FOR ALL SERVICES (ADJACENT OR BELOW) & HAVE NO IMPACT.
9. SANDSTONE & PROPRIETARY RETAINING WALLS TO BE DESIGNED & CONSTRUCTED TO HAVE VERTICAL FACE UNLESS OTHERWISE AGREED BY THE SUPERINTENDENT.
10. ANY WALL GREATER THAN 0.9M HIGH TO INSTALL A FALL BARRIER AT THE TOP OF WALL. THE FALL BARRIER IS TO BE MAINTAINED UNTIL THE END OF THE MAINTENANCE PERIOD OR THE ASSOCIATED LOT IS SOLD BY THE DEVELOPER.
11. SETBACKS: LOT - LOT = 0.2m, LOT - ROAD RESERVE = 0.3m
12. WHERE RETAINING WALLS ARE LOCATED WITHIN 2m OF A PMT SITE THE RETAINING WALL IS TO BE DESIGNED & CONSTRUCTED TO ALLOW EXCAVATION OF THE FULL PMT SITE TO A DEPTH OF 1.3m.
13. FENCE BRACKETS TO BE ISNTALLED ON POSTS. NO BRACKET 5m FROM FRONT BOUNDARY.
14. ALL FOOTINGS MUST BE WHOLLY CONTAINED WITHIN THE LOT.

RETAINING WALL COLOUR AND FACE FINISH NOTE:

1. RETAINING WALL COLOUR AND FINISH IS TO BE AS NOMINATED ON RETAINING WALL PLANS



PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



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ASSOCIATED CONSULTANTS

DRAWING TITLE

RETAINING WALL
DETAILS



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31302-CLLN3-070

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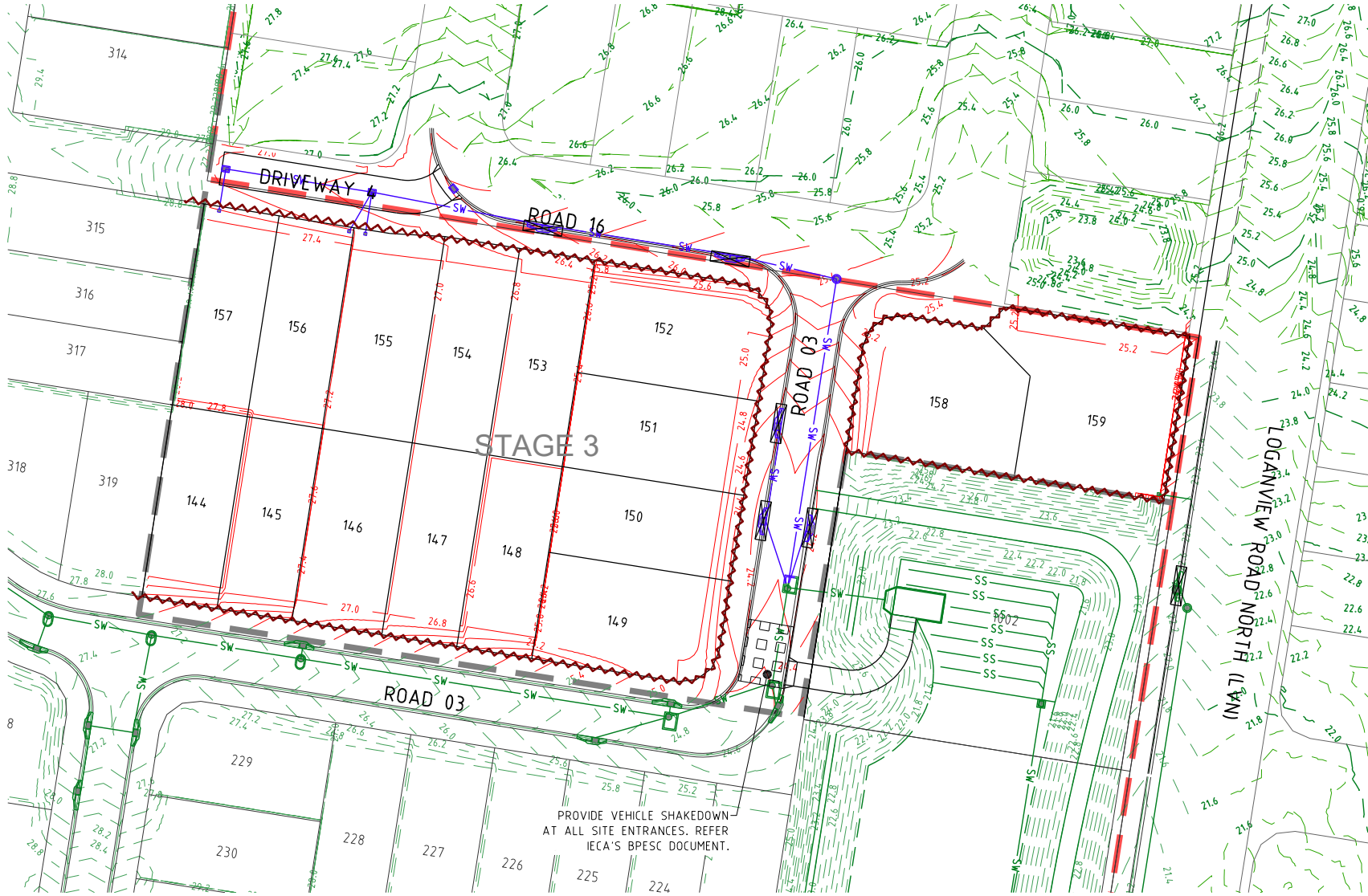
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SEDIMENT AND EROSION

1. THE EROSION & SEDIMENT CONTROL DEVICES SHOWN ON THESE DRAWINGS ARE INDICATIVE & PROVIDED FOR SUBMISSION TO LOCAL AUTHORITY ONLY. NOTWITHSTANDING THE EROSION & CONTROL DEVICES SHOWN ON THESE DRAWINGS, THE CONTRACTOR MUST PREPARE & FOLLOW A SITE SPECIFIC EROSION & SEDIMENT CONTROL PLAN TO MEET ALL LOCAL & STATE GOVERNMENT LEGISLATION INCLUDING BUT NOT LIMITED TO:
- a. ENVIRONMENTAL PROTECTION ACT WITH SPECIFIC REFERENCE TO PARTS 5440G & 5319
 - b. STATE PLANNING POLICY
- PRESCRIBED WATER CONTAMINANTS (AS DEFINED IN THE ENVIRONMENTAL PROTECTION ACT 1994) MUST NOT BE RELEASED FROM THE SITE OR TO WATERS WITHIN THE SITE, OR BE LIKELY TO BE RELEASED SHOULD RAINFALL OCCUR, UNLESS ALL REASONABLE & PRACTICABLE MEASURES ARE TAKEN TO PREVENT OR MINIMISE THE RELEASE & CONCENTRATION OF CONTAMINATION. THE ESC PLAN MUST BE DESIGNED, IMPLEMENTED & MAINTAINED IN ACCORDANCE WITH "BEST PRACTICE EROSION & SEDIMENT CONTROL" PUBLISHED BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIAN CHAPTER) (IECA, 2008).
2. TO COMPLY WITH THE REQUIREMENTS OF THE EP ACT & BEST PRACTICE DESIGN, THE SEDIMENT BASINS ON THE SITE MUST BE DESIGNED & IMPLEMENTED TO ACHIEVE THE FOLLOWING:
- SEDIMENT BASINS ARE TO BE DESIGNED, IMPLEMENTED & MAINTAINED TO A STANDARD WHICH WOULD ACHIEVE AT LEAST 80% OF THE AVERAGE ANNUAL RUNOFF VOLUME OF THE CONTRIBUTING CATCHMENT TREATED (I.E. 80% HYDROLOGIC EFFECTIVENESS) TO 50MG/L TSS OR LESS & PH IN THE RANGE 6.5-8.5
 - THIS WILL REQUIRE THE INSTALLATION & OPERATION OF A HIGH-EFFICIENCY SEDIMENT BASIN(S) DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS CONTAINED IN THE "BEST PRACTICE EROSION & SEDIMENT CONTROL - APPENDIX B SEDIMENT BASIN DESIGN & OPERATION" PUBLISHED BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIAN CHAPTER) (IECA, 2016, DRAFT)
3. THE EROSION & SEDIMENT CONTROL PLAN MUST BE PREPARED & CERTIFIED BY A CERTIFIED PROFESSIONAL IN EROSION & SEDIMENT CONTROL & FOLLOW THE REQUIREMENTS OUTLINED IN IECA'S BEST PRACTICE EROSION & SEDIMENT CONTROL DOCUMENT & THE QUEENSLAND URBAN DRAINAGE MANUAL.
4. PRIOR TO THE COMMENCEMENT OF WORKS ONSITE THE CONTRACTOR MUST MAKE THEMSELVES AWARE OF ALL PREVIOUS GEOTECHNICAL REPORTS & DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL (INCLUDING PERFORMING ANY SOIL TESTS IF REQUIRED). THE RESULTS OF THIS REVIEW & ANY TESTS MUST BE INCLUDED IN THE CONTRACTOR'S EROSION & SEDIMENT CONTROL PLAN. A COPY OF ALL TEST RESULTS MUST BE PROVIDED TO THE SUPERINTENDENT.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION & DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION (INCLUDING THE MAINTENANCE PERIOD). NOTWITHSTANDING THE CONTROL MEASURES OR FINISHED EARTHWORKS DESIGN SHOWN ON THESE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL OR ALTERNATIVE EROSION & SEDIMENT CONTROL MEASURES TO MINIMISE SEDIMENT ACROSS OR LEAVING THE SITE.
6. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS (INCLUDING WEEKENDS & PUBLIC HOLIDAYS) & AT ALL TIMES REMAINS RESPONSIBLE TO:
- a) CLEAN & REPAIR CONTROL DEVICES WHENEVER THE ACCUMULATED SEDIMENT REDUCES THEIR CAPACITY BY 50%.
 - b) MAINTAIN POSITIVE GRADES OF ALL PERIMETER BANKS & SWALES TO AN OUTLET.
 - c) PROTECT ANY DOWNSTREAM CONSTRUCTION.
 - d) CONTROLLING DUST.
 - e) MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH DETAILS OUTLINED IN THEIR EROSION & SEDIMENT CONTROL PLAN & AS DIRECTED BY THE SUPERINTENDENT.
7. THE CONTRACTOR'S PLAN SHALL ALLOW FOR SUITABLE ACCESS TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. NO ADDITIONAL VEGETATION CLEARING IS PERMITTED FOR GAINING ACCESS UNLESS APPROVED BY THE SUPERINTENDENT.
8. THE CONTRACTOR MAY REQUEST APPROVAL FROM THE SUPERINTENDENT TO REUSE THE STOCKPILED MULCH FOR STABILISING BATTERS ONLY IN LOCATIONS WHERE THE APPROVED LANDSCAPE OPW DESIGN REQUIRES MULCH ULTIMATELY.
9. CONSTRUCTION STOCKPILING:
- a) TOPSOIL SHALL BE STRIPPED & STOCKPILED IN LOCATIONS NOMINATED ON THE CONSTRUCTION DRAWINGS OR IN LOCATIONS AGREED WITH THE SUPERINTENDENT.
 - b) ADDITIONAL VEGETATION CLEARING IS NOT PERMITTED TO FACILITATE THE STOCKPILING OF MATERIALS UNLESS SHOWN ON THE APPROVED VEGETATION MANAGEMENT PLAN.
 - c) ANY STOCKPILE SITE MUST BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES.
 - d) NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE OF VEGETATION.
 - e) A TEMPORARY SILT FENCE IS TO BE ERECTED APPROXIMATELY 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.
10. NOTWITHSTANDING THE DETAILS SHOWN IN THE CONTRACTOR'S EROSION & SEDIMENT CONTROL PLAN, DURING CONSTRUCTION THE CONTRACTOR MUST:
- a) SIZE ALL TEMPORARY SEDIMENT BASINS APPROPRIATELY TO TREAT THE UPSTREAM CATCHMENT. NOTE THAT THE PERMANENT BIO BASINS SHOWN ON THESE DRAWINGS ARE SIZED FOR THE ULTIMATE CATCHMENT NOT FOR THE CONSTRUCTION PHASE.
 - b) PLACE A ROCK BUND AROUND ALL HEADWALLS DURING CONSTRUCTION.
 - c) PROVIDE KERB INLET PROTECTION TO ALL GULLIES.
 - c) PLACE A MINIMUM 1.0m WIDE TURF STRIP BEHIND ALL KERBS & IN A HERRINGBONE LAYOUT WITHIN THE ROAD VERGE.
 - d) MAINTENANCE (INCLUDING FLOCCULATION IF REQUIRED & PUMP OUT) OF ALL CONSTRUCTION SEDIMENT BASINS (WHETHER EXISTING OR NEW).
 - e) CLEAN OUT OF ALL GROSS POLLUTANT TRAPS, SEDIMENT FOREBAYS & ALL OTHER PERMANENT SEDIMENT CONTROL DEVICES AT BOTH ON & OFF MAINTENANCE.
11. CONTRACTOR TO CONFIRM THE EXTENTS OF REQUIRED GRASSING TREATMENTS WITH THE SUPERINTENDENT AT LEAST 7 DAYS PRIOR TO FINAL TRIMMING.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT GRASSING STRIKE RATES ARE ACHIEVED AT THE ON & OFF MAINTENANCE INSPECTIONS IN ACCORDANCE WITH COUNCIL REQUIREMENTS. THIS INCLUDES THE SUPPLY & INSTALLATION OF ANY REQUIRED CHEMICAL/FERTILISER AMELIORATION TO ACHIEVE THE SPECIFIED GRASS STRIKE RATES.
13. GEOFABRIC LINING OF CHANNELS & CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH APPROVED OPEN SPACE MANAGEMENT PLAN & LANDSCAPING OPW. CONTRACT DOCUMENTATION WILL SPECIFY WHETHER THIS IS THE CIVIL CONTRACTOR OR THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY & INSTALL. THE CIVIL CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUITABLE ACCESS FOR THE LANDSCAPE CONTRACTOR TO PERFORM THEIR WORKS.
14. MAINTENANCE PERIOD (PRE TO POST CONSTRUCTION)
- a) ALL PROTECTION MEASURES ARE TO BE INSPECTED & MAINTAINED REGULARLY
 - b) REPAIRS ARE TO BE EFFECTED IMMEDIATELY.
 - c) SILT AFTER RAIN IS TO BE CLEANED FROM STREETS & ALLOTMENTS IMMEDIATELY & CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE.
 - d) AT OFF-MAINTENANCE & ONLY WHEN DIRECTED BY COUNCIL, REMOVE & DISPOSE OFFSITE ALL TEMPORARY EROSION & SEDIMENT CONTROL DEVICES.
16. EROSION & SEDIMENT CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR HOLDS ALL LIABILITY.

NOTE:

SEDIMENT AND EROSION CONTROL MEASURES SHOWN RELATE TO THE FINISHED SURFACE ONLY AND ARE CONCEPTUAL ONLY. THE CONTRACTOR IS TO PREPARE A SITE SPECIFIC CONSTRUCTION AND MAINTENANCE PHASE SEDIMENT AND EROSION CONTROL PLAN.



LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING STORMWATER
- EXISTING CONTOURS
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE STORMWATER
- FUTURE CONTOURS
- SITE BOUNDARY
- STAGE BOUNDARY
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED STORMWATER
- DESIGN CONTOURS
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- SEDIMENT FENCE
- SCOUR PROTECTION
- TEMPORARY SEDIMENT BASIN
- STORMWATER INLET FILTER
- ROCK CHECK DAM
- VEHICLE SHAKEDOWN (AT ALL SITE ENTRANCES MIN.)
- TEMPORARY SWALE
- SAND BAGS
- TREES

PROVIDE SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION BPESC DOCUMENT.



PROJECT NAME

CEDAR RIDGE

CHANGE OF LEVEL OF LAND
NORTH 3

RP DESCRIPTION

260-266 LOGANVIEW ROAD NORTH
LOT 42 RP229101

CLIENT



0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

REV	DATE	DESCRIPTION	INT
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ASSOCIATED CONSULTANTS

DRAWING TITLE

FINAL SURFACE AND
SEDIMENT AND EROSION
PLAN



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