Design Report

Indigo Parkway

Prepared for Shire of Serpentine Jarrahdale

27 June 2025

Project Number: TC24021

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
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Approval for Release

Name	Position	File Reference
Joseph Mowat	Civil Engineer	TC24021_100% Design Report_1.0
Signature	Joseph Mowat Digitally signed by Joseph Mowat DN: O=Talis Consultants, CN=Joseph Mowat, E=joseph.mowat@talisconsultants.com.au Reason: I am approving this document Location: Date: 2025.06.27 16:40:42+08'00' Foxit PDF Reader Version: 12.0.0	

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1 Introduction

Talis Consultants Pty Ltd (Talis) has been commissioned by Shire of Serpentine Jarrahdale (the Shire) to design and document Indigo Parkway extension, linking the existing Indigo Parkway at Briggs Road to Larsen Road at Sansimeon Boulevard.

The scope of Talis' services, as outlined in this Design Report, is to prepare design documentation for the construction of Indigo Parkway. The extent of the design includes:

- Road reserve width to be 27.5m and 22.5m adjacent to the northern Multiple Use Corridor – Public Open Space (MUC);
- Earthworks for the full road reserve width, and any adjacent tie in/blending;
- The verge width being 5.75m to accommodate parking;
- 2.5m parking bays are to be indented into the verge;
- 5m wide lanes, consisting of 3.5m wide traffic lane and 1.5m wide on street cycle lane;
- 2.5m wide dual use path on the north side and a 1.5m footpath on the south side;
- Minor 20% and Major 1% drainage design including centre median island to be designed as a 6m wide inverted swale;
- Continuation of a median island East/West across Briggs Road, creating a left in-left out intersection at Briggs Road and Indigo Parkway;
- Roundabout intersection at Carraway Avenue and Indigo Parkway;
- Roundabout intersection at Larsen Road and Indigo Parkway;
- Left in/Left out at Portwine Avenue;
- Associated drainage design, including Water Sensitive Urban Design;
- Utility removal/relocation and insertion; and
- LED Western Power standard Street lighting.

This Design Report outlines the design assumptions, standards used and any deviations from the standards in preparing the designs.

This Design Report should be read in conjunction with the Design Drawings.

2 Background

2.1 Survey and Topography

Talis commissioned Jurovich Surveying to undertake feature survey in July 2024, which is shown in Appendix A.

2.2 Geotechnical Information

A geotechnical site investigation was undertaken by ASLAB Pty Ltd in August 2024 to support the construction of Indigo Parkway. Geotechnical investigation test site locations are shown in Figure 2-1.

Figure 2-1: Test Pits Locations

Laboratory testing was undertaken on 4x field samples for CBR, particle size distribution, Atterberg, and moisture content characteristics. CBR values of the in-situ material ranged between 19% and 35%. For design purposes, a value of 12% CBR has been adopted. A copy of laboratory test results is shown in Appendix D.

Due to moderate linear shrinkage characteristics of tested soil samples, clearance cover with clean fill sand with a minimum depth of 300mm to in situ material has been incorporated in 3d design of the road.

2.3 Site Inspection

A site inspection was undertaken by Talis on 26 March 2024. The site inspection was used to determine any constraints and opportunities within the design. Information gathered from the site inspection has been used to amend the design and incorporated within the design drawings.

3 Design Standards

3.1 Software

The design of Indigo Parkway from Briggs Road to Larsen Road has been undertaken using AutoDesk Civil 3D 2024.

3.2 Civil Design Standards

The road has been designed in accordance with the following standards and guidelines:

- Australian Standard 1428: Design for access and mobility
- Australian Standard 1742: Manual of uniform traffic control devices
- Austroads Guide to Road Design Part 3: Geometric Design
- Austroads Guide to Road Design Part 4B: Roundabouts
- Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths

Table 3-1: Civil Design Standards

Parameter	Value	Reference
Traffic Lane width	3.5 meters	AGRD Part 3 Cl.4.2.4
Cycle Lane width	1.5 metres	AGRD Part 6A T5.2
Footpath Width	1.5 meters	AGRD Part 6A T5.1
Dual Usage Path Width	2.5 meters	AGRD Part 6A T5.3
Vertical grade	3% maximum (desirable)	AS 1428.1 Cl. 7.2
Traffic Lane Crossfall	3% maximum	AGRD Part 3 Cl.4.2.2
Footpath/DUP Crossfall	2.5% maximum	AS 1428.1:2021 Cl. 7.1
Design speed	60 km/h	AGRD Part 3 Cl.3
Cycle Lane Horizontal radius	9 metres minimum	AGRD Part 6A T5.7
Design Vehicle	8.5m Service Vehicle	Project requirement
Check Vehicle	12m Semi-trailer	Project requirement

3.1 Alignments

The new section of Indigo Parkway will extend from the east of the existing Indigo Parkway and Briggs Road to the north of Larsen Road and Sansimeon Boulevard. The proposed alignment is shown in Appendix E.

3.2 Tie-in

The new pavement will tie-in to the existing pavement at:

- Sansimeon Boulevard;
- Larsen Road;
- Portwine Avenue;
- Caraway Avenue; and
- Briggs Road.

3.3 Intersections

A single-lane roundabout was designed for the Larsen Road and Caraway Avenue intersection with central islands and pram ramps on the either side of the roundabout.

Several options were considered for the intersection of Indigo Parkway with Larsen Road, including both staggered t-intersections, and a 4-way roundabout. In consultation with the Shire, the roundabout option was agreed to be progressed due to improved traffic flows in comparison to the staggered t-intersection option. It is noted that due to the asymmetrical approach legs; the roundabout geometry shown in the detailed drawings does not accommodate the manoeuvring of vehicles longer than 12 meters making left turn movements from Larsen Road onto Indigo Parkway Westbound. As such, it is recommended that vehicles over 12 meters be prohibited from making left turns at this intersection.

Due to site constraints at the Caraway Ave/ Indigo Parkway intersection, various design iterations and layout options were explored between the 15% and 85% design stages. While a T-intersection would provide required geometry for turning movements of design vehicles within the currently allocated road reserve, due to funding commitments and anticipated traffic volumes accessing Carraway Ave from the intersection, a roundabout is understood to be required. Due to minimum radius required to accommodate swept paths of design vehicles, the alignment is required to deviate beyond the currently designated road reserve at this location and encroach into the Reserve (Type 3 R) Lot on the south side of the alignment.

3.4 Parking Bays

During 85% stage, 53 parallel car park bays were proposed to be included with a width 2.5 meters, to service the proposed multi-use corridor and future development to the South of Indigo Parkway.

Following Shire 85% design review comments, the number of bays has been reduced to enable the road and footpath carriageway to fit within proposed 22.5m road reserve adjacent to the Multiple Use Corridor.

3.5 Cycle lane

A 1.5 meter wide cycle lane is included either side of the road connecting from Larsen Road to Briggs Road.

3.6 Footpath

A 1.5 meter wide concrete footpath is includedalong south side of the road connecting existing footpath on Larsen Road and Sansimeon Boulevard to existing footpath on Briggs Road.

3.7 Dual Use Path

A 2.5 meter wide concrete dual use path was designed on the North side of the road connecting existing footpath on Larsen Road and Sansimeon Boulevard to existing footpath on Briggs road. The design has considered that experienced road cyclists will be using the on-road bicycle lane, and as such the dual use path has adopted a minimum design speed.

3.8 Stormwater Drainage

The stormwater strategy involves directing road runoff, with a 3% crossfall and kerb break structures drainage surface water into the 6-meter median drain.

A new box culvert, designed between chainage 0.86 and 0.88, will allow stormwater from the creek to flow into the existing open drain to the north of the road.

Hydraulic information has been adopted from the 360 Environmental Local Water Management Strategy report for sizing of culvert, swale reshaping, and design basin sizing. The existing culvert immediately downstream of the proposed Indigo Parkway Multi use corridor has also been taken into consideration.

Hydraulic and storage requirements for this basin have been guided from requirements outlined in the Local Water Management Strategy Plan (LWMS) previously undertaken by 360 Environmental, provided by the Shire. The geometry detailed in the LWMS study and included in concept design assumed a rectangular plan view of the basin, with a base area of 800m^2 and depth of 1.2m, and , side slopes of 1:6 H:V. Following detailed earthworks modelling, a rectangular plan view shape with the dimensions is not able to be accommodated considering the tie-in level constraints and available MUC area. A detention basin with capacity of 3300m^3 has been detailed in the design drawings with geometry designed to suit required road levels and geometry and outlet level constraints discharging to Oakland Creek. A 450mm RCP outlet at the base of the detention basin draining into the has been included as outlined in the Local Water Management Strategy Plan previously undertaken by 360 Environmental.

3.9 Kerbing and Ramps

Kerbing was designed to achieve drainage requirements of the road, with Shire Standard details being utilised. The kerbing design includes reinforced flush kerbs, semi-mountable kerbs and mountable kerbs, which are selected based on the road's traffic load and the drainage requirements. This ensures that water is efficiently guided into stormwater systems, minimising the risk of flooding and road damage.

Design includes the installation of 22 pram ramps to improve accessibility across the Indigo Parkway extension, with integrated TGSI elements to ensure safe navigation for visually impaired pedestrians.

Several existing kerb ramps have been identified as being non-compliant and have been included for reconstruction as part of this project.

3.10 Tree Removal

Talis commissioned Westworks Consultancy to undertake a tree survey. Westworks conducted the survey between Indigo Parkway and Sansimeon Boulevard, Byford, on 29 January 2025. The purpose of the inspection was to assess all trees within the area proposed for the Indigo Parkway extension.

A total of 70 trees were assessed during the survey, with the following breakdown:

- 25 trees identified as native species in accordance with the Environmental Protection Act 1986 (EPA Act).
- 45 trees classified as introduced species.
- 50 trees were found to be in fair health, which is considered normal for their species.
- 5 trees exhibit poor or very poor structural conditions.
- 13 trees are recommended for removal due to being dead or exhibiting poor to very poor health and/or structure. These trees have a reduced Useful Life Expectancy (ULE), making them unsuitable for preservation.
- No trees were observed to contain hollows or show signs of foraging activity within their canopies.
- 49 trees have a Future Habitat Value.
- 8 trees are classified as providing Roosting Value.
- 12 trees have No Habitat Value, due to their poor health, structural condition, or being unsuitable species for habitat purposes.
- A single tree was noted to contain a bird nest, assigning it a Low habitat value.

A copy of to Tree Survey report is provided in Appendix F.

Based on detailed design drawings, trees shown in the hatched areas in Figure 3-1 will require removal to construct the proposed Indigo Parkway extension.

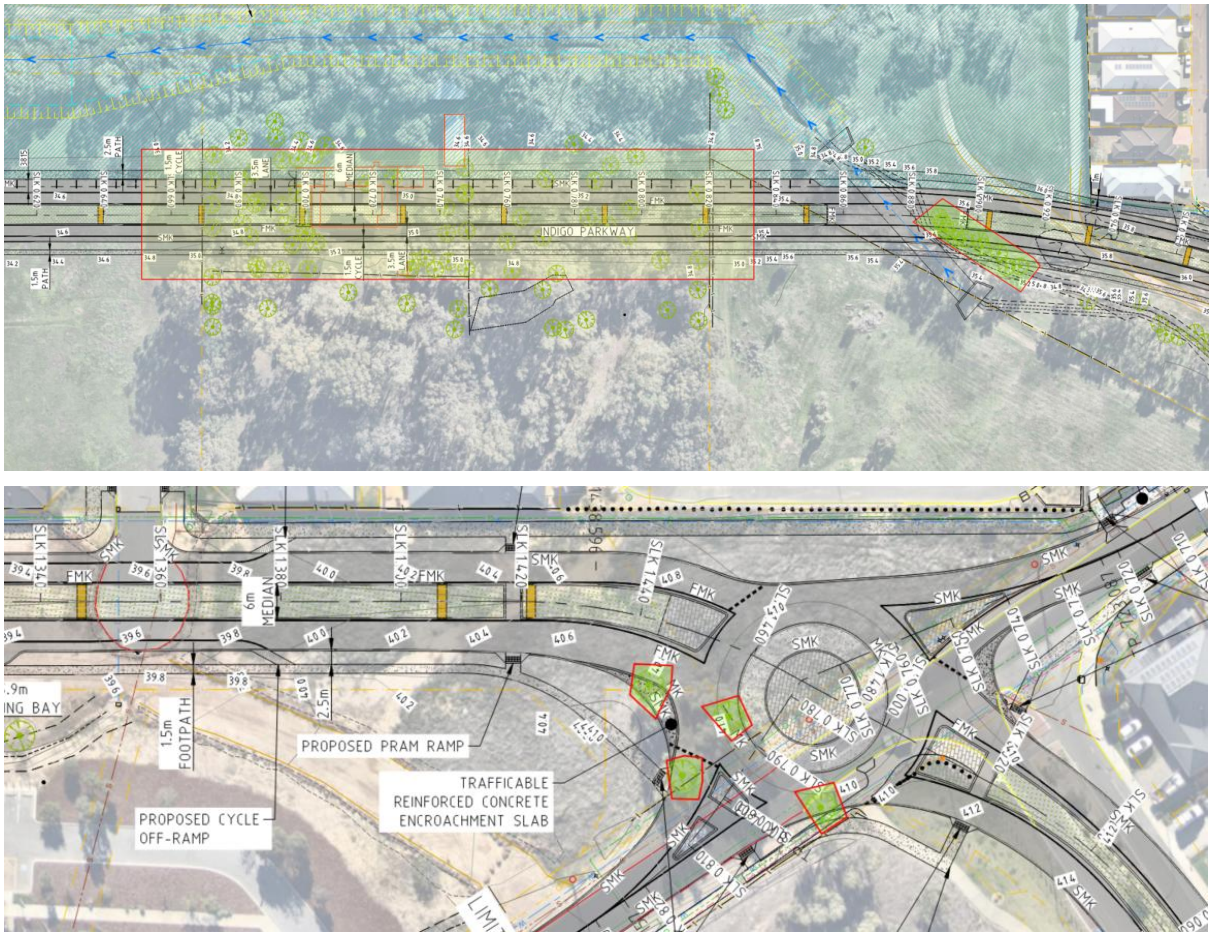


Figure 3-1: Required Tree Clearing

3.11 Existing Services

Talis commissioned Raidar Innovation to undertake service locating existing services within the proposed road reserve in July 2024. Existing services survey plans are shown in Appendix C.

3.12 Property Boundaries/Land Acquisition

The proposed road alignment will encroach into private property with existing property boundaries as detailed on Landgate database, shown on the Drawings in Appendix E. It is understood that the Shire has since acquired these properties and have lodged applications for Cadastral Boundary realignments to accommodate the required road reserve alignment.

To accommodate the roundabout intersection at Carraway Ave, the kerb line on the northern leg (Caraway Ave) is required to be realigned into the existing verge area adjacent to Properties #40 and #41. While the proposed design at this location is within the existing road reserve, the kerb realignments require demolition of existing landscaping and fencing adjacent within the road reserve at the front of Properties #40 and #41 Carraway Ave.

Preliminary areas of proposed land acquisition are shown in Appendix B.

3.13 List of Drawings

A list of drawings provided in the 100% design package is shown in Table 3-2

Table 3-2: Drawing Sheet List

Sheet Number	Sheet Title
C-000	Cover Page and Locality Plan
C-001	Existing Topography
C-002	Proposed Road Reserve Boundaries
C-101	General Arrangement 1 of 2
C-102	General Arrangement 2 of 2
C-103	General Notes
C-110	Opt 1 - Swept path
C-111	Land Acquisition
C-115	Plan & Profile Sheet 1
C-116	Plan & Profile Sheet 2
C-117	Plan & Profile Sheet 3
C-118	Plan & Profile Sheet 4
C-119	Plan & Profile Sheet 5
C-120	Plan & Profile Sheet 6
C-121	Plan & Profile Sheet 7
C-122	Plan & Profile Sheet 8
C-123	Indigo PWY Larsen Roundabout
C-125	Multi-use corridor layout
C-126	Stormwater Catchment Plan
C-127	Stormwater Layout
C-130	Signs and Lines Sheet 1

Sheet Number	Sheet Title
C-131	Signs and Lines Sheet 2
C-132	Signs and Lines Sheet 3
C-133	Signs and Lines Sheet 4
C-201	Cross sections Sheet 1
C-202	Cross sections Sheet 2
C-203	Cross sections Sheet 3
C-204	Cross Sections Sheet 4
C-205	Cross sections Sheet 5
C-206	Cross Sections Sheet 6
C-207	Cross Sections Sheet 7
C-208	Cross Sections Sheet 8
C-209	Cross Sections Sheet 9
C-210	Cross Sections Sheet 10
C-211	Cross Sections Sheet 11
C-212	Cross Sections Sheet 12
C-213	Cross Sections Sheet 13
C-301	Typical Section

4 Road Safety Audit

A copy of the Road Safety Audit undertaken on the 85% design package is provided as an attachment.

A summary of findings, recommendations and design responses is provided in Table 4-1.

Table 4-1: Road Safety Audit Findings and Response Summary

Finding No.	Description	Recommendation	Talis Comment
2.1	Restricted sightline for pedestrians crossing Indigo Parkway due to the wall	"Sufficient sight distance should be provided for pedestrians to cross the road in accordance with Austroads guidelines. Additional mitigation measures could include an Advance Pedestrian crossing signage (W6-1) placed on approach."	Vehicles approaching Indigo Parkway intersection from Briggs Street are required to stop. Additional Advance warning signs has been included.
2.2	"There is a risk of road users not being aware of the change to the intersection and suddenly stopping or overshooting the intersection resulting in a rear end or right angle crash"	"A One Way (R2-2) sign should be installed on the median opposite the side road approach. An advance T junction signage should be installed on the approach to the intersection."	Additional warning signs included as per recommendations
2.3	“Approach to RAB's not aligned with central annulus.”	"The pavement line marking should align with the central annulus of the roundabout as detailed in the Austroads Guidelines"	Line marking amended to provide improved alignment with central annulus.

Finding No.	Description	Recommendation	Talis Comment
2.4	“There are side streets that road users could shortcut across the verge to access Indigo Parkway.”	"The side roads should have a suitable treatment to ensure that vehicles do not shortcut across the verge into Indigo Pathway.”	Bollards included adjacent to Sandalwood Road. Due to existing underground services adjacent to Primrose Loop, it is suggested that this section be monitored and if road users shortcutting through is an issue, that an rock boulders (or similar treatment with minimal subsurface depth) be placed to block unsafe thoroughfare.
2.5	“Location of the existing bus stop on Larsen Road.”	“A review should be undertaken to establish if the existing bus stop should be relocated further from the proposed roundabout.”	Bus stop to be relocated further East along Larsen Road.
2.6	“The plans do not show connections to the existing paths”	“The path connections to existing paths should be detailed on the drawings”	Relevant footpaths on drawings have been extended to connect to existing. Additional kerb ramp reconstructions included.
2.7	“The drawings show a gap in the kerbing where the large culvert is to be installed.”	“The placement of guide posts at the start and end of the kerb as well as median edge line marking should be detailed on the drawings.”	Edge line and signage included on signs and lines drawings.
2.8	“The drawings do not show all vehicle swept paths at intersections.”	“The turning swept paths of large vehicles should be detailed for all intersections along Indigo Pathway.”	Swept paths included in drawing set. Design vehicle parameters for each intersection outlined in design report.

Finding No.	Description	Recommendation	Talis Comment
2.9	"Non-Frangible objects near the traffic lane."	"Determine the Network Roadside Risk Intervention Threshold for the road. If the action is to treat only the isolated hazards, then those that present a higher risk should be treated first. These will be the isolated hazards that are closer to the road. Alternatively, use the Austroads: Guide to Road Design Part 6 - Roadside Design Safety and Barriers (2010) Table 4.1: Clear zone distances from the edge of through travelled way and provide a suitable clear zone or shield hazards with road barriers."	Swept paths included in drawing set. Design vehicle parameters for each intersection outlined in design report.
2.10	"The drawings show a crossfall of -3% which is steep for a roundabout with high bus usage"	"The high adverse crossfall may be a discomfort to bus patrons."	Crossfall considered however retained for drainage requirements.
2.11	"Tactile Ground Surface Indicators"	"The Tactile Ground Surface Indicators should be installed to AS 1428.4. The path crossing alignment at various locations should be compliant with recommendations for universal access. A landing behind the ramp should be provided."	Additional TGSI's included in accordance with AS 1428.4. Level Landings minimum 1500mm wide included in drawings.
2.12	"The start of kerbing should be delineated with a guide post to assist the road user past the end of the kerb."	"The start of kerbing should be delineated with a guide post to assist the road user past the end of the kerb"	Guide post to be installed at kerb termination.

Finding No.	Description	Recommendation	Talis Comment
2.13	“Service Pit Covers in Traffic Lane.”	“Service lids should not be installed in the traffic lane, when not possible, they should have a textured cover or skid resistant coating.”	“Service lids relocated where posible. Concrete infill Class D lids to be installed where pits are required to be located within traffic lane.”
2.14	“Missing signage”	“A One Way (R2-2) sign should be installed on the median opposite the side road.”	Additional signage included
2.15	“There are sections of car parking adjacent to the cycle lane along Indigo Parkway”	“Where parking has been placed adjacent to a cycle lane which has a high turnover of parked vehicles a bicycle safety strip should be installed.”	Bicycle safety strip previously explored and deemed impractical within road reserve constraints.

5 Conclusion

The proposed road alignment commences from the East of the existing Indigo Parkway and Briggs Road to the north of Larsen Road and Sansimeon Boulevard.

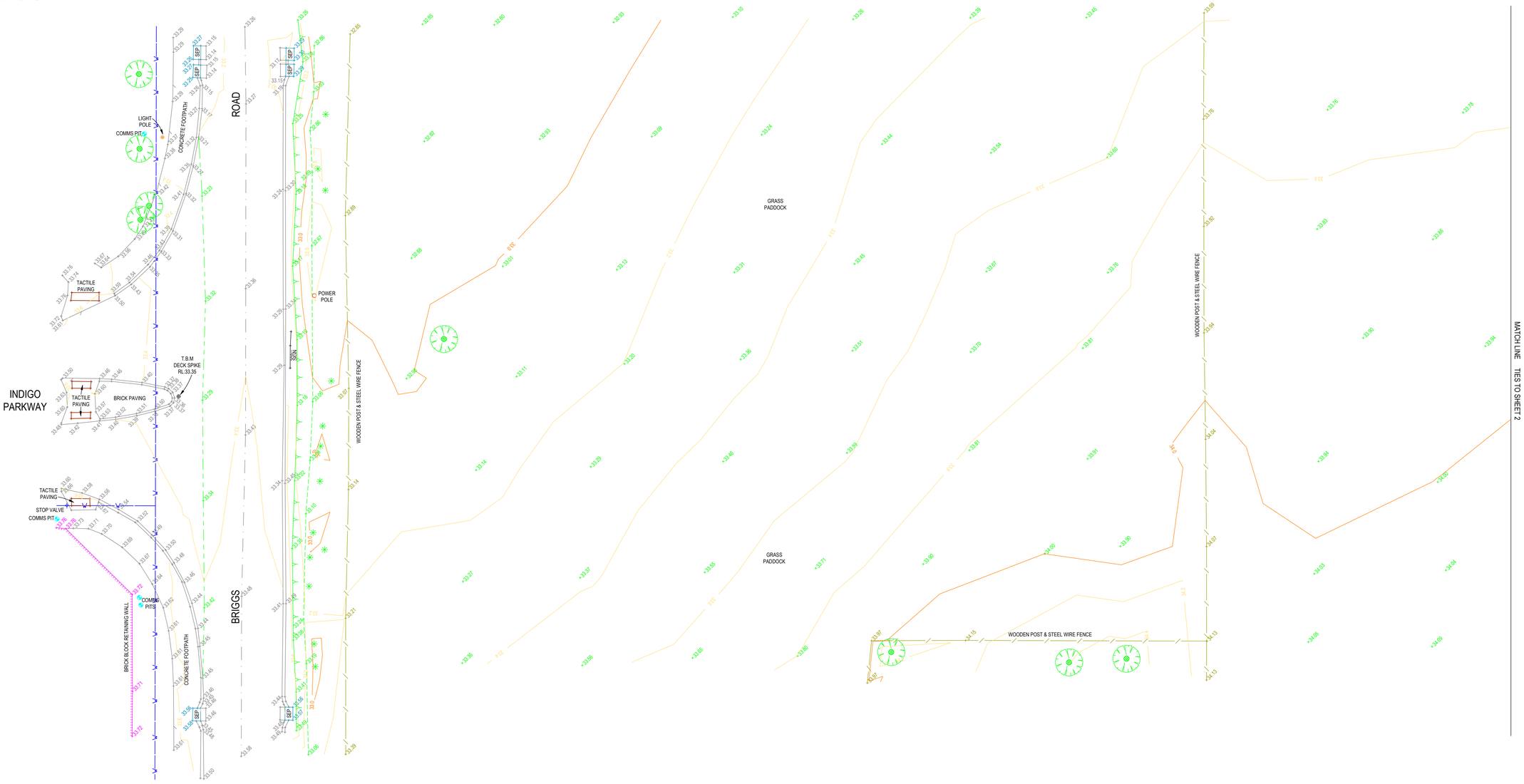
The follow comments are provided:

- 100% Lighting design reflecting kerb alignments revisions is currently being finalised at time of issuing this report.
- The Shire should continue its consultations with the two property owners at Properties #40 and #41 Carraway Ave, and #1 Sansimseon Boulevard.

APPENDIX A
Existing Survey

LEGEND

- Centre of Road
- Lane Marking
- Kerb
- Edge of Driveway/Concrete
- Edge of Bitumen
- Major Contour (1m)
- Minor Contour (0.2m)
- Building
- Retaining Wall
- Wall
- Fence Line
- Gate
- Line of Levels
- Bottom of Bank
- Top of Bank
- Drainage Pipe
- Sewer Main (from Water Corp data)
- Water Main (from Water Corp data)
- Overhead Power
- Significant Tree
- Grass Tree
- Hydrant
- Bollard
- Spot Height



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4. SERVICES INFORMATION TO BE CONFIRMED WITH RELEVANT AUTHORITIES. FOR UNDERGROUND SERVICES CONTACT "DIAL BEFORE YOU DIG" FOR CONFIRMATION OF THOSE SERVICES.
5. AHD CONNECTION DETERMINED FROM CONNECTIONS MADE TO SSM WUNGONG 23.
6. SOME LEVELS ARE FROZEN FOR CLARITY.

SHEET 1 0F 9

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ALL DISTANCES ARE IN METRES

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JUROVICH SURVEYING
ABN 60 146 230 944
3/47 MONASH AVE COMO, WA 6152
PO BOX 3066 SHELLEY, WA 6148
1300 57 00 00
info@jurovichsurveying.com.au
www.jurovichsurveying.com.au

FEATURE & LEVEL SURVEY
INDIGO PARKWAY
BRIGGS ROAD TO LARSEN ROAD, BYFORD
SHIRE OF SERPENTINE JARRAHDALE

CLIENT: TALIS CONSULTANTS

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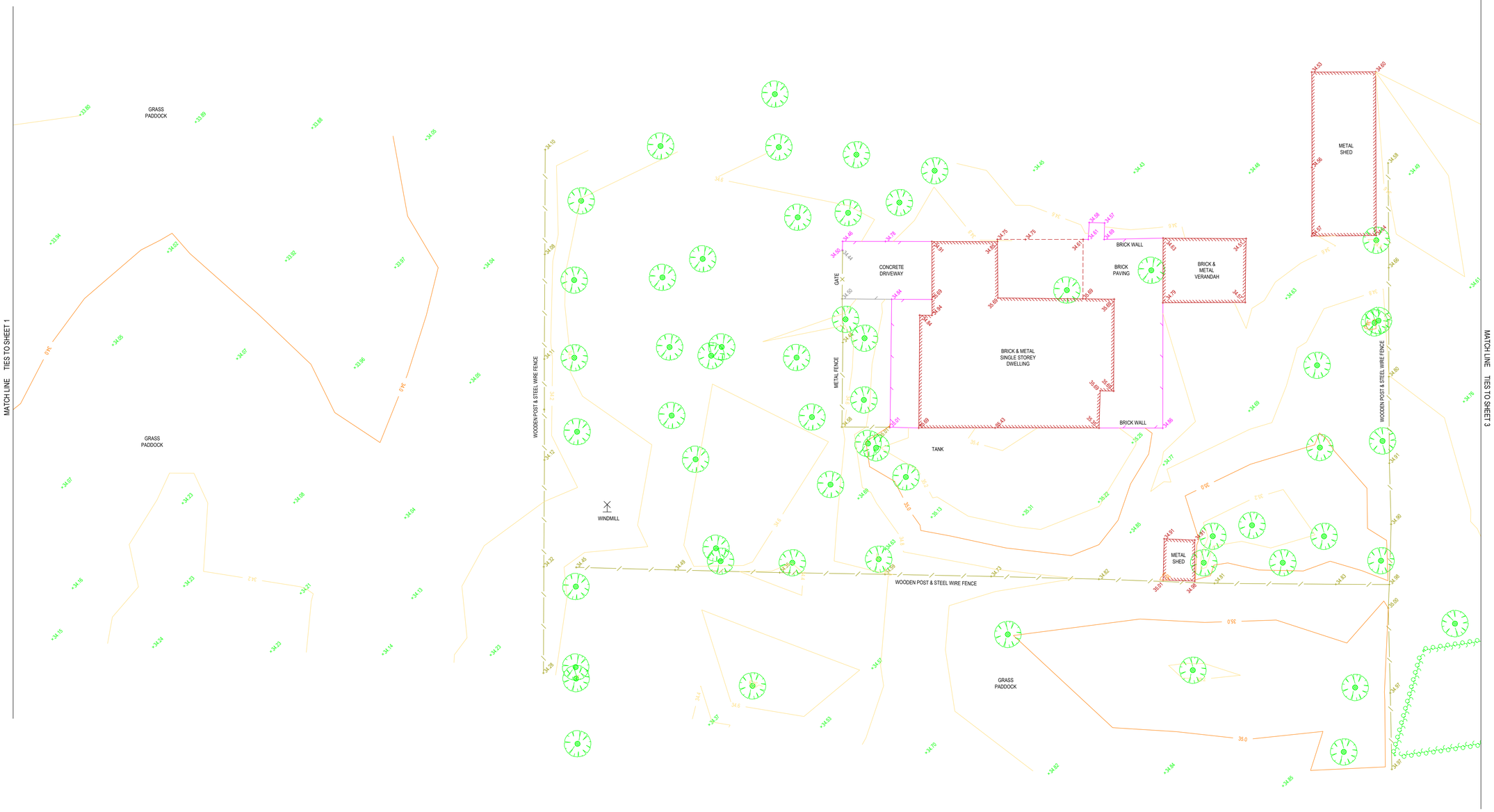

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PO BOX 3066 SHELLEY, WA 6148
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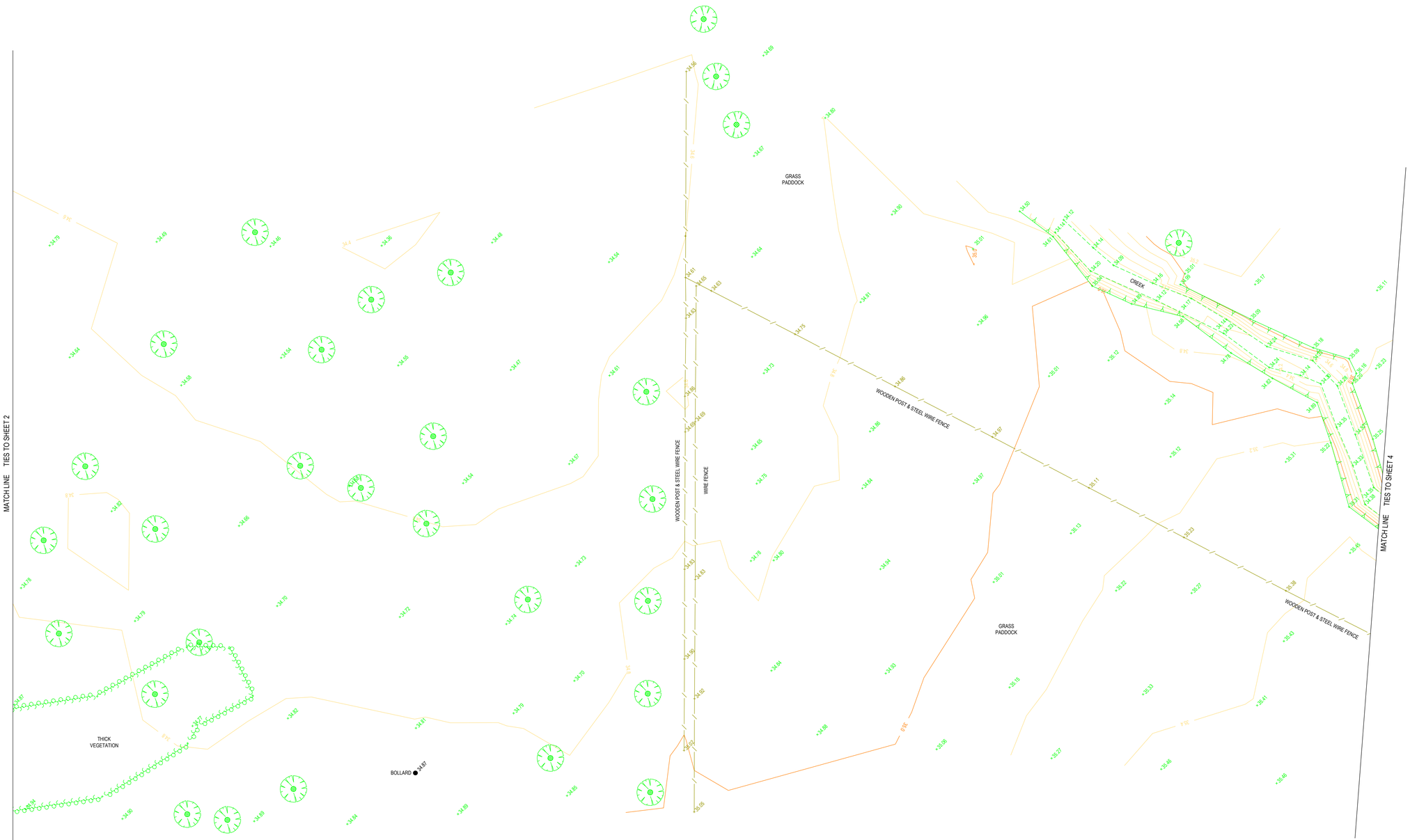

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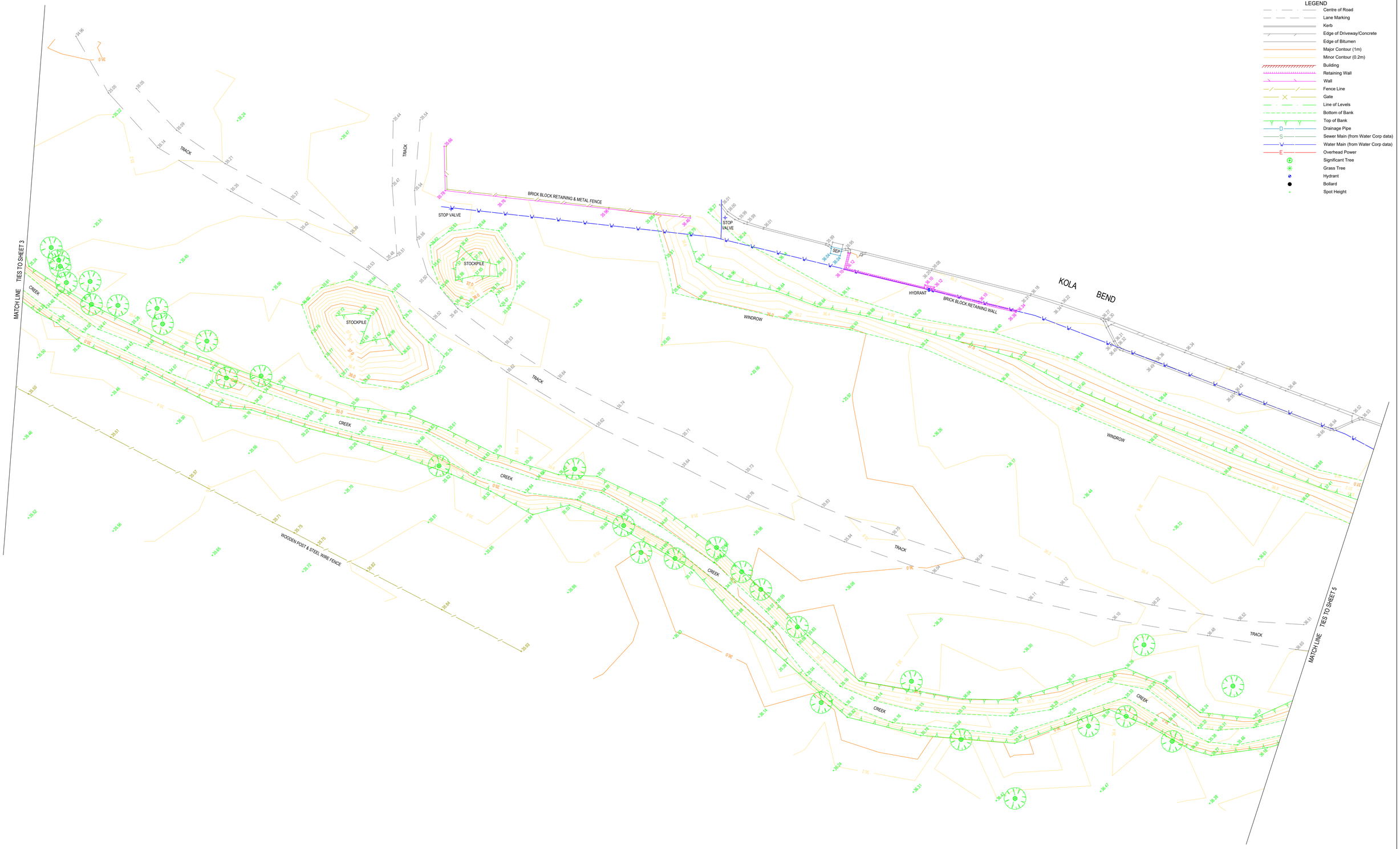

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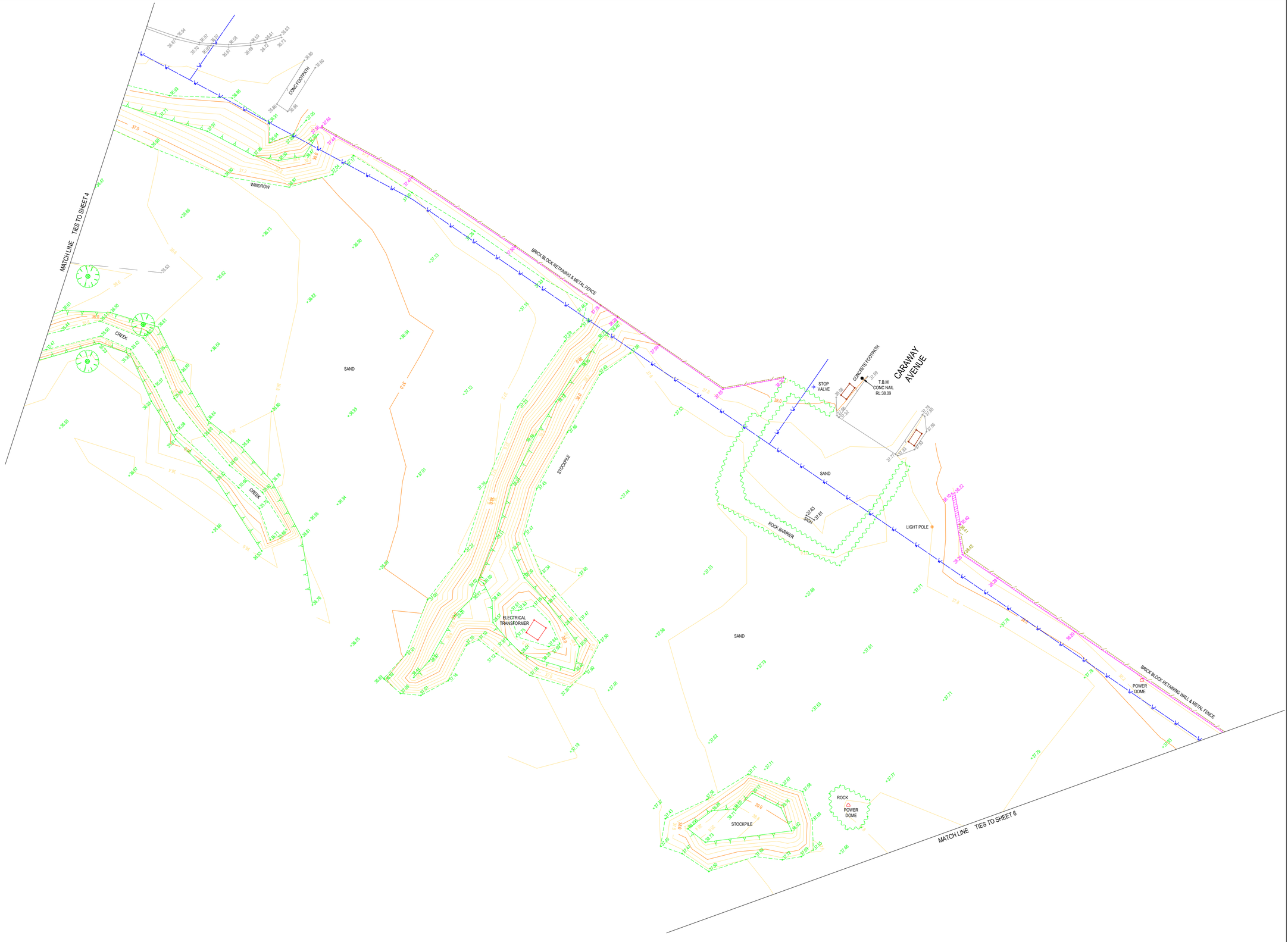
- Edge of Driveway/Concrete
- Edge of Bitumen
- Major Contour (1m)
- Minor Contour (0.2m)
- Building
- Retaining Wall
- Wall
- Fence Line
- Gate
- Line of Levels
- Bottom of Bank
- Top of Bank
- Drainage Pipe
- Sewer Main (from Water Corp data)
- Water Main (from Water Corp data)
- Overhead Power
- Significant Tree
- Grass Tree
- Hydrant
- Bollard
- Spot Height



NOTES:

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5. AHD CONNECTION DETERMINED FROM CONNECTIONS MADE TO SSM WUNGONG 23.
6. SOME LEVELS ARE FROZEN FOR CLARITY.

SHEET 5 0F 9

5 0 5 10 15 20

SCALE: 1:200 @ A1
ALL DISTANCES ARE IN METRES

NORTH

SURVEYOR:	EG		
SURVEY DATE:	5/07/2024		
FILE:	24418B.see		
HOR. DATUM:	PCG2020		
VERT. DATUM:	AHD71		
DRAWN:	BC	CHECKED:	EG/JP

JUROVICH SURVEYING
ABN 60 146 230 944
3/47 MONASH AVE COMO, WA 6152
PO BOX 3066 SHELLEY, WA 6148
1300 57 00 00
info@jurovichsurveying.com.au
www.jurovichsurveying.com.au

FEATURE & LEVEL SURVEY
INDIGO PARKWAY
BRIGGS ROAD TO LARSEN ROAD, BYFORD
SHIRE OF SERPENTINE JARRAHDALE

CLIENT: TALIS CONSULTANTS

A1 SCALE: 1 : 200	JS JOB No: 24418	DWG Name: 24418-01	REV: A

LEGEND

- Centre of Road
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- Kerb
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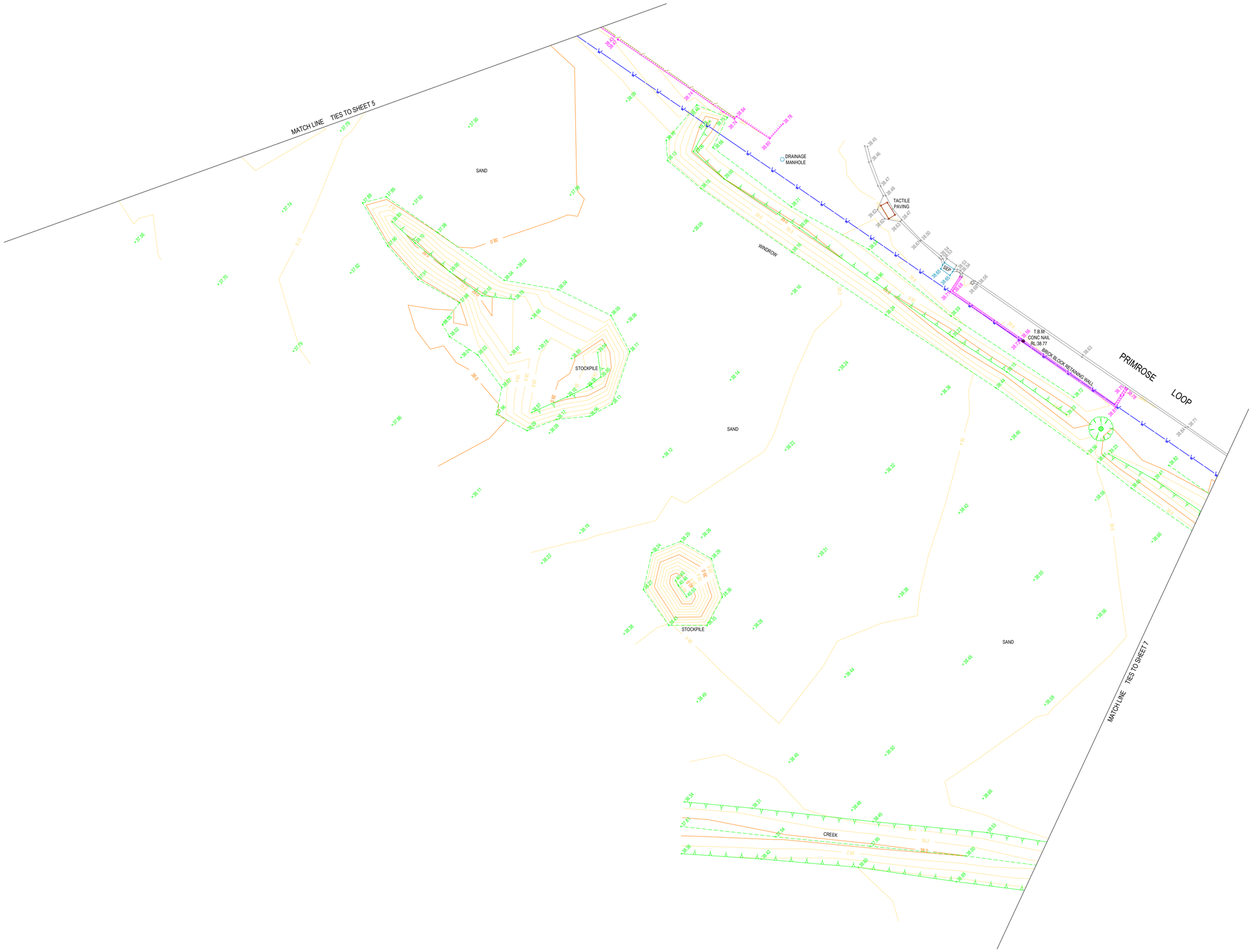

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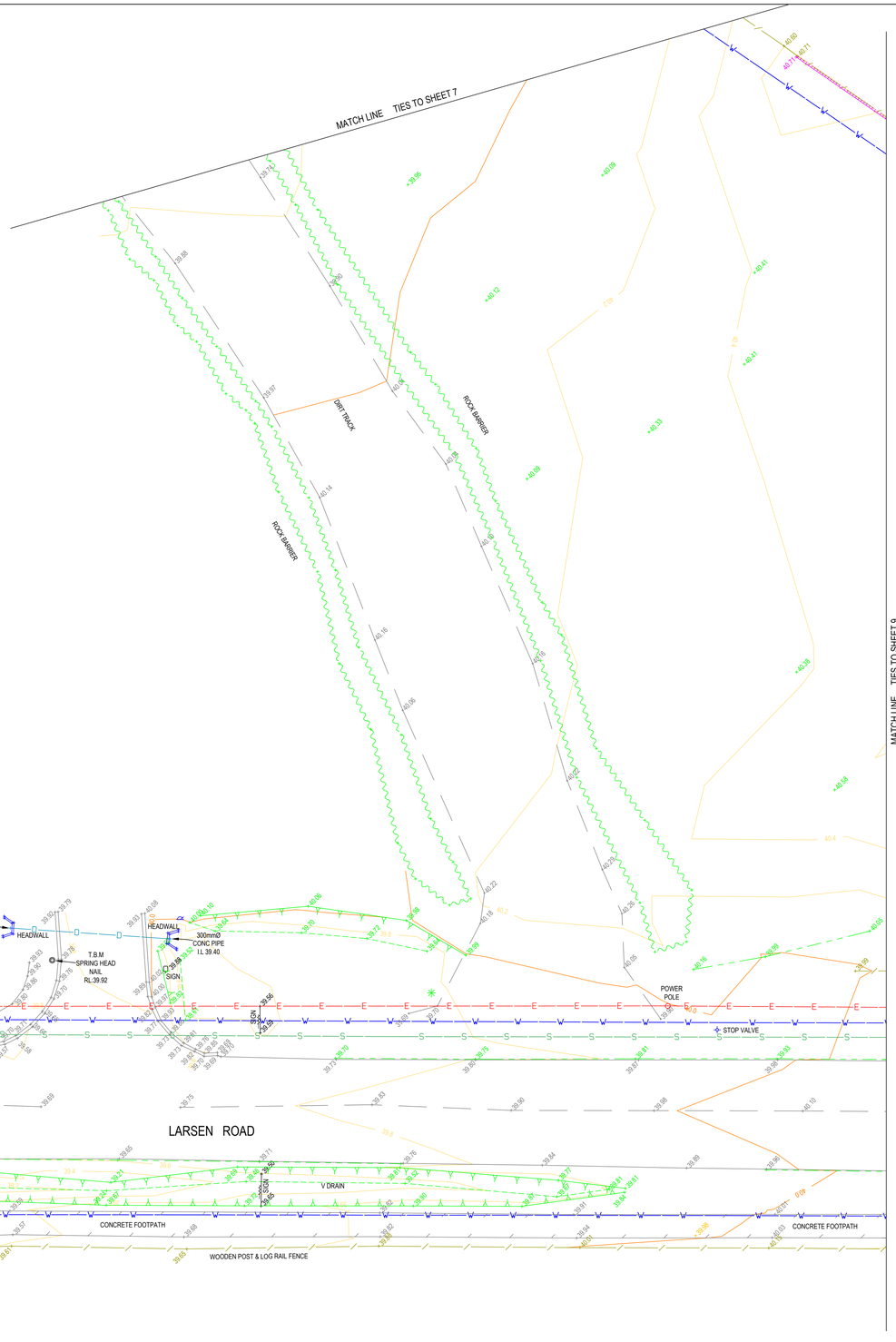

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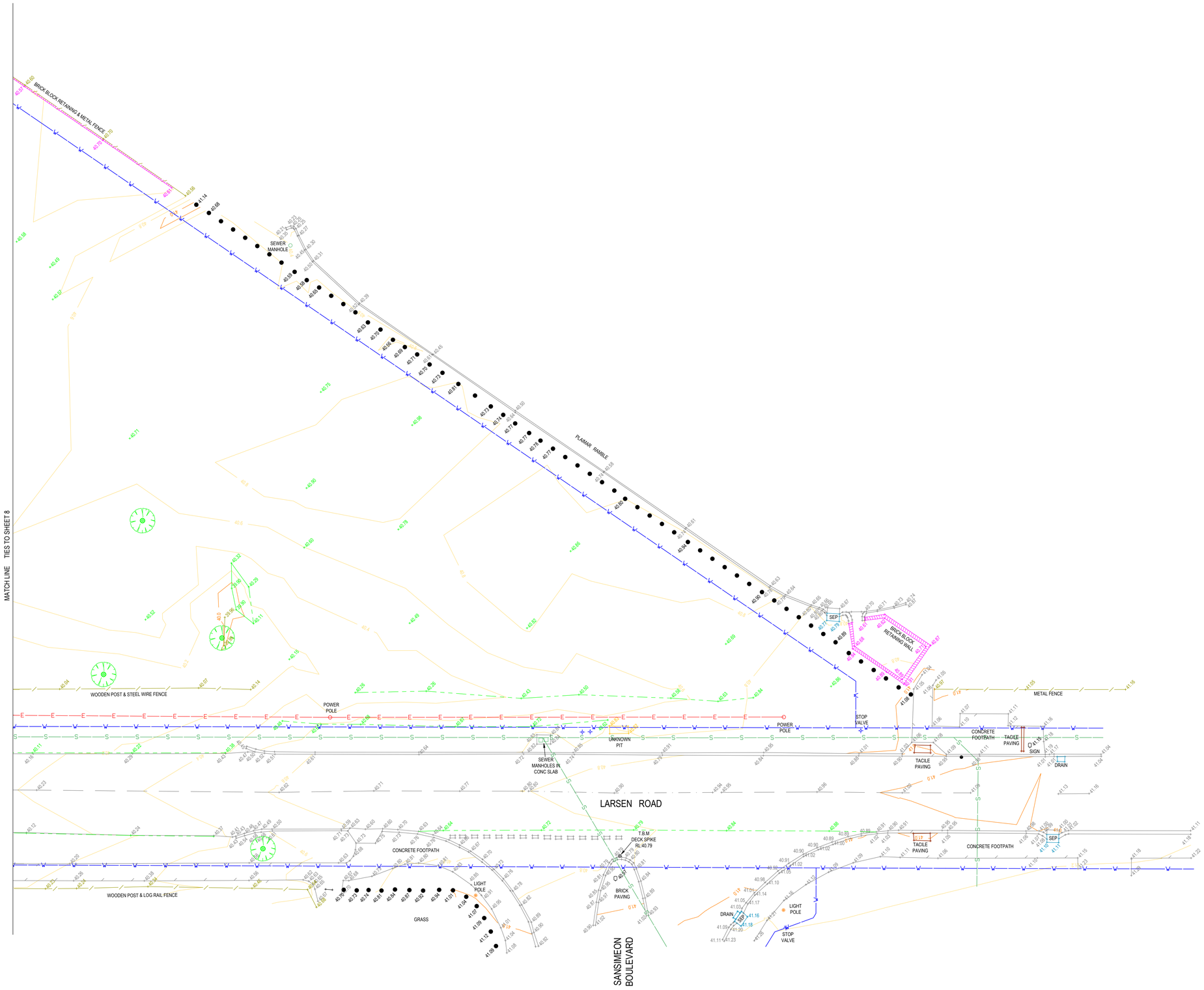

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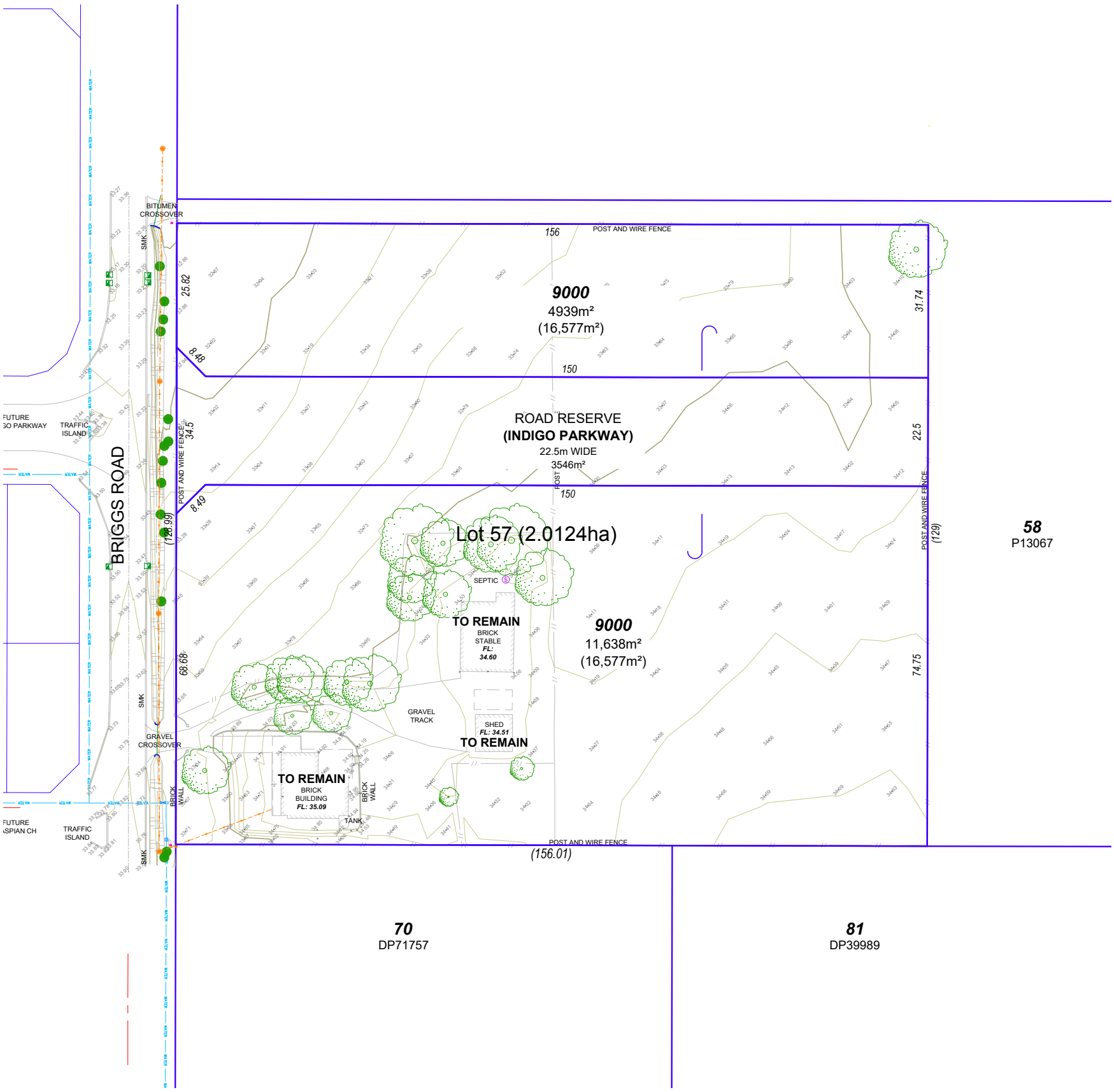
CLIENT: TALIS CONSULTANTS

A1 SCALE: 1 : 200	JS JOB No: 24418	DWG Name: 24418-01	REV: A

APPENDIX B
Preliminary Land Acquisition

DEPARTMENT OF PLANNING, LANDS AND HERITAGE

DATE	FILE
16-Apr-2024	200134



SCALE
HORIZ. 0 10 20
A1 1:500 / A3 1:1000

REV	AMENDMENTS	APP'D	DATE	GENERAL NOTES / REFERENCES
0	FOR ISSUE		28/2/24	

KR SURVEYS

DRAWN/SURVEYED BY:	CHECKED BY:	VERIFIED BY:	COORD SYSTEM | HEIGHT DATUM:
GH	GH	AK	PCG94 | AHD

PLOT DATE: 27/03/2024 LOCATION: BYFORD

PRE CALCULATION PLAN
LOT 57 on PLAN 13067
#57 BRIGGS ROAD, BYFORD

DRAWING STATUS:	DRAWING NO:	REV
FINAL	S_0262	0

DWG LOCATION: C:\Users\GerardHoskins\KR Surveys\KRData - Survey Projects\S-0262_57 BRIGGS ROAD, BYFORD\#SUBDIVSION PROCESS#\200. WAPC Application\57_BRIGGS_PRECALC_03.dwg

DEPARTMENT OF PLANNING, LANDS AND HERITAGE

DATE 18-Dec-2023 | FILE 164166

7 | 9 | 114 | 4 | 5 | 6

ROAD | THOMAS | BRIGGS ROAD

Underground Power | Overhead Powerlines | Sewer | Water

Thomas Road widening requirement under Metropolitan Region Scheme

106.13 | 229.52 | 122.0 | 8.06 | 7.91 | 177.62 | 173.6

R37332 151

61 2.0653ha | 62 2.1633ha | 1 8.684ha | 60 2.1774ha | 59 2.3767ha | 9511

181.92 | 144.71 | 260.48 | 124.0 | 67.0 | 64.0 | 122.07 | 190.9 | 114.0 | 114.0 | 99.6 | 191.0 | 341.95 | 28.45

Existing Dwelling to be removed | Existing Shed to be removed

Multiple Use Corridor per Lots 59-62 Briggs Road Local Structure Plan & associated development approval

57 | 58 | 53 | 379 | 376 | 371 | 364 | 369 | 8000

LEGEND:

SUBJECT LAND -

PROPOSED AMALGAMATION

LOTS 61 & 62 THOMAS RD & LOTS 59 & 60 BRIGGS RD BYFORD

SHIRE OF SERPENTINE - JARRAHDALE

0 20 40 60 80 100 120 140m

SCALE: 1:2000
ORIGINAL PLAN SIZE: A3

JOB CODE: EDE BRI GE

DATE: 07.12.2023

Allerding & Associates
Town Planners, Advocates and Subdivision Designers

125 Hamersley Road, Subiaco WA 6008
T: (08) 9382 3000 | F: (08) 9382 3005 | W: allerdingassoc.com

APPENDIX C
Existing Services

SURVEY CONTROL LISTING (PCG2020/AHD):
*CONTRACTORS TO VERIFY ALL SURVEY CONTROL MARKS TO BE CORRECT (BY FIELD CHECKS) PRIOR TO UTILISATION FOR CONSTRUCTION PURPOSES

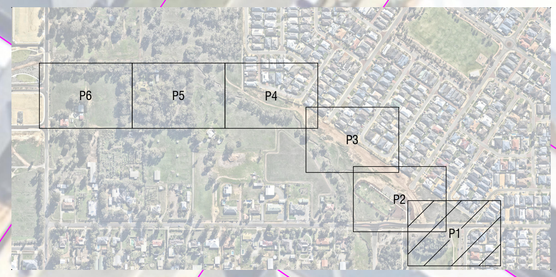
STN#	EAST	NORTH	HEIGHT	DESCRIPTION
9000	67330.380	334773.420	39.591	DECK SPIKE IN BITUMEN
WUN20	66533.074	334416.616	35.718	STATE SURVEY MARK
WUN23	66879.450	335406.409	32.668	STATE SURVEY MARK

1:250 @ A1

5 0 5 10

PLAIMAR RAMBLE

LARSEN ROAD



NOTES:
* THIS NOTE IS AN INTEGRAL PART OF THIS PLAN OR THE DATA AS TRANSMITTED. OMISSION OF THIS NOTE WHEN TRANSMITTING THIS PLAN OR ACCOMPANYING DATA OR ANY PART THEREOF TO ANY THIRD PARTY WILL RENDER THIS PLAN OR DATA INVALID.

DIGITAL DRAWING:
* SEE INDEX SHEET FOR NOTES, CONTROL LISTING AND FEATURE LEGEND
* DATA EXISTS ON LAYERS THAT HAVE BEEN DIGITALLY SWITCHED OFF. THE DATA IS NOT SHOWN ON THIS PAPER PLAN FOR CLARITY.
* DATA EXISTS IN THE MODEL SPACE OF THIS PLAN OUTSIDE THE EXTENTS OF PLOTTED SHEETS.
* DATA SUPPLIED IS CORRECT AT THE TIME OF SURVEY. ALTERATIONS TO SITE ARE POSSIBLE AFTER THIS DATE. REFER TO REVISION DATES.
* THIS PLAN HAS BEEN PREPARED FOR THE CLIENT AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE UNLESS AUTHORISED BY CROSSLAND & HARDY PTY LTD.

UNDERGROUND UTILITIES:
* WHERE DEPTH IS ANNOTATED WITH "D?", NO DEPTH HAS BEEN SUPPLIED BY LOCATOR.
* UNDERGROUND UTILITY DETECTION UNDERTAKEN BY TRIODIA SCANNING SERVICES PTY LTD.
* UNDERGROUND UTILITIES DETECTED USING ELECTRONIC METHODS. THE DATA SHOWN REPRESENTS SPATIAL ACCURACY TO QUALITY LEVEL B STANDARD AS DEFINED IN AS5488.1-2022, HOWEVER THE ACCURACY OF ELECTRONIC DETECTION MAY VARY WITH SITE CONDITIONS (SOIL TYPE, UTILITY TYPE, UTILITY DEPTH ETC). POSITIONAL UNCERTAINTY CAN BE GREATER THAN +/- 500mm.
* UNDERGROUND UTILITIES HAVE BEEN SURVEYED AT GROUND LEVEL WHERE ELECTRONICALLY DETECTED. THE UTILITY LEVEL IS CALCULATED FROM SUBTRACTING THE DETECTED DEPTH FROM THE SURVEYED GROUND LEVEL. WHERE DEPTH INFORMATION FOR A SURVEYED POINT WAS NOT AVAILABLE THE DEPTH HAS BEEN INTERPOLATED BETWEEN ADJACENT POINTS WITH KNOWN DEPTHS.
* WHERE AN UNDERGROUND UTILITY TOP OF PIPE HAS BEEN DIRECTLY MEASURED (POT HOLE OR EXPOSED), THEN THE SPATIAL ACCURACY OF THE SURVEYED POINT IS IN ACCORDANCE WITH QUALITY LEVEL A AS DEFINED IN AS5488.1-2022. QUALITY LEVEL A POINTS ARE SHOWN WITH A POINT SYMBOL, SEE LEGEND OF FEATURES.
* UNDERGROUND UTILITY ALIGNMENTS ARE REPRESENTED WITH STRAIGHT LINES JOINING SURVEYED POINTS. THE TRUE SERVICE ALIGNMENT MAY VARY BETWEEN SURVEYED POINTS.
* NO RESPONSIBILITY CAN BE ACCEPTED BY CROSSLAND & HARDY PTY LTD FOR ANY DAMAGE CAUSED TO ANY UNDERGROUND SERVICE OR ANY LOSS OR INJURY SO SUFFERED IF ENQUIRY AND VERIFICATION HAVE NOT BEEN COMPLETED IN ACCORDANCE WITH THIS NOTE.

TOPOGRAPHIC:
* TOPOGRAPHIC SURVEY UNDERTAKEN USING RTK GPS (ACCURACY +/-30mm, WHERE LEVELS ARE SHOWN).

AERIAL IMAGE:
* AERIAL IMAGE (NEARMAP JUNE 2024). POSITION AND SCALE IS APPROXIMATE. COPYRIGHT NEARMAP.

LEGEND

- COMMS PIT
- DRAIN GRATE
- DRAIN PIT
- DRAIN SEP
- ELEC DOME
- ELEC LIGHT POLE
- ELEC POWER POLE
- ELEC TRANSFORMER
- GNSS CK SHOT
- SEWER PIT
- SURVEY DECK SPIKE
- SURVEY SSM
- WATER HYDRANT
- WATER MARKER
- WATER STOP VALVE
- CAD BOUNDARY
- COMMS CABLE QLB
- COMMS CABLE QLD
- DRAIN PIPE QLB
- POWER CABLE QLB
- GAS PIPE QLB
- GAS PIPE QLD
- UNKNOWN QLB
- WATER PIPE QLB
- SEWER PIPE QLB
- SEWER PIPE QLD

REV	INITIAL	DATE	C&H VERSION	REVISION DETAILS
0	RW	19-07-2024	VERS 01	INITIAL PLAN RELEASE

SERVICE LOCATION SURVEY
INDIGO PARKWAY, BYFORD

CROSSLAND & HARDY PTY LTD
CONSULTING LICENSED SURVEYORS
177 RAILWAY PARADE, MAYLANDS 6051
TEL 08 9272 2214 FAX 08 9370 1547
EMAIL info@chsurveys.com.au
A.B.N. 46 008 745 542

REF 9589/01
SURVEYOR RW
DWG SIZE A1

Prepared for: RAIDAR INNOVATION

VER DATUM: AHD
ORIGIN: SSM WUN20

CO-ORD SYSTEM: PCG2020
ORIGIN: SSM WUN20

CAD 958901 - INDIGO PARKWAY BYFORD - SERVICE LOCATION SURVEY.DWG

DATE 19/07/2024

SCALE 1:250

PLAN 9589/01

REVISION 0

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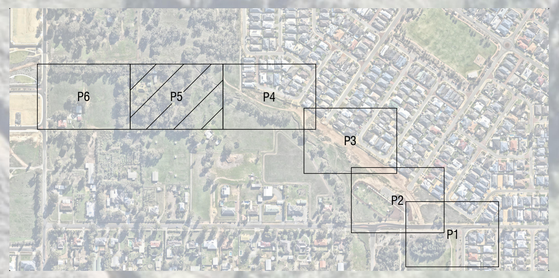

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DATE 19/07/2024

PLAN 9589/01

SCALE 1:250

REVISION 0

APPENDIX D
Geotechnical Test Results

ASLAB PTY LTD
ABN 14008786794 ACN 008786797
Independant Materials Testing
68A Boulder Road MALAGA WA 6090
Telephone: 6249 8100
NATA Accredited Laboratory No. 2991

REPORT NO: 96126 **DATE:** 22/08/2024

CLIENT: **JOB NO.:** 5382

Talis Consultants
660 Newcastle Street
Leederville WA 6007

ORDER NO:
Indigo Parkway, Byford

Zero Point:

CHARACTERISTIC MOISTURE CONTENT REPORT

Sample No.	Location Chainage / Offset	Field Moisture %
S74861	Site 1 As Per Map	**16.9**
S74862	Site 2 As Per Map	**10.6**
S74863	Site 3 As Per Map	**8.0**
S74864	Site 4 As Per Map	**9.9**

DATE TESTED: **19/08/2024**

TIME TESTED: 10:00am

MATERIAL DESCRIPTION: Sandy Clay

TEST DEPTH: **500**

DEPTH OF LAYER: **500**

COURSE TESTED: **Embankment**

Alex Issaya
Authorized signatory

Report No: 96126

Job No: 5382

Date: 22/08/2024

Client: Talis Consultants

Location: Indigo Parkway, Byford

Note: Approximate Locations

ASLAB PTY LTD
ABN 14008786794 ACN 008786797
Independant Materials Testing
68A Boulder Road MALAGA WA 6090
Telephone: 6249 8100
NATA Accredited Laboratory No. 2991

NATA
WORLD RECOGNISED ACCREDITATION

REPORT NO: 96250

DATE: 4/09/2024

CLIENT:

Talis Consultants
660 Newcastle Street
Leederville WA 6007

JOB: 5382

ORDER NO.
MATERIAL: Clay Subgrade
JOB: Indigo Park Way, Byford
Pit 1

SOILS TEST REPORT

SIEVE mm	% PASSING	SPECIFICATION %
75.0		
53.0		
37.5	100	
26.5	92	
19.0	91	
13.2	87	
9.5	84	
6.7	80	
4.75	77	
2.36	73	
1.18	71	
0.600	60	
0.425	46	
0.300	32	
0.150	20	
0.075	16	

SAMPLE NO: S74857

SAMPLED BY: ASLAB

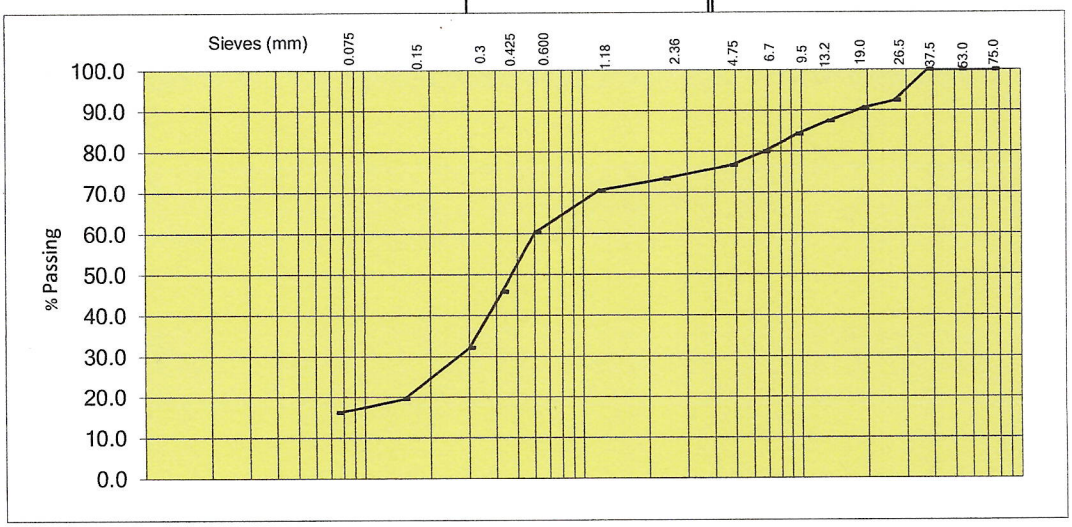
DATE SAMPLED: 18/08/2024

SAMPLE METHOD: AS 1289.1.2.1

DATE TESTED: 23/08/2024

TEST METHOD: AS 1289.3.6.1 (wet)

SOURCE: Oven dried



PROCEDURE	METHOD	RESULT	SPECIFICATION
Cone liquid Limit	AS1289.3.9.1	25 %	
Plastic Limit	AS1289.3.2.1	13 %	
Plasticity Index	AS1289.3.3.2	12 %	
Linear Shrinkage	AS1289.3.4.1	4.5 %	
SAMPLE HISTORY:	Oven dried	PREPARATION METHOD:	Dry sieved

Accredited for compliance with ISO/IEC 17025 - Testing

SIGNED.

Mark Fry
Authorised Signatory

ASLAB PTY LTD
ABN 14008786794 ACN 008786797
Independant Materials Testing
68A Boulder Road MALAGA WA 6090
Telephone: 6249 8100
NATA Accredited Laboratory No. 2991

NATA
WORLD RECOGNISED ACCREDITATION

REPORT NO: 96259

DATE: 4/09/2024

CLIENT:

JOB: 5382

Talis Consultants
660 Newcastle Street
Leederville WA 6007

ORDER NO.
MATERIAL: Clay Subgrade
JOB: Indigo Park Way, Byford
Pit 2

SOILS TEST REPORT

SIEVE mm	% PASSING	SPECIFICATION %
75.0		
53.0		
37.5		
26.5	100	
19.0	99	
13.2	96	
9.5	93	
6.7	87	
4.75	82	
2.36	78	
1.18	75	
0.600	64	
0.425	52	
0.300	42	
0.150	29	
0.075	24	

SAMPLE NO: S74858

SAMPLED BY: ASLAB

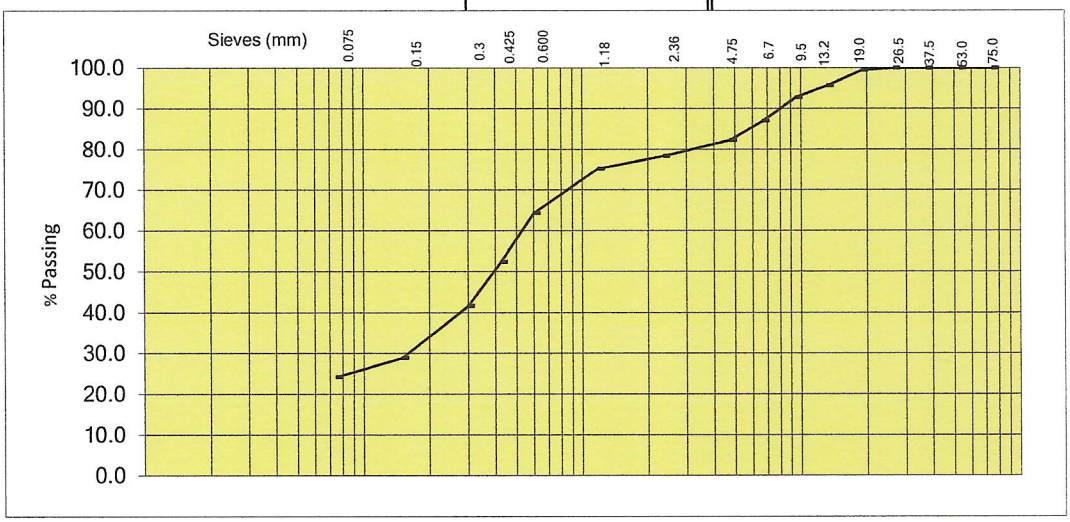
DATE SAMPLED: 18/08/2024

SAMPLE METHOD: AS 1289.1.2.1

DATE TESTED: 23/08/2024

TEST METHOD: AS 1289.3.6.1 (wet)

SOURCE: Oven dried



PROCEDURE	METHOD	RESULT	SPECIFICATION
Cone liquid Limit	AS1289.3.9.1	32 %	
Plastic Limit	AS1289.3.2.1	13 %	
Plasticity Index	AS1289.3.3.2	19 %	
Linear Shrinkage	AS1289.3.4.1	8.0 %	
SAMPLE HISTORY:	Oven dried	PREPARATION METHOD:	Dry Sieved

Accredited for compliance with ISO/IEC 17025 - Testing

SIGNED.

Mark Fry
Authorised Signatory

ASLAB PTY LTD
ABN 14008786794 ACN 008786797
Independant Materials Testing
68A Boulder Road MALAGA WA 6090
Telephone: 6249 8100
NATA Accredited Laboratory No. 2991

REPORT NO: 96260

DATE: 4/09/2024

CLIENT:

Talis Consultants
660 Newcastle Street
Leederville WA 6007

JOB: 5382

ORDER NO.
MATERIAL: Clay Subgrade
JOB: Indingo Parkway, Byford
Pit 3

SOILS TEST REPORT

SIEVE mm	% PASSING	SPECIFICATION %
75.0		
53.0		
37.5		
26.5	100	
19.0	99	
13.2	96	
9.5	92	
6.7	87	
4.75	83	
2.36	79	
1.18	76	
0.600	67	
0.425	54	
0.300	39	
0.150	23	
0.075	18	

SAMPLE NO: S74859

SAMPLED BY: ASLAB

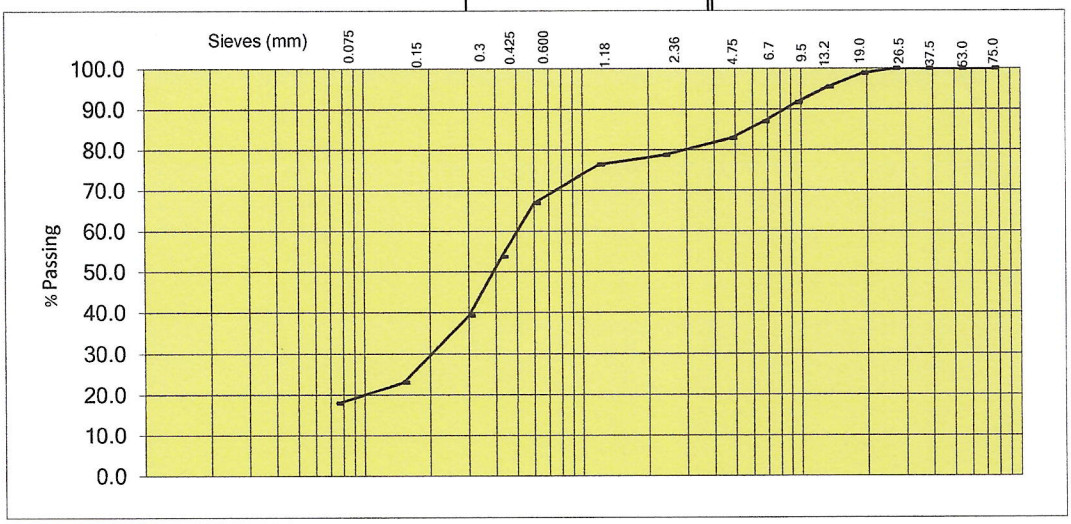
DATE SAMPLED: 18/08/2024

SAMPLE METHOD: AS 1289.1.2.1

DATE TESTED: 27/08/2024

TEST METHOD: AS 1289.3.6.1 (wet)

SOURCE: Oven dried



PROCEDURE	METHOD	RESULT	SPECIFICATION
Cone liquid Limit	AS1289.3.9.1	26 %	
Plastic Limit	AS1289.3.2.1	13 %	
Plasticity Index	AS1289.3.3.2	13 %	
Linear Shrinkage	AS1289.3.4.1	5.0 %	
SAMPLE HISTORY:	Oven dried	PREPARATION METHOD:	Dry sieved

Accredited for compliance with ISO/IEC 17025 - Testing

SIGNED.

Mark Fry
Authorised Signatory

ASLAB PTY LTD
ABN 14008786794 ACN 008786797
Independant Materials Testing
68A Boulder Road MALAGA WA 6090
Telephone: 6249 8100
NATA Accredited Laboratory No. 2991

REPORT NO: 96261

DATE: 4/09/2024

CLIENT:

JOB: 5382

Talis Consultants
660 Newcastle Street
Leederville WA 6007

ORDER NO.
MATERIAL: Clayey Gravel Subgrade
JOB: Indigo Parkway, Byford, Pit 4

SOILS TEST REPORT

SIEVE mm	% PASSING	SPECIFICATION %
75.0		
53.0		
37.5		
26.5	100	
19.0	99	
13.2	95	
9.5	88	
6.7	78	
4.75	72	
2.36	67	
1.18	65	
0.600	57	
0.425	50	
0.300	40	
0.150	25	
0.075	17	

SAMPLE NO: S74860

SAMPLED BY: ASLAB

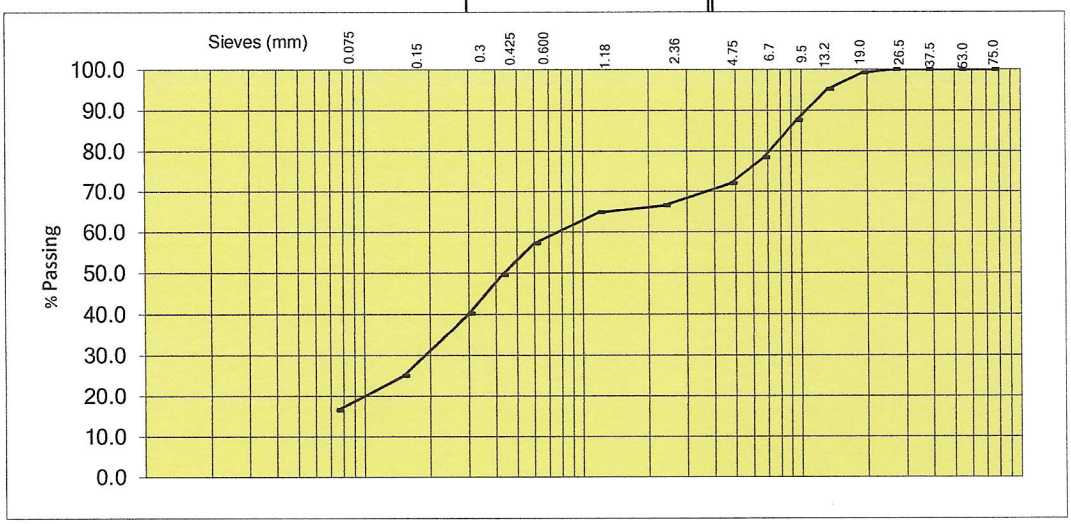
DATE SAMPLED: 18/08/2024

SAMPLE METHOD: AS 1289.1.2.1

DATE TESTED: 27/08/2024

TEST METHOD: AS 1289.3.6.1 (wet)

SOURCE: Oven dried



PROCEDURE	METHOD	RESULT	SPECIFICATION
Cone liquid Limit	AS1289.3.9.1	23 %	
Plastic Limit	AS1289.3.2.1	16 %	
Plasticity Index	AS1289.3.3.2	7 %	
Linear Shrinkage	AS1289.3.4.1	3.0 %	
SAMPLE HISTORY:	Oven dried	PREPARATION METHOD:	Dry sieved

Accredited for compliance with ISO/IEC 17025 - Testing

SIGNED.

Mark Foy
Authorised Signatory

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - AS 1289.6.1.1

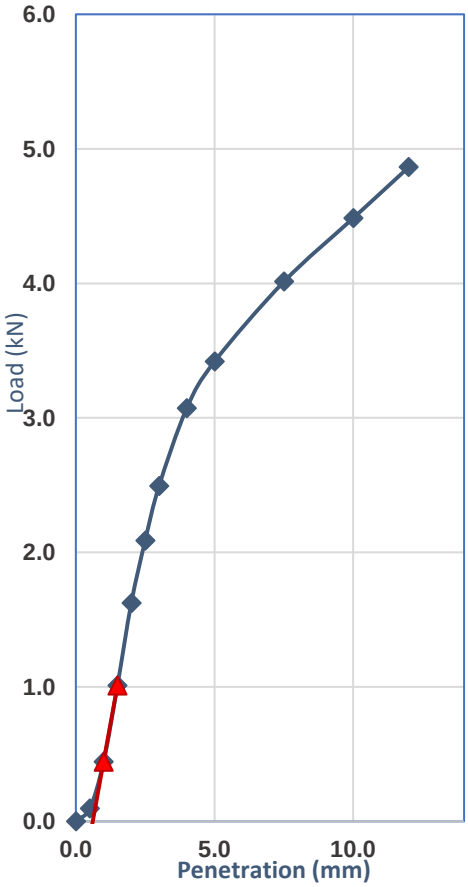
Client:	ASLAB	*Ticket No.*	S14289
Client Address:	68A Boulder Road, Malaga WA 6090	*Report No.*	WG24.13307_1_SCBR
Project:	Material Assessment	*Sample No.*	WG24.13307
Location:	Indigo Parkway, Byford Pit 1	*Date Sampled:*	19/08/2024
Sample Identification:	S74857	*Date Tested:*	29/8/24-6/9/24

TEST RESULTS - CALIFORNIA BEARING RATIO

Sample Description: Gravelly Clay

Sampling Method: Sampled by Client, Tested as Received

Load Penetration Curve



Compaction Details			
Compaction Method	AS 1289.5.2.1	Hammer Type	Modified
Plasticity Determined by	Estimated	Curing Time (Hours)	24.0
% Retained 19.0mm	0	Excluded/Replaced	Excluded
Maximum Dry Density (t/m^3)	2.09	Optimum Moisture (%)	8.5
Target Dry Density Ratio (%)	95	Target Moisture Ratio (%)	100

Specimen Conditions At Compaction			
Dry Density (t/m3)	1.98	Moisture Content (%)	8.3
Density Ratio (%)	95.0	Moisture Ratio (%)	97.5

Specimen Conditions After Soak			
Soaked or Unsoaked	Soaked	Soaking Period (days)	4
Surcharges Applied (kg)	4.50	Measured Swell (%)	0.5
Dry Density (t/m³)	1.98	Dry Density Ratio (%)	94.5
Moisture Content (%)	12.3	Moisture Ratio (%)	144.0

Specimen Conditions After Test			
Top 30mm Moisture (%)	12.0	Remaining Depth (%)	11.4

Correction applied to Penetration: 0.6mm

Determined at a Penetration of: 2.5mm

California Bearing Ratio (CBR): 19%

Comments: MDD + OMC Values provided by client. Report No.96177. Nata Accredited Laboratory Number - 2991.

Approved Signatory: Coneill

Name: Cody O'Neill

Date: 09/September/2024

NATA WORLD RECOGNISED ACCREDITATION

Accreditation No. 20599

Accredited for compliance with ISO/IEC 17025 - Testing

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - AS 1289.6.1.1

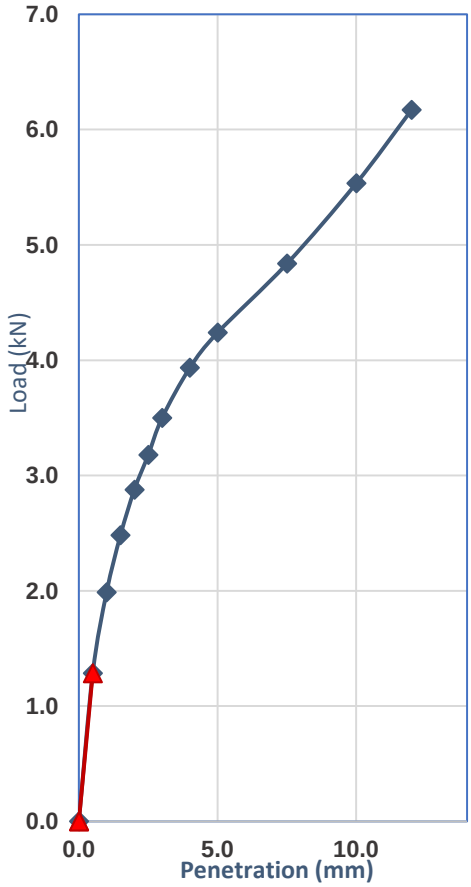
Client:	ASLAB	*Ticket No.*	S14289
Client Address:	68A Boulder Road, Malaga WA 6090	*Report No.*	WG24.13308_1_SCBR
Project:	Material Assessment	*Sample No.*	WG24.13308
Location:	Indigo Parkway, Byford Pit 2	*Date Sampled:*	20/08/2024
Sample Identification:	S74858	*Date Tested:*	29/8/24-6/9/24

TEST RESULTS - CALIFORNIA BEARING RATIO

Sample Description: Gravelly Clay

Sampling Method: Sampled by Client, Tested as Received

Load Penetration Curve



Compaction Details			
Compaction Method	AS 1289.5.2.1	Hammer Type	Modified
Plasticity Determined by	Estimated	Curing Time (Hours)	24.0
% Retained 19.0mm	0	Excluded/Replaced	Excluded
Maximum Dry Density (t/m^3)	2.15	Optimum Moisture (%)	9.0
Target Dry Density Ratio (%)	95	Target Moisture Ratio (%)	100

Specimen Conditions At Compaction			
Dry Density (t/m3)	2.05	Moisture Content (%)	8.6
Density Ratio (%)	95.5	Moisture Ratio (%)	95.5

Specimen Conditions After Soak			
Soaked or Unsoaked	Soaked	Soaking Period (days)	4
Surcharges Applied (kg)	4.50	Measured Swell (%)	0.5
Dry Density (t/m³)	2.04	Dry Density Ratio (%)	95.0
Moisture Content (%)	11.8	Moisture Ratio (%)	131.5

Specimen Conditions After Test			
Top 30mm Moisture (%)	11.2	Remaining Depth (%)	10.4

Correction applied to Penetration: 0mm

Determined at a Penetration of: 2.5mm

California Bearing Ratio (CBR): 25%

Comments: MDD + OMC Values provided by client. Report No.96115. Nata Accredited Laboratory Number - 2991.

Approved Signatory:

Name: Cody O'Neill

Date: 09/September/2024

NATA WORLD RECOGNISED ACCREDITATION

Accreditation No. 20599

Accredited for compliance with ISO/IEC 17025 - Testing

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - AS 1289.6.1.1

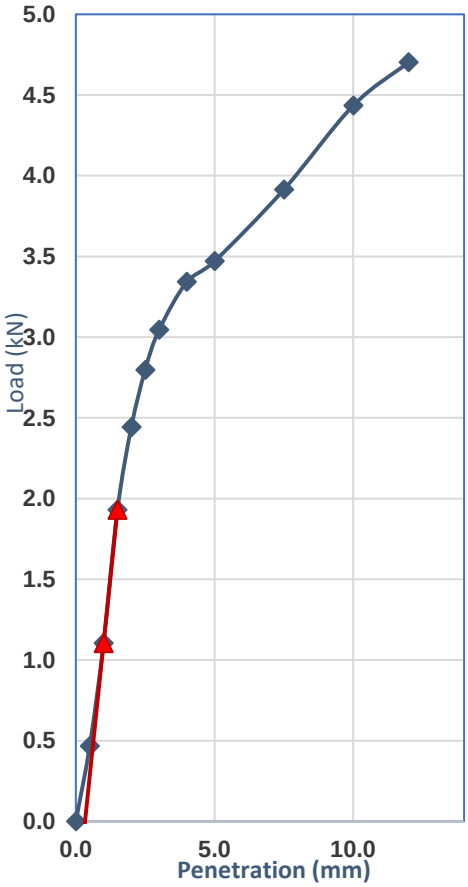
Client:	ASLAB	*Ticket No.*	S14289
Client Address:	68A Boulder Road, Malaga WA 6090	*Report No.*	WG24.13309_1_SCBR
Project:	Material Assessment	*Sample No.*	WG24.13309
Location:	Indigo Parkway, Byford Pit 3	*Date Sampled:*	20/08/2024
Sample Identification:	S74859	*Date Tested:*	29/8/24-6/9/24

TEST RESULTS - CALIFORNIA BEARING RATIO

Sample Description: Gravelly Clay

Sampling Method: Sampled by Client, Tested as Received

Load Penetration Curve



Compaction Details			
Compaction Method	AS 1289.5.2.1	Hammer Type	Modified
Plasticity Determined by	Estimated	Curing Time (Hours)	24.0
% Retained 19.0mm	1	Excluded/Replaced	Excluded
Maximum Dry Density (t/m^3)	2.17	Optimum Moisture (%)	8.0
Target Dry Density Ratio (%)	95	Target Moisture Ratio (%)	100

Specimen Conditions At Compaction			
Dry Density (t/m3)	2.07	Moisture Content (%)	7.7
Density Ratio (%)	95.5	Moisture Ratio (%)	95.5

Specimen Conditions After Soak			
Soaked or Unsoaked	Soaked	Soaking Period (days)	4
Surcharges Applied (kg)	4.50	Measured Swell (%)	0.5
Dry Density (t/m³)	2.06	Dry Density Ratio (%)	95.0
Moisture Content (%)	11.7	Moisture Ratio (%)	146.0

Specimen Conditions After Test			
Top 30mm Moisture (%)	11.8	Remaining Depth (%)	11.0

Correction applied to Penetration: 0.3mm

Determined at a Penetration of: 2.5mm

California Bearing Ratio (CBR): 20%

Comments: MDD + OMC Values provided by client. Report No.96116. Nata Accredited Laboratory Number - 2991.

Approved Signatory:

Name: Cody O'Neill

Date: 09/September/2024

NATA WORLD RECOGNISED ACCREDITATION

Accreditation No. 20599

Accredited for compliance with ISO/IEC 17025 - Testing

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - AS 1289.6.1.1

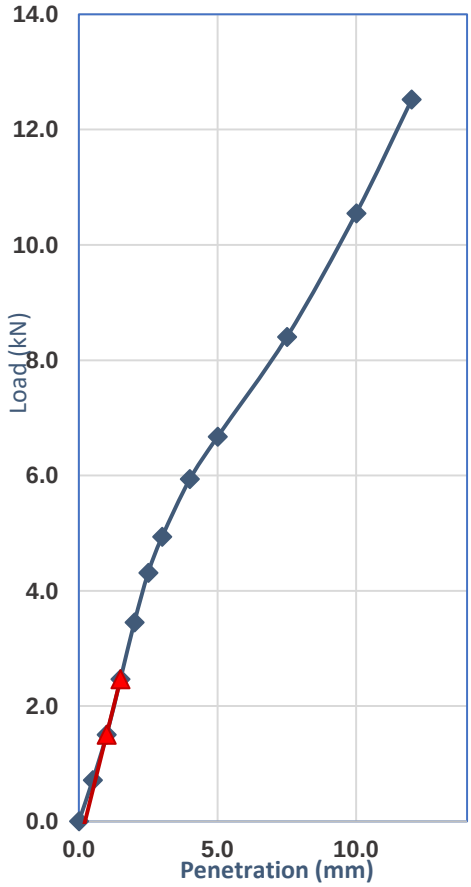
Client:	ASLAB	*Ticket No.*	S14289
Client Address:	68A Boulder Road, Malaga WA 6090	*Report No.*	WG24.13310_1_SCBR
Project:	Material Assessment	*Sample No.*	WG24.13310
Location:	Indigo Parkway, Byford Pit 4	*Date Sampled:*	19/08/2024
Sample Identification:	S74860	*Date Tested:*	29/8/24-6/9/24

TEST RESULTS - CALIFORNIA BEARING RATIO

Sample Description: Clayey Gravel

Sampling Method: Sampled by Client, Tested as Received

Load Penetration Curve



Compaction Details			
Compaction Method	AS 1289.5.2.1	Hammer Type	Modified
Plasticity Determined by	Estimated	Curing Time (Hours)	24.0
% Retained 19.0mm	0	Excluded/Replaced	Excluded
Maximum Dry Density (t/m^3)	2.23	Optimum Moisture (%)	8.0
Target Dry Density Ratio (%)	95	Target Moisture Ratio (%)	100

Specimen Conditions At Compaction			
Dry Density (t/m3)	2.11	Moisture Content (%)	8.4
Density Ratio (%)	94.5	Moisture Ratio (%)	105.0

Specimen Conditions After Soak			
Soaked or Unsoaked	Soaked	Soaking Period (days)	4
Surcharges Applied (kg)	4.50	Measured Swell (%)	0.5
Dry Density (t/m³)	2.10	Dry Density Ratio (%)	94.0
Moisture Content (%)	10.5	Moisture Ratio (%)	131.0

Specimen Conditions After Test			
Top 30mm Moisture (%)	10.3	Remaining Depth (%)	9.8

Correction applied to Penetration: 0.2mm

Determined at a Penetration of: 2.5mm

California Bearing Ratio (CBR): 35%

Comments: MDD + OMC Values provided by client. Report No.96132. Nata Accredited Laboratory Number - 2991.

Approved Signatory:

Name: Cody O'Neill

Date: 09/September/2024

NATA WORLD RECOGNISED ACCREDITATION

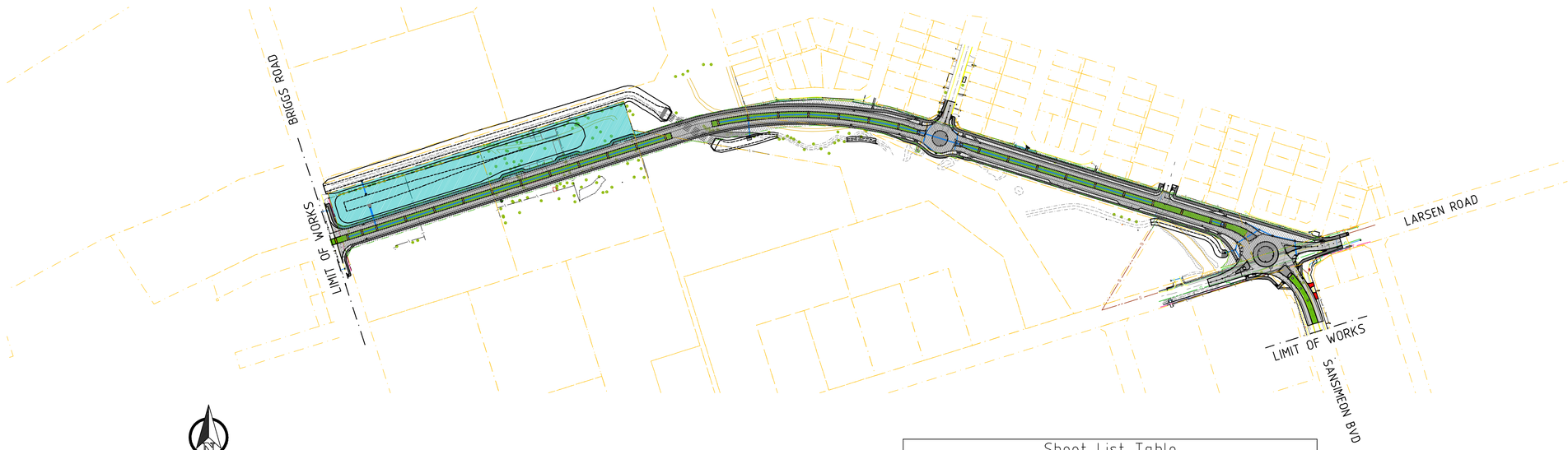
Accreditation No. 20599

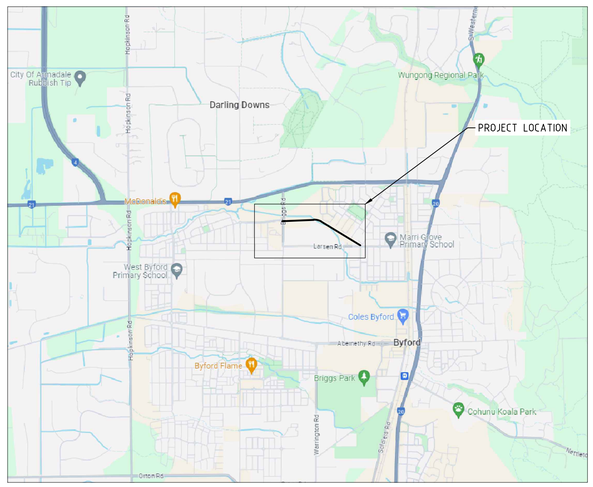
Accredited for compliance with ISO/IEC 17025 - Testing

APPENDIX E

100% Detailed Design Drawings

SHIRE OF SERPENTINE JARRAHDALE
INDIGO DRIVE





LOCALITY PLAN
SCALE: N.T.S.

Sheet List Table	
Sheet Number	Sheet Title
C-000	Cover Page and Locality Plan
C-001	Existing Topography
C-002	Proposed Road Reserve Boundaries
C-101	General Arrangement 1 of 2
C-102	General Arrangement 2 of 2
C-103	General Notes
C-110	Opt 1 - Swept path
C-111	Land Acquisition
C-115	Plan & Profile Sheet 1
C-116	Plan & Profile Sheet 2
C-117	Plan & Profile Sheet 3
C-118	Plan & Profile Sheet 4
C-119	Plan & Profile Sheet 5
C-120	Plan & Profile Sheet 6
C-121	Plan & Profile Sheet 7
C-122	Plan & Profile Sheet 8
C-123	Indigo PWY Larsen Roundabout
C-125	Multi-use corridor layout
C-126	Stormwater Catchment Plan
C-127	Stormwater Layout
C-130	Signs and Lines Sheet 1
C-131	Signs and Lines Sheet 2
C-132	Signs and Lines Sheet 3
C-133	Signs and Lines Sheet 4
C-201	Cross sections Sheet 1
C-202	Cross sections Sheet 2
C-203	Cross sections Sheet 3
C-204	Cross Sections Sheet 4
C-205	Cross sections Sheet 5
C-206	Cross Sections Sheet 6
C-207	Cross Sections Sheet 7
C-208	Cross Sections Sheet 8
C-209	Cross Sections Sheet 9
C-210	Cross Sections Sheet 10
C-211	Cross Sections Sheet 11
C-212	Cross Sections Sheet 13
C-213	Cross Sections Sheet 14
C-301	Typical Sections and Details

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

100m 0m 100m 200m
1:2500 @ A1

talis consultants
www.talisconsultants.com.au T: 1300 251 070

Client: Shire of Serpentine Jarrahdale

NOTES

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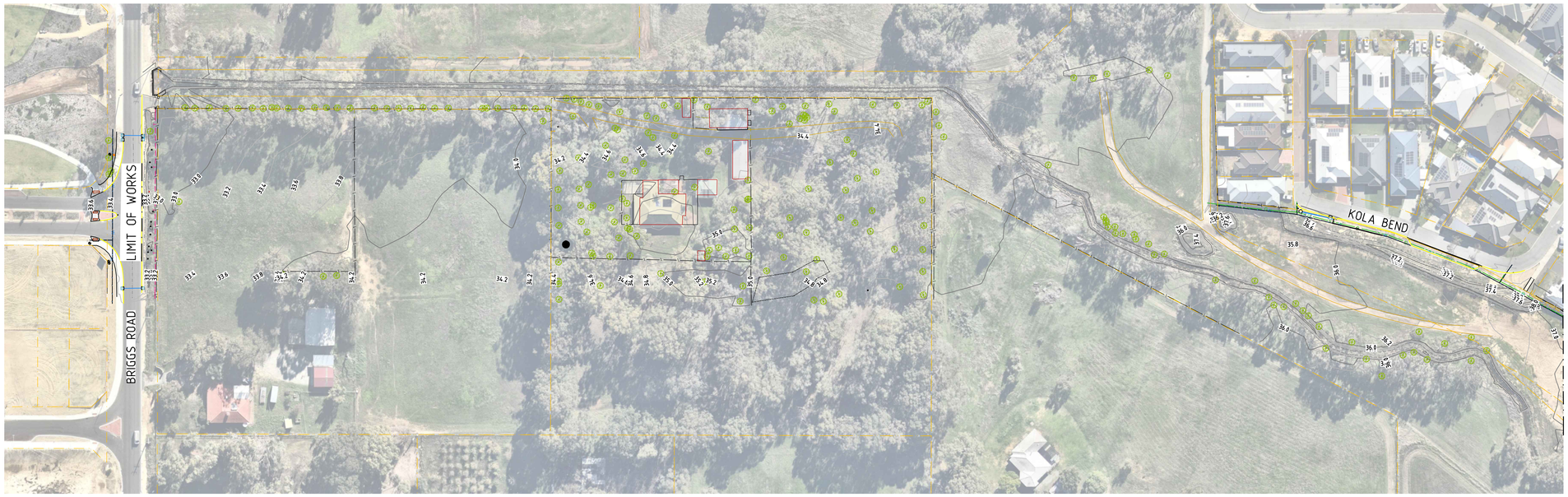
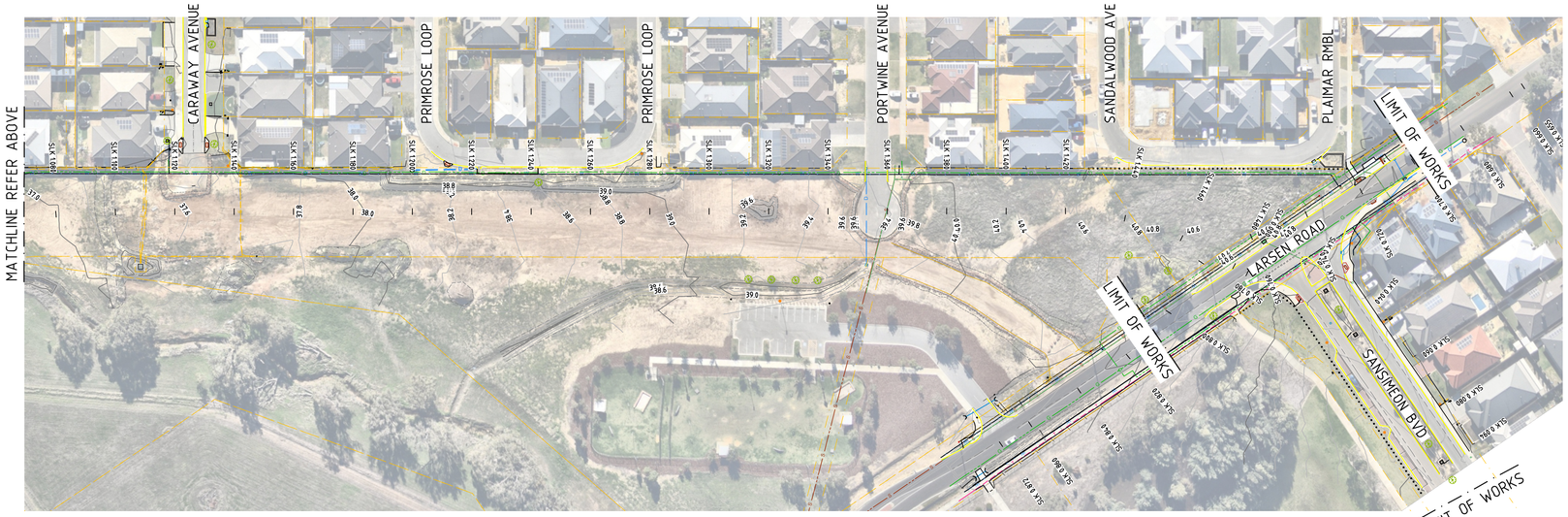
No.	Date			Amendment / Issue	App.
E	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
D	04.04.2024	AB	JM	85% DESIGN ISSUE	
C	10.02.2025	YJ	AB	LAND ACQUISITION LAYOUT ADDED	
B	30.01.2025	YJ	AB	CLIENT COMMENTS UPDATED	
A	31.07.2024	VS	AB	PRELIMINARY ISSUE	

Project: SSJ INDIGO DRIVE

Title: COVER PAGE AND LOCALITY PLAN

Scale: AS SHOWN @ A1 | Date: 31.07.2024
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-000 | Rev: E
Filename: TC24021.DWG





LEGEND:

- EXISTING TREES
- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLAROS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

100m 0m 100m 200m
1:2500 @ A1

talis consultants
www.talisconsultants.com.au T: 1300 251 070

Client: Shire of Serpentine Jarrahdale

NOTES

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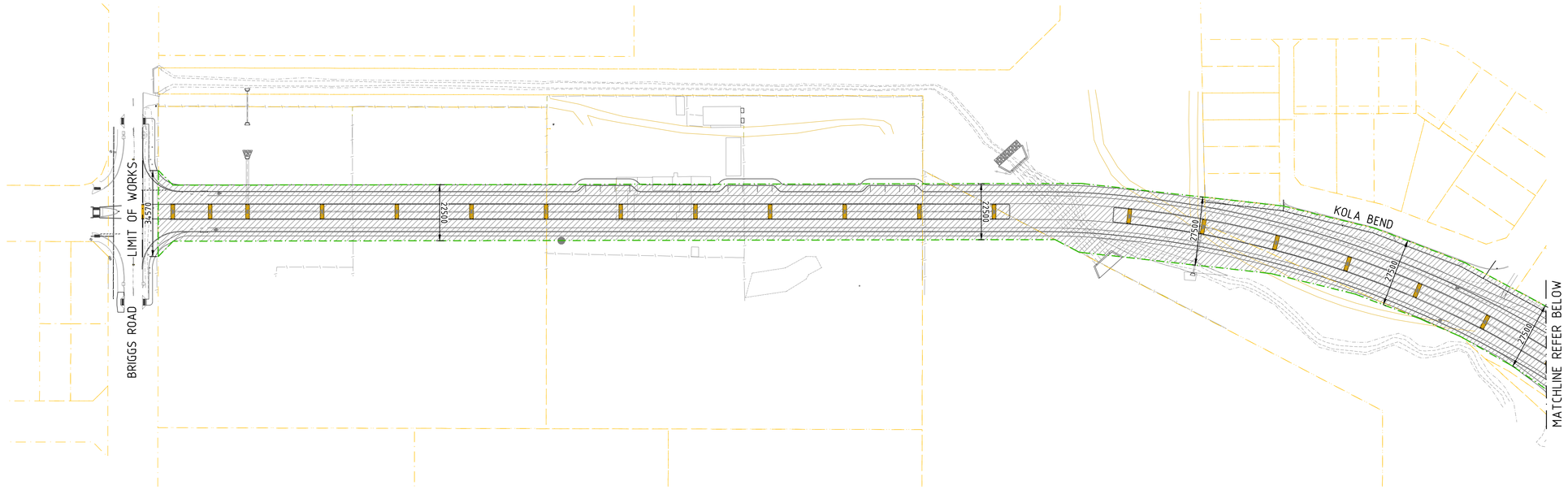
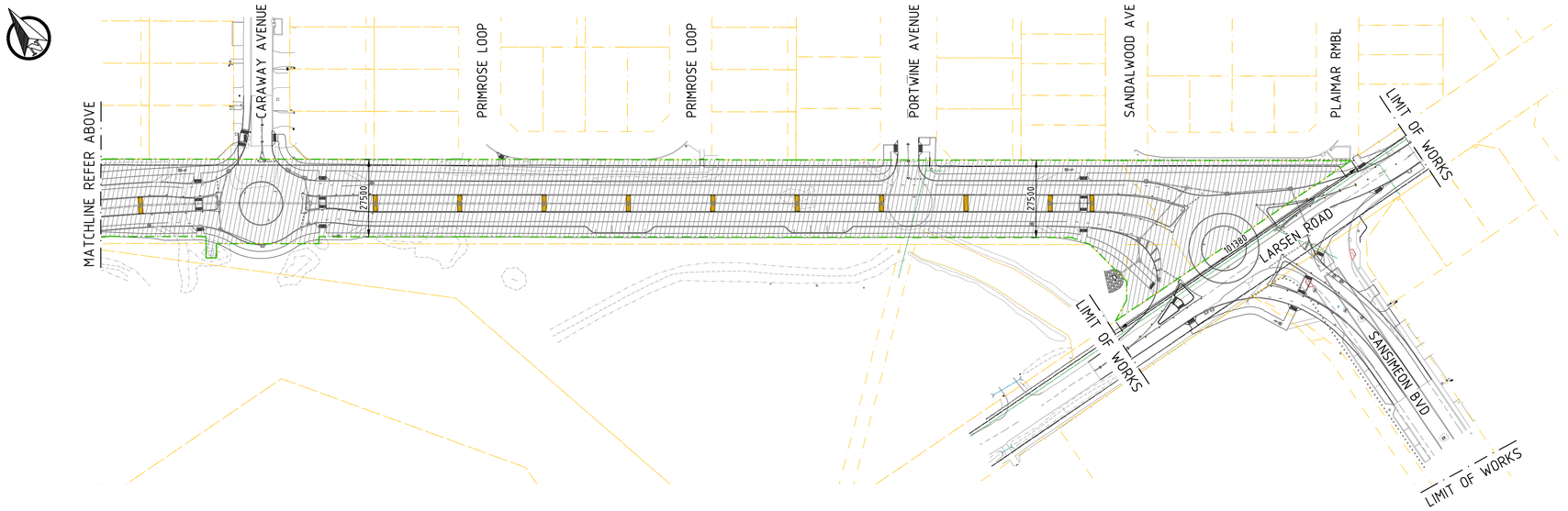
No.	Date	dr	ch	Amendment / Issue	App.
C	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
B	04.04.2025	AB	JM	85% DESIGN ISSUE	
A	31.07.2024	VS	AB	PRELIMINARY ISSUE	

Project: SSJ INDIGO DRIVE

Title: EXISTING TOPOGRAPHY

Scale: AS SHOWN @ A1 | Date: 31.07.2024
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-001 | Rev: C
Filename: TC24021.DWG





LEGEND:

- PROPOSED ROAD RESERVE
- EXISTING CADASTRAL BOUNDARY
- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

100m 0m 100m 200m
1:2500 @ A1

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Client: Shire of Serpentine Jarrahdale

NOTES

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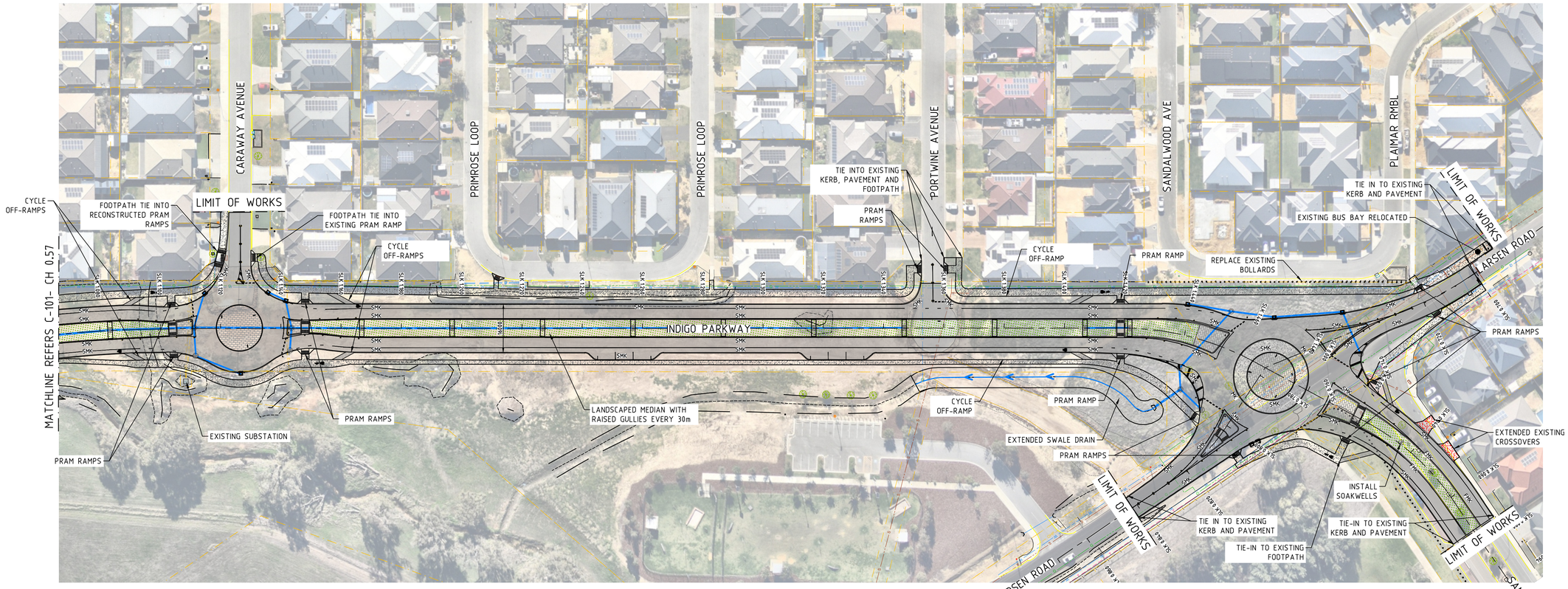
No.	Date	Dr.	Ch.	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	20.05.2025	AB	JM	PRELIMINARY ISSUE	

Project: SSJ INDIGO DRIVE

Title: PROPOSED ROAD RESERVE BOUNDARIES

Scale: AS SHOWN @ A1 | Date: 20.05.2025
Drawn: AB | Checked: JM | Approved: JM
Job No: TC24021 | Drg. No: C-002 | Rev: B
Filename: TC24021.DWG

FILENAME Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021.DWG



INDIGO PARKWAY ROAD LAYOUT
SCALE: 1:750

LEGEND:

- EXISTING TREES
- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- NEW KERB
- NEW CYCLE LANE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW PRAM RAMP
- EXTENDED CONCRETE CROSSOVER

SMK SEMI-MOUNTABLE KERB
FMK REINFORCED FLUSH KERBING
MK MOUNTABLE KERB

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

30m 0m 30m 60m
1:750 @ A1

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Client: Shire of Serpentine Jarrahdale

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No.	Date	dr	ch	Amendment / Issue	App.
	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
F	13.05.2025	YJ	AB	FOR APPROVAL	
E	04.04.2025	AB	JM	85% DESIGN ISSUE	
D	13.02.2025	YJ	AB	CLIENT COMMENTS UPDATED	
C	10.02.2025	YJ	AB	LAND ACQUISITION LAYOUT ADDED	
B	30.01.2025	YJ	AB	CLIENT COMMENTS UPDATED	
A	31.07.2024	VS	AB	PRELIMINARY ISSUE	

Project: SSJ INDIGO DRIVE

Title: GENERAL ARRANGEMENT 2 OF 2

Scale: AS SHOWN @ A1 | Date: 31.07.2024
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-102 | Rev: G
Filename: TC24021.DWG

GENERAL NOTES:

1. SURVEY HAS BEEN PROVIDED BY JUROVICH SURVEYORS
2. LOCATION OF UNDERGROUND SERVICES IS TAKEN FROM GPR SCANNING, BEFORE YOU DIG AUSTRALIA (BYDA) AND ESINET. NO UNDERGROUND PROOFING HAS BEEN UNDERTAKEN AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE PRINCIPAL'S SUPERINTENDENT.
3. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR. LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
4. THE SITE IS TO BE LEFT CLEAN AND FREE OF RUBBISH/DEBRIS UPON COMPLETION OF THE WORKS.
5. THE DRAWINGS AND SPECIFICATIONS ARE DETAILED TO SHOW SUFFICIENT INFORMATION FOR THE CONTRACTOR TO COMPLETE THE WORKS. ANY ADDITIONAL DESIGN AND DETAILING WHICH THE CONTRACTOR FEELS IS NECESSARY SHALL BE COMPLETED BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL UNDERTAKE A DILAPIDATION SURVEY PRIOR TO THE COMMENCEMENT OF WORKS.
7. READ DRAWINGS IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND ANY OTHER WRITTEN INSTRUCTION AS MAY BE ISSUED DURING THE COURSE OF THE WORKS.
8. REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT AND OBTAIN A DECISION BEFORE PROCEEDING WITH THE WORK.
9. VERIFY ALL DIMENSIONS AND SETTING OUT BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
10. DIMENSIONS ARE NOT TO BE INFERRED BY SCALING FROM THESE DRAWINGS.
11. COMPLY WITH ALL RELEVANT AUSTRALIAN STANDARDS AND STATUTORY REQUIREMENTS.
12. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
13. ALL SHOP DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR, CHECKED BY THE CONTRACTOR AND ENDORSED BY THE CONTRACTOR AS HAVING BEEN CHECKED FOR COMPLETENESS AND ACCURACY PRIOR TO SUBMITTING FOR REVIEW. ACCEPTANCE OF THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DOCUMENTATION.

EARTHWORKS

1. WHERE SURPLUS MATERIAL CANNOT BE REUSED ON SITE, IT SHALL BE REMOVED OFF SITE AT THE CONTRACTOR'S EXPENSE.
2. THE SUBGRADE SHALL BE COMPACTED TO ACHIEVE A DRY DENSITY RATIO OF 95% OF MAXIMUM MODIFIED DRY DENSITY (MMDD) WHEN TESTED IN ACCORDANCE WITH MRWA TEST METHOD WA 134.1.

EARTHWORKS

REFER STANDARD SSJ DRAWINGS AND DETAILS:

DRAWING NO.	TITLE
STD-R01	EXTRUDED KERBING AND PAVEMENT DETAILS
STD-R07	FOOTPATH DETAILS
STD-R05	JOINT DETAILS
STD-R04	PEDESTRIAN RAMP
SD.03	STANDARD BIO RETENTION POCKETS
STD-D04	STANDARD COMBINATION GRATED SIDE ENTRY PIT
STD-D08	STANDARD DRAINAGE SUMP DETAILS
STD-D09	STANDARD DRAINAGE SUMP FENCING
STD-D07	STANDARD PIPE BEDDING AND STEP IRON DETAILS
STD-D05	STANDARD SIDE ENTRY PIT WITH SOAKWELL LINER
STD-D10	STANDARD SUBSOIL DRAINAGE
STD-D03	STANDARD TYPICAL GRATED GULLY PIT
STD-D02	STANDARD TYPICAL JUNCTION PIT
STD-D01	STANDARD TYPICAL SIDE ENTRY PIT
STD-R09	TYPICAL CARBAYS AND LANEWAYS LINEMARKING
STD-R02	TYPICAL CROSS SECTION KERBED ROAD

PAVEMENT & SURFACING

1. THE SUBGRADE SHALL BE DRIED BACK TO 85% OF OMC PRIOR TO THE CONSTRUCTION OF THE BASECOURSE LAYER.
2. THE BASECOURSE SHALL BE CONSTRUCTED IN A SINGLE LAYER TO ACHIEVE A DRY DENSITY RATIO OF 98% OF MAXIMUM MODIFIED DRY DENSITY (MMDD) WHEN TESTED IN ACCORDANCE WITH MRWA TEST METHOD WA 134.1.
3. THE BASECOURSE SHALL BE DRIED BACK TO 85% OF OMC PRIOR TO LAYING THE PRIME COAT.
4. THE SUB BASE SHALL BE CONSTRUCTED IN A SINGLE LAYER TO ACHIEVE A DRY DENSITY RATIO OF 95% OF MAXIMUM DRY DENSITY(MMDD) WHEN TESTED IN ACCORDANCE WITH MRWA TEST METHOD WA 134.1

CONCRETE

1. ALL CONCRETE AND CONCRETE WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS 3600 AND THE REFERENCED CODES/STANDARDS.
2. USE ONLY ORDINARY PORTLAND CEMENT TYPE GP UNLESS NOTED OTHERWISE.
3. COMPACT PLASTIC CONCRETE USING SUITABLE IMMERSION VIBRATORS OR AS OTHERWISE SPECIFIED TO ACHIEVE A DENSE AND UNIFORM MASS FREE FROM VOIDS, SEGREGATION & HONEYCOMBING WITH A UNIFORM FACE WHEN THE FORMS ARE REMOVED.
4. SIZE OF CONCRETE ELEMENTS DOES NOT INCLUDE THICKNESS OF APPLIED FINISHES.
5. PROPERLY FORM ALL CONSTRUCTION JOINTS AND USE ONLY WHERE SHOWN ON DRAWINGS OR AS OTHERWISE APPROVED BY THE SUPERINTENDENT.
6. COMMENCE CURING IMMEDIATELY AFTER CONCRETE HAS ACHIEVED SET AND CONTINUE FOR 7 DAYS BY KEEPING SURFACE(S) CONTINUOUSLY MOIST OR BY APPLICATION OF SPRAYED CURING COMPOUND IN ACCORDANCE WITH AS 3799.
7. ALL GROUND SLABS SHALL BE LAID ON A VAPOUR BARRIER COMPRISING 0.2mm POLYETHYLENE FILM IN ACCORDANCE WITH AS 2877. SHEETS SHALL BE LAPPED 200mm AND TAPED AT ALL JOINTS.

SIGNS AND PAVEMENT MARKINGS

1. ALL LINE MARKING SHALL BE WHITE UNLESS NOTED OTHERWISE.
2. ALL LINE MARKING SHALL BE SLIP RESISTANT PAINT UNLESS NOTED OTHERWISE.
3. ALL LINE MARKING SHALL BE INSTALLED IN ACCORDANCE WITH AS 1742.2.
4. LINE MARKING AND SIGNS FOR ACROD PARKING BAYS SHALL BE INSTALLED IN ACCORDANCE WITH AS/NZS 2890.6.

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30m 0m 30m 60m
1:750 @ A1

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Client: Shire of Serpentine Jarrahdale

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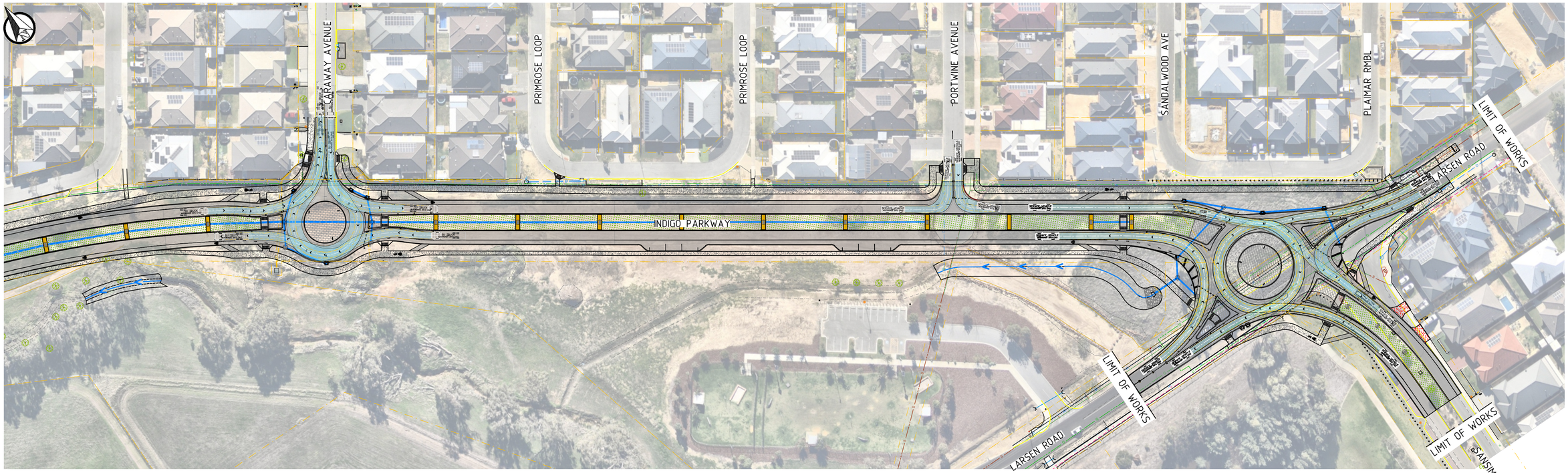
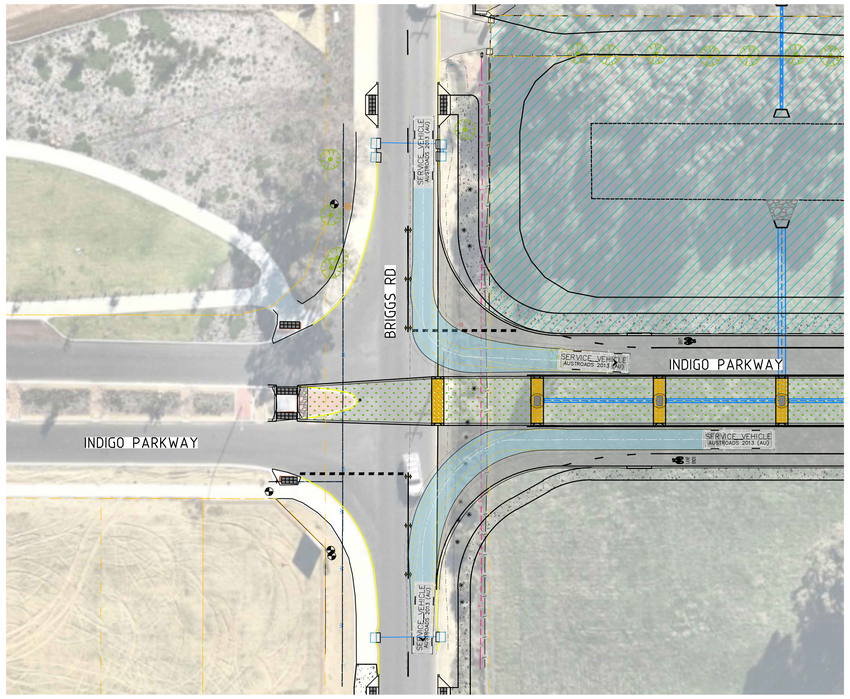
No.	Date	Dr	Ch	Amendment / Issue	App.
A	26.06.2025	AB	JM	100% DESIGN ISSUE	PG

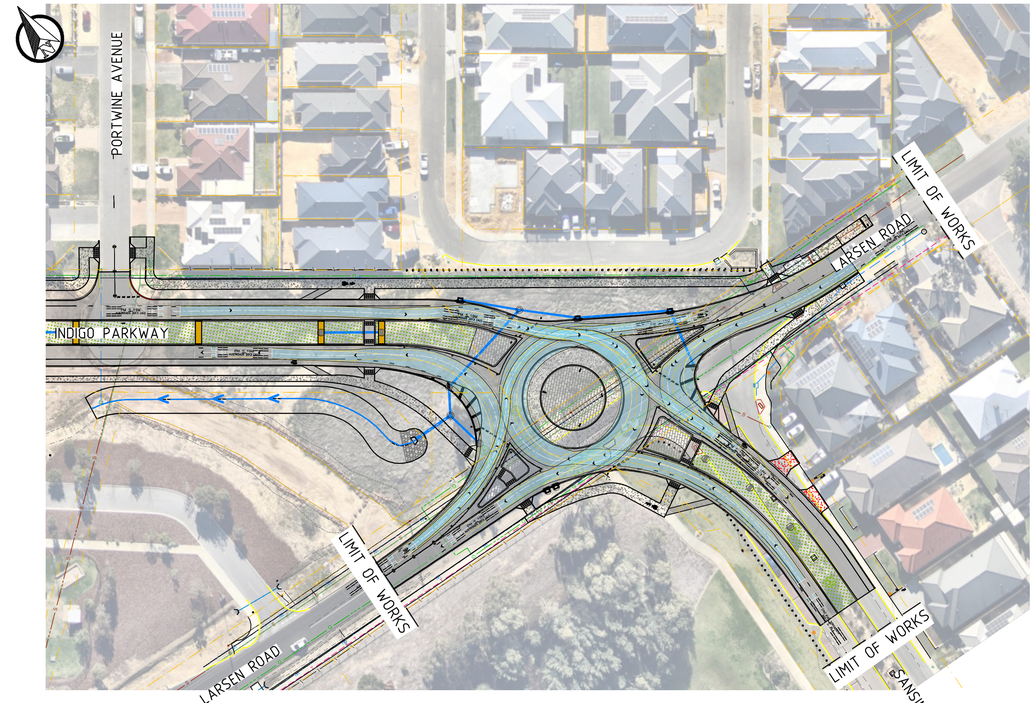
Project: SSJ INDIGO DRIVE

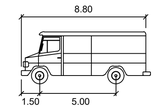
Title: GENERAL NOTES

Scale: AS SHOWN @ A1 | Date: 31.07.2024
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-103 | Rev: A
Filename: TC24021.DWG



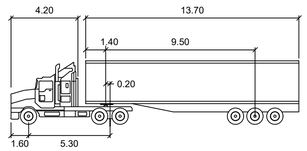






SERVICE VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7



PM S 19M

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

30m 0m 30m 60m
1:750 @ A1

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Client: Shire of Serpentine Jarrahdale

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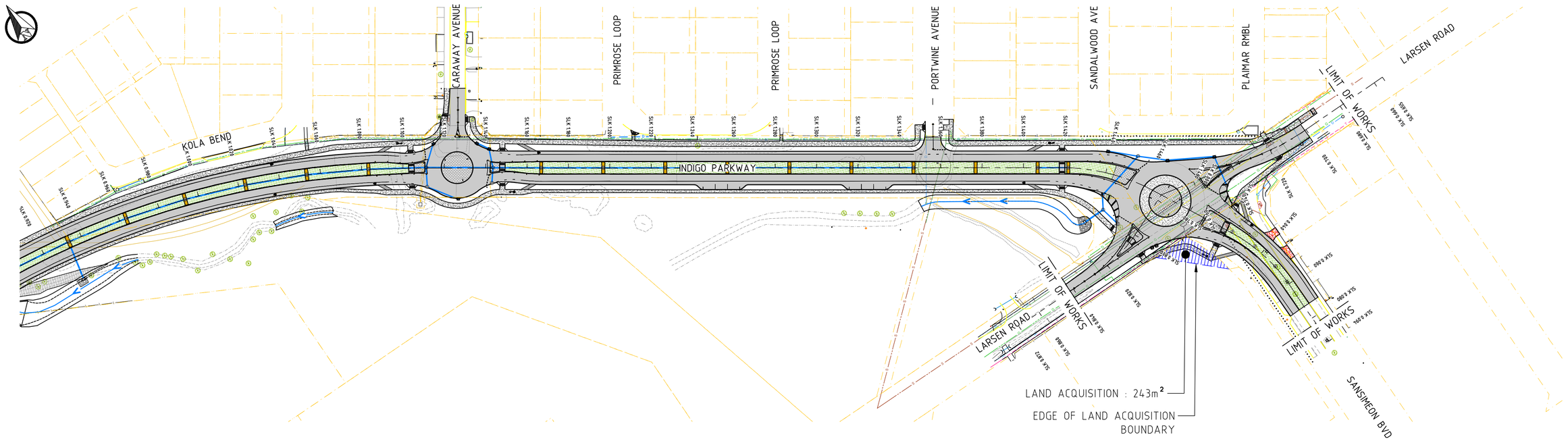
No.	Date	Drn	Chk	Amendment / Issue	App.
F	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
E	04.04.2025	AB	JM	85% DESIGN ISSUE	
D	13.02.2025	YJ	AB	CLIENT COMMENTS UPDATED	
C	10.02.2025	YJ	AB	LAND ACQUISITION LAYOUT ADDED	
B	30.01.2025	YJ	AB	CLIENT COMMENTS UPDATED	
A	31.07.2024	VS	AB	PRELIMINARY ISSUE	

Project: SSJ INDIGO DRIVE

Title: OPT 1 - SWEPT PATH

Scale: AS SHOWN @ A1		Date: 31.07.2024	
Drawn: VS	Checked: AB	Approved: JM	
Job No: TC24021	Drg. No: C-110	Rev: F	
Filename: TC24021.DWG			

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021.DWG



LEGEND:

LAND ACQUISITION AREAS

EXISTING CADASTRAL BOUNDARY

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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40m 0m 40m 80m
1:1000 @ A1

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Client: Shire of Serpentine Jarrahdale

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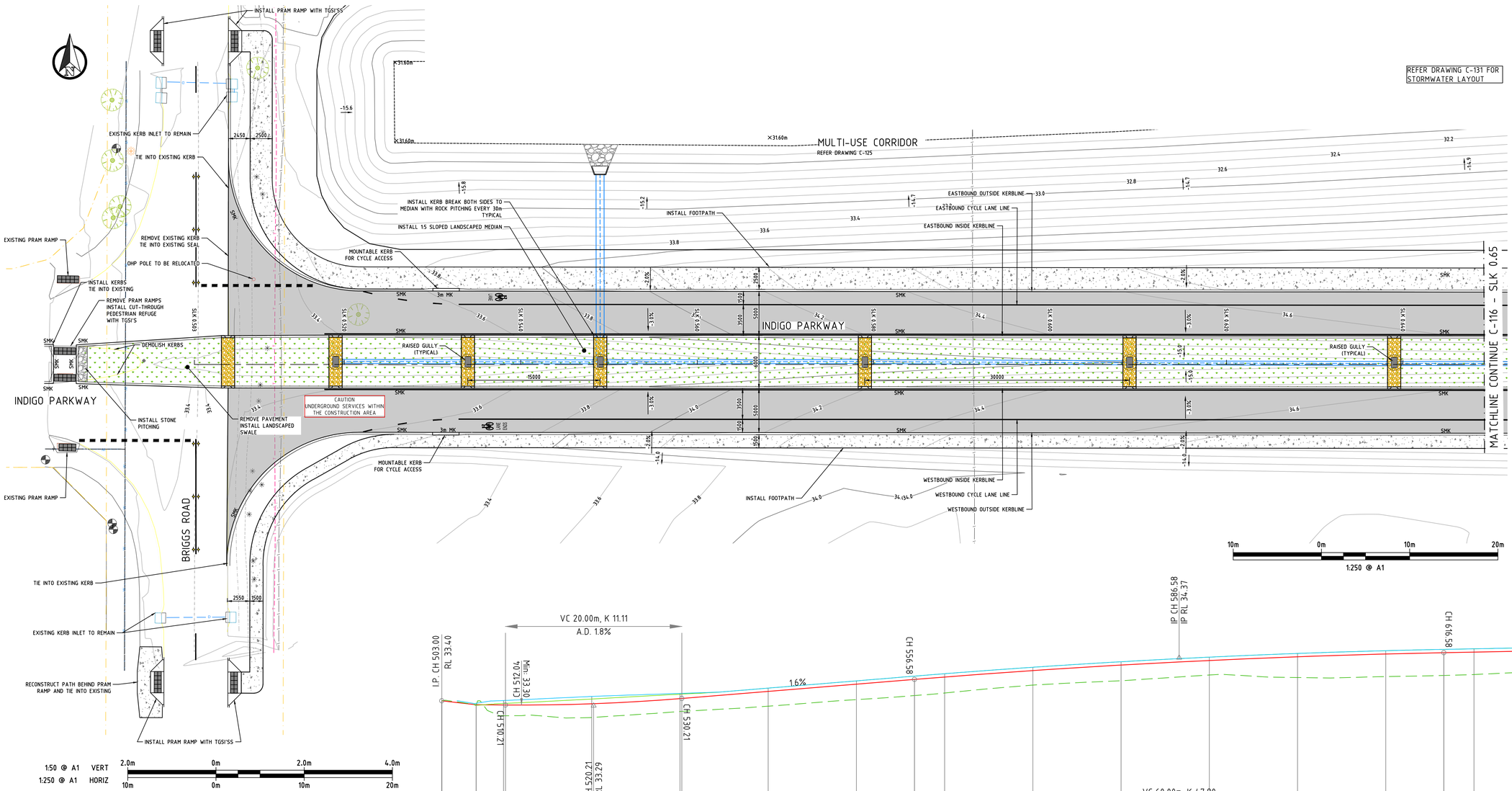
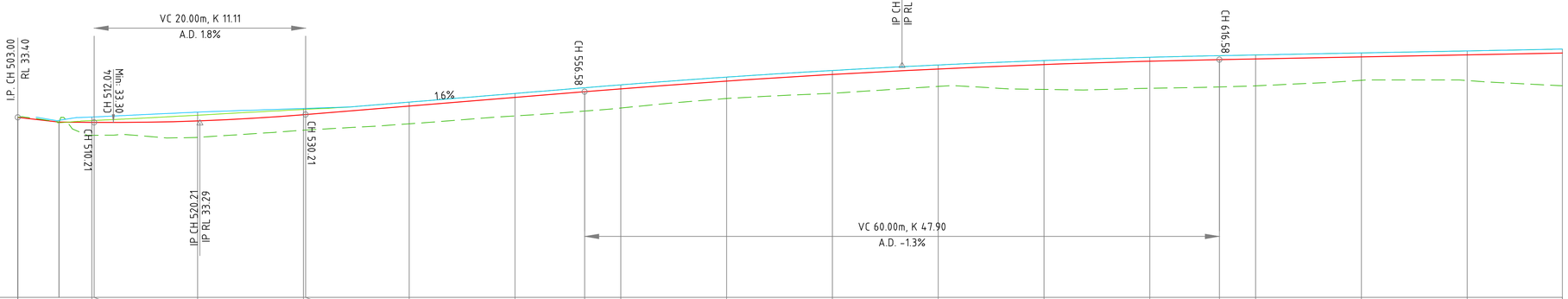
No.	Date	Dr	Ch	Amendment / Issue	App.
D	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
C	04.04.2025	AB	JM	85% DESIGN ISSUE	
B	13.02.2025	YJ	AB	CLIENT COMMENTS UPDATED	
A	10.02.2025	YJ	AB	LAND AQUISITION LAYOUT ADDED	

Project: SSJ INDIGO DRIVE

Title: LAND ACQUISITION

Scale: AS SHOWN @ A1 | Date: 10.02.2025
Drawn: YJ | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-111 | Rev: D
Filename: TC24021.DWG





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EASTBOUND CL		33.313	33.338	33.367	33.419	33.439	33.478	33.548		33.602	33.686	33.772	33.854	33.942	34.022	34.102	34.173	34.237	34.297	34.351	34.403	34.445	34.484	34.517	34.544	34.566	34.585	34.606	34.625	34.646	34.666	34.685	
WESTBOUND CL		33.378	33.405	33.433	33.482	33.497	33.527	33.567		33.608	33.690	33.778	33.862	33.948	34.028	34.102	34.173	34.237	34.297	34.351	34.403	34.445	34.484	34.517	34.544	34.566	34.585	34.606	34.625	34.646	34.666	34.685	
EXISTING LEVELS	33.399		33.060	33.061		33.021		33.156	33.158		33.277		33.426		33.517	33.575		33.755		33.854		33.983		33.926		33.947		33.974	33.994		34.098		34.094		33.995
DEPTH	0.000		0.244	0.243		0.310		0.292	0.293		0.335		0.349		0.365	0.362		0.329		0.355		0.330		0.470		0.512		0.515	0.507		0.442		0.485		0.618
SLK	0.503		0.510	0.510		0.520		0.530	0.530		0.540		0.550		0.557	0.560		0.570		0.580		0.590		0.600		0.610		0.617	0.620		0.630		0.640		0.649
HORIZONTAL																																				
VERTICAL																																				

HORIZONTAL: L: 359.893; B: 089° 57' 21"

VERTICAL: G: -2.3% L: 3.891 | G: -0.2% L: 3.323 | R: 1111.1 K: 11.1 L: 20.000 | G: 1.6% L: 26.367 | R: 4790.0 K: 47.9 L: 60.000 | G: 0.4% L: 313.322

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
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- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- SMK SEMI-MOUNTABLE KERB
- FMK REINFORCED FLUSH KERBING
- MK MOUNTABLE KERB

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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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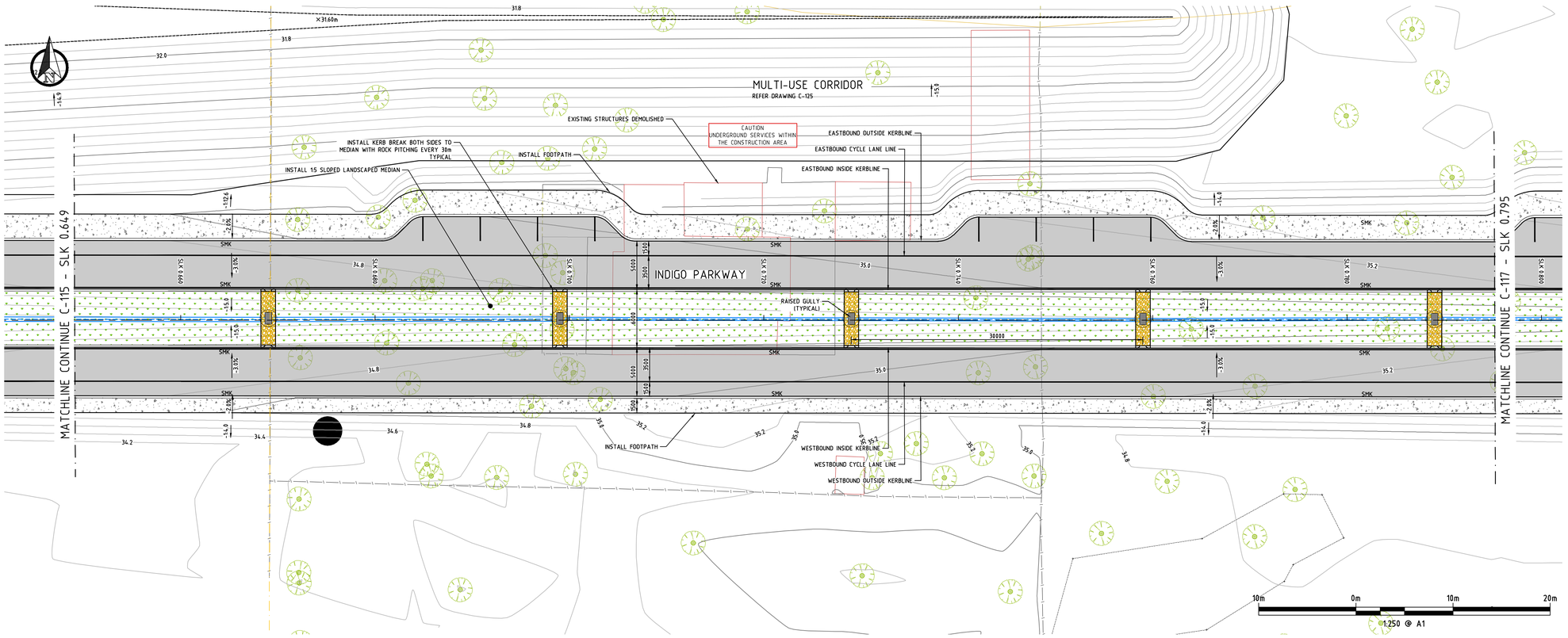
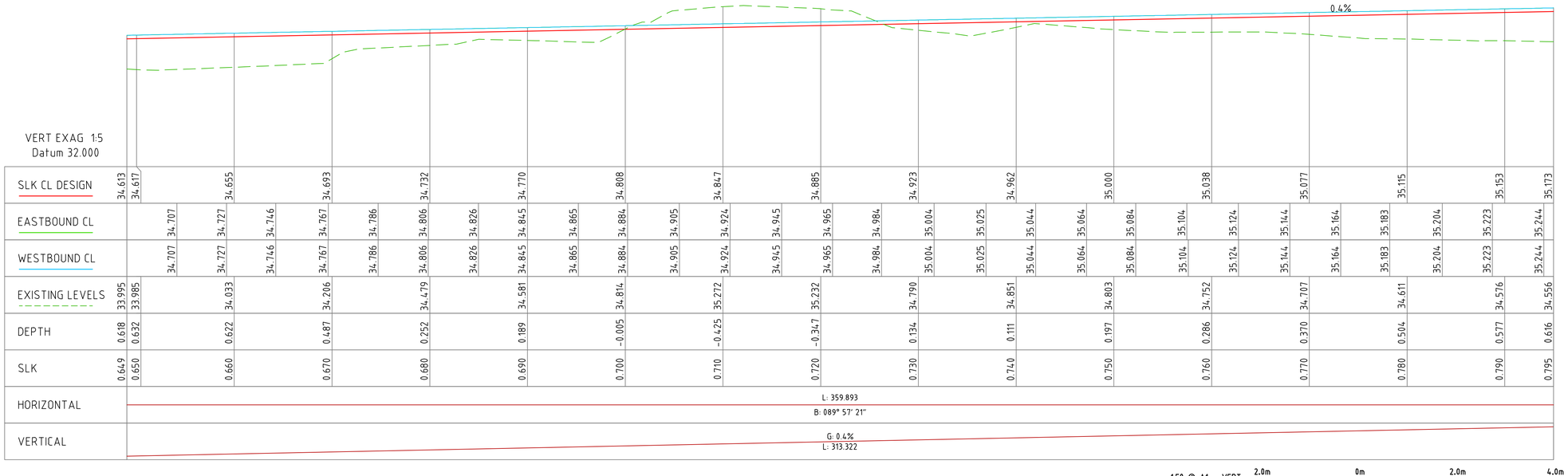
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: PLAN & PROFILE SHEET 1

Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-115 | Rev: B
Filename: TC24021.DWG





Printed byArmand Bester on 03.04.2025 03:07 PM

REFER DRAWING C-131 FOR STORMWATER LAYOUT

VERT EXAG 1:5
Datum 32.000

SLK CL DESIGN	34.613	34.617	34.655	34.693	34.732	34.770	34.808	34.847	34.885	34.923	34.962	35.000	35.038	35.077	35.115	35.153	35.173											
EASTBOUND CL	34.707	34.727	34.746	34.767	34.786	34.806	34.826	34.845	34.865	34.884	34.905	34.924	34.945	34.965	34.984	35.004	35.025	35.044	35.064	35.084	35.104	35.124	35.144	35.164	35.183	35.204	35.223	35.244
WESTBOUND CL	34.707	34.727	34.746	34.767	34.786	34.806	34.826	34.845	34.865	34.884	34.905	34.924	34.945	34.965	34.984	35.004	35.025	35.044	35.064	35.084	35.104	35.124	35.144	35.164	35.183	35.204	35.223	35.244
EXISTING LEVELS	33.995	33.985	34.033	34.206	34.479	34.581	34.814	35.272	35.232	34.790	34.851	34.803	34.752	34.707	34.611	34.576	34.556											
DEPTH	0.618	0.632	0.622	0.487	0.252	0.189	-0.005	-0.425	-0.347	0.134	0.111	0.197	0.286	0.370	0.504	0.577	0.616											
SLK	0.649	0.650	0.660	0.670	0.680	0.690	0.700	0.710	0.720	0.730	0.740	0.750	0.760	0.770	0.780	0.790	0.795											
HORIZONTAL	L: 359.893 B: 089° 57' 21"																											
VERTICAL	G: 0.4% L: 313.322																											

1:50 @ A1 VERT 2.0m 0m 2.0m 4.0m
1:250 @ A1 HORIZ 10m 0m 10m 20m

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- T EXISTING TELSTRA LINE
- W EXISTING WATER LINE
- D EXISTING DRAINAGE LINE
- G EXISTING GAS LINE
- E EXISTING UNDERGROUND POWER LINE
- OHP EXISTING OVERHEAD POWER LINE
- S EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS

SMK	SEMI-MOUNTABLE KERB
FMK	REINFORCED FLUSH KERBING
MK	MOUNTABLE KERB

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client:
Shire of Serpentine Jarrahdale

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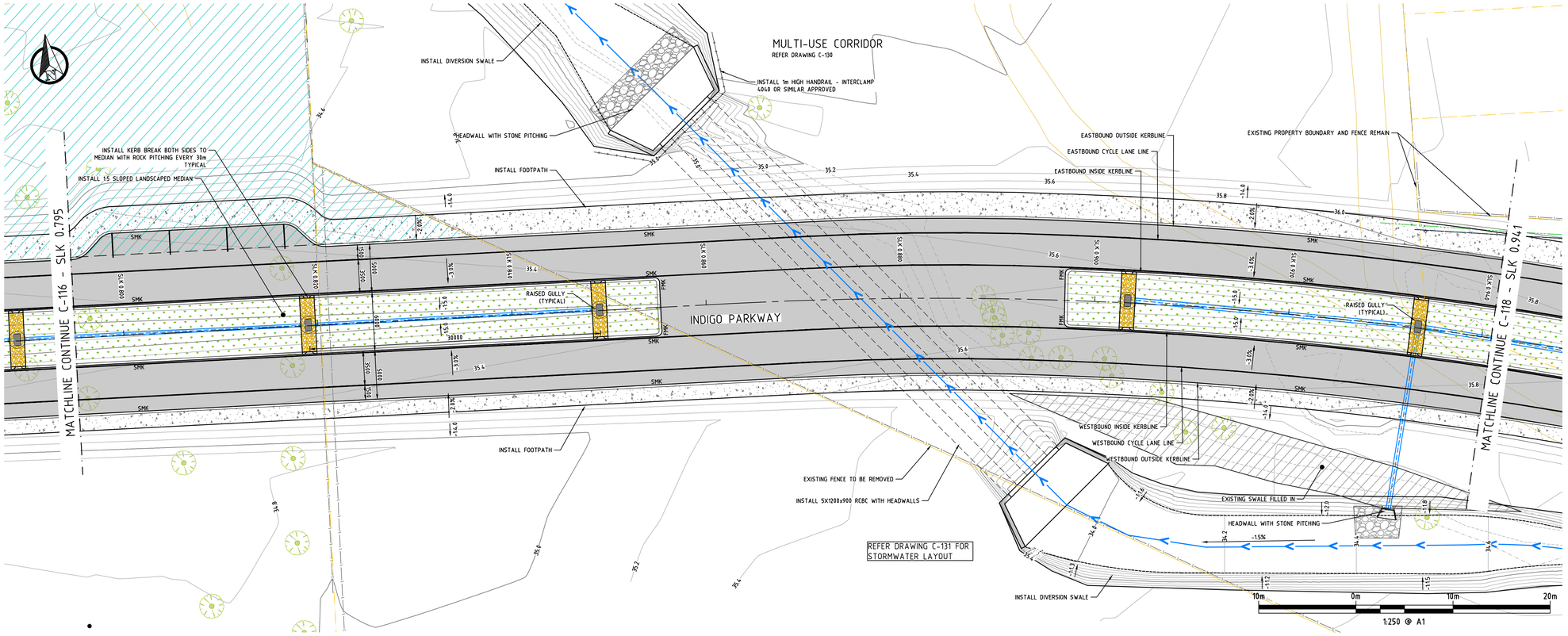
No.	Date			Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

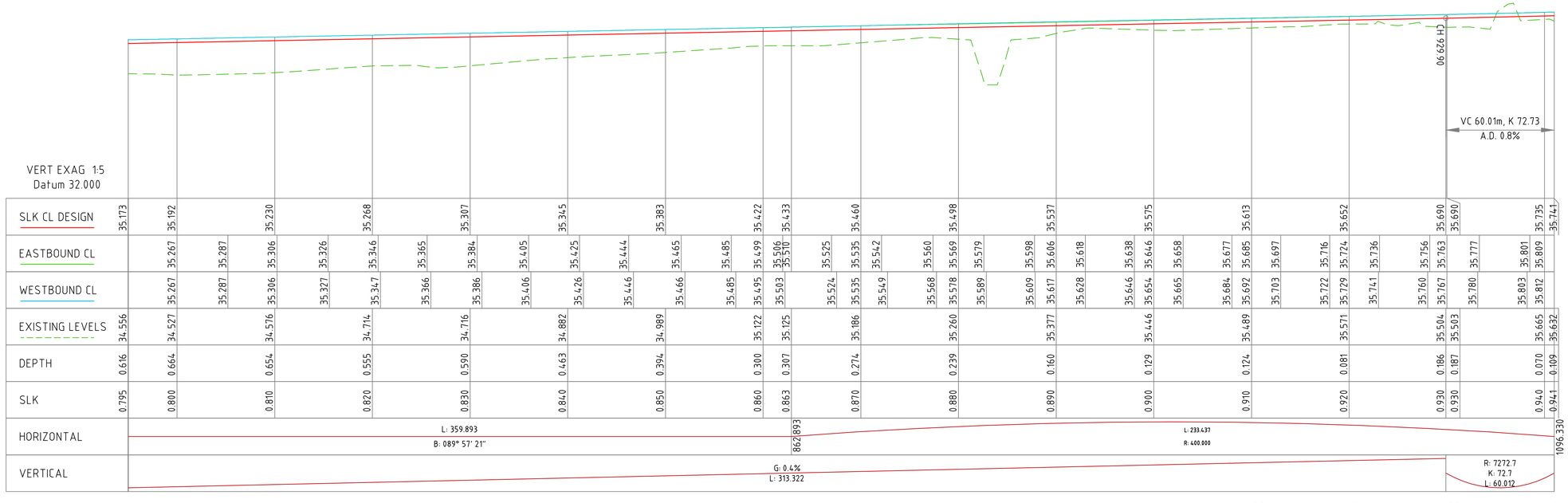
Project:
SSJ INDIGO DRIVE

Title:
PLAN & PROFILE SHEET 2

Scale: AS SHOWN @ A1
Date: 04.04.2025
Drawn: VS
Checked: AB
Approved: JM
Job No: TC24021
Drg. No: C-116
Rev: B
Filename: TC24021.DWG

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021.DWG





LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS

SMK SEMI-MOUNTABLE KERB
FMK REINFORCED FLUSH KERBING
MK MOUNTABLE KERB

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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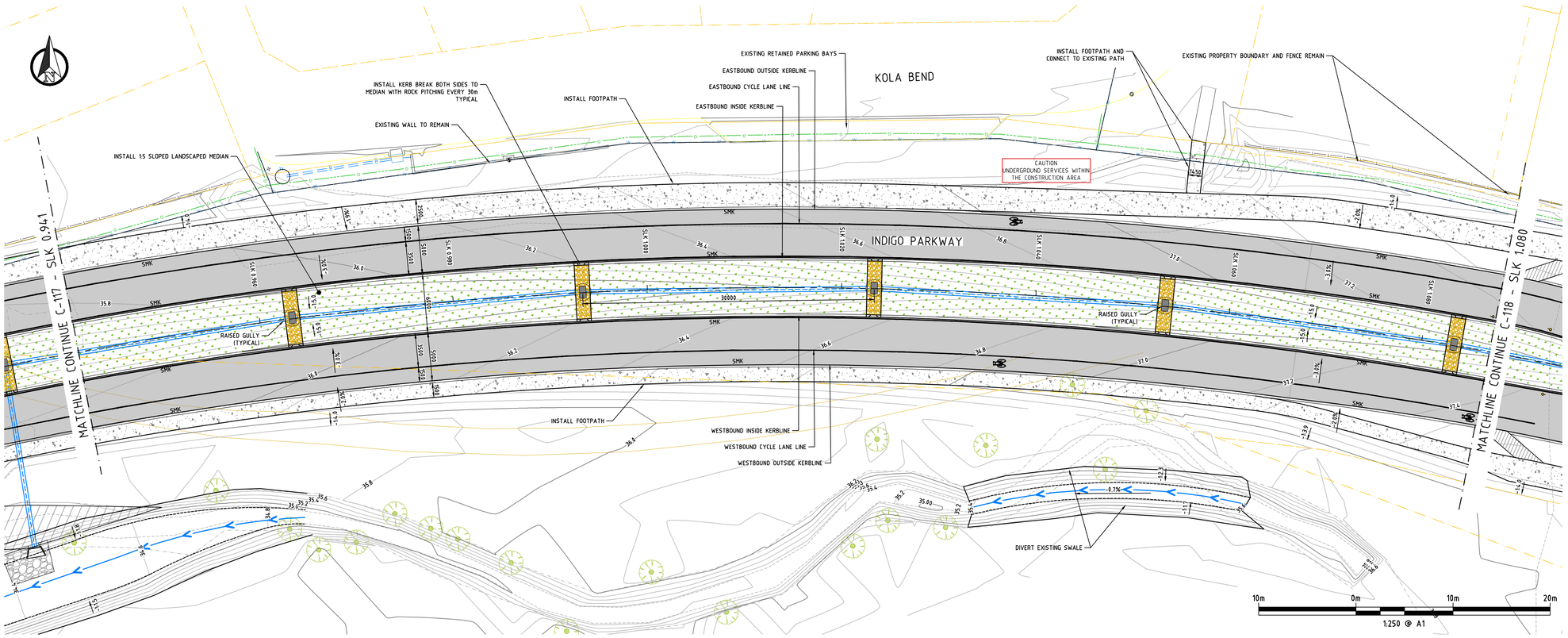
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

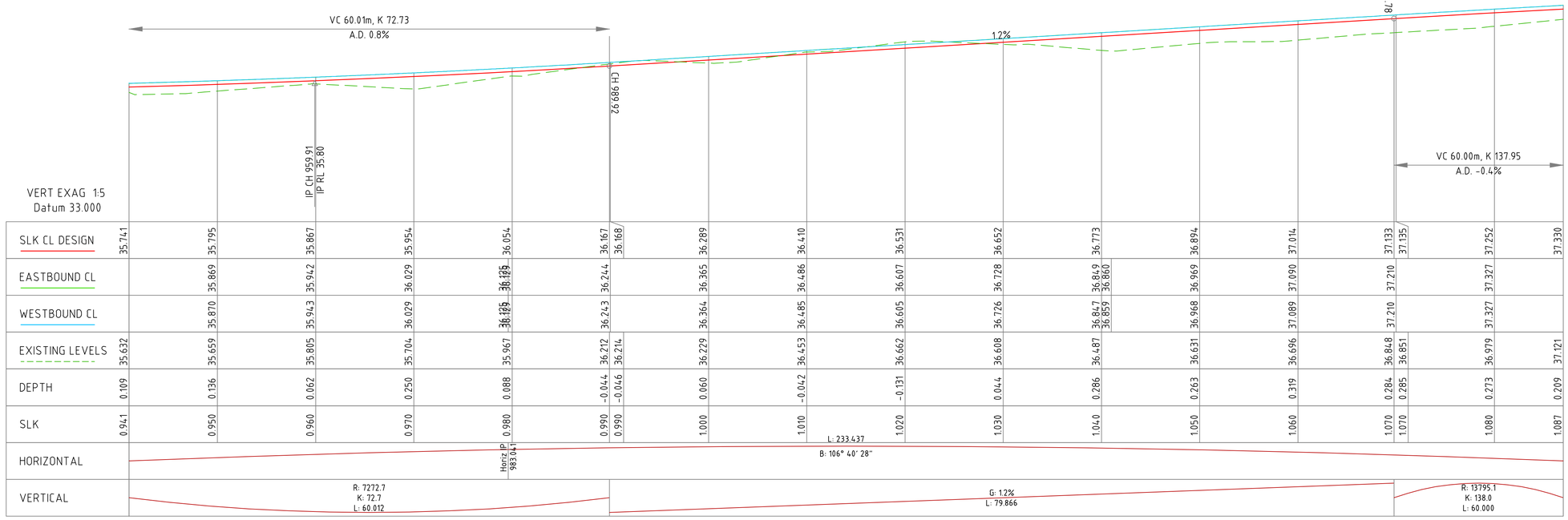
Project: SSJ INDIGO DRIVE

Title: PLAN & PROFILE SHEET 3

Scale: AS SHOWN @ A1	Date: 04.04.2025		
Drawn: VS	Checked: AB	Approved: JM	
Job No: TC24021	Drg. No: C-117	Rev: B	
Filename: TC24021.DWG			

FILENAME: Y:\SECTIONS\ENGINEERING PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021.DWG





Printed by Armand Bester on 03.04.2025 03:08 PM

REFER DRAWING C-131 FOR STORMWATER LAYOUT

SLK CL DESIGN	35.741	35.795	35.867	35.954	36.054	36.167	36.168	36.289	36.410	36.531	36.652	36.773	36.894	37.014	37.133	37.135	37.252	37.330
EASTBOUND CL		35.869	35.942	36.029	36.125 36.129	36.244		36.365	36.486	36.607	36.728	36.849 36.860	36.969	37.090	37.210		37.327	
WESTBOUND CL		35.870	35.943	36.029	36.125 36.129	36.243		36.364	36.485	36.605	36.726	36.847 36.859	36.968	37.089	37.210		37.327	
EXISTING LEVELS	35.632	35.659	35.805	35.704	35.967	36.212	36.214	36.229	36.453	36.662	36.608	36.487	36.631	36.696	36.848	36.851	36.979	37.121
DEPTH	0.109	0.136	0.062	0.250	0.088	-0.044	-0.046	0.060	-0.042	-0.131	0.044	0.286	0.263	0.319	0.284	0.285	0.273	0.209
SLK	0.941	0.950	0.960	0.970	0.980	0.990	0.990	1.000	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.070	1.080	1.087
HORIZONTAL					Horiz IP 983.041				L: 233.437 B: 106° 40' 28"									
VERTICAL	R: 7272.7 K: 72.7 L: 60.012					G: 1.2% L: 79.866										R: 13795.1 K: 138.0 L: 60.000		

1:50 @ A1 VERT 2.0m 0m 2.0m 4.0m
1:250 @ A1 HORIZ 10m 0m 10m 20m

LEGEND:

●	EXISTING COMM PIT
	EXISTING HEADWALL
	EXISTING MULTI POST SIGN
	EXISTING ONE POST SIGN
◇	EXISTING ELETRIC TRANSFORMER
+	EXISTING STOP VALVE
✳	EXISTING LIGHT POLE
△	EXISTING POWER DOME
○	EXISTING DRAINAGE MANHOLE
●	EXISTING BOLLARDS
○	EXISTING POWER POLES
○	EXISTING SEWER MANHOLE
◫	EXISTING SEPTIC TANK WITH DRAIN
	EXISTING WINDMILL
✳	EXISTING VEGETATION TREE
	EXISTING CADASTRAL BOUNDARY
	EXISTING LEVEL CONTOURS
	EXISTING FENCE
	EXISTING EDGE OF THE SEAL
	EXISTING TOP OF BANK
	EXISTING BOTTOM OF BANK
	EXISTING UNSEALED TRACK
	EXISTING CONCRETE FOOTPATH
	EXISTING ROCK LINE
	EXISTING KERB
	EXISTING VEGETATION LINE
	EXISTING BUILDINGS
T	EXISTING TELSTRA LINE
W	EXISTING WATER LINE
D	EXISTING DRAINAGE LINE
G	EXISTING GAS LINE
E	EXISTING UNDERGROUND POWER LINE
OHP	EXISTING OVERHEAD POWER LINE
S	EXISTING SEWER LINE
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
	NEW KERB
	NEW LINE MARKING
	NEW SEALED ROAD
▨	NEW BRICK PAVING
	NEW CONCRETE PATHS
	NEW MEDIAN WITH LANDSCAPING
▨	NEW MULTI-USE CORRIDOR
	NEW PRAM RAMP
	NEW TOP OF BANK
	NEW BOTTOM OF BANK
>	NEW SWALE LINE
	NEW CULVERTS
SMK	SEMI-MOUNTABLE KERB
FMK	REINFORCED FLUSH KERBING
MK	MOUNTABLE KERB

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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client:
Shire of Serpentine Jarrahdale

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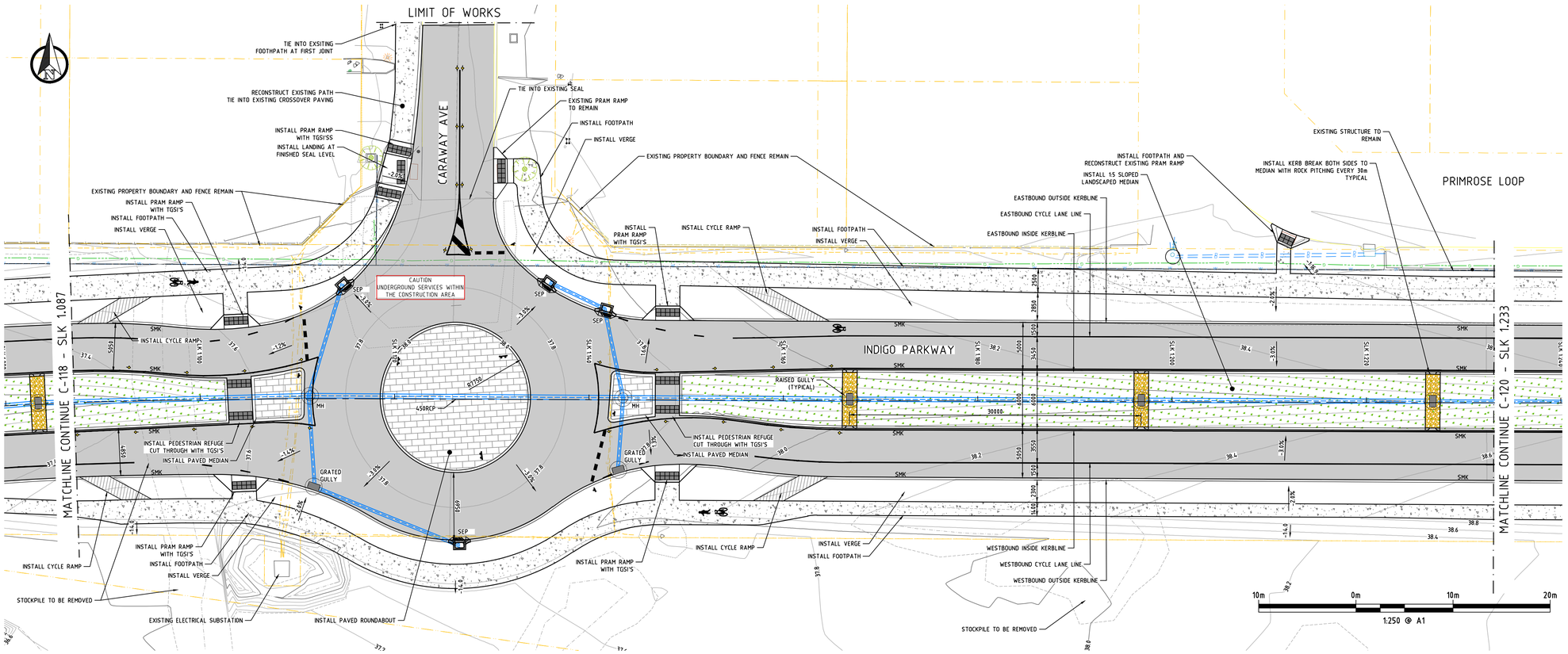
No.	Date	Dn	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project:
SSJ INDIGO DRIVE

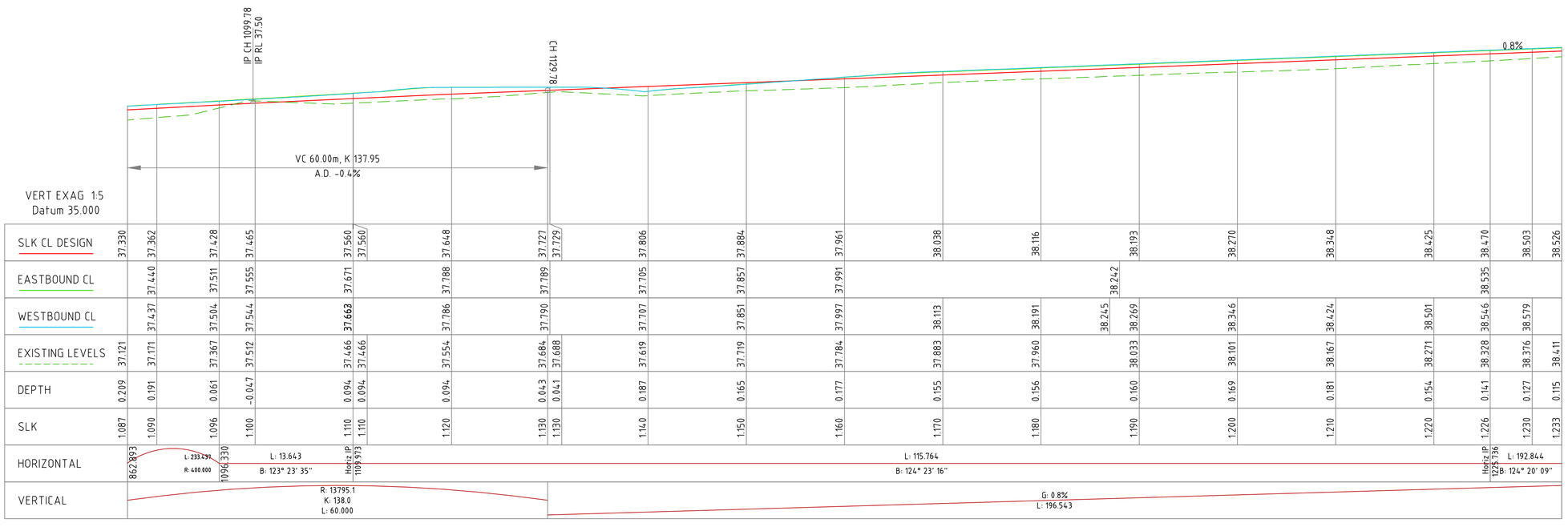
Title:
PLAN & PROFILE SHEET 4

Scale: AS SHOWN @ A1
Date: 04.04.2025
Drawn: VS
Checked: AB
Approved: JM
Job No: TC24021
Drg. No: C-118
Rev: B
Filename: TC24021.DWG

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021.DWG



REFER DRAWING C-131 FOR STORMWATER LAYOUT



1:50 @ A1 VERT
1:250 @ A1 HORIZ
2.0m 0m 2.0m 4.0m
10m 0m 10m 20m

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- SMK SEMI-MOUNTABLE KERB
- FMK REINFORCED FLUSH KERBING
- MK MOUNTABLE KERB

PRELIMINARY ONLY
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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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No.	Date	Dr	Ch	Amendment / Issue	App.
A	04.04.2025	AB	JM	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: PLAN & PROFILE SHEET 5

Scale: AS SHOWN @ A1	Date: 04.04.2025	
Drawn: VS	Checked: AB	Approved: JM
Job No: TC24021	Drg. No: C-119	Rev: A
Filename: TC24021.DWG		

REFER DRAWING C-131 FOR STORMWATER LAYOUT

VERT EXAG 1:5
Datum 36.000

SLK CL DESIGN	38.526 38.580 38.657 38.735 38.812 38.889 38.967 39.044 39.121 39.199 39.248 39.277 39.365 39.464 39.575 39.698 39.818
EASTBOUND CL	38.662 38.739 38.810 38.886 38.957 39.034 39.112 39.190 39.268 39.342 39.420 39.509 39.611 39.716 39.837
WESTBOUND CL	38.656 38.734 38.812 38.890 38.967 39.045 39.123 39.200 39.278 39.356 39.384 39.444 39.543 39.652 39.773
EXISTING LEVELS	38.411 38.490 38.577 38.692 38.813 38.931 39.026 39.106 39.218 40.395 39.316 39.334 39.459 39.310 39.393 39.879 39.956
DEPTH	0.115 0.090 0.080 0.042 -0.001 -0.042 -0.059 -0.062 -0.096 -1.196 -0.068 -0.057 -0.094 0.154 0.182 -0.182 -0.138
SLK	1.233 1.240 1.250 1.260 1.270 1.280 1.290 1.300 1.310 1.320 1.326 1.330 1.340 1.350 1.360 1.370 1.379
HORIZONTAL	L: 192.844 B: 124° 20' 09"
VERTICAL	G: 0.8% L: 196.543 R: 8523.3 K: 85.2 L: 60.000

1:50 @ A1 VERT
1:250 @ A1 HORIZ
2.0m 0m 2.0m 4.0m
10m 0m 10m 20m

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- T EXISTING TELSTRA LINE
- W EXISTING WATER LINE
- D EXISTING DRAINAGE LINE
- G EXISTING GAS LINE
- E EXISTING UNDERGROUND POWER LINE
- OHP EXISTING OVERHEAD POWER LINE
- S EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS

SMK	SEMI-MOUNTABLE KERB
FMK	REINFORCED FLUSH KERBING
MK	MOUNTABLE KERB

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client:
Shire of Serpentine Jarrahdale

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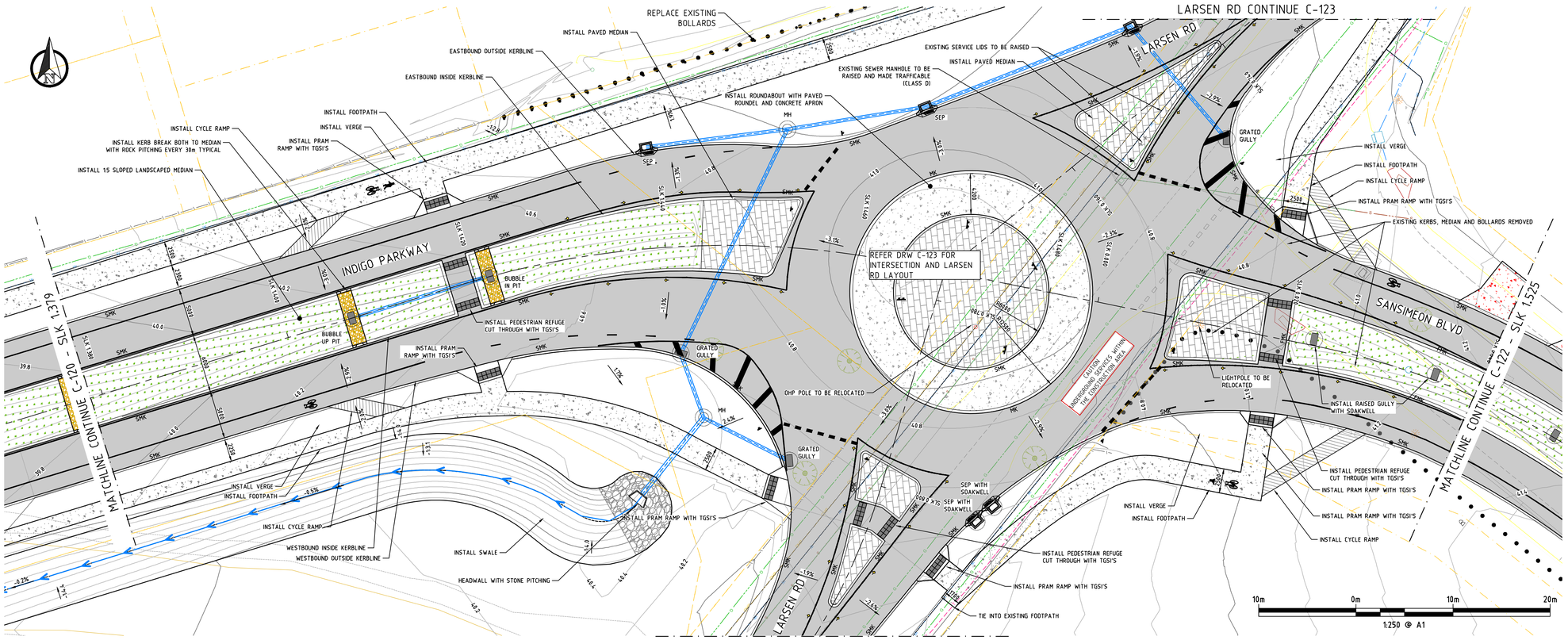
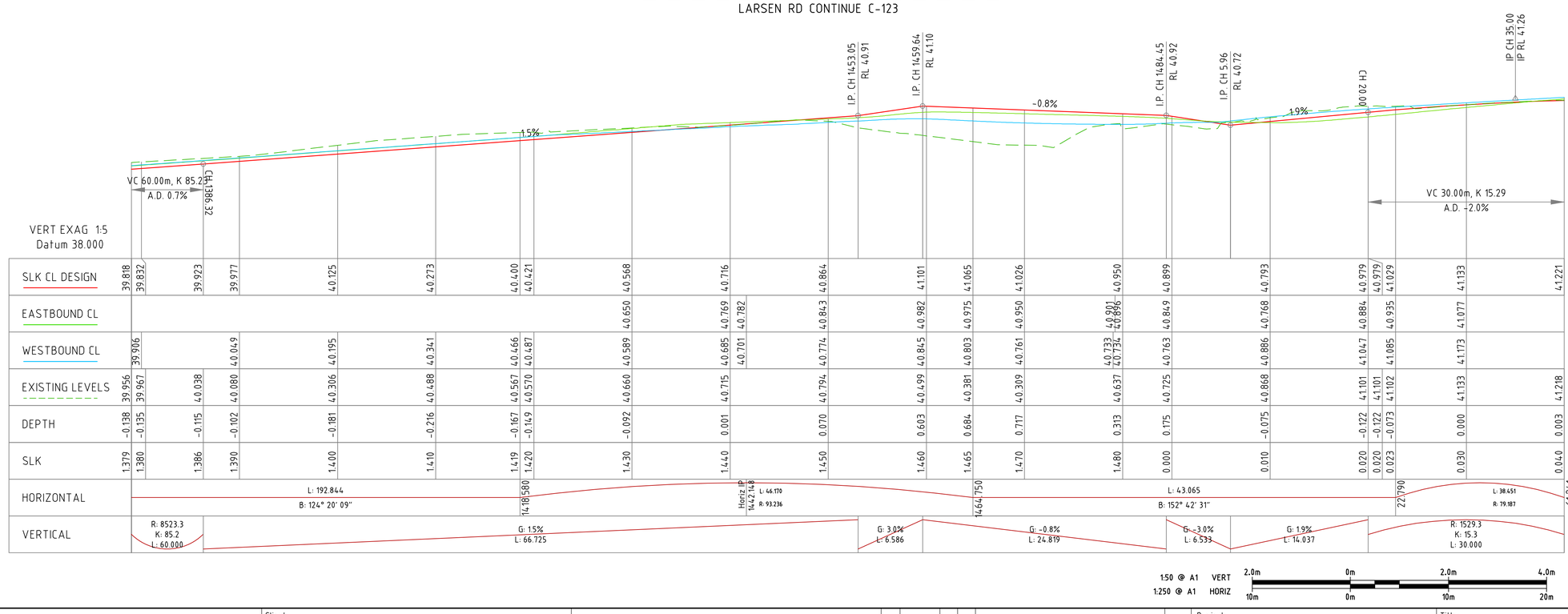
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project:
SSJ INDIGO DRIVE

Title:
PLAN & PROFILE SHEET 6

Scale: AS SHOWN @ A1
Date: 04.04.2025
Drawn: VS
Checked: AB
Approved: JM
Job No: TC24021
Drg. No: C-120
Rev: B
Filename: TC24021.DWG





REFER DRAWING C-131 FOR STORMWATER LAYOUT

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- SMK SEMI-MOUNTABLE KERB
- FMK REINFORCED FLUSH KERBING
- MK MOUNTABLE KERB

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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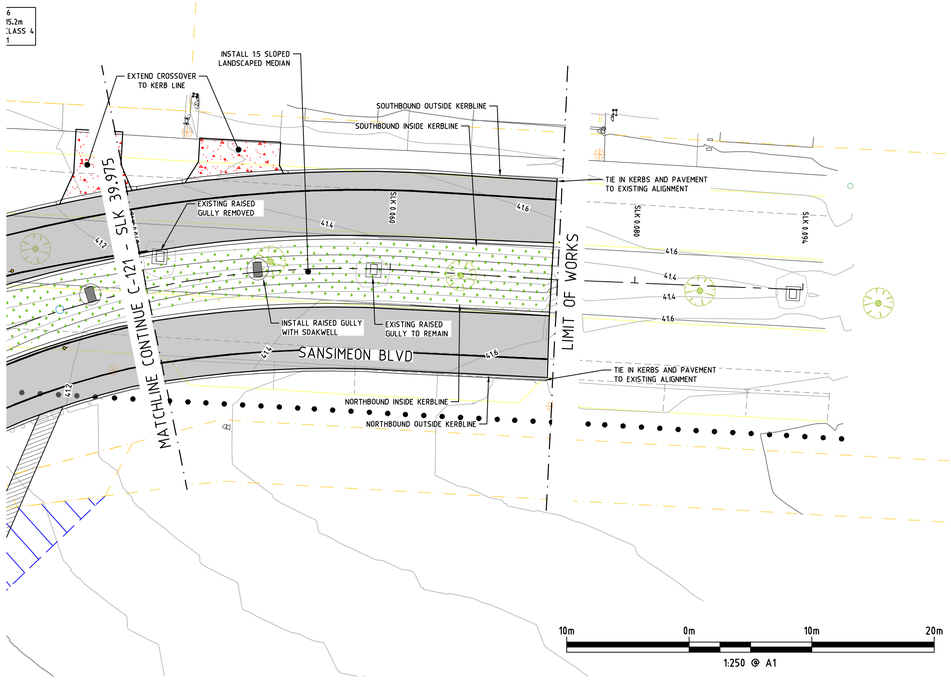
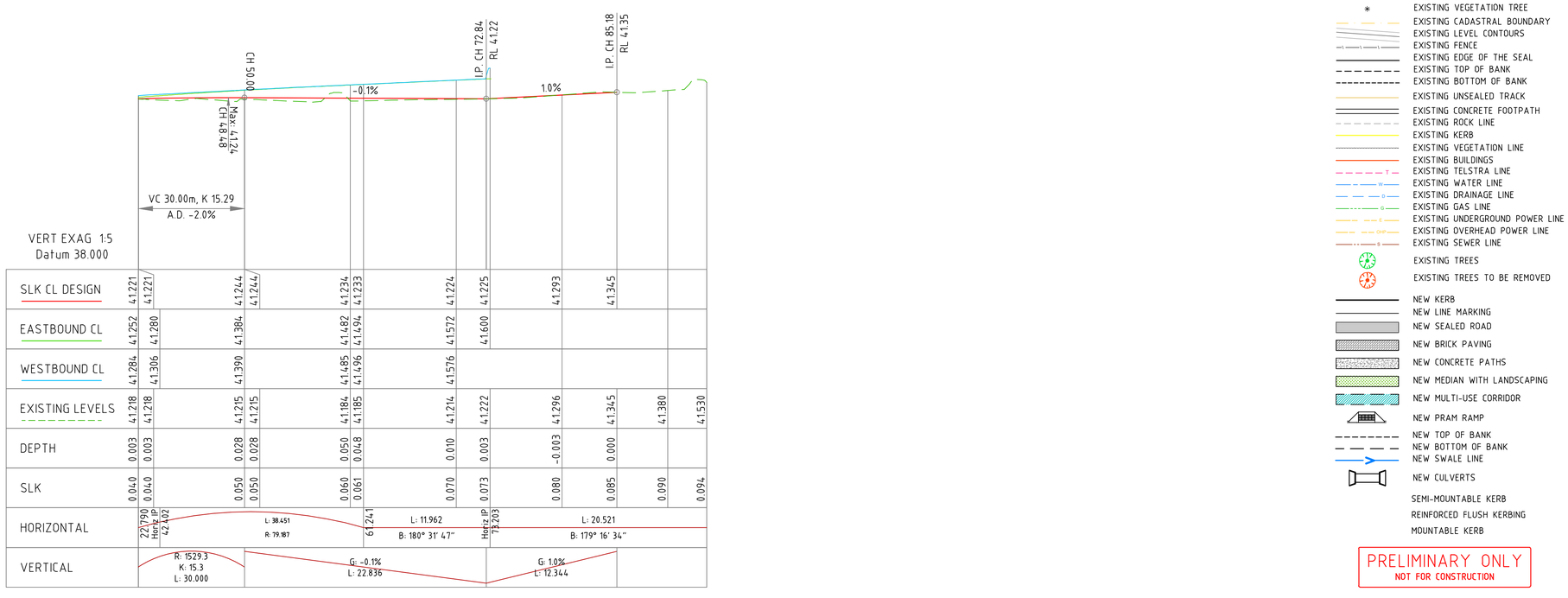
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: PLAN & PROFILE SHEET 7

Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-121 | Rev: B
Filename: TC24021.DWG





1:50 @ A1 VERT
1:250 @ A1 HORIZ
2.0m 0m 2.0m 4.0m
10m 0m 10m 20m

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- SEMI-MOUNTABLE KERB
- REINFORCED FLUSH KERBING
- MOUNTABLE KERB

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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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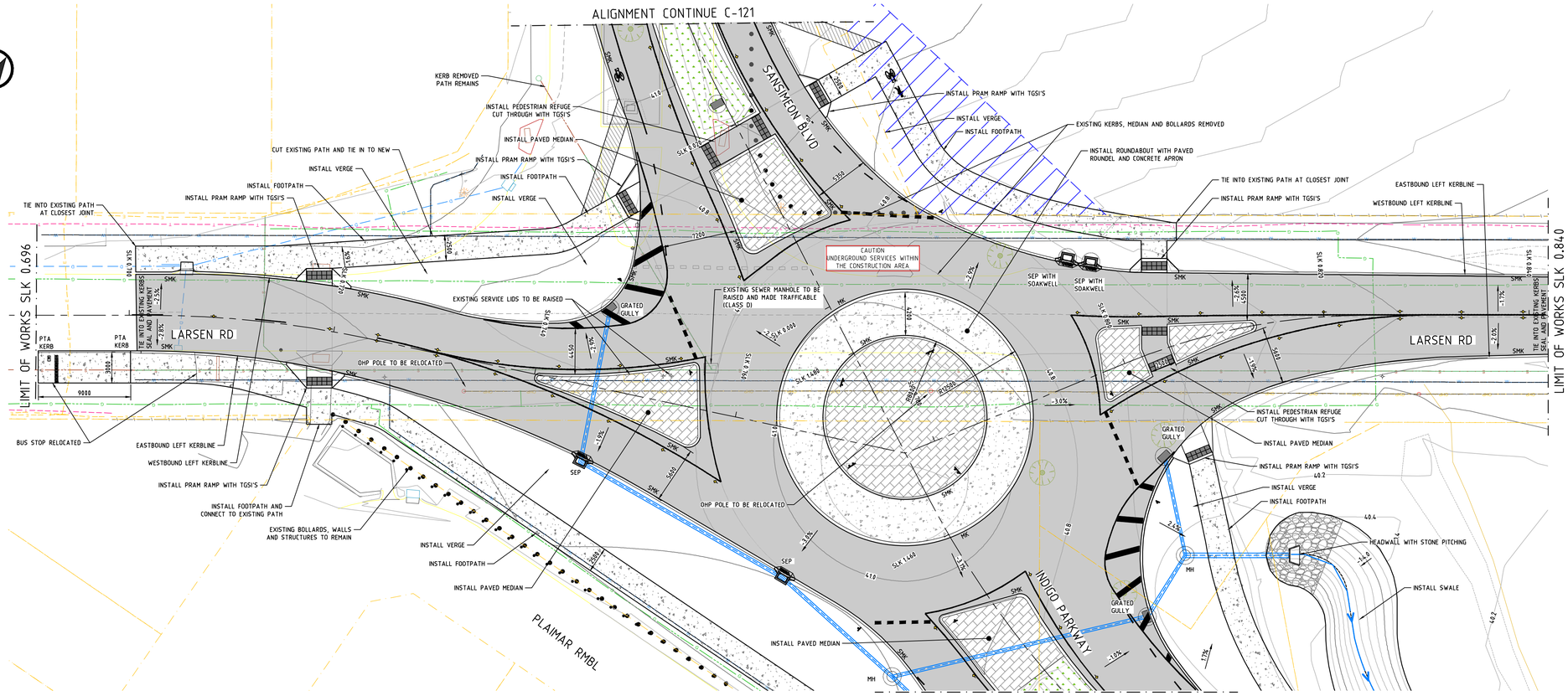
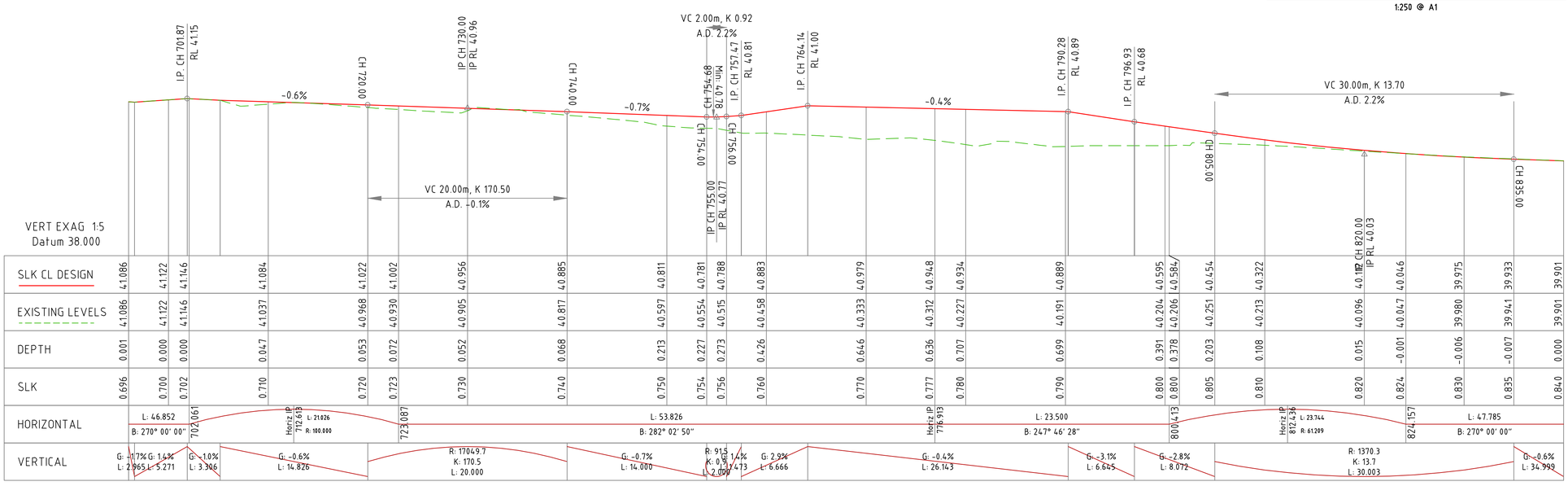
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: PLAN & PROFILE SHEET 8

Scale: AS SHOWN @ A1 Date: 04.04.2025
Drawn: VS Checked: AB Approved: JM
Job No: TC24021 Drg. No: C-122 Rev: B
Filename: TC24021.DWG





1:50 @ A1 VERT
1:250 @ A1 HORIZ
2.0m 0m 2.0m 4.0m
10m 0m 10m 20m

REFER DRAWING C-131 FOR STORMWATER LAYOUT

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS

SMK SEMI-MOUNTABLE KERB
FMK REINFORCED FLUSH KERBING
MK MOUNTABLE KERB

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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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No.	Date	Drn	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: INDIGO PWY LARSEN ROUNDABOUT

Scale: AS SHOWN @ A1	Date: 04.04.2025	
Drawn: VS	Checked: AB	Approved: JM
Job No: TC24021	Drg. No: C-123	Rev: B

Filename: TC24021.DWG

FILENAME: Y:\SECTIONS\ENGINEERING PROJECTS\TC2024-TC24121 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24121.DWG

REFER DRAWING C-131 FOR STORMWATER LAYOUT

STORMWATER RETENTION BASIN (3,300m³)

EXISTING OPEN DRAIN TO BE WIDENED TO 6m WIDE BASE

EXISTING DRAIN

455Ø RCP CULVERT AND HEADWALLS

900Ø RCP INLET TO BASIN

MULTI-USE CORRIDOR

INDIGO PARKWAY

BRIGGS ROAD

9X1200x900 RCBC WITH HEADWALLS

20m 0m 20m 40m

1:500 @ A1

LEGEND:

- EXISTING COMM PIT
- EXISTING HEADWALL
- EXISTING MULTI POST SIGN
- EXISTING ONE POST SIGN
- EXISTING ELETRIC TRANSFORMER
- EXISTING STOP VALVE
- EXISTING LIGHT POLE
- EXISTING POWER DOME
- EXISTING DRAINAGE MANHOLE
- EXISTING BOLLARDS
- EXISTING POWER POLES
- EXISTING SEWER MANHOLE
- EXISTING SEPTIC TANK WITH DRAIN
- EXISTING WINDMILL
- EXISTING VEGETATION TREE
- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE

- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- NEW KERB
- NEW LINE MARKING
- NEW SEALED ROAD
- NEW BRICK PAVING
- NEW CONCRETE PATHS
- NEW MEDIAN WITH LANDSCAPING
- NEW MULTI-USE CORRIDOR
- NEW PRAM RAMP
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- SMK SEMI-MOUNTABLE KERB
- FMK REINFORCED FLUSH KERBING

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SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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No.	Date	Dft	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: MULTI-USE CORRIDOR LAYOUT

Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-125 | Rev: B
Filename: TC24021.DWG

STORMWATER RETENTION BASIN (3,300m³)

EXISTING OPEN DRAIN TO BE WIDENED TO 6m WIDE BASE

HANDRAIL

LIMIT OF WORKS

BRIGGS ROAD

LANDSCAPED MEDIAN

LANDSCAPED MEDIAN WITH RAISED GULLIES EVERY 30m

INDIGO PARKWAY

KOLA BEND

REROUTED SWALE DRAIN

REROUTED SWALE DRAIN

MATCHLINE CONTINUE BELOW

CARAWAY AVENUE

PRIMROSE LOOP

PRIMROSE LOOP

PORTWINE AVENUE

SANDALWOOD AVE

PLAIMAR RMBL

LIMIT OF WORKS

MATCHLINE CONTINUE ABOVE

LIMIT OF WORKS

LARSEN ROAD

INDIGO PARKWAY

LANDSCAPED MEDIAN WITH RAISED GULLIES EVERY 30m

EXISTING BUBBLE UP PIT TO REMAIN
SWALE TIED INTO EXSTING SWALE SURROUNDING PIT

EXTENDED SWALE DRAIN

EXISTING SWALE

INSTALL SOAKWELLS

LIMIT OF WORKS

LARSEN ROAD

LIMIT OF WORKS

SANSIMEON BVD

LEGEND:

- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- NEW HANDRAIL
- MH MANHOLE
- GG GRATED GULLY
- SEP SIDE ENTRY PIT
- RG RAISED GULLY
- BU BUBBLE UP PIT
- BI BUBBLE IN PIT
- STONE PITCHING TO HEADWALL OUTLETS
- STONE PITCHING TO RAISED GULLIES
- CATCHMENT AREA

PRELIMINARY ONLY
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30m 0m 30m 60m
1:750 @ A1

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM

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No.	Date	Dr	Ch	Amendment / Issue	App.
A	26.06.2025	AB	JM	100% DESIGN ISSUE	

Project: SSJ INDIGO DRIVE

Title: STORMWATER CATCHMENT PLAN

Scale: AS SHOWN @ A1	Date: 31.07.2024	
Drawn: VS	Checked: AB	Approved: JM
Job No: TC24021	Drg. No: C-126	Rev: A
Filename: TC24021.DWG		

STORMWATER RETENTION BASIN (3,300m³)

EXISTING OPEN DRAIN TO BE WIDENED TO 6m WIDE BASE

HANDRAIL

LIMIT OF WORKS

BRIGGS ROAD

LANDSCAPED MEDIAN

INDIGO PARKWAY

LANDSCAPED MEDIAN WITH RAISED GULLIES EVERY 30m

KOLA BEND

REROUTED SWALE DRAIN

REROUTED SWALE DRAIN

MATCHLINE CONTINUE BELOW

CARAWAY AVENUE

PRIMROSE LOOP

PRIMROSE LOOP

PORTWINE AVENUE

SANDALWOOD AVE

PLAIMAR RMBL

LIMIT OF WORKS

MATCHLINE CONTINUE ABOVE

INDIGO PARKWAY

LANDSCAPED MEDIAN WITH RAISED GULLIES EVERY 30m

EXISTING BUBBLE UP PIT TO REMAIN
SWALE TIED INTO EXSTING SWALE SURROUNDING PIT

EXTENDED SWALE DRAIN

EXISTING SWALE

INSTALL SOAKWELLS

LARSEN ROAD

LIMIT OF WORKS

LIMIT OF WORKS

LARSEN ROAD

SANSIMEON BVD

LEGEND:

- EXISTING CADASTRAL BOUNDARY
- EXISTING LEVEL CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF THE SEAL
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING UNSEALED TRACK
- EXISTING CONCRETE FOOTPATH
- EXISTING ROCK LINE
- EXISTING KERB
- EXISTING VEGETATION LINE
- EXISTING BUILDINGS
- EXISTING TELSTRA LINE
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SEWER LINE
- NEW TOP OF BANK
- NEW BOTTOM OF BANK
- NEW SWALE LINE
- NEW CULVERTS
- NEW HANDRAIL
- MANHOLE
- GRATED GULLY
- SIDE ENTRY PIT
- RAISED GULLY
- BUBBLE UP PIT
- BUBBLE IN PIT
- STONE PITCHING TO HEADWALL OUTLETS
- STONE PITCHING TO RAISED GULLIES

PRELIMINARY ONLY
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30m 0m 30m 60m
1:750 @ A1

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM

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Client: Shire of Serpentine Jarrahdale

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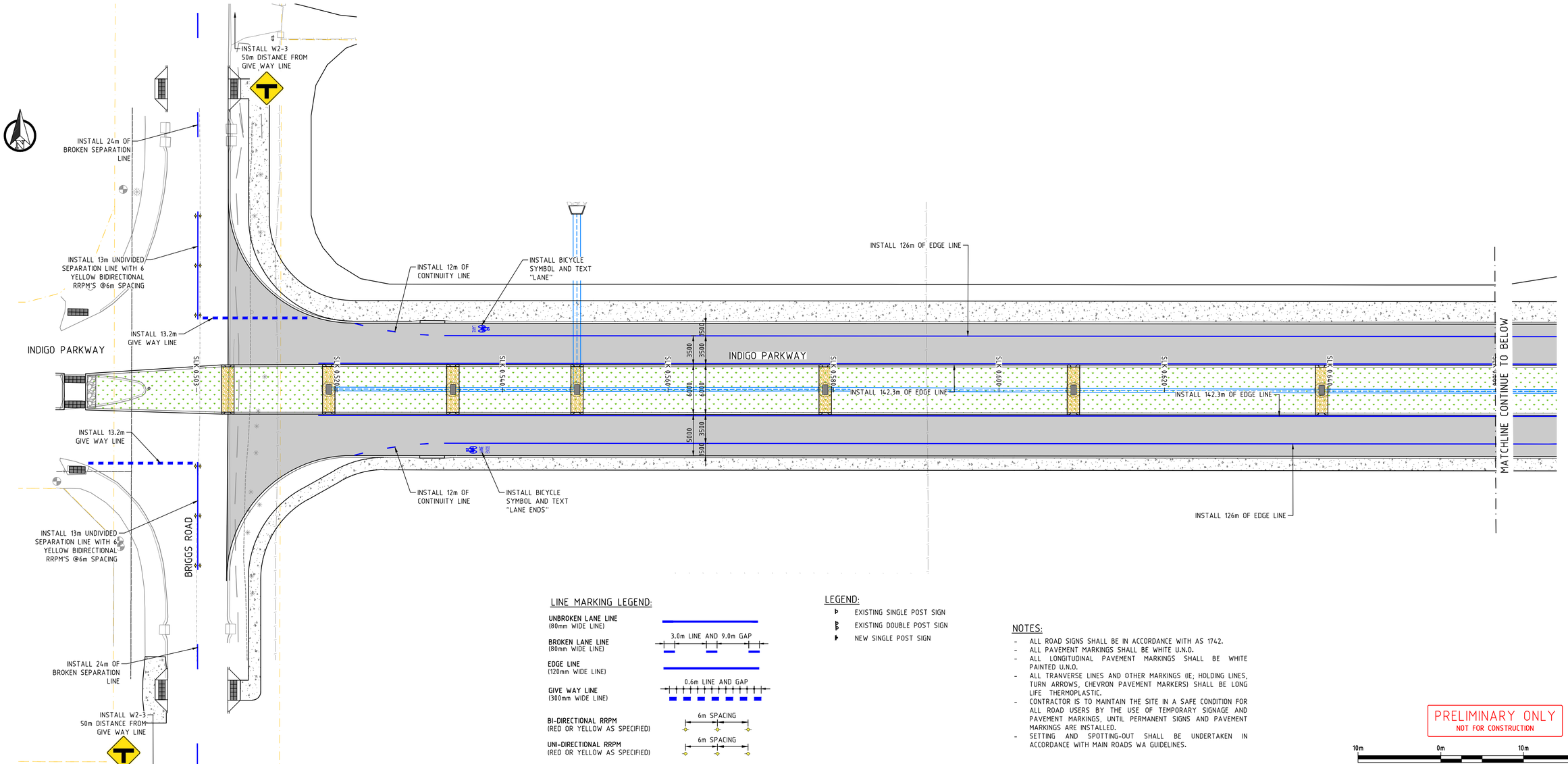
No.	Date	Dr	Ch	Amendment / Issue	App.
A	26.06.2025	AB	JM	100% DESIGN ISSUE	PG

Project: SSJ INDIGO DRIVE

Title: STORMWATER LAYOUT

Scale: AS SHOWN @ A1 | Date: 31.07.2024
Drawn: VS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-127 | Rev: A
Filename: TC24021.DWG

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021.DWG



LINE MARKING LEGEND:

UNBROKEN LANE LINE (80mm WIDE LINE)	
BROKEN LANE LINE (80mm WIDE LINE)	3.0m LINE AND 9.0m GAP
EDGE LINE (120mm WIDE LINE)	
GIVE WAY LINE (300mm WIDE LINE)	0.6m LINE AND GAP
BI-DIRECTIONAL RRPM (RED OR YELLOW AS SPECIFIED)	6m SPACING
UNI-DIRECTIONAL RRPM (RED OR YELLOW AS SPECIFIED)	6m SPACING

LEGEND:

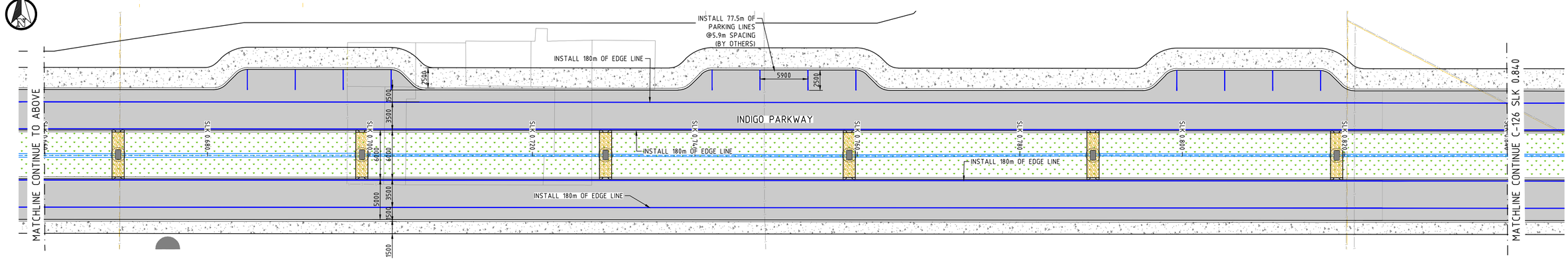
- EXISTING SINGLE POST SIGN
- EXISTING DOUBLE POST SIGN
- NEW SINGLE POST SIGN

NOTES:

- ALL ROAD SIGNS SHALL BE IN ACCORDANCE WITH AS 1742.
- ALL PAVEMENT MARKINGS SHALL BE WHITE U.N.O.
- ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE WHITE PAINTED U.N.O.
- ALL TRANVERSE LINES AND OTHER MARKINGS (IE; HOLDING LINES, TURN ARROWS, CHEVRON PAVEMENT MARKERS) SHALL BE LONG LIFE THERMOPLASTIC.
- CONTRACTOR IS TO MAINTAIN THE SITE IN A SAFE CONDITION FOR ALL ROAD USERS BY THE USE OF TEMPORARY SIGNAGE AND PAVEMENT MARKINGS, UNTIL PERMANENT SIGNS AND PAVEMENT MARKINGS ARE INSTALLED.
- SETTING AND SPOTTING-OUT SHALL BE UNDERTAKEN IN ACCORDANCE WITH MAIN ROADS WA GUIDELINES.

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

10m 0m 10m 20m
1:250 @ A1



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Client: Shire of Serpentine Jarrahdale

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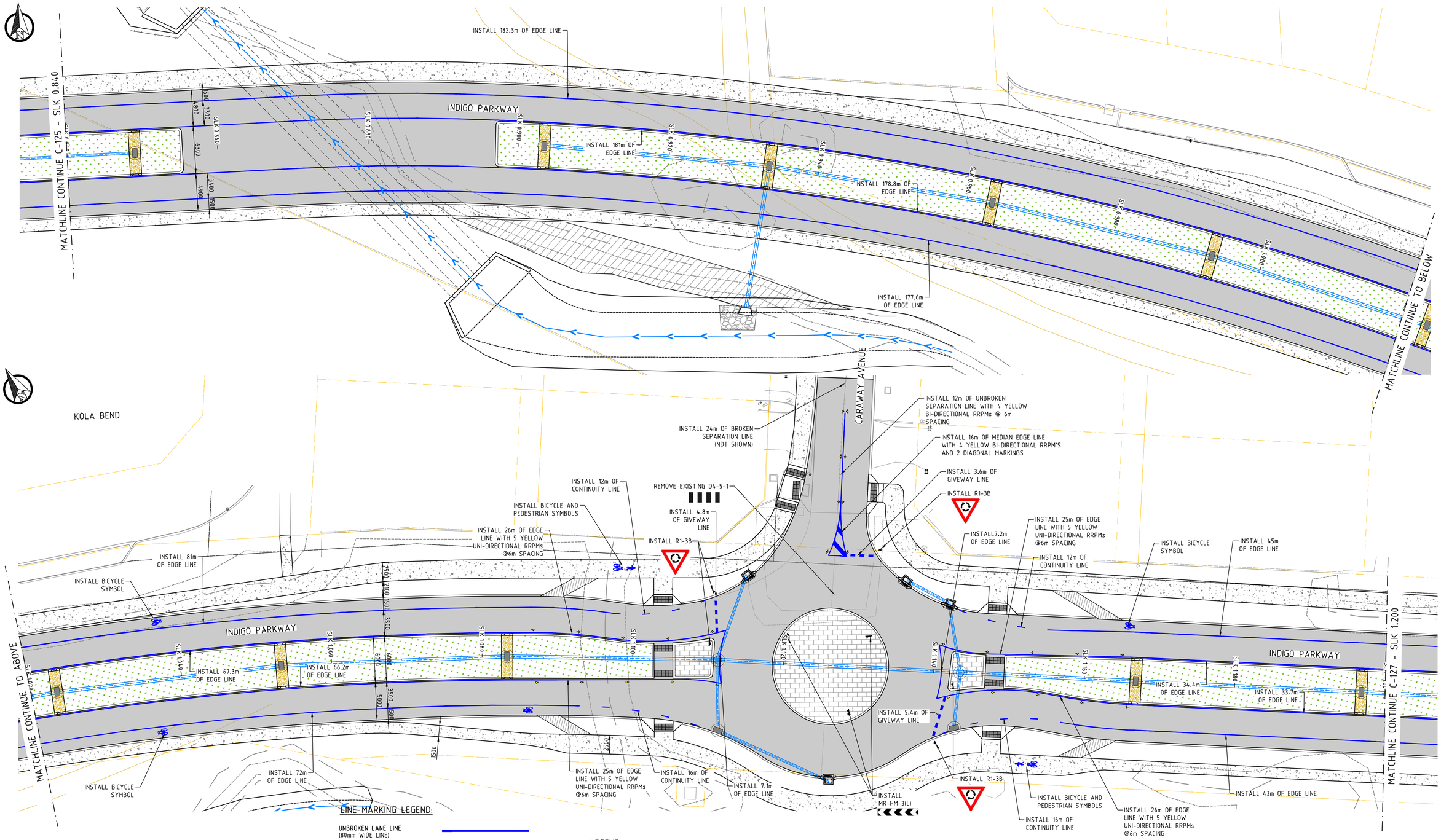
No.	Date	By	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DETAIL DESIGN	PG
A	04.04.2025	YJ	AB	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: SIGNS AND LINES SHEET 1

Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: YJ | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-130 | Rev: B
Filename: TC24021_S&L.DWG

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC20\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021_S&L.DWG



LINE MARKING LEGEND:

UNBROKEN LANE LINE
(80mm WIDE LINE)

BROKEN LANE LINE
(80mm WIDE LINE)

3.0m LINE AND 9.0m GAP

EDGE LINE
(120mm WIDE LINE)

GIVE WAY LINE
(300mm WIDE LINE)

0.6m LINE AND GAP

BI-DIRECTIONAL RRPM
(RED OR YELLOW AS SPECIFIED)

6m SPACING

UNI-DIRECTIONAL RRPM
(RED OR YELLOW AS SPECIFIED)

6m SPACING

LEGEND:

- EXISTING SINGLE POST SIGN
- EXISTING DOUBLE POST SIGN
- NEW SINGLE POST SIGN
- NEW DOUBLE POST SIGN

NOTES:

- ALL ROAD SIGNS SHALL BE IN ACCORDANCE WITH AS 1742.
- ALL PAVEMENT MARKINGS SHALL BE WHITE U.N.O.
- ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE WHITE PAINTED U.N.O.
- ALL TRANVERSE LINES AND OTHER MARKINGS (IE; HOLDING LINES, TURN ARROWS, CHEVRON PAVEMENT MARKERS) SHALL BE LONG LIFE THERMOPLASTIC.
- CONTRACTOR IS TO MAINTAIN THE SITE IN A SAFE CONDITION FOR ALL ROAD USERS BY THE USE OF TEMPORARY SIGNAGE AND PAVEMENT MARKINGS, UNTIL PERMANENT SIGNS AND PAVEMENT MARKINGS ARE INSTALLED.
- SETTING AND SPOTTING-OUT SHALL BE UNDERTAKEN IN ACCORDANCE WITH MAIN ROADS WA GUIDELINES.

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10m 0m 10m 20m
1:250 @ A1

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No.	Date	ch	ck	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DETAIL DESIGN	PG
A	04.04.2025	YJ	AB	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: SIGNS AND LINES SHEET 2

Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: YJ | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-131 | Rev: B
Filename: TC24021_S&L.DWG

PRIMROSE LOOP
PORTWINE AVE
INDIGO PARKWAY
MATCHLINE CONTINUE C-126 - SLK 1.200
MATCHLINE CONTINUE TO BELOW
REMOVE EXISTING G9-18B AT VANILLA BEND
INSTALL 24m OF BROKEN SEPARATION LINE
INSTALL 14m OF EDGE LINE
INSTALL 147m OF EDGE LINE
INSTALL 13m UNDIVIDED SEPARATION LINE WITH 6 YELLOW BIDIRECTIONAL RRPM'S @6m SPACING
INSTALL 6m GIVE WAY LINE
INSTALL 16m OF CONTINUITY LINE
INSTALL MR-HM-3(L)
INSTALL 180m OF EDGE LINE
INSTALL 7.4m OF PARKING LINES @5.9m SPACING (BY OTHERS)
REMOVE EXISTING D4-2-1
SLK 1.220
SLK 1.240
SLK 1.260
SLK 1.280
SLK 1.300
SLK 1.320
SLK 1.340
SLK 1.360
5900
MATCHLINE CONTINUE C-133 LARSEN RD SLK 0.740
LARSEN RD
INSTALL 21m OF CONTINUITY LINE
INSTALL R1-3B
INSTALL 26m OF EDGE LINE WITH 5 YELLOW UNI-DIRECTIONAL RRPMs @6m SPACING
INSTALL 7.2m OF GIVEWAY LINE
INSTALL BICYCLE AND PEDESTRIAN SYMBOLS
INSTALL 50.5m OF EDGE LINE
INSTALL 53m OF EDGE LINE
INSTALL 11m OF EDGE LINE
INSTALL 12m OF CONTINUITY LINE
INSTALL BICYCLE SYMBOL
INSTALL 6m OF EDGE LINE
INSTALL 53m OF EDGE LINE
INSTALL 12m OF EDGE LINE
INSTALL 16m OF CONTINUITY LINE
INSTALL 9m OF GIVEWAY LINE
INSTALL 28m OF CONTINUITY LINE
INSTALL 46.7m OF EDGE LINE
INSTALL 25m OF EDGE LINE WITH 5 YELLOW UNI-DIRECTIONAL RRPMs @6m SPACING
INSTALL BICYCLE SYMBOL
INSTALL 33m OF EDGE LINE
INSTALL 49m OF EDGE LINE
INSTALL 6m OF EDGE LINE
INSTALL BICYCLE AND PEDESTRIAN SYMBOLS
TIE INTO EXISTING EDGE LINE
SANSIMEON BLVD
MATCHLINE CONTINUE TO ABOVE
MATCHLINE CONTINUE C-133 LARSEN RD SLK 0.800
LIMIT OF WORKS
6495
7600

LINE MARKING LEGEND:

UNBROKEN LANE LINE (80mm WIDE LINE)	
BROKEN LANE LINE (80mm WIDE LINE)	3.0m LINE AND 9.0m GAP
EDGE LINE (120mm WIDE LINE)	
GIVE WAY LINE (300mm WIDE LINE)	0.6m LINE AND GAP
BI-DIRECTIONAL RRPM (RED OR YELLOW AS SPECIFIED)	6m SPACING
UNI-DIRECTIONAL RRPM (RED OR YELLOW AS SPECIFIED)	6m SPACING

LEGEND:

- EXISTING SINGLE POST SIGN
- EXISTING DOUBLE POST SIGN
- NEW SINGLE POST SIGN
- NEW DOUBLE POST SIGN

NOTES:

- ALL ROAD SIGNS SHALL BE IN ACCORDANCE WITH AS 1742.
- ALL PAVEMENT MARKINGS SHALL BE WHITE U.N.O.
- ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE WHITE PAINTED U.N.O.
- ALL TRANVERSE LINES AND OTHER MARKINGS (IE; HOLDING LINES, TURN ARROWS, CHEVRON PAVEMENT MARKERS) SHALL BE LONG LIFE THERMOPLASTIC.
- CONTRACTOR IS TO MAINTAIN THE SITE IN A SAFE CONDITION FOR ALL ROAD USERS BY THE USE OF TEMPORARY SIGNAGE AND PAVEMENT MARKINGS, UNTIL PERMANENT SIGNS AND PAVEMENT MARKINGS ARE INSTALLED.
- SETTING AND SPOTTING-OUT SHALL BE UNDERTAKEN IN ACCORDANCE WITH MAIN ROADS WA GUIDELINES.

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

10m 0m 10m 20m
1:250 @ A1

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Client: Shire of Serpentine Jarrahdale

NOTES

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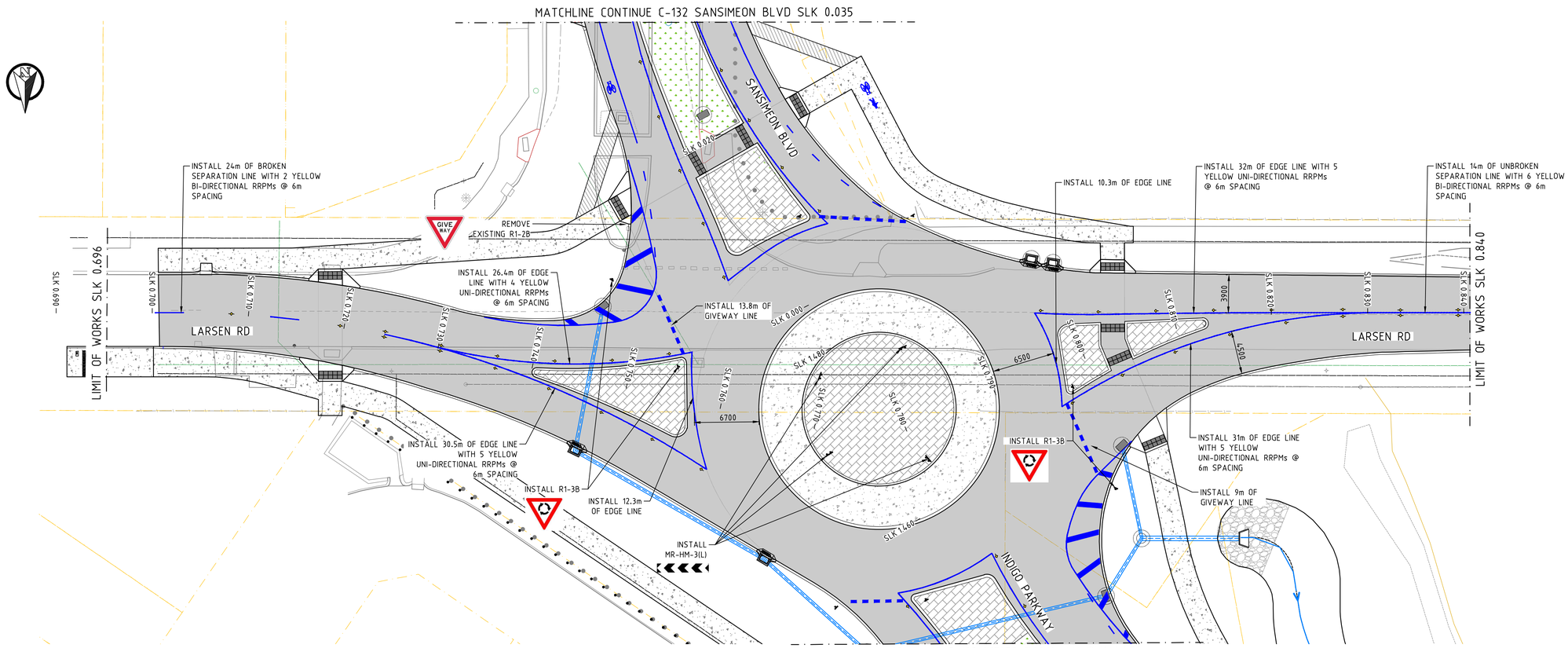
No.	Date	Drawn	Checked	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DETAIL DESIGN	PG
A	04.04.2025	YJ	AB	85% ISSUE	

Project: SSJ INDIGO DRIVE

Title: SIGNS AND LINES SHEET 3

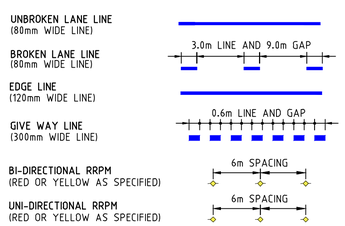
Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: YJ | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-132 | Rev: B
Filename: TC24021_S&L.DWG

MATCHLINE CONTINUE C-132 SANSIMEON BLVD SLK 0.035



MATCHLINE CONTINUE C-132 INDIGO PARKWAY SLK 1.450

LINE MARKING LEGEND:



LEGEND:

- EXISTING SINGLE POST SIGN
- EXISTING DOUBLE POST SIGN
- NEW SINGLE POST SIGN
- NEW DOUBLE POST SIGN

NOTES:

- ALL ROAD SIGNS SHALL BE IN ACCORDANCE WITH AS 1742.
- ALL PAVEMENT MARKINGS SHALL BE WHITE U.N.O.
- ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE WHITE PAINTED U.N.O.
- ALL TRANVERSE LINES AND OTHER MARKINGS (IE; HOLDING LINES, TURN ARROWS, CHEVRON PAVEMENT MARKERS) SHALL BE LONG LIFE THERMOPLASTIC.
- CONTRACTOR IS TO MAINTAIN THE SITE IN A SAFE CONDITION FOR ALL ROAD USERS BY THE USE OF TEMPORARY SIGNAGE AND PAVEMENT MARKINGS, UNTIL PERMANENT SIGNS AND PAVEMENT MARKINGS ARE INSTALLED.
- SETTING AND SPOTTING-OUT SHALL BE UNDERTAKEN IN ACCORDANCE WITH MAIN ROADS WA GUIDELINES.

PRELIMINARY ONLY
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10m 0m 10m 20m
1:250 @ A1

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Client: Shire of Serpentine Jarrahdale

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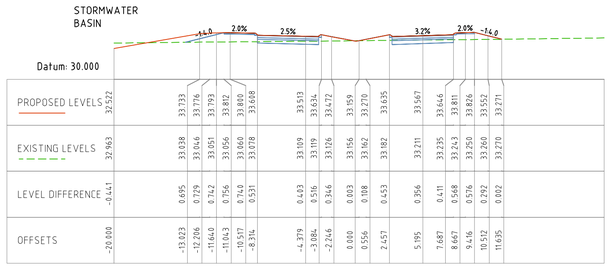
No.	Date	By	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DETAIL DESIGN	PG
A	04.04.2025	YJ	AB	85% ISSUE	

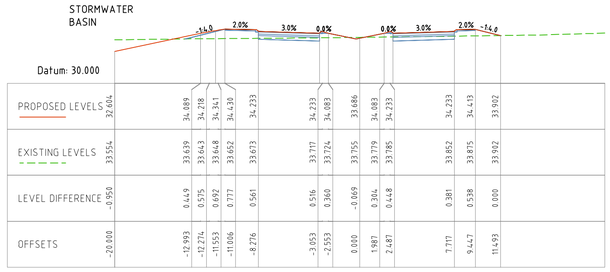
Project: SSJ INDIGO DRIVE

Title: SIGNS AND LINES SHEET 4

Scale: AS SHOWN @ A1 | Date: 04.04.2025
Drawn: YJ | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-133 | Rev: B
Filename: TC24021_S&L.DWG

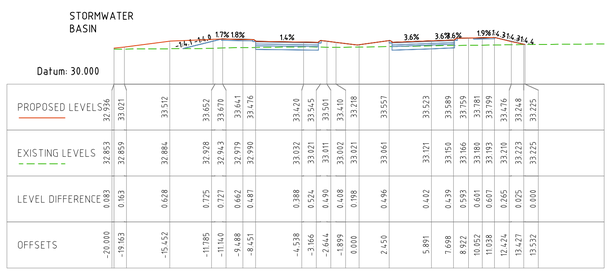


SLK 0.530

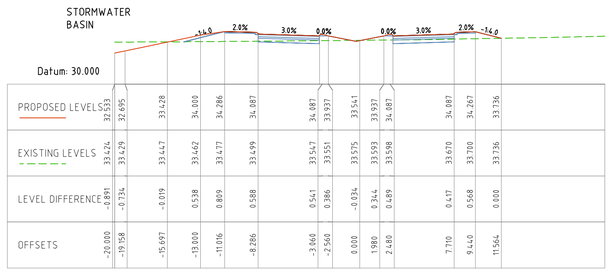


SLK 0.570

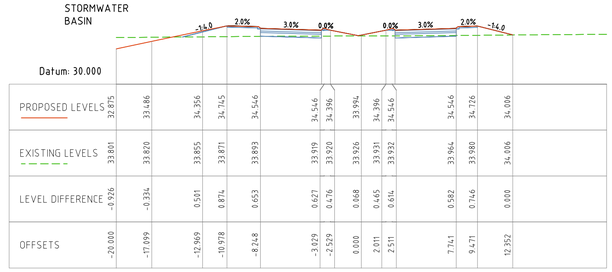
SLK 0.610



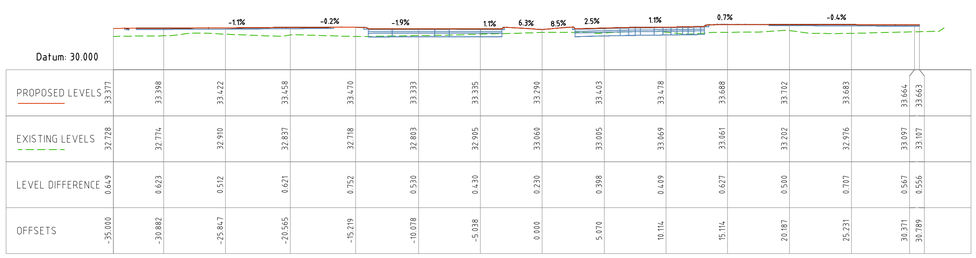
SLK 0.520



SLK 0.560

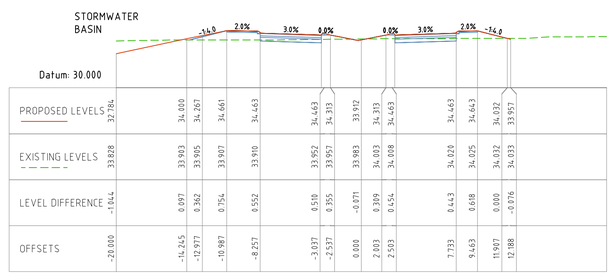


SLK 0.600



SLK 0.510

SLK 0.550



SLK 0.590

NOTES:

PAVEMENT LAYERS SHOWN ON CROSS SECTIONS ARE INDICATIVE ONLY. REFER TO SSJ DETAIL DRAWINGS AND C-301

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1:250 @ A1 VERT
1:250 @ A1 HORIZ

10m 0m 10m 20m
10m 0m 10m 20m

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Client: Shire of Serpentine Jarrahdale

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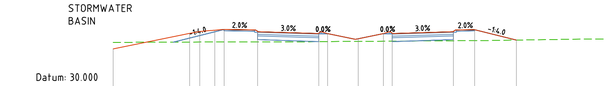
No.	Date			Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project: SSJ INDIGO DRIVE

Title: CROSS SECTIONS SHEET 1

Scale: 1:250 @ A1 Date: 01.04.2025
Drawn: AB Checked: JM Approved: JM
Job No: TC24021 Drg. No: C-201 Rev: B
Filename: TC24021_XSECT.DWG



SLK 0.650

SLK 0.680

SLK 0.710

SLK 0.640

SLK 0.670

SLK 0.700

SLK 0.630

SLK 0.660

SLK 0.690

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1:250 @ A1 VERT
1:250 @ A1 HORIZ

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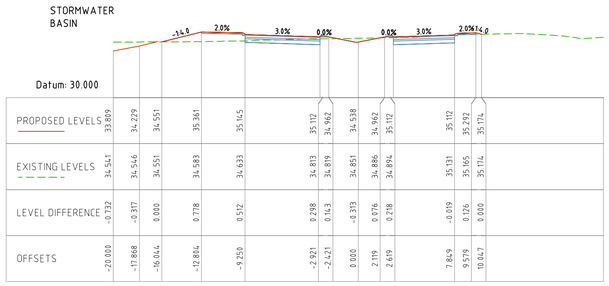
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:
SSJ INDIGO DRIVE

Title:
CROSS SECTIONS SHEET 2

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-202
Rev: B
Filename: TC24021_XSECT.DWG



Printed by Armand Bester on 03.04.2025 03:11 PM

SLK 0.740

SLK 0.770

SLK 0.800

SLK 0.730

SLK 0.760

SLK 0.790

SLK 0.720

SLK 0.750

SLK 0.780

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1:250 @ A1 VERT
1:250 @ A1 HORIZ

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Client:

Shire of Serpentine Jarrahdale

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B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:

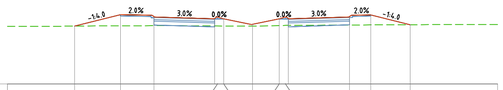
SSJ INDIGO DRIVE

Title:

CROSS SECTIONS SHEET 3

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-203
Rev: B
Filename: TC24021_XSECT.DWG

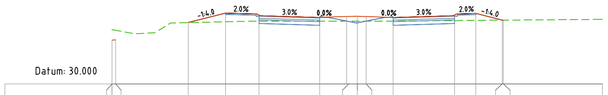
FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021_XSECT.DWG



Datum: 30.000

PROPOSED LEVELS		34.719	35.655	35.455	35.457	35.307	34.869	35.307	35.457		35.457	35.637	34.834
EXISTING LEVELS		34.719	34.747	34.755	34.731	34.727	34.716	34.764	34.779		34.806	34.821	34.834
LEVEL DIFFERENCE		0.000	0.909	0.700	0.726	0.580	0.153	0.542	0.677		0.651	0.816	0.000
OFFSETS	-16.508		-10.762	-8.032	-2.852	-2.352	0.000	2.188	2.688		7.938	9.648	12.859

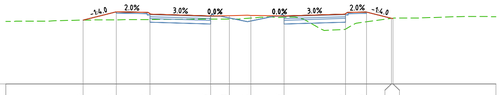
SLK 0.830



Datum: 30.000

PROPOSED LEVELS	33.588	33.589	35.007	35.770	35.570	35.438	35.507	35.524	35.499	35.422	35.572	35.752	35.210	35.189
EXISTING LEVELS	34.416	34.374	35.007	35.075	35.117	35.120	35.121	35.122	35.122	35.126	35.173	35.189	35.210	35.210
LEVEL DIFFERENCE	-0.828	-0.785	0.000	0.695	0.453	0.318	0.386	0.402	0.376	0.296	0.399	0.562	0.000	-0.021
OFFSETS	-20.000	-19.970	-13.790	-10.738	-8.008	-3.957	-0.693	0.000	0.733	2.942	7.942	9.672	11.839	11.922

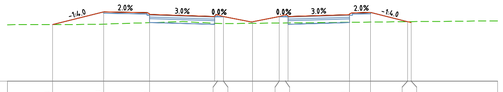
SLK 0.860



Datum: 30.000

PROPOSED LEVELS		35.204	35.885	35.685	35.537	35.571	35.599	35.537	35.687		35.867	35.360	35.329
EXISTING LEVELS		35.204	35.236	35.257	35.287	35.295	35.377	35.438	34.470		35.881	35.360	35.378
LEVEL DIFFERENCE		0.000	0.649	0.428	0.750	0.277	0.222	0.099	1.217		0.786	0.000	-0.048
OFFSETS	-13.703		-10.976	-8.237	-3.292	-1.756	0.000	2.715	7.713		9.443	11.470	11.598

SLK 0.890

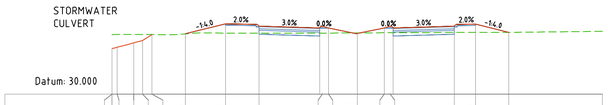


Datum: 30.000

PROPOSED LEVELS		34.610	35.648	35.427	35.448	35.268	34.832	35.268	35.448		35.448	35.598	34.845	34.768
EXISTING LEVELS		34.610	34.645	34.767	34.710	34.699	34.714	34.736	34.742		34.797	34.895	34.845	34.847
LEVEL DIFFERENCE		0.000	1.003	0.661	0.108	0.578	0.119	0.532	0.677		0.622	0.783	0.000	-0.080
OFFSETS	-16.388		-12.155	-8.389	-2.859	-2.359	0.000	2.181	2.681		7.911	9.641	12.656	12.963

SLK 0.820

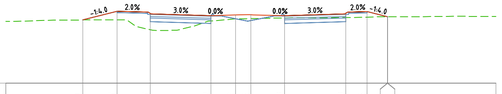
STORMWATER CULVERT



Datum: 30.000

PROPOSED LEVELS	33.970	33.819	34.176	34.375	34.852	34.916	35.732	35.532	35.533	35.383	34.943	35.383	35.523	35.533	35.713	35.635
EXISTING LEVELS	34.847	34.861	34.857	34.854	34.852	34.916	34.978	34.977	34.974	34.976	34.989	35.001	35.084	35.023	35.026	35.035
LEVEL DIFFERENCE	0.738	1.042	0.681	0.480	0.000	0.000	0.754	0.555	0.560	0.407	0.046	0.382	0.529	0.510	0.688	0.000
OFFSETS	-20.000	-19.586	-18.242	-17.517	-16.754	-14.011	-10.746	-8.016	-2.836	-2.336	0.000	2.204	7.704	7.934	9.664	12.377

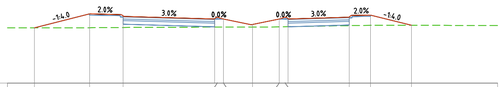
SLK 0.850



Datum: 30.000

PROPOSED LEVELS		35.150	35.847	35.647	35.499	35.552	35.572	35.498	35.648		35.928	35.472	35.408
EXISTING LEVELS		35.150	35.157	34.344	35.069	35.233	35.260	35.315	35.342		35.380	35.472	35.472
LEVEL DIFFERENCE		0.000	0.690	1.303	0.430	0.319	0.313	0.183	0.306		0.548	0.000	-0.064
OFFSETS	-13.720		-10.932	-8.204	-3.261	-1.246	0.000	2.147	7.746		9.477	11.142	11.160

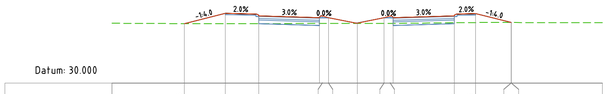
SLK 0.880



Datum: 30.000

PROPOSED LEVELS		34.523	35.654	35.454	35.380	35.230	34.795	35.230	35.380		35.380	35.560	34.724
EXISTING LEVELS		34.523	34.526	34.544	34.512	34.573	34.576	34.598	34.601		34.692	34.721	34.724
LEVEL DIFFERENCE		0.000	1.127	0.909	0.808	0.657	0.219	0.632	0.713		0.688	0.839	0.000
OFFSETS	-17.803		-13.280	-10.550	-2.867	-2.367	0.000	2.173	2.673		7.903	9.633	12.976

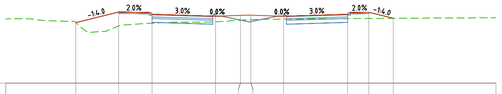
SLK 0.810



Datum: 30.000

PROPOSED LEVELS		34.855	35.694	35.494	35.495	35.345	34.906	35.345	35.495		35.495	35.675	34.963	34.943
EXISTING LEVELS		34.855	34.856	34.869	34.876	34.878	34.882	34.878	34.877		34.932	34.949	34.950	34.950
LEVEL DIFFERENCE		0.000	0.837	0.624	0.619	0.467	0.024	0.467	0.618		0.563	0.727	0.040	-0.007
OFFSETS	-14.109		-10.754	-8.024	-2.844	-2.344	0.000	2.196	2.696		7.926	9.656	12.555	12.585

SLK 0.840



Datum: 30.000

PROPOSED LEVELS		34.938	35.869	35.659	35.467	35.530	35.549	35.467	35.610		35.790	35.290
EXISTING LEVELS		34.938	34.672	34.890	35.011	35.134	35.186	35.226	35.269		35.278	35.290
LEVEL DIFFERENCE		0.000	1.137	0.719	0.456	0.396	0.363	0.241	0.341		0.512	0.000
OFFSETS	-14.278		-10.795	-8.065	-2.891	-0.860	0.000	2.661	7.887		9.618	11.620

SLK 0.870

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

NOTES:

PAVEMENT LAYERS SHOWN ON CROSS SECTIONS ARE INDICATIVE ONLY. REFER TO SSJ DETAIL DRAWINGS AND C-301

1:250 @ A1 VERT
1:250 @ A1 HORIZ

10m 0m 10m 20m
10m 0m 10m 20m

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Client: Shire of Serpentine Jarrahdale

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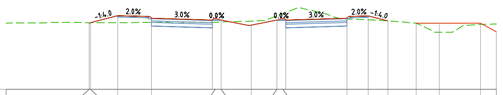
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project: SSJ INDIGO DRIVE

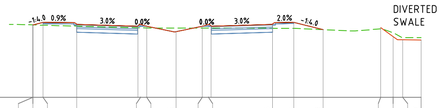
Title: CROSS SECTIONS SHEET 4

Scale: 1:250 @ A1 Date: 01.04.2025
Drawn: AB Checked: JM Approved: JM
Job No: TC24021 Drg. No: C-204 Rev: B
Filename: TC24021_XSECT.DWG



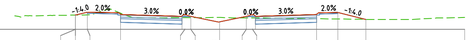
Datum: 30.000																				
PROPOSED LEVELS			35.384	35.447	36.001	35.801		35.802	35.652	35.234	35.652	35.802		35.802	35.982	35.582	35.402	35.402	35.403	34.691
EXISTING LEVELS			35.447	35.447	35.429	35.468		35.481	35.496	35.511	35.987	36.181		35.741	35.672	35.582	35.395	34.660	35.289	35.337
LEVEL DIFFERENCE			-0.064	0.000	0.572	0.333		0.321	0.156	-0.336	-0.335	-0.379		0.061	0.310	0.000	0.007	0.741	0.113	-0.646
OFFSETS	-13.233	-13.114	-10.895	-8.152		-2.949	-2.449	0.000	2.087	2.587		7.819	9.547	11.147		13.462	15.346		18.705	20.000

SLK 0.920



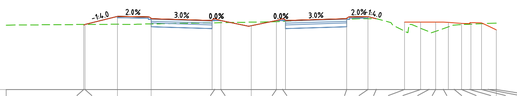
Datum: 30.000																				
PROPOSED LEVELS			35.986	35.907	36.116	35.944		35.945	35.795	35.365	35.795	35.945		35.945	36.125	35.523		35.687	34.951	34.687
EXISTING LEVELS			35.907	35.907	35.884	35.810		35.668	35.642	35.659	35.658	35.658		35.633	35.622	35.523		35.597	35.258	34.874
LEVEL DIFFERENCE			-0.001	0.000	0.232	0.134		0.277	0.152	-0.294	0.136	0.286		0.312	0.502	0.000		0.089	-0.307	-0.187
OFFSETS	-11.678	-11.675	-10.839	-8.108		-2.886	-2.386	0.000	2.147	2.647		7.880	9.610	12.016				16.711	17.177	18.511	20.000

SLK 0.950



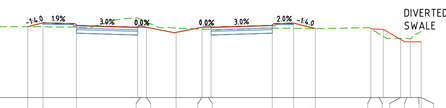
Datum: 35.000																				
PROPOSED LEVELS			36.961	36.961	36.494	36.204		36.204	36.054	35.618	36.054	36.204		36.204	36.384	35.814				
EXISTING LEVELS			36.961	36.961	36.777	36.325		35.950	35.953	35.967	35.932	35.932		35.865	35.843	35.814				
LEVEL DIFFERENCE			0.000	0.000	0.283	-0.121		0.254	0.101	-0.349	0.122	0.273		0.339	0.541	0.000				
OFFSETS	-11.782	-11.781	-10.807	-8.079		-2.849	-2.349	0.000	2.183	2.683		7.918	9.648	11.928						

SLK 0.980



Datum: 30.000																				
PROPOSED LEVELS			35.232	35.301	35.963	35.762		35.763	35.613	35.201	35.613	35.763		35.763	35.943	35.715	35.489	35.592	35.506	35.491	35.424	35.395	35.378	35.235	35.175	34.851
EXISTING LEVELS			35.301	35.301	35.322	35.349		35.439	35.447	35.689	35.538	35.560		35.750	35.768	35.715	34.763	34.999	34.711	34.967	35.252	35.294	35.323	35.365	35.390	35.418
LEVEL DIFFERENCE			-0.069	0.000	0.641	0.414		0.325	0.166	-0.288	0.075	0.203		0.014	0.175	0.000	0.726	0.593	0.795	0.524	0.182	0.101	0.055	0.069	-0.215	-0.567
OFFSETS	-13.667	-13.564	-10.919	-8.171		-2.975	-2.475	0.000	2.063	2.563		7.793	9.521	10.193	12.504	13.810	14.490	15.043	15.688	16.575	17.166	17.835	18.795	19.344	20.000	

SLK 0.910



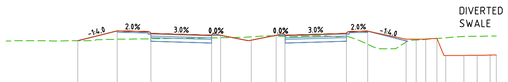
Datum: 30.000																				
PROPOSED LEVELS			35.775	36.084		35.885		35.885	35.795	35.310	35.795	35.885		35.885	36.065	35.620		35.624		
EXISTING LEVELS			35.775	35.764		35.721		36.381	36.759	35.665	35.579	35.559		35.658	35.634	35.620		35.629	35.590	34.818
LEVEL DIFFERENCE			0.000	0.320		0.164		-0.495	-0.423	-0.356	0.156	0.326		0.227	0.431	0.000		-0.005	0.376	-0.088
OFFSETS	-12.088	-10.856		-8.121		-2.904	-2.404	0.000	2.138	2.630		7.862	9.592	11.373				15.900	16.573	18.343

B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	
No.	Date	Dr.	Ch.	Amendment / Issue	App.

SLK 0.940

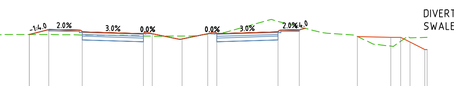
Datum: 35.000																				
PROPOSED LEVELS			36.354	36.304		36.184		36.184	35.959	35.559	35.954	36.184		36.184	36.284	35.706				
EXISTING LEVELS			36.350	36.381	36.496			35.828	36.104	35.705	35.669	35.671		35.701	35.711	35.706				
LEVEL DIFFERENCE			0.014	-0.077	-0.392			0.276	0.147	-0.185	0.285	0.433		0.493	0.573	0.000				
OFFSETS	-11.615	-10.835	-8.087			-2.858	-2.358	0.000	2.174	2.674		7.908	9.638	11.950						

SLK 0.970



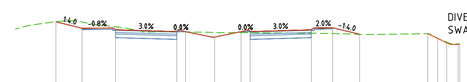
Datum: 30.000																				
PROPOSED LEVELS			35.123	35.924	35.724		35.725	35.735	35.468	35.575	35.725		35.725	35.905	35.245	35.254	35.262	35.294	34.851	33.946	33.931	33.936	33.948	33.953	33.961	33.964
EXISTING LEVELS			35.123	35.246	35.288		35.368	35.376	35.446	35.510	35.488		35.490	34.840	35.017	35.188	35.235	35.284	35.329	35.371	35.478	35.484	35.490	35.497	35.504	35.507
LEVEL DIFFERENCE			0.000	0.679	0.435		0.357	0.359	-0.278	0.065	0.237		0.235	1.065	0.228	0.066	0.027	0.010	-0.477	-1.454	-1.547	-1.547	-1.542	-1.554	-1.543	-1.543
OFFSETS	-14.149	-10.944	-8.191			-3.004	-2.504	0.000	2.035	2.535		7.765	9.492	12.631	13.460	14.151	14.770	15.339	15.871	17.344	17.866	18.434	19.068	19.727	20.000	

SLK 0.900



Datum: 30.000																				
PROPOSED LEVELS			35.642	35.644	36.040	35.839		35.840	35.690	35.268	35.690	35.840		35.840	36.020	35.469		35.406	35.484	35.021	34.410	34.410				
EXISTING LEVELS			35.644	35.644	35.633	35.598		35.511	35.497	35.593	35.656	35.766		36.704	36.264	35.475		34.689	35.087	35.360	35.407	35.414				
LEVEL DIFFERENCE			-0.003	0.000	0.407	0.241		0.329	0.193	-0.325	0.034	0.074		-0.863	-0.244	-0.005		0.718	0.397	-0.339	-0.997	-1.004				
OFFSETS	-12.605	-12.455	-10.874	-8.135		-2.925	-2.425	0.000	2.110	2.610		7.842	9.571	14.311		17.039	17.845	18.619	19.825	20.000						

SLK 0.930



Datum: 30.000																				
PROPOSED LEVELS			36.681	36.148	36.017		36.017	35.867	35.435	35.867	36.017		36.017	36.197	35.650	35.709	35.325	34.964	34.826	34.828						
EXISTING LEVELS			36.681	36.653	36.268		35.841	35.841	35.806	35.785	35.781		35.737	35.717	35.650	35.703	35.332	35.816	34.876	34.860						
LEVEL DIFFERENCE			0.000	-0.505	-0.251		0.176	0.028	-0.371	0.083	0.237		0.281	0.480	0.000	0.006	-0.006	-0.852	-0.049	-0.032						
OFFSETS	-12.958	-10.826	-8.096			-2.871	-2.371	0.000	2.162	2.662		7.895	9.625	11.846		177.400	18.194	18.946	19.531	20.000						

SLK 0.960

PRELIMINARY ONLY
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NOTES:

PAVEMENT LAYERS SHOWN ON CROSS SECTIONS ARE INDICATIVE ONLY. REFER TO SSJ DETAIL DRAWINGS AND C-301

1:250 @ A1 VERT
1:250 @ A1 HORIZ

10m 0m 10m 20m
10m 0m 10m 20m

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021_XSECT.DWG

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Client: Shire of Serpentine Jarrahdale

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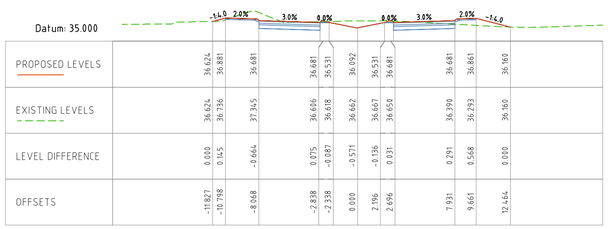
Project: SSJ INDIGO DRIVE

Title: CROSS SECTIONS SHEET 5

Scale: 1:250 @ A1 Date: 01.04.2025
Drawn: AB Checked: JM Approved: JM
Job No: TC24021 Drg. No: C-205 Rev: B
Filename: TC24021_XSECT.DWG



SLK 1.020

SLK 1.060

SLK 1.100

SLK 1.010

SLK 1.050

SLK 1.090

SLK 1.000

SLK 1.040

SLK 1.080

SLK 0.990

SLK 1.030

SLK 1.070

PRELIMINARY ONLY
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NOTES:

PAVEMENT LAYERS SHOWN ON CROSS SECTIONS ARE INDICATIVE ONLY. REFER TO SSJ DETAIL DRAWINGS AND C-301

1:250 @ A1 VERT
1:250 @ A1 HORIZ
10m 0m 10m 20m

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Shire of Serpentine Jarrahdale

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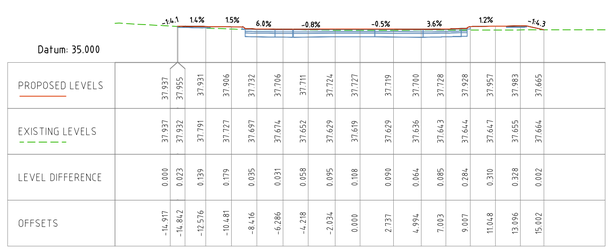
No.	Date	Dn	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:
SSJ INDIGO DRIVE

Title:
CROSS SECTIONS SHEET 6

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-206
Rev: B
Filename: TC24021_XSECT.DWG

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021_XSECT.DWG



Printed by Armand Bester on 03.04.2025 03:11 PM

SLK 1.140

SLK 1.180

SLK 1.220

SLK 1.130

SLK 1.170

SLK 1.210

SLK 1.120

SLK 1.160

SLK 1.200

SLK 1.110

SLK 1.150

SLK 1.190

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

NOTES:

PAVEMENT LAYERS SHOWN ON CROSS SECTIONS ARE INDICATIVE ONLY. REFER TO SSJ DETAIL DRAWINGS AND C-301

1:250 @ A1 VERT
1:250 @ A1 HORIZ

10m 0m 10m 20m

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Client:
Shire of Serpentine Jarrahdale

NOTES

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No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DETAIL DESIGN	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:
SSJ INDIGO DRIVE

Title:
CROSS SECTIONS SHEET 7

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-207
Rev: B
Filename: TC24021_XSECT.DWG

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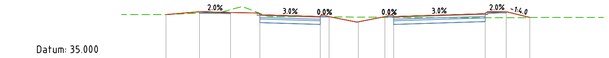


Datum: 35.000

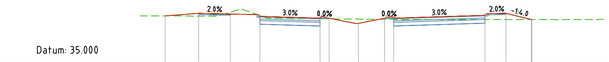
PROPOSED LEVELS	38.903	39.126	39.076	38.882	38.885	38.735	38.346	38.735	38.885	38.958	39.139	38.657		
EXISTING LEVELS	38.903	39.015	39.294	38.997	38.718	38.713	38.692	38.672	38.667	38.648	38.652	38.657		
LEVEL DIFFERENCE	0.000	0.111	-0.218	-0.115	0.167	0.021	-0.386	0.062	0.218	0.311	0.487	0.000		
OFFSETS	-15.718	-12.979	-10.446	-8.041	-2.900	-2.400	0.000	2.144	2.644	10.331	12.956	13.985		

SLK 1.260

Datum: 35.000

PROPOSED LEVELS	39.141	39.433	39.384	39.192	39.194	39.644	38.699	39.194	39.199	39.395	39.426	39.083		
EXISTING LEVELS	39.141	39.135	39.127	39.119	39.109	39.109	39.106	39.096	39.094	39.082	39.083	39.083		
LEVEL DIFFERENCE	0.000	0.298	0.257	0.071	0.085	-0.065	-0.498	-0.052	0.100	0.117	0.342	0.000		
OFFSETS	-13.997	-12.830	-10.468	-7.969	-2.867	-2.367	0.000	2.176	2.676	8.069	10.594	12.141	13.513	

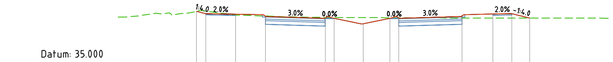
SLK 1.300



Datum: 35.000

PROPOSED LEVELS	38.846	39.050	38.998	38.805	38.807	38.657	38.230	38.657	38.807	38.881	39.061	38.541	38.533	
EXISTING LEVELS	38.846	38.826	39.151	38.862	38.608	38.603	38.577	38.559	38.556	38.549	38.548	38.541	38.541	
LEVEL DIFFERENCE	0.000	0.224	-0.153	-0.057	0.199	0.055	-0.347	0.098	0.252	0.332	0.513	0.000	-0.008	
OFFSETS	-15.779	-13.042	-10.455	-8.059	-2.908	-2.408	0.000	2.136	2.636	10.322	12.935	14.117	14.148	

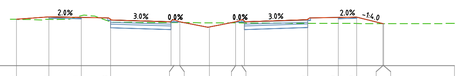
SLK 1.250



Datum: 35.000

PROPOSED LEVELS	39.544	39.356	39.307	39.113	39.117	38.967	38.533	38.967	39.117	39.122	39.317	39.348	38.980	
EXISTING LEVELS	39.544	39.567	39.232	39.156	39.033	39.032	39.026	39.019	39.017	38.991	38.984	38.980	38.980	
LEVEL DIFFERENCE	0.000	-0.211	0.076	-0.043	0.083	-0.065	-0.492	-0.052	0.100	0.130	0.333	0.369	0.000	
OFFSETS	-13.684	-12.852	-10.417	-7.987	-2.875	-2.375	0.000	2.168	2.668	8.060	10.581	12.120	13.593	

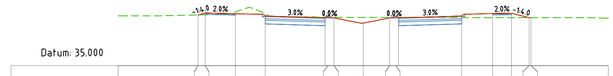
SLK 1.290



Datum: 35.000

PROPOSED LEVELS	38.784	38.974	38.921	38.728	38.730	38.580	38.154	38.580	38.730	38.735	38.930	38.960	38.424	38.422
EXISTING LEVELS	38.784	38.781	39.065	38.566	38.503	38.501	38.490	38.478	38.475	38.448	38.439	38.433	38.424	38.424
LEVEL DIFFERENCE	0.000	0.193	-0.144	0.162	0.227	0.079	-0.336	0.102	0.255	0.286	0.491	0.527	0.000	-0.001
OFFSETS	-15.765	-13.116	-10.465	-8.077	-2.916	-2.416	0.000	2.128	2.628	8.011	10.517	12.014	14.157	14.214

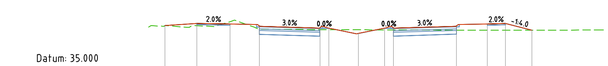
SLK 1.240



Datum: 35.000

PROPOSED LEVELS	39.127	39.279	39.230	39.036	39.039	38.889	38.457	38.889	39.039	39.044	39.240	39.271	38.907	38.877
EXISTING LEVELS	39.127	39.142	39.391	39.226	38.944	38.938	38.931	38.926	38.925	38.920	38.914	38.910	38.907	38.907
LEVEL DIFFERENCE	0.000	0.137	-0.161	-0.190	0.095	-0.048	-0.474	-0.037	0.114	0.124	0.326	0.360	0.000	-0.030
OFFSETS	-13.691	-12.884	-10.427	-8.005	-2.883	-2.383	0.000	2.160	2.660	8.058	10.569	12.099	13.553	13.791

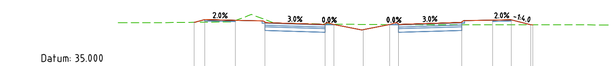
SLK 1.280



Datum: 35.000

PROPOSED LEVELS	38.718	38.898	38.844	38.651	38.653	38.593	38.079	38.593	38.653	38.657	38.852	38.882	38.342	
EXISTING LEVELS	38.718	38.705	39.035	38.622	38.387	38.385	38.376	38.367	38.365	38.346	38.342	38.342	38.342	
LEVEL DIFFERENCE	0.000	0.193	-0.191	0.229	0.265	0.117	-0.297	0.135	0.287	0.311	0.510	0.540	0.000	
OFFSETS	-15.799	-13.200	-10.435	-8.095	-2.924	-2.424	0.000	2.120	2.620	7.983	10.504	11.992	14.152	

SLK 1.230



Datum: 35.000

PROPOSED LEVELS	38.986	39.233	39.153	38.959	38.962	38.872	38.382	38.812	38.962	38.967	39.162	39.193	38.793	38.767
EXISTING LEVELS	38.986	38.996	39.128	39.214	38.846	38.839	38.813	38.794	38.791	38.788	38.792	38.794	38.793	38.793
LEVEL DIFFERENCE	0.000	0.246	0.025	-0.255	0.116	-0.027	-0.432	0.018	0.171	0.179	0.370	0.399	0.600	-0.026
OFFSETS	-13.794	-12.926	-10.436	-8.023	-2.881	-2.391	0.000	2.152	2.652	8.041	10.556	12.077	13.679	13.845

SLK 1.270

Datum: 35.000

PROPOSED LEVELS	39.199	39.510	39.462	39.267	39.271	39.121	38.685	39.121	39.271	39.276	39.472	39.503	39.196	39.188
EXISTING LEVELS	39.199	39.194	39.219	39.272	39.290	39.277	39.218	39.188	39.187	39.181	39.181	39.192	39.196	39.196
LEVEL DIFFERENCE	0.000	0.317	0.243	-0.004	-0.019	-0.156	-0.533	-0.066	0.084	0.095	0.286	0.312	0.000	-0.007
OFFSETS	-14.063	-12.819	-10.398	-7.951	-2.858	-2.358	0.000	2.184	2.684	8.079	10.607	12.163	13.393	13.413

SLK 1.310

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1:250 @ A1 VERT
1:250 @ A1 HORIZ

10m 0m 10m 20m
10m 0m 10m 20m

NOTES:

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Client: Shire of Serpentine Jarrahdale

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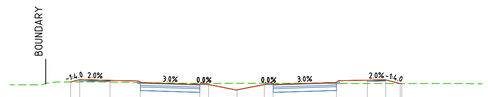
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project: SSJ INDIGO DRIVE

Title: CROSS SECTIONS SHEET 8

Scale: 1:250 @ A1 Date: 01.04.2025
Drawn: AB Checked: JM Approved: JM
Job No: TC24021 Drg. No: C-208 Rev: B
Filename: TC24021_XSECT.DWG



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Datum: 35.000

PROPOSED LEVELS	39.568	39.754	39.704	39.510	39.515	39.365	38.923	39.365	39.515	39.520	39.715	39.745	39.446	39.432
EXISTING LEVELS	39.568	39.574	39.562	39.523	39.442	39.446	39.459	39.456	39.456	39.450	39.450	39.448	39.446	39.446
LEVEL DIFFERENCE	0.000	0.180	0.142	-0.013	0.073	-0.082	-0.536	-0.092	0.059	0.069	0.265	0.297	0.000	-0.013
OFFSETS	-13.592	-12.847	-10.370	-7.896	-2.834	-2.334	0.000	2.209	2.709	8.107	10.616	12.116	13.312	13.424

SLK 1.340

Datum: 35.000

PROPOSED LEVELS	40.008	40.093	40.043	39.848	39.848	39.698	39.250	39.698	39.848	39.847	40.043	40.073	39.743	39.496	39.066	39.391	39.845
EXISTING LEVELS	40.024	40.014	40.002	39.987	39.924	39.916	39.879	39.833	39.823	39.790	39.763	39.747	39.743	39.748	39.784	39.809	39.845
LEVEL DIFFERENCE	-0.016	0.079	0.041	-0.139	-0.076	-0.218	-0.629	-0.135	0.025	0.058	0.280	0.326	0.000	-0.252	-0.718	-0.419	0.000
OFFSETS	-13.430	-13.020	-10.520	-8.033	-2.804	-2.304	0.000	2.236	2.736	7.960	10.460	11.960	13.097	14.271	16.316	17.756	19.763

SLK 1.370

Datum: 35.000

PROPOSED LEVELS	40.671	40.650	40.523	40.473	40.275	40.275	40.125	39.674	40.125	40.275	40.275	40.470	40.500	40.267	39.859	39.156	39.560	40.131
EXISTING LEVELS	40.653	40.650	40.643	40.607	40.535	40.373	40.357	40.306	40.293	40.290	40.261	40.265	40.272	40.267	40.239	40.201	40.169	40.131
LEVEL DIFFERENCE	0.018	0.000	-0.119	-0.134	-0.260	-0.098	-0.232	-0.632	-0.168	-0.015	0.014	0.205	0.228	0.000	-0.380	-1.045	-0.608	0.000
OFFSETS	-13.891	-13.665	-13.158	-10.658	-8.004	-2.784	-2.284	0.000	2.256	2.756	7.964	10.447	11.947	12.878	14.209	16.085	17.624	19.771

SLK 1.400

Datum: 35.000

PROPOSED LEVELS	39.296	39.666	39.617	39.422	39.427	39.277	38.837	39.277	39.427	39.501	39.681	39.400	39.389
EXISTING LEVELS	39.296	39.310	39.317	39.315	39.311	39.313	39.334	39.353	39.357	39.395	39.398	39.400	39.400
LEVEL DIFFERENCE	0.000	0.355	0.300	0.107	0.116	-0.036	-0.497	-0.076	0.070	0.106	0.283	0.000	-0.011
OFFSETS	-14.305	-12.827	-10.379	-7.914	-2.842	-2.342	0.000	2.200	2.700	10.398	12.140	13.264	13.309

SLK 1.330

Datum: 35.000

PROPOSED LEVELS	39.687	39.663	39.669	39.691	39.710	39.723	39.575	39.129	39.575	39.725	39.920	39.701	39.036	39.702
EXISTING LEVELS	39.576	39.617	39.601	39.588	39.570	39.520	39.407	39.393	39.401	39.515	39.730	39.701	39.701	39.702
LEVEL DIFFERENCE	0.111	0.046	0.068	0.103	0.140	0.203	0.168	-0.264	0.174	0.209	0.191	0.000	-0.665	0.000
OFFSETS	-17.181	-16.405	-14.405	-12.362	-10.250	-7.989	-2.309	0.000	2.231	7.960	10.460	12.958	16.392	19.760

SLK 1.360

Datum: 35.000

PROPOSED LEVELS	40.282	40.274	40.375	40.325	40.127	40.127	39.977	39.528	39.977	40.127	40.127	40.322	40.352	40.113	39.752	39.126	39.509	40.045
EXISTING LEVELS	40.271	40.268	40.256	40.215	40.171	40.085	40.082	40.080	40.089	40.091	40.116	40.127	40.127	40.113	40.101	40.082	40.066	40.045
LEVEL DIFFERENCE	0.011	0.007	0.118	0.110	-0.044	0.043	-0.105	-0.552	-0.112	0.036	0.011	0.195	0.225	0.000	-0.349	-0.956	-0.557	0.000
OFFSETS	-14.025	-13.797	-13.112	-10.612	-8.014	-2.792	-2.292	0.000	2.248	2.748	7.960	10.455	11.955	12.911	14.230	16.162	17.668	19.768

SLK 1.390

Datum: 35.000

PROPOSED LEVELS	39.243	39.588	39.539	39.344	39.349	39.199	38.760	39.199	39.349	39.423	39.604	39.290
EXISTING LEVELS	39.243	39.231	39.260	39.294	39.902	40.182	40.395	39.280	39.279	39.280	39.286	39.290
LEVEL DIFFERENCE	0.000	0.357	0.279	0.051	-0.553	-0.983	-1.635	-0.081	0.070	0.143	0.318	0.000
OFFSETS	-14.196	-12.818	-10.389	-7.933	-2.850	-2.350	0.000	2.192	2.692	10.388	12.164	13.417

SLK 1.320

Datum: 35.000

PROPOSED LEVELS	39.658	39.665	39.680	39.662	39.610	39.464	39.015	39.464	39.617	39.812	39.514	39.372	39.166
EXISTING LEVELS	39.472	39.469	39.455	39.426	39.471	39.291	39.310	39.319	39.632	39.578	39.514	39.368	39.140
LEVEL DIFFERENCE	0.186	0.196	0.226	0.237	0.139	0.173	-0.294	0.145	-0.015	0.234	0.000	0.004	0.026
OFFSETS	-15.788	-15.227	-12.872	-10.774	-7.902	-2.298	0.000	2.244	8.069	10.557	13.369	16.169	17.543

SLK 1.350

Datum: 35.000

PROPOSED LEVELS	40.021	40.228	40.178	39.982	39.982	39.832	39.384	39.832	39.982	39.982	40.177	40.207	39.934	39.630	39.096	39.443	39.928
EXISTING LEVELS	40.021	40.016	40.002	39.987	39.970	39.970	39.967	39.963	39.962	39.955	39.945	39.938	39.934	39.929	39.920	39.914	39.928
LEVEL DIFFERENCE	0.000	0.212	0.176	-0.005	0.012	-0.138	-0.583	-0.131	0.020	0.027	0.232	0.269	0.000	-0.299	-0.825	-0.471	0.000
OFFSETS	-13.894	-13.066	-10.566	-8.023	-2.799	-2.299	0.000	2.241	2.741	7.960	10.460	11.960	13.053	14.250	16.239	17.712	19.766

SLK 1.380

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NOTES:

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1:250 @ A1 VERT
1:250 @ A1 HORIZ

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Client:
Shire of Serpentine Jarrahdale

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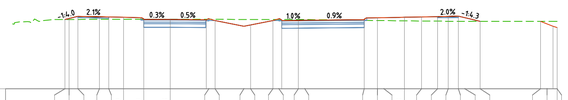
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:
SSJ INDIGO DRIVE

Title:
CROSS SECTIONS SHEET 9

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-209
Rev: B
Filename: TC24021_XSECT.DWG

FILENAME: Y:\SECTIONS\ENGINEERING\PROJECTS\TC2024\TC24021 - SSJ INDIGO DRIVE\DRAWINGS\1_DRAWINGS\TC24021_XSECT.DWG



SLK 1.430

SLK 1.460

SLK 1.420

SLK 1.450

SLK 1.410

SLK 1.440

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1:250 @ A1 VERT
1:250 @ A1 HORIZ
10m 0m 10m 20m

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Client:
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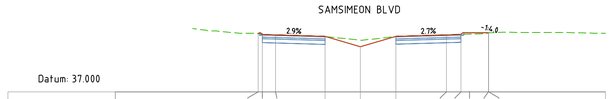
No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:
SSJ INDIGO DRIVE

Title:
CROSS SECTIONS SHEET 10

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-210
Rev: B
Filename: TC24021_XSECT.DWG



Printed by Armand Bester on 03.04.2025 8:31 PM

SLK 0.070

SLK 1.485

SLK 0.030

SLK 0.060

SLK 1.480

SLK 0.020

SLK 0.050

SLK 1.470

SLK 0.010

SLK 0.040

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NOTES:

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1:250 @ A1 VERT
1:250 @ A1 HORIZ
10m 0m 10m 20m

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No.	Date	Drawn	Checked	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project:
SSJ INDIGO DRIVE

Title:
CROSS SECTIONS SHEET 11

Scale: 1:250 @ A1
Date: 01.04.2025
Drawn: AB
Checked: JM
Approved: JM
Job No: TC24021
Drg. No: C-211
Rev: B
Filename: TC24021_XSECT.DWG

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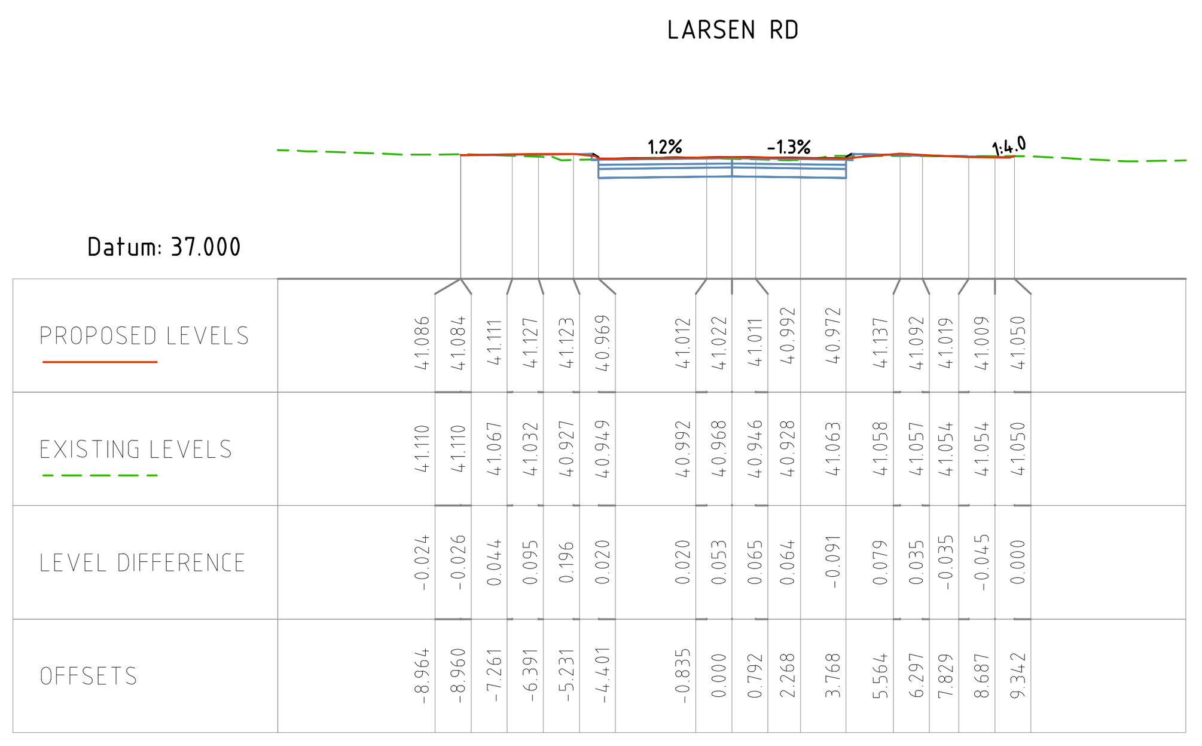

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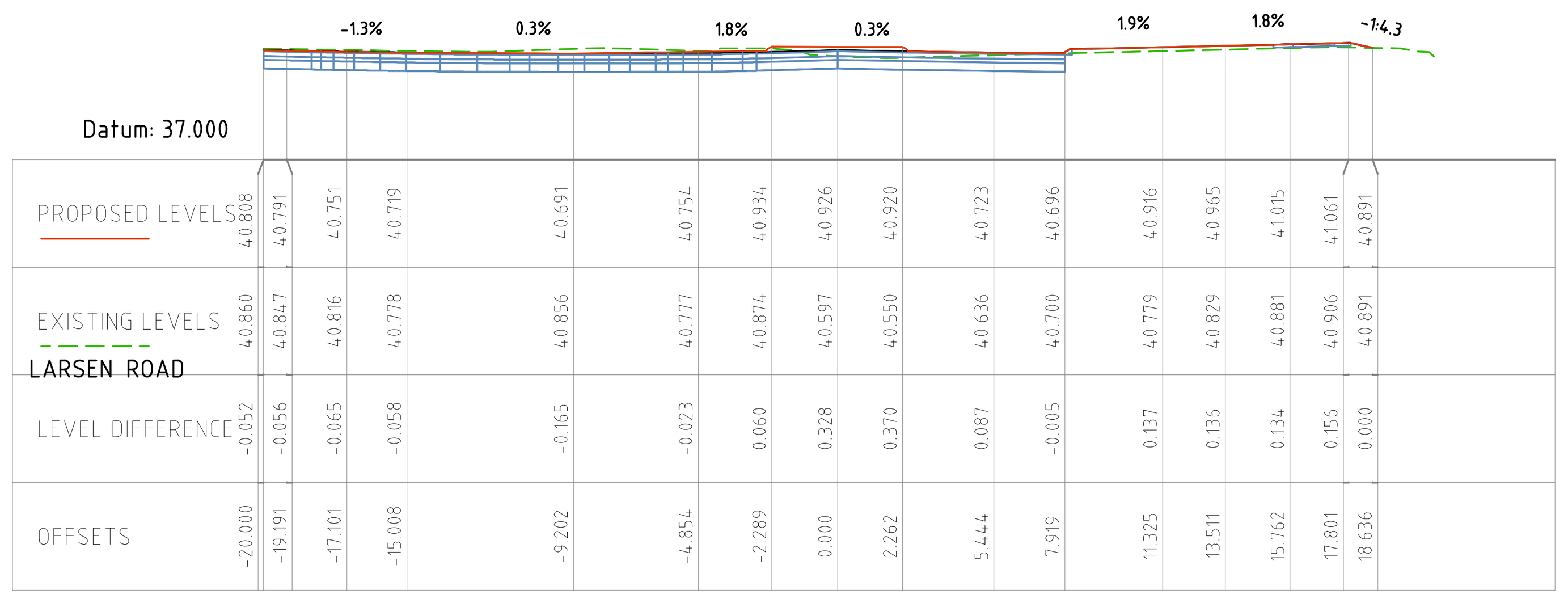
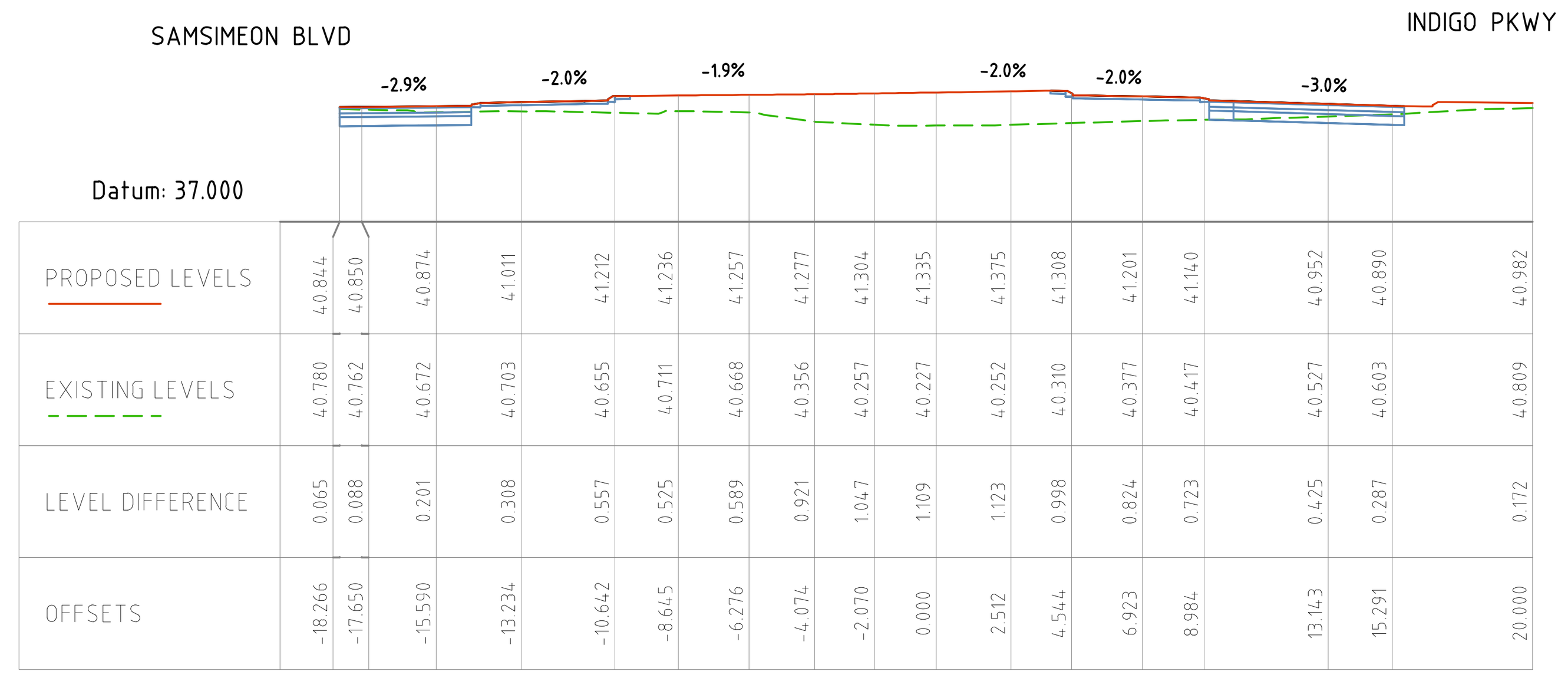


SLK 0.750



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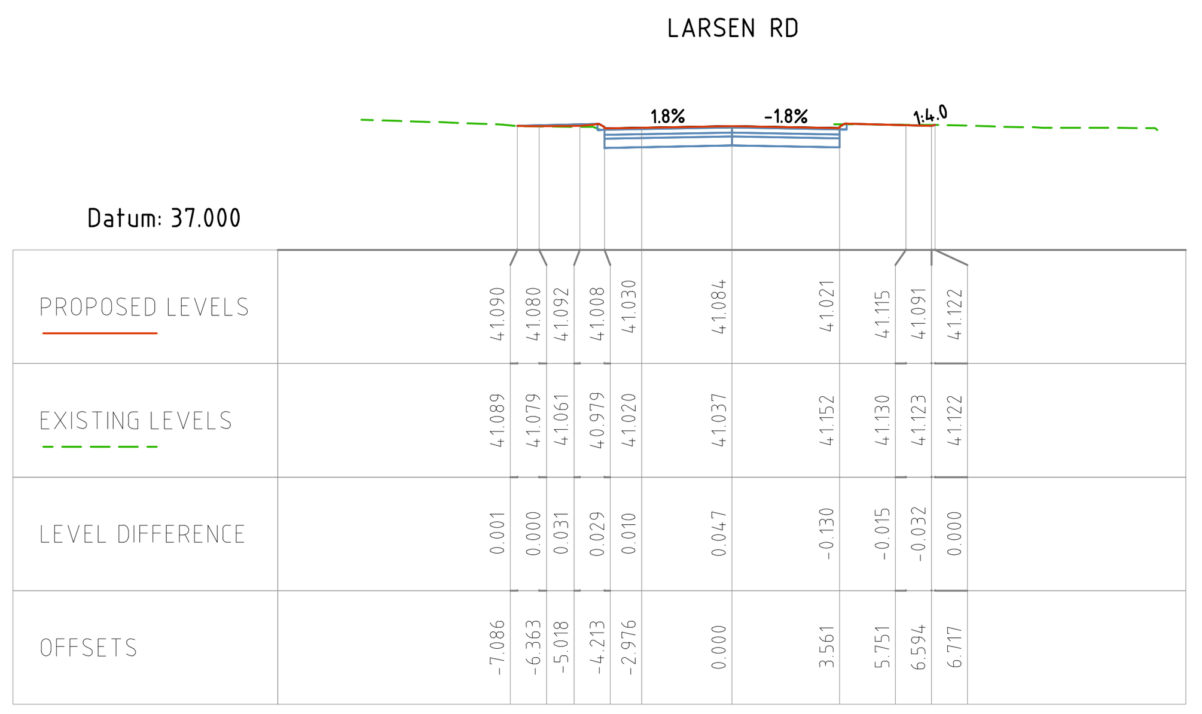
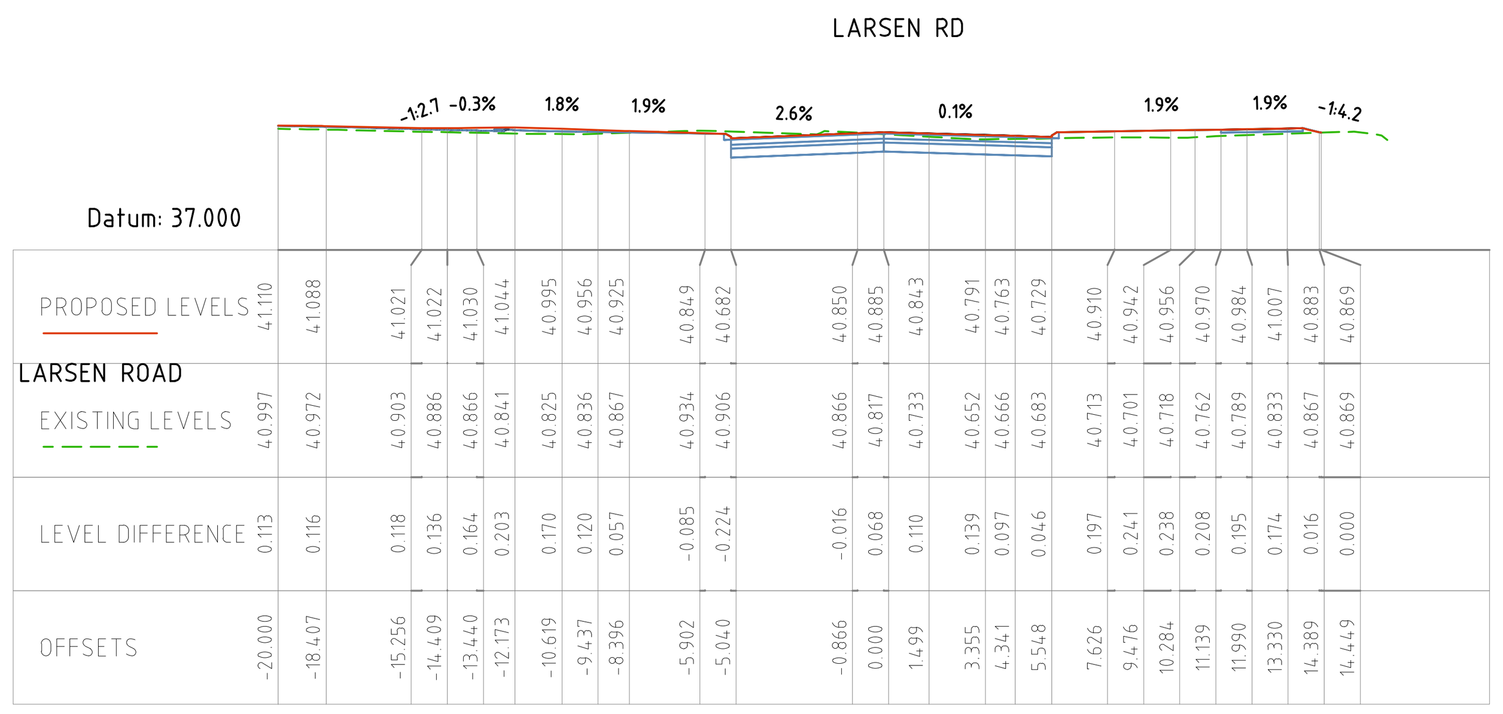


SLK 0.710



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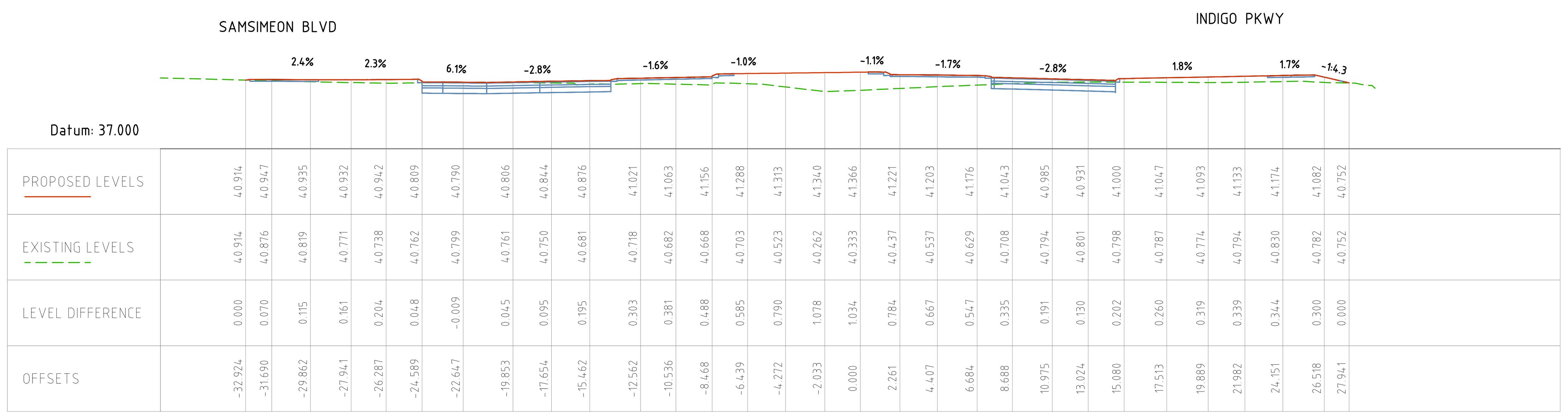

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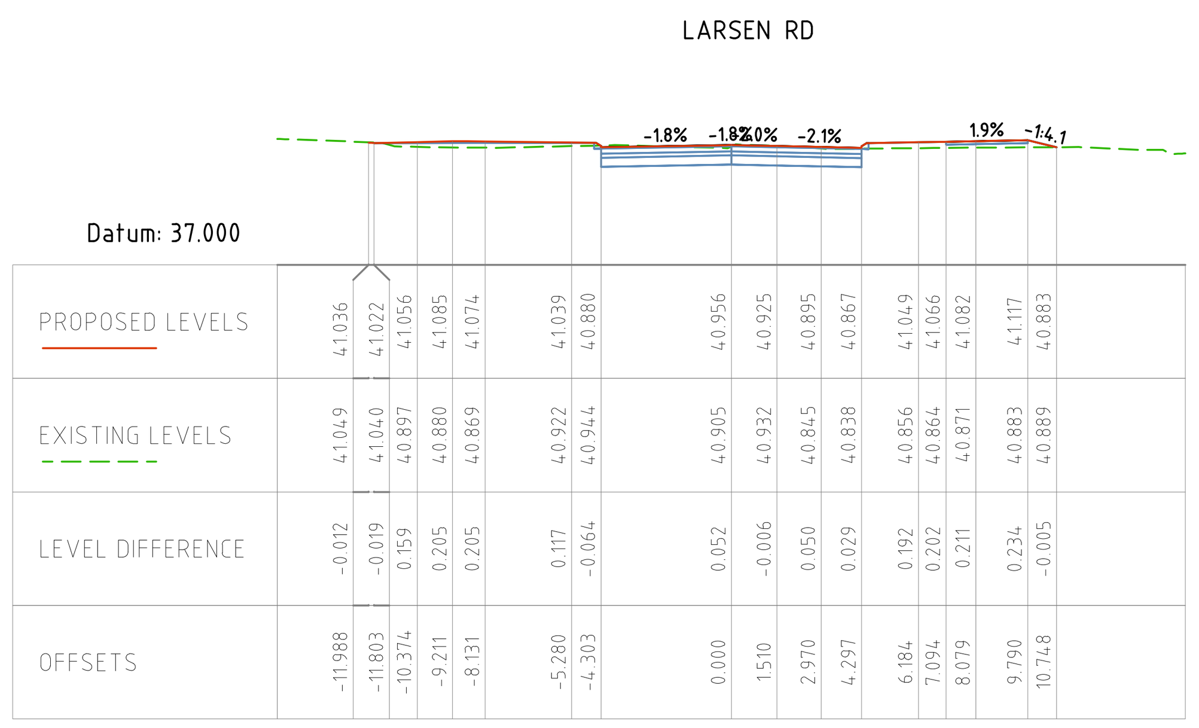
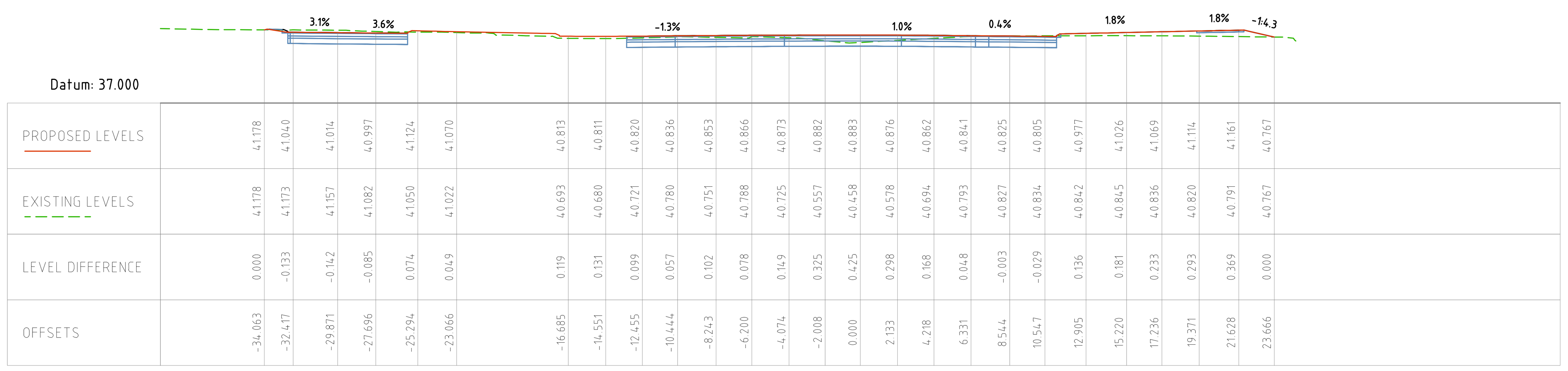


SLK 0.730



SLK 0.760

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NOTES:

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1:250 @ A1 VERT
1:250 @ A1 HORIZ
10m 0m 10m 20m

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Client: Shire of Serpentine Jarrahdale

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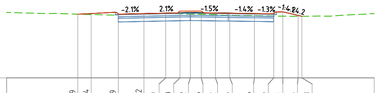
No.	Date			Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

Project: SSJ INDIGO DRIVE

Title: CROSS SECTIONS SHEET 12

Scale: 1:250 @ A1 | Date: 01.04.2025
Drawn: AB | Checked: JM | Approved: JM
Job No: TC24021 | Drg. No: C-212 | Rev: B
Filename: TC24021_XSECT.DWG

LARSEN RD

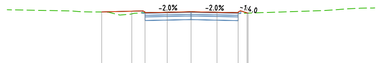


Datum: 35.000

PROPOSED LEVELS	40.199	40.254	40.199	40.242	40.279	40.449	40.452	40.455	40.292	40.275	40.246	40.275	40.391	40.694	40.023
EXISTING LEVELS	40.199	40.170	40.167	40.206	40.241	40.231	40.213	40.195	40.170	40.102	40.071	40.048	40.037	40.699	40.023
LEVEL DIFFERENCE	0.000	0.084	0.032	0.037	0.038	0.218	0.239	0.261	0.121	0.173	0.175	0.177	0.353	0.075	0.000
OFFSETS	-9.184	-8.096	-5.890	-3.791	-2.013	-0.849	0.000	0.888	2.042	3.217	5.229	6.399	7.547	8.795	9.998

SLK 0.810

LARSEN RD

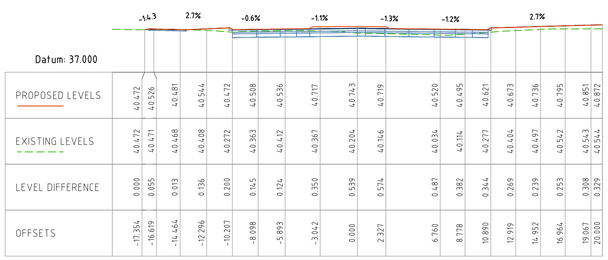


Datum: 35.000

PROPOSED LEVELS	39.886	39.954	39.828	39.863	39.901	39.858	39.823	39.819	39.796
EXISTING LEVELS	39.886	39.731	39.825	39.862	39.901	39.860	39.782	39.793	39.796
LEVEL DIFFERENCE	0.000	0.223	0.003	0.001	0.000	-0.001	0.041	0.026	0.000
OFFSETS	-7.290	-4.828	-3.751	-1.947	0.000	2.125	3.841	4.572	4.663

SLK 0.840

LARSEN RD

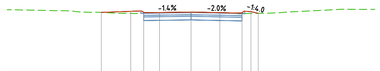


Datum: 37.000

PROPOSED LEVELS	40.472	40.526	40.481	40.544	40.472	40.508	40.536	40.717	40.743	40.719	40.520	40.495	40.621	40.673	40.736	40.795	40.861	40.872
EXISTING LEVELS	40.472	40.471	40.408	40.408	40.272	40.363	40.412	40.367	40.204	40.146	40.034	40.114	40.277	40.404	40.497	40.542	40.543	40.544
LEVEL DIFFERENCE	0.000	0.055	0.073	0.136	0.200	0.145	0.124	0.350	0.539	0.574	0.487	0.382	0.344	0.269	0.239	0.253	0.318	0.329
OFFSETS	-17.354	-16.619	-14.464	-12.296	-10.287	-8.998	-5.893	-3.042	0.000	2.327	6.760	8.778	10.890	12.919	14.952	16.964	19.067	21.000

SLK 0.800

LARSEN RD



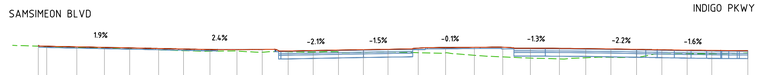
Datum: 35.000

PROPOSED LEVELS	39.952	40.039	39.920	39.938	39.975	39.927	39.891	40.018	39.872
EXISTING LEVELS	39.952	39.869	39.862	39.915	39.980	39.925	39.842	39.859	39.871
LEVEL DIFFERENCE	0.000	0.170	0.057	0.023	-0.006	0.002	0.049	0.159	0.000
OFFSETS	-7.319	-4.999	-3.864	-2.565	0.000	2.348	4.166	4.898	5.490

SLK 0.830

SAMSIMEON BLVD

INDIGO PKWY

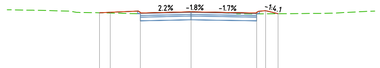


Datum: 37.000

PROPOSED LEVELS	41.120	41.063	41.011	40.966	40.924	40.876	40.835	40.796	40.787	40.803	40.671	40.709	40.715	40.781	40.813	40.909	40.958	40.975	40.983	40.897	40.887	40.866	40.839	40.805	40.770	40.744	40.725	40.689
EXISTING LEVELS	41.067	41.046	40.971	40.901	40.838	40.765	40.783	40.657	40.675	40.572	40.605	40.591	40.565	40.561	40.601	40.535	40.521	40.326	40.191	40.097	40.030	40.124	40.157	40.181	40.429	40.444	40.458	40.525
LEVEL DIFFERENCE	0.053	0.017	0.041	0.065	0.086	0.111	0.052	0.139	0.112	0.231	0.067	0.118	0.180	0.220	0.211	0.374	0.437	0.649	0.793	0.800	0.857	0.742	0.682	0.624	0.341	0.300	0.267	0.164
OFFSETS	-37.909	-37.216	-34.767	-32.512	-30.452	-28.886	-26.060	-23.902	-21.700	-19.630	-17.515	-15.470	-13.413	-11.378	-9.367	-6.898	-4.667	-2.323	0.000	2.254	4.625	6.772	8.821	10.926	12.985	15.051	17.057	20.000

SLK 0.790

LARSEN RD



Datum: 35.000

PROPOSED LEVELS	40.039	40.077	40.021	40.112	40.020	40.211	39.961		
EXISTING LEVELS	40.039	40.020	40.004	40.096	39.947	39.953	39.961		
LEVEL DIFFERENCE	0.000	0.057	0.017	0.015	0.073	0.258	0.000		
OFFSETS	-7.470	-6.588	-4.131	0.000	5.355	6.091	7.109		

SLK 0.820

PRELIMINARY ONLY
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NOTES:

PAVEMENT LAYERS SHOWN ON CROSS SECTIONS ARE INDICATIVE ONLY. REFER TO SSJ DETAIL DRAWINGS AND C-301

1:250 @ A1 VERT
1:250 @ A1 HORIZ

10m 0m 10m 20m
10m 0m 10m 20m

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Client: Shire of Serpentine Jarrahdale

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No.	Date	dr	ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	04.04.2025	AB	JM	85% DETAIL DESIGN	

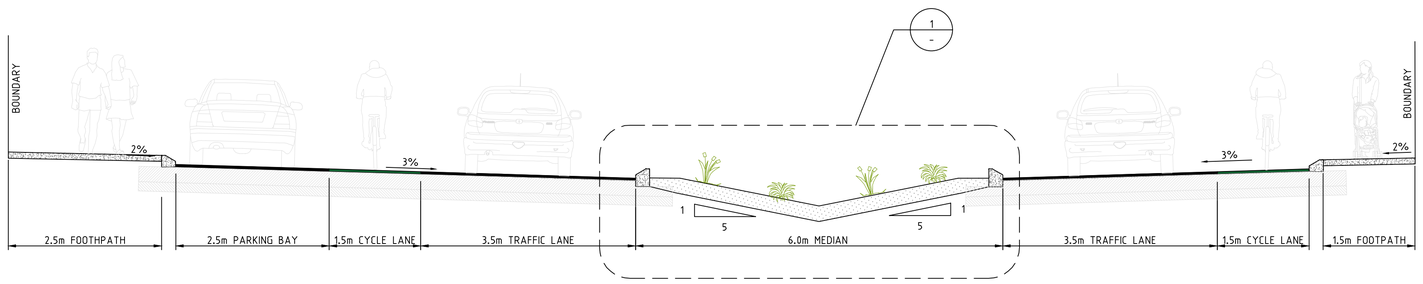
Project: SSJ INDIGO DRIVE

Title: CROSS SECTIONS SHEET 13

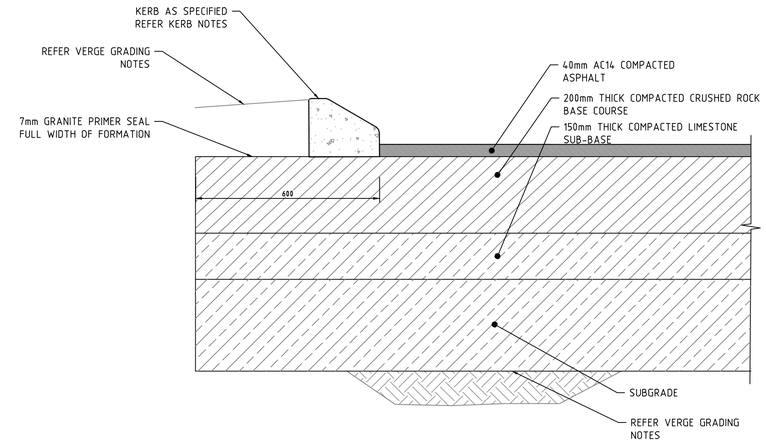
Scale: 1:250 @ A1 | Date: 01.04.2025
Drawn: AB | Checked: JM | Approved: JM
Job No: TC24021 | Drg. No: C-213 | Rev: B
Filename: TC24021_XSECT.DWG

INDIGO PARKWAY
EASTBOUND

INDIGO PARKWAY
WESTBOUND



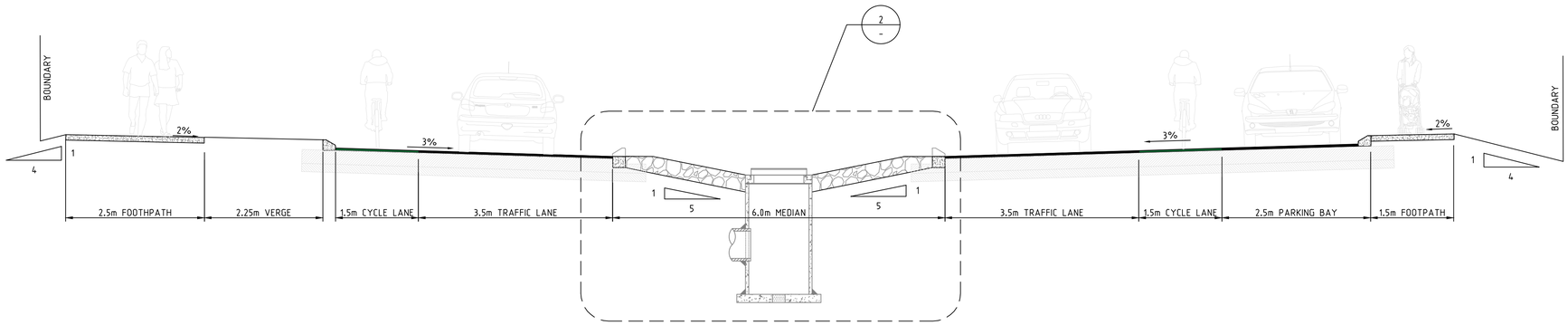
TYPICAL SECTIONS @22.5m ROAD RESERVE CORRIDOR
SCALE: 1:50



TYPICAL PAVEMENT CROSS SECTION
SCALE: 1:10

INDIGO PARKWAY
EASTBOUND

INDIGO PARKWAY
WESTBOUND



TYPICAL SECTIONS @27.5m ROAD RESERVE CORRIDOR
SCALE: 1:50

NOTES:

REFER STANDARD SSJ DRAWINGS AND DETAILS:

DRAWING NO.	TITLE
STD-R01	EXTRUDED KERBING AND PAVEMENT DETAILS
STD-R07	FOOTPATH DETAILS
STD-R05	JOINT DETAILS
STD-R04	PEDESTRIAN RAMP
SD_03	STANDARD BIO RETENTION POCKETS
STD-D04	STANDARD COMBINATION GRATED SIDE ENTRY PIT
STD-D08	STANDARD DRAINAGE SUMP DETAILS
STD-D09	STANDARD DRAINAGE SUMP FENCING
STD-D07	STANDARD PIPE BEDDING AND STEP IRON DETAILS
STD-D05	STANDARD SIDE ENTRY PIT WITH SOAKWELL LINER
STD-D10	STANDARD SUBSOIL DRAINAGE
STD-D03	STANDARD TYPICAL GRATED GULLY PIT
STD-D02	STANDARD TYPICAL JUNCTION PIT
STD-D01	STANDARD TYPICAL SIDE ENTRY PIT
STD-R09	TYPICAL CARBAYS AND LANEWAYS LINEMARKING
STD-R02	TYPICAL CROSS SECTION KERBED ROAD

PRELIMINARY ONLY
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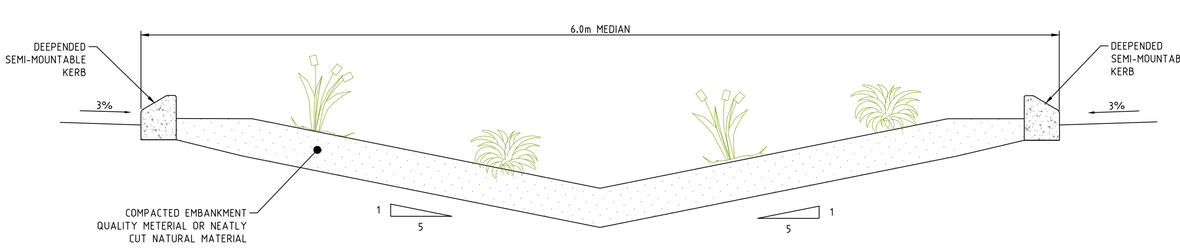
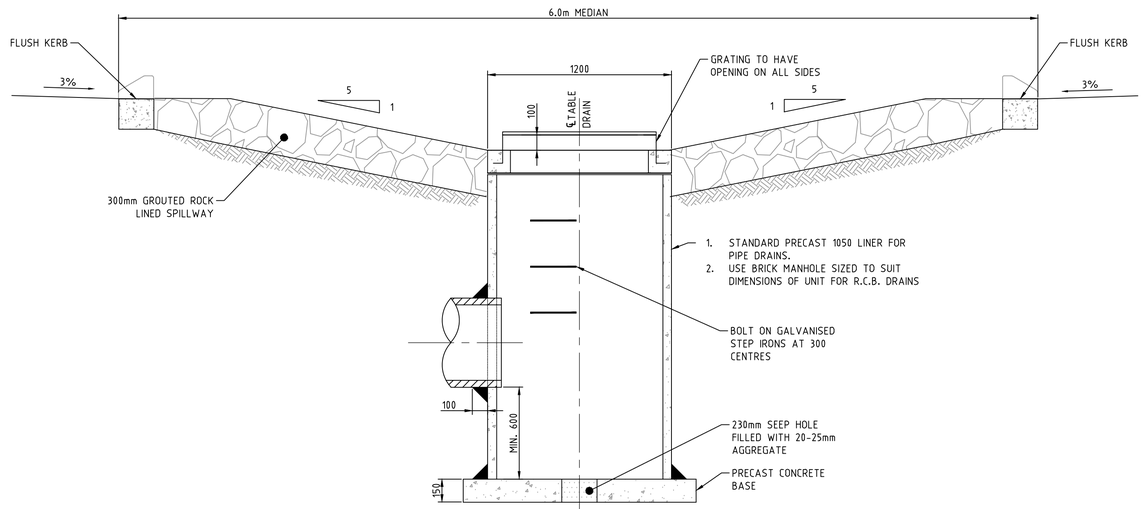


1 – SECTION THROUGH MEDIAN DRAIN
SCALE: 1:20

0.8m 0m 0.8m 1.6m
1:20 @ A1

2.0m 0m 2.0m 4.0m
1:50 @ A1



2 – SECTION THROUGH ROCK LINED DRAIN WITH RAISED GULLY PIT
SCALE: 1:20

SURVEY REFERENCE: JUROVICH SURVEYING
DATE: 05.07.2024
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 2020

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Client: Shire of Serpentine Jarrahdale

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No.	Date	Dr	Ch	Amendment / Issue	App.
B	26.06.2025	AB	JM	100% DESIGN ISSUE	PG
A	03.10.2024	JS	AB	PRELIMINARY ISSUE	

Project: SSJ INDIGO DRIVE

Title: TYPICAL SECTIONS AND DETAILS

Scale: AS SHOWN @ A1 | Date: 03.10.2024
Drawn: JS | Checked: AB | Approved: JM
Job No: TC24021 | Drg. No: C-301 | Rev: B
Filename: TC24021.DWG

APPENDIX F
Tree Survey Report

WESTWORKS
—CONSULTANCY—

Tree Survey

Location: Indigo Parkway, Byford W.A 6122

Date: 29 January 2025

Mark Short
Grad Cert Arboriculture

Arboricultural Consultant
Westworks Consultancy
PO Box 173
Mundijong WA 6121
Mobile: 0417 011 426
mark@westworksconsultancy.com.au
www.westworksconsultancy.com.au
QTRA Licensed user 2290

Table of Contents

1.0 Introduction

An inspection (Tree survey) was undertaken on 70 trees located between Indigo Parkway and Sansimeon Boulevard, Byford on the 29 January 2025. The purpose of the inspection is to inspect all trees within the area proposed for the Indigo Parkway extension.

A Tree Survey is a ground level assessment of trees meeting criteria of inclusion set in consultation with the client and where applicable, the policies and regulations set out by the Environmental Protection Agency in line with Part 5, Division 2, of the Environmental Protection Act 1986, Environmental regulation – Clearing of native vegetation.

The survey requires collection of data on individual trees including the accurate species ID, location with GPS coordinates, a rating of the health and structural condition, tree size (height, canopy spread, DBH and DGL), the age and useful life expectancy. Additionally, the classification of individuals origin and habitat value as defined by the EPA.

This report discusses the impacts that the proposed Indigo Parkway extension will have on the subject trees.

2.0 Methodology

This tree assessment consisted of a ground based basic tree assessment utilising the principals of Visual Tree Assessment (VTA) as outlined by Mattheck and Breloer (1994) and Lonsdale's approach (1999).

Following positive identification, the trees were assessed against the following areas: height (in meters), canopy spread, diameter of the trunk, health, structure, age and inspected from ground level for any evidence of defect and pest and diseases, using the following tools.

- Acoustic hammer.
- Clinometer.
- Forestry Workers Measuring Tape.
- Probing tools

2.1 Species Identification.

This consultant and associates have a combined over 20 years' experience working with Western Australian tree species, with key proficiency identifying those which are endemic and native to the local Perth regions. Additionally, there are resources to the disposal of Westworks Consultancy to assist in tree species identification including, but not limited to, peer reviewed books and journals, outsourced associates with particular expertise and access to the Western Australian Herbarium (Department of Biodiversity, Conservation and Attractions).

2.2 Tree Measurements

- The height of the tree is an approximate height taken in meters (m)
- The canopy spread gives an indication of the general spread of the canopy in meters.
- The diameter of the trunk (DBH) is measures at 1.4m above ground level.
- The diameter of the trunk at ground level (DGL).

2.3 Tree Health

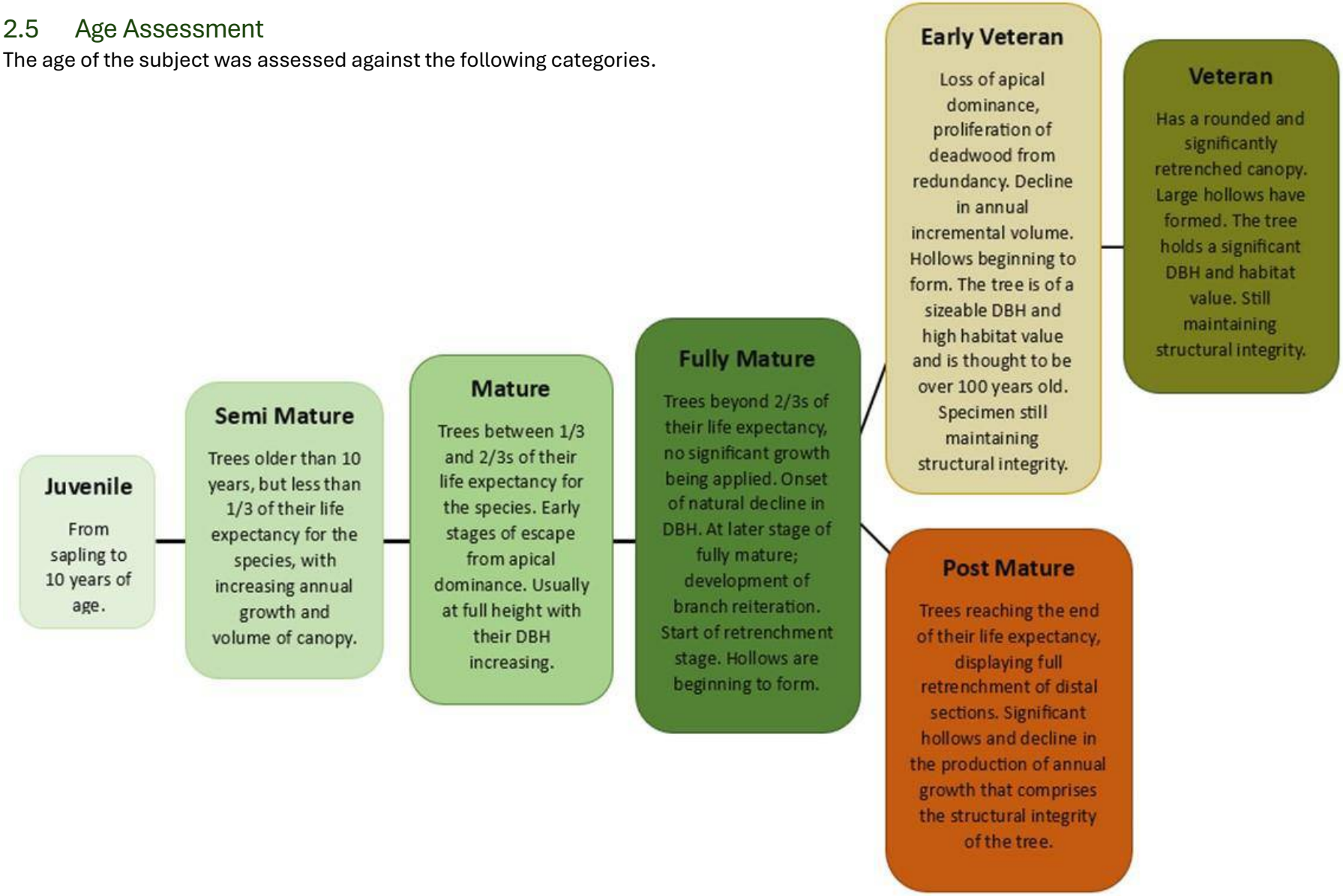
- **Good:** The tree will show good to excellent vigour throughout the tree for the species. The tree will exhibit a full and healthy canopy of foliage with only minimal pest or diseases evident.
- **Fair:** The tree is growing in a reasonable condition and shape with adequate canopy foliage for the species. Minor dead wood may be present throughout the crown, with reasonable colour and density when compared to a typical healthy specimen of that species.
- **Poor:** The tree appears to not be growing to its full capability with the canopy potentially visibly showing signs of openness and thinning with excessive amounts of dead or dying limbs. Evidence of established pest and disease issues will be evident or symptoms of stress indicating the tree is in decline.
- **Very Poor:** The tree is in decline with a very sparse canopy, and little chance of recovery. There would typically be excessive amounts of dead and dying material throughout its canopy.
- **Dead:** No living tissue was found; the tree is dead and should be removed. Unless it is otherwise noted as holding potential as a habitat tree.

2.4 Structure

- **Good:** The tree will have optimum spacings of first order branches, with open angles of attachment and no inclusions, the trunk is applying very visible signs of annualised response growth. There are no observable defects. This is a high-quality specimen for the species.
- **Fair:** The tree is displaying evenly spaced first order branches, with structurally sound unions, the trunk is applying annualised wood to maintain optimum structural integrity. There may be some minor defects, yet the tree is managing these appropriately. This is a "normal" specimen for the species.
- **Poor:** Minor structural defects observed, there may be damage to the cambium, included bark, which reduces the structural integrity of a union, and/or the tree may have been lopped, which has significantly altered its form.
- **Very poor:** The tree is in a state of decline with poor branch spacings and attachment. Major structural defects have been observed.
- **Has Failed:** The tree is of a significantly poor structural integrity to the point where A failure event was observed to have occurred.

2.5 Age Assessment

The age of the subject was assessed against the following categories.



2.6 Useful Life Expectancy

- **Greater than 40 + years**

  Very high quality and high value, these trees would hold such a condition that make them a valuable part of the environment/ landscape, would be considered to hold a Useful Life Expectancy (ULE) of greater than 40 years, thus allowing them to make a substantial contribution for a long period of time.

- **Greater than 20 to 40 years**

  High quality and high value, these trees would hold such a condition that make them a valuable part of the environment/ landscape, would be considered to hold a Useful Life Expectancy (ULE) of 40 years of greater, thus allowing them to make a substantial contribution.

- **11 and 20 years**

  Medium quality and medium value, trees of this category are thought of as making a significant contribution to the area they dwell in and would be considered to hold a ULE of a minimum of 20 years.

- **6 and 10 years**

  Low quality and low value. These trees would be regarded as being in an adequate condition that would see them being retained for a period that would allow new plantings to establish. They would be considered as having a ULE of 5 to 10 years.

- **1 to 5 years**

  Very Low quality and very low value, these trees would be regarded as having a poor form, displaying a low vitality, and may be exhibiting initial signs of structural decline. They would be considered to have a ULE of less than 5 years and are to be included in a plan for replacement.

- **No remaining ULE**. (Dead or hazardous)

  Trees in this category would be considered to hold such a condition that would potentially hold no value or in their current state it would be reasonable to undertake their removal for reasons of sound Arboricultural management, due to a high level of risk.

2.7 Origin of species

The definition of Native Vegetation is as stipulated in the Environmental Protections Act 1986, 3(1) & 51(A).

- **Native** – Part 5 - Division 2 – Clearing of native vegetation 51(A)

  native vegetation has the meaning given by section 3(1) but does not include vegetation that was intentionally sown, planted or propagated unless —

  (a) that vegetation was sown, planted or propagated as required under this Act or another written law; or

  (b) that vegetation is of a class declared by regulation to be included in this definition.

  Part 1 - Preliminary - Terms used (3(1)

  native vegetation means indigenous aquatic or terrestrial vegetation and includes dead vegetation unless that dead vegetation is of a class declared by regulation to be excluded from this definition but does not include vegetation in a plantation.

- **Introduced** – A species not Native as defined by section 3(1) & 51(A) of the Environmental Protections Act 1986, to the survey area. Introduced species may originate from other areas of Australia, or from outside Australia.

2.8 Habitat Value

- **High** – Trees with a DBH ≥500mm, with hollows of an estimated diameter ≥150mm.
- **Medium** Trees with a DBH ≥300mm to ≤500mm with hollows of any size up to an estimated 140mm in diameter. Trees with one or more nests throughout the canopy.
- **Low** – Trees without hollows, but with nests, or the potential for either, it may have one or more beehives.
- **Future Value** – Trees with size or spread suitable for potential habitat formation or selection, or young trees of suitable species for future habitat value.
- **Roosting Value** – Tree does not have the potential to develop hollows but is suitable for habitat or perching.
- **No Value** – Tree is not suitable for hollows, nesting, or hives.

2.9 VALID Tree Risk Assessment Explained

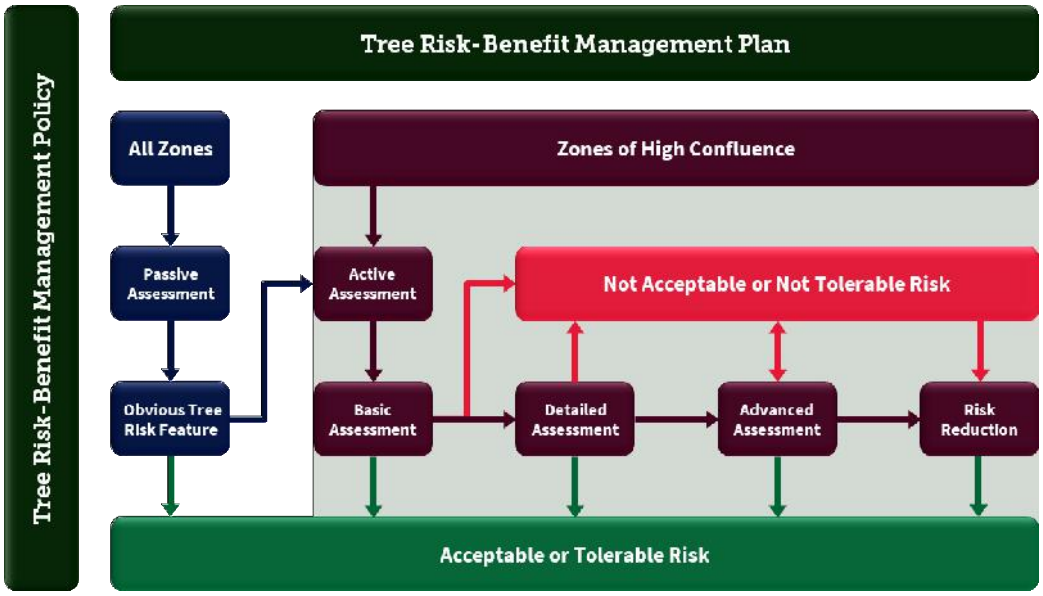
Why and how we're going to manage the risk from our trees and branches falling

This flowchart shows the structure of our Tree Risk-Benefit Management Strategy. Everything follows from the **Policy**. The Policy sets out our position on trees, their benefits, and the risks. In brief, our Policy says;

- Trees give us many benefits that we need
- The overall risk from trees and branches falling is extremely low
- We can't remove the risk entirely. Trees are living structures that sometimes shed branches or fall during severe weather
- Our duty of care, when managing the risk, is to be reasonable, proportionate, and reasonably practicable
- We're going to manage the risk to an Acceptable or Tolerable level

The **Plan** explains how we'll carry out the Policy. We're going to manage the risk by **Passive Assessment** in all zones of use. And **Active Assessment** in **Zones of High Confluence** (high use and large trees).

The Strategy at a glance



Passive Assessment

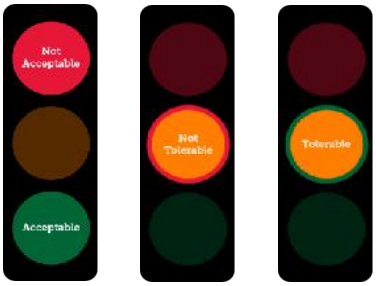
Passive Assessment is simply picking up on **Obvious Tree Risk Features** you can't help but notice as you go about your daily routine. Passive Assessment is our most valuable risk management asset because we carry it out in all zones of use, day in day out, at no additional cost.

Active Assessment | Basic > Detailed > Advanced

Active Assessment is where we have trained assessors looking for risks that might not be Acceptable or Tolerable. Active Assessment has 3 levels to it that increase in depth of evaluation. The 3 levels are, Basic > Detailed > Advanced. We carry out Active Assessment in Zones of High Confluence every 5 years.

Risk objectives & Risk ratings

VALID has applied 'ISO 31000 - Risk Management' and the 'Tolerability of Risk Framework' (ToR) to tree risk-benefit management and assessment, which we've adopted. In ISO risk terms, our 'objectives' are to grow, maintain, and conserve trees because of the many benefits they give us that we need. And, to manage the risk from tree failure to an Acceptable or Tolerable level. We have four easy-to-understand traffic light coloured risk ratings to show how we'll manage the risk.



Red **Not Acceptable** risks will be reduced to an Acceptable level

Amber **Not Tolerable** risks will be reduced to an Acceptable level, but with a lower priority than red Not Acceptable risks

Amber **Tolerable** risks will not be reduced but may require an increased frequency of assessment than green Acceptable risks

Green **Acceptable** risks will not be reduced

3.0 Location of Subject Tree

Subject trees are marked with a red dot.

4.0 Tree Assessments

River Red Gum Tree ID #1

Tree Details

Latin Name:	Eucalyptus camaldulensis
Common Name:	River Red Gum
Tree Age:	Semi mature
Health:	Fair
Structure:	Very Poor
Tree Height (Estimated) [m]:	7
Canopy Spread [m]:	5
DBH [cm]:	15.68
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.56
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	2.59
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Weak attachments, Epicormic shoots, Co-dominant tree
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	Remove to ground level - Full stump grind
Observation Comments:	This tree consists of suckers regrown from a residual stump
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.992145
Latitude:	-32.208818

Photos Street View Map View

image.jpg
28/01/2025

Swamp Mahogany Tree ID #2

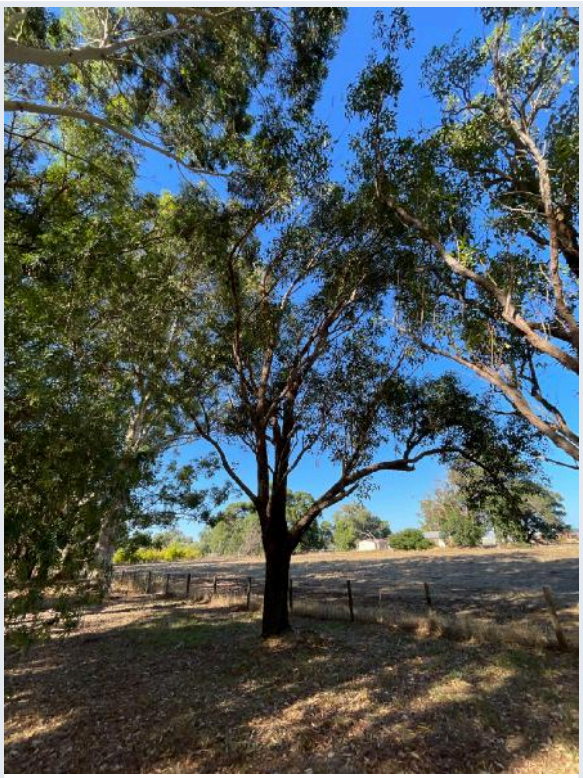
Tree Details

Latin Name:	Eucalyptus robusta
Common Name:	Swamp Mahogany
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	16
Canopy Spread [m]:	15
DBH [cm]:	57
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.62
Tree Protection Zone (TPZ) [m]:	6.84
Structural Root Zone (SRZ) [m]:	2.71
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Epicormic shoots, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993695
Latitude:	-32.208916

Photos | Street View | Map View



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28/01/2025

Swamp Mahogany Tree ID #3

Tree Details

Latin Name:	Eucalyptus robusta
Common Name:	Swamp Mahogany
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	15
Canopy Spread [m]:	12
DBH [cm]:	63
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.82
Tree Protection Zone (TPZ) [m]:	7.56
Structural Root Zone (SRZ) [m]:	3.04
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Deadwood, Epicormic shoots, Bifurcated union, Canopy decline
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	Termite activity observed at base of trunk no active termites observed at this time
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993724
Latitude:	-32.208851

Photos Street View Map View

image.jpg
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Radiata Pine Tree ID #4

Tree Details

Latin Name:	Pinus radiata
Common Name:	Radiata Pine
Tree Age:	Mature
Health:	Dead
Structure:	Poor
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	7
DBH [cm]:	56
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.64
Tree Protection Zone (TPZ) [m]:	6.72
Structural Root Zone (SRZ) [m]:	2.74
Useful Life Expectancy:	0 years
Observations-Structural Issues:	Broken Limb, Deadwood
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	Remove to ground level - Full stump grind
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.993733
Latitude:	-32.208770

Photos Street View Map View

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29/01/2025

Desert Ash Tree ID #5

Tree Details

Latin Name:	Fraxinus Oxycarpa
Common Name:	Desert Ash
Tree Age:	Semi mature
Health:	Fair
Structure:	Poor
Tree Height (Estimated) [m]:	8
Canopy Spread [m]:	7
DBH [cm]:	10.63
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.27
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.91
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Co-dominant tree
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993807
Latitude:	-32.208785

Photos Street View Map View

image.jpg
29/01/2025

Claret ash Tree ID #6

Tree Details

Latin Name:	Fraxinus excelsior raywood
Common Name:	Claret ash
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	13
Canopy Spread [m]:	8
DBH [cm]:	18
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.24
Tree Protection Zone (TPZ) [m]:	2.16
Structural Root Zone (SRZ) [m]:	1.82
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993792
Latitude:	-32.208937

Photos Street View Map View

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Cedar Wattle Tree ID #7

Tree Details

Latin Name:	Acaicia elata
Common Name:	Cedar Wattle
Tree Age:	Mature
Health:	Fair
Structure:	Poor
Tree Height (Estimated) [m]:	18
Canopy Spread [m]:	21
DBH [cm]:	51
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.79
Tree Protection Zone (TPZ) [m]:	6.12
Structural Root Zone (SRZ) [m]:	3
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Broken Limb, Bifurcated union, Crack
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	Target Pruning required
Observation Comments:	Hazard beam fracture observed on lower western branch
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.993852
Latitude:	-32.208908

Photos Street View Map View

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Spotted Gum Tree ID #8

Tree Details

Latin Name:	Corymbia maculata
Common Name:	Spotted Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	29
Canopy Spread [m]:	17
DBH [cm]:	56
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.74
Tree Protection Zone (TPZ) [m]:	6.72
Structural Root Zone (SRZ) [m]:	2.92
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Broken Limb, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	Remove Hanging Branch
Observation Comments:	Broken hanging limb from adjacent Acacia observed in western side of canopy approximately 12 m above ground level
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.993842
Latitude:	-32.208865

Photos Street View Map View

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Narrow Leaved Peppermint Tree ID #9

Tree Details

Latin Name:	Eucalyptus nicholii
Common Name:	Narrow Leaved Peppermint
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	19
Canopy Spread [m]:	15
DBH [cm]:	62
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.72
Tree Protection Zone (TPZ) [m]:	7.44
Structural Root Zone (SRZ) [m]:	2.88
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	Termite mound observed at base of trunk on the northern side. No active termites are observed at this time
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993844
Latitude:	-32.208819

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Spotted Gum Tree ID #10

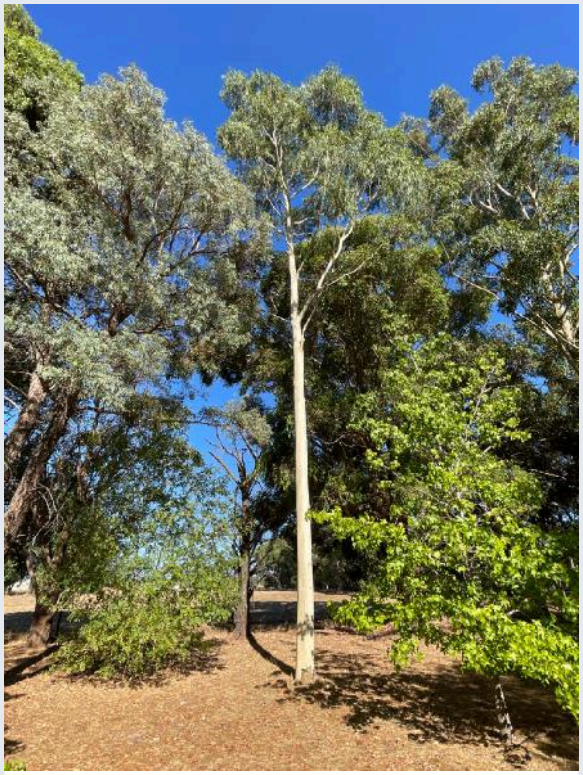
Tree Details

Latin Name:	Corymbia maculata
Common Name:	Spotted Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	31
Canopy Spread [m]:	14
DBH [cm]:	41
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.53
Tree Protection Zone (TPZ) [m]:	4.92
Structural Root Zone (SRZ) [m]:	2.53
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	Termite activity observed at base of trunk on the western side. No active termites are observed at this time
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993866
Latitude:	-32.208792

Photos Street View Map View



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Liquidamber Tree ID #11

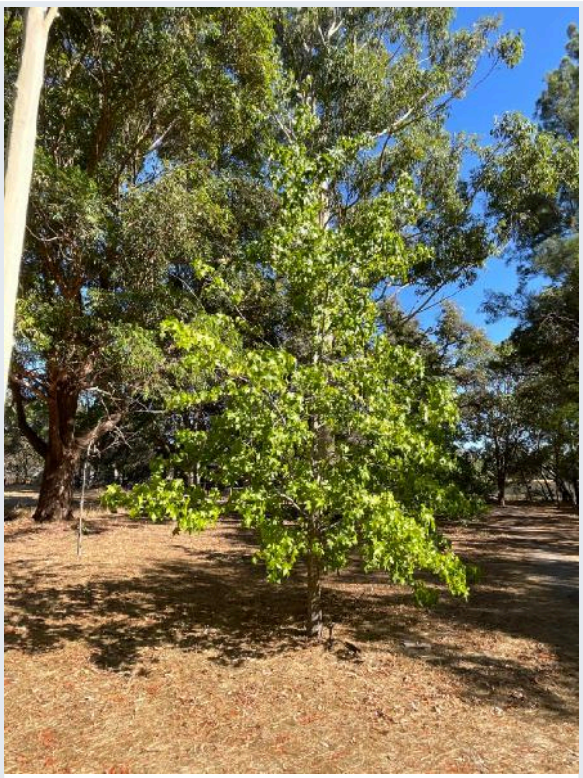
Tree Details

Latin Name:	Liquidambar styraciflua
Common Name:	Liquidamber
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	8
Canopy Spread [m]:	6
DBH [cm]:	11
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.18
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.61
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993909
Latitude:	-32.208781

Photos Street View Map View



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Liquidamber Tree ID #12

Tree Details

Latin Name:	Liquidambar styraciflua
Common Name:	Liquidamber
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	8
Canopy Spread [m]:	6
DBH [cm]:	14
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.21
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.72
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993920
Latitude:	-32.208818

Photos Street View Map View

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29/01/2025

Liquidamber Tree ID #13

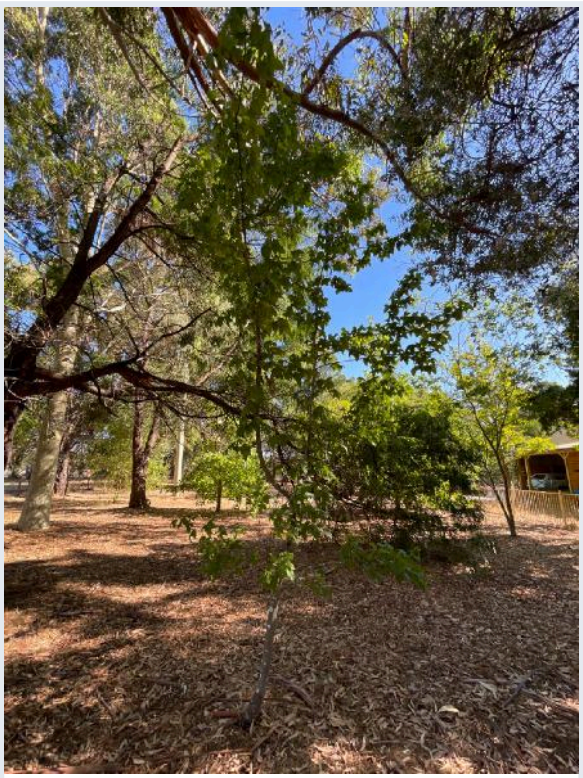
Tree Details

Latin Name:	Liquidambar styraciflua
Common Name:	Liquidamber
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	6
Canopy Spread [m]:	4
DBH [cm]:	6
DBH Range:	0-8cm
Diameter at Root Flare (DRF) [cm]:	0.09
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.2
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993922
Latitude:	-32.208963

Photos Street View Map View



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Jacaranda Tree ID #14

Tree Details

Latin Name:	Jacaranda mimosifolia
Common Name:	Jacaranda
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	6
Canopy Spread [m]:	4
DBH [cm]:	11.4
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.14
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.45
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993942
Latitude:	-32.208840

Photos Street View Map View

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Liquidamber Tree ID #15

Tree Details

Latin Name:	Liquidambar styraciflua
Common Name:	Liquidamber
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	5
DBH [cm]:	15
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.22
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.75
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993967
Latitude:	-32.208820

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Chinese Hackberry Tree ID #16

Tree Details

Latin Name:	Celtis sinensis
Common Name:	Chinese Hackberry
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	7
Canopy Spread [m]:	6
DBH [cm]:	10.82
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.15
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.49
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Included Bark
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993974
Latitude:	-32.208892

Photos Street View Map View

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Mt Morgan Wattle Tree ID #17

Tree Details

Latin Name:	Acacia podalyriifolia
Common Name:	Mt Morgan Wattle
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	6
Canopy Spread [m]:	5
DBH [cm]:	14
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.26
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.88
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Bifurcated union
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993976
Latitude:	-32.208971

Photos Street View Map View

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Silky Oak Tree ID #18

Tree Details

Latin Name:	Grevillea robusta
Common Name:	Silky Oak
Tree Age:	Semi mature
Health:	Very Poor
Structure:	Poor
Tree Height (Estimated) [m]:	13
Canopy Spread [m]:	6
DBH [cm]:	17.5
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.25
Tree Protection Zone (TPZ) [m]:	2.1
Structural Root Zone (SRZ) [m]:	1.85
Useful Life Expectancy:	1-5 years
Observations-Structural Issues:	Canopy decline, Deadwood
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.994007
Latitude:	-32.208960

Photos | Street View | Map View

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Chinese Tallow Tree Tree ID #19

Tree Details

Latin Name:	Sapium sebiferum
Common Name:	Chinese Tallow Tree
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	7
Canopy Spread [m]:	5
DBH [cm]:	14.21
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.21
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.72
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Deadwood, Bifurcated union
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.993999
Latitude:	-32.208797

Photos Street View Map View

image.jpg
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Cutleaf plane Tree ID #20

Tree Details

Latin Name:	Platanus orientalis
Common Name:	Cutleaf plane
Tree Age:	Semi mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	9
Canopy Spread [m]:	7
DBH [cm]:	23
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.37
Tree Protection Zone (TPZ) [m]:	2.76
Structural Root Zone (SRZ) [m]:	2.18
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Canopy decline, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994031
Latitude:	-32.208822

Photos Street View Map View

image.jpg
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Cutleaf plane Tree ID #21

Tree Details

Latin Name:	Platanus orientalis
Common Name:	Cutleaf plane
Tree Age:	Semi mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	5
DBH [cm]:	20
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.29
Tree Protection Zone (TPZ) [m]:	2.4
Structural Root Zone (SRZ) [m]:	1.97
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Canopy decline, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994026
Latitude:	-32.208885

Photos Street View Map View

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Weeping Bottlebrush Tree ID #22

Tree Details

Latin Name:	Callistemon viminalis
Common Name:	Weeping Bottlebrush
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	5
DBH [cm]:	41.44
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.62
Tree Protection Zone (TPZ) [m]:	4.97
Structural Root Zone (SRZ) [m]:	2.71
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Broken Limb, Bifurcated union, Co-dominant tree, Deadwood
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994041
Latitude:	-32.208935

Photos Street View Map View

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Trident Maple Tree ID #23

Tree Details

Latin Name:	Acer buergerianum
Common Name:	Trident Maple
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	5
Canopy Spread [m]:	7
DBH [cm]:	12
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.18
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.61
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994065
Latitude:	-32.208966

Photos Street View Map View

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29/01/2025

Big leaf mahogany Tree ID #24

Tree Details

Latin Name:	Swietenia macrophylla
Common Name:	Big leaf mahogany
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	
Canopy Spread [m]:	19
DBH [cm]:	16
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.61
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	2.69
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Broken Limb, Bifurcated union, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	Broken hanging branch observed to the eastern side of the canopy approximately 9 m above ground level
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.994067
Latitude:	-32.208951

Photos Street View Map View

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29/01/2025

Cocos Palm Tree ID #25

Tree Details

Latin Name:	Syagrus romanzoffiana
Common Name:	Cocos Palm
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	5
DBH [cm]:	24
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.41
Tree Protection Zone (TPZ) [m]:	2.88
Structural Root Zone (SRZ) [m]:	2.28
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Impermeable surface over root plate
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994154
Latitude:	-32.208782

Photos Street View Map View

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29/01/2025

Cocos Palm Tree ID #26

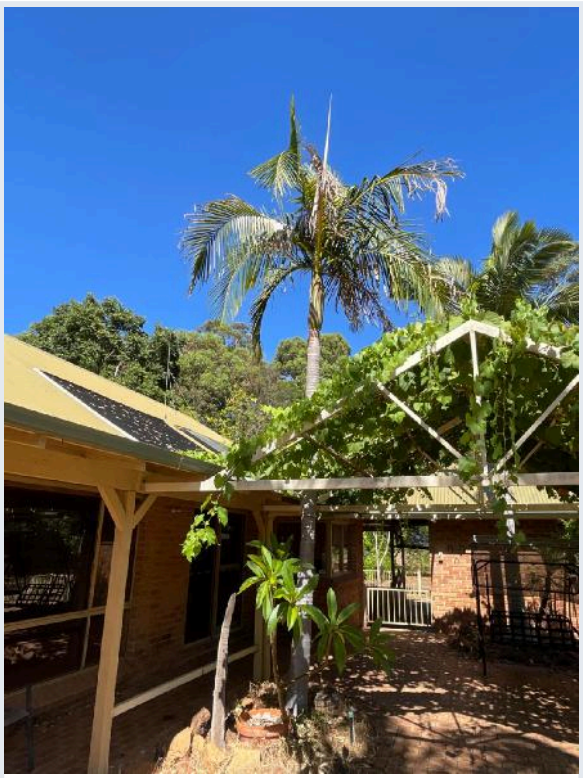
Tree Details

Latin Name:	Syagrus romanzoffiana
Common Name:	Cocos Palm
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	8
Canopy Spread [m]:	4
DBH [cm]:	16
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.24
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.82
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Impermeable surface over root plate
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994200
Latitude:	-32.208795

Photos Street View Map View



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Cocos Palm Tree ID #27

Tree Details

Latin Name:	Syagrus romanzoffiana
Common Name:	Cocos Palm
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	11
Canopy Spread [m]:	6
DBH [cm]:	20
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.28
Tree Protection Zone (TPZ) [m]:	2.4
Structural Root Zone (SRZ) [m]:	1.94
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994273
Latitude:	-32.208785

Photos Street View Map View

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29/01/2025

River Red Gum Tree ID #28

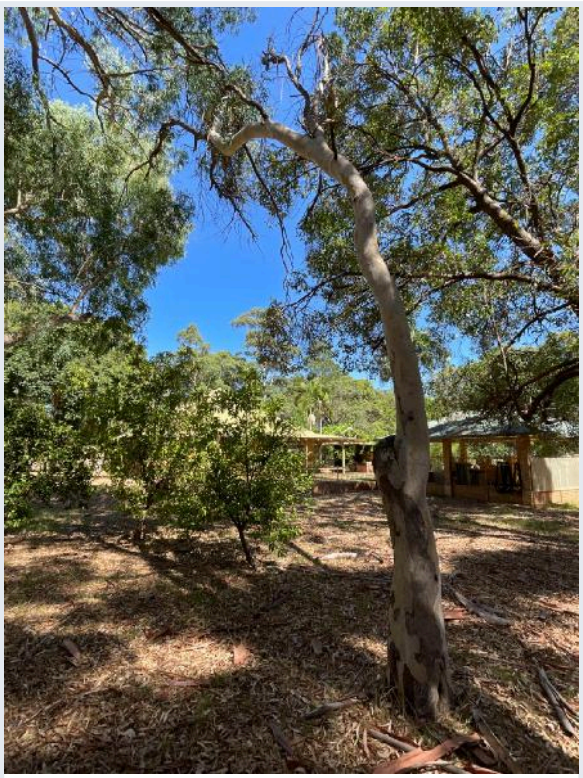
Tree Details

Latin Name:	Eucalyptus camaldulensis
Common Name:	River Red Gum
Tree Age:	Mature
Health:	Very Poor
Structure:	Poor
Tree Height (Estimated) [m]:	14
Canopy Spread [m]:	7
DBH [cm]:	36
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.46
Tree Protection Zone (TPZ) [m]:	4.32
Structural Root Zone (SRZ) [m]:	2.39
Useful Life Expectancy:	6-10 years
Observations-Structural Issues:	Leaning trunk, Canopy decline, Deadwood
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.994476
Latitude:	-32.208878

Photos Street View Map View



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29/01/2025

Marri Tree ID #29

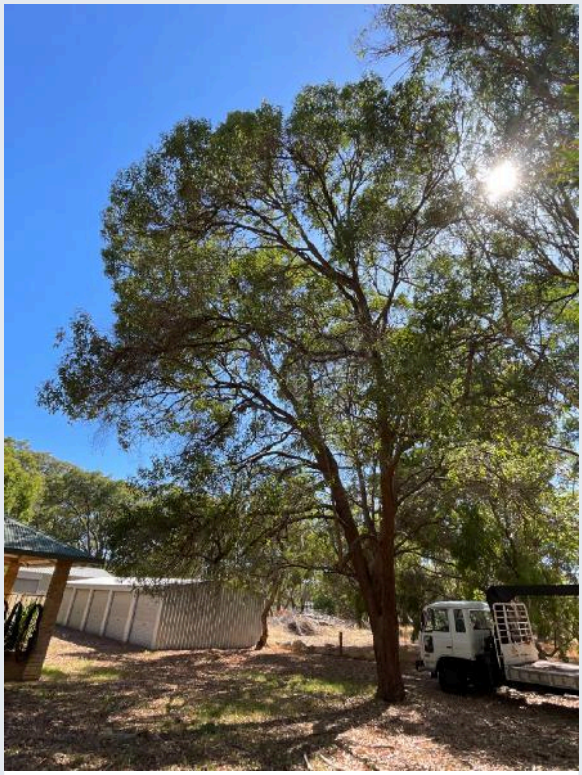
Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	14
Canopy Spread [m]:	7
DBH [cm]:	70
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.71
Tree Protection Zone (TPZ) [m]:	8.4
Structural Root Zone (SRZ) [m]:	2.87
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994469
Latitude:	-32.208850

Photos Street View Map View



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29/01/2025

Yellow Gum Tree ID #30

Tree Details

Latin Name:	Eucalyptus leucoxylon
Common Name:	Yellow Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	12
DBH [cm]:	26
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.58
Tree Protection Zone (TPZ) [m]:	3.12
Structural Root Zone (SRZ) [m]:	2.63
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994523
Latitude:	-32.208750

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #31

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	17
Canopy Spread [m]:	14
DBH [cm]:	50
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.61
Tree Protection Zone (TPZ) [m]:	6
Structural Root Zone (SRZ) [m]:	2.69
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Broken Limb, Bifurcated union, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994532
Latitude:	-32.208800

Photos | Street View | Map View

image.jpg
29/01/2025

River Red Gum Tree ID #32

Tree Details

Latin Name:	Eucalyptus camaldulensis
Common Name:	River Red Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	19
Canopy Spread [m]:	16
DBH [cm]:	46
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.58
Tree Protection Zone (TPZ) [m]:	5.52
Structural Root Zone (SRZ) [m]:	2.63
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Leaning trunk, Deadwood, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994538
Latitude:	-32.208878

Photos Street View Map View

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29/01/2025

Weeping Bottlebrush Tree ID #33

Tree Details

Latin Name:	Callistemon viminalis
Common Name:	Weeping Bottlebrush
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	12
Canopy Spread [m]:	7
DBH [cm]:	17
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.26
Tree Protection Zone (TPZ) [m]:	2.04
Structural Root Zone (SRZ) [m]:	1.88
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Bifurcated union, Deadwood
Species origin:	Introduced
Habitat value:	Roosting Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994532
Latitude:	-32.208950

Photos | Street View | Map View

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29/01/2025

Swamp Wattle Tree ID #34

Tree Details

Latin Name:	Acacia retinodes
Common Name:	Swamp Wattle
Tree Age:	Mature
Health:	Fair
Structure:	Very Poor
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	7
DBH [cm]:	43
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.37
Tree Protection Zone (TPZ) [m]:	5.16
Structural Root Zone (SRZ) [m]:	2.18
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Leaning trunk, Weak attachments, Epicormic shoots
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	Remove to ground level - Full stump grind
Observation Comments:	This tree has been subject to whole tree failure and has re-grown from the failed root plate and fallen trunk
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.994652
Latitude:	-32.208979

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #35

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	13
Canopy Spread [m]:	18
DBH [cm]:	35
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.41
Tree Protection Zone (TPZ) [m]:	4.2
Structural Root Zone (SRZ) [m]:	2.28
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Leaning trunk, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994623
Latitude:	-32.208855

Photos Street View Map View

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29/01/2025

Flooded Gum Tree ID #36

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	16
Canopy Spread [m]:	6
DBH [cm]:	33
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.42
Tree Protection Zone (TPZ) [m]:	3.96
Structural Root Zone (SRZ) [m]:	2.3
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Leaning trunk
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994692
Latitude:	-32.208944

Photos Street View Map View

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29/01/2025

Rose Gum Tree ID #37

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	28
Canopy Spread [m]:	19
DBH [cm]:	51
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.69
Tree Protection Zone (TPZ) [m]:	6.12
Structural Root Zone (SRZ) [m]:	2.83
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Co-dominant Limbs, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994714
Latitude:	-32.208888

Photos Street View Map View

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29/01/2025

Rose Gum Tree ID #38

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	34
Canopy Spread [m]:	22
DBH [cm]:	97
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	1.23
Tree Protection Zone (TPZ) [m]:	11.64
Structural Root Zone (SRZ) [m]:	3.61
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Co-dominant Limbs, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994768
Latitude:	-32.208947

Photos Street View Map View

image.jpg
29/01/2025

Rose Gum Tree ID #39

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	37
Canopy Spread [m]:	26
DBH [cm]:	129
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	1.22
Tree Protection Zone (TPZ) [m]:	15
Structural Root Zone (SRZ) [m]:	3.6
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Co-dominant Limbs, Deadwood, Bifurcated union, Included Bark
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994793
Latitude:	-32.208809

Photos Street View Map View

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29/01/2025

River Red Gum Tree ID #40

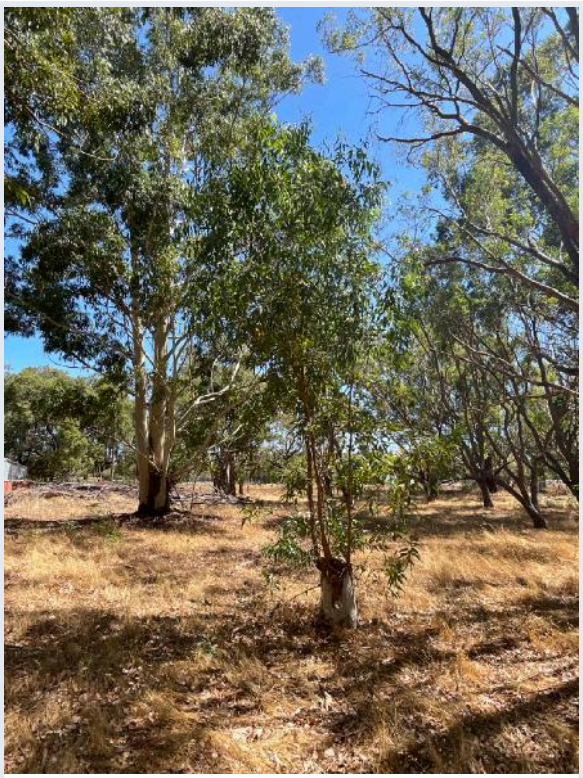
Tree Details

Latin Name:	Eucalyptus camaldulensis
Common Name:	River Red Gum
Tree Age:	Mature
Health:	Fair
Structure:	Very Poor
Tree Height (Estimated) [m]:	6
Canopy Spread [m]:	4
DBH [cm]:	7.81
DBH Range:	0-8cm
Diameter at Root Flare (DRF) [cm]:	0.45
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	2.37
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Epicormic shoots
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	Remove to ground level - Full stump grind
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994834
Latitude:	-32.208913

Photos Street View Map View



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Rose Gum Tree ID #41

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	32
Canopy Spread [m]:	27
DBH [cm]:	114
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	1.26
Tree Protection Zone (TPZ) [m]:	13.68
Structural Root Zone (SRZ) [m]:	3.65
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Co-dominant Limbs, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994806
Latitude:	-32.209043

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #42

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	18
Canopy Spread [m]:	16
DBH [cm]:	93
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	0.84
Tree Protection Zone (TPZ) [m]:	11.16
Structural Root Zone (SRZ) [m]:	3.08
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Co-dominant Limbs, Deadwood, Canopy is Sparse
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994899
Latitude:	-32.208914

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #43

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	10
Canopy Spread [m]:	8
DBH [cm]:	37.54
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.41
Tree Protection Zone (TPZ) [m]:	4.5
Structural Root Zone (SRZ) [m]:	2.28
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Deadwood, Canopy is Sparse, Bifurcated union, Canopy decline, Co-dominant Limbs
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.994928
Latitude:	-32.208818

Photos Street View Map View

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29/01/2025

Flooded Gum Tree ID #44

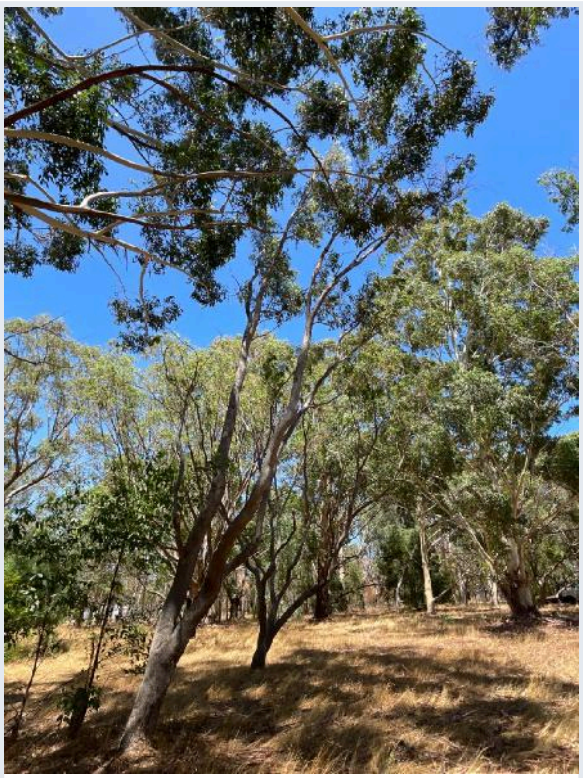
Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	17
Canopy Spread [m]:	12
DBH [cm]:	47
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.43
Tree Protection Zone (TPZ) [m]:	5.64
Structural Root Zone (SRZ) [m]:	2.32
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Bifurcated union, Canopy is Sparse, Co-dominant Limbs
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995064
Latitude:	-32.208774

Photos Street View Map View



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Rose Gum Tree ID #45

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	38
Canopy Spread [m]:	27
DBH [cm]:	90
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	1.46
Tree Protection Zone (TPZ) [m]:	10.8
Structural Root Zone (SRZ) [m]:	3.88
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Co-dominant Limbs
Species origin:	Introduced
Habitat value:	Low
Work Requirements:	
Observation Comments:	Termite activity observed on the northern side of the trunk at the base no active termites present. Birdnest observed approximately 18 m above ground level in central canopy on main trunk
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995122
Latitude:	-32.208724

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #46

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	19
Canopy Spread [m]:	18
DBH [cm]:	98
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	1.05
Tree Protection Zone (TPZ) [m]:	11.76
Structural Root Zone (SRZ) [m]:	3.38
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Co-dominant Limbs, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995030
Latitude:	-32.208967

Photos Street View Map View

image.jpg
29/01/2025

Rose Gum Tree ID #47

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Juvenile
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	9
Canopy Spread [m]:	4
DBH [cm]:	9
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.15
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	1.49
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	None observed
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995094
Latitude:	-32.208942

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #48

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	11
Canopy Spread [m]:	7
DBH [cm]:	21.26
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.43
Tree Protection Zone (TPZ) [m]:	2.55
Structural Root Zone (SRZ) [m]:	2.32
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Leaning trunk, Co-dominant tree
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995196
Latitude:	-32.208703

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #49

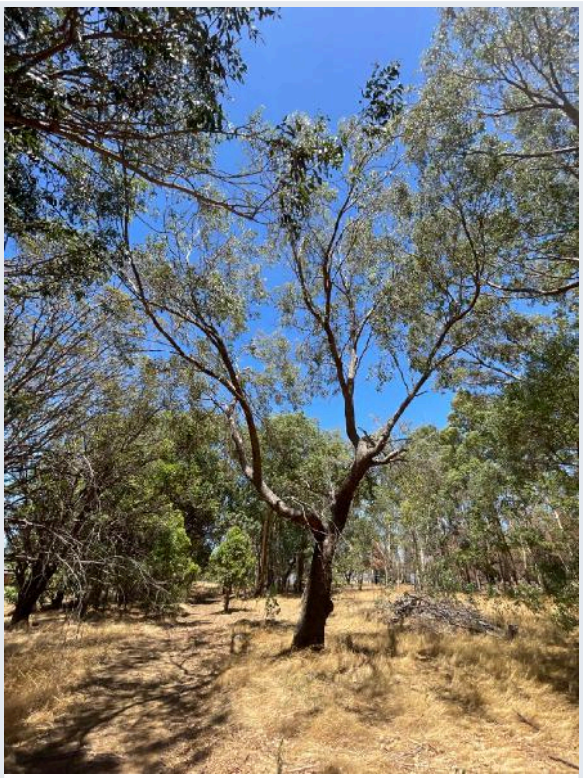
Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	15
Canopy Spread [m]:	17
DBH [cm]:	65
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.86
Tree Protection Zone (TPZ) [m]:	7.8
Structural Root Zone (SRZ) [m]:	3.11
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Bifurcated union
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995161
Latitude:	-32.209020

Photos | Street View | Map View



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29/01/2025

Bushy Yate Tree ID #50

Tree Details

Latin Name:	Eucalyptus conferruminata
Common Name:	Bushy Yate
Tree Age:	Mature
Health:	Poor
Structure:	Poor
Tree Height (Estimated) [m]:	15
Canopy Spread [m]:	16
DBH [cm]:	56
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.64
Tree Protection Zone (TPZ) [m]:	6.72
Structural Root Zone (SRZ) [m]:	2.74
Useful Life Expectancy:	6-10 years
Observations-Structural Issues:	Weak attachments, Deadwood, Bifurcated union, Canopy decline, Root plate weakness, Leaning trunk
Species origin:	Native
Habitat value:	No Value
Work Requirements:	Remove to ground level - Full stump grind
Observation Comments:	Large termite mound observed on the northern side of the tree at the base. This is likly because of a leader failure at the base of tree. a wound on the eastern side indicates this.
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.995271
Latitude:	-32.209005

Photos Street View Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #51

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	21
Canopy Spread [m]:	18
DBH [cm]:	134
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	1.26
Tree Protection Zone (TPZ) [m]:	15
Structural Root Zone (SRZ) [m]:	3.65
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Bifurcated union
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995331
Latitude:	-32.208921

Photos Street View Map View

image.jpg
29/01/2025

Swamp Mahogany Tree ID #52

Tree Details

Latin Name:	Eucalyptus robusta
Common Name:	Swamp Mahogany
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	22
Canopy Spread [m]:	19
DBH [cm]:	90
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	0.9
Tree Protection Zone (TPZ) [m]:	10.8
Structural Root Zone (SRZ) [m]:	3.17
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Broken Limb, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	Remove Hanging Branch
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.995299
Latitude:	-32.208815

Photos Street View Map View

image.jpg
29/01/2025

Rose Gum Tree ID #53

Tree Details

Latin Name:	Eucalyptus grandis
Common Name:	Rose Gum
Tree Age:	Semi mature
Health:	Poor
Structure:	Very Poor
Tree Height (Estimated) [m]:	12
Canopy Spread [m]:	8
DBH [cm]:	27
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.31
Tree Protection Zone (TPZ) [m]:	3.24
Structural Root Zone (SRZ) [m]:	2.02
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Co-dominant tree, Deadwood
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	This tree's structure has been compromised due to mechanical damage to its main trunk as well as being entangled within a wire fence
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.995336
Latitude:	-32.208789

Photos | Street View | Map View

image.jpg
29/01/2025

Eucalyptus Sp Tree ID #54

Tree Details

Latin Name:	Eucalyptus sp.
Common Name:	Eucalyptus Sp
Tree Age:	Semi mature
Health:	Poor
Structure:	Very Poor
Tree Height (Estimated) [m]:	8
Canopy Spread [m]:	6
DBH [cm]:	15.2
DBH Range:	8-16cm
Diameter at Root Flare (DRF) [cm]:	0.73
Tree Protection Zone (TPZ) [m]:	2
Structural Root Zone (SRZ) [m]:	2.9
Useful Life Expectancy:	6-10 years
Observations-Structural Issues:	Co-dominant tree
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	Remove to ground level - Full stump grind
Observation Comments:	This tree is a group of suckers growing from a residual stump
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.995573
Latitude:	-32.209002

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #55

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	19
Canopy Spread [m]:	23
DBH [cm]:	104
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	0.93
Tree Protection Zone (TPZ) [m]:	12.48
Structural Root Zone (SRZ) [m]:	3.21
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Canopy decline, Bifurcated union, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995770
Latitude:	-32.208699

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #56

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	9
Canopy Spread [m]:	7
DBH [cm]:	18
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.24
Tree Protection Zone (TPZ) [m]:	2.16
Structural Root Zone (SRZ) [m]:	1.82
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.995770
Latitude:	-32.208748

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #57

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Dead
Structure:	Poor
Tree Height (Estimated) [m]:	15
Canopy Spread [m]:	7
DBH [cm]:	47
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.53
Tree Protection Zone (TPZ) [m]:	5.64
Structural Root Zone (SRZ) [m]:	2.53
Useful Life Expectancy:	0 years
Observations-Structural Issues:	Deadwood
Species origin:	Native
Habitat value:	No Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.996006
Latitude:	-32.208932

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #58

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Dead
Structure:	Poor
Tree Height (Estimated) [m]:	12
Canopy Spread [m]:	8
DBH [cm]:	51
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.59
Tree Protection Zone (TPZ) [m]:	6.12
Structural Root Zone (SRZ) [m]:	2.65
Useful Life Expectancy:	0 years
Observations-Structural Issues:	Deadwood, Leaning trunk
Species origin:	Native
Habitat value:	No Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.996073
Latitude:	-32.208935

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #59

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	15
Canopy Spread [m]:	8
DBH [cm]:	33
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.35
Tree Protection Zone (TPZ) [m]:	3.96
Structural Root Zone (SRZ) [m]:	2.13
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Leaning trunk, Deadwood, Canopy decline
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996111
Latitude:	-32.208939

Photos | Street View | Map View

image.jpg
29/01/2025

Marri Tree ID #60

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	18
Canopy Spread [m]:	13
DBH [cm]:	50
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.57
Tree Protection Zone (TPZ) [m]:	6
Structural Root Zone (SRZ) [m]:	2.61
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996162
Latitude:	-32.208957

Photos | Street View | Map View

image.jpg
29/01/2025

Marri Tree ID #61

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	23
Canopy Spread [m]:	19
DBH [cm]:	77
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	0.92
Tree Protection Zone (TPZ) [m]:	9.24
Structural Root Zone (SRZ) [m]:	3.2
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996189
Latitude:	-32.208941

Photos | Street View | Map View

image.jpg
29/01/2025

Marri Tree ID #62

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	11
Canopy Spread [m]:	6
DBH [cm]:	21
DBH Range:	16-30cm
Diameter at Root Flare (DRF) [cm]:	0.25
Tree Protection Zone (TPZ) [m]:	2.52
Structural Root Zone (SRZ) [m]:	1.85
Useful Life Expectancy:	11-20 years
Observations-Structural Issues:	Deadwood, Missing bark on trunk, Canopy decline, Bifurcated union
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996204
Latitude:	-32.208961

Photos | Street View | Map View

image.jpg
29/01/2025

Marri Tree ID #63

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Very Poor
Structure:	Poor
Tree Height (Estimated) [m]:	13
Canopy Spread [m]:	7
DBH [cm]:	34
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.38
Tree Protection Zone (TPZ) [m]:	4.08
Structural Root Zone (SRZ) [m]:	2.2
Useful Life Expectancy:	1-5 years
Observations-Structural Issues:	Deadwood, Canopy decline, Bifurcated union
Species origin:	Native
Habitat value:	No Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.996226
Latitude:	-32.208943

Photos | Street View | Map View

image.jpg
29/01/2025

Marri Tree ID #64

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	23
Canopy Spread [m]:	14
DBH [cm]:	84
DBH Range:	>75cm
Diameter at Root Flare (DRF) [cm]:	0.97
Tree Protection Zone (TPZ) [m]:	10.08
Structural Root Zone (SRZ) [m]:	3.27
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Bifurcated union, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996269
Latitude:	-32.208940

Photos | Street View | Map View

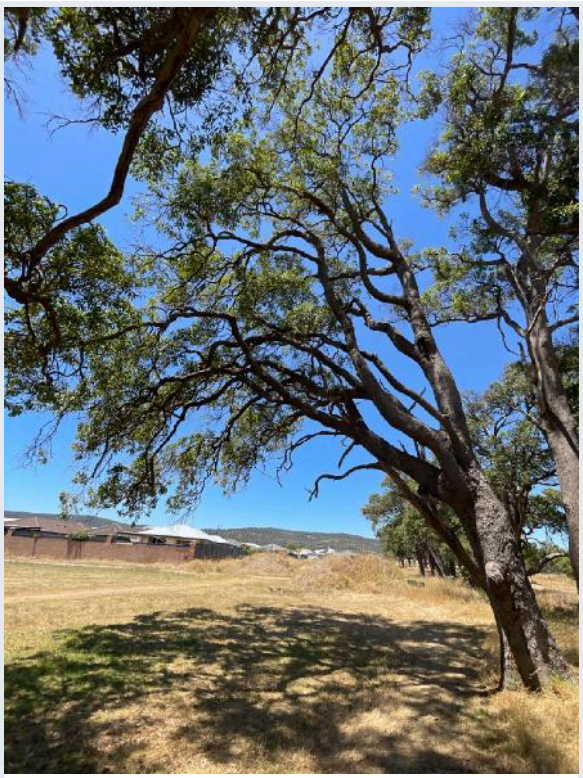

image.jpg
29/01/2025

Marri Tree ID #65

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	20
Canopy Spread [m]:	16
DBH [cm]:	64
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.77
Tree Protection Zone (TPZ) [m]:	7.68
Structural Root Zone (SRZ) [m]:	2.97
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Bifurcated union, Deadwood, Canopy decline
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996270
Latitude:	-32.208963

Photos | Street View | Map View

image.jpg
29/01/2025

Eucalyptus Sp Tree ID #66

Tree Details

Latin Name:	Eucalyptus sp.
Common Name:	Eucalyptus Sp
Tree Age:	Mature
Health:	Dead
Structure:	Has Failed
Tree Height (Estimated) [m]:	14
Canopy Spread [m]:	8
DBH [cm]:	42
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.55
Tree Protection Zone (TPZ) [m]:	5.04
Structural Root Zone (SRZ) [m]:	2.57
Useful Life Expectancy:	0 years
Observations-Structural Issues:	Deadwood, Leaning trunk
Species origin:	Introduced
Habitat value:	No Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	This dead tree has failed at the root plate and is leaning in an adjacent marri
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.996321
Latitude:	-32.208963

Photos | Street View | Map View

image.jpg
29/01/2025

Flooded Gum Tree ID #67

Tree Details

Latin Name:	Eucalyptus rudis
Common Name:	Flooded Gum
Tree Age:	Mature
Health:	Poor
Structure:	Has Failed
Tree Height (Estimated) [m]:	12
Canopy Spread [m]:	8
DBH [cm]:	49
DBH Range:	46-60cm
Diameter at Root Flare (DRF) [cm]:	0.63
Tree Protection Zone (TPZ) [m]:	5.88
Structural Root Zone (SRZ) [m]:	2.73
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Leaning trunk, Deadwood
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	Remove to ground level - Shallow stump grind
Observation Comments:	This tree has failed at the root plate and is leaning on the ground and still growing
VALID Tree Risk Assessment :	Condition of concern found- Refer to detailed assessment

Tree Location

Longitude:	115.996336
Latitude:	-32.209031

Photos Street View Map View

image.jpg
29/01/2025

Marri Tree ID #68

Tree Details

Latin Name:	Corymbia calophylla
Common Name:	Marri
Tree Age:	Mature
Health:	Poor
Structure:	Fair
Tree Height (Estimated) [m]:	13
Canopy Spread [m]:	11
DBH [cm]:	70
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.76
Tree Protection Zone (TPZ) [m]:	8.4
Structural Root Zone (SRZ) [m]:	2.95
Useful Life Expectancy:	20-40 years
Observations-Structural Issues:	Bifurcated union, Deadwood, Canopy decline
Species origin:	Native
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	115.996378
Latitude:	-32.209005

Photos | Street View | Map View

image.jpg
29/01/2025

River Red Gum Tree ID #69

Tree Details

Latin Name:	Eucalyptus camaldulensis
Common Name:	River Red Gum
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	
Canopy Spread [m]:	
DBH [cm]:	37.03
DBH Range:	30-45cm
Diameter at Root Flare (DRF) [cm]:	0.54
Tree Protection Zone (TPZ) [m]:	4.44
Structural Root Zone (SRZ) [m]:	2.55
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Co-dominant tree, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	116.001127
Latitude:	-32.211373

Photos Street View Map View

image.jpg
29/01/2025

River Red Gum Tree ID #70

Tree Details

Latin Name:	Eucalyptus camaldulensis
Common Name:	River Red Gum
Tree Age:	Semi mature
Health:	Fair
Structure:	Fair
Tree Height (Estimated) [m]:	16
Canopy Spread [m]:	15
DBH [cm]:	68
DBH Range:	60-75cm
Diameter at Root Flare (DRF) [cm]:	0.65
Tree Protection Zone (TPZ) [m]:	8.16
Structural Root Zone (SRZ) [m]:	2.76
Useful Life Expectancy:	40+ years
Observations-Structural Issues:	Deadwood, Broken Limb, Bifurcated union
Species origin:	Introduced
Habitat value:	Future Value
Work Requirements:	
Observation Comments:	
VALID Tree Risk Assessment :	Acceptable level of risk

Tree Location

Longitude:	116.001206
Latitude:	-32.211434

Photos Street View Map View

image.jpg
29/01/2025

5.0 Conclusion

A total of twenty-five trees were identified as native species, as defined by the *Environmental Protection Act 1986 (EPA Act)*, while forty-five trees were classified as introduced species.

Fifty trees were assessed to be in *Fair* health, which is considered normal for their species. However, five of these trees exhibit poor or very poor structure.

Thirteen trees are recommended for removal due to being dead or exhibiting poor to very poor health and/or structure, resulting in a reduced ULE.

No trees were observed to contain hollows or show signs of foraging activity within their canopies. A single tree (Tree 45) was noted to contain a nest, assigning it a *Low* habitat value.

In terms of future habitat potential:

- 49 trees are considered to have *Future Habitat Value*.
- 8 trees provide *Roosting Value*.
- 12 trees have no habitat value due to being dead, exhibiting poor or very poor health and/or structure, being unsuitable species for habitat, or a combination of these factors.

8.0 Glossary of Arboricultural Terminology

Abscission - The shedding of a leaf or other short-lived part of a woody plant, involving the formation of a corky layer across its base; in some tree species twigs can be shed in this way.

Abiotic - Pertaining to non-living agents, e.g., environmental factors.

Absorptive roots - non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients.

Adaptive growth - In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. This helps to maintain a uniform distribution of mechanical stress.

Adaptive roots - The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading.

Adventitious shoots - Shoots that develop other than from apical, axillary, or dormant buds; see also 'epicormic'

Anchorage - The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree.

Axil - The place where a bud is borne between a leaf and its parent shoot.

Bacteria - Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms.

Bark - A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex, and periderm; occasionally applied only to the periderm or the phellem.

Basidiomycotina (Basidiomycetes) - One of the major taxonomic groups of fungi.

Bolling - A term sometimes used to describe pollard heads.

Bottle-butt - A broadening of the stem base and buttresses of a tree, in excess of normal and sometimes denoting a growth response to weakening in that region, especially due to decay.

Bracing - The use of rods or cables to restrain the movement between parts of a tree.

Branch:

- **Primary** - A first order branch arising from a trunk or stem
- **Lateral** - A second order branch, subordinate to a primary branch
- **Sub-lateral** - A third order branch, originating from lateral branch

Branch bark ridge - The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem.

Branch-collar - A visible swelling formed at the base of a branch.

Brown-rot - A type of wood decay in which cellulose is degraded, while lignin is only modified.

Buckling - An irreversible deformation of a structure subjected to a bending load.

Buttress zone - The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions.

Cambium - Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally.

Canker - A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria.

Canopy species - Tree species that mature to form a closed forest canopy.

Cleaning out - The removal of dead, crossing, weak, and damaged branches, where this will not damage or spoil the overall appearance of the tree.

Compartmentalisation - The chemical confinement of disease, decay, or other dysfunction within a trees tissue, due to passive and/or active defences operating at the boundaries of the affected region.

Compression fork - An acute angled fork that is mechanically optimised for the growth pressure that two or more adjacent stems exert on each other.

Compression strength - The ability of a material or structure to resist failure when subjected to compressive loading, measurable in trees with special drilling devices.

Compressive loading - Mechanical loading which exerts a positive pressure, the opposite to tensile loading.

Tree Protection Zone - Area from which access is prohibited for the duration of the project to prevent damage to a tree.

Crown/Canopy - The main foliage bearing section of the tree.

Crown lifting - The removal of limbs and small branches to a specified height above ground level.

Crown thinning - The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure.

Crown reduction/shaping - A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape.

Crown reduction/thinning - Reduction of the canopy volume by thinning to remove selected branches whilst preserving the natural tree shape.

Deadwood - Branch or stem wood bearing no live tissues.

Decurrent - A system of branching in which the crown is borne on a number of major widely spreading limbs of similar size.

Defect - In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.

Delamination - The separation of wood layers along their length, visible as longitudinal splitting.

Dieback - The death of parts of a woody plant, starting at shoot-tips or root-tips.

Disease - A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused pathogens.

Distal - In the direction away from the main body of a tree or subject organism (cf. proximal)

Dominance - In trees, the tendency for a leading shoot to grow faster or more vigorously than the lateral shoots; also, the tendency of a tree to maintain a taller crown than its neighbours.

Dormant bud - An axial bud which does not develop into a shoot until after the formation of two or more annual wood increments; many such buds persist through the life of a tree and develop only if stimulated to do so.

Dysfunction - In woody tissues, the loss of physiological function, especially water conduction, in sapwood.

DBH (Diameter at Breast Height) - Stem diameter measured at a height of 1.4 metres or the nearest measurable point. Where measurement at a height of 1.4 metres is not possible, another height may be specified.

Endophytes - Micro-organisms that live inside plant tissues without causing overt disease, but in some cases capable of causing disease if the tissues become physiologically stressed.

Epicormic shoot - A shoot having developed from a dormant or adventitious bud and not having developed from a first-year shoot.

Excrescence - Any abnormal outgrowth on the surface of tree or other organism.

Excurrent - In trees, a system of branching in which there is a well-defined central main stem, bearing branches which are limited in their length, diameter, and secondary branching (cf. decurrent).

Fastigiate - Having upright, often clustered branches.

Flush cut - A pruning cut which removes part of the branch bark ridge and or branch-collar.

Girdling root - A root which circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue.

Habit - The overall growth characteristics, shape of the tree and branch structure.

Haloing - Removing or pruning trees from around the crown of another (usually mature or post-mature) tree to prevent it becoming supressed.

Hazard beam - An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth, prone to longitudinal splitting.

Heartwood/false-heartwood - The dead central wood that has become dysfunctional as part of the aging processes and being distinct from the sapwood.

Heave - The lifting of pavements and other structures by root diameter expansion; also, the lifting of one side of a wind-rocked root-plate.

High canopy tree species - Tree species having potential to contribute to the closed canopy of a mature forest.

Incipient failure - In wood tissues, a mechanical failure which results only in deformation or cracking, and not in the fall or detachment of the affected part.

Included bark (ingrown bark) - Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact.

Infection - The establishment of a parasitic micro-organism in the tissues of a tree or other organism.

Internode - The part of a stem between two nodes; not to be confused with a length of stem which bear nodes but no branches.

Lever arm - A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or individual branch.

Lignin - The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed Lignification.

Lions tailing - When a branch of a tree that has few if any side branches except at its end and is thus liable to snap due to end-loading.

Loading - A mechanical term describing the force acting on a structure from a particular source, e.g., the weight of the structure itself or wind pressure.

Longitudinal - Along the length (of a stem, root, or branch).

Lopping - A term often used to describe the removal of large branches from a tree, but also used to describe other forms of cutting

Minor deadwood - Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target.

Mulch - Material laid down over the rooting area of plants to help conserve moisture; mulch may consist of organic matter, or artificial material.

Mycelium - The body of a fungus, consisting of branched filaments (hyphae).

Occlusion - The process whereby a wound is progressively closed by the formation of new wood and bark around it.

Pathogen - A micro-organism which causes disease in another organism.

Photosynthesis - The process whereby plants use light energy to split hydrogen from water molecules and combine it with carbon dioxide to form the molecular building blocks for synthesizing carbohydrates and other biochemical products.

Phytotoxic - Toxic to plants.

Pollarding - The removal of the tree canopy, back to the stem or primary branches, usually to a point just outside that of the previous cutting.

Primary branch - A major branch, generally having a basal diameter greater than 0.25 x stem diameter.

Probability - A statistical measure of the likelihood that a particular event might occur.

Pruning - The removal or cutting back tree parts to growth points.

Rams-horn - In connection with wounds on trees, a roll of occluding tissues which has a spiral structure as seen in cross section.

Reactive Growth/Reaction Wood - Production of woody tissue in response to altered mechanical or external loading.

Residual wall - The amount of non-decayed wood remaining following decay of internal wood

Rib - A ridge of wood that has usually developed because of locally increased mechanical loading. Often associated with internal cracking in the wood of the stem, branch, or root.

Ringbarking (girdling) - The removal of a ring of bark and phloem around the circumference of a stem or branch, normally resulting in an inability to transport photosynthetic assimilates above or below the area of damage.

Ripewood - The older central wood of those tree species in which sapwood gradually ages without being converted to heartwood.

Root-collar - The transitional area between the stem/s and roots.

Root zone - Area of soils containing absorptive roots of the tree/s described. The Primary root zone is that which we consider of primary importance to the physiological well-being of the tree.

Sapwood - Living xylem tissues.

Selective delignification - A kind of wood decay (white-rot) in which lignin is degraded faster than cellulose.

Shedding - In woody plants, the normal abscission, rotting off or sloughing of leaves, floral parts, twigs, fine roots, and bark scales.

Shrub species - Woody perennial species forming the lowest level of woody plants in a forest or garden and not normally considered to be trees.

Simultaneous white rot - A kind of wood decay in which lignin and cellulose are degraded at about the same rate.

Soft-rot - A kind of wood decay in which a fungus degrades cellulose within the cells,

Spores - Propagules of fungi; most spores are microscopic and dispersed in air or water.

Sporophore - The spore bearing structure of fungi.

Stem/s - Principle above-ground structural component(s) of a tree that supports its branches.

Stress - In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition, or extremes of temperature: In mechanics, the application of an external force to an object.

Stringy white-rot - The kind of wood decay produced by selective delignification.

Structural roots - Roots, generally having a diameter greater than 50 millimetres, and contributing significantly to the structural support and stability of the tree.

Structural root zone (ZRZ) - The zone of the root plate most likely to contain roots that are critical for anchorage and the stability of the tree.

Subsidence - In relation to soil or structures resting in or on soil, a sinking due to shrinkage when certain types of clay soil dry out, sometimes due to extraction of moisture by tree roots.

Subsidence - In relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight.

Taper - In stems and branches, the degree of change in girth along a given length.

Targets - In tree risk assessment persons or property or other things of value which might be harmed or damaged by falling parts of a tree

Topping/ Lopping - In arboriculture, the removal of the crown of a tree, or of a major proportion of it.

Torsional stress - Mechanical stress applied by a twisting force.

Translocation - In plant physiology, the movement of water and dissolved materials through the body of the plant.

Transpiration - The evaporation of moisture from the surface of a plant, especially via the stomata of leaves; it exerts a suction which draws water up from the roots and through the intervening xylem cells.

Tree Protection Zone (TRZ) - This is an area left around a tree to ensure protection of the above and below ground parts of the tree during construction works. It will usually include the SRZ and is usually recommended to be fenced off for the period of the works.

Understorey - A layer of vegetation consisting of younger or smaller trees and shrubs which are adapted to grow under lower light conditions.

Understorey tree species - Tree species not having potential to attain a size at which they can contribute to the closed high canopy of a forest or garden.

Vascular wilt - A type of plant disease in which water-conducting cells become dysfunctional.

Vessels - Water-conducting cells in plants, usually wide and long for hydraulic efficiency; generally, not present in coniferous trees.

Vigour - The expression of carbohydrate expenditure to growth (in trees).

Vitality - A measure of physiological condition.

White-rot - A range of kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded.

Wind exposure - The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity.

Windthrow - The blowing over of a tree at its roots.

Woundwood - Wood with atypical anatomical features, formed in the vicinity of a wound.

9.0 References

Mattheck, C. and Breloer, H. 1994. The body language of trees - a handbook for failure analysis. The Stationery Office, London England. p 11- 21, 22 – 27, 39, 60 – 65, 130 – 136, 171 – 172.

Harris, R, H. Clark, J, R. Matheny, N, P. 2004 Arboriculture, Integrated management of Trees, Shrubs, and vines. Pearson education, Upper Saddle River, New Jersey, USA. p 162, 351.

Lonsdale, D. 1999, 2010 Principles of Tree Hazard Assessment and Management. The Stationary Office, London England. PG: 149-150.

Shigo, A, L. 1979. Tree Decay; An expanded Concept. USDA Forest Service Agricultural Information. Bulletin No 419.

Duiker, S, W. 2002. Diagnosing Soil Compaction using a Penetrometer. Penn State College of Agricultural Science Research. Pennsylvania, USA.

Day, S.D. and Bassuk, N.L. 1994. Soil Compaction: A Review of the effects of soil compaction and amelioration treatments on landscape trees. Journal of Arboriculture. Vol 20 No 1 p 9-17.

Ganesson, S. 1995 Plant Pathology 202. Challenger Institute of Technology, Murdoch. Perth, Western Australia, Pg: 81 to 93.

Dunster, J, A, A. Smiley, T. Matheny, N. Lilly, S. (2013) Tree Risk Assessment Manual. International society of Arboriculture. Champaign Illinois, USA. p 29, 67 – 71, 74 – 84, 88 – 95.

Fay, N. 2007 Defining and Surveying Veteran and Ancient Trees, UK Biodiversity Action plan. England.

Smith, K, D. May, P, B. Moore, G, M. 2001. The Influence of Compaction and soil Strength on the Establishment of four Australian Landscape Trees, Journal of Arboriculture Vol 27 No 1.

Ellison, M. (2010). Quantified Tree Risk Assessment – Licensed User Manual, Quantified Tree Risk Assessment Ltd, Poynton, England.

Standards Australia. AS 4373 – 2007 Pruning of amenity Trees, Sydney, Australia.

Standards Australia. AS 4970 – 2009 Protection of Trees on Development Sites.

10.0 Appendices

10.1 Referral Guideline for Habitat Attributes

Extract of table 3 (page 17) – Referral Guideline for 3 WA Threatened Black Cockatoo Species.

Table 3 Referral thresholds for black cockatoos

Attribute	Referral threshold	Reasons
Breeding	Any loss of / impact upon known, suitable or potential nesting trees, and the habitat around these trees, is highly likely to require a referral to the minister. Loss of any potential nesting habitat is likely to require a referral to the minister.	As identified in the conservation planning documents, clearing of breeding habitat is a known threat to the 3 species[a] as a lack of tree hollows is a limiting factor. Habitat loss, habitat degradation, lack of recruitment, fire and competition are causing the scarcity of nesting resource[b].
High-quality native foraging habitat	Loss of greater than or equal to 1 ha of foraging habitat scoring 5-10 using the foraging quality scoring tool is likely to require referral to the minister. Foraging habitat quality is determined using the foraging quality scoring tool (see Appendix A) and takes into account context i.e. proximity of the impact site to important attributes.	As identified in the conservation planning documents, clearing of foraging habitat is a known threat to the 3 species. Habitat loss, habitat modification, climate change and fire are increasingly causing the scarcity of foraging resources[c]. These resources are critical at all stages of life for the species.
Lower-quality native foraging habitat	Loss of greater than or equal to 10 ha of foraging habitat scoring 0-4 using the foraging quality scoring tool is likely to require referral to the minister. Foraging habitat quality is determined using the foraging quality scoring tool (see Appendix A) and takes into account context i.e. proximity of the impact site to important attributes.	As identified in the conservation planning documents, clearing of foraging habitat is a known threat to the 3 species. Habitat loss, habitat modification, climate change and fire are increasingly causing the scarcity of foraging resources. These resources are critical at all stages of life for the species.
Exotic foraging habitat	Loss of greater than or equal to 1 ha of predominantly exotic habitat (e.g. Cape Lilac trees and pine trees) known to be utilised by black cockatoos is likely to require a referral to the minister.	As identified in the conservation planning documents, clearing of exotic foraging habitat is a known threat to the 3 species, noting that its value in comparison to native habitat depends upon the context.
Night roosting habitat	Removal of any part of a known night roosting site is likely to require referral to the minister.	As identified in the conservation planning documents, clearing of night roosting habitat is a known threat to the 3 species.

Note: Referral threshold described may be a result of direct loss, as well as loss from indirect and facilitated impacts.

a Chapman (2008); Department of Parks and Wildlife (2013)

b Johnstone & Kirkby (2008); Saunders et al. (2014)

c Saunders (1990); Johnstone et al. (2017)

11.0 Disclaimer and Limitations

a. References in this report to the "Consultant" means listed on the cover page as an employee of Westworks Consultancy.

b. References in this report to Westworks Consultancy means Westworks Group Pty Ltd as trustee for Ussheridan Trust trading as Westworks Consultancy (ACN 156 131 010 ABN 23 100 208 057).

c. In this report a reference to a group of persons includes a reference to all of them collectively, any two or more collectively and each of them individually.

d. The releases and limitations in this report apply to the Arborist, Westworks Consultancy and any employees, directors, contractors, and agents of the Arborist and/or Westworks Consultancy.

e. This report only covers identifiable defects present at the time of inspection. The Arborist and Westworks Consultancy accept no responsibility and cannot be held liable for any structural defect or unforeseen event/situation that may occur after the time of inspection.

f. The Arborist and Westworks Consultancy cannot and do not guarantee trees contained within this report will be structurally sound under all circumstances and cannot and do not guarantee that the recommendations made will categorically result in the tree being made "safe." Unless specifically mentioned this report will only be concerned with above ground inspections, that will be undertaken visually from ground level.

g. Trees are living organisms and as such cannot be classified as "safe" under any circumstances.

h. Failure events can occur for any number of reasons at any time and cannot always reasonably be foreseen, as any number of circumstances can come about at any time before or after an inspection that the Arborist and Westworks Consultancy may not be aware of.

i. All recommendations are made based on what can be reasonably identified at the time of inspection therefore the author accepts no liability for any recommendations made.

j. Care has been taken to obtain all information from reliable sources. All data has been verified or as much as possible; however, the Arborist and Westworks Consultancy can neither guarantee nor be responsible for the accuracy of information provided by others.

k. Booking of re-assessment after the prescribed period is the responsibility of the land manager/owner only. The Arborist and Westworks Consultancy are not responsible for providing reminders or notification that re assessment may be due and will not be held responsible to reinspect the listed trees until requested.

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Talis Consultants
ABN 85 967 691 321

HEAD OFFICE
604 Newcastle Street,
Leederville
Western Australia 6007

PO Box 454,
Leederville
Western Australia 6903

NSW OFFICES
Nowra
76 Bridge Road, Nowra
New South Wales, 2541

PO Box 1189, Nowra
New South Wales, 2541

Newcastle
58 Cleary Street, Hamilton
New South Wales, 2303

P: 1300 251 070
E: enquiries@talisconsultants.com.au