



Premise

MIRVAC

ROL10 - Precinct 8 & 10, Everleigh

ENGINEERING SERVICES REPORT

Report No: MIR-1000/R2203553

Rev: 2

19 July 2022

**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**




Approval no: DEV2022/1277

Date: 11 November 2022



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DOCUMENT AUTHORISATION					
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1	21/03/2022	Submission for Approval			
2	19/07/2022	Further Issues Response			
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1. INTRODUCTION

Premise was commissioned by Mirvac to prepare an Engineering Services Report for Precincts 8 & 10 of the Everleigh development. Everleigh is located at Teviot Road, Greenbank and is part of the Priority Development Area (PDA) with EDQ being the assessing authority.

The proposed development consists of Precinct 8 and Precinct 10. The breakdown of the two Precincts are as below;

- Precinct 8 consists of 286 residential lots, linear parks and roadways situated over an approximate residential area of 17.1ha, 44.4ha of parks and 2.7ha of WSUD and SPS areas. Precinct 8 will be split into four (4) residential, seven (7) park and one (1) sewage pump station sub-precincts to accommodate staged delivery. The precinct masterplan and sub-precinct split-up can be seen in the below Figure 1.1.
- Precinct 10 consists of 280 residential lots, linear parks and roadways situated over an over an approximate residential area of 18.1ha and 13ha of parks. To accommodate staged delivery, Precinct 10 will be split into five (5) residential and two (2) park sub-precincts. The Precinct 10 masterplan and sub-precinct split-up can be seen in the below Figure 1.1.

The Precinct 8 and Precinct 10 Masterplan Layouts, prepared by Urbis, can be seen in Appendix A.

This report addresses the engineering services that will be required to service the proposed development of Precinct 8 and Precinct 10, examining the development at an 'as if complete' conceptual level for Development Approval. This report should be read in conjunction with the reports provided by Urbis (Town Planning).





Figure 2.1: Site Location

3. DATA

Data for this report has been gathered from the following sources:

- Urbis Townplanners – Lot layout
- Economic Development Queensland (EDQ) – Greater Flagstone Priority Development Area plans and documents;
- Saunders Havill Group – Detail Survey;
- Approved (EDQ) MWH Global Movement Network Infrastructure Master Plan;
- Approved (EDQ) MWH Global Sewer and Water Master Plan;
- Logan City Council – Existing services location (where applicable and relevant) and Planning Scheme 2015 development information; and
- Dial Before You Dig.
- ATP Consulting Engineers 'Traffic Noise Impact Assessment, Everleigh Green Bank, RoL Application
- Stormwater technical letter 'RE: Everleigh Precinct 8 – Stormwater Detention and Water Quality Analysis' prepared by Engeny

4. SERVICES FOR DEVELOPMENT

4.1 EARTHWORKS

Earthworks will be required to facilitate the construction of the roads, allotments and parks proposed within Precinct 8 and 10. The earthworks will consist of excavations, filling, permanent batters to existing surface level with maximum slope of 1 in 4 and batters between lots with a maximum slope of 1 in 2. Retaining walls will be constructed during civil works to provide level allotments. All retaining wall heights are less than or equal to 2.5m in height.

A preliminary 'as if complete' earthworks design has been carried out over the ROL10 area. While the target for the earthworks design was to minimise the cut and fill volumes associated with the earthworks operation along with targeting a cut to fill volume balance, there were several constraints that needed to be considered which influenced levels. These constraints included:

- Interface to natural surface levels and adjoining developed precincts
- Road Gradings
- Benching of allotments
- Relationship between benched allotments and retaining walls
- Coordination with landscape design in linear parks and pedestrian lanes
- Access and disability grades along footpaths
- Stormwater drainage outlet and channel levels

The preliminary earthworks design for the site has identified that the overall earthworks cut and fill volumes result in the requirement to source material from a location outside Precinct 8 and 10 to meet the fill material volume requirements. Additional material will be sourced from a borrow area in Precinct 6 to meet the requirements.

Vegetation clearing will be required to allow earthworks operations to commence. Additional clearing beyond the earthworks extent will be required to accommodate the recommendations of the Bushfire Hazard Assessment and Fire Management Plan.

The proposed earthworks design and extent can be seen on the Preliminary Earthworks Sketch Plans Provided in Appendix B.

4.2 EROSION & SEDIMENT CONTROL

Erosion and Sediment Control (ESC) measures will be required during all stages of development from site establishment to project completion. An Erosion and Sediment Control program will be designed and detailed during the detailed design phase.

4.3 ROADWORKS

Vehicle access to Precinct 10 will be gained via the northern leg of the Anderson Drive / Guroman Drive roundabout constructed in Precinct 9. The northern leg will be formed by Unnamed Road 073, a future neighbourhood connector road. Precinct 8 will subsequently be accessed through Precinct 10 via Unnamed Road 073.

4.3.1 INTERNAL ROADS

The road layout within Precinct 9 has been developed in accordance with the road typologies nominated in the approved Movement Network Infrastructure Master Plan (MNIMP). The roads servicing the Precincts 8 & 10 include:

- Unnamed Road 073 – Neighbourhood Connector 2; and
- All other roads – Access Street, Typical and Park types.

A Road Hierarchy Plan showing the above road typologies located within the precincts can be seen in Appendix C.

All allotments can be accessed from the proposed internal road network via direct driveway access or the dedicated driveway access reserves provided. The proposed roads will be provided with concrete kerb and channel, 1.5m minimum width concrete footpaths or shared paths and minimum 4m wide verges which accommodate necessary service corridors as required by Logan City Council.

Internal Road Functional plans detailing the Precinct 8 & 10 internal road network can be seen in Appendix D.

4.4 NOISE ATTENUATION

A traffic noise impact assessment has been undertaken by ATP Consulting Engineers (ATP). ATP undertook traffic noise propagation modelling to consider the future traffic flows for a planning horizon of 2051. Based on the results of the traffic noise impact assessment for the ROL 10 (Precincts 8 and 10) of the Everleigh development, the following is concluded:

- Teviot Road does not affect the noise amenity at the allotments within ROL 10 (Precincts 8 and 10).
- Anderson Drive has limited noise impact on the allotments at ROL 10 with only Lot 4001, within Precinct 10, impacted by traffic noise. The traffic noise impact is limited to the upper floor of two-storey (high-set) house.
- In accordance with the noise control strategy for the Everleigh development, the upper floor of any two-storey house at Lot 4001 must be subject of design and construction in accordance with QDC MP4.4 or AS3671-1989 to ensure compliance with the internal noise criteria from AS/NZS 2107:2016. In addition, the outdoor living area of any house at Lot 4001 must be located along the façade which has no direct view to Anderson Drive.
- If the private open space of the house to be constructed at Lot 4001 is located along the protected northern façade (facing away from the road), or in a protected courtyard recessed into the side of the buildings, compliance with the traffic noise criterion will be achieved.
- All the other allotments with ROL 10 (Precincts 8 and 10) of Everleigh development are not affected by road traffic noise and the houses on these allotments do not require acoustic design to be facade.

ATP Engineers have stated within their Traffic Noise Impact Assessment Everleigh, Greenbank ROL10 Application report *'Provided the recommended planning and design noise control measures are implemented in the construction of Everleigh development ROL 10, road traffic noise will not impose any further constraints on the establishment of this stage of the development.'*

Refer to ATP Consulting Engineers 'Traffic Noise Impact Assessment, Everleigh Green Bank, RoL Application' report attached as part of the application documentation for further information.

4.5 TRAFFIC

A Traffic Impact Assessment has been prepared which addresses the suitability of the proposed Precinct 8 and 10 site layout and road typologies, and determines traffic volumes in accordance with overall site data. The Traffic Impact Assessment provides confirmation of the above items with consideration to relevant guidelines, standards, and approved documents.

The Traffic Impact Assessment can be seen in Appendix E.

4.6 STORMWATER DRAINAGE

The proposed piped underground drainage, roofwater drainage and major storm overland flow for this site will be designed in accordance with EDQ Guideline 13, Logan City Council and QUDM stormwater design guidelines. It is proposed that a network of underground pipes and gully pits will be constructed to capture and convey stormwater collected from allotments and roadways towards a new Bio-Basin and Detention Basin at the North-Eastern Corner of Precinct 8 as well as via the existing main in Precinct 9.7 to the Bio-Basin and wetland South of the School Reserve. The existing Bio-basin has been sized to cater for the additional catchment areas from Precinct 8 and 10.

The major storm overland flows generated from the Precinct 8 and 10 catchments will be contained in the road reserves and are also conveyed towards existing precincts. Roadways in the existing Precincts 6 and 9 have been designed to accommodate these flows.

There are 2 defined overland flow paths in Precinct 8, a pedestrian link and that runs through the centre of the site and a pedestrian link/ driveway that is adjacent to and joins a flow path in Precinct 9.7, which has been designed to accommodate the additional overland flow.

Refer to the Preliminary Stormwater Drainage Plans provided in Appendix F for further details.

4.7 STORMWATER QUANTITY & QUALITY

The quantity management of Precinct 8 and 10 stormwater flows will be accommodated in a combined stormwater detention and treatment basin located to the north of Precinct 8. Stormwater quality management for the combined catchment will be treated through the use of a sediment pond and bioretention system.

Details on the proposed Stormwater Quantity and Quality treatments proposed for this precinct are provided within the stormwater technical letter 'RE: Everleigh Precinct 8 – Stormwater Detention and Water Quality Analysis' prepared by Engeny. This stormwater technical letter outlines the water quantity and quality analysis undertaken in support of the Reconfiguration of a Lot (ROL) submission for Precinct 8, 10 and a small portion of Precinct 11 of the Everleigh development.

4.8 SEWER RETICULATION

All proposed residential allotments within Precinct 8 and 10 will be provided with a sewer property service. Property services will be connected to a sewer reticulation pipe network located in the road verge. The sewer reticulation network will be designed and installed in accordance with SEQ D&C Code, Logan City Council requirements and Premise prepared whole of site sewer design master plan.

There are three (3) sewer catchments within the ROL area and are generally described below

- Catchment A – Area serviced by gravity mains through Precinct 9 that drain to the south to the GB2 Regional pump station
- Catchment B - Serviced by a gravity sewerage system draining to SPS C located in the Central Northern section of Precinct 8.
- Catchment C – Area serviced by a gravity main (to be completed as part of these works) which is in future Precinct 6 and discharges into a constructed temporary sewage pump station located in future Precinct 6. This constructed temporary pump station then discharges by an existing rising main into the GB2 Regional pump station.

A summary of the Catchment demands is provided in the table 4.8.1 below and references the Premise Preliminary Sewer Catchment Plan is located in Appendix G

Table 4.8.1

Catchment	Unit	EP / Unit	Total EP
Catchment A			
Precinct 8	-	3 EP per Lot	0 EP
Precinct 10	166 Lots	3 EP per Lot	498
Total	166 Lots	3 EP per Lot	498
Catchment B			
Precinct 8	288 Lots	3 EP per Lot	864
Precinct 10	101 Lots	3 EP per Lot	303
Future	58 Lots	3 EP per Lot	174
Total	447 Lots	3 EP per Lot	1,341
Catchment C			
Precinct 8	-	3 EP per Lot	0
Precinct 10	11 Lots	3 EP per Lot	33
Future*	-	3 EP per Lot	0
Total	11 Lots	3 EP per Lot	33
TOTAL OVERALL	624 Lots	3 EP per Lot	1,872

Note - The future residential have been included for the sizing of the SPS and downstream gravity main systems. These future lots will be completed as part of a future ROL approval.*

CATCHMENT A

These catchment uses two previously planned gravity sewer main connections through Precinct 9. The locations of these connections are presented in the Preliminary Sewer Reticulation Plans in Appendix H. There is sufficient capacity within the downstream networks for this catchments demand.

CATCHMENT B

This catchment is serviced using a sewage pump station which then discharges into a constructed manhole in Precinct 9. The sizing of the sewage pump station is below

The demand on the SPS C is summarised in the table 4.8.2 below

Table 4.8.2

Category	Unit	EP / Unit	Total EP	Total ADWF	Total PWWF
Residential	447 Lots	3 EP per Lot	1,341	3.10 L/s	15.52 L/s

Note, A residential lot average day weather flow (ADWF) of 200L/EP/Day and peak wet weather flow (PWWF) of 1000L/EP/Day were adopted in accordance with the Logan Water Alliance Desired Standards of Service (DSS) April 2014

A summary of the wet well sizing is shown in the table below. The required operation storage of the wet well was calculated as 1.16m³ a wet well diameter of 2m was adopted. Using the preliminary sewer design Due to the incoming sewer invert level of 42.70m and the surface level of 48m the calculated depth of the wet well was 7.07m.

Table 4.8.3

Wet Well Details	Value
Capacity (PWWF) (L/s)	15.52
Operating Storage (m ³)	1.16
Wet Well diameter (m)	2
Operating Depth (m)	0.37
Surface Level (m)	48.00
Incoming Invert Level (m)	42.70
Alarm RL (m)	42.55
Standby RL (m)	42.25
Pump TWL RL (m)	42.10
Pump BWL RL (m)	41.73
Floor Level RL (m)	41.33
Wet Well Depth (m)	7.07
Emergency Storage Time	4 hours at ADWF of 3.10L/s
Total Emergency Storage Volume Required (m ³)	44.7
Emergency Storage in Wet Well (Above Alarm Level) (m ³)	17.12
Additional Emergency Storage Required (m ³)	27.58

A summary of the SRM sizing calculations is shown in the table 4.8.4 below. An DN180 PE100 DR11 pipe will have a suitable velocity of 0.94/s with a PWWF of 15.52L/s. The duty point of the pump station was calculated as 15.52 L/s at 17.8m. Preliminary design plans for the Sewage Pump Station and rising main are attached with the Preliminary Sewer Reticulation Plans in Appendix H.

Table 4.8.4

	Value
PWWF	15.52 L/s
Length of SRM	867.6
Pipe Type	PE100 DR11
Nominal Size	DN180
Internal Diameter (mm)	145
Area (m²)	0.017
Velocity (m/s)	0.94
C value	130
Friction Head (m)	6.10
Low point (Pump BWL) (m)	41.73
High point (m)	53.42
Static Head Requirement (m)	11.69
Total Pump Head (m)	17.79
Pump Duty Point	15.52 L/s at 17.79m

Note. *The Option 2B alignment has been used for these calculations.*

The detailed design submission for pumping infrastructure and the receiving system shall be accompanied by the Odour Impact Assessment Report. This Impact Assessment shall address the odour impacts at the air discharge of associated gravity mains at the SPS location, the operation of the SPS, at the rising main discharge point to the downstream gravity network, and gas release valve arrangements.

We have anticipated that the sewer rising main discharge manhole will be designed to meet the WSA 04 – 2005-2.1. On this basis the discharge manhole will be protected against corrosion using corrosion resistant materials and that an addition vent pole will not be required.

Three rising main alignment options were assessed to determine the preferred alignment for the development. These alignments are described below

Option1

- The alignment followed the northern park area before turning perpendicular into the development to the discharge point.
- This alignment kept the majority of the rising main away from the residential area.

Option2 (A&B)

- The Option 2 alignment takes a more direct route to the discharge point.
- This alignment does take the rising main through the residential area for all but a small section.
- The difference between Option 2A and Option 2B is the vertical grading.

The rising main alignments are included in the Premise Sketch MIR-1000-SKC65 attached in Appendix H

An assessment of the grading, construction phasing and overall costs was undertaken with the general comments for each alignment below

Option 1

- a) A concern raised for this alignment was the high point along the alignment which required an air valve. This high point is required to prevent excessive depths.
- b) A scour valve is required for this alignment to go under a stormwater pipe
- c) There is a construction phasing constraint with the rising main alignment being through three precinct 8 sub-precincts. This will result in the rising main being constructed and then the finishing civil works occurring at a later stage.

Option 2A

- a) It has a reduced length as it is a more direct route to the discharge point
- b) There is a high point located in the park area which is the location for an air valve. This is due to the site contours and the vertical grading of the main to prevent clashes with a number of stormwater pipes.
- c) A scour valve is required for this alignment to go under a stormwater pipe

Option 2B

- a) Option 2B has the same horizontal alignment as option 2A however the vertical grading is amended.
- b) The vertical grading for the rising main has been lifted so that it goes above the stormwater infrastructure at approximate chainage 400. This vertical grading changes results in there not being a need for either an air or scour valve.
- c) The vertical grading of the sewer results in it being above the stormwater which does not conform with the SEQ code. With the use of the rising main PE material and being encased inside an RCP pipe assists in elevating the concerns of having a sewer above stormwater.

Verdict

While option 2B doesn't conform directly with the SEQ Code, it provides a lot of benefits over the other two options. The most significant benefit is the alignment not requiring either an air or scour valve. Further we have engaged with Logan Water and this alignment is preferred. It is recommended that Option 2B is progressed further into the detail design phase.

CATCHMENT C

The small demand from Catchment C will discharge via the constructed sewer gravity main along Anderson Road to this sewage pump station.

The constructed sewer gravity main on Anderson Drive and the constructed Temporary sewage pump station have been completed under previous approvals. References to these approvals are

- Temporary sewage pump station, Approval Number DEV/2018/999/7 dated 21 April 2020
- Gravity sewer main in Anderson Drive, Approval Number DEV/2018/999/10 dated 15 December 2020

Copies of the approved drawings for both the constructed temporary sewage pump station and constructed gravity main are attached in Appendix I.

There is an additional capacity of 53 EP within the constructed temporary sewage pump station (SPS) provided to service the Everleigh School site. This additional capacity was to be used for other functions. The demand from Catchment C referred in Table 4.8.1 is 33 EPs which is within the remaining capacity of this temporary sewage pumpstation. Logan City Council is supportive of using the remaining capacity of this temporary sewage pumpstation to service residential lots. A copy of this support from Logan Water is attached in Appendix J.

The details described above sewer reticulation system are shown on the Preliminary Sewer Reticulation Plans in Appendix H.

4.9 WATER RETICULATION

All proposed allotments in Precinct 8 and 10 will be provided with a potable water service connection. A water reticulation pipe network will be provided in Precinct 8 and 10 to provide service connections to each allotment. The water reticulation network will be designed and installed in accordance with the SEQ D&C Code, Logan City Council requirements and the approved Water Supply Network Modelling Report prepared by Premise.

Precincts 8 and Precinct 10 will be serviced from the boosted Round Mountain Water Service Zone which is distributed via the existing 300mm diameter trunk water main located in Teviot Road adjoining the Everleigh site. Two (2) existing connections to the 300mm diameter main were installed with Precinct 1 and Precinct 9 respectively and currently services the Everleigh development.

The details described above are shown on the Preliminary Water Reticulation Plans in Appendix K.

4.10 ELECTRICITY, LIGHTING, TELECOMMUNICATIONS & GAS

Electrical, telecommunication, and gas services exist in previous precincts adjacent to the boundary of the proposed site, have enough capacity for the electrical demands that are proposed to be generated by Precinct 8 and 10.

Details of these will be confirmed during the operational works phase and will be designed in accordance with the relevant service provider requirements.

An electrical servicing statement prepared by Robin Russell has been provided in Appendix L.

5. CONCLUSION

Based on the information collected and preliminary investigations carried out it has been established that the proposed development can be adequately serviced.

All service and infrastructure layouts are generally in accordance with the relevant approved infrastructure master plans, EDQ requirements, and other relevant and appropriate design standards and guidelines.

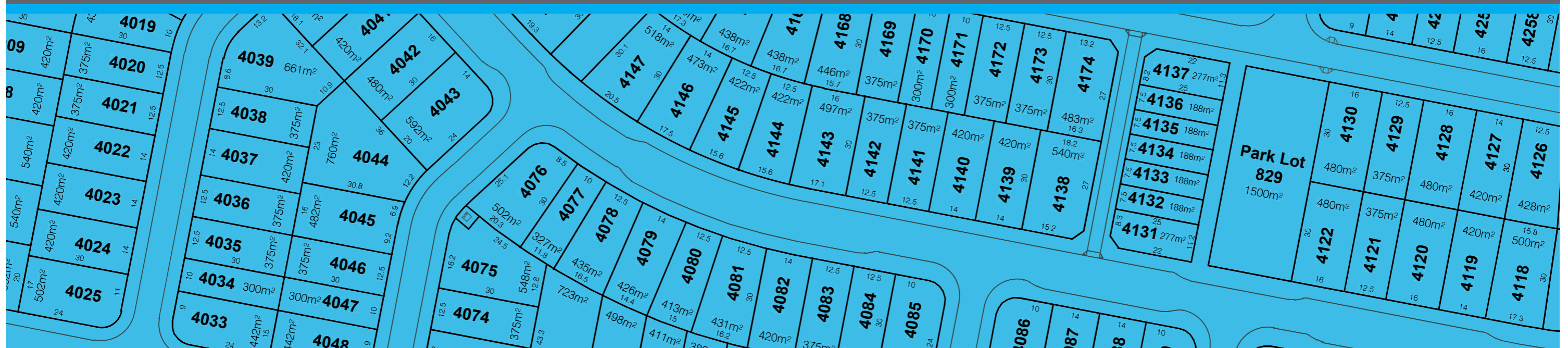
A.1 APPENDIX A – MASTERPLAN LAYOUT

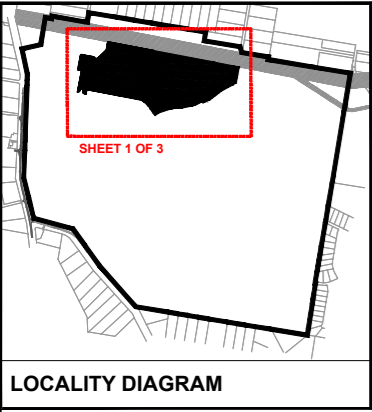
Everleigh

ROL 10: RECONFIGURATION OF A LOT PLANS

TEVIOT ROAD, EVERLEIGH

JULY 2022





LEGEND

GENERAL

- ROL 10 Boundary
- Proposed Road Carriageways
- Proposed Lot Boundaries
- Major Linear Park
- Neighbourhood Park
- Local Park / Pedestrian Link
- Powerline Easement

RESIDENTIAL - STANDARD LOTS HOUSE (ATTACHED)

- Front Loaded Terrace
- Rear Loaded Terrace
- Potential Attached Dwelling (refer to House (Attached) Design Criteria which prevails to the extent of any inconsistency with this plan)

HOUSE (DETACHED)

- Villa
- Premium Villa
- Courtyard
- Premium Courtyard
- Traditional
- Premium Traditional

ROL 10 - YIELD SUMMARY

LOT TYPE	INDICATIVE LOT FRONTAGE	TOTAL	
		LOTS	%
Front Loaded Terrace	7.5m wide	20 lots	4%
Rear Loaded Terrace	7.5m wide	7 lots	1%
Villa	10m wide	75 lots	13%
Premium Villa	12.5m wide	157 lots	28%
Courtyard	14m wide	164 lots	29%
Premium Courtyard	16m wide	93 lots	16%
Traditional	18m wide	37 lots	7%
Premium Traditional	20m wide	13 lots	2%
TOTAL RESIDENTIAL LOTS		566 lots	100%
DENSITY (NET RESIDENTIAL DENSITY)		15.65 dw/ha	

APPROVED
DEVELOPMENT

NOTE:

- Balance lots, while not appearing on ROL 10: Reconfiguration of a Lot Plans, will be included on the relevant survey plans as development progresses.
- This ROL plan may be changed via compliance assessment in accordance with the ROL 10: Plan of Development - Design Criteria document.



EVERLEIGH

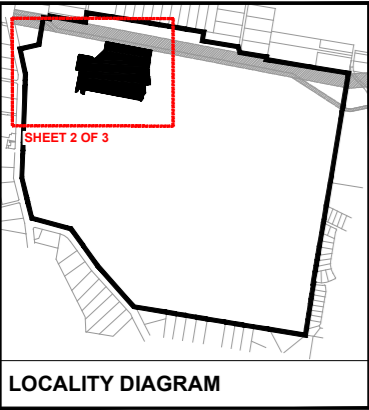
RECONFIGURATION OF A LOT PLAN - ROL 10 - SHEET 1 OF 3

Scale: 1:4,000 @ A3

0 50 100 150 200



PROJECT NO: P0018054
DATE: 19.07.2022
DRAWING NO: ROL10-1
REV: 08



SHEET 2 OF 3

LEGEND

GENERAL

- ROL 10 Boundary
- Proposed Road Carriageways
- Proposed Lot Boundaries
- Major Linear Park
- Neighbourhood Park
- Local Park / Pedestrian Link
- Powerline Easement

RESIDENTIAL - STANDARD LOTS HOUSE (ATTACHED)

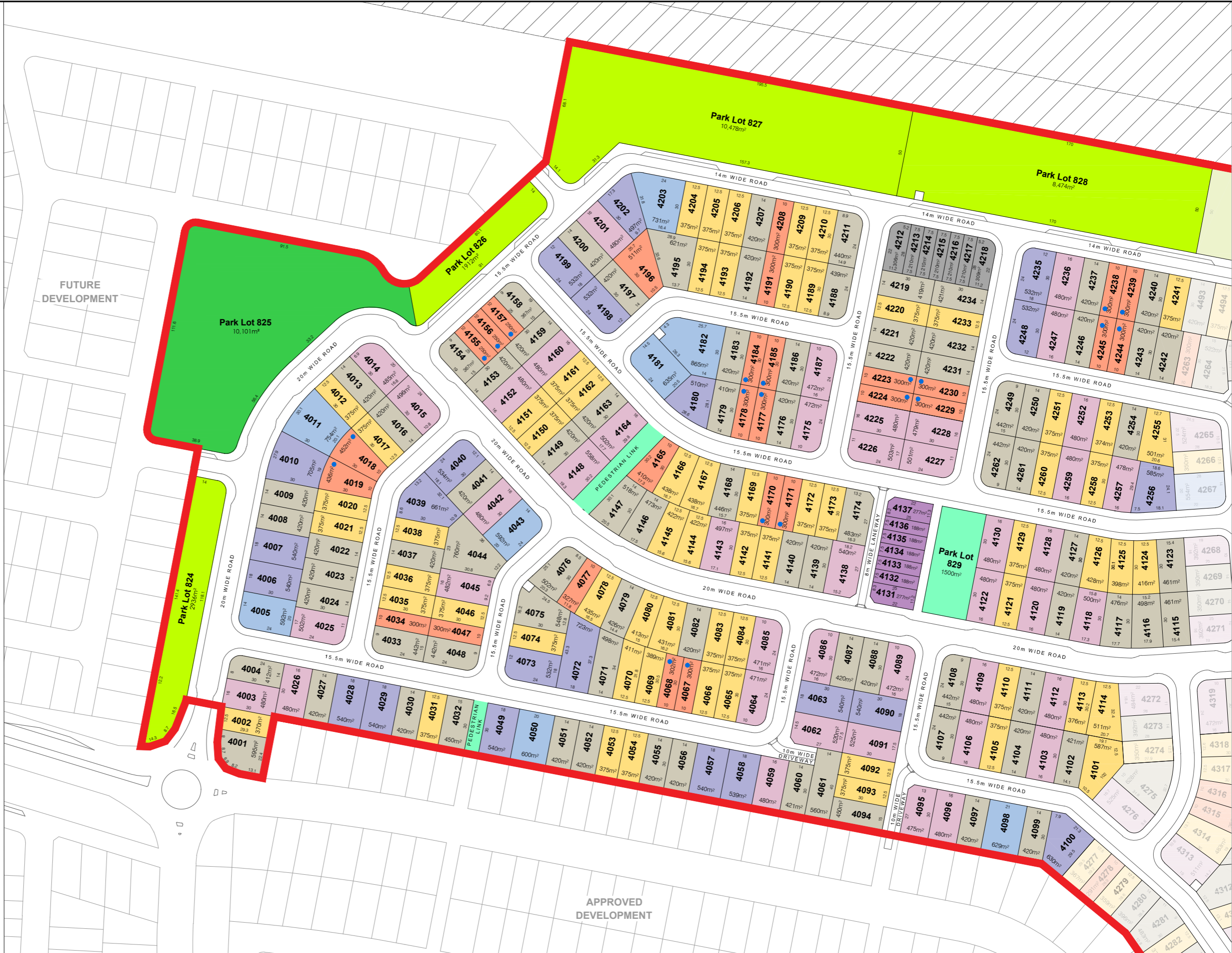
- Front Loaded Terrace
- Rear Loaded Terrace
- Potential Attached Dwelling (refer to House (Attached) Design Criteria which prevails to the extent of any inconsistency with this plan)

HOUSE (DETACHED)

- Villa
- Premium Villa
- Courtyard
- Premium Courtyard
- Traditional
- Premium Traditional

NOTE:

- Balance lots, while not appearing on ROL 10: Reconfiguration of a Lot Plans, will be included on the relevant survey plans as development progresses.
- This ROL plan may be changed via compliance assessment in accordance with the ROL 10: Plan of Development - Design Criteria document.



EVERLEIGH

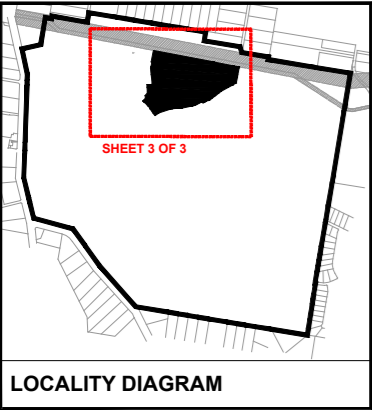
PLAN OF DEVELOPMENT - ROL 10 - ENVELOPE PLAN - SHEET 2 OF 3

Scale: 1:2,000 @ A3

0 20 40 60 80 100



PROJECT NO: P0018054
DATE: 19.07.2022
DRAWING NO: ROL10-2
REV: 12



LOCALITY DIAGRAM

LEGEND

GENERAL

- ROL 10 Boundary
- Proposed Road Carriageways
- Proposed Lot Boundaries
- Major Linear Park
- Neighbourhood Park
- Local Park / Pedestrian Link
- Powerline Easement

RESIDENTIAL - STANDARD LOTS HOUSE (ATTACHED)

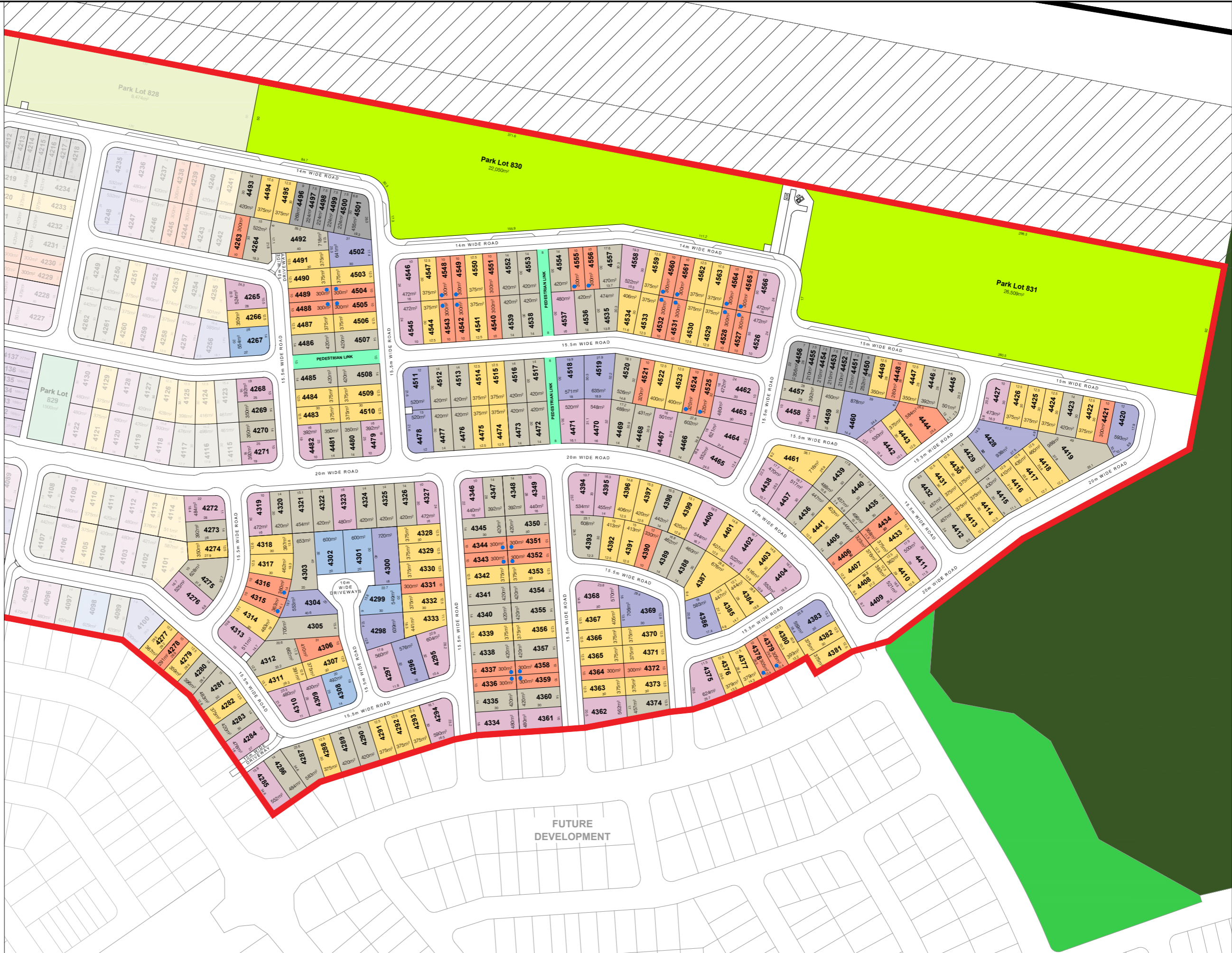
- Front Loaded Terrace
- Rear Loaded Terrace
- Potential Attached Dwelling (refer to House (Attached) Design Criteria which prevails to the extent of any inconsistency with this plan)

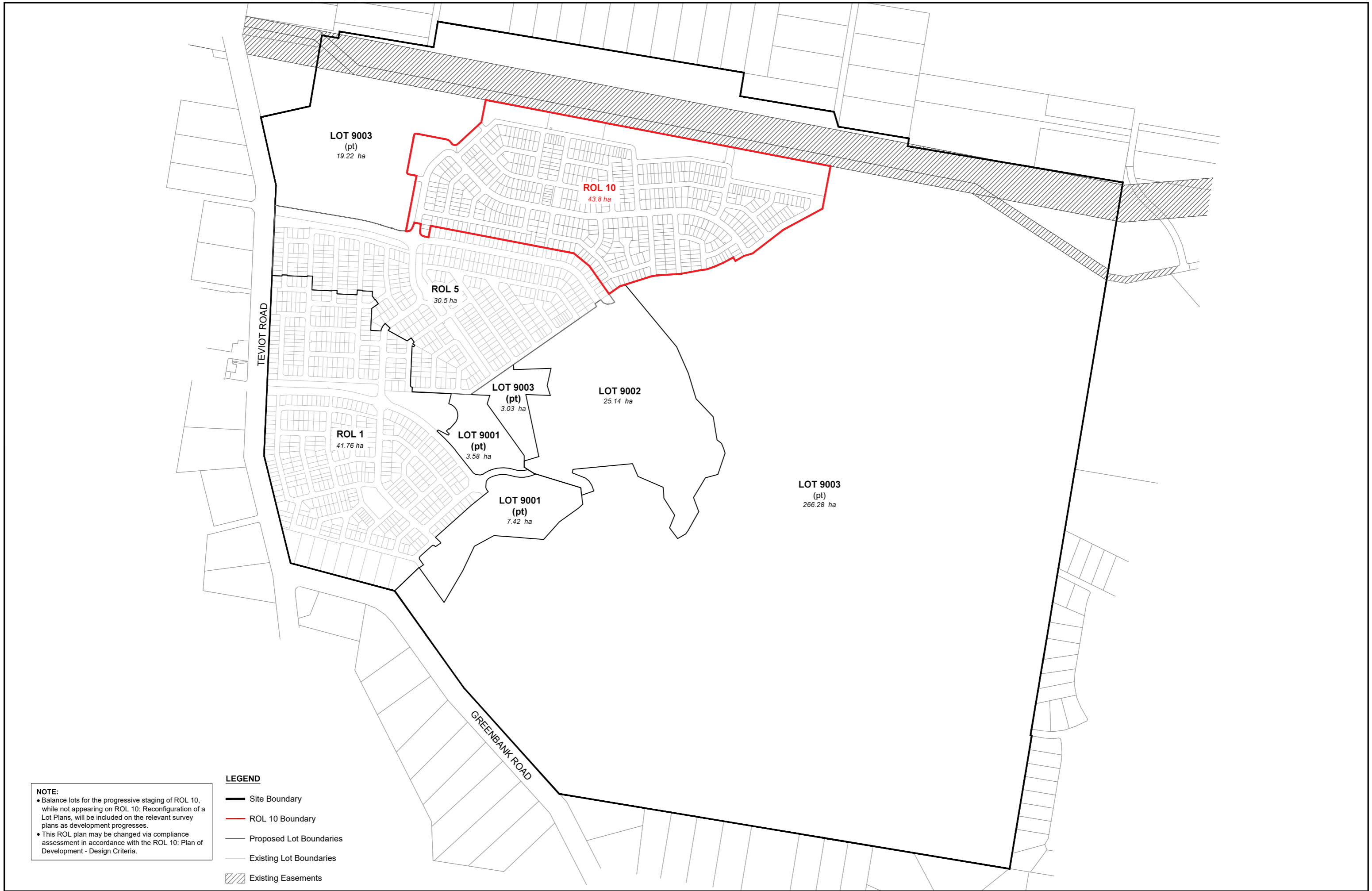
HOUSE (DETACHED)

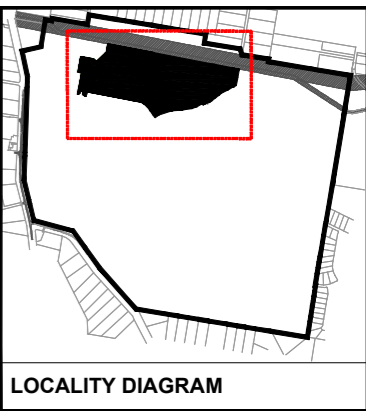
- Villa
- Premium Villa
- Courtyard
- Premium Courtyard
- Traditional
- Premium Traditional

NOTE:

- Balance lots, while not appearing on ROL 10: Reconfiguration of a Lot Plans, will be included on the relevant survey plans as development progresses.
- This ROL plan may be changed via compliance assessment in accordance with the ROL 10: Plan of Development - Design Criteria document.







LOCALITY DIAGRAM



LEGEND

- Site boundary
- ROL 10 boundary
- Preliminary Stage Boundaries

NOTE:

- Balance lots, while not appearing on ROL 10: Reconfiguration of a Lot Plans, will be included on the relevant survey plans as development progresses.
- This ROL plan may be changed via compliance assessment in accordance with the ROL 10: Plan of Development - Design Criteria document.



A.2 APPENDIX B – PRELIMINARY EARTHWORKS PLANS



LEGEND - PROPOSED

- EXTENT OF CUT
- EXTENT OF FILL
- PROPOSED BORROW AREA. FINAL EXTENT TO BE CONFIRMED DURING DETAILED DESIGN
- PROPOSED CONSTRUCTION WATER TREATMENT AREA. SIZE TO BE CONFIRMED DURING DETAILED DESIGN
- PROPOSED MINOR EARTHWORKS FOR FOOTPATH CONSTRUCTION.
- BORROW AREA EXTENT FOR PRECINCT 9 EARTHWORKS. FURTHER EARTHWORKS TO BE DONE TO GET TO FINISHED SURFACE LEVEL
- 12.0 FINISHED MAJOR CONTOURS (0.50m)
- FINISHED MINOR CONTOURS (0.25m)
- RETAINING WALL
- VEGETATION CLEARING LINE
- ROL BOUNDARY
- PRECINCT BOUNDARY

LEGEND - EXISTING

- EARTHWORKS TO BE DONE AS PART OF PRECINCT 9. FOR DETAILS, REFER TO APPROVED DRAWINGS DEV2020/1160 DATED 26 AUGUST 2021
- 12.0 EXISTING CONTOURS (0.50m)
- RETAINING WALL
- EXISTING VEGETATION CLEARING LINE

ROL10 EARTHWORKS VOLUMES		
	CUT	FILL
P10 EARTHWORKS	351,086	385,193
BULKING (10%)	35,109	
TOTAL VOLUMES	386,195	385,193

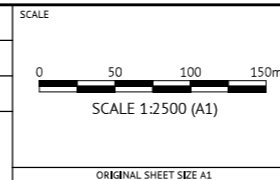
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
08/07/2022	3	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



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PH: (07) 3253 2222
WEB: www.premise.com.au

DESIGNED
KLYNT KIANG
CHECKED
ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFFER
ENGINEERING CERTIFICATION



CLIENT
MIRVAC QLD PTY LTD
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION
TEVIOT ROAD, GREENBANK
SHEET TITLE
OVERALL PRELIMINARY EARTHWORKS LAYOUT PLAN

JOB CODE
MIR-1000
SHEET NUMBER
SKC10
REV
3



LEGEND - PROPOSED

- EXTENT OF CUT
- EXTENT OF FILL
- PROPOSED BORROW AREA. FINAL EXTENT TO BE CONFIRMED DURING DETAILED DESIGN
- PROPOSED MINOR EARTHWORKS FOR FOOTPATH CONSTRUCTION
- BORROW AREA EXTENT FOR PRECINCT 9 EARTHWORKS. FURTHER EARTHWORKS TO BE DONE TO GET TO FINISHED SURFACE LEVEL
- 12.0 FINISHED MAJOR CONTOURS (0.50m)
- FINISHED MINOR CONTOURS (0.25m)
- RETAINING WALL
- VEGETATION CLEARING LINE
- PROPOSED FUTURE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- PAD LEVEL
- SPOT LEVEL
- EASEMENT

LEGEND - EXISTING

- EARTHWORKS TO BE DONE AS PART OF PRECINCT 9
- 12.0 EXISTING CONTOURS (0.50m)
- RETAINING WALL
- EXISTING VEGETATION CLEARING LINE

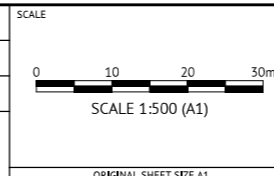
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
08/07/2022	3	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



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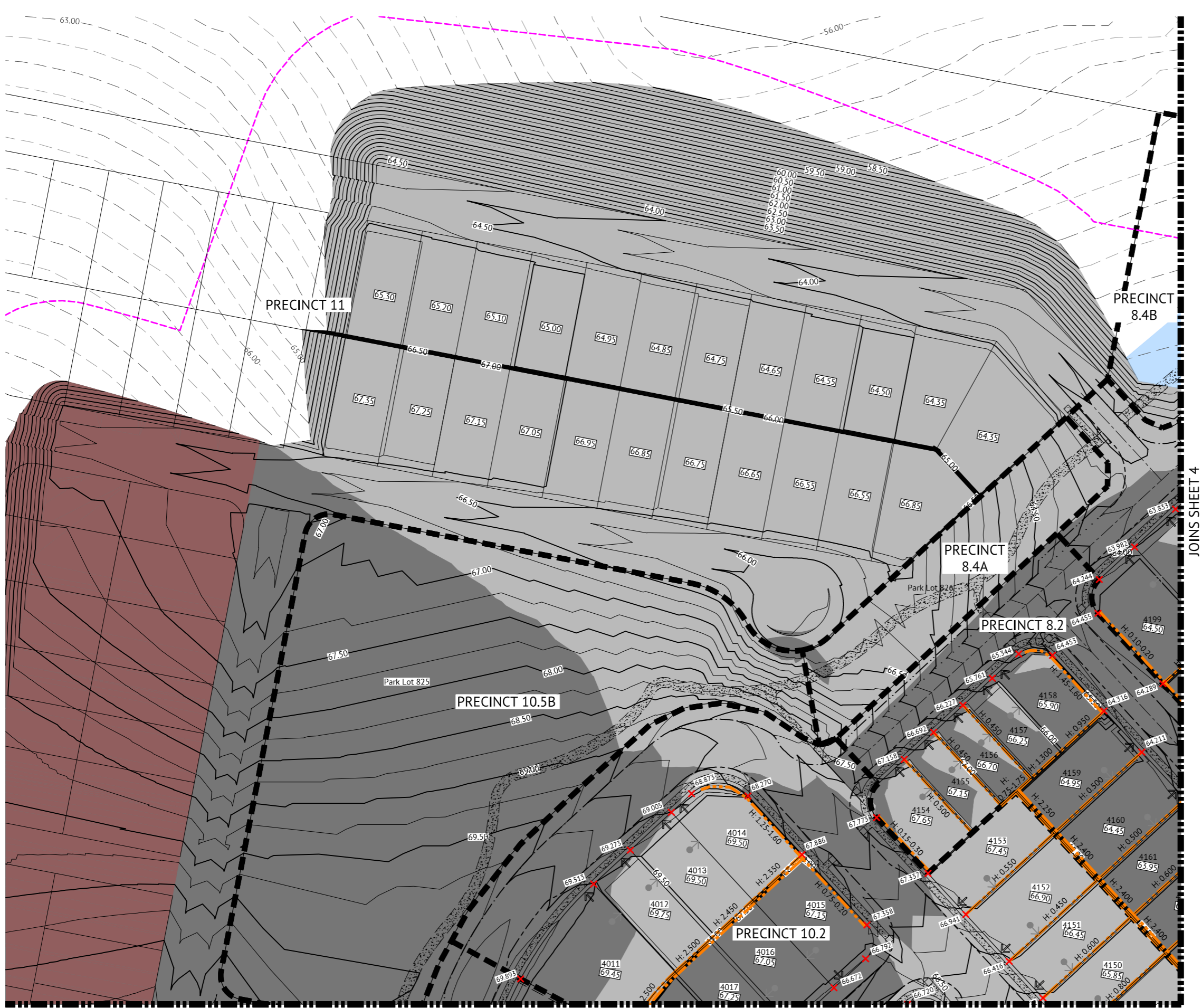
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK

SHEET TITLE
PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 1

JOB CODE
MIR-1000

SHEET NUMBER	REV
SKC11	3



JOINS SHEET 1

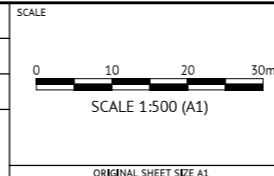
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DATE	REV	DESCRIPTION	REC	APP
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14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



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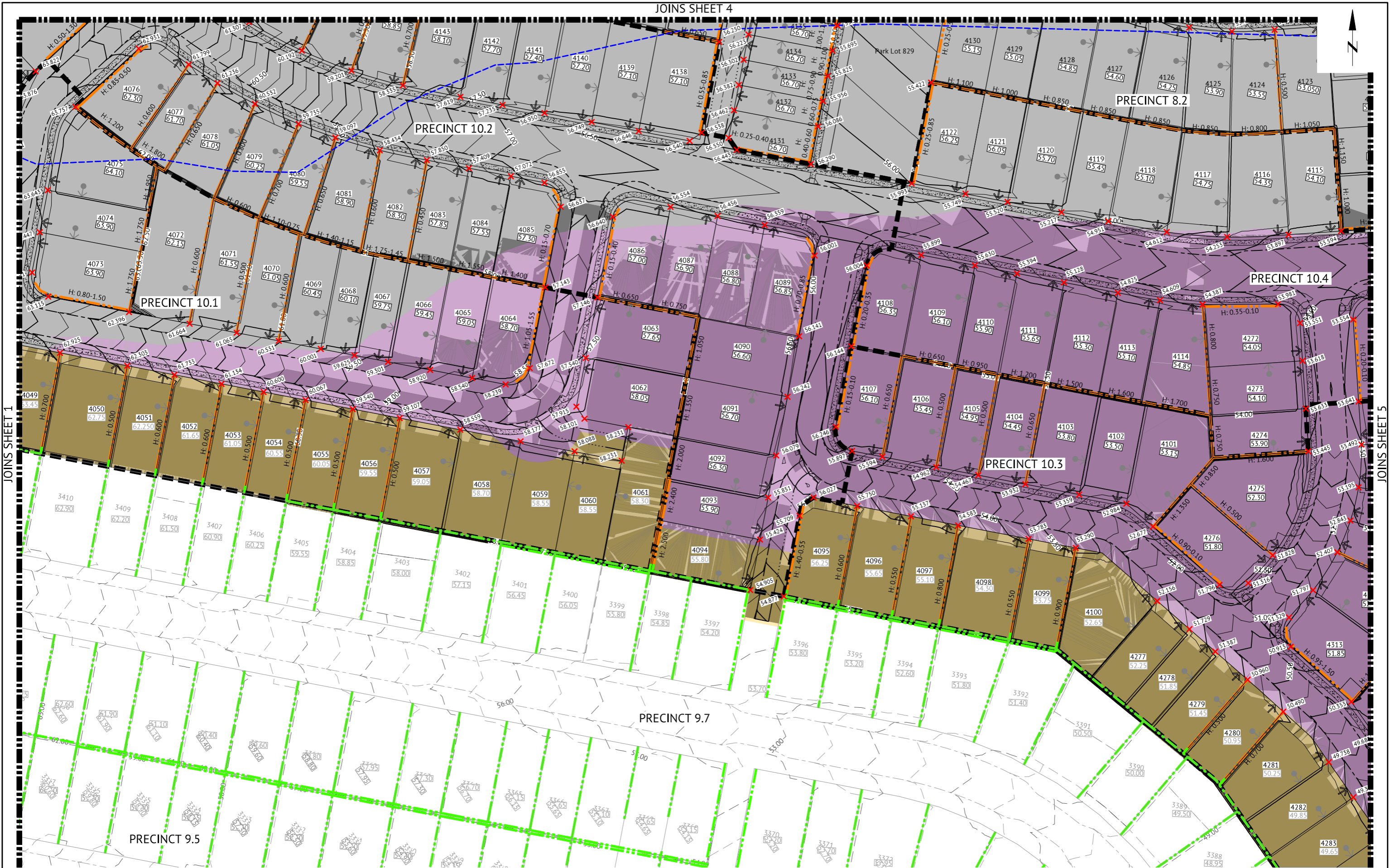
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK

SHEET TITLE
PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 2

JOB CODE
MIR-1000

SHEET NUMBER	REV
SKC12	3



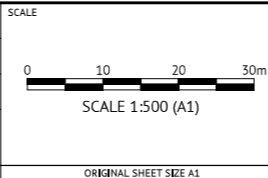
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14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



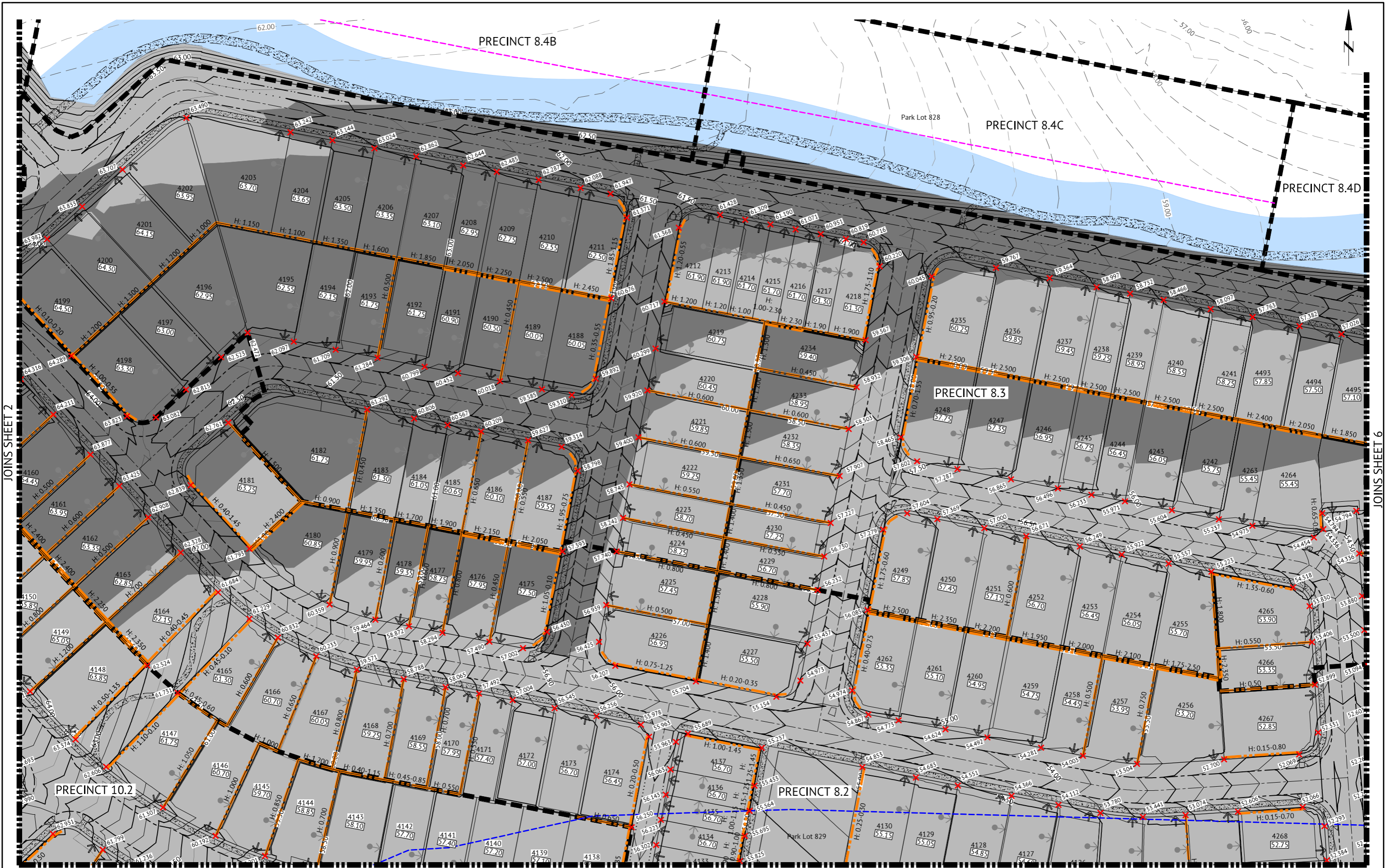
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CLIENT
MIRVAC QLD PTY LTD
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION
TEVIOT ROAD, GREENBANK
SHEET TITLE
PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 3

JOB CODE
MIR-1000
SHEET NUMBER
SKC13
REV
3



PRELIMINARY - NOT FOR CONSTRUCTION				
DATE	REV	DESCRIPTION	REC	APP
08/07/2022	3	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
REVISIONS				



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CHECKED
ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

0 10 20 30m

SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT
MIRVAC QLD PTY LTD

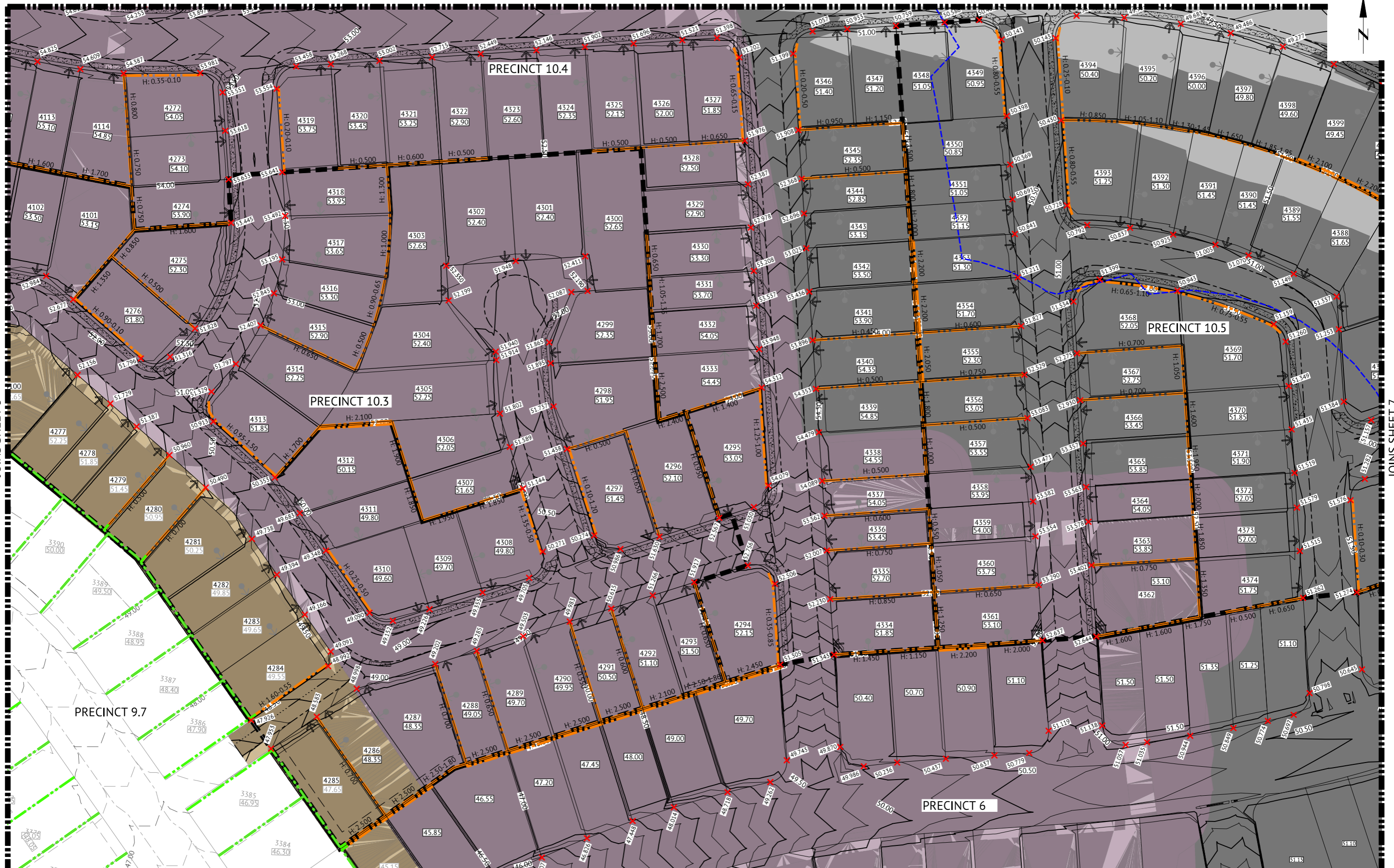
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK

SHEET TITLE
PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 4

JOB CODE
MIR-1000

SHEET NUMBER	REV
SKC14	3



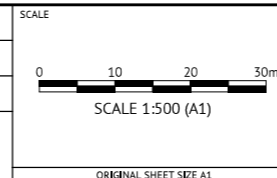
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REVISED BY	APP
08/07/2022	3	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



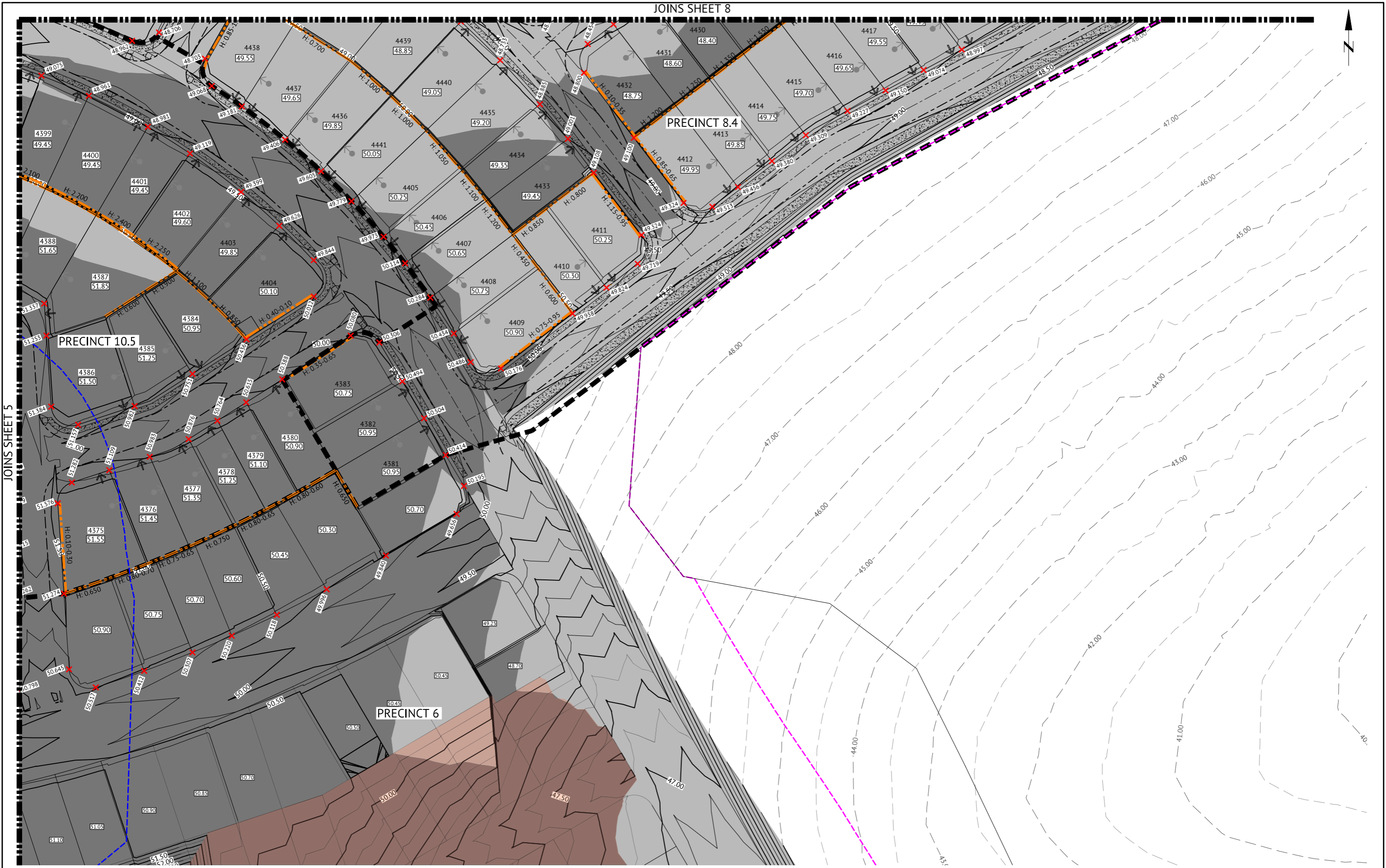
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CLIENT
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PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION
TEVIOT ROAD, GREENBANK
SHEET TITLE
PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 5

JOB CODE
MIR-1000
SHEET NUMBER
SKC15
REV
3




PRELIMINARY - NOT FOR CONSTRUCTION				
DATE	REV	DESCRIPTION	REC	APP
08/07/2022	3	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
REVISIONS				



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CHECKED ANDREW LANGDON
PROJECT MANAGER SIMON STEINHOFFER
ENGINEERING CERTIFICATION

SCALE



0 10 20 30m

SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 7

JOB CODE	MIR-1000
SHEET NUMBER	SKC17
REV	3



PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
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14/03/2022	2	UPDATED EARTHWORKS EXTENTS	KK	
17/12/2021	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	

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PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT

MIRVAC QLD PTY LTD

PROJECT

EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION

TEVIOT ROAD, GREENBANK

SHEET TITLE

PRELIMINARY EARTHWORKS LAYOUT PLAN - SHEET 8

JOB CODE

MIR-1000

SHEET NUMBER

SKC18

REV

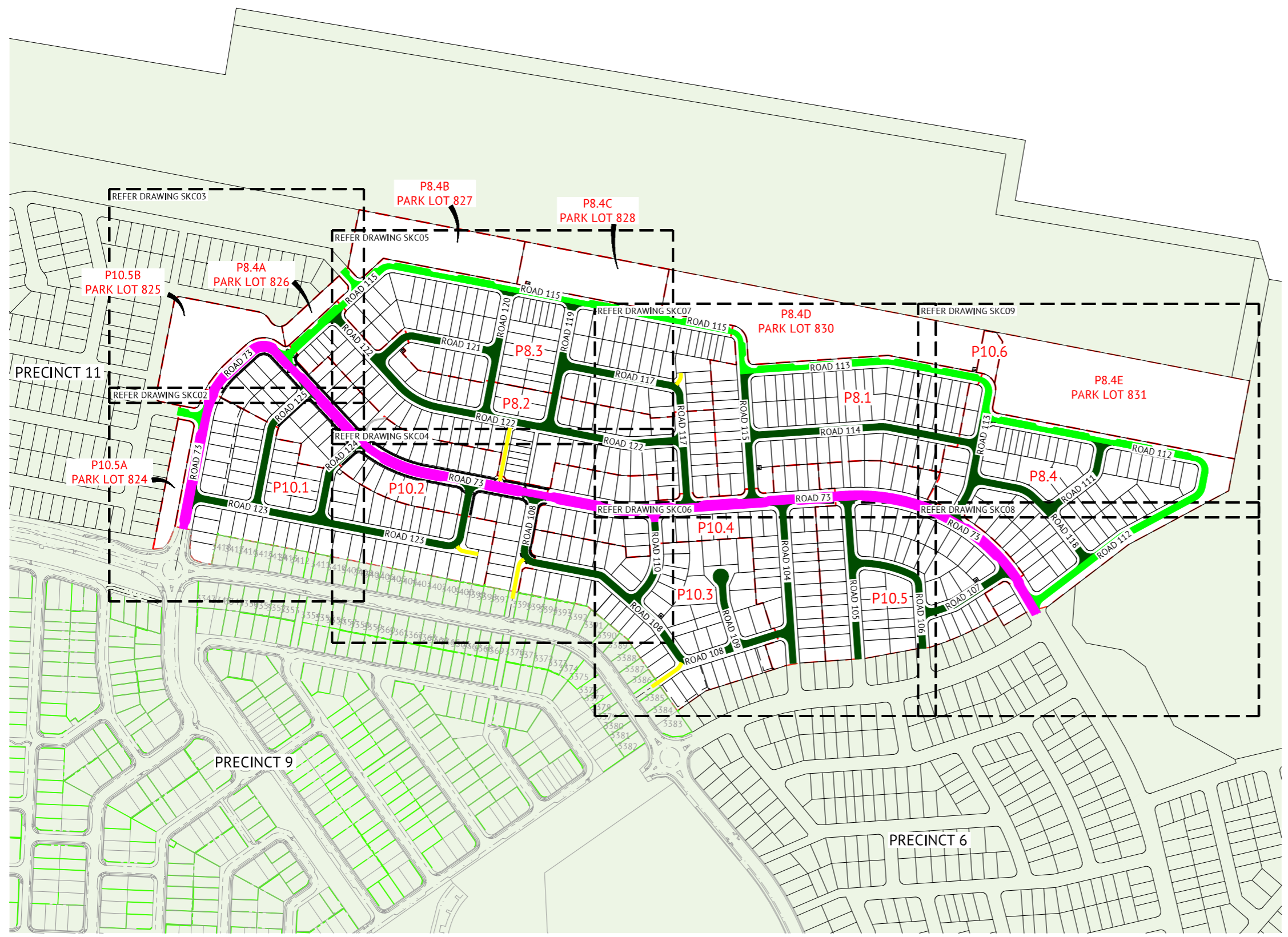
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A.3 APPENDIX C – ROAD HEIRARCHY PLAN



LEGEND - ROAD HEIRARCHY


- TRUNK CONNECTOR 1
- NEIGHBOURHOOD CONNECTOR 1
- NEIGHBOURHOOD CONNECTOR 2
- ACCESS STREET (TYPICAL)
- ACCESS STREET (PARK)
- DRIVEWAY



PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	

REVISIONS



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ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

0 50 100 150m

SCALE 1:2500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT
MIRVAC QLD PTY LTD

PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK

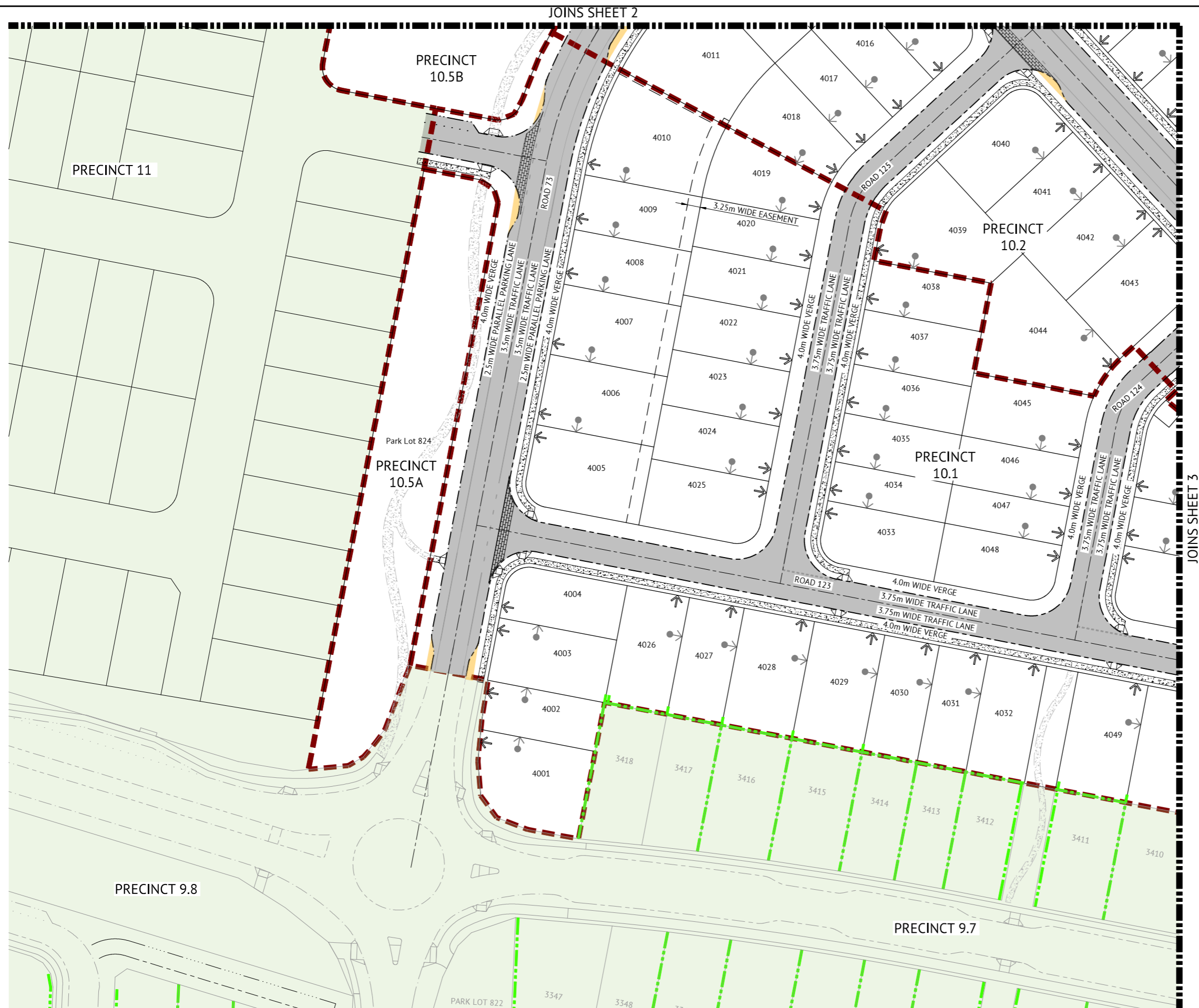
SHEET TITLE
ROAD HEIRARCHY PLAN

JOB CODE
MIR-1000

SHEET NUMBER
SKC01

REV
2

A.4 APPENDIX D – INTERNAL ROAD FUNCTIONAL PLANS



LEGEND - PROPOSED



- PROPOSED IPWEA STD TYPE 'B1' KERB & CHANNEL. REFER IPWEA STD DWG RS-080.
- PROPOSED IPWEA STD TYPE 'B2' KERB ONLY. REFER IPWEA STD DWG RS-080.
- PROPOSED IPWEA TYPE 'M3' KERB & CHANNEL. REFER IPWEA STD DWG RS-080.
- PROPOSED IPWEA STD TYPE 'ER1' EDGE RESTRAINT. REFER IPWEA STD DWG RS-080.
- PROPOSED IPWEA INVERT.
REFER IPWEA STD DWG RS-080.
- PROPOSED FUTURE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- PROPOSED 1.5m WIDE GREEN KERB BUILD-OUT
- PROPOSED 1.5m WIDE (U.N.O.) CONCRETE FOOTPATH.
- FOOTPATH ALIGNMENT BY LANDSCAPE
- PROPOSED KERB RAMP.
REFER IPWEA STD DWG RS-090.
- PROPOSED THRESHOLD TREATMENT
- PROPOSED NEW AC PAVEMENT
- PROPOSED NEW CONCRETE PAVEMENT
- PROPOSED PMT SITE LOCATION
- PROPOSED EASEMENT

PRELIMINARY - NOT FOR CONSTRUCTION

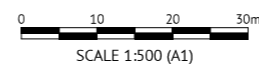
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03/05/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



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CHECKED	ANDREW LANGDON
PROJECT MANAGER	SIMON STEINHOFFER
ENGINEERING CERTIFICATION	

SCALE



ORIGINAL SHEET SIZE A1

CLIENT

MIRVAC QLD PTY LTD

PROJECT EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION **TEVIOT ROAD, GREENBANK**

SHEET TITLE **ROAD FUNCTIONAL LAYOUT - SHEET 1**

JOB CODE	
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MIR-1000

SHEET NUMBER

SKC02



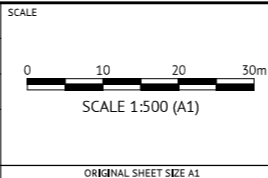
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
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03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



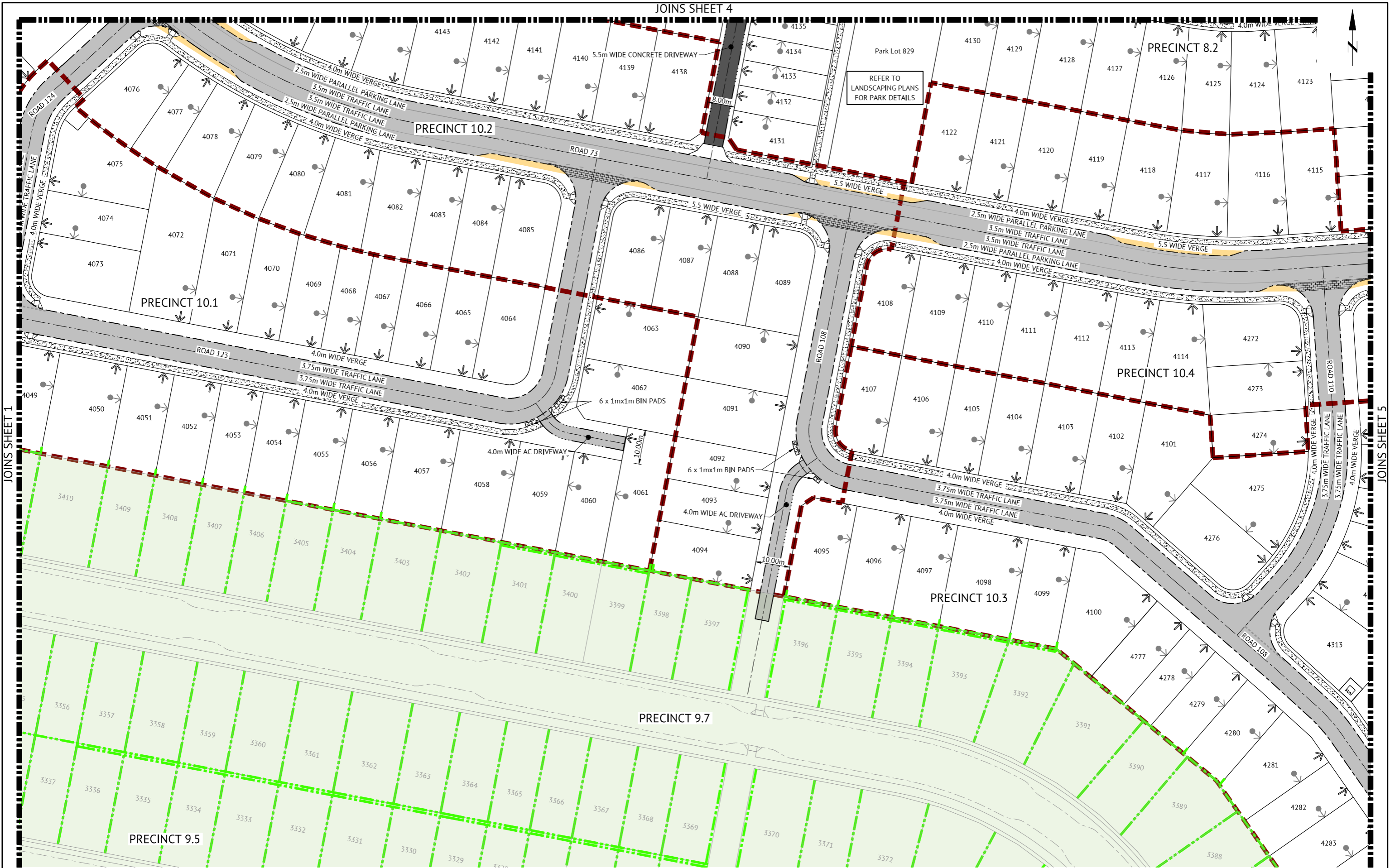
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WEB: www.premise.com.au

DESIGNED
KLYNT KIWANG
CHECKED
ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFER
ENGINEERING CERTIFICATION



CLIENT
MIRVAC QLD PTY LTD
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION
TEVIOT ROAD, GREENBANK
SHEET TITLE
ROAD FUNCTIONAL LAYOUT - SHEET 2

JOB CODE
MIR-1000
SHEET NUMBER
SKC03
REV
2



PRELIMINARY - NOT FOR CONSTRUCTION						
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03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION			KK	
DATE	REV	DESCRIPTION			REC	APP
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PROJECT MANAGER SIMON STEINHOFFER
ENGINEERING CERTIFICATION

SCALE

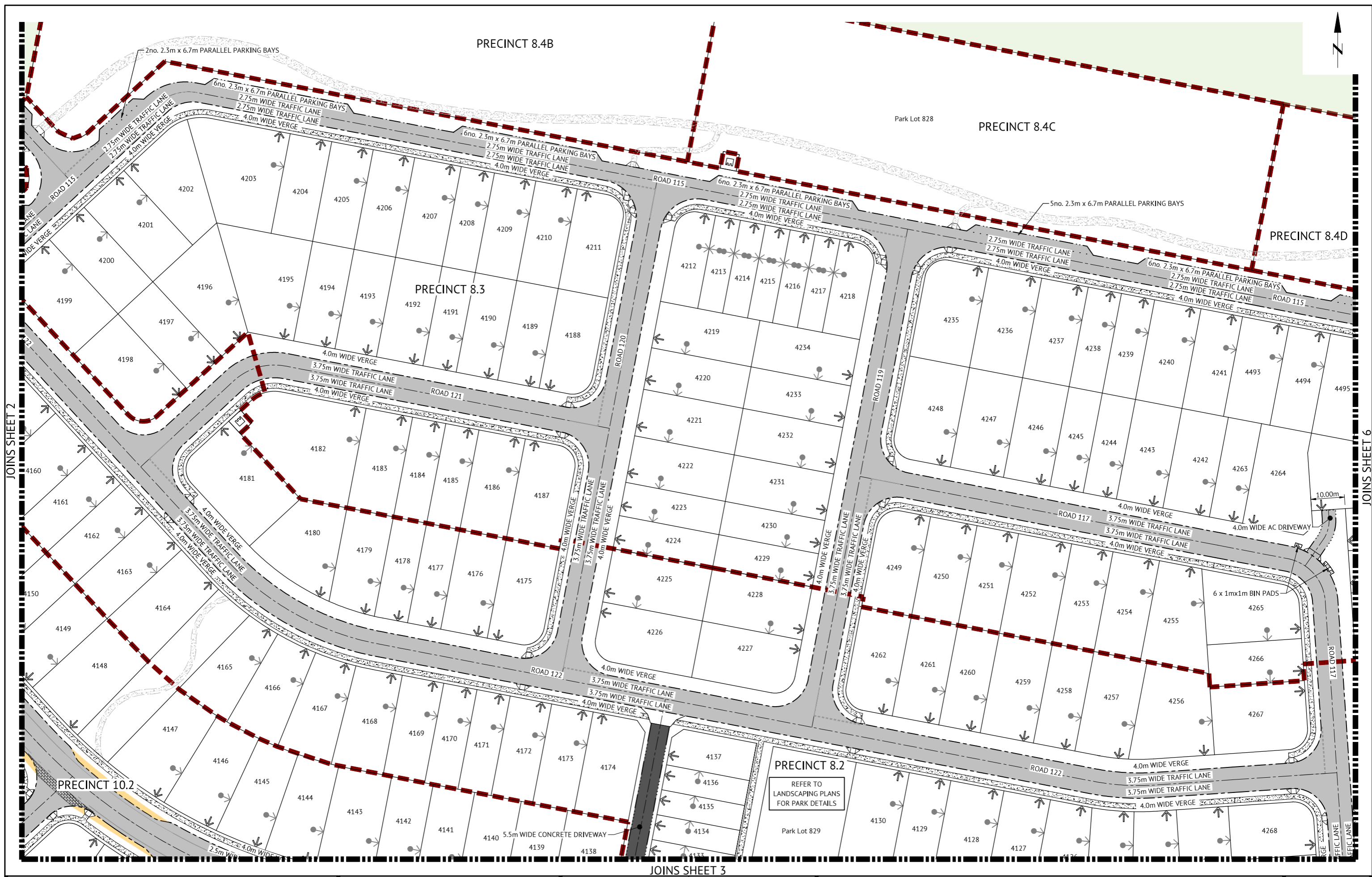


SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	ROAD FUNCTIONAL LAYOUT - SHEET 3

JOB CODE	MIR-1000
SHEET NUMBER	SKC04
REV	2



PRELIMINARY - NOT FOR CONSTRUCTION

[illegible]

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DESIGNED	KLYNT KIWANG
CHECKED	ANDREW LANGDON
PROJECT MANAGER	SIMON STEINHOFFER
ENGINEERING CERTIFICATION	

SCALE

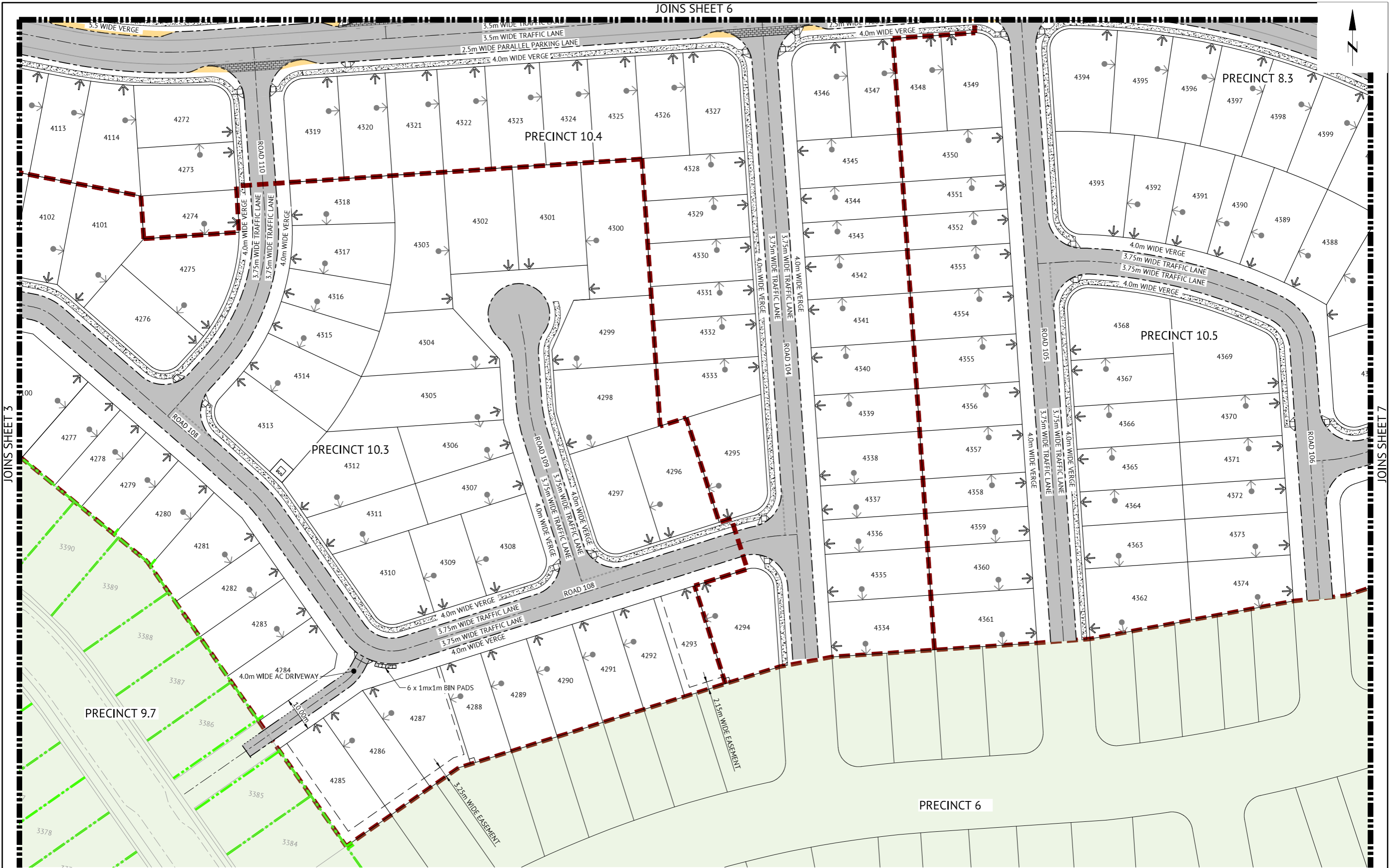
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ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	ROAD FUNCTIONAL LAYOUT - SHEET 4

JOB CODE
MIR-1000
 SHEET NUMBER
SKC05



PRELIMINARY - NOT FOR CONSTRUCTION				
08/07/2022	2	UPDATED AS PER RFI DATED 22/05/16	KK	
03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



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CHECKED
ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

0 10 20 30m

SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT

MIRVAC QLD PTY LTD

PROJECT

EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION

TEVIOT ROAD, GREENBANK

SHEET TITLE

ROAD FUNCTIONAL LAYOUT - SHEET 5

JOB CODE

MIR-1000

SHEET NUMBER

SKC06

REV

2



PRELIMINARY - NOT FOR CONSTRUCTION				
08/07/2022	2	UPDATED AS PER RFI DATED 22/05/16	KK	
03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



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WEB: www.premise.com.au

DESIGNED KLYNT KIWANG
CHECKED ANDREW LANGDON
PROJECT MANAGER SIMON STEINHOFER
ENGINEERING CERTIFICATION

SCALE

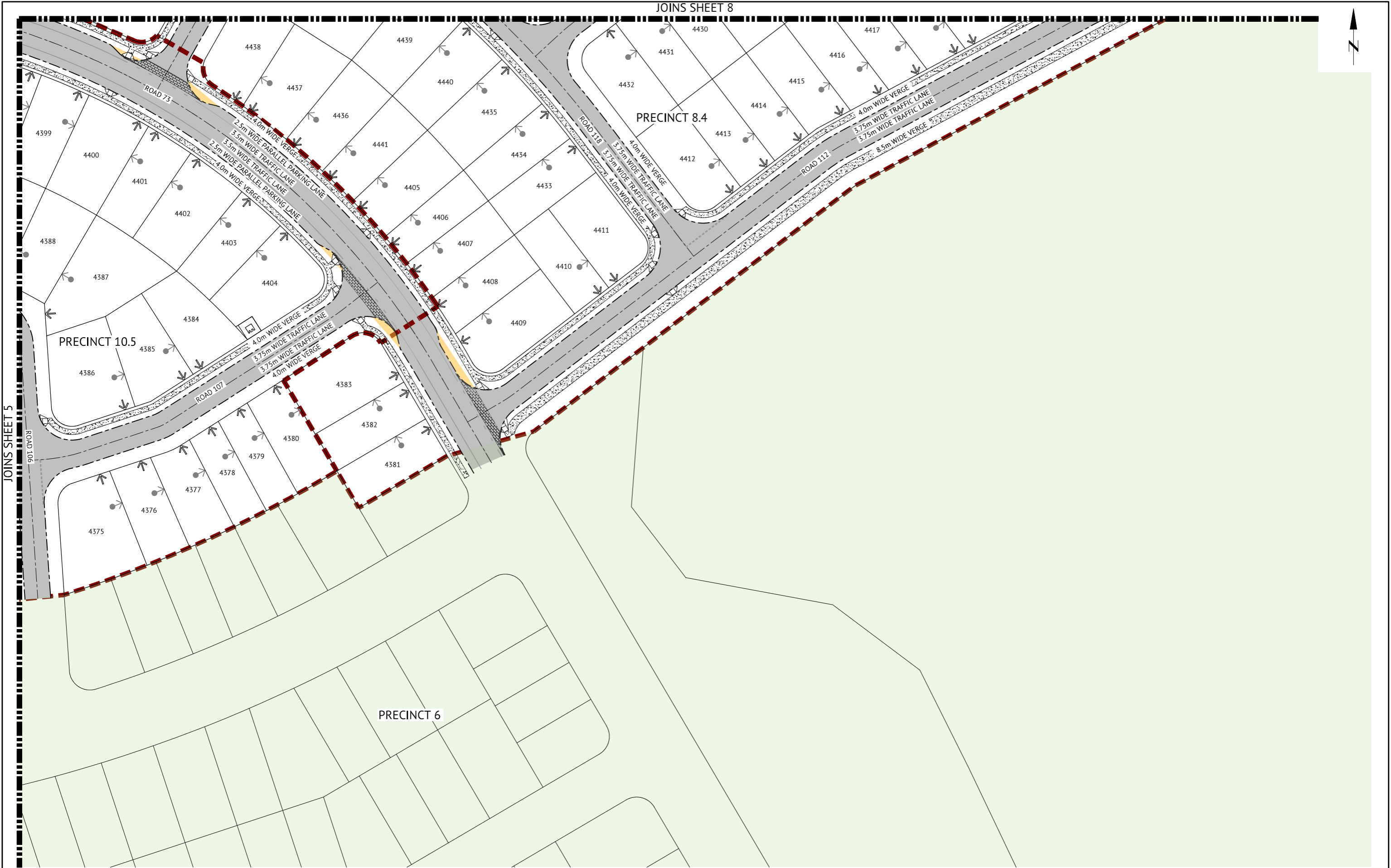


SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	ROAD FUNCTIONAL LAYOUT - SHEET 6

JOB CODE	MIR-1000
SHEET NUMBER	SKC07
REV	2




PRELIMINARY - NOT FOR CONSTRUCTION					
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16			KK
03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION			KK
DATE	REV	DESCRIPTION			REC APP
REVISIONS					



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CHECKED ANDREW LANGDON
PROJECT MANAGER SIMON STEINHOFFER
ENGINEERING CERTIFICATION

SCALE



0102030m

SCALE 1:500 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	ROAD FUNCTIONAL LAYOUT - SHEET 7

JOB CODE	MIR-1000
SHEET NUMBER	SKC08
REV	2




PRELIMINARY - NOT FOR CONSTRUCTION				
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



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PH: (07) 3253 2222
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DESIGNED KLYNT KIWANG
CHECKED ANDREW LANGDON
PROJECT MANAGER SIMON STEINHOFFER
ENGINEERING CERTIFICATION

SCALE



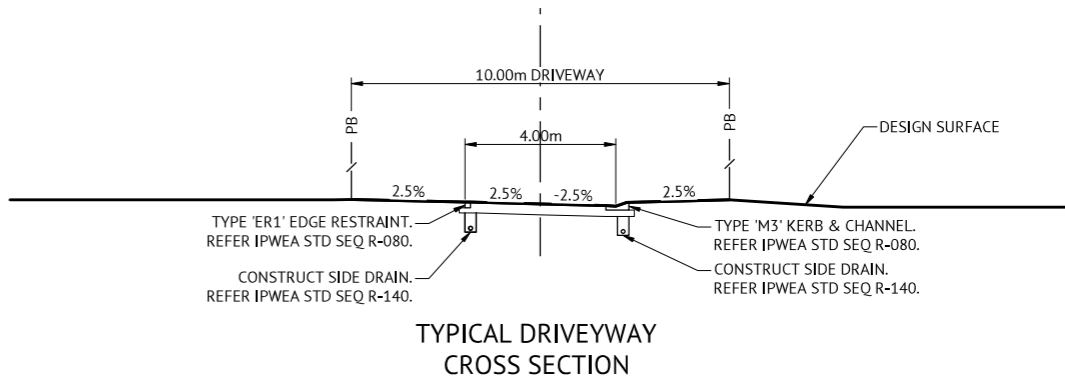
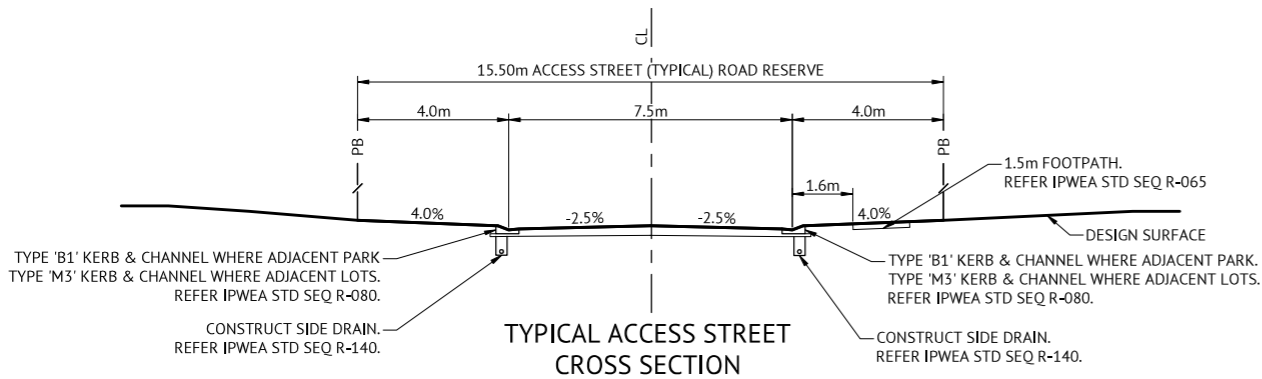
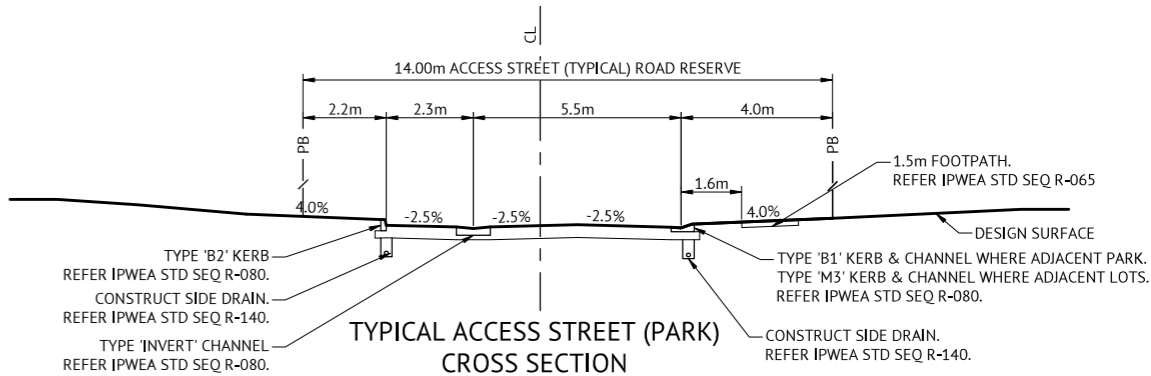
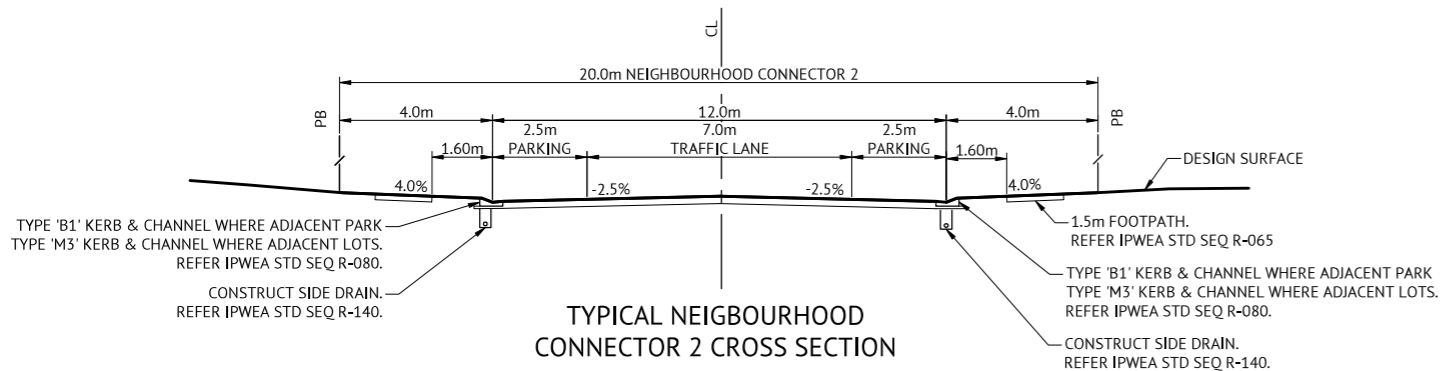
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ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	ROAD FUNCTIONAL LAYOUT - SHEET 8

JOB CODE	MIR-1000
SHEET NUMBER	SKC09
REV	2



PRELIMINARY - NOT FOR CONSTRUCTION				
03/03/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
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ENGINEERING CERTIFICATION

SCALE



SCALE 1:100 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	TYPICAL ROAD CROSS SECTIONS

JOB CODE	MIR-1000
SHEET NUMBER	SKC54
REV	1

A.5 APPENDIX E – TRAFFIC IMPACT ASSESSMENT



Premise

MIRVAC

Everleigh Precincts 8 & 10

TRAFFIC IMPACT ASSESSMENT



Report No: MIR0800/R01

Rev: B

8 July 2022

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APPENDIX F TRAFFIC IMPACT ASSESSMENT CERTIFICATION

1. INTRODUCTION

Premise Australia Pty Ltd (Premise) has been engaged by Mirvac to undertake a Traffic Impact Assessment for precincts 8 & 10 of the Everleigh residential development in accordance with the Department of Transport and Main Roads' (TMR's) "Guide to Traffic Impact Assessment" (GTIA).

1.1 Background

The Everleigh development is an urban subdivision comprised of approximately 3,500 residential dwellings located on Teviot Road in Greenbank. The development is within the Greater Flagstone Priority Development Area (PDA) as defined by the Department of State Development, Infrastructure, Local Government and Planning and is therefore assessed by Economic Development Queensland (EDQ).

Precincts 8 & 10 are located on the north-east portion of the Everleigh site and contain 304 and 262 lots respectively. This report aims to quantify and assess the traffic impacts of the two (2) precincts as part of the Reconfiguring a Lot application for submission to EDQ.

1.2 Scope and Study Area

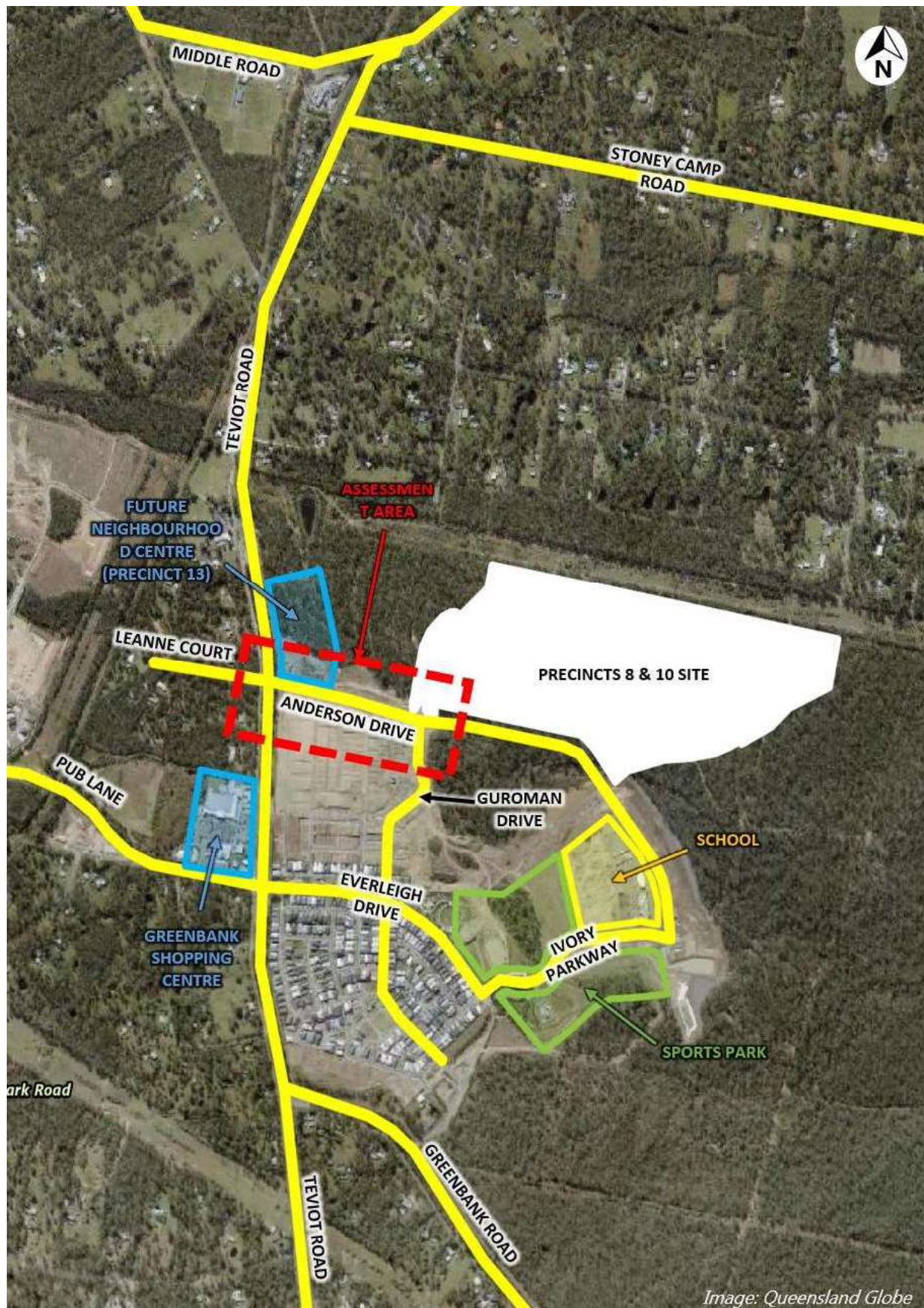
Figure 1 shows the assessment area which consists of Anderson Drive between its intersections with Teviot Road and Guroman Drive.

The construction period is scheduled to commence in 2023 and is expected to last four (4) years with:

- Precinct 10 planned for construction from 2023 to 2024; and
- Precinct 8 planned for construction from 2024 to 2026.

In accordance with the GTIA, the impact mitigation period for access intersections is 10 years after the opening of the final stage resulting in a design year of 2036. This is expected to coincide with the completion of the full Everleigh development.

Figure 1 – Impact assessment area



2. EXISTING CONDITIONS

2.1 Land Use and Zoning

The subject site is comprised of land on lots 9003 on SP324819 and 9004 on SP327213 and is currently undeveloped. The site is located within Everleigh Master Planned Community which is part of the Greater Flagstone PDA. The site is zoned for urban living in the Greater Flagstone PDA Development Scheme.

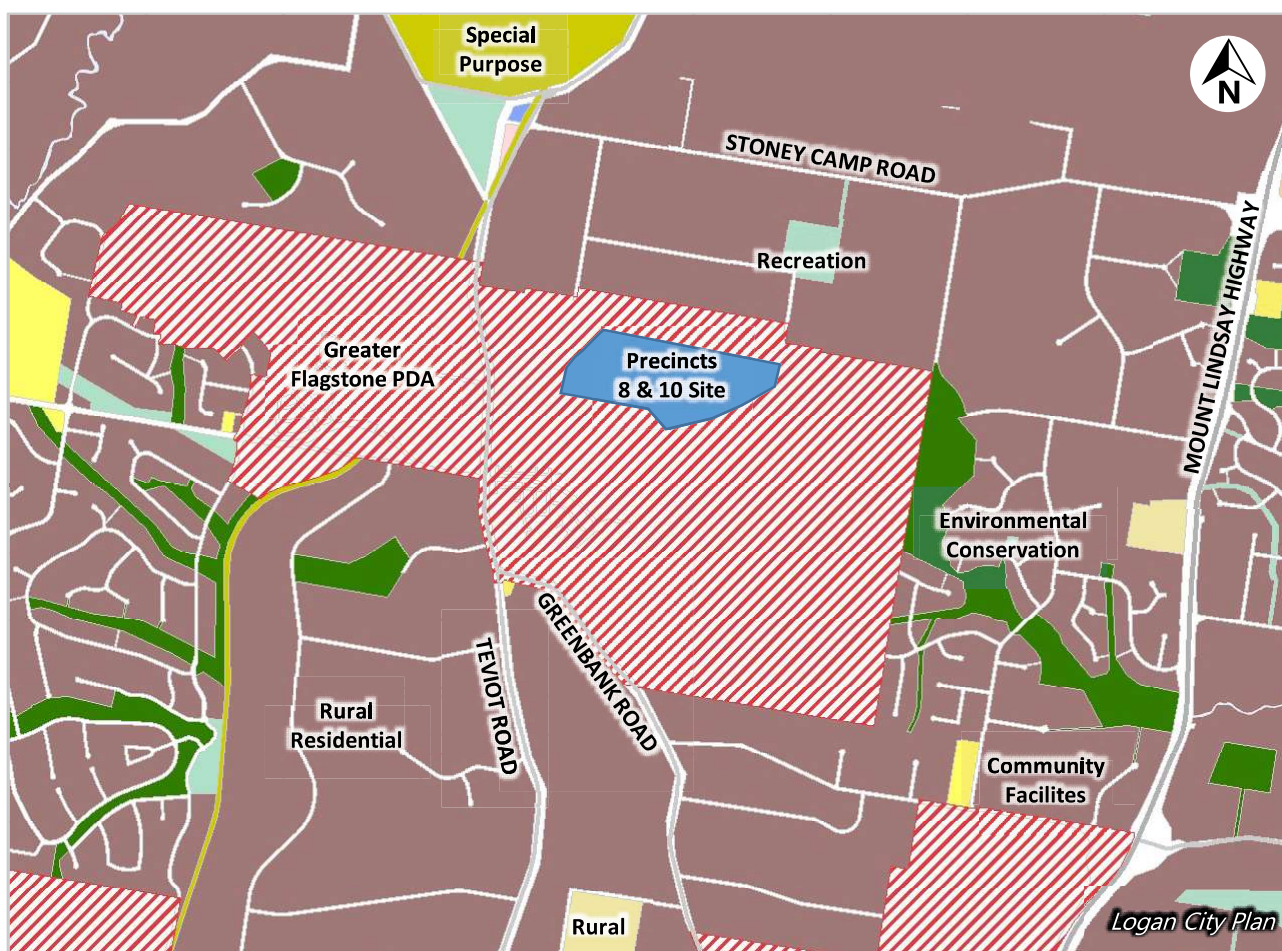
2.2 Adjacent Land Uses / Approval

Land surrounding the development site is generally zoned urban living in accordance with the Greater Flagstone PDA Development Scheme. The site is bounded by:

- Existing rural residential uses to the north;
- Nature reserves to the east;
- Precinct 9 and the future site of precinct 6 to the south; and
- The future site of precinct 11 to the west.

Figure 2 shows the land use zones outlined in the Logan City Plan for the area surrounding the PDA which consists primarily of rural residential uses.

Figure 2 – Surrounding area land use



The primary land entitlements under the Everleigh Master Plan is standard residential lots with a minimum net residential density of 15 lots per hectare. Precincts 8 and 10 are being developed as standard residential lots. Approved non-residential land entitlements within the Everleigh Master Plan are shown by Figure 1 and consist of a Neighbourhood Centre and Community Health Centre to the west, and a State Primary School to the south.

2.3 Surrounding Road Network Details

The surrounding road network is shown by Figure 1.

2.3.1 ROAD LINKS

The existing road links applicable to this assessment include Teviot Road, Anderson Drive, Guroman Drive and Leanne Court.

2.3.1.1 Teviot Road

Teviot Road is an arterial road under the jurisdiction of Logan City Council (LCC). The road is generally aligned north-south between Middle Road to the north and Homestead Drive to the south. The cross-section features a two (2) lane undivided carriageway (one (1) lane each way) with marked traffic lanes as shown in Figure 3. Along the site frontage, a posted speed limit of 70km/h applies.

To support growth of the Greater Flagstone PDA, LCC is widening Teviot Road to four (4) lanes (two (2) lanes each way) between Middle Road and Greenbank Road. The upgrade includes intersection improvements and aims to deliver improved walking and cycling facilities. Within the Logan City Plan, Teviot Road is currently classified as a dual carriageway road in accordance with the proposed upgrade.

Figure 3 – Teviot Road cross-section



2.3.1.2 Anderson Drive

Anderson Drive is a future neighbourhood connector road being constructed as part of Everleigh. The road is aligned in a crescent shape connecting the development with Teviot Road to the west and Greenbank Road to the south.

The planned cross-section features a two (2) lane carriageway (one (1) lane each way) that is divided to the west of the Anderson Drive / Guroman Drive intersection and undivided to the east. Figure 4 shows an existing section of Anderson Drive that features the undivided carriageway.

Figure 4 – Anderson Drive cross-section fronting the school site



2.3.1.3 Guroman Drive

Guroman Drive is a neighbourhood connector road within Everleigh. The road is generally aligned north-south between the Anderson Drive / Guroman Drive roundabout to the north and Everleigh Drive to the south. The cross-section features a two (2) lane undivided carriageway (one (1) lane each way) with indented parking bays as shown by Figure 5. The default urban speed limit of 50km/h applies on Guroman Drive.

Figure 5 – Guroman Drive cross-section



2.3.1.4 Leanne Court

Leanne Court is classed as an urban access street under the jurisdiction of LCC. The court is approximately 350m in length and is generally aligned east-west between Teviot Road to the east and a dead-end to the west. Figure 7 shows the road cross-section which features an undivided two (2) way carriageway on an approximately 3.5m wide seal. The default urban speed limit of 50km/h applies on Leanne Court.

Figure 6 – Leanne Court cross-section



2.3.2 INTERSECTIONS

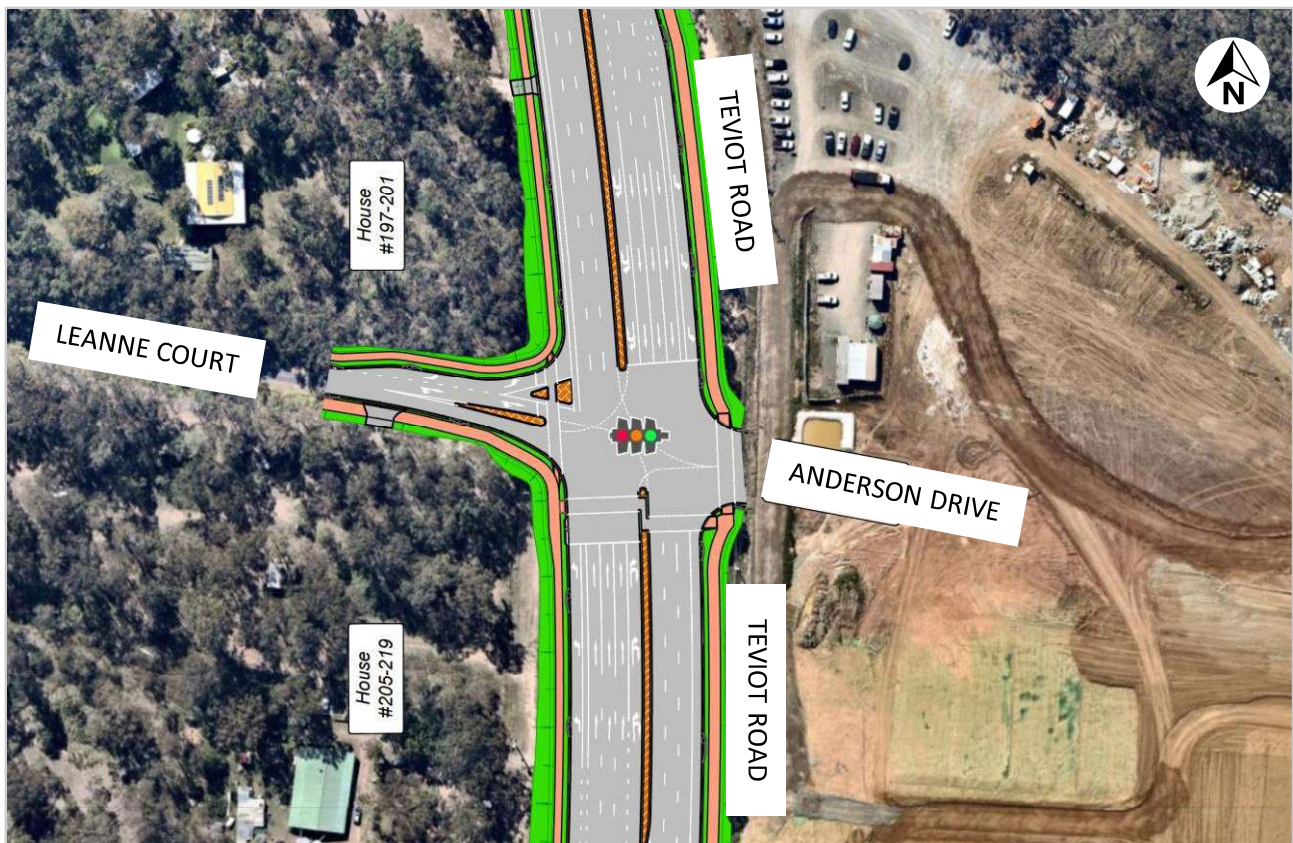
Intersections applicable to this assessment include:

- The Teviot Road / Anderson Drive crossroads; and
- The Anderson Drive / Guroman Drive roundabout.

2.3.2.1 Teviot Road / Anderson Drive Crossroads

Teviot Road and Leanne Court form a priority-controlled T-intersection on the local government road network. As part of the Teviot Road widening project, LCC is upgrading the intersection with Leanne Court to signal control as shown by Figure 7. The proposed layout features improved channelisation and pedestrian crossing facilities across three (3) intersection legs. In conjunction with the upgrade, Mirvac is constructing Anderson Drive to the east which will form the intersection's fourth leg.

Figure 7 – Teviot Road / Anderson Drive intersection functional layout plan

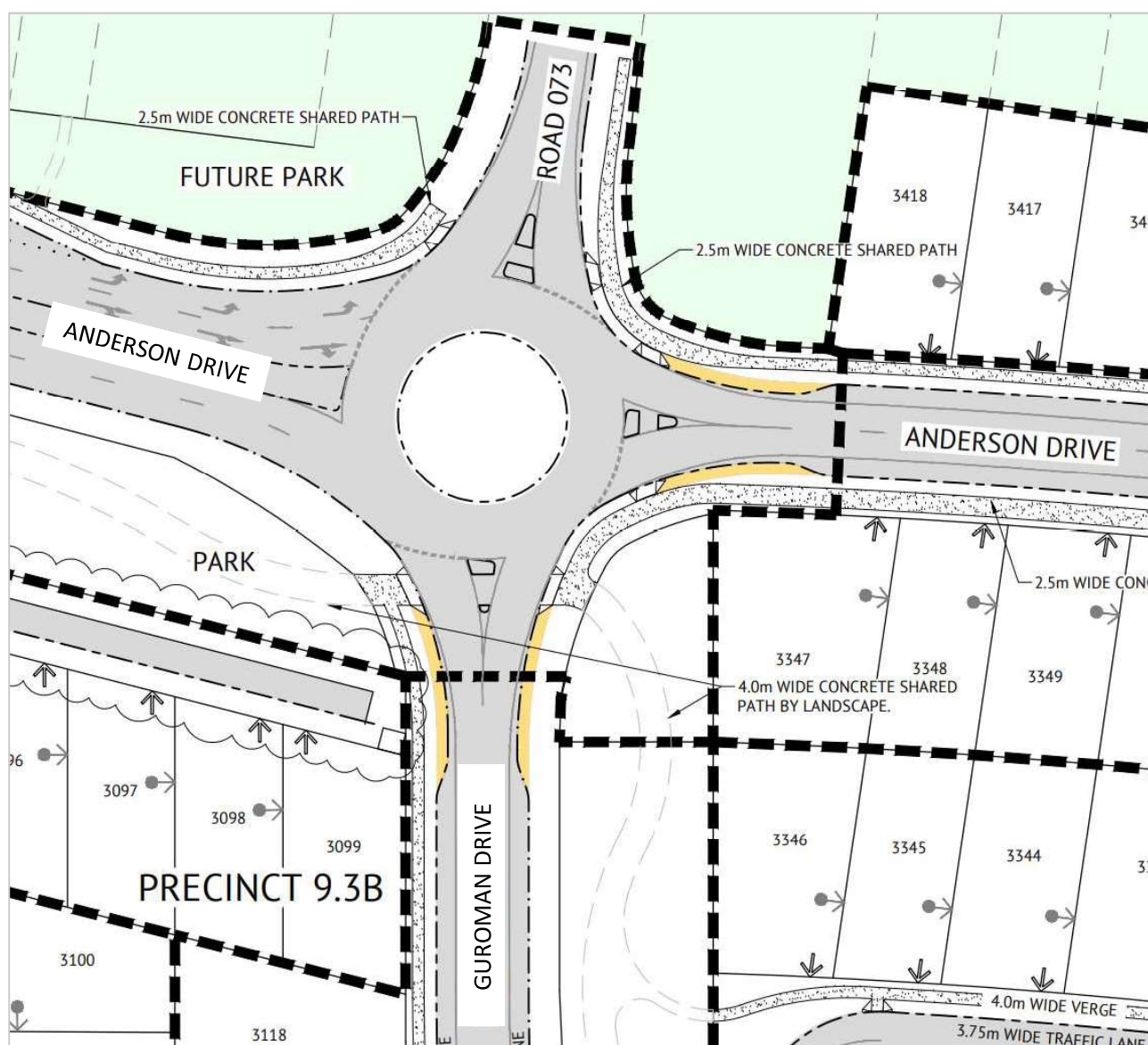


2.3.2.2 Anderson Drive / Guroman Drive Roundabout

Anderson Drive and Guroman Drive form a future roundabout controlled intersection on the local government road network. Figure 8 shows the functional layout plan for the intersection which is being constructed as part of Everleigh precinct 9. It features a 22m diameter central island and a single seven (7) metre wide circulating lane.

The plan indicates two (2) approach and two (2) departure lanes on the western leg of the roundabout, however, the final layout may be designed and constructed as one (1) approach and one (1) departure lane. The suitability of this option is addressed in "Everleigh Precinct 9 – Traffic Statement" (Precinct 9 Traffic Statement-revB) dated 11/05/2021 previously prepared by Premise.

Figure 8 – Anderson Drive / Guroman Drive roundabout functional layout plan



2.4 Traffic Volumes

Premise previously developed a traffic model of Everleigh and the surrounding road network. The model is based on assumptions used in the AIMSUN model developed by MWH for the purpose of preparing “Movement Network Infrastructure Master Plan: Teviot Road, Greenbank” (MNIMP). The MNIMP was approved by EDQ on 9 August 2017 based on:

- 24-hour intersection traffic count data collected on Thursday 5 November 2015;
- Traffic generation rates and directional splits for land uses within Everleigh as agreed by MWH and Veitch Lister Consulting (VLC) on 25 January 2017;
- Growth rates of between 3% and 4%; and
- 25% discounting of trips produced by residential development within Everleigh to represent the community’s self-containment.

Further to the above, the Premise traffic model is based on:

- The preferred hierarchy specified in the GTIA for daily traffic generation rates not specified by MWH; and
- An external trip distribution which was estimated based on the available information regarding the trip distribution in the MWH model.

While Premise has generally sort to keep the traffic model consistent with the MWH model, Premise has increased the number of trip generating zones within Everleigh from four (4) in the MWH model to 16 in the Premise model. EDQ acknowledges that this will provide a more refined traffic model and allow more realistic estimation of traffic on the network. In preparation for this report the Premise traffic model has been updated to reflect the latest forecasts of development yield and timing.

This assessment adopts volumes at the completion of precinct 9 as existing traffic volumes, this is expected to occur in 2023 (prior to construction commencing on precinct 10). 2023 morning and evening peak hour traffic volumes for the assessment area are shown in Figure 9 and Figure 10 respectively.

Figure 9 – Existing conditions (2023) morning peak hour traffic volumes

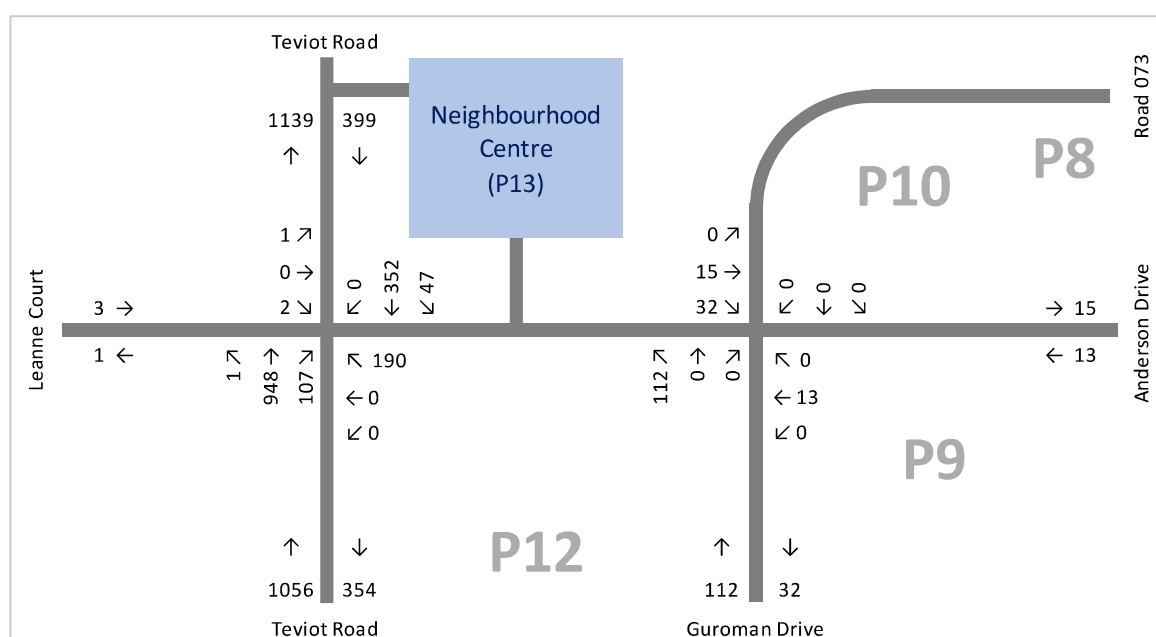
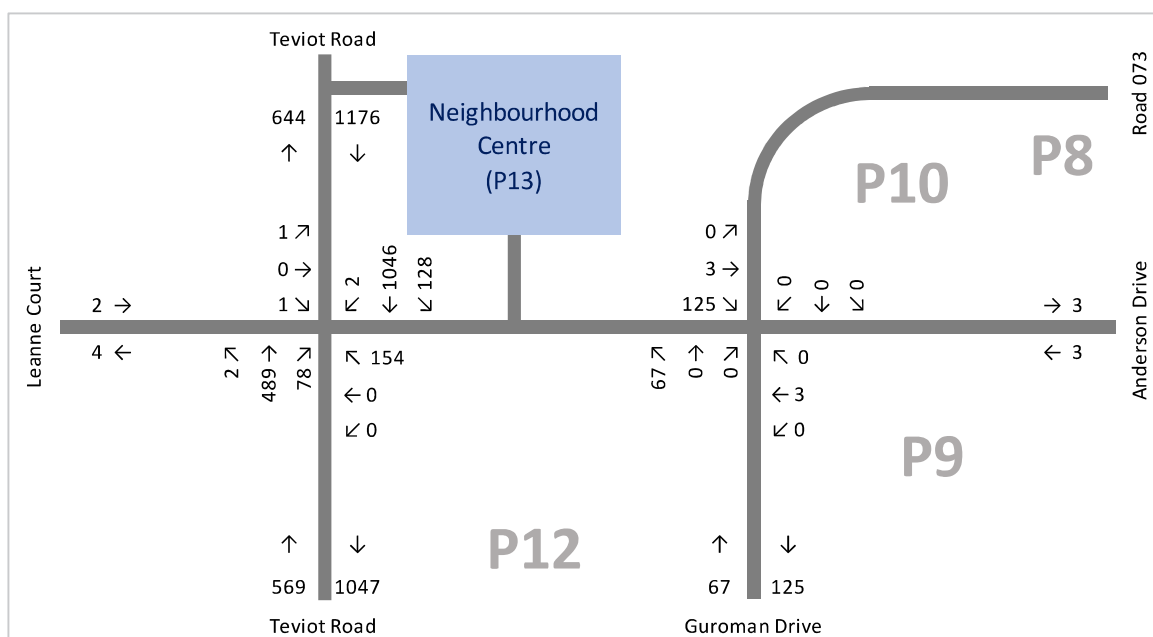


Figure 10 – Existing conditions (2023) evening peak hour traffic volumes



2.5 Intersection and Network Performance

Intersection (and access) performance has been assessed using SIDRA Intersection Version 9 (SIDRA). SIDRA is an advanced micro-analytical traffic tool for evaluation of intersections. SIDRA reports intersection performance in terms of a range of parameters including:

- **Demand Volumes (V):** The modelled number of vehicles arriving at the intersection during the assessment hour. Demand volumes are calculated by dividing the peak hour volume by the peak flow factor (PFF). SIDRA's default PFF of 95% has been adopted for all movements;
- **Degree of Saturation (DoS):** The ratio of the demand volume, V, to the theoretical capacity. An intersection is considered to be operating at its practical capacity when the DoS reaches 0.85 for a roundabout and 0.90 for traffic signals;
- **Average Delay (D):** The mean control delay including both queuing delay and geometric delay for all vehicles arriving during the assessment period including the delay experienced after the end of the flow period until the departure of the last vehicle arriving during the flow period. The GTIA specifies that average delays exceeding 42 seconds for any movement at a roundabout is a safety issue; and
- **95th Percentile Back of Queue Length (Q):** The maximum backward extent of the queue relative to the stop line or give-way / yield line during a signal cycle or gap acceptance cycle below which 95% of all queue lengths fall. The 95th percentile back of queue length is generally accepted as the maximum queue length for design purposes.

SIDRA analysis assumes a heavy vehicle proportion of 5% for all vehicle movements.

2.5.1 TEVIOT ROAD / ANDERSON DRIVE PERFORMANCE

Intersection analysis has been undertaken at the Teviot Road / Anderson Drive intersection based on existing (2023) traffic volumes (refer Section 2.4). All analysis of the intersection adopts the site layout shown in Figure 11, the signal phase sequence shown in Figure 12 and a cycle time of 120 seconds.

Figure 11 – Teviot Road / Anderson Drive SIDRA site layout

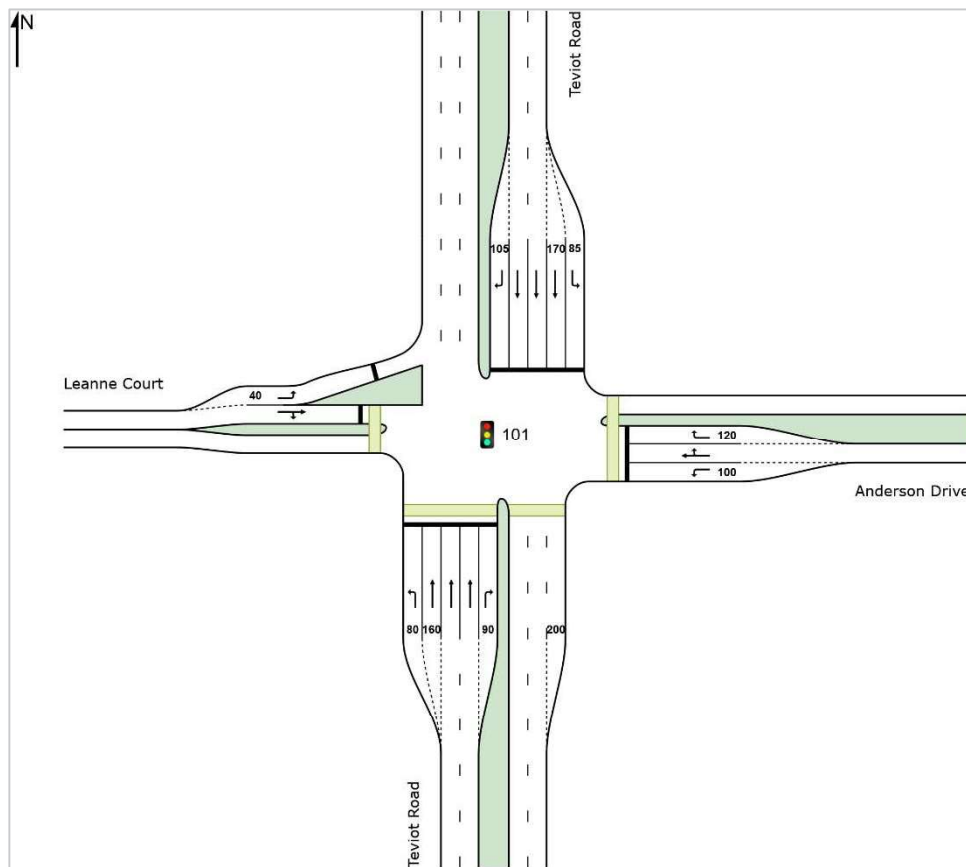
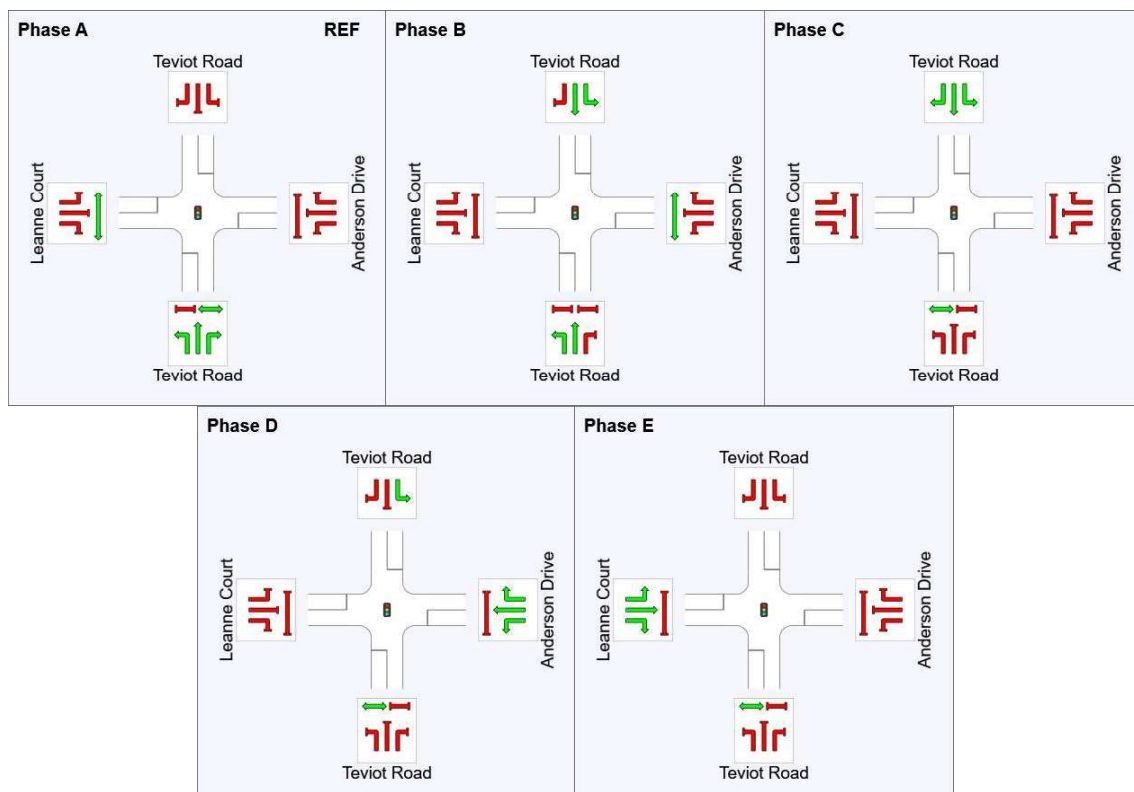


Figure 12 – Teviot Road / Anderson Drive SIDRA signal phase sequence



Appendix A shows SIDRA output results for intersection with key outputs from the SIDRA model provided in Table 1 and summarised below.

- The maximum DoS is 0.475, which is well below practical capacity;
- The maximum average delay to any movement is 65.8 seconds, which is expected under signal control; and
- The maximum queue length does not exceed 15.2 vehicles, which does not impact on neighbouring intersections.

Table 1 – SIDRA Output – Teviot Road / Anderson Drive, existing conditions (2023)

Movement	AM Peak				PM Peak			
	V (veh)	DoS	D (sec)	Q (veh)	V (veh)	DoS	D (sec)	Q (veh)
South Approach: Teviot Road								
Left	1	0.001	24.4	0.0	2	0.003	25.7	0.1
Through	998	0.391	23.4	12.8	515	0.210	22.5	6.2
Right	113	0.222	41.0	5.0	82	0.458	62.7	4.7
East Approach: Anderson Drive								
Left	1	0.002	41.2	0.0	1	0.003	44.4	0.0
Through	1	0.224	38.5	4.7	1	0.202	40.8	3.9
Right	200	0.224	44.2	4.7	162	0.202	46.4	3.9
North Approach: Teviot Road								
Left	49	0.053	20.7	1.4	135	0.107	11.7	2.5
Through	371	0.302	42.7	6.1	1101	0.457	26.5	15.2
Right	1	0.012	65.8	0.1	2	0.013	59.5	0.1
West Approach: Leanne Court								
Left	1	0.012	65.8	0.1	1	0.012	65.8	0.1
Through	1	0.035	60.8	0.2	1	0.023	60.5	0.1
Right	2	0.035	66.5	0.2	1	0.023	66.2	0.1

2.5.2 ANDERSON DRIVE / GUROMAN DRIVE PERFORMANCE

Appendix A shows the SIDRA output results for the Anderson Drive / Guroman Drive roundabout based on the proposed layout (refer Figure 8) and existing conditions (2023) traffic volumes. Key outputs from the SIDRA model are provided in Table 2 and summarised below:

- The maximum DoS is 0.083, which is well below practical capacity;
- The maximum average delay to any movement is 9.4 seconds, which is very low; and
- The maximum queue length does not exceed one (1) vehicle, which is short.

Table 2 – SIDRA Output – Anderson Drive / Guroman Drive, existing conditions (2023)

Movement	AM Peak				PM Peak			
	V (veh)	DoS	D (sec)	Q (veh)	V (veh)	DoS	D (sec)	Q (veh)
South Approach: Guroman Drive								
Left	118	0.081	3.9	0.4	71	0.047	3.8	0.2
Through	1	0.081	4.0	0.4	1	0.047	4.0	0.2
Right	1	0.081	8.9	0.4	1	0.047	8.9	0.2
East Approach: Anderson Drive								
Left	1	0.012	4.0	0.1	1	0.004	4.4	0.0
Through	14	0.012	4.1	0.1	3	0.004	4.5	0.0
Right	1	0.012	9.0	0.1	1	0.004	9.4	0.0
North Approach: Road 073								
Left	1	0.002	4.0	0.0	1	0.003	4.4	0.0
Through	1	0.002	4.2	0.0	1	0.003	4.5	0.0
Right	1	0.002	9.0	0.0	1	0.003	9.4	0.0
West Approach: Anderson Drive								
Left	1	0.032	3.8	0.1	1	0.083	3.8	0.4
Through	16	0.032	4.0	0.1	3	0.083	4.0	0.4
Right	34	0.032	8.8	0.1	132	0.083	8.8	0.4

2.6 Road Safety Issues

Existing road safety issues in the study area were identified through crash rate analysis. The analysis was conducted for the existing Teviot Road / Leanne Court T-intersection based on crash data available on the Queensland Open Data Portal for crashes that occurred between 2005 and 2020. The information for each crash includes the crash type, location, year, number/type of vehicles involved, vehicle direction, conditions and contributing factors. There were a total of three (3) crashes recorded at the intersection for this period consisting of one (1) rear-end collision, one (1) entering roadway crash and one (1) off-path crash.

The rear-end collision (DCA 303) involved three (3) vehicles including one (1) vehicle turning right. The crash occurred in 2017 at 12:00PM in wet conditions and resulted hospitalisation.

The entering roadway crash (DCA 408) is a multi-vehicle crash that occurred between a vehicle travelling southbound on Teviot Road and a vehicle entering the roadway. The crash occurred in 2008 at 6:00PM in clear dry conditions and resulted in medical treatment.

The off-path crash (DCA 703) involved a single vehicle travelling southbound on Teviot Road that left the carriageway and collided with an object. The crash occurred in 2006 at 4:00PM in clear dry conditions and resulted in medical treatment.

2.7 Site Access

Currently, no direct access is provided to the site. At the completion of precinct 9, the site will be accessible via the northern leg of the Anderson Drive / Guroman Drive roundabout.

2.8 Public Transport

The subject site is not currently serviced by public transport. The closest bus stop pair is located on Teviot Road at its intersection with Pub Lane and serviced exclusively by school bus routes.

2.9 Active Transport

Footpaths and shared paths are provided along each road link within precinct 9 and in park land parallel to Guroman Drive and Anderson Drive to the west. Along the precinct 8 & 10 frontage, paths are provided on both sides of Anderson Drive and land is reserved for pedestrian links to adjacent access streets including three (3) to precincts 8 & 10.

3. PROPOSED DEVELOPMENT DETAILS

3.1 Development Site Plan

The proposed development is precincts 8 and 10 of Everleigh. The development site plan prepared by Urbis is shown in Figure 13. Precinct 10 features 280 residential lots. Precinct 8 features 286 residential lots.

Figure 13 – Development site plan



Pedestrian paths are expected to be provided on every road link. The development site plan indicates that eight (8) additional pedestrian links are to be provided including three (3) to Anderson Drive and five (3) internal to the site.

3.2 Operational Details

The construction period is scheduled to commence in 2023 and is expected to last (4) years with precinct 10 planned for construction from 2023 to 2024 and precinct 8 planned for construction from 2024 to 2026.

Based on the residential land uses the development is expected to have two (2) peak periods being:

- The morning commuter peak hour; and
- The evening commuter peak hour.

3.3 Proposed Access and Parking

Vehicle access to the development is proposed via the north leg of the Anderson Drive / Guroman Drive roundabout. The leg is formed by unnamed road 073, a neighbourhood connector road which is generally aligned east-west between the roundabout to the west and a future connection to precinct 6 to the east. A total of four (4) future connections are proposed between precincts 8 and 6.

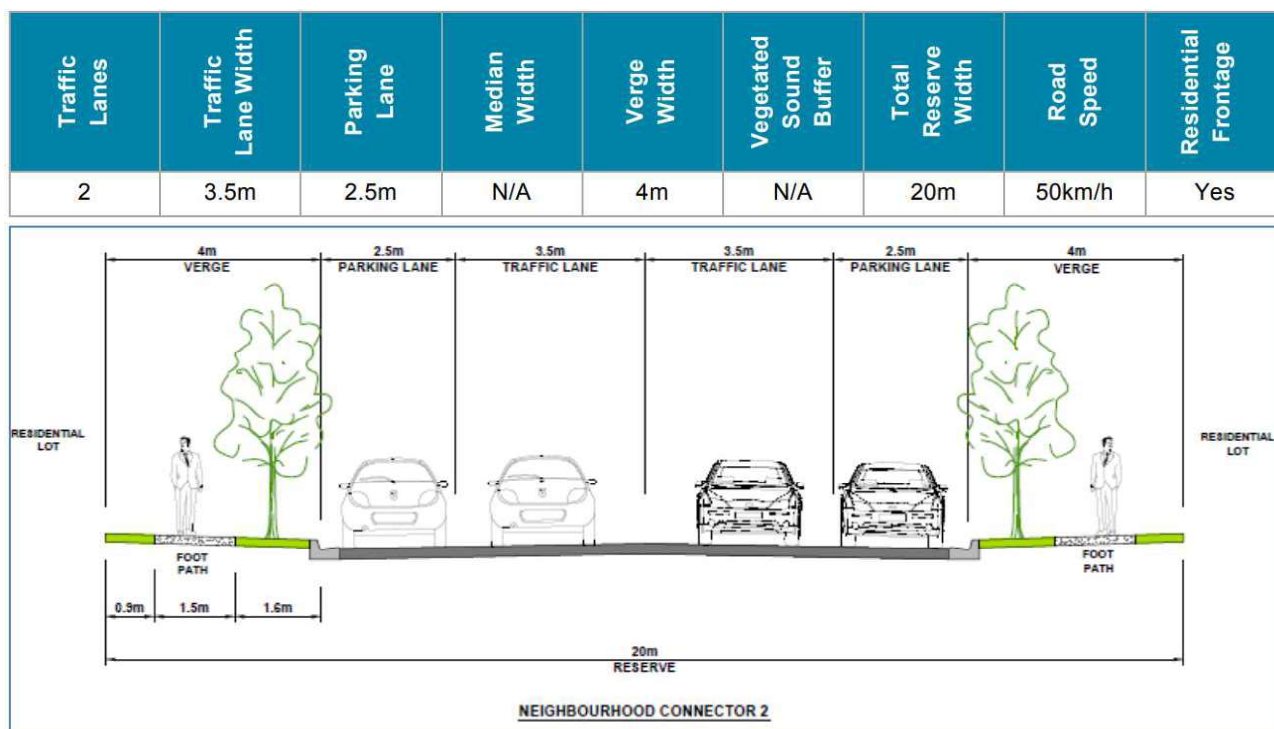
The ultimate internal roadway layout for Everleigh is attached in Appendix B and shows precincts 8 & 10 to consist of three (3) road cross sections as defined by the MNIMP, including:

- Neighbourhood Connector 2;
- Access Street (Typical); and
- Access Street (Park).

3.3.1 NEIGHBOURHOOD CONNECTOR 2 CROSS-SECTION

Figure 14 shows the MNIMP approved neighbourhood connector 2 cross-section which will be provided by unnamed road 073. It features a total reserve width of 20m, two (2) 3.5m traffic lanes (one (1) lane each way), 2.5m wide parking lanes and 4m wide verges. Footpaths are provided on both sides of the neighbourhood connector 2 cross-section.

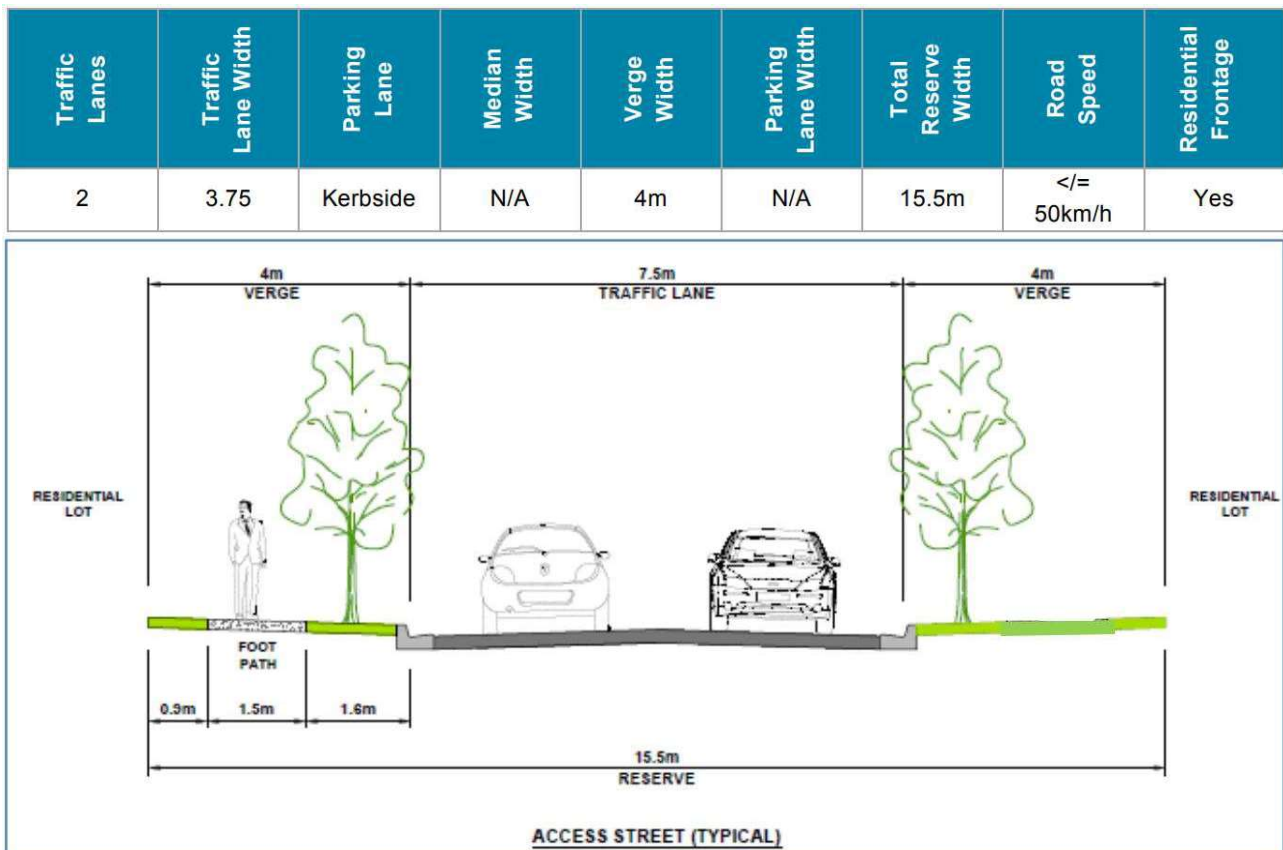
Figure 14 – Neighbourhood Connector 2 cross-section (source: MWH MNIMP)



3.3.2 ACCESS STREET (TYPICAL) CROSS-SECTION

Figure 15 shows the MNIMP approved access street (typical) cross-section which features a total reserve width of 15.5m, two (2) 3.75m traffic lanes (one (1) lane each way) and 4m wide verges. A footpath is provided on one (1) side of the access street (typical) cross-section.

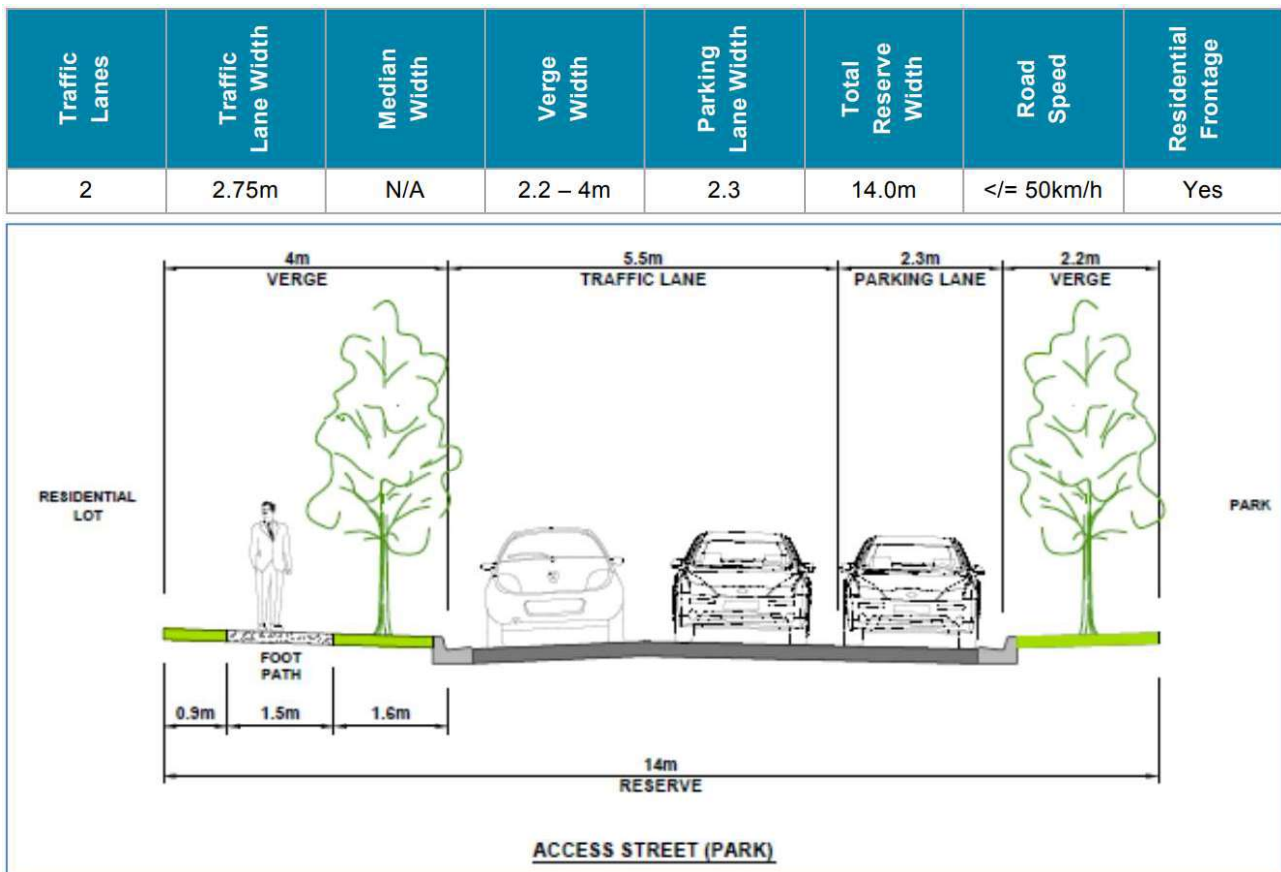
Figure 15 – Access Street (Typical) cross-section (source: MWH MNIMP)



3.3.3 ACCESS STREET (PARK) CROSS-SECTION

Figure 16 shows the MNIMP approved access street (park) cross-section which features a total reserve width of 14m, two (2) 2.75m traffic lanes (one (1) lane each way) and a 2.3m wide parking lane adjacent to park land. A footpath is provided on one (1) side of the access street (park) cross-section.

Figure 16 – Access Street (Park) cross-section (source: MWH MNIMP)



4. DEVELOPMENT TRAFFIC

4.1 Traffic Generation

Peak hour development traffic generation is based on the model assumptions outlined in the MNIMP, being:

- 0.85 trips per dwelling; and
- 25% discounting for internal trips during the morning peak hour

The development consists of 566 residential lots and therefore is expected to generate 361 external trips during the morning peak hour and 481 trips during the evening peak hour. Table 3 outlines the expected peak hour generation for each precinct.

Table 3 – Development traffic generation

Precinct	Morning Peak Hour (Vehicles)	Evening Peak Hour (Vehicles)
8	182	243
10	179	238
Total	361	481

The residential trips are distributed between inbound and outbound consistent with the MNIMP model. This corresponds to 22% inbound and 78% outbound during the morning peak hour and 65% inbound and 35% outbound during the evening peak hour.

4.2 Trip Distribution

Development trips are distributed based on the MNIMP model and include:

- 10% of trips on Middle Road to the west;
- 15% of trips on Middle Road to the east;
- 10% of trips on Mount Lindsay Highway to the north via Stoney Camp Road;
- 5% of trips on Granger Road to the east via Stoney Camp Road;
- 40% of trips on Pub Lane to the west;
- 5% of trips on Crowson Lane to east via Greenbank Road;
- 5% of trips on Greenbank Road to the south via Greenbank Road; and
- 10% of trips on Teviot Road to the south.

Access to precincts 8 & 10 is limited to the to the north leg of the Anderson Drive / Guroman Drive roundabout until after the completion of precinct 6. Therefore, under the ultimate development case traffic is expected to redistribute between the roundabout access and future connections to the east via precinct 6. The development site plans show four (4) future connections to precinct 6 including three (3) access streets and one (1) neighbourhood connector.

4.3 Development Traffic Volumes on the Network

Development traffic volumes for the design morning and evening peak hours were estimated from the traffic generation determined in Section 4.1 and the trip distribution determined in Section 4.2. The resulting morning and evening peak hour volumes at the completion of precinct 10 (2024) are shown in Figure 17 and Figure 18 and volumes at the completion of precinct 8 (2026) are shown in Figure 19 and Figure 20. Morning and evening peak hour redistributed development traffic volumes under the ultimate development case are attached in Appendix C.

Figure 17 – Precinct 10 opening year (2024) morning peak development traffic volumes

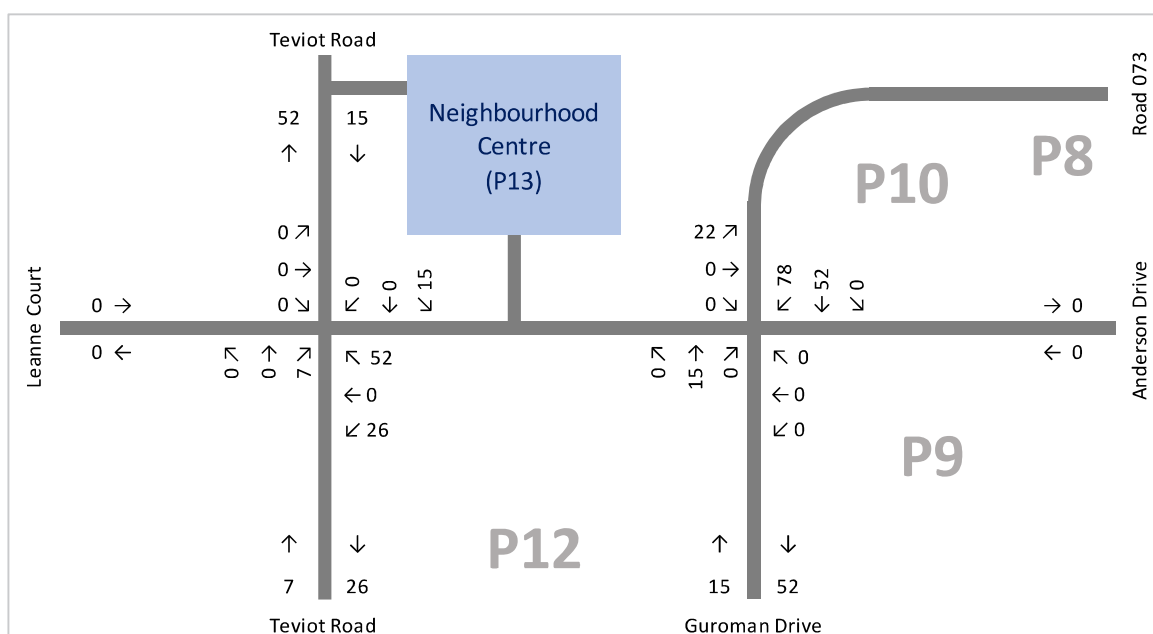
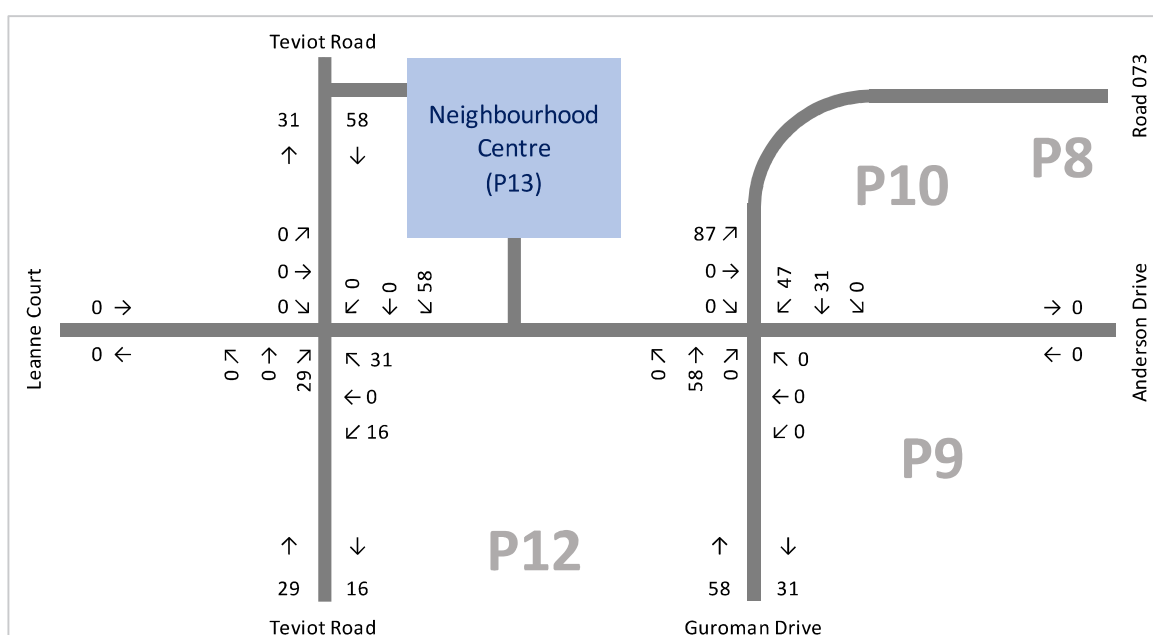


Figure 18 – Precinct 10 opening year (2024) evening peak development traffic volumes



[illegible]

The diagram illustrates a road network with four intersections and a central blue box representing a Neighbourhood Centre (P13). The roads are Leanne Court, Teviot Road, Guroman Drive, and Road 073. Traffic flow is indicated by arrows, and accident counts are shown for each direction. The accident hotspots are labeled P8, P9, P10, and P12.

Intersections and Accident Counts:

- Leanne Court and Teviot Road:**
 - Leanne Court → Teviot Road: 0
 - Leanne Court ← Teviot Road: 0
 - Teviot Road → Leanne Court: 130
 - Teviot Road ← Leanne Court: 70
- Teviot Road and Guroman Drive:**
 - Teviot Road → Guroman Drive: 125
 - Teviot Road ← Guroman Drive: 67
 - Guroman Drive → Teviot Road: 58
 - Guroman Drive ← Teviot Road: 31
- Guroman Drive and Road 073:**
 - Guroman Drive → Road 073: 255
 - Guroman Drive ← Road 073: 0
 - Road 073 → Guroman Drive: 137
 - Road 073 ← Guroman Drive: 31
- Leanne Court and Road 073:**
 - Leanne Court → Road 073: 0
 - Leanne Court ← Road 073: 0
 - Road 073 → Leanne Court: 0
 - Road 073 ← Leanne Court: 0

Accident Hotspots:

- P8:** Located at the intersection of Teviot Road and Road 073.
- P9:** Located at the intersection of Guroman Drive and Road 073.
- P10:** Located at the intersection of Teviot Road and Road 073.
- P12:** Located at the intersection of Leanne Court and Teviot Road.

Neighbourhood Centre (P13): A blue box located on Teviot Road, between Leanne Court and Guroman Drive.

5. IMPACT ASSESSMENT AND MITIGATION

5.1 With and Without Development Traffic Volumes

5.1.1 PRECINCT 10 OPENING YEAR (2024) TRAFFIC VOLUMES

'With development' traffic volumes at the completion of stage 10 (2024) were adopted from the Premise traffic model (refer Section 2.4) and are shown for the morning peak hour in Figure 21 and for the evening peak hour in Figure 22.

Figure 21 – Precinct 10 opening year (2024) morning peak 'with development' traffic volumes

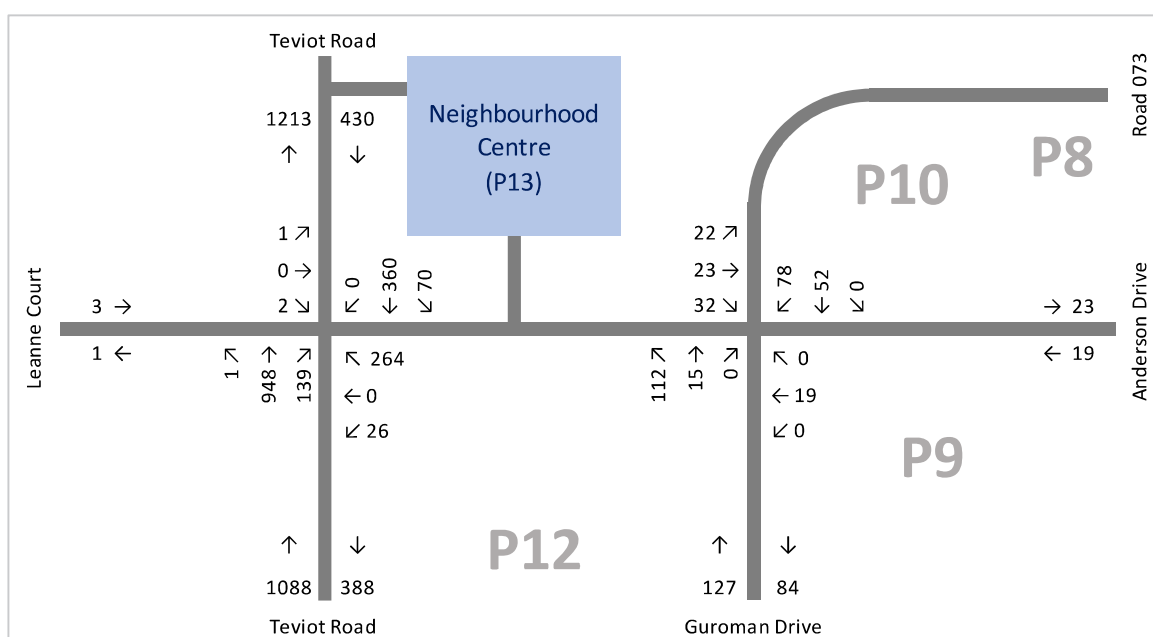
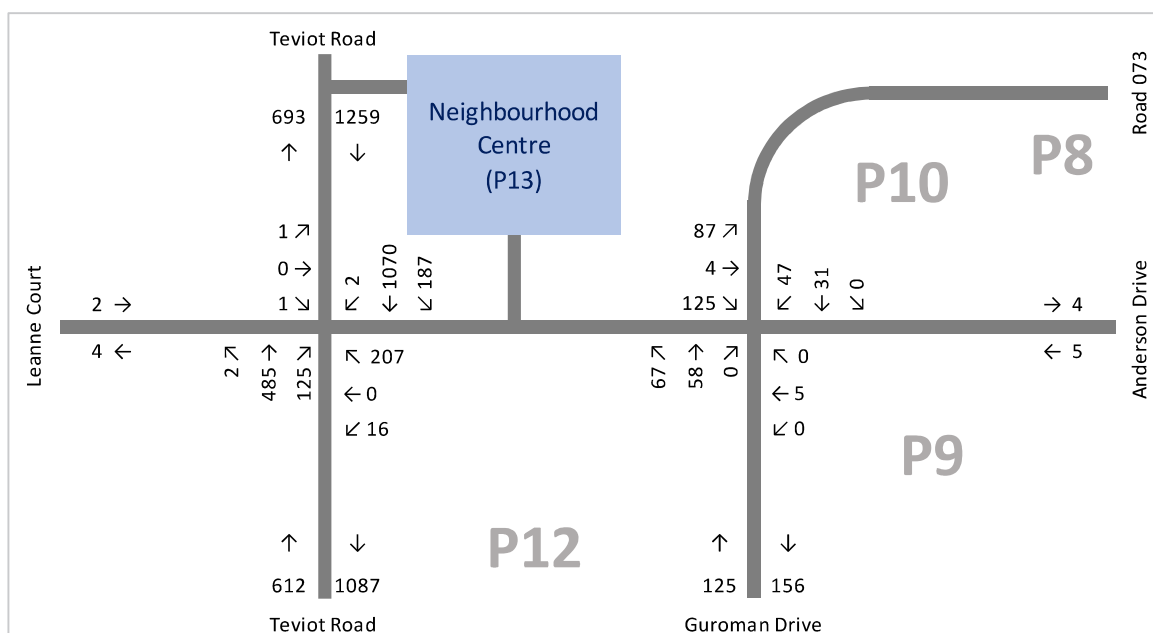


Figure 22 – Precinct 10 opening year (2024) evening peak 'with development' traffic volumes



5.1.2 PRINCINCT 8 OPENING YEAR (2026) TRAFFIC VOLUMES

'With development' traffic volumes at the completion of stage 8 (2026) were adopted from the Premise traffic model (refer Section 2.4) and are shown for the morning peak hour in Figure 23 and for the evening peak hour in Figure 24.

Figure 23 – Precinct 8 opening year (2026) morning peak 'with development' traffic volumes

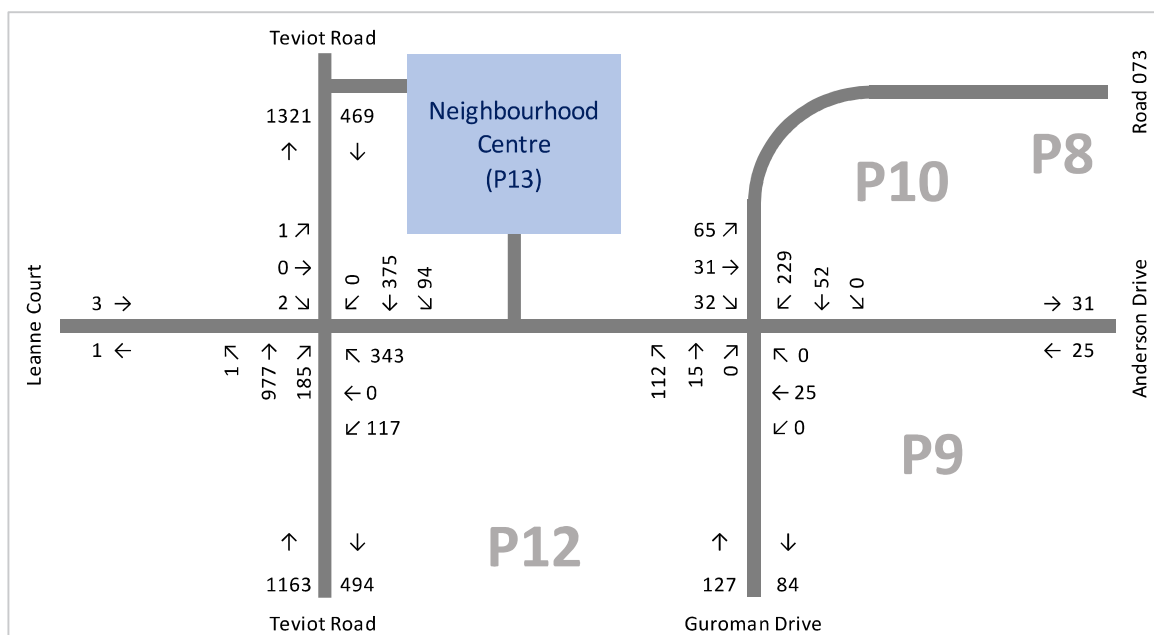
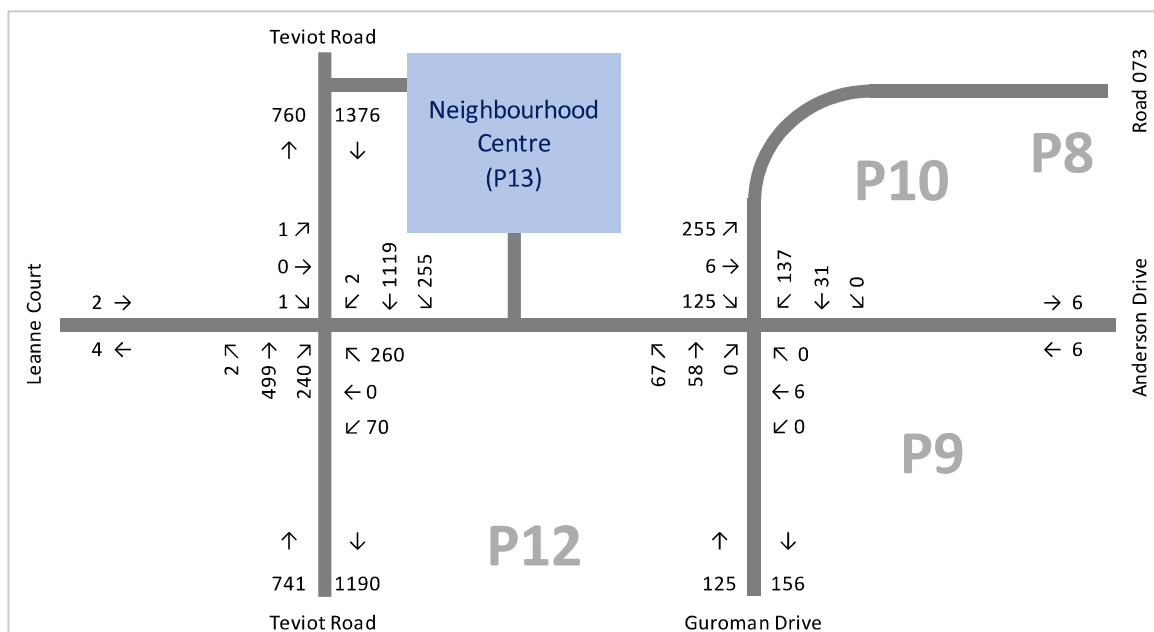


Figure 24 – Precinct 8 opening year (2026) evening peak 'with development' traffic volumes



5.1.3 DESIGN YEAR (2036) TRAFFIC VOLUMES

Morning and evening peak 'with development' traffic volumes for the design year (2036) were adopted from the Premise traffic model (refer Section 2.4) and are attached in Appendix C.

Annual Average Daily Traffic (AADT) volumes estimated for road links within the assessment area and precincts 8 & 10 are outlined in Table 4.

Table 4 – Design year (2036) road link AADT

Road Link	Two-way AADT (vehicles per day)
Anderson Drive between Teviot Road and Guroman Drive	15,336vpd
Unnamed Road 073 north of Anderson Drive	2,890vpd
All other road links (precincts 8 & 10)	< 3,000vpd

5.2 Road Safety Impact Assessment and Mitigation

The GTIA specifies the following two (2) stage process for assessment of road safety impacts:

1. Road Safety Risk Assessment to determine the change in risk profile associated with existing road safety issues as a result of the development; and
2. Road Environment Safety Assessment to determine if changes to infrastructure require either a road safety audit by an accredited road safety auditor (RSA) or a road safety assessment by either an RSA or a registered professional engineer of Queensland (RPEQ).

5.2.1 ROAD SAFETY RISK ASSESSMENT

Existing road safety issues in the assessment area are identified in Section 2.6. The existing Teviot Road / Leanne Court intersection is being upgraded by LCC as part of Teviot Road upgrade (refer Section 2.3.2.1). The intersection upgrade is expected to minimise the risk of:

- Rear-end collisions by improving channelisation of turning movements;
- Entering roadway crashes by controlling conflicting traffic streams with signal control; and
- Off-path crashes by improving road alignment delineation with kerb and channel.

Therefore, all identified risks are considered to be mitigated by the development and no further mitigations are required to address existing safety issues.

5.2.2 ROAD ENVIRONMENT SAFETY ASSESSMENT

Road environment risk ratings calculated in accordance with the GTIA and design year (2036) AADT volumes include:

- Anderson Drive assessed as having a medium risk rating based on a speed limit of 50km/h and an AADT of more than 8,000vpd; and
- All other road links assessed as having low risk ratings based on speed limits of less than or equal to 50km/h and AADTs of less than 8,000vpd.

The proposed development is a Major Development as defined by the GTIA and therefore, any changes to the road environment on:

- Anderson Drive warrants a “road safety audit” by an accredited Road Safety Auditor (RSA) at the detailed design stage; and
- All other road links will not require a road safety audit but should be subject to a road safety assessment.

A road safety assessment may be conducted by either an accredited road safety auditor or a Registered Professional Engineer of Queensland (RPEQ). This requirement would be satisfied by safety reports prepared in accordance with Section 295 of the Work Health and Safety Regulation 2011 as part of the design process.

5.3 Access and Frontage Impact Assessment and Mitigation

5.3.1 INTERSECTION ANALYSIS

5.3.1.1 Precinct 8 Opening Year (2026)

Intersection analysis has been undertaken at the Teviot Road / Anderson Drive intersection based on the proposed layout (refer Figure 7) and precinct 8 opening year (2026) traffic volumes (refer Section 5.1.2). Appendix D shows the SIDRA output results for the intersection with key outputs from the SIDRA model provided in Table 5 and summarised below.

- The maximum DoS is 0.574, which is well below practical capacity;
- The maximum average delay to any movement is 66.5 seconds, which is expected under signal control; and
- The maximum queue length does not exceed 19 vehicles, which does not impact on neighbouring intersections.

Table 5 – SIDRA Output – Teviot Road / Anderson Drive, precinct 8 opening year (2026)

Movement	AM Peak				PM Peak			
	V (veh)	DoS	D (sec)	Q (veh)	V (veh)	DoS	D (sec)	Q (veh)
South Approach: Teviot Road								
Left	1	0.001	25.0	0.0	2	0.002	17.3	0.1
Through	1028	0.411	24.3	13.5	525	0.164	13.1	4.8
Right	195	0.395	43.8	9.3	253	0.564	48.3	13.0
East Approach: Anderson Drive								
Left	123	0.266	44.1	5.8	74	0.308	58.5	4.0
Through	1	0.391	39.7	8.8	1	0.574	54.2	7.8
Right	361	0.391	45.3	8.8	274	0.574	59.8	7.8
North Approach: Teviot Road								
Left	99	0.105	20.7	2.9	268	0.272	20.7	8.2
Through	395	0.322	42.9	6.5	1178	0.567	32.9	18.3
Right	1	0.012	65.8	0.1	2	0.023	66.2	0.1
West Approach: Leanne Court								
Left	1	0.012	65.8	0.1	1	0.012	65.8	0.1
Through	1	0.035	60.8	0.2	1	0.023	60.5	0.1
Right	2	0.035	66.5	0.2	1	0.023	66.2	0.1

Appendix D shows the SIDRA output results for the Anderson Drive / Guroman Drive roundabout based on the proposed layout (refer Figure 8) and precinct 8 opening year (2026) traffic volumes (refer Section 5.1.2). Key outputs from the SIDRA model are provided in Table 6 and summarised below:

- The maximum DoS is 0.289, which is well below practical capacity;
- The maximum average delay to any movement is 10.4 seconds, which is low; and
- The maximum queue length does not exceed two (2) vehicles, which is short.

Table 6 – SIDRA Output – Anderson Drive / Guroman Drive, precinct 8 opening year (2026)

Movement	AM Peak				PM Peak			
	V (veh)	DoS	D (sec)	Q (veh)	V (veh)	DoS	D (sec)	Q (veh)
South Approach: Guroman Drive								
Left	118	0.124	5.2	0.6	71	0.111	4.6	0.6
Through	16	0.124	5.3	0.6	61	0.111	4.7	0.6
Right	1	0.124	10.2	0.6	1	0.111	9.6	0.6
East Approach: Anderson Drive								
Left	1	0.027	5.3	0.1	1	0.008	5.2	0.0
Through	26	0.027	5.5	0.1	6	0.008	5.3	0.0
Right	1	0.027	10.4	0.1	1	0.008	10.2	0.0
North Approach: Road 073								
Left	1	0.215	4.2	1.2	1	0.147	4.5	0.8
Through	55	0.215	4.3	1.2	33	0.147	4.7	0.8
Right	241	0.215	9.2	1.2	144	0.147	9.6	0.8
West Approach: Anderson Drive								
Left	68	0.091	3.9	0.5	268	0.289	4.2	1.8
Through	33	0.091	4.0	0.5	6	0.289	4.3	1.8
Right	34	0.091	8.9	0.5	132	0.289	9.2	1.8

5.3.1.2 Design Year Opening Year (2036)

Intersection analysis has been undertaken at the Teviot Road / Anderson Drive intersection based on the proposed layout (refer Figure 7) and design year (2036) traffic volumes (refer Section 5.1.3). Appendix E shows the SIDRA output results for the intersection with key outputs from the SIDRA model provided in Table 7 and summarised below.

- The maximum DoS is 0.819, which is below practical capacity;
- The maximum average delay to any movement is 66.5 seconds, which is expected under signal control; and
- The maximum queue length does not exceed 31 vehicles, which does not impact on neighbouring intersections.

Table 7 – SIDRA Output – Teviot Road / Anderson Drive, design year (2036)

Movement	AM Peak				PM Peak			
	V (veh)	DoS	D (sec)	Q (veh)	V (veh)	DoS	D (sec)	Q (veh)
South Approach: Teviot Road								
Left	1	0.002	30.7	0.0	2	0.002	18.7	0.1
Through	1395	0.678	34.2	23.1	738	0.240	15.3	7.4
Right	213	0.593	53.3	11.5	324	0.804	57.7	19.3
East Approach: Anderson Drive								
Left	185	0.310	37.8	8.0	112	0.393	57.6	6.0
Through	1	0.580	35.6	16.8	1	0.819	59.0	14.4
Right	693	0.580	41.2	16.8	464	0.819	64.7	14.4
North Approach: Teviot Road								
Left	218	0.203	17.1	5.7	614	0.725	23.1	22.9
Through	503	0.410	44.0	8.5	1555	0.803	39.3	30.8
Right	1	0.012	65.8	0.1	2	0.023	66.2	0.1
West Approach: Leanne Court								
Left	1	0.012	65.8	0.1	1	0.012	65.8	0.1
Through	1	0.035	60.8	0.2	1	0.023	60.5	0.1
Right	2	0.035	66.5	0.2	1	0.023	66.2	0.1

Appendix E shows the SIDRA output results for the Anderson Drive / Guroman Drive roundabout based on the proposed layout (refer Figure 8) and precinct 8 opening year (2026) traffic volumes (refer Section 5.1.3). Key outputs from the SIDRA model are provided in Table 8 and summarised below:

- The maximum DoS is 0.612, which is below practical capacity;
- The maximum average delay to any movement is 13.3 seconds, which is low; and
- The maximum queue length does not exceed seven (7) vehicles, which will not impact on neighbouring intersections.

Table 8 – SIDRA Output – Anderson Drive / Guroman Drive, design year (2036)

Movement	AM Peak				PM Peak			
	V (veh)	DoS	D (sec)	Q (veh)	V (veh)	DoS	D (sec)	Q (veh)
South Approach: Guroman Drive								
Left	118	0.195	8.0	1.2	71	0.180	6.0	1.0
Through	26	0.195	8.2	1.2	102	0.180	6.1	1.0
Right	1	0.195	13.1	1.2	1	0.180	11.0	1.0
East Approach: Anderson Drive								
Left	1	0.485	5.6	3.6	1	0.295	5.4	1.8
Through	547	0.485	5.7	3.6	308	0.295	5.5	1.8
Right	2	0.485	10.6	3.6	11	0.295	10.4	1.8
North Approach: Road 073								
Left	9	0.194	5.1	1.1	5	0.179	8.3	1.1
Through	92	0.194	5.3	1.1	55	0.179	8.4	1.1
Right	115	0.194	10.2	1.1	68	0.179	13.3	1.1
West Approach: Anderson Drive								
Left	33	0.184	3.9	1.2	127	0.612	4.8	6.2
Through	204	0.184	4.1	1.2	561	0.612	5.0	6.2
Right	34	0.184	9.0	1.2	132	0.612	9.8	6.2

5.3.2 ROAD FRONTAGE ASSESSMENT

As part of Everleigh, public transport facilities are proposed along Anderson Drive and Everleigh Drive including eight (8) indented bus stops pairs as shown in Appendix B. These bus stop pairs are expected to cater for future bus services along Anderson Drive.

The development proposed road cross-sections (refer Section 3.3) show that pedestrian paths will be provided on each road link or in adjacent park land. In addition, external links to Anderson Drive and its intersection with Guroman Drive are proposed to provide access to the surrounding path network and future indented bus bays.

The proposed public transport and active transport facilities are considered adequate to support the development.

5.4 Road Link Capacity Assessment

Capacity of road links was assessed based on the design year (2036) traffic volumes outlined in Section 5.1.3 and link characteristics outlined in Economic Development Queensland's (EDQ's) "PDA Guideline No.06 – Street and Movement Network".

Anderson Drive between Teviot Road and Guroman Drive is assessed as having a capacity of 7,500 – 18,000vpd based on a two-lane trunk connector cross-section. Anderson Drive is expected to carry 15,336vpd and therefore provides sufficient capacity.

Unnamed Road 073 is assessed as having a capacity of 3,000 – 7,499vpd based on a neighbourhood connector cross-section. Road 073 is expected to carry a maximum of 2,890vpd and therefore provides sufficient capacity.

All other road links being constructed as part of precincts 8 & 10 feature access street cross-sections and have a corresponding capacity of less than 3,000vpd. The road links are not expected to carry more than 3,000vpd and therefore provide sufficient capacity.

5.5 Intersection Spacing

Minimum intersection spacing along road links within precincts 8 & 10 was assessed based on design year (2036) road link AADT values outlined in Table 4 and intersection spacing requirements outlined in EDQ's "PDA Guideline No.06 – Street and Movement Network". It is noted that traffic volumes within the development site are not expected to increase beyond 2036 volumes.

All road links within the development site including unnamed road 073 are expected to experience AADT of less than 3,000vpd. In accordance with PDA Guideline No.06, based on an AADT of less than 3,000vpd the road links are classed as neighbourhood access streets and therefore have no minimum intersection spacing.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of Impacts and Mitigation Measures

Based on the preceding discussion this Traffic Impact Assessment makes the following conclusions:

- Risk items existing in the assessment area were identified through crash rates analysis of 16 years of historic crash data. A road safety risk assessment conducted in accordance with the GTIA concluded that the proposed upgrade of the Teviot Road / Anderson Drive will minimise the risk of all existing risk items. Therefore, no mitigation works are required to address existing road safety issues.
- A review of road environment safety assessment requirements outlined by the GTIA concluded that, changes to:
 - Anderson Drive warrants a “road safety audit” by an accredited Road Safety Auditor (RSA) at the detailed design stage; and
 - All other road links will not require a road safety audit but should be subject to a road safety assessment.

A road safety assessment may be conducted by either an accredited road safety auditor or a Registered Professional Engineer of Queensland (RPEQ). This requirement would be satisfied by safety reports prepared in accordance with Section 295 of the Work Health and Safety Regulation 2011 as part of the design process.

- Intersection analysis of the Teviot Road / Anderson Drive intersection and Anderson Drive / Guroman Drive roundabout was undertaken using SIDRA for precinct 8 opening year (2026) and design year (2036) traffic volumes. The analysis concluded that, both intersections will operate below capacity, experience acceptable delays and will not impact on neighbouring intersections.
- A road frontage assessment of proposed active transport and public transport facilities concluded that the facilities are adequate to support the development.
- A road link capacity assessment based on design year (2036) traffic volumes and link characteristics contained in Economic Development Queensland’s “PDA Guideline No.06 – Street and Movement Network” was undertaken. The assessment concluded that proposed cross-sections of all road links provide sufficient capacity to cater for anticipated traffic volumes.
- Minimum intersection spacing was determined in accordance with Economic Development Queensland’s “PDA Guideline No.06 – Street and Movement Network” for road links within precincts 8 & 10. Based on road link AADTs of less than 3,000vpd and the corresponding neighbourhood access street classification, the guideline doesn’t require a minimum intersection spacing.

6.2 Certification Statement and Authorisation

This report was prepared by Alex Roberts under the direct supervision of Bradley Jones (RPEQ 19986).

The Traffic Impact Assessment Certification in accordance with the GTIA is attached in Appendix F.



APPENDIX A

SIDRA OUTPUT – EXISTING CONDITIONS

SITE LAYOUT

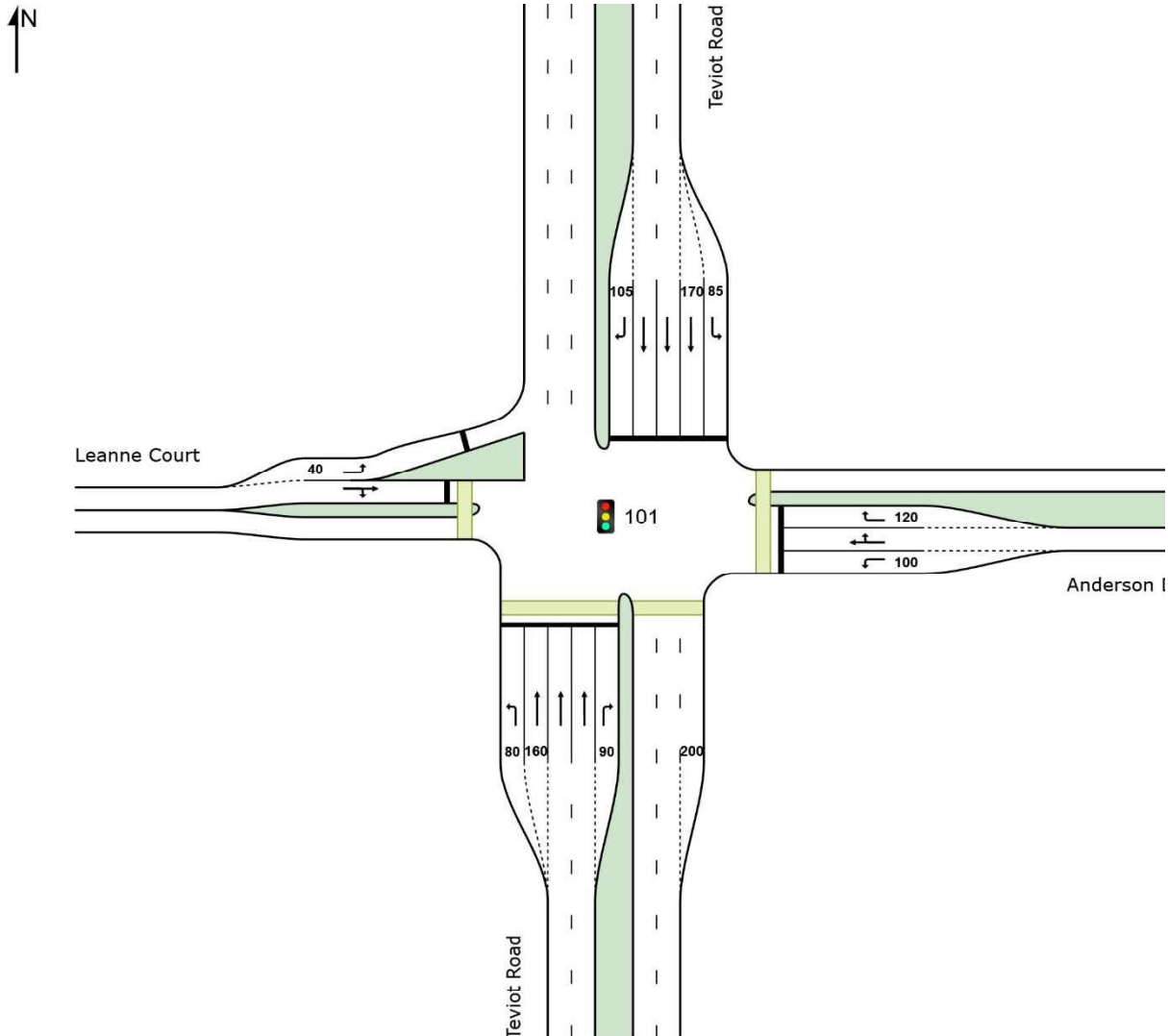
Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: Existing Conditions)]

Teviot Road / Anderson Drive Intersection Upgrade - 2023 Existing Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



PHASING SUMMARY

Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: Existing Conditions)]

Teviot Road / Anderson Drive Intersection Upgrade - 2023 Existing Traffic Volumes, Morning Peak Hour
 Site Category: (None)
 Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Phasing - Import

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D, E

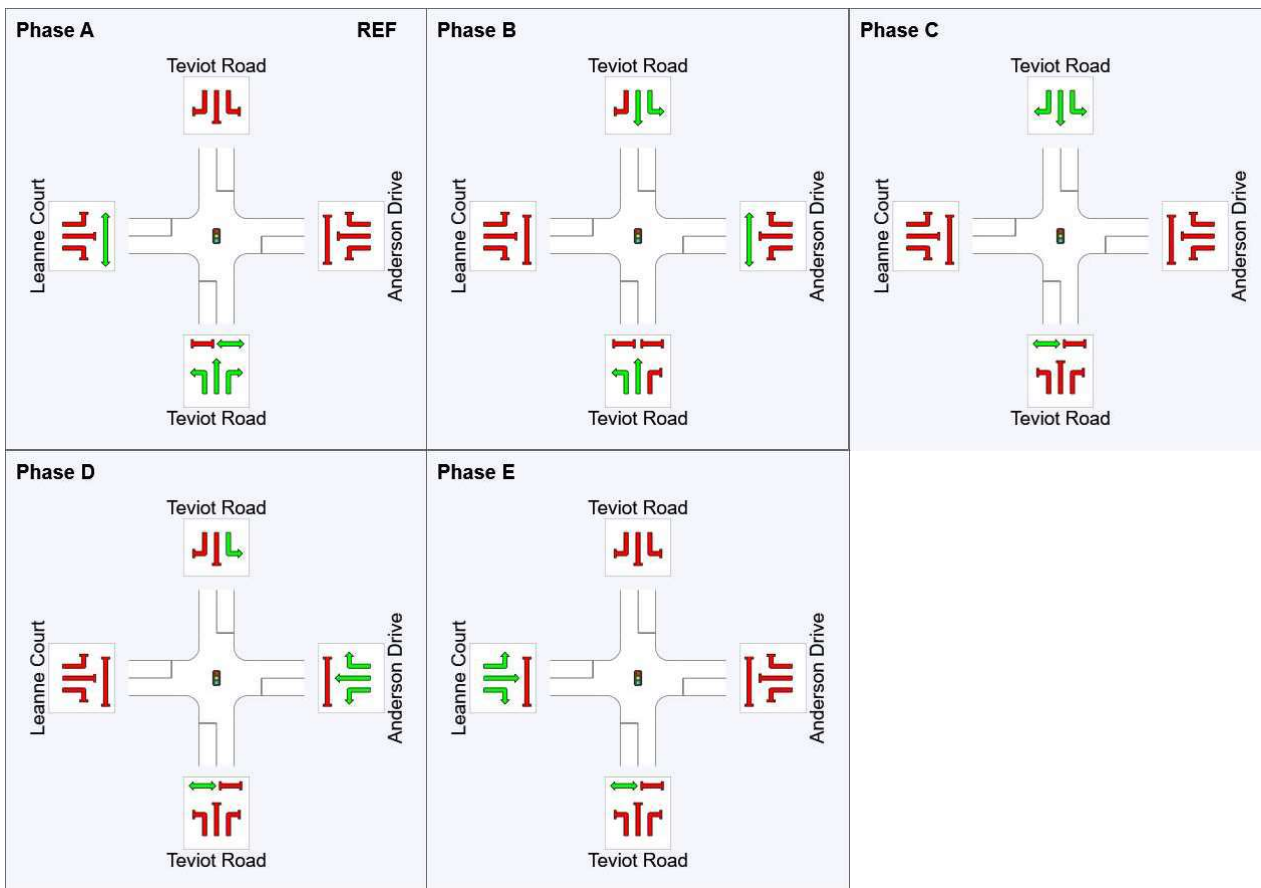
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	40	60	72	108
Green Time (sec)	34	14	6	30	6
Phase Time (sec)	40	20	12	36	12
Phase Split	33%	17%	10%	30%	10%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



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Organisation: PREMISE GROUP SERVICES PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 18 February 2022 3:01:36 PM

Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

MOVEMENT SUMMARY

Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: Existing Conditions)]

Teviot Road / Anderson Drive Intersection Upgrade - 2023 Existing Traffic Volumes, Morning Peak Hour
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE [Veh.	BACK OF QUEUE Dist]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		veh	m				km/h
South: Teviot Road														
1	L2	1	5.0	1	5.0	0.001	24.4	LOS C	0.0	0.2	0.56	0.60	0.56	41.9
2	T1	948	5.0	998	5.0	0.391	23.4	LOS C	12.8	93.8	0.71	0.62	0.71	43.4
3	R2	107	5.0	113	5.0	* 0.222	41.0	LOS D	5.0	36.7	0.81	0.76	0.81	35.5
Approach		1056	5.0	1112	5.0	0.391	25.2	LOS C	12.8	93.8	0.72	0.63	0.72	42.4
East: Anderson Drive														
4	L2	1	5.0	1	5.0	0.002	41.2	LOS D	0.0	0.3	0.77	0.60	0.77	35.2
5	T1	1	5.0	1	5.0	* 0.224	38.5	LOS D	4.7	34.2	0.84	0.76	0.84	34.9
6	R2	190	5.0	200	5.0	0.224	44.2	LOS D	4.7	34.2	0.84	0.76	0.84	34.5
Approach		192	5.0	202	5.0	0.224	44.1	LOS D	4.7	34.2	0.84	0.76	0.84	34.6
North: Teviot Road														
7	L2	47	5.0	49	5.0	0.053	20.7	LOS C	1.4	10.3	0.52	0.68	0.52	43.7
8	T1	352	5.0	371	5.0	0.302	42.7	LOS D	6.1	44.5	0.88	0.71	0.88	35.3
9	R2	1	5.0	1	5.0	* 0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.5
Approach		400	5.0	421	5.0	0.302	40.2	LOS D	6.1	44.5	0.84	0.71	0.84	36.1
West: Leanne Court														
10	L2	1	5.0	1	5.0	0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.7
11	T1	1	5.0	1	5.0	* 0.035	60.8	LOS E	0.2	1.3	0.97	0.62	0.97	29.3
12	R2	2	5.0	2	5.0	0.035	66.5	LOS E	0.2	1.3	0.97	0.62	0.97	29.0
Approach		4	5.0	4	5.0	0.035	64.9	LOS E	0.2	1.3	0.97	0.61	0.97	29.0
All Vehicles		1652	5.0	1739	5.0	0.391	31.1	LOS C	12.8	93.8	0.76	0.67	0.76	39.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped	BACK OF QUEUE Dist]	Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		ped	m			sec	m	m/sec
South: Teviot Road												
P11	Stage 1	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.6	217.5	0.98
P12	Stage 2	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.5	210.9	0.97
East: Anderson Drive												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.3	217.2	0.98
West: Leanne Court												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.3	210.6	0.97
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	218.9	214.1	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.
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Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

PHASING SUMMARY

Site: 101 [PM Teviot / Anderson - Upgrade (Site Folder: Existing Conditions)]

Teviot Road / Anderson Drive Intersection Upgrade - 2023 Existing Traffic Volumes, Evening Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Phasing - Import

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D, E

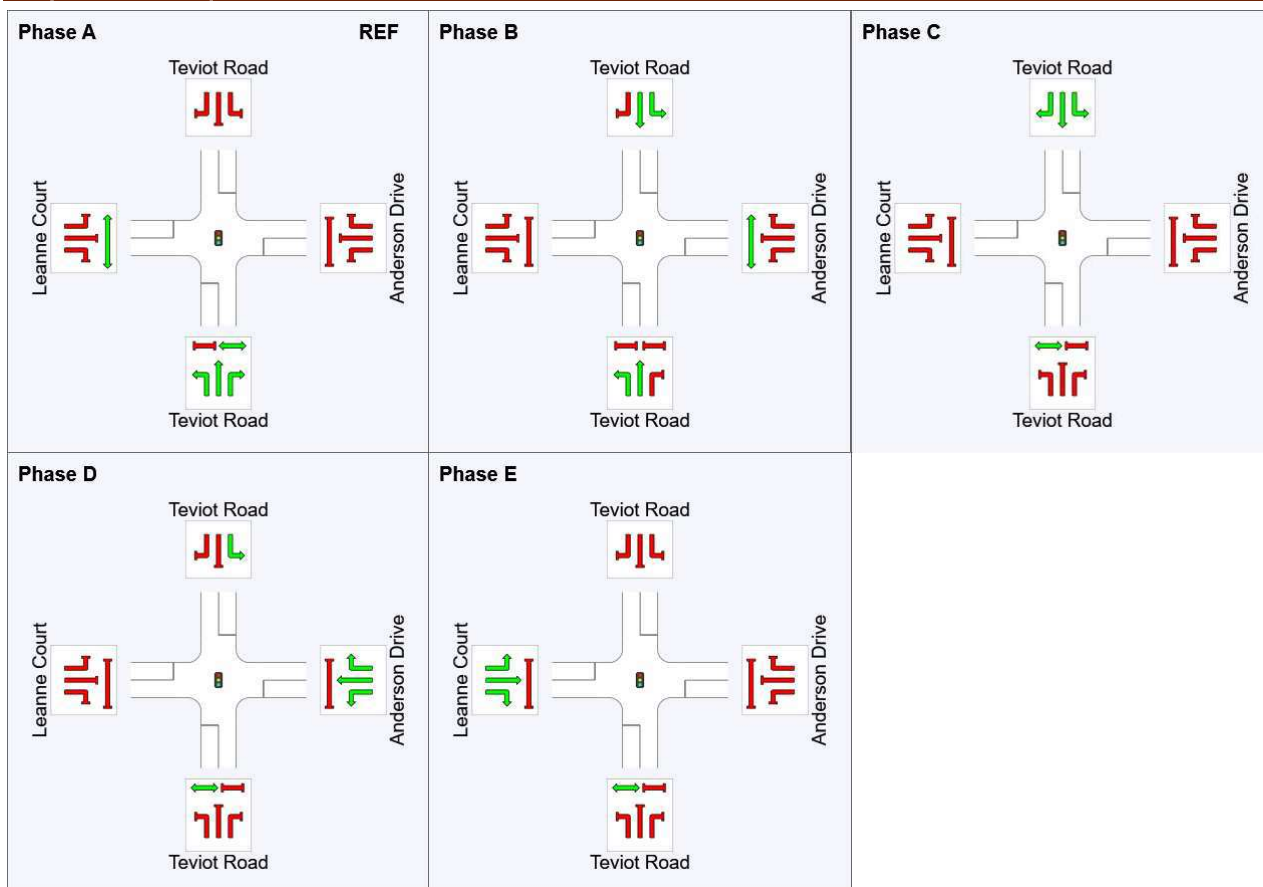
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	18	58	75	108
Green Time (sec)	12	34	11	27	6
Phase Time (sec)	18	40	17	33	12
Phase Split	15%	33%	14%	28%	10%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



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Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

MOVEMENT SUMMARY

 **Site: 101 [PM Teviot / Anderson - Upgrade (Site Folder: Existing Conditions)]**

Teviot Road / Anderson Drive Intersection Upgrade - 2023 Existing Traffic Volumes, Evening Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE [Veh.	Dist]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		veh	m				km/h
South: Teviot Road														
1	L2	2	5.0	2	5.0	0.003	25.7	LOS C	0.1	0.5	0.58	0.61	0.58	41.3
2	T1	489	5.0	515	5.0	0.210	22.5	LOS C	6.2	45.0	0.66	0.55	0.66	43.8
3	R2	78	5.0	82	5.0	* 0.458	62.7	LOS E	4.7	34.4	0.99	0.77	0.99	29.3
Approach		569	5.0	599	5.0	0.458	28.0	LOS C	6.2	45.0	0.71	0.58	0.71	41.0
East: Anderson Drive														
4	L2	1	5.0	1	5.0	0.003	44.4	LOS D	0.0	0.3	0.79	0.60	0.79	34.4
5	T1	1	5.0	1	5.0	* 0.202	40.8	LOS D	3.9	28.4	0.85	0.75	0.85	34.2
6	R2	154	5.0	162	5.0	0.202	46.4	LOS D	3.9	28.4	0.85	0.75	0.85	33.8
Approach		156	5.0	164	5.0	0.202	46.4	LOS D	3.9	28.4	0.85	0.75	0.85	33.8
North: Teviot Road														
7	L2	128	5.0	135	5.0	0.107	11.7	LOS B	2.5	18.2	0.34	0.66	0.34	49.0
8	T1	1046	5.0	1101	5.0	0.457	26.5	LOS C	15.2	110.8	0.76	0.67	0.76	42.0
9	R2	2	5.0	2	5.0	* 0.013	59.5	LOS E	0.1	0.8	0.93	0.62	0.93	30.0
Approach		1176	5.0	1238	5.0	0.457	25.0	LOS C	15.2	110.8	0.72	0.66	0.72	42.6
West: Leanne Court														
10	L2	1	5.0	1	5.0	0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.7
11	T1	1	5.0	1	5.0	* 0.023	60.5	LOS E	0.1	0.9	0.97	0.60	0.97	29.6
12	R2	1	5.0	1	5.0	0.023	66.2	LOS E	0.1	0.9	0.97	0.60	0.97	29.3
Approach		3	5.0	3	5.0	0.023	64.2	LOS E	0.1	0.9	0.97	0.60	0.97	29.2
All Vehicles		1904	5.0	2004	5.0	0.458	27.7	LOS C	15.2	110.8	0.73	0.65	0.73	41.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped	Dist]	Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		ped	m			sec	m	m/sec
South: Teviot Road												
P11	Stage 1	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.6	217.5	0.98
P12	Stage 2	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.5	210.9	0.97
East: Anderson Drive												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.3	217.2	0.98
West: Leanne Court												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.3	210.6	0.97
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	218.9	214.1	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

SITE LAYOUT

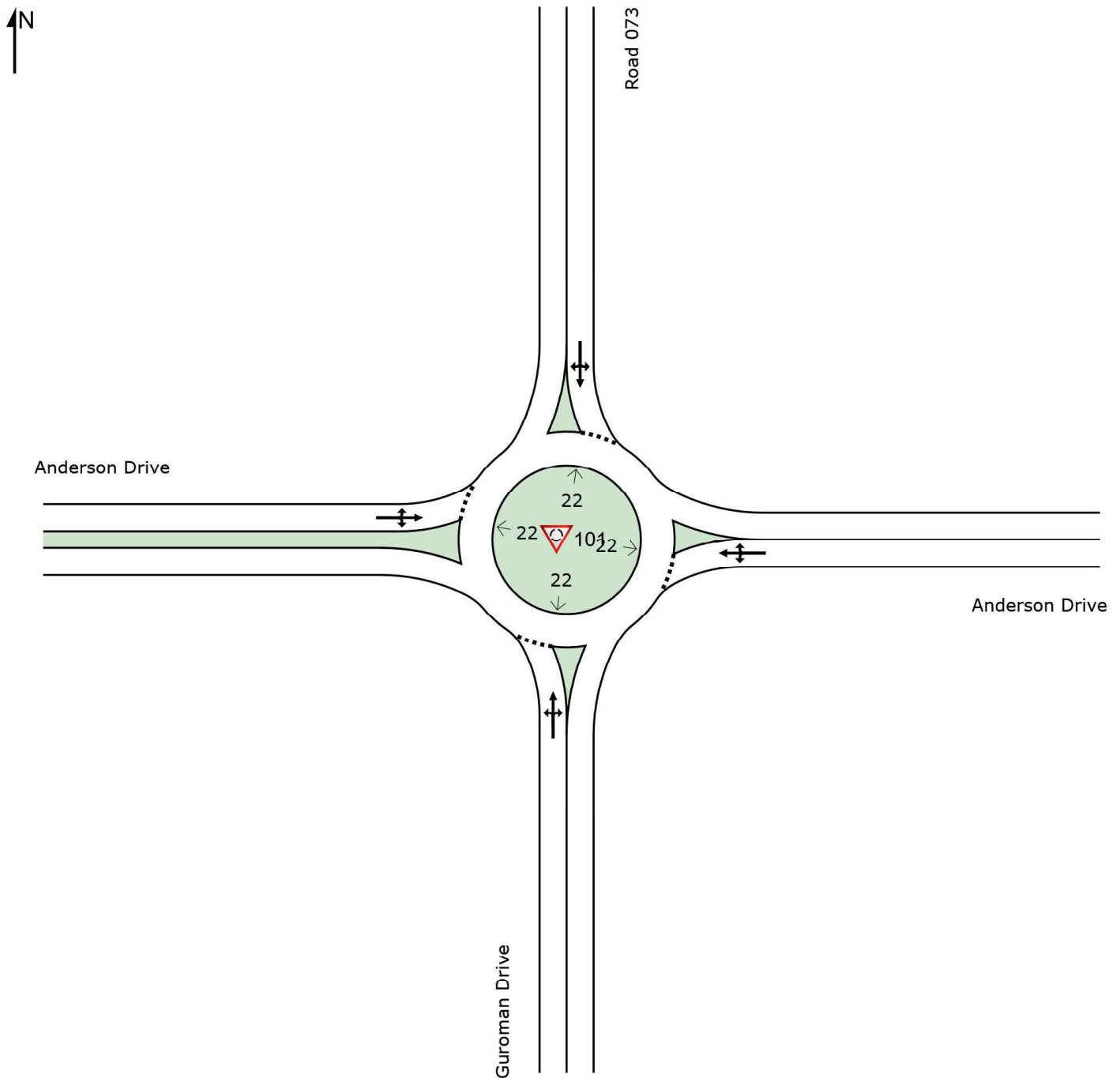
 **Site: 101 [AM Anderson / Guroman (Site Folder: Existing Conditions)]**

Anderson Drive / Guroman Drive Roundabout - 2023 Existing Traffic Volumes, Morning Peak Hour

Site Category: (None)

Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Anderson / Guroman (Site Folder: Existing Conditions)]

Anderson Drive / Guroman Drive Roundabout - 2023 Existing Traffic Volumes, Morning Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE [Veh.	Dist]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		veh	m				
South: Guroman Drive														
1	L2	112	5.0	118	5.0	0.081	3.9	LOS A	0.4	2.9	0.08	0.46	0.08	55.3
2	T1	1	5.0	1	5.0	0.081	4.0	LOS A	0.4	2.9	0.08	0.46	0.08	56.8
3	R2	1	5.0	1	5.0	0.081	8.9	LOS A	0.4	2.9	0.08	0.46	0.08	56.7
Approach		114	5.0	120	5.0	0.081	3.9	LOS A	0.4	2.9	0.08	0.46	0.08	55.4
East: Anderson Drive														
4	L2	1	5.0	1	5.0	0.012	4.0	LOS A	0.1	0.4	0.13	0.40	0.13	54.8
5	T1	13	5.0	14	5.0	0.012	4.1	LOS A	0.1	0.4	0.13	0.40	0.13	56.2
6	R2	1	5.0	1	5.0	0.012	9.0	LOS A	0.1	0.4	0.13	0.40	0.13	56.1
Approach		15	5.0	16	5.0	0.012	4.4	LOS A	0.1	0.4	0.13	0.40	0.13	56.1
North: Road 073														
7	L2	1	5.0	1	5.0	0.002	4.0	LOS A	0.0	0.1	0.16	0.49	0.16	53.8
8	T1	1	5.0	1	5.0	0.002	4.2	LOS A	0.0	0.1	0.16	0.49	0.16	55.2
9	R2	1	5.0	1	5.0	0.002	9.0	LOS A	0.0	0.1	0.16	0.49	0.16	55.1
Approach		3	5.0	3	5.0	0.002	5.7	LOS A	0.0	0.1	0.16	0.49	0.16	54.7
West: Anderson Drive														
10	L2	1	5.0	1	5.0	0.032	3.8	LOS A	0.1	1.1	0.03	0.59	0.03	53.0
11	T1	15	5.0	16	5.0	0.032	4.0	LOS A	0.1	1.1	0.03	0.59	0.03	54.3
12	R2	32	5.0	34	5.0	0.032	8.8	LOS A	0.1	1.1	0.03	0.59	0.03	54.3
Approach		48	5.0	51	5.0	0.032	7.2	LOS A	0.1	1.1	0.03	0.59	0.03	54.3
All Vehicles		180	5.0	189	5.0	0.081	4.9	LOS A	0.4	2.9	0.07	0.49	0.07	55.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [PM Anderson / Guroman (Site Folder: Existing Conditions)]

Anderson Drive / Guroman Drive Roundabout - 2023 Existing Traffic Volumes, Evening Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed	
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				
South: Guroman Drive														
1	L2	67	5.0	71	5.0	0.047	3.8	LOS A	0.2	1.7	0.04	0.46	0.04	55.4
2	T1	1	5.0	1	5.0	0.047	4.0	LOS A	0.2	1.7	0.04	0.46	0.04	56.9
3	R2	1	5.0	1	5.0	0.047	8.9	LOS A	0.2	1.7	0.04	0.46	0.04	56.9
Approach		69	5.0	73	5.0	0.047	3.9	LOS A	0.2	1.7	0.04	0.46	0.04	55.5
East: Anderson Drive														
4	L2	1	5.0	1	5.0	0.004	4.4	LOS A	0.0	0.1	0.27	0.45	0.27	53.8
5	T1	3	5.0	3	5.0	0.004	4.5	LOS A	0.0	0.1	0.27	0.45	0.27	55.1
6	R2	1	5.0	1	5.0	0.004	9.4	LOS A	0.0	0.1	0.27	0.45	0.27	55.1
Approach		5	5.0	5	5.0	0.004	5.5	LOS A	0.0	0.1	0.27	0.45	0.27	54.9
North: Road 073														
7	L2	1	5.0	1	5.0	0.003	4.4	LOS A	0.0	0.1	0.27	0.49	0.27	53.4
8	T1	1	5.0	1	5.0	0.003	4.5	LOS A	0.0	0.1	0.27	0.49	0.27	54.8
9	R2	1	5.0	1	5.0	0.003	9.4	LOS A	0.0	0.1	0.27	0.49	0.27	54.7
Approach		3	5.0	3	5.0	0.003	6.1	LOS A	0.0	0.1	0.27	0.49	0.27	54.3
West: Anderson Drive														
10	L2	1	5.0	1	5.0	0.083	3.8	LOS A	0.4	3.0	0.03	0.64	0.03	52.0
11	T1	3	5.0	3	5.0	0.083	4.0	LOS A	0.4	3.0	0.03	0.64	0.03	53.2
12	R2	125	5.0	132	5.0	0.083	8.8	LOS A	0.4	3.0	0.03	0.64	0.03	53.2
Approach		129	5.0	136	5.0	0.083	8.7	LOS A	0.4	3.0	0.03	0.64	0.03	53.2
All Vehicles		206	5.0	217	5.0	0.083	7.0	LOS A	0.4	3.0	0.04	0.57	0.04	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



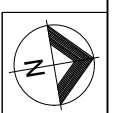
APPENDIX B

EVERLEIGH INTERNAL ROAD LAYOUT



APPENDIX C

DESIGN YEAR (2036) TRAFFIC VOLUMES



ROAD LEGEND

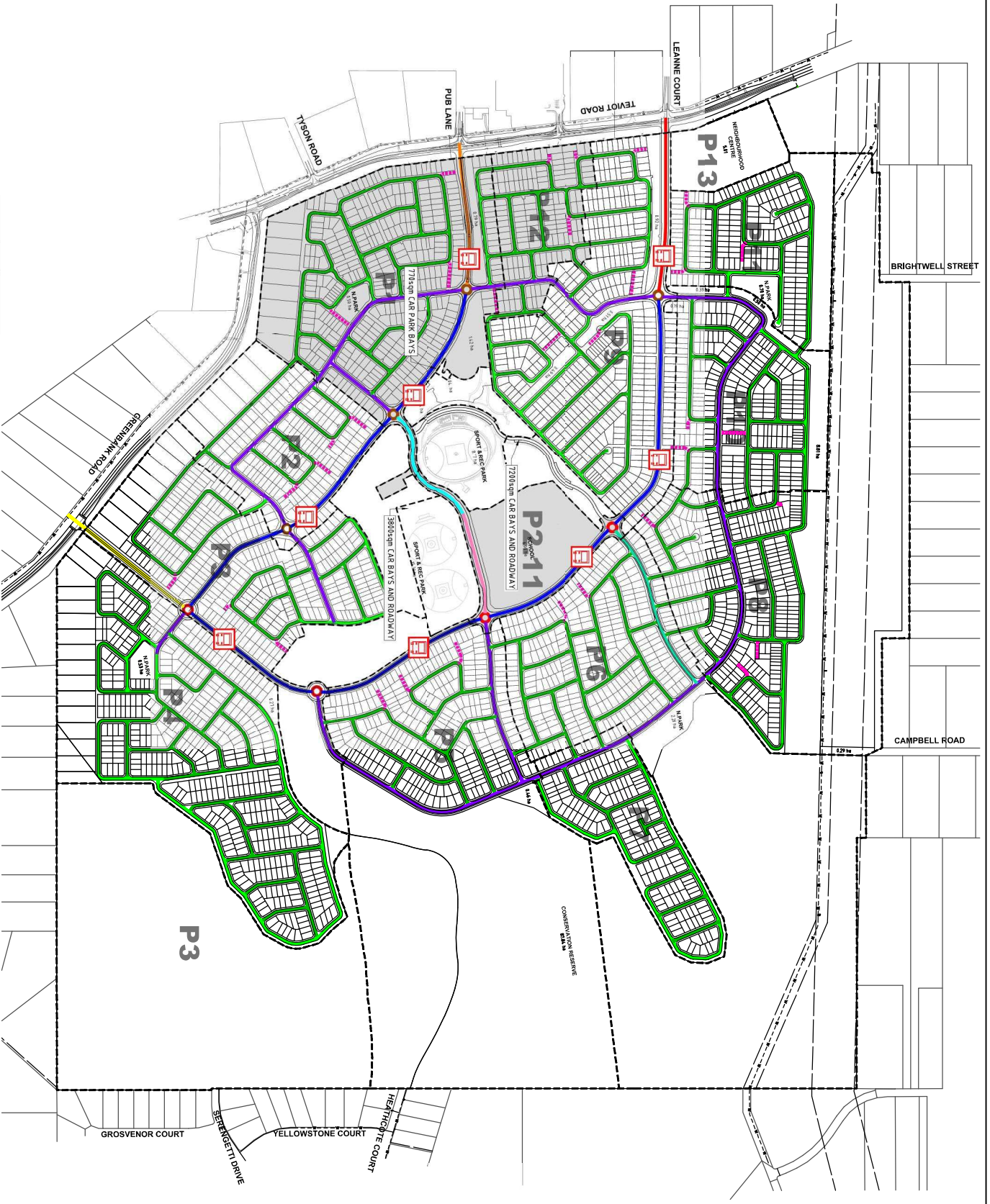
- ACCESS STREET (TYPICAL)
- ACCESS STREET (PARK)
- RURAL ACCESS STREET
- TRUNK CONNECTOR 1
- TRUNK CONNECTOR 2
- TRUNK CONNECTOR 3
- NEIGHBOURHOOD CONNECTOR 1
- NEIGHBOURHOOD CONNECTOR 2
- NEIGHBOURHOOD CONNECTOR 3
- PARK CONNECTOR 1
- PARK CONNECTOR 2
- ASPHALT DRIVEWAYS
- PROPOSED INDENTED BUS STOP PAIR

LEGEND

- COMPLETED WORKS

NOTES:

- ROAD HIERARCHY BASED ON MOVEMENT NETWORKS MAP PREPARED BY PMH DATED 10/04/17.
- REFER TO DRAWING SL402 FOR TABLE OF ROAD LENGTHS.



DATE: 10/04/17 DRAWN: K. KITMANC CHECKED: H. YU DATE: 10/04/17 SCALE: 1:1000 SCALE 15000 (A1)		DESIGNED: K. KITMANC DRAWN: H. YU CHECKED: R. BARCER DATE: 10/04/17 SCALE: 1:1000 SCALE 15000 (A1)		APPROVED: DATE:		CLIENT: MIRVAC		PROJECT: PROPOSED SUBDIVISION LOCATION: GREENBANK ROAD, GREENBANK SUBJECT: SERVICING LAYOUT - INTERNAL ROADWORKS		JOB CODE: MIRSGB SHEET NUMBER: SL400 REV: F DATE: 10/04/17 DRAWN: K. KITMANC	
<p>BRISBANE OFFICE LEVEL 11, 300 ADELAIDE STREET BRISBANE, QLD 4000 PH: (07) 3553 2222 WEB: www.premise.com.au</p> <p>Premise</p>											
<p>DESIGNED BY AND FOR THE CLIENT AND ROAD ADJACENTS THIS DRAWING IS THE PROPERTY OF PREMISE CONSULTING AND IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF PREMISE CONSULTING DATE: 10/04/17</p>											



APPENDIX D

SIDRA OUTPUT – PRECINCT 8 OPENING YEAR (2026)

SITE LAYOUT

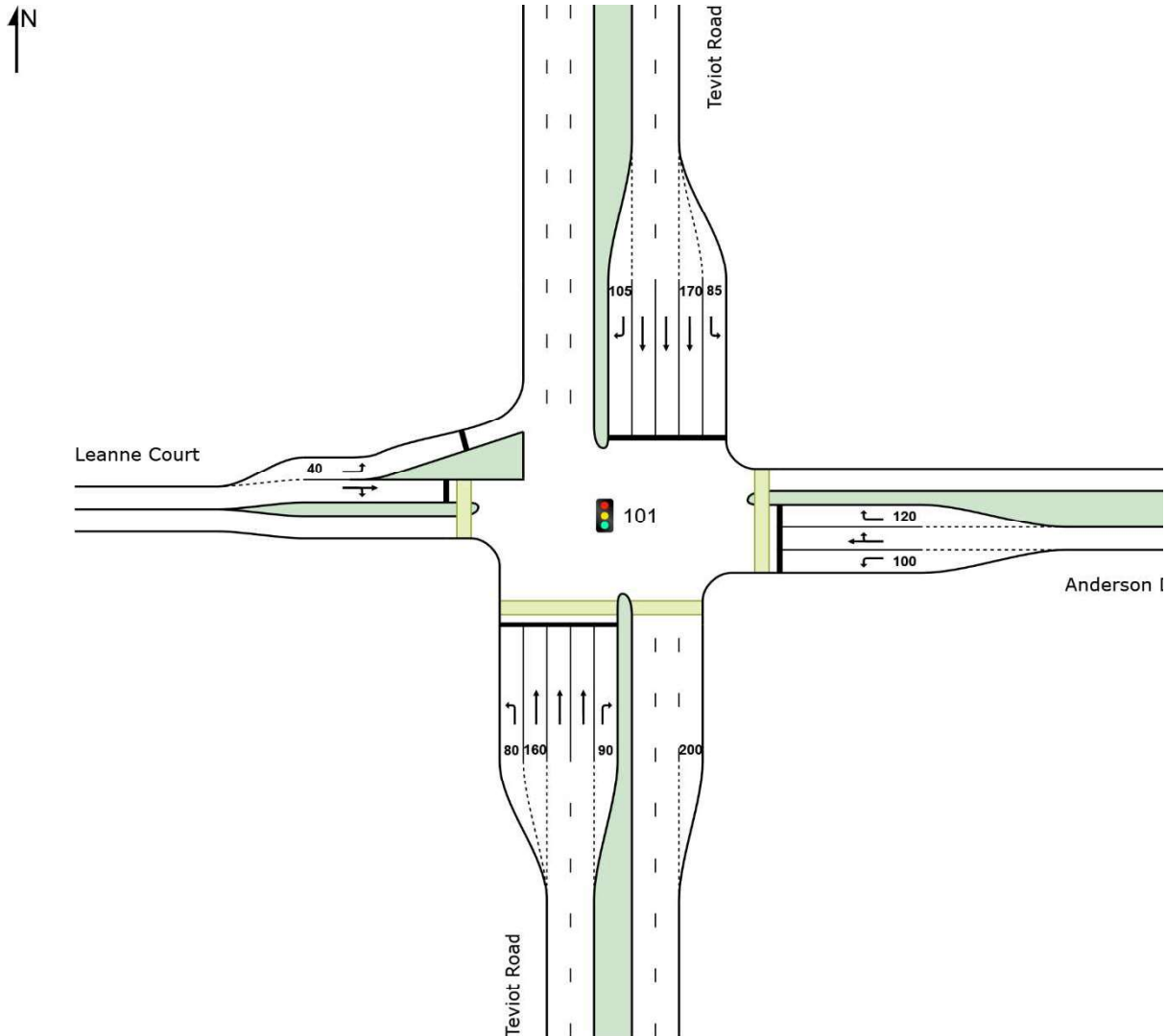
Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: 2026 Opening 8)]

Teviot Road / Anderson Drive Intersection Upgrade - 2026 Opening Year Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



PHASING SUMMARY

Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: 2026 Opening 8)]

Teviot Road / Anderson Drive Intersection Upgrade - 2026 Opening Year Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Phasing - Import

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D, E

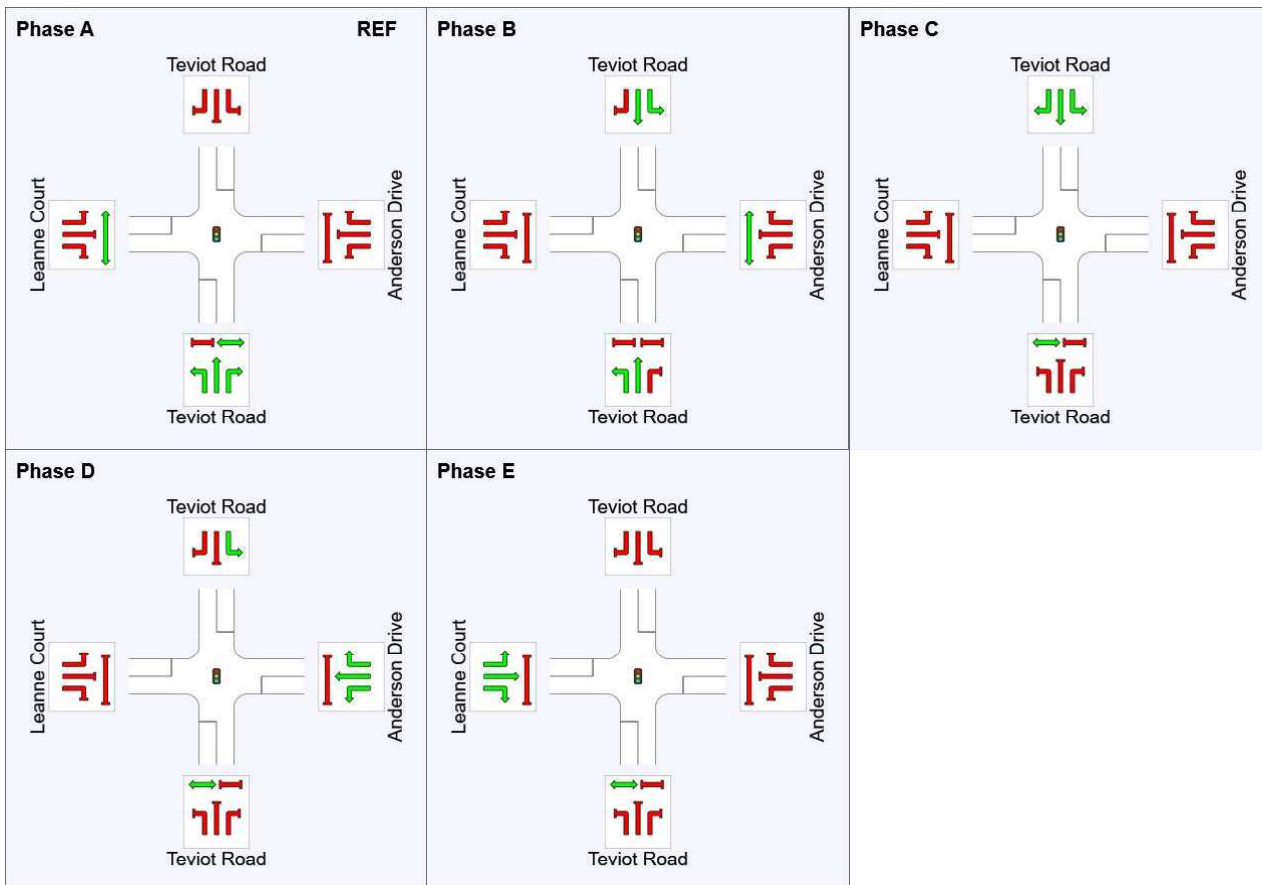
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	39	59	71	108
Green Time (sec)	33	14	6	31	6
Phase Time (sec)	39	20	12	37	12
Phase Split	33%	17%	10%	31%	10%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



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Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14, Engineering - Traffic\03, SIDRA\MIR-0800 SIDRA.sip9

MOVEMENT SUMMARY

 **Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: 2026 Opening 8)]**

Teviot Road / Anderson Drive Intersection Upgrade - 2026 Opening Year Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Teviot Road														
1	L2	1	5.0	1	5.0	0.001	25.0	LOS C	0.0	0.2	0.57	0.60	0.57	41.6
2	T1	977	5.0	1028	5.0	0.411	24.3	LOS C	13.5	98.8	0.73	0.63	0.73	42.9
3	R2	185	5.0	195	5.0	* 0.395	43.8	LOS D	9.3	67.9	0.86	0.79	0.86	34.5
Approach		1163	5.0	1224	5.0	0.411	27.4	LOS C	13.5	98.8	0.75	0.66	0.75	41.3
East: Anderson Drive														
4	L2	117	5.0	123	5.0	0.266	44.1	LOS D	5.8	42.0	0.84	0.77	0.84	34.3
5	T1	1	5.0	1	5.0	* 0.391	39.7	LOS D	8.8	64.1	0.87	0.79	0.87	34.5
6	R2	343	5.0	361	5.0	0.391	45.3	LOS D	8.8	64.1	0.87	0.79	0.87	34.2
Approach		461	5.0	485	5.0	0.391	45.0	LOS D	8.8	64.1	0.86	0.79	0.86	34.2
North: Teviot Road														
7	L2	94	5.0	99	5.0	0.105	20.7	LOS C	2.9	20.8	0.53	0.70	0.53	43.8
8	T1	375	5.0	395	5.0	0.322	42.9	LOS D	6.5	47.6	0.89	0.72	0.89	35.2
9	R2	1	5.0	1	5.0	* 0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.5
Approach		470	5.0	495	5.0	0.322	38.5	LOS D	6.5	47.6	0.82	0.71	0.82	36.6
West: Leanne Court														
10	L2	1	5.0	1	5.0	0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.7
11	T1	1	5.0	1	5.0	* 0.035	60.8	LOS E	0.2	1.3	0.97	0.62	0.97	29.3
12	R2	2	5.0	2	5.0	0.035	66.5	LOS E	0.2	1.3	0.97	0.62	0.97	29.0
Approach		4	5.0	4	5.0	0.035	64.9	LOS E	0.2	1.3	0.97	0.61	0.97	29.0
All Vehicles		2098	5.0	2208	5.0	0.411	33.8	LOS C	13.5	98.8	0.79	0.70	0.79	38.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input	Dem.	Aver.	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		Vol.	Flow	Delay		[Ped	Dist]					
		ped/h	ped/h	sec		ped	m					
South: Teviot Road												
P11	Stage 1	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.6	217.5	0.98
P12	Stage 2	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.5	210.9	0.97
East: Anderson Drive												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.3	217.2	0.98
West: Leanne Court												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.3	210.6	0.97
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	218.9	214.1	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

PHASING SUMMARY

Site: 101 [PM Teviot / Anderson - Upgrade (Site Folder: 2026 Opening 8)]

Teviot Road / Anderson Drive Intersection Upgrade - 2026 Opening Year Traffic Volumes, Evening Peak Hour
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

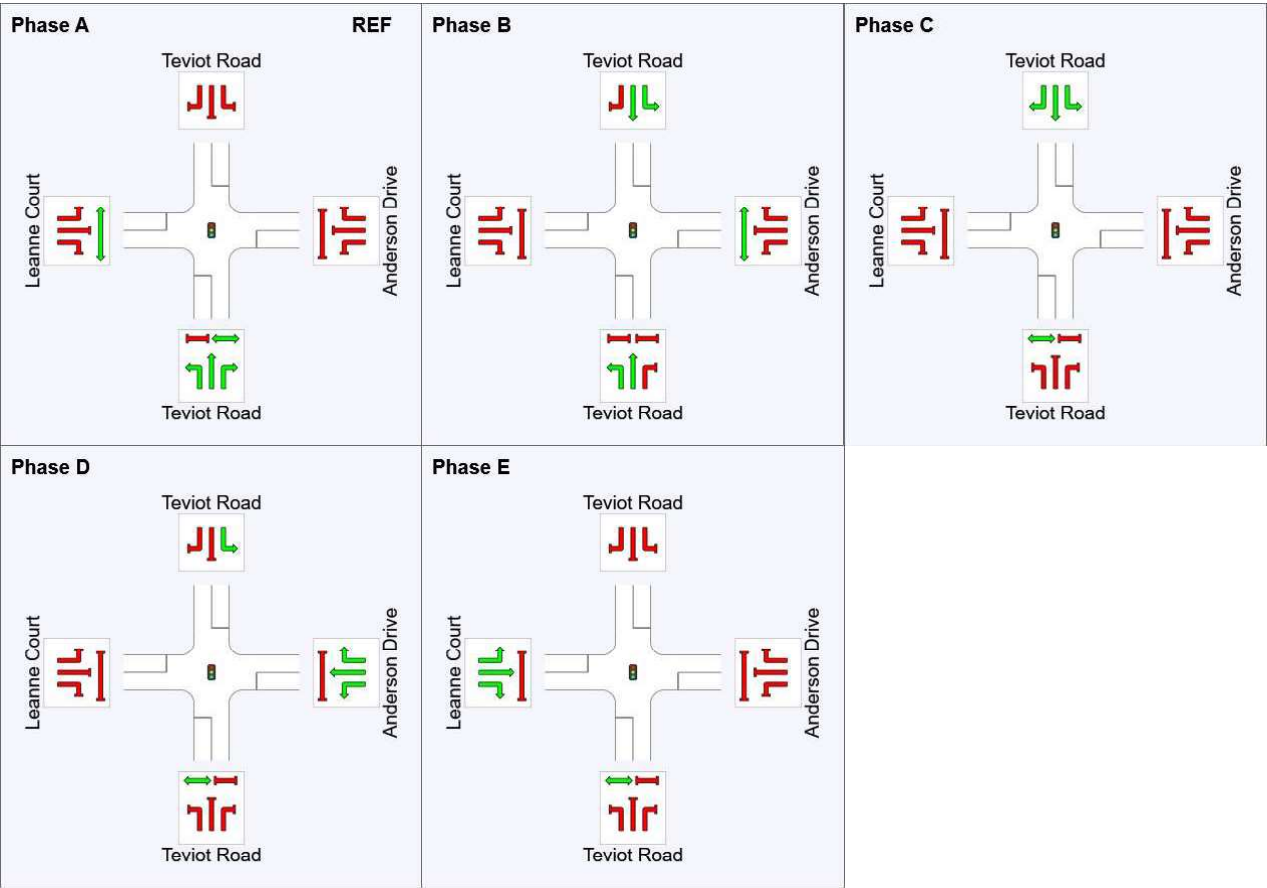
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Phasing - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D, E
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	36	74	86	108
Green Time (sec)	30	32	6	16	6
Phase Time (sec)	36	38	12	22	12
Phase Split	30%	32%	10%	18%	10%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



MOVEMENT SUMMARY

Site: 101 [PM Teviot / Anderson - Upgrade (Site Folder: 2026 Opening 8)]

Teviot Road / Anderson Drive Intersection Upgrade - 2026 Opening Year Traffic Volumes, Evening Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Teviot Road														
1	L2	2	5.0	2	5.0	0.002	17.3	LOS B	0.1	0.4	0.45	0.61	0.45	45.6
2	T1	499	5.0	525	5.0	0.164	13.1	LOS B	4.8	35.0	0.51	0.43	0.51	49.4
3	R2	240	5.0	253	5.0	* 0.564	48.3	LOS D	13.0	95.0	0.93	0.82	0.93	33.1
Approach		741	5.0	780	5.0	0.564	24.5	LOS C	13.0	95.0	0.64	0.55	0.64	42.6
East: Anderson Drive														
4	L2	70	5.0	74	5.0	0.308	58.5	LOS E	4.0	29.2	0.94	0.76	0.94	30.4
5	T1	1	5.0	1	5.0	* 0.574	54.2	LOS D	7.8	56.8	0.99	0.80	0.99	30.4
6	R2	260	5.0	274	5.0	0.574	59.8	LOS E	7.8	56.8	0.99	0.80	0.99	30.1
Approach		331	5.0	348	5.0	0.574	59.5	LOS E	7.8	56.8	0.98	0.79	0.98	30.2
North: Teviot Road														
7	L2	255	5.0	268	5.0	0.272	20.7	LOS C	8.2	59.7	0.57	0.74	0.57	43.8
8	T1	1119	5.0	1178	5.0	* 0.567	32.9	LOS C	18.3	133.5	0.86	0.75	0.86	39.1
9	R2	2	5.0	2	5.0	0.023	66.2	LOS E	0.1	0.9	0.97	0.61	0.97	28.4
Approach		1376	5.0	1448	5.0	0.567	30.7	LOS C	18.3	133.5	0.80	0.74	0.80	39.9
West: Leanne Court														
10	L2	1	5.0	1	5.0	0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.7
11	T1	1	5.0	1	5.0	* 0.023	60.5	LOS E	0.1	0.9	0.97	0.60	0.97	29.6
12	R2	1	5.0	1	5.0	0.023	66.2	LOS E	0.1	0.9	0.97	0.60	0.97	29.3
Approach		3	5.0	3	5.0	0.023	64.2	LOS E	0.1	0.9	0.97	0.60	0.97	29.2
All Vehicles		2451	5.0	2580	5.0	0.574	32.8	LOS C	18.3	133.5	0.78	0.69	0.78	38.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
						[Ped	Dist]					
						ped	m					
		ped/h	ped/h	sec						sec	m	m/sec
South: Teviot Road												
P11	Stage 1	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.6	217.5	0.98
P12	Stage 2	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.5	210.9	0.97
East: Anderson Drive												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.3	217.2	0.98
West: Leanne Court												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.3	210.6	0.97
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	218.9	214.1	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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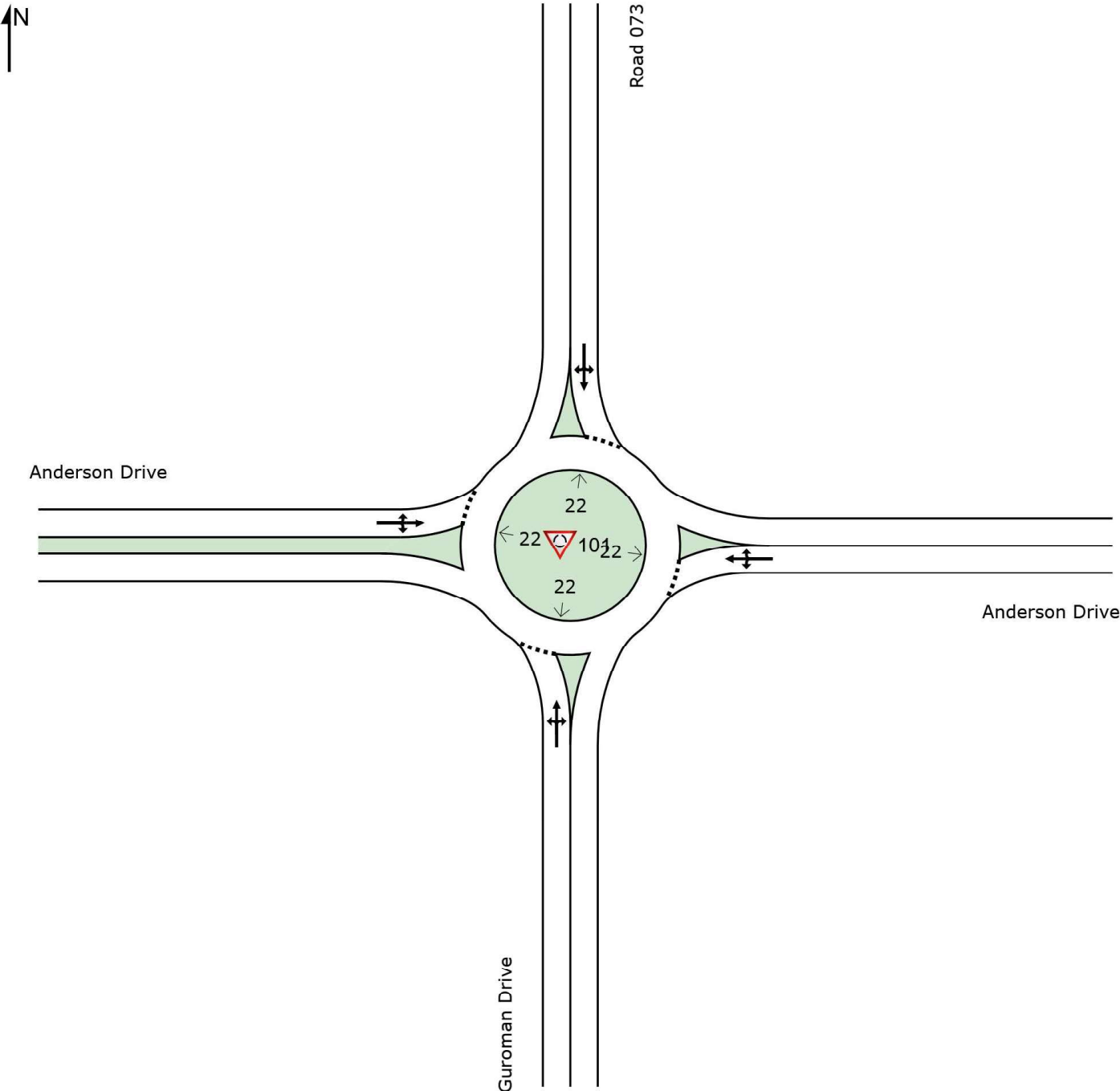
Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

SITE LAYOUT

 **Site: 101 [AM Anderson / Guroman (Site Folder: 2026 Opening 8)]**

Anderson Drive / Guroman Drive Roundabout - 2026 Opening Year Traffic Volumes, Morning Peak Hour
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Anderson / Guroman (Site Folder: 2026 Opening 8)]

Anderson Drive / Guroman Drive Roundabout - 2026 Opening Year Traffic Volumes, Morning Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed	
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Guroman Drive														
1	L2	112	5.0	118	5.0	0.124	5.2	LOS A	0.6	4.7	0.44	0.55	0.44	54.1
2	T1	15	5.0	16	5.0	0.124	5.3	LOS A	0.6	4.7	0.44	0.55	0.44	55.5
3	R2	1	5.0	1	5.0	0.124	10.2	LOS B	0.6	4.7	0.44	0.55	0.44	55.4
Approach		128	5.0	135	5.0	0.124	5.3	LOS A	0.6	4.7	0.44	0.55	0.44	54.2
East: Anderson Drive														
4	L2	1	5.0	1	5.0	0.027	5.3	LOS A	0.1	1.0	0.45	0.50	0.45	53.4
5	T1	25	5.0	26	5.0	0.027	5.5	LOS A	0.1	1.0	0.45	0.50	0.45	54.7
6	R2	1	5.0	1	5.0	0.027	10.4	LOS B	0.1	1.0	0.45	0.50	0.45	54.7
Approach		27	5.0	28	5.0	0.027	5.7	LOS A	0.1	1.0	0.45	0.50	0.45	54.7
North: Road 073														
7	L2	1	5.0	1	5.0	0.215	4.2	LOS A	1.2	8.7	0.22	0.59	0.22	51.9
8	T1	52	5.0	55	5.0	0.215	4.3	LOS A	1.2	8.7	0.22	0.59	0.22	53.2
9	R2	229	5.0	241	5.0	0.215	9.2	LOS A	1.2	8.7	0.22	0.59	0.22	53.1
Approach		282	5.0	297	5.0	0.215	8.3	LOS A	1.2	8.7	0.22	0.59	0.22	53.1
West: Anderson Drive														
10	L2	65	5.0	68	5.0	0.091	3.9	LOS A	0.5	3.6	0.10	0.49	0.10	54.3
11	T1	31	5.0	33	5.0	0.091	4.0	LOS A	0.5	3.6	0.10	0.49	0.10	55.7
12	R2	32	5.0	34	5.0	0.091	8.9	LOS A	0.5	3.6	0.10	0.49	0.10	55.6
Approach		128	5.0	135	5.0	0.091	5.2	LOS A	0.5	3.6	0.10	0.49	0.10	55.0
All Vehicles		565	5.0	595	5.0	0.215	6.8	LOS A	1.2	8.7	0.25	0.55	0.25	53.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [PM Anderson / Guroman (Site Folder: 2026 Opening 8)]

Anderson Drive / Guroman Drive Roundabout - 2026 Opening Year Traffic Volumes, Evening Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance													
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m			km/h
South: Guroman Drive													
1	L2	67	5.0	71	5.0	0.111	4.6	LOS A	0.6	4.3	0.33	0.47	54.2
2	T1	58	5.0	61	5.0	0.111	4.7	LOS A	0.6	4.3	0.33	0.47	55.7
3	R2	1	5.0	1	5.0	0.111	9.6	LOS A	0.6	4.3	0.33	0.47	55.6
Approach		126	5.0	133	5.0	0.111	4.7	LOS A	0.6	4.3	0.33	0.47	54.9
East: Anderson Drive													
4	L2	1	5.0	1	5.0	0.008	5.2	LOS A	0.0	0.3	0.43	0.48	53.3
5	T1	6	5.0	6	5.0	0.008	5.3	LOS A	0.0	0.3	0.43	0.48	54.6
6	R2	1	5.0	1	5.0	0.008	10.2	LOS B	0.0	0.3	0.43	0.48	54.6
Approach		8	5.0	8	5.0	0.008	5.9	LOS A	0.0	0.3	0.43	0.48	54.5
North: Road 073													
7	L2	1	5.0	1	5.0	0.147	4.5	LOS A	0.8	5.7	0.32	0.60	51.6
8	T1	31	5.0	33	5.0	0.147	4.7	LOS A	0.8	5.7	0.32	0.60	52.9
9	R2	137	5.0	144	5.0	0.147	9.6	LOS A	0.8	5.7	0.32	0.60	52.8
Approach		169	5.0	178	5.0	0.147	8.6	LOS A	0.8	5.7	0.32	0.60	52.8
West: Anderson Drive													
10	L2	255	5.0	268	5.0	0.289	4.2	LOS A	1.8	13.5	0.24	0.52	53.6
11	T1	6	5.0	6	5.0	0.289	4.3	LOS A	1.8	13.5	0.24	0.52	55.0
12	R2	125	5.0	132	5.0	0.289	9.2	LOS A	1.8	13.5	0.24	0.52	54.9
Approach		386	5.0	406	5.0	0.289	5.8	LOS A	1.8	13.5	0.24	0.52	54.1
All Vehicles		689	5.0	725	5.0	0.289	6.3	LOS A	1.8	13.5	0.28	0.53	53.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



APPENDIX E

SIDRA OUTPUT – DESIGN YEAR (2036)

SITE LAYOUT

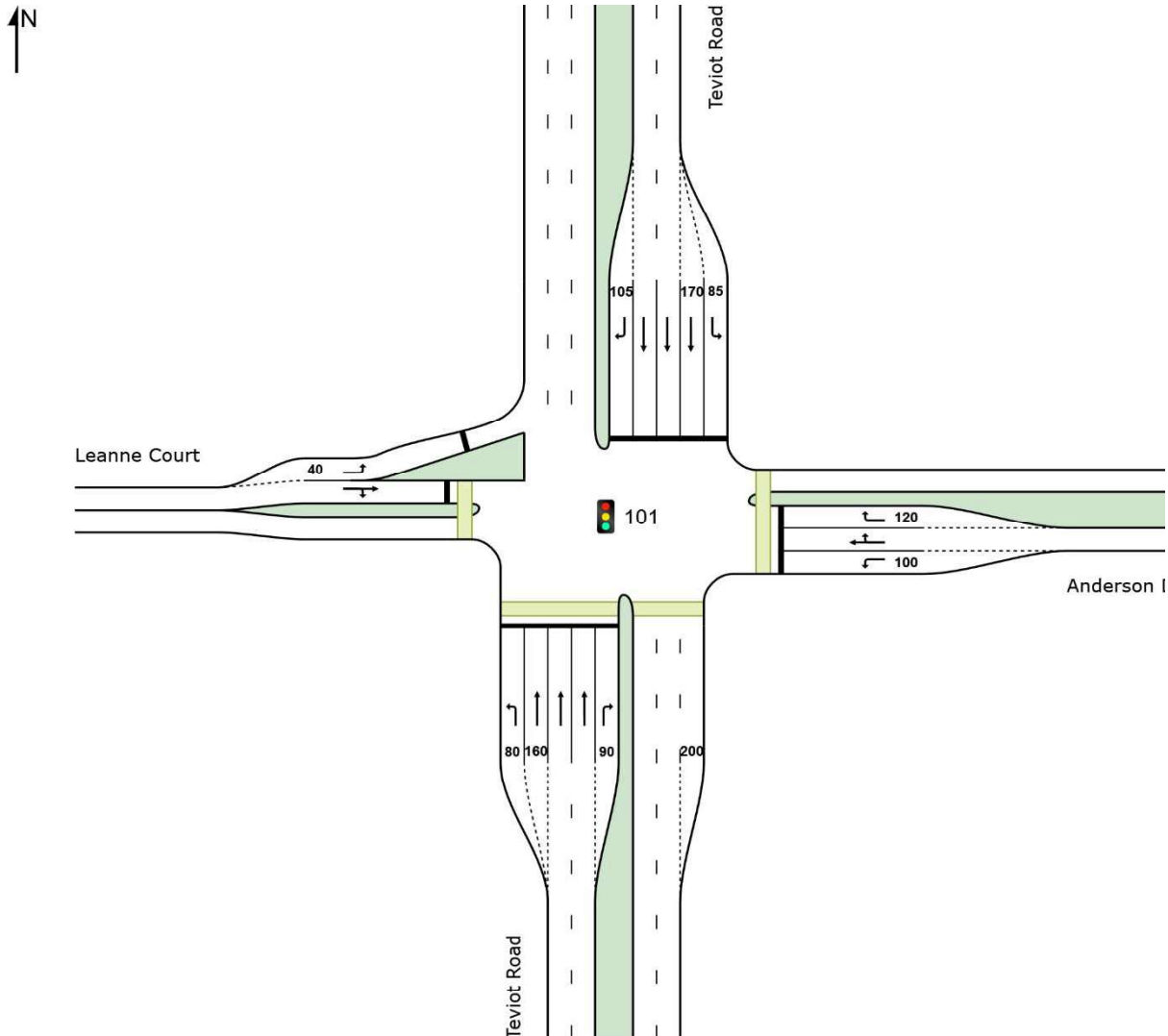
Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: 2036 Design Year)]

Teviot Road / Anderson Drive Intersection Upgrade - 2036 Design Year Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



PHASING SUMMARY

Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: 2036 Design Year)]

Teviot Road / Anderson Drive Intersection Upgrade - 2036 Design Year Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Phasing - Import

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D, E

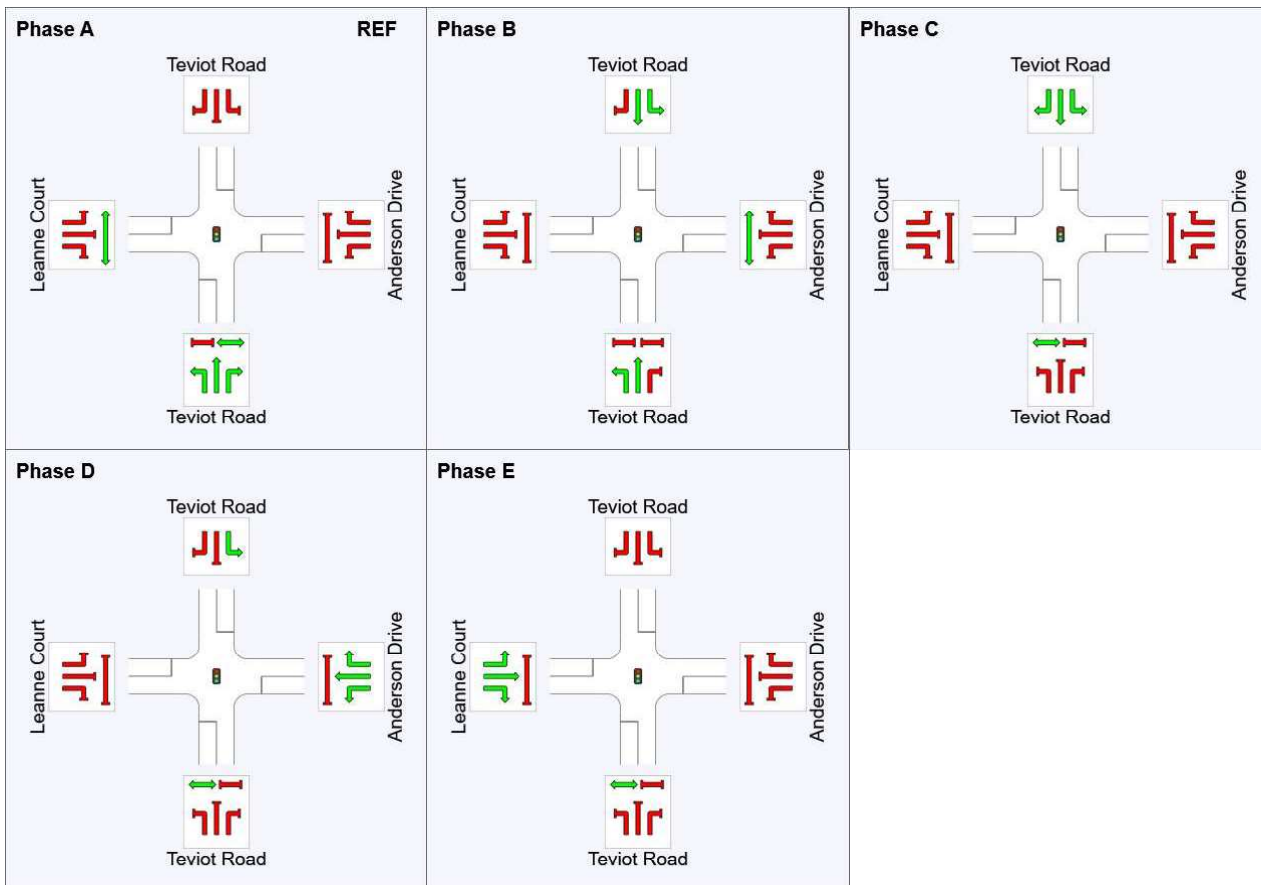
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	30	50	62	108
Green Time (sec)	24	14	6	40	6
Phase Time (sec)	30	20	12	46	12
Phase Split	25%	17%	10%	38%	10%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



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Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

MOVEMENT SUMMARY

 Site: 101 [AM Teviot / Anderson - Upgrade (Site Folder: 2036 Design Year)]

Teviot Road / Anderson Drive Intersection Upgrade - 2036 Design Year Traffic Volumes, Morning Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Teviot Road														
1	L2	1	5.0	1	5.0	0.002	30.7	LOS C	0.0	0.3	0.65	0.60	0.65	39.1
2	T1	1325	5.0	1395	5.0	0.678	34.2	LOS C	23.1	168.6	0.90	0.79	0.90	38.4
3	R2	202	5.0	213	5.0	* 0.593	53.3	LOS D	11.5	83.8	0.96	0.82	0.96	31.7
Approach		1528	5.0	1608	5.0	0.678	36.8	LOS D	23.1	168.6	0.91	0.80	0.91	37.4
East: Anderson Drive														
4	L2	176	5.0	185	5.0	0.310	37.8	LOS D	8.0	58.6	0.79	0.78	0.79	36.4
5	T1	1	5.0	1	5.0	* 0.580	35.6	LOS D	16.8	122.5	0.88	0.83	0.88	35.9
6	R2	658	5.0	693	5.0	0.580	41.2	LOS D	16.8	122.5	0.88	0.83	0.88	35.5
Approach		835	5.0	879	5.0	0.580	40.5	LOS D	16.8	122.5	0.86	0.82	0.86	35.7
North: Teviot Road														
7	L2	207	5.0	218	5.0	0.203	17.1	LOS B	5.7	41.5	0.49	0.71	0.49	45.7
8	T1	478	5.0	503	5.0	0.410	44.0	LOS D	8.5	62.1	0.91	0.74	0.91	34.9
9	R2	1	5.0	1	5.0	* 0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.5
Approach		686	5.0	722	5.0	0.410	35.9	LOS D	8.5	62.1	0.78	0.73	0.78	37.6
West: Leanne Court														
10	L2	1	5.0	1	5.0	0.012	65.8	LOS E	0.1	0.4	0.97	0.59	0.97	28.7
11	T1	1	5.0	1	5.0	* 0.035	60.8	LOS E	0.2	1.3	0.97	0.62	0.97	29.3
12	R2	2	5.0	2	5.0	0.035	66.5	LOS E	0.2	1.3	0.97	0.62	0.97	29.0
Approach		4	5.0	4	5.0	0.035	64.9	LOS E	0.2	1.3	0.97	0.61	0.97	29.0
All Vehicles		3053	5.0	3214	5.0	0.678	37.6	LOS D	23.1	168.6	0.87	0.79	0.87	36.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Teviot Road												
P11	Stage 1	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.6	217.5	0.98
P12	Stage 2	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.5	210.9	0.97
East: Anderson Drive												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.3	217.2	0.98
West: Leanne Court												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.3	210.6	0.97
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	218.9	214.1	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

PHASING SUMMARY

Site: 101 [PM Teviot / Anderson - Upgrade (Site Folder: 2036 Design Year)]

Teviot Road / Anderson Drive Intersection Upgrade - 2036 Design Year Traffic Volumes, Evening Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D, E

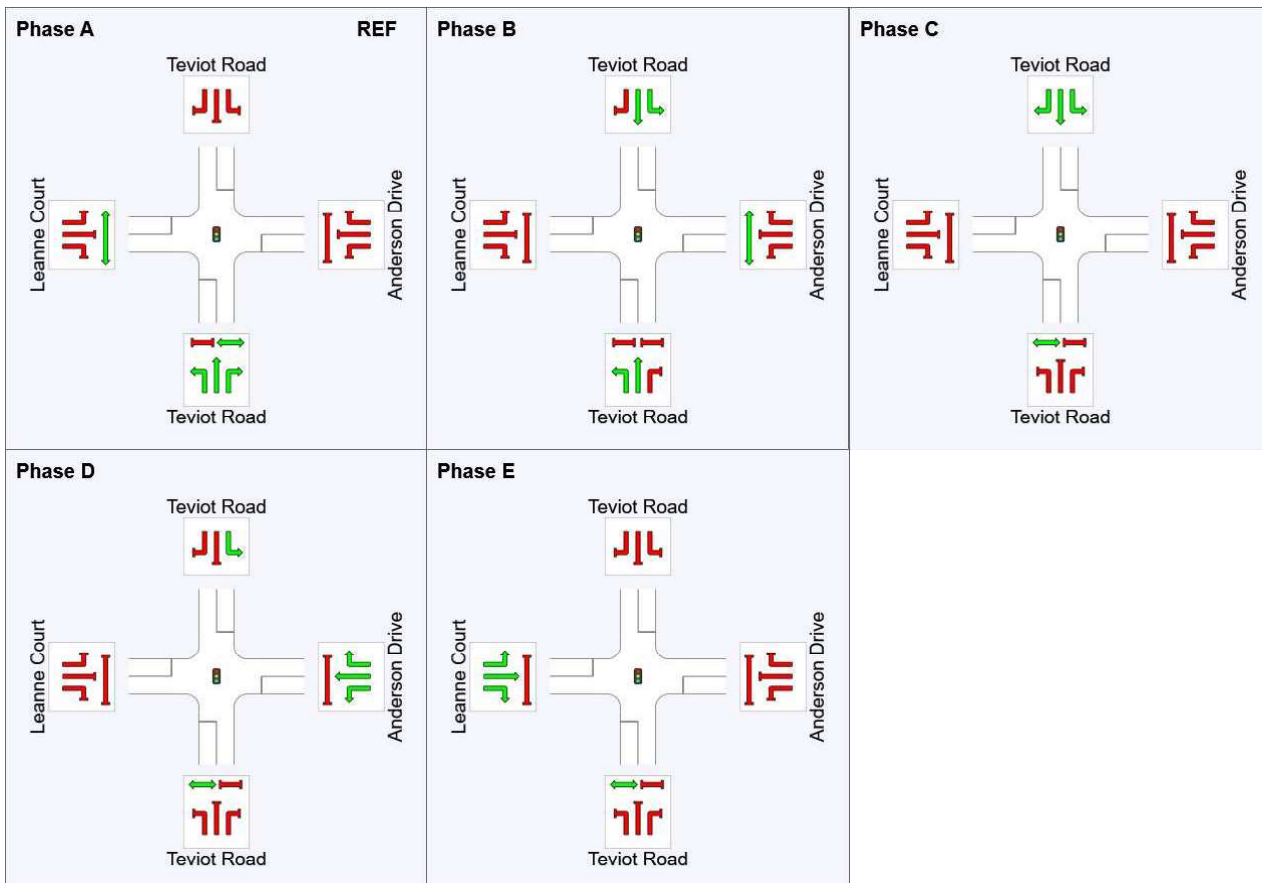
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	33	71	83	108
Green Time (sec)	27	32	6	19	6
Phase Time (sec)	33	38	12	25	12
Phase Split	28%	32%	10%	21%	10%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



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MOVEMENT SUMMARY

 **Site: 101 [PM Teviot / Anderson - Upgrade (Site Folder: 2036 Design Year)]**

Teviot Road / Anderson Drive Intersection Upgrade - 2036 Design Year Traffic Volumes, Evening Peak Hour

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE [Veh. Dist]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. Dist] m				km/h
South: Teviot Road													
1	L2	2	5.0	2	5.0	0.002	18.7	LOS B	0.1	0.4	0.47	0.61	44.8
2	T1	701	5.0	738	5.0	0.240	15.3	LOS B	7.4	54.3	0.56	0.48	48.0
3	R2	308	5.0	324	5.0	* 0.804	57.7	LOS E	19.3	140.9	1.00	0.91	30.5
Approach		1011	5.0	1064	5.0	0.804	28.2	LOS C	19.3	140.9	0.70	0.61	40.8
East: Anderson Drive													
4	L2	106	5.0	112	5.0	0.393	57.6	LOS E	6.0	43.7	0.94	0.78	30.9
5	T1	1	5.0	1	5.0	* 0.819	59.0	LOS E	14.4	105.4	1.00	0.92	29.2
6	R2	441	5.0	464	5.0	0.819	64.7	LOS E	14.4	105.4	1.00	0.92	29.0
Approach		548	5.0	577	5.0	0.819	63.3	LOS E	14.4	105.4	0.99	0.89	29.3
North: Teviot Road													
7	L2	583	5.0	614	5.0	0.735	23.1	LOS C	22.9	167.1	0.70	0.80	42.5
8	T1	1477	5.0	1555	5.0	* 0.803	39.3	LOS D	30.3	221.5	0.94	0.88	36.7
9	R2	2	5.0	2	5.0	0.023	66.2	LOS E	0.1	0.9	0.97	0.61	28.4
Approach		2062	5.0	2171	5.0	0.803	34.7	LOS C	30.3	221.5	0.87	0.86	38.2
West: Leanne Court													
10	L2	1	5.0	1	5.0	0.012	65.8	LOS E	0.1	0.4	0.97	0.59	28.7
11	T1	1	5.0	1	5.0	* 0.023	60.5	LOS E	0.1	0.9	0.97	0.60	29.6
12	R2	1	5.0	1	5.0	0.023	66.2	LOS E	0.1	0.9	0.97	0.60	29.3
Approach		3	5.0	3	5.0	0.023	64.2	LOS E	0.1	0.9	0.97	0.60	29.2
All Vehicles		3624	5.0	3815	5.0	0.819	37.3	LOS D	30.3	221.5	0.84	0.79	37.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped Dist]	Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped Dist] m			sec	m	m/sec
South: Teviot Road											
P11	Stage 1	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.6	0.98
P12	Stage 2	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.5	0.97
East: Anderson Drive											
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.3	0.98
West: Leanne Court											
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	216.3	0.97
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	218.9	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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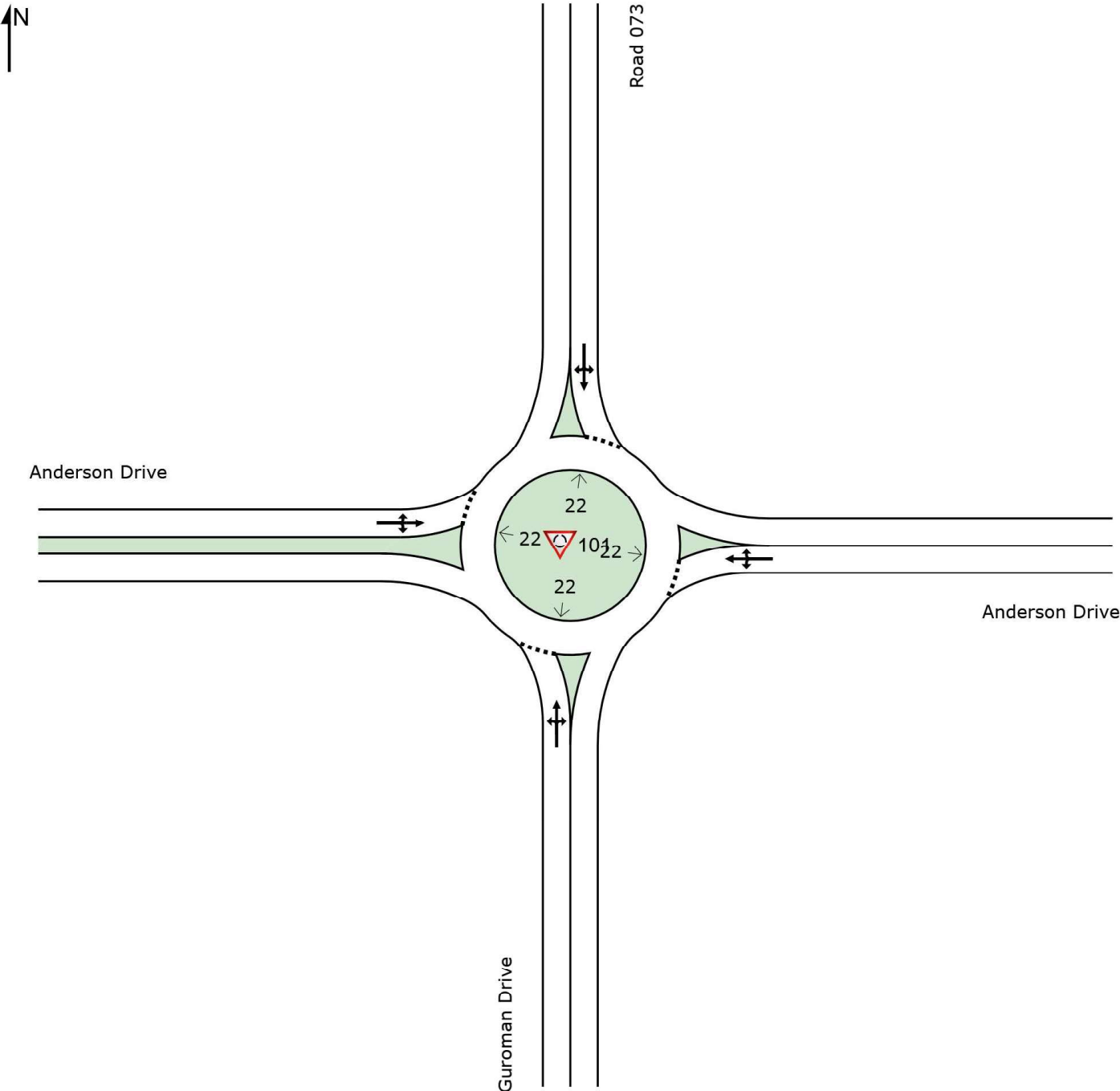
Project: C:\12dS\data\12dSynergy\MIR-0800 Greenbank - P8 ROL_13813\14. Engineering - Traffic\03. SIDRA\MIR-0800 SIDRA.sip9

SITE LAYOUT

 **Site: 101 [AM Anderson / Guroman (Site Folder: 2036 Design Year)]**

Anderson Drive / Guroman Drive Roundabout - 2036 Design Year Traffic Volumes, Morning Peak Hour
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Anderson / Guroman (Site Folder: 2036 Design Year)]

Anderson Drive / Guroman Drive Roundabout - 2036 Design Year Traffic Volumes, Morning Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance													
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m			km/h
South: Guroman Drive													
1	L2	112	5.0	118	5.0	0.195	8.0	LOS A	1.2	9.0	0.74	0.74	52.2
2	T1	25	5.0	26	5.0	0.195	8.2	LOS A	1.2	9.0	0.74	0.74	53.6
3	R2	1	5.0	1	5.0	0.195	13.1	LOS B	1.2	9.0	0.74	0.74	53.5
Approach		138	5.0	145	5.0	0.195	8.1	LOS A	1.2	9.0	0.74	0.74	52.5
East: Anderson Drive													
4	L2	1	5.0	1	5.0	0.485	5.6	LOS A	3.6	26.6	0.58	0.58	52.9
5	T1	520	5.0	547	5.0	0.485	5.7	LOS A	3.6	26.6	0.58	0.58	54.2
6	R2	2	5.0	2	5.0	0.485	10.6	LOS B	3.6	26.6	0.58	0.58	54.1
Approach		523	5.0	551	5.0	0.485	5.7	LOS A	3.6	26.6	0.58	0.58	54.2
North: Road 073													
7	L2	9	5.0	9	5.0	0.194	5.1	LOS A	1.1	7.7	0.43	0.43	52.2
8	T1	87	5.0	92	5.0	0.194	5.3	LOS A	1.1	7.7	0.43	0.43	53.4
9	R2	109	5.0	115	5.0	0.194	10.2	LOS B	1.1	7.7	0.43	0.43	53.4
Approach		205	5.0	216	5.0	0.194	7.9	LOS A	1.1	7.7	0.43	0.43	53.3
West: Anderson Drive													
10	L2	31	5.0	33	5.0	0.184	3.9	LOS A	1.2	8.7	0.16	0.16	54.4
11	T1	194	5.0	204	5.0	0.184	4.1	LOS A	1.2	8.7	0.16	0.16	55.9
12	R2	32	5.0	34	5.0	0.184	9.0	LOS A	1.2	8.7	0.16	0.16	55.8
Approach		257	5.0	271	5.0	0.184	4.7	LOS A	1.2	8.7	0.16	0.16	55.7
All Vehicles		1123	5.0	1182	5.0	0.485	6.2	LOS A	3.6	26.6	0.48	0.48	54.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 101 [PM Anderson / Guroman (Site Folder: 2036 Design Year)]**

Anderson Drive / Guroman Drive Roundabout - 2036 Design Year Traffic Volumes, Evening Peak Hour

Site Category: (None)

Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m			km/h
South: Guroman Drive													
1	L2	67	5.0	71	5.0	0.180	6.0	LOS A	1.0	7.6	0.56	0.61	53.3
2	T1	97	5.0	102	5.0	0.180	6.1	LOS A	1.0	7.6	0.56	0.61	54.6
3	R2	1	5.0	1	5.0	0.180	11.0	LOS B	1.0	7.6	0.56	0.61	54.5
Approach		165	5.0	174	5.0	0.180	6.1	LOS A	1.0	7.6	0.56	0.61	54.0
East: Anderson Drive													
4	L2	1	5.0	1	5.0	0.295	5.4	LOS A	1.8	13.3	0.50	0.56	53.1
5	T1	293	5.0	308	5.0	0.295	5.5	LOS A	1.8	13.3	0.50	0.56	54.5
6	R2	10	5.0	11	5.0	0.295	10.4	LOS B	1.8	13.3	0.50	0.56	54.4
Approach		304	5.0	320	5.0	0.295	5.7	LOS A	1.8	13.3	0.50	0.56	54.5
North: Road 073													
7	L2	5	5.0	5	5.0	0.179	8.3	LOS A	1.1	8.3	0.75	0.79	50.4
8	T1	52	5.0	55	5.0	0.179	8.4	LOS A	1.1	8.3	0.75	0.79	51.6
9	R2	65	5.0	68	5.0	0.179	13.3	LOS B	1.1	8.3	0.75	0.79	51.5
Approach		122	5.0	128	5.0	0.179	11.0	LOS B	1.1	8.3	0.75	0.79	51.5
West: Anderson Drive													
10	L2	121	5.0	127	5.0	0.612	4.8	LOS A	6.2	44.9	0.51	0.51	52.9
11	T1	533	5.0	561	5.0	0.612	5.0	LOS A	6.2	44.9	0.51	0.51	54.2
12	R2	125	5.0	132	5.0	0.612	9.8	LOS A	6.2	44.9	0.51	0.51	54.2
Approach		779	5.0	820	5.0	0.612	5.7	LOS A	6.2	44.9	0.51	0.51	54.0
All Vehicles		1370	5.0	1442	5.0	0.612	6.2	LOS A	6.2	44.9	0.54	0.56	53.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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APPENDIX F

TRAFFIC IMPACT ASSESSMENT CERTIFICATION

CERTIFICATION OF TRAFFIC IMPACT ASSESSMENT REPORT

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND

FOR


Project Title	Everleigh Precinct 8 & 10: Traffic Impact Assessment
----------------------	-----------------------------------------------------------------

As a professional engineer registered by the Board of Professional Engineers of Queensland pursuant to the Professional Engineers Act 2002 as competent in my areas of nominated expertise, I understand and recognise:

- The significant role of engineering as a profession; and that
- The community has a legitimate expectation that my certification affixed to this engineering work can be trusted; and that
- I am responsible for ensuring its preparation has satisfied all necessary standards, conduct and contemporary practice.

As the responsible RPEQ, I certify:

- I am satisfied that all submitted components comprising this traffic impact assessment, listed in the following table, have been completed in accordance with the Guide to Traffic Impact Assessment published by the Queensland Department of Transport and Main Roads and using sound engineering principles; and
- Where specialised areas of work have not been under my direct supervision, I have reviewed the outcomes of the work and consider the work and its outcomes as suitable for the purposes of this traffic impact assessment; and that
- The outcomes of this traffic impact assessment are a true reflection of results of assessment; and that
- I believe the strategies recommended for mitigating impacts by this traffic impact assessment, embrace contemporary practice initiatives and will deliver the desired outcomes.

Name	Bradley Jones
RPEQ No.	19986
RPEQ Competencies	Civil
Email	Bradley.Jones@premise.com.au
Postal Address	PO Box 1110, Townsville QLD 4810
Signature	
Date	8/07/2022

Traffic impact assessment components to which this certification applies	<input checked="" type="checkbox"/>
1. Introduction	
Background	<input checked="" type="checkbox"/>
Scope and study area	<input checked="" type="checkbox"/>
Pre-lodgement meeting notes	<input type="checkbox"/>
2. Existing Conditions	
Land use and zoning	<input checked="" type="checkbox"/>
Adjacent land uses / approvals	<input checked="" type="checkbox"/>
Surrounding road network details	<input checked="" type="checkbox"/>
Traffic volumes	<input checked="" type="checkbox"/>
Intersection and network performance	<input checked="" type="checkbox"/>
Road safety issues	<input checked="" type="checkbox"/>
Site access	<input checked="" type="checkbox"/>
Public transport (if applicable)	<input checked="" type="checkbox"/>
Active transport (if applicable)	<input checked="" type="checkbox"/>
Parking (if applicable)	<input type="checkbox"/>
Pavement (if applicable)	<input type="checkbox"/>
Transport infrastructure (if applicable)	<input type="checkbox"/>
3. Proposed Development Details	
Development site plan	<input type="checkbox"/>
Operational details (including year of opening each stage and any relevant catchment / market analysis)	<input checked="" type="checkbox"/>
Proposed access and parking	<input checked="" type="checkbox"/>
4. Development Traffic	
Traffic generation (by development stage if relevant and considering light and heavy vehicle trips)	<input checked="" type="checkbox"/>
Trip distribution	<input checked="" type="checkbox"/>
Development traffic volumes on the network	<input checked="" type="checkbox"/>
5. Impact Assessment and Mitigation	
With and without development traffic volumes	<input checked="" type="checkbox"/>
Construction traffic impact assessment and mitigation (if applicable)	<input type="checkbox"/>
Road safety impact assessment and mitigation	<input checked="" type="checkbox"/>
Access and frontage impact assessment and mitigation	<input checked="" type="checkbox"/>
Intersection delay impact assessment and mitigation	<input type="checkbox"/>
Road link capacity assessment and mitigation	<input checked="" type="checkbox"/>
Pavement impact assessment and mitigation	<input type="checkbox"/>
Transport infrastructure impact assessment and mitigation	<input type="checkbox"/>
Other impacts assessment relevant to the specific development type / location (if applicable) - Intersection Spacing	<input checked="" type="checkbox"/>
6. Conclusions and Recommendations	
Summary of impacts and mitigation measures proposed	<input checked="" type="checkbox"/>
Certification statement and authorisation	<input checked="" type="checkbox"/>



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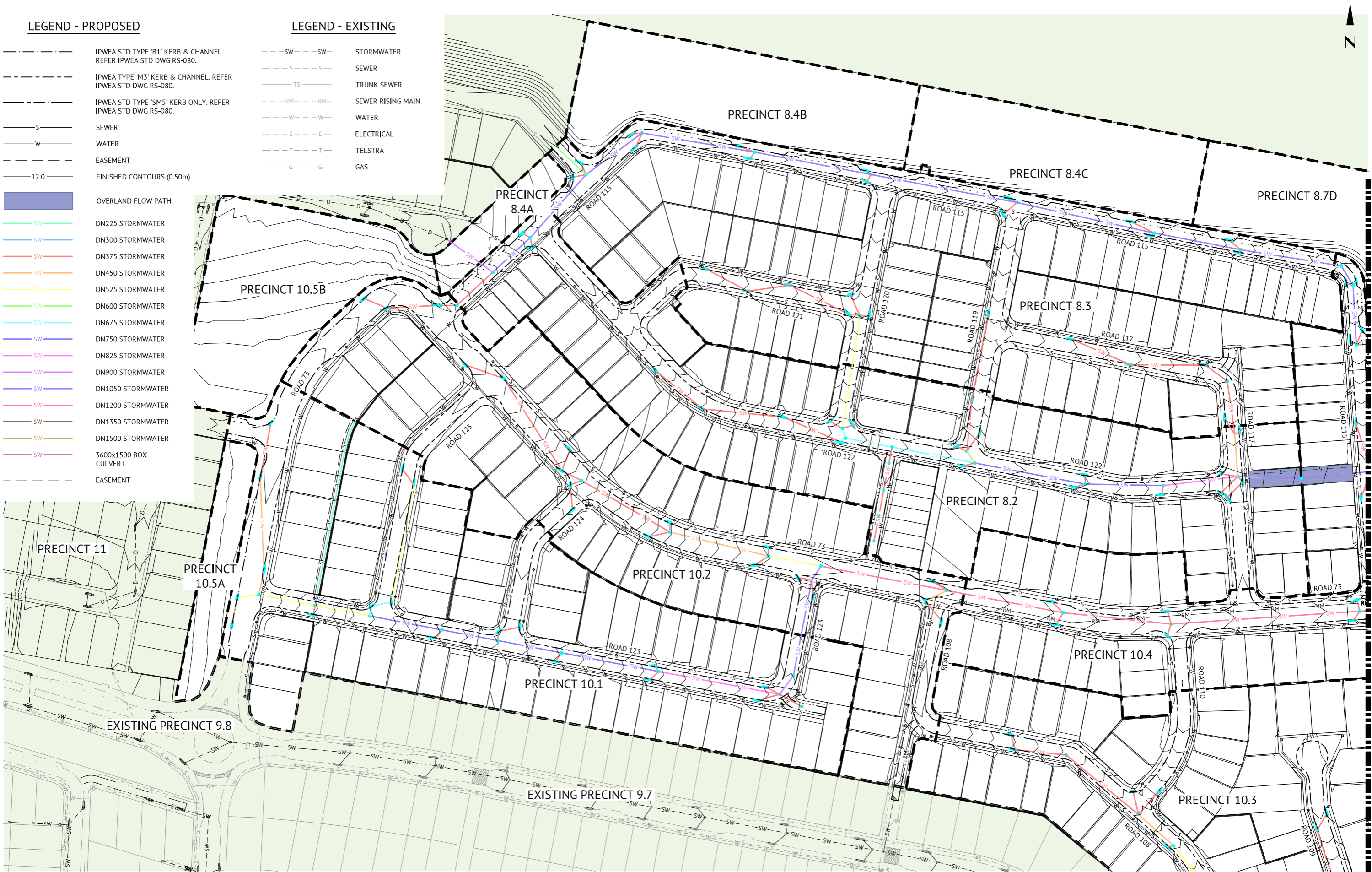
A.6 APPENDIX F – PRELIMINARY STORMWATER DRAINAGE PLANS

LEGEND - PROPOSED

LEGEND - EXISTING

- IPWEA STD TYPE 'B1' KERB & CHANNEL. REFER IPWEA STD DWG RS-080.
- IPWEA TYPE 'M3' KERB & CHANNEL. REFER IPWEA STD DWG RS-080.
- IPWEA STD TYPE 'SM5' KERB ONLY. REFER IPWEA STD DWG RS-080.
- SEWER
- WATER
- EASEMENT
- FINISHED CONTOURS (0.50m)
- OVERLAND FLOW PATH
- DN225 STORMWATER
- DN300 STORMWATER
- DN375 STORMWATER
- DN450 STORMWATER
- DN525 STORMWATER
- DN600 STORMWATER
- DN675 STORMWATER
- DN750 STORMWATER
- DN825 STORMWATER
- DN900 STORMWATER
- DN1050 STORMWATER
- DN1200 STORMWATER
- DN1350 STORMWATER
- DN1500 STORMWATER
- 3600x1500 BOX CULVERT
- EASEMENT

- STORMWATER
- SEWER
- TRUNK SEWER
- SEWER RISING MAIN
- WATER
- ELECTRICAL
- TELSTRA
- GAS



JOINS SHEET 2

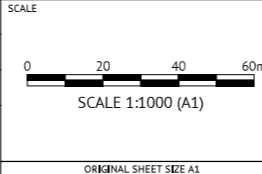
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
08/07/2022	2	UPDATED AS PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



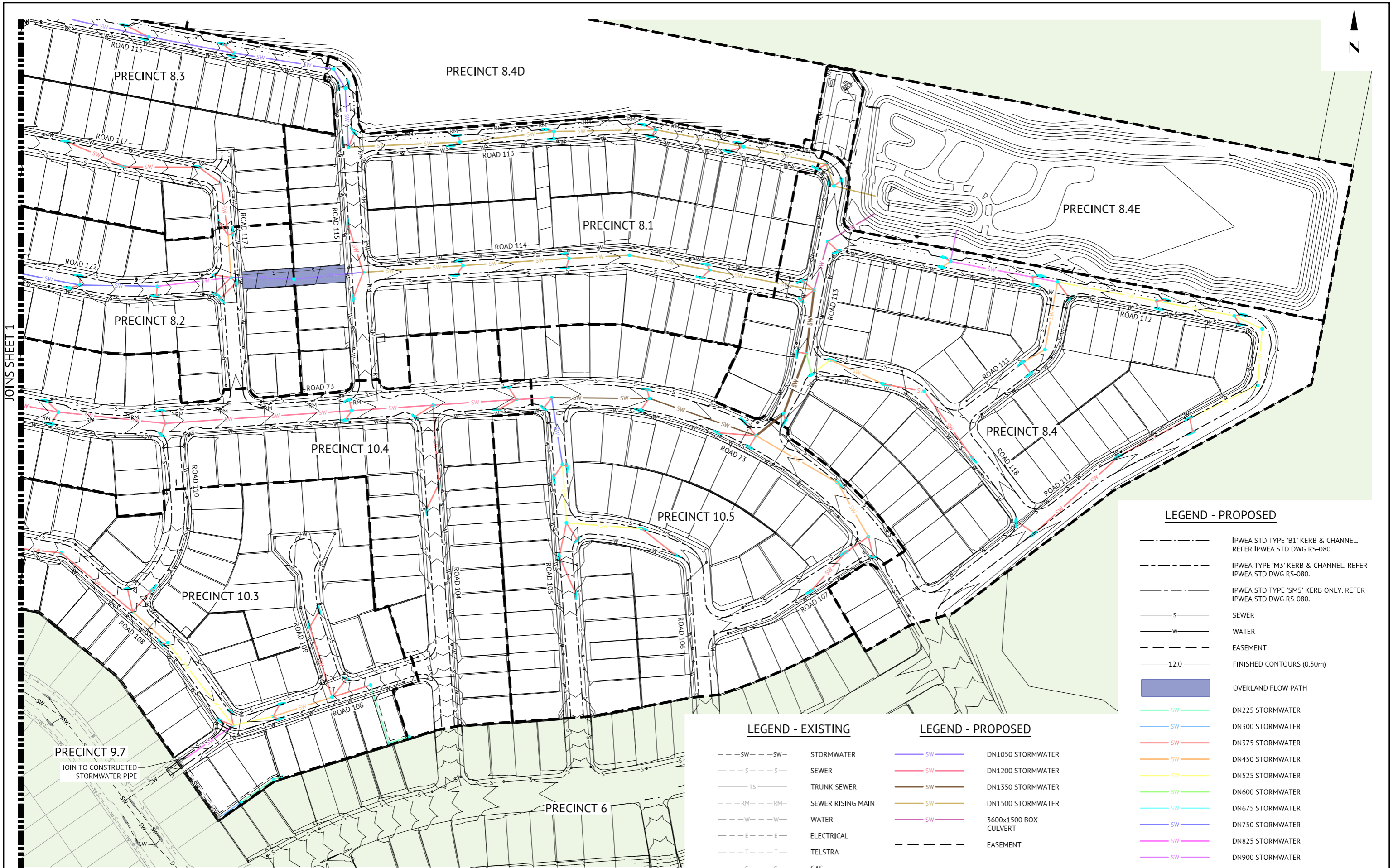
BRISBANE OFFICE
LEVEL 11, 300 ADELAIDE STREET
BRISBANE, QLD 4000
PH: (07) 3253 2222
WEB: www.premise.com.au

DESIGNED
KLYNT KIANG
CHECKED
ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFFER
ENGINEERING CERTIFICATION



CLIENT
MIRVAC QLD PTY LTD
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION
TEVIOT ROAD, GREENBANK
SHEET TITLE
PRELIMINARY STORMWATER LAYOUT PLAN - SHEET 1

JOB CODE
MIR-1000
SHEET NUMBER
SKC30
REV
2



PRELIMINARY - NOT FOR CONSTRUCTION				
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



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LEVEL 11, 300 ADELAIDE STREET
BRISBANE, QLD 4000
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WEB: www.premise.com.au

DESIGNED
KLYNT KIANG

CHECKED
ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

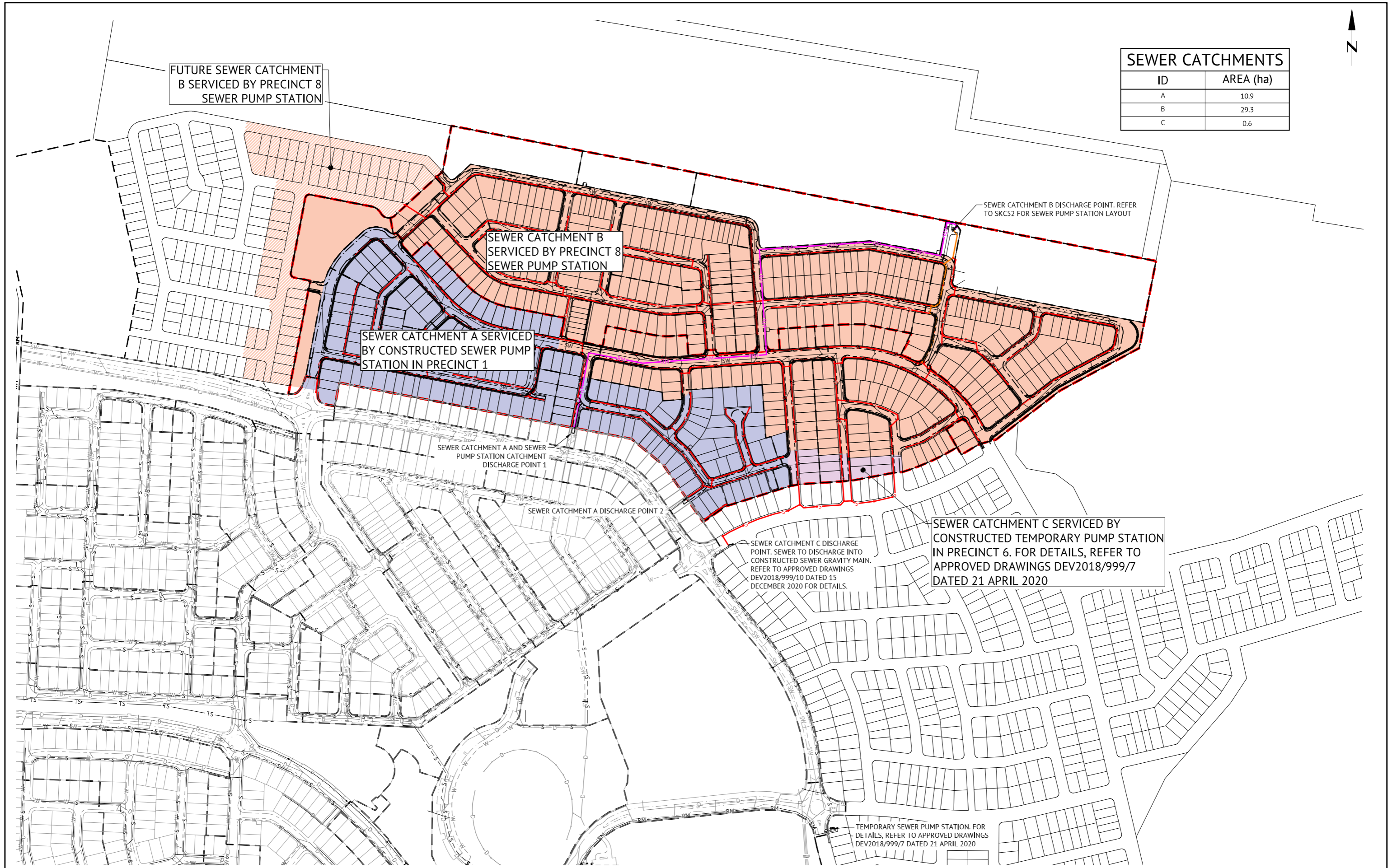
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SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD	JOB CODE	MIR-1000
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT	SHEET NUMBER	SKC31
LOCATION	TEVIOT ROAD, GREENBANK	REV	2
SHEET TITLE	PRELIMINARY STORMWATER LAYOUT PLAN - SHEET 2		

A.7 APPENDIX G – PRELIMINARY SEWER CATCHMENT PLAN



SEWER CATCHMENTS	
ID	AREA (ha)
A	10.9
B	29.3
C	0.6




PRELIMINARY - NOT FOR CONSTRUCTION				
NOT FOR CONSTRUCTION				
14/03/2022	2	ADDED PRECINCT BOUNDARIES AND CATCHMENT TABLE	KK	08/07/20
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	SS
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



BRISBANE OFFICE
LEVEL 11, 300 ADELAIDE STREET
BRISBANE, QLD 4000
PH: (07) 3253 2222
WEB: www.premise.com.au

DESIGNED KLYNT KIANG
CHECKED ANDREW LANGDON
PROJECT MANAGER SIMON STEINHOFFER
ENGINEERING CERTIFICATION

SCALE



SCALE 1:2500 (A1)


















ORIGINAL SHEET SIZE A1

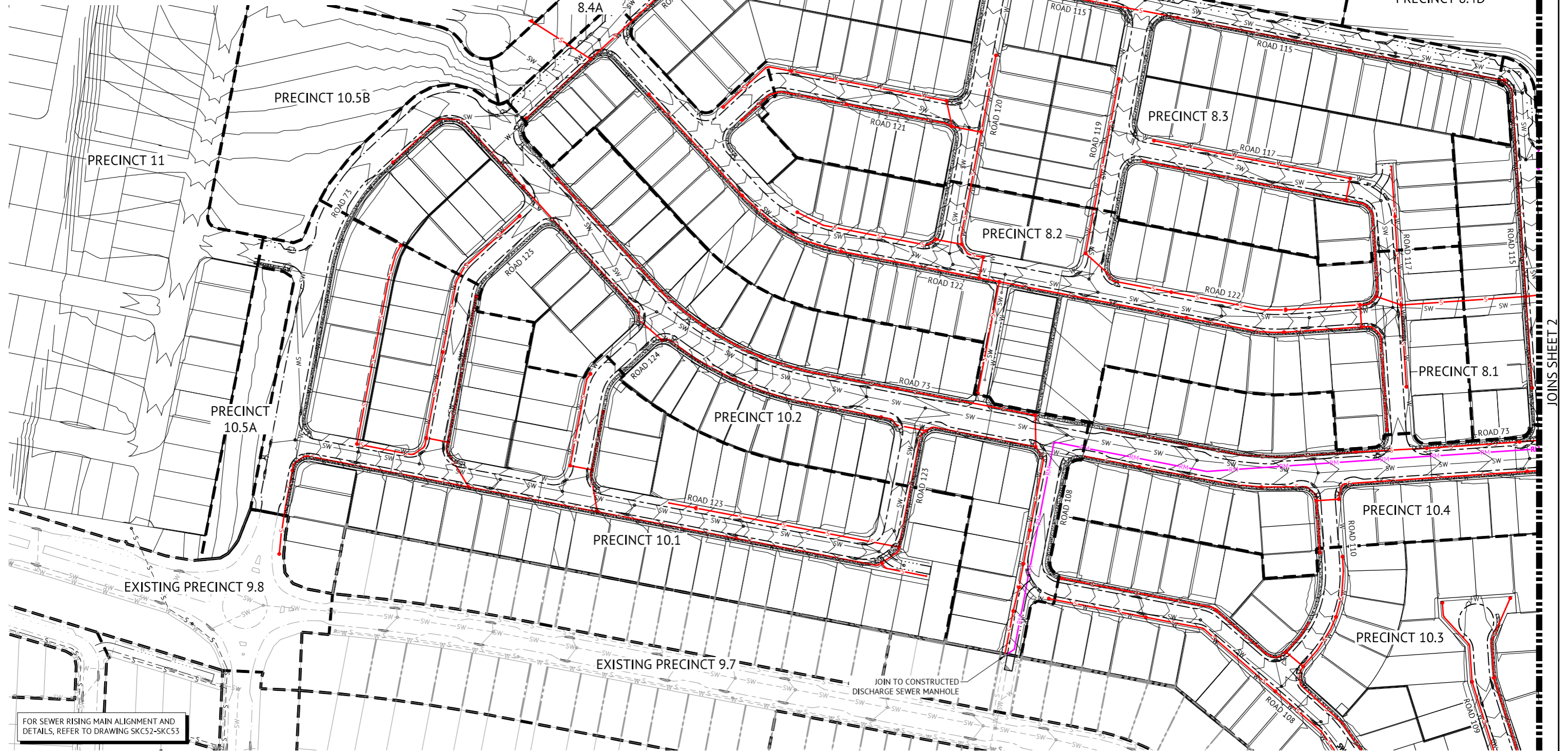
CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	PRELIMINARY SEWER CATCHMENT PLAN

JOB CODE	MIR-1000
SHEET NUMBER	SKC38
REV	3

A.8 APPENDIX H – PRELIMINARY SEWER RETICULATION PLANS

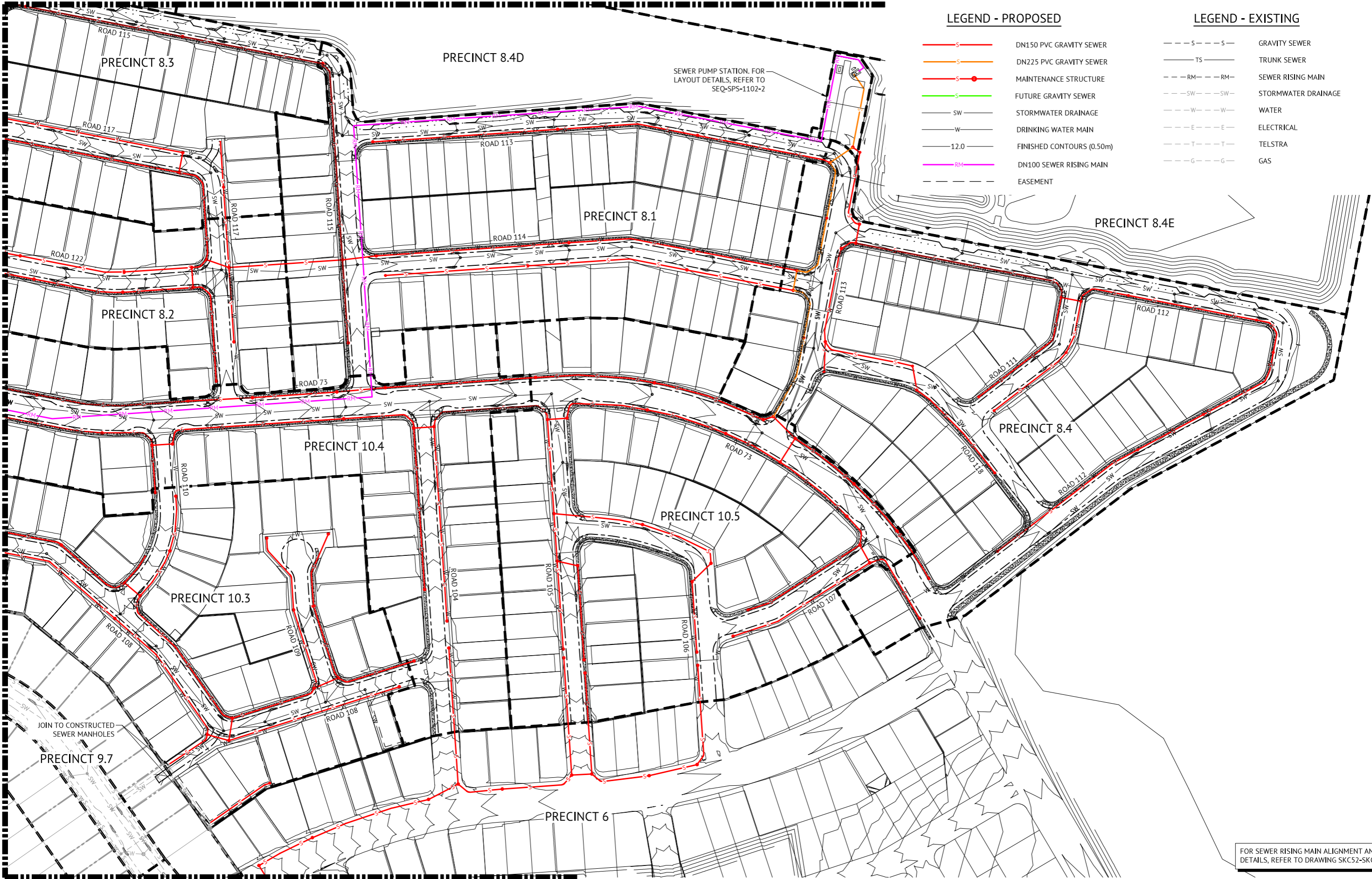
LEGEND - EXISTING

- | | | | |
|-----------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------|---------------------|
|  | DN150 PVC GRAVITY SEWER |  | GRAVITY SEWER |
|  | DN225 PVC GRAVITY SEWER |  | TRUNK SEWER |
|  | MAINTENANCE STRUCTURE |  | SEWER RISING MAIN |
|  | FUTURE GRAVITY SEWER |  | STORMWATER DRAINAGE |
|  | STORMWATER DRAINAGE |  | WATER |
|  | DRINKING WATER MAIN |  | ELECTRICAL |
|  | FINISHED CONTOURS (0.50m) |  | TELSTRA |
|  | DN100 SEWER RISING MAIN |  | GAS |
|  | EASEMENT | | |



JOB CODE	
MIR-1000	
SHEET NUMBER	REV
SKC35	2

08/07/2022	2	UPDATED AS PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



LEGEND - PROPOSED

- DN150 PVC GRAVITY SEWER
- DN225 PVC GRAVITY SEWER
- MAINTENANCE STRUCTURE
- FUTURE GRAVITY SEWER
- STORMWATER DRAINAGE
- DRINKING WATER MAIN
- FINISHED CONTOURS (0.50m)
- DN100 SEWER RISING MAIN
- EASEMENT

LEGEND - EXISTING

- GRAVITY SEWER
- TRUNK SEWER
- SEWER RISING MAIN
- STORMWATER DRAINAGE
- WATER
- ELECTRICAL
- TELSTRA
- GAS

FOR SEWER RISING MAIN ALIGNMENT AND DETAILS, REFER TO DRAWING SKC52-SKC53

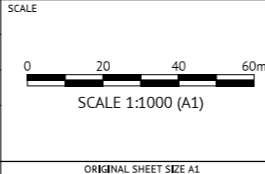
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND A5 PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



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CHECKED
ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFFER
ENGINEERING CERTIFICATION



CLIENT
MIRVAC QLD PTY LTD
PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION
TEVIOT ROAD, GREENBANK
SHEET TITLE
PRELIMINARY SEWER LAYOUT PLAN - SHEET 2

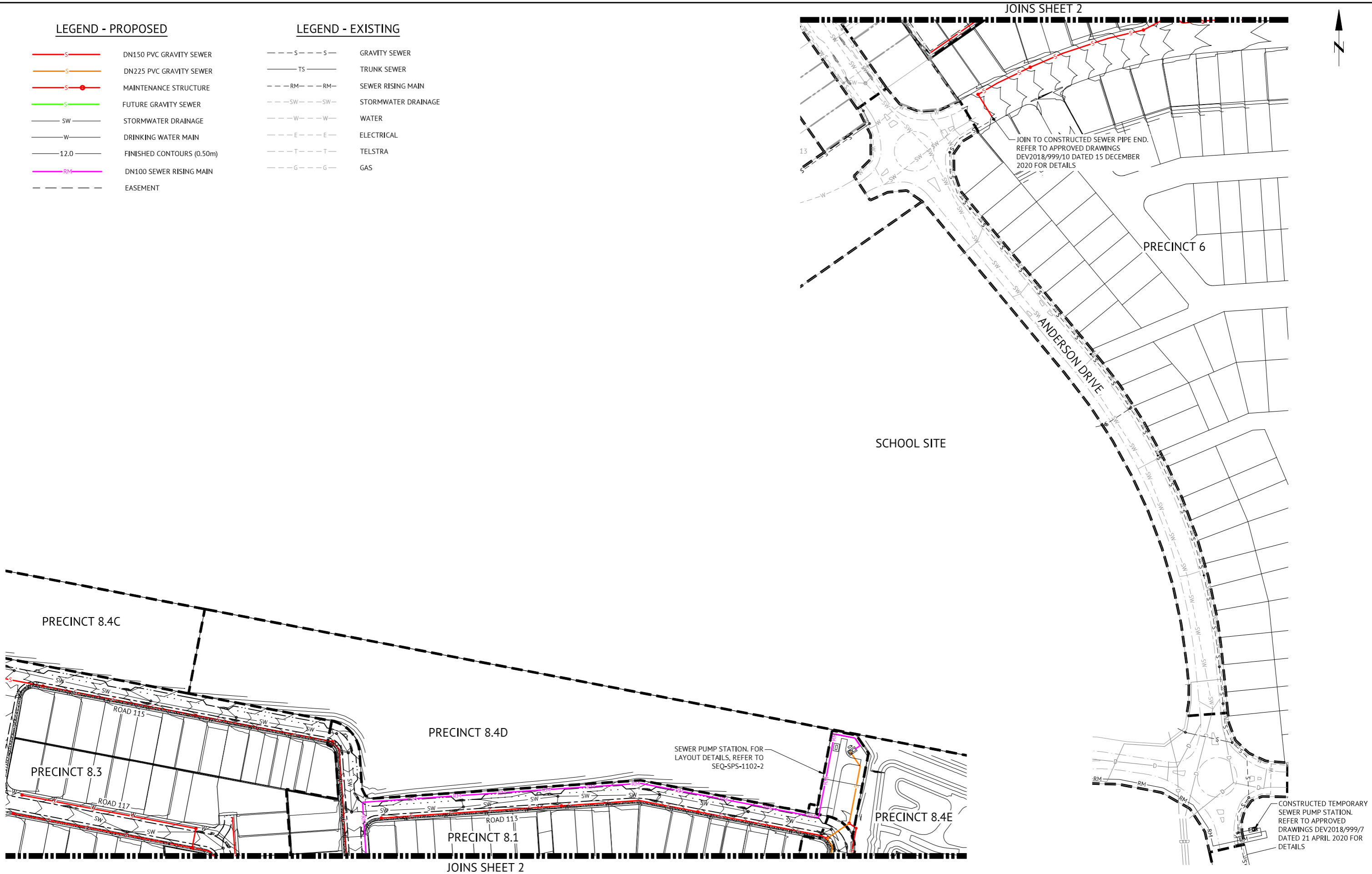
JOB CODE
MIR-1000
SHEET NUMBER
SKC36
REV
2

LEGEND - PROPOSED

- DN150 PVC GRAVITY SEWER
- DN225 PVC GRAVITY SEWER
- MAINTENANCE STRUCTURE
- FUTURE GRAVITY SEWER
- STORMWATER DRAINAGE
- DRINKING WATER MAIN
- FINISHED CONTOURS (0.50m)
- DN100 SEWER RISING MAIN
- EASEMENT

LEGEND - EXISTING

- GRAVITY SEWER
- TRUNK SEWER
- SEWER RISING MAIN
- STORMWATER DRAINAGE
- WATER
- ELECTRICAL
- TELSTRA
- GAS



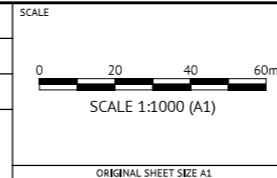
PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REV	DESCRIPTION	REC	APP
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND A5 PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	



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ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFFER
ENGINEERING CERTIFICATION



CLIENT
MIRVAC QLD PTY LTD

PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK


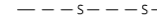

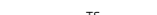




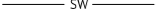

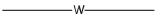







SHEET TITLE
PRELIMINARY SEWER LAYOUT PLAN - SHEET 3

JOB CODE
MIR-1000

SHEET NUMBER
SKC37

REV
2

RISE MAIN PRELIMINARY DETAILS:

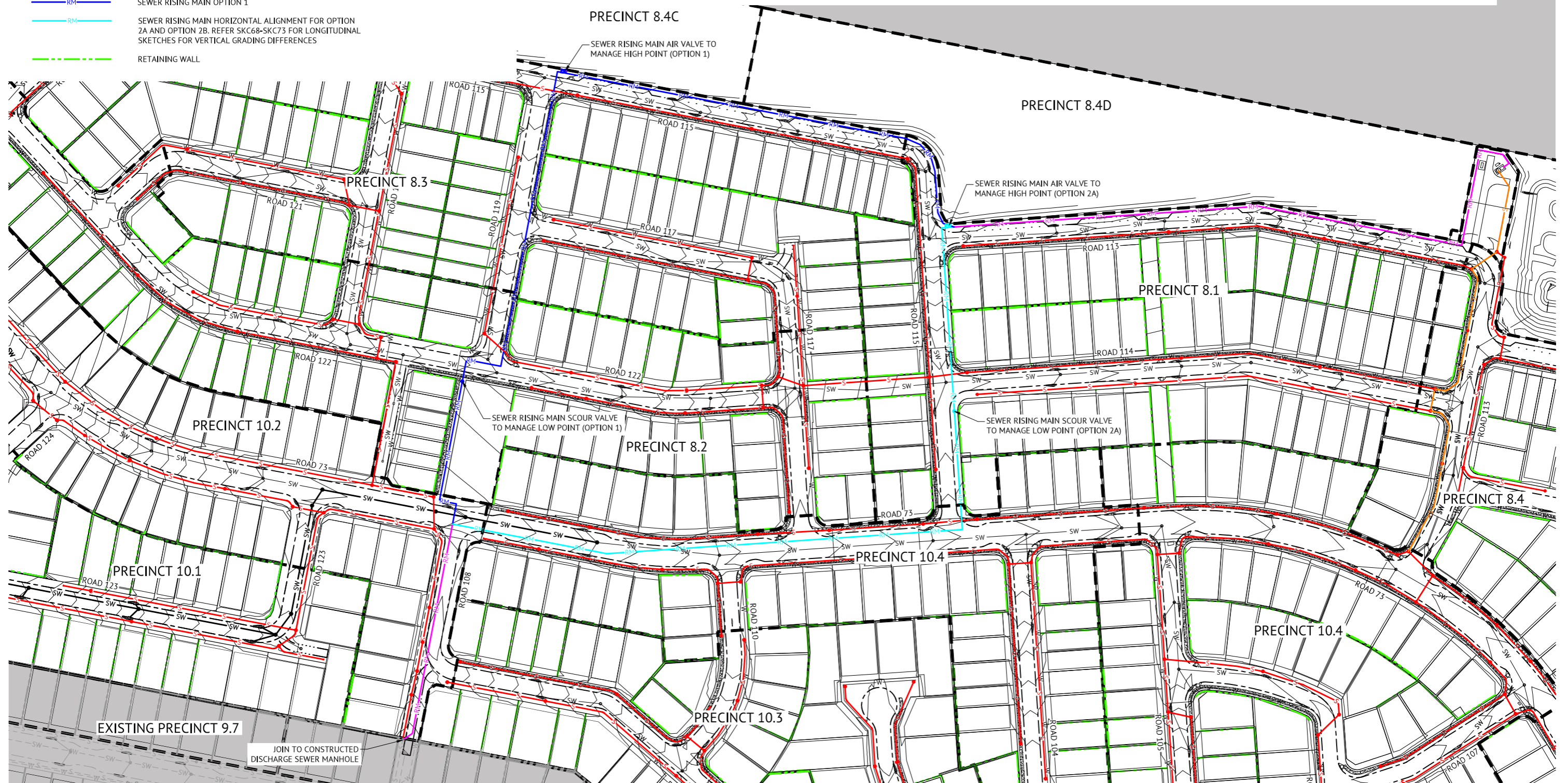
- | | | | |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------|
|  | DN150 PVC GRAVITY SEWER |  | GRAVITY SEWER |
|  | DN225 PVC GRAVITY SEWER |  | TRUNK SEWER |
|  | MAINTENANCE STRUCTURE |  | SEWER RISING MAIN |
|  | STORMWATER DRAINAGE |  | STORMWATER DRAINAGE |
|  | DRINKING WATER MAIN |  | WATER |
|  | FINISHED CONTOURS (0.50m) |  | ELECTRICAL |
|  | SEWER RISING MAIN
(COMMON ALIGNMENT) |  | TELSTRA |
|  | SEWER RISING MAIN OPTION 1 |  | GAS |
|  | SEWER RISING MAIN HORIZONTAL ALIGNMENT FOR OPTION
2A AND OPTION 2B. REFER SKC68-SKC73 FOR LONGITUDINAL
SKETCHES FOR VERTICAL GRADING DIFFERENCES | | |
|  | RETAINING WALL | | |

OPTION 1:
TOTAL LENGTH: 946.510m

OPTION 2A:
TOTAL LENGTH: 867.600m

OPTION 2B:
TOTAL LENGTH: 867.600m

LENGTHS AND DEPTHS MAY VARY AND ARE SUBJECT TO
DETAILED DESIGN



PRELIMINARY - NOT FOR CONSTRUCTION

[illegible]

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DESIGNED	KLYNT KIWANG
CHECKED	ANDREW LANGDON
PROJECT MANAGER	SIMON STEINHOFFER
ENGINEERING CERTIFICATION	

SCALE

0 20 40 60m

SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QLD PTY LTD
PROJECT	EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT
LOCATION	TEVIOT ROAD, GREENBANK
SHEET TITLE	PRELIMINARY SEWER RISING MAIN LAYOUT OPTIONS

JOB CODE
MIR-1000
 SHEET NUMBER
SKC65

[illegible]

RR DENOTES ROAD RESERVE
PP DENOTES PRIVATE PROPERTY

NOTES:

1. EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.



NOTE:
THE SEWER INVERT LEVELS ARE PRELIMINARY
AND ARE SUBJECT TO DETAILED DESIGN

[illegible]

JOB CODE
MIR-1000
SHEET NUMBER
SKC66

[illegible]

LEGEND

RR DENOTES ROAD RESERVE
PP DENOTES PRIVATE PROPERTY

MANHOLE TYPES	
A	CONCRETE MANHOLE 1.0Ø
B	CONCRETE MANHOLE 1.2Ø
C	CONCRETE MANHOLE 1.5Ø
J	TYPE 'J' 1 MAINTENANCE SHAFT (DN300 SHAFT)
TE	TEMPORARY END
HB	HORIZONTAL BEND
VB	VERTICAL BEND

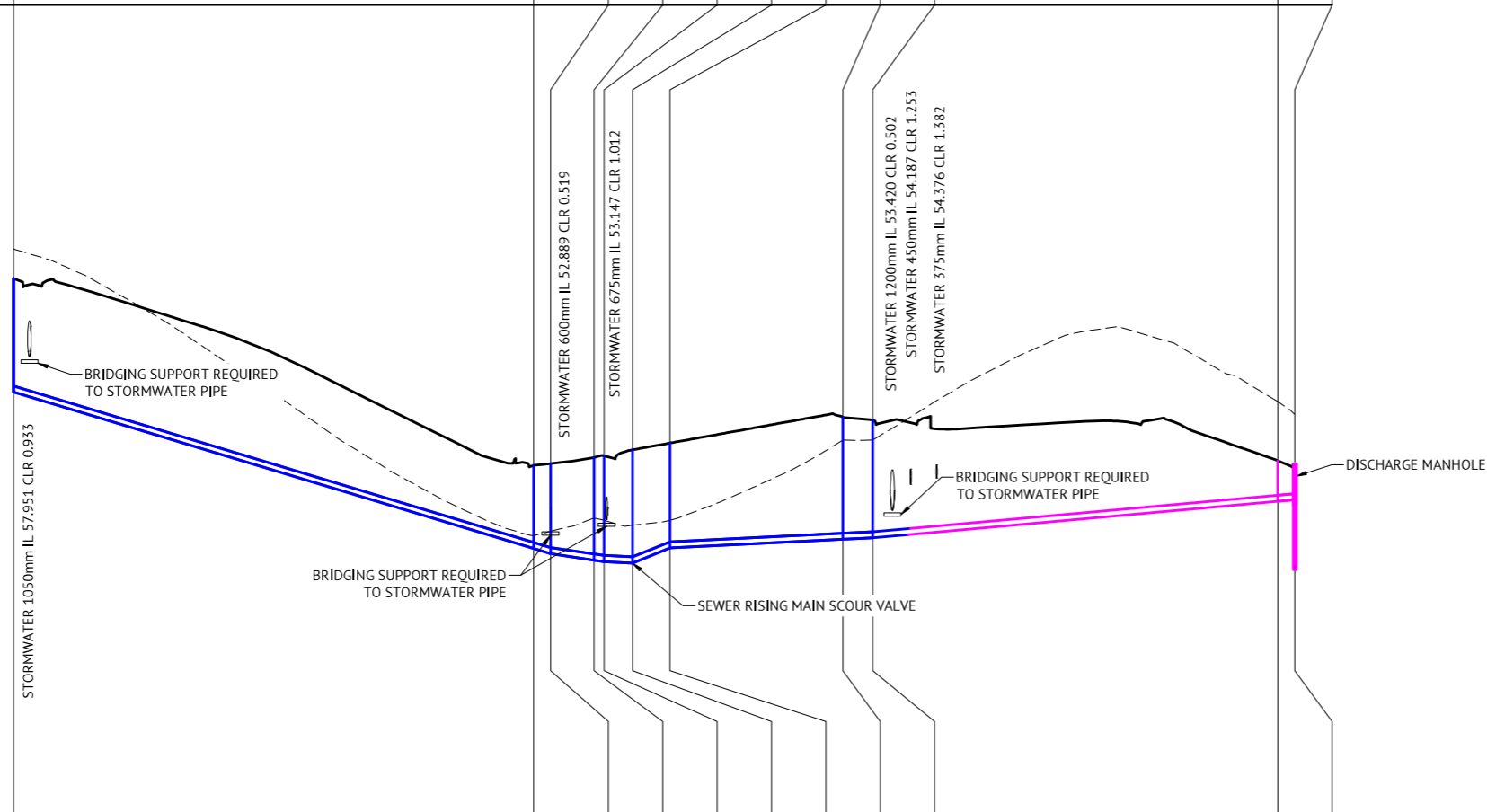
LID TYPES	
B	CLASS B NON TRAFFICABLE CAST IRON
BD	CLASS B NON TRAFFICABLE BOLT DOWN
D	CLASS D TRAFFICABLE CAST IRON

MAINTENANCE STRUCTURE DROP TYPES	
V	FALL THROUGH MH
W	OBLIQUE 45° BACKDROP
X	INTERNAL DROP
Y	EXTERNAL DROP
VORT	INTERNAL VORTEX DROP
Z	MAINTENANCE SHAFT DROP

PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

NOTES:

1. EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

[illegible]

NOTE:

THE SEWER INVERT LEVELS ARE PRELIMINARY
AND ARE SUBJECT TO DETAILED DESIGN

PRELIMINARY - NOT FOR CONSTRUCTION


20/06/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
		REVISIONS		



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CHECKED	ANDREW LANGDON
PROJECT MANAGER	SIMON STEINHOFFER
ENGINEERING CERTIFICATION	

SCALE



0 20 40 60m

SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT

MIRVAC QLD PTY LTD

PROJECT **EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT**

LOCATION **TEVIOT ROAD, GREENBANK**

SHEET TITLE PRELIMINARY SEWER RISING MAIN LONG SECTION OPTION 1 - SHEET 2

	JOB CODE
--	----------

MIR-1000

SHEET NUMBER

SKC67

1

MH / MS COVER TYPE																	
MH / MS TYPE	HB	HB	HB	HB	HB	VB	VB		HB	VB		VB		VB	HB		VB
MH DROP TYPE																	
LINE NO.																	
PROPERTY CONNECTION																	
DEPTH																	
PROPERTY CONNECTION																	
INVERT LEVEL																	
PROPERTY CONNECTION TYPE																	
LOT NO.																	

LEGEND

RR DENOTES ROAD RESERVE
PP DENOTES PRIVATE PROPERTY

MANHOLE TYPES	
A	CONCRETE MANHOLE 1.0Ø
B	CONCRETE MANHOLE 1.2Ø
C	CONCRETE MANHOLE 1.5Ø
J	TYPE 'J' 1 MAINTENANCE SHAFT (DN300 SHAFT)
TE	TEMPORARY END
HB	HORIZONTAL BEND
VB	VERTICAL BEND

LID TYPES	
B	CLASS B NON TRAFFICABLE CAST IRON
BD	CLASS B NON TRAFFICABLE BOLT DOWN
D	CLASS D TRAFFICABLE CAST IRON

MAINTENANCE STRUCTURE DROP TYPES	
V	FALL THROUGH MH
W	OBLIQUE 45° BACKDROP
X	INTERNAL DROP
Y	EXTERNAL DROP
VORT	INTERNAL VORTEX DROP
Z	MAINTENANCE SHAFT DROP

PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

- NOTES:
- EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
 - DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

SEWER RISING MAIN OPTION 2A

SEWER RISING MAIN OPTION 2B

DATUM RL	38.000																
PROPERTY DESCRIPTION										RR							
PIPE SIZE (mm), CLASS										DN180 PE100 SDR 11							
GRADE (1 IN X)	-403	-403	-403	-403	-403	-40	-32	-32	-184	-186	27	27	-20	-20			
LENGTH	3.347	5.567	11.857	49.470	11.072	20.250	74.204	0.296	59.500	95.906	6.250	93.750	60.500	8.588			
EMBEDMENT TYPE																	
DEPTH OF INVERT BELOW FSL	1.069	0.954	1.211	1.862	1.265	1.462	1.607	2.208	2.203	2.806	3.112	3.891	4.417	2.464			2.151
INVERT LEVEL (IL)	45.876	45.884	45.898	45.928	46.051	46.078	46.584	48.875	48.884	49.207	49.721	49.487	45.971	48.935			49.356
FINISHED SURFACE LEVEL (FSL)	46.945	46.838	47.110	47.790	47.315	47.540		51.083	51.087	52.013	52.833	53.378	50.388	51.400			51.507
EXISTING SURFACE LEVEL (ESL)	47.181	47.083	47.376	48.081	47.032	47.592	48.631	51.992	52.000	52.824	53.619	53.663	48.738	51.307			51.479
CHAINAGE (CH)	0.000	3.347	8.914	20.771	70.241	81.313	101.563	175.767	176.063	235.563	331.469	337.719	431.469	491.969	500.557		

NOTE:

THE SEWER INVERT LEVELS ARE PRELIMINARY AND ARE SUBJECT TO DETAILED DESIGN

REFER TO SKETCHES SKC72-SKC73 FOR OPTION 2B LEVELS.

PRELIMINARY - NOT FOR CONSTRUCTION

20/06/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION														KK	
DATE	REV	DESCRIPTION														REC	APP
REVISIONS																	

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KLYNT KIWANG
CHECKED
ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFFER
ENGINEERING CERTIFICATION

SCALE

0 20 40 60m

SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT

MIRVAC QLD PTY LTD

PROJECT

EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION

TEVIOT ROAD, GREENBANK

SHEET TITLE

PRELIMINARY SEWER RISING MAIN LONG SECTION OPTION 2A - SHEET 1

JOB CODE

MIR-1000

SHEET NUMBER

SKC68

REV

1

MH / MS COVER TYPE									B
MH / MS TYPE	VB		VB	HB	VB		VB	HB	J
MH DROP TYPE									
LINE NO.									
PROPERTY CONNECTION DEPTH									
PROPERTY CONNECTION INVERT LEVEL									
PROPERTY CONNECTION TYPE									
LOT NO.									

LEGEND

RR DENOTES ROAD RESERVE
PP DENOTES PRIVATE PROPERTY

MANHOLE TYPES	
A	CONCRETE MANHOLE 1.0Ø
B	CONCRETE MANHOLE 1.2Ø
C	CONCRETE MANHOLE 1.5Ø
J	TYPE 'J' 1 MAINTENANCE SHAFT (DN300 SHAFT)
TE	TEMPORARY END
HB	HORIZONTAL BEND
VB	VERTICAL BEND

LID TYPES	
B	CLASS B NON TRAFFICABLE CAST IRON
BD	CLASS B NON TRAFFICABLE BOLT DOWN
D	CLASS D TRAFFICABLE CAST IRON

MAINTENANCE STRUCTURE DROP TYPES	
V	FALL THROUGH MH
W	OBLIQUE 45° BACKDROP
X	INTERNAL DROP
Y	EXTERNAL DROP
VORT	INTERNAL VORTEX DROP
Z	MAINTENANCE SHAFT DROP

PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

- NOTES:
1. EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
 2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

- SEWER RISING MAIN OPTION 2A
- SEWER RISING MAIN OPTION 2B

DATUM RL	42.000								
PROPERTY DESCRIPTION				RR					
PIPE SIZE (mm), CLASS				DN180 PE100 SDR 11					
GRADE (1 IN X)		-71	-38	-38	-200	-200	-200	-200	
LENGTH		160.639	12.570	23.429	50.057	6.616	108.723	5.009	
EMBEDMENT TYPE									
DEPTH OF INVERT BELOW FSL	2.151		2.945	2.767	2.596	3.148	3.181	1.506	1.382
INVERT LEVEL (IL)	49.356		51.605	51.936	52.552	52.802	52.835	53.379	55.404
FINISHED SURFACE LEVEL (FSL)	51.507	54.551	54.703	55.148	55.950	56.017		54.885	54.786
EXISTING SURFACE LEVEL (ESL)	51.479	55.257	55.598	55.851	56.134	56.131		56.623	56.242
CHAINAGE (CH)	500.557	661.196	673.766	697.195	747.252	753.868		862.591	867.601

NOTE:

THE SEWER INVERT LEVELS ARE PRELIMINARY AND ARE SUBJECT TO DETAILED DESIGN

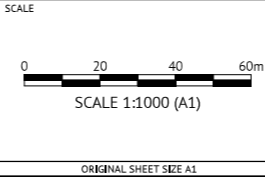
REFER TO SKETCHES SKC72-SKC73 FOR OPTION 2B LEVELS.

PRELIMINARY - NOT FOR CONSTRUCTION

20/06/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION						KK	
DATE	REV	DESCRIPTION						REC	APP
REVISIONS									

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KLYNT KIWANG
CHECKED
ANDREW LANGDON
PROJECT MANAGER
SIMON STEINHOFFER
ENGINEERING CERTIFICATION



CLIENT
MIRVAC QLD PTY LTD

PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK

SHEET TITLE
PRELIMINARY SEWER RISING MAIN LONG SECTION OPTION 2A - SHEET 2

JOB CODE
MIR-1000

SHEET NUMBER	REV
SKC69	1

LEGEND

RR	DENOTES ROAD RESERVE
PP	DENOTES PRIVATE PROPERTY

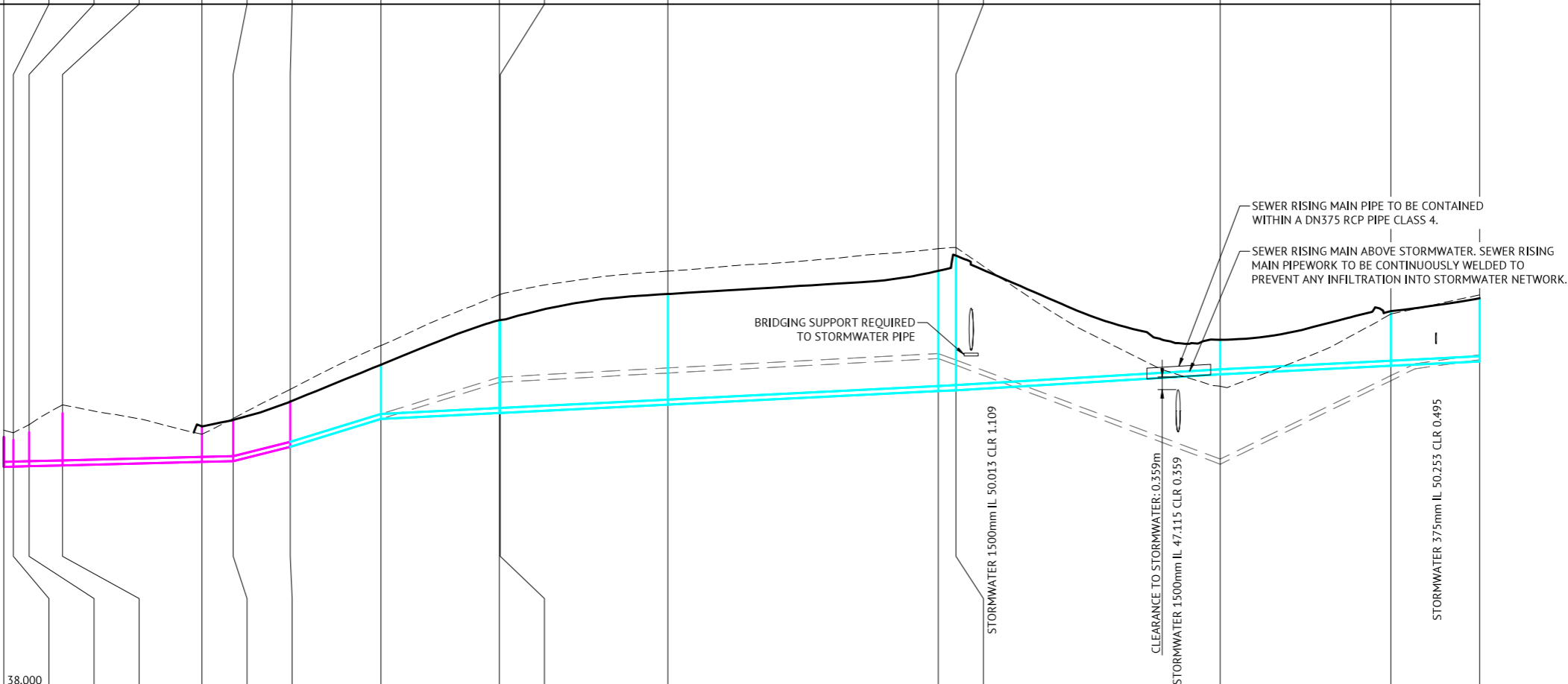
PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

NOTES:

1. EMBLEMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

SEWER RISING MAIN OPTION 2A

SEWER RISING MAIN OPTION 2B



NOTE:
THE SEWER INVERT LEVELS ARE PRELIMINARY
AND ARE SUBJECT TO DETAILED DESIGN

REFER TO SKETCHES SKC68-SKC69 FOR
OPTION 2A LEVELS.

MH / MS COVER TYPE									B
MH / MS TYPE	VB	VB	HB	VB	VB	HB	HB		J
MH DROP TYPE									
LINE NO.									
PROPERTY CONNECTION DEPTH									
PROPERTY CONNECTION INVERT LEVEL									
PROPERTY CONNECTION TYPE									
LOT NO.									

LEGEND

RR DENOTES ROAD RESERVE
PP DENOTES PRIVATE PROPERTY

MANHOLE TYPES	
A	CONCRETE MANHOLE 1.0Ø
B	CONCRETE MANHOLE 1.2Ø
C	CONCRETE MANHOLE 1.5Ø
J	TYPE 'J' 1 MAINTENANCE SHAFT (DN300 SHAFT)
TE	TEMPORARY END
HB	HORIZONTAL BEND
VB	VERTICAL BEND

LID TYPES	
B	CLASS B NON TRAFFICABLE CAST IRON
BD	CLASS B NON TRAFFICABLE BOLT DOWN
D	CLASS D TRAFFICABLE CAST IRON

MAINTENANCE STRUCTURE DROP TYPES	
V	FALL THROUGH MH
W	OBLIQUE 45° BACKDROP
X	INTERNAL DROP
Y	EXTERNAL DROP
VORT	INTERNAL VORTEX DROP
Z	MAINTENANCE SHAFT DROP

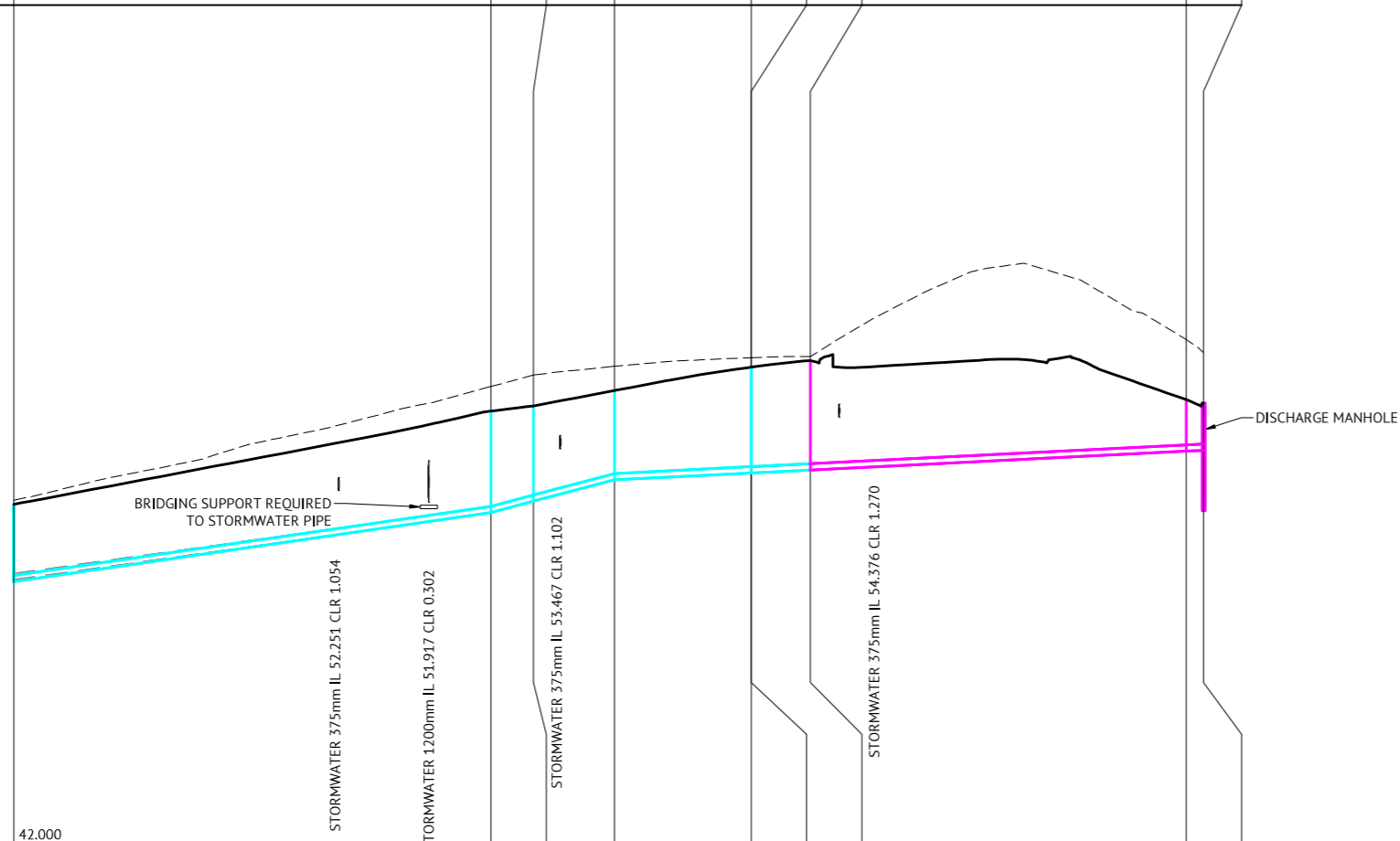
PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

NOTES:

1. EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

SEWER RISING MAIN OPTION 2A

SEWER RISING MAIN OPTION 2B

[illegible]

NOTE:

THE SEWER INVERT LEVELS ARE PRELIMINARY
AND ARE SUBJECT TO DETAILED DESIGN

REFER TO SKETCHES SKC68-SKC69 FOR
OPTION 2A LEVELS.

PRELIMINARY - NOT FOR CONSTRUCTION

20/06/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION		KK	
DATE	REV	DESCRIPTION		REC	APP
		REVISIONS			



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DESIGNED
KLYNT KIWANG

CHECKED
ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE



SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT

MIRVAC QLD PTY LTD

PROJECT **EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT**

LOCATION **TEVIOT ROAD, GREENBANK**

SHEET TITLE **PRELIMINARY SEWER RISING MAIN LONG SECTION OPTION 2B - SHEET 2**

JOB CODE

MIR-1000

SHEET NUMBER

SKC73

1

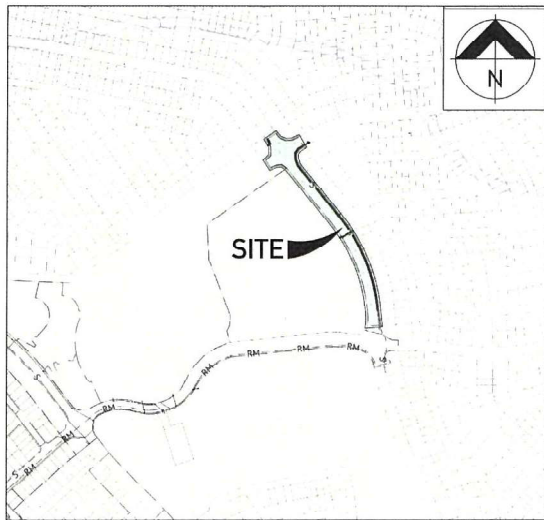
A.9 APPENDIX I – Constructed Temporary SPS and Anderson Drive Gravity Main Approvals

EVERLEIGH SCHOOL SITE PACKAGE 3 - ANDERSON DRIVE

TEVIOT ROAD, GREENBANK

FOR MIRVAC

SEWERAGE RETICULATION



LOCALITY PLAN

REAL PROPERTY DESCRIPTION

LOT 205 & 434 on RP845844
LOT 9 on S312355

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
C500	SEWERAGE RETICULATION LOCALITY PLAN & NOTES
C501	SEWERAGE RETICULATION LAYOUT PLAN
C502	SEWERAGE RETICULATION LONG SECTIONS - SHEET 1 OF 2
C503	SEWERAGE RETICULATION LONG SECTIONS - SHEET 2 OF 2
C504	SEWERAGE RETICULATION NOTES AND DETAILS

GENERAL NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE SYSTEM.
- ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE CONTRACTOR UNDER LOGAN WATER SUPERVISION AT THE DEVELOPER'S COST.
- ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE ACCEPTED PRODUCTS AND MATERIALS LIST.
- EACH ALLOTMENT SHALL BE SERVED BY A DN100 PROPERTY CONNECTION FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN150 PROPERTY CONNECTION SHALL BE PROVIDED.
- PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
- PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND A MAXIMUM OF 750mm.
- WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
- WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE.
- THE CUNICAL FOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
- SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEQ SEWER CODE.
- BENCH MARK AND LEVELS TO AHD
- REFER TO BULK EARTHWORKS DRAWINGS FOR FINISHED SURFACE LEVELS.
- ALL SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORK HEALTH AND SAFETY ACT. FOR INFORMATION PHONE: 1300 369 915.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS TO ALLOW CONSTRUCTION OF THE SEWER SYSTEM.
- THE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND SAFE SHORING TO ALLOW SEWER MAINTENANCE SECTION TO CARRY OUT LIVE SEWER WORK.
- CONSTRUCT TRENCHES TO SEQ-SEW-1200-2, WITH EMBEDMENT TYPE 3 SUPPORT MINIMUM TO SEQ-SEW-1201-1, AND ROAD CROSSINGS TO SEQ-SEW-1205-1 AND LCC STANDARDS.
- CONSTRUCT PROPERTY CONNECTIONS TO SEQ-SEW-1100 SERIES.
- CONSTRUCT MAINTENANCE STRUCTURES TO SEQ-SEW-1300 SERIES.
- CONSTRUCT BULKHEADS TO SEQ-SEW-1206-1.
- INSTALL DETECTABLE MARKER TAPE ON ALL MAINS AND PROPERTY CONNECTIONS.
- CALCAREOUS CONCRETE IN MAINTENANCE HOLES REQUIRED IN ACCORDANCE WITH SEQ WORKS D-C CODE REQUIREMENTS.
- CCTV OF SEWER TO BE UNDERTAKEN AND SUPPLIED TO SUPERINTENDENT PRIOR TO, BUT NO GREATER THAN 2 WEEKS BEFORE, THE ON-SITE INSPECTION FOR OFF MAINTENANCE.

VEGETATION PROTECTION

- A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- C. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
- C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA, ACID SULPHATE SOILS ARE TO BE MANAGED IN ACCORDANCE WITH AN APPROVED ACID SULPHATE SOIL MANAGEMENT PLAN.

CREEK CROSSINGS

- A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

- A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

COMPLIANCE ENDORSEMENT
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2018/999/10
Date: 15 December 2020



INDEMNITY - EXISTING SERVICES

NOT WITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CAUSED AS A RESULT OF THE WORKS.

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO COMMENCING ANY CONSTRUCTION WORK, INCLUDING CLEARING.

ALL SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 2011. CONTACT THE DIVISION OF HEALTH & SAFETY FOR INFORMATION. PHONE: 1300 369 915

CONTACT 'DIAL BEFORE YOU DIG' ON 1100 FOR LOCATION OF EXISTING PUBLIC SERVICES PRIOR TO EXCAVATION.

TRENCH EXCAVATION AND SPOIL:

ALL TRENCH EXCAVATIONS SHALL INCLUDE TREATING, SIZING, CONDITIONING AND PROCESSING OF ALL TYPES OF ROCK. CONTRACTOR SHALL PLACE ALL EXCESS TRENCH SPOIL TO A LOCATION NOMINATED BY THE SUPERINTENDENT INCLUDING ALL LEVEL ONE COMPACTION REQUIREMENTS AND TESTING, AND MUST BE FREE-DRAINING. THE PLACEMENT OF THE SPOIL SHALL MEET ALL REQUIREMENTS OF THE FILL SPECIFICATION PROVIDED WITHIN THESE PROJECT DRAWINGS.

NAME OF ESTATE	EVERLEIGH SCHOOL SITE PACKAGE 3 - ANDERSON DRIVE
SUBDIVIDER	MIRVAC
APPLICATION No.	-
SP DELEGATE APPROVAL DATE	16 APRIL 2019
COUNCIL DA APPROVAL No.	DEV 2018 / 999
DRAWING/PLAN No.	C500-C504
No. OF ALLOTMENTS	1
AREA IN Ha.	1.04 Ha
LENGTH OF SEWERS	DN150 uPVC S88 399m DN150 DI 18m

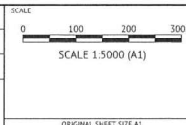
PRELIMINARY - FOR APPROVAL

DATE	REV	DESCRIPTION	REVISED
11/05/20	1	AMENDED TRENCH EXCAVATION AND SPOIL	MM
10/01/20	A	PRELIMINARY ISSUE - NOT FOR CONSTRUCTION	MM
DATE	REV	DESCRIPTION	REVISED



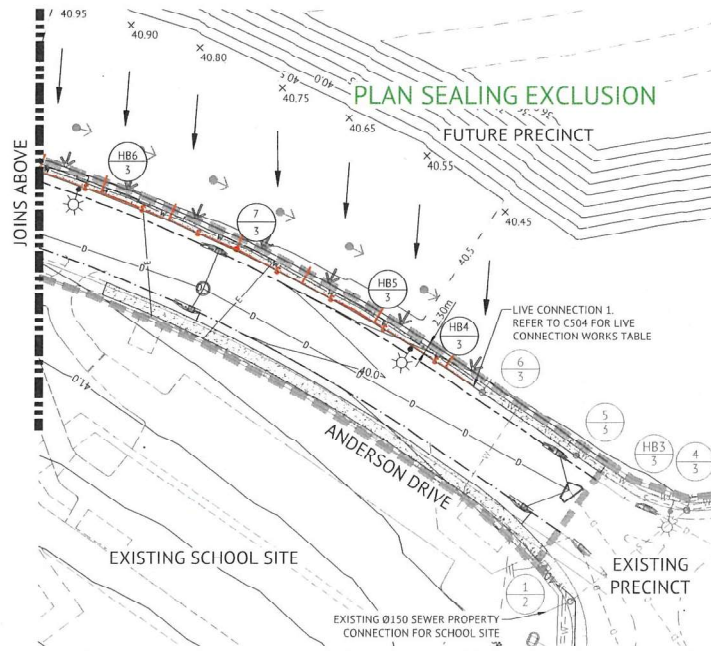
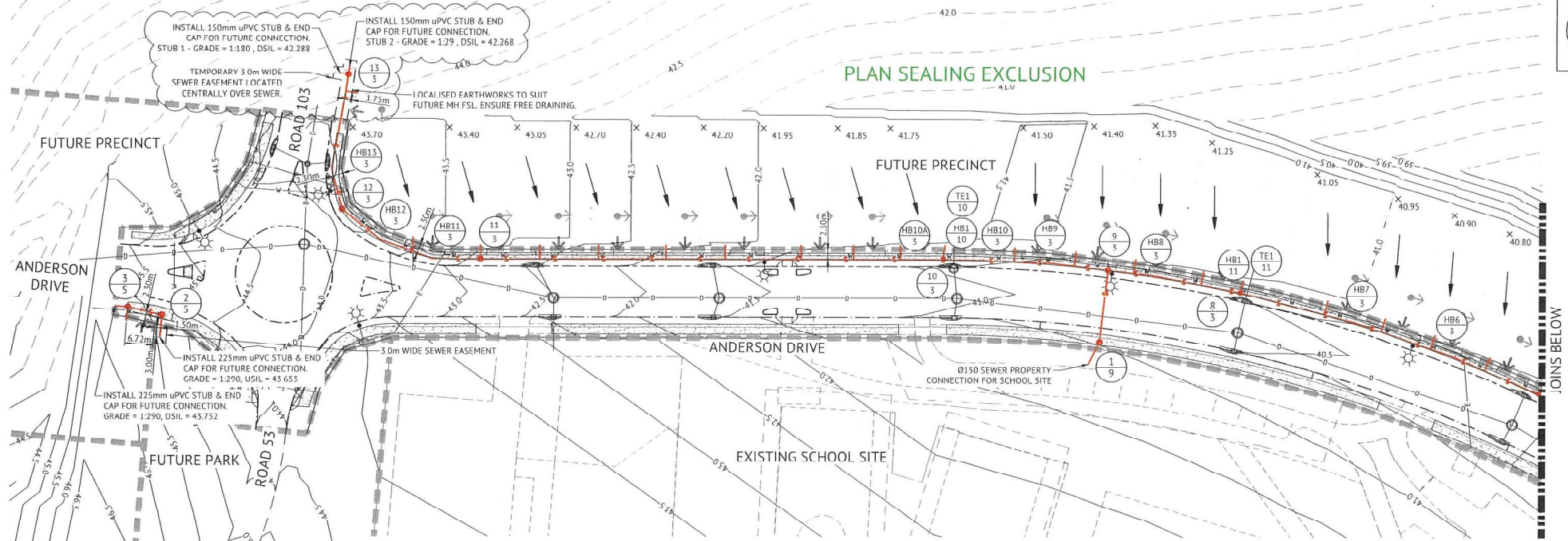
BRISBANE OFFICE
LEVEL 1, 100 BRUNSWICK STREET
PO BOX 361
FORTITUDE VALLEY, QLD 4006
PH: (07) 3253 2222
WEB: www.premise.com.au

DESIGNED: K. KIANG
CHECKED: M. MAJNER
PROJECT COORDINATOR: M. LILLYWYN
PROJECT CERTIFIER: Patrick Brady
RPEQ 7112



CLIENT: MIRVAC
PROJECT: EVERLEIGH SCHOOL SITE PACKAGE 3 - ANDERSON DRIVE
LOCATION: TEVIOT ROAD, GREENBANK
SHEET TITLE: SEWERAGE RETICULATION LOCALITY PLAN & NOTES

SHEET CODE: MIR016-3
SHEET NUMBER: C500
REV: B



LEGEND - PROPOSED

- S — GRAVITY SEWER
- S — 100mm PROPERTY CONNECTION. 7.5m OFFSET TO BDY (U.N.O.).
- S — MAINTENANCE STRUCTURE
- 1 — PROPOSED MAINTENANCE HOLE OR MAINTENANCE SHAFT NUMBER. REFER LONG SECTION DRAWINGS FOR STRUCTURE DETAILS.
- HB1 — HORIZONTAL BEND (5m RADIUS).
- 38 — LOT NUMBER
- D — STORMWATER DRAINAGE
- W — DRINKING WATER MAIN
- E — ELECTRICAL (PROPOSED)
- 12.0 — FINISHED CONTOURS (0.50m)
- 0 — ZERO LOT LINE
- 0 — FUTURE DRIVEWAY LOCATION

LEGEND - EXISTING

- EX HC — 100mm EXISTING PROPERTY CONNECTION
- D — D — STORMWATER DRAINAGE
- S — S — GRAVITY SEWER
- W — W — DRINKING WATER MAIN

PROPERTY CONNECTION NOTE:

PROPOSED PROPERTY CONNECTIONS LOCATION AND DEPTHS ARE BASED ON UN-APPROVED LOT LAYOUT. FUTURE CONFLICTS WITH CHANGES TO FINAL LOT LAYOUT TO BE RECTIFIED AT DEVELOPER'S COSTS.

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH TO INVERT OF PROPERTY CONNECTION AT 1.5m. (UNLESS OTHERWISE STATED)

ALL PROPERTY CONNECTIONS DIA 100 PVC UNLESS OTHERWISE DENOTED.

FOR SEWERAGE RETICULATION NOTES REFER DWG No. C500.

CONTRACTOR TO ENSURE THAT ALL SLOPED PROPERTY CONNECTIONS LOCATED AT REAR OF LOTS SHALL TERMINATE AT SHORTEST LENGTH POSSIBLE FROM THE JUNCTION WITH THE SEWER MAIN.

CONTRACTOR TO CONSTRUCT PROPOSED SEWER MANHOLES WITH SUFFICIENT NECK HEIGHT SHOULD FUTURE LAND OWNER REQUIRE ADJUSTMENT TO LID LEVEL TO SUIT FUTURE DRIVEWAY.

COMPLIANCE ENDORSEMENT
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2018/999/10

Date: 15 December 2020



PRELIMINARY - FOR APPROVAL

DATE	REV	DESCRIPTION	REVISED
04/11/2020	D	ADDED PROPERTY CONNECTION NOTE AND AMENDED SEWER EXTENT	KE
03/09/2020	C	ADDED SEWER CONNECTIONS TO FUTURE PRECINCTS AND SEWER EASEMENTS	KK
31/05/20	B	AMENDED SEWER MAIN AND ADDED ELEC AND LANDSCAPE LINEWORK	MM
10/01/20	A	ORIGINAL ISSUE	MM



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DESIGNED: K KIWANG
CHECKED: M MAZNER
PROJECT COORDINATOR: R LLEWELYN
PROJECT CERTIFIER: PATRICK BRADY
RPEQ 7112

SCALE
0 10 20 30m
SCALE 1:500 (A1)
ORIGINAL (SHEET SIZE A1)

CLIENT: MIRVAC
PROJECT: EVERLEIGH SCHOOL SITE PACKAGE 3 - ANDERSON DRIVE
LOCATION: TEVIOT ROAD, GREENBANK
SHEET TITLE: SEWERAGE RETICULATION LAYOUT PLAN

SHEET NUMBER: MIR016-3
REV: C501
D

MAINTENANCE HOLE / SHAFT NO.	6/3	HB4/3	HB5/3	7/3	HB6/3	HB7/3	8/3	HB8/3	9/3	HB9/3	HB10/3	10/3	HB10A/3	11/3	HB11/3	HB12/3	12/3	HB13/3
MH / MS COVER TYPE	B					B			B			B			B			
MH / MS TYPE	A	HTP	HB	HTP	HTP	HB	HTP	HB	HTP	HB	HTP	HB	HTP	HB	HTP	HB	HTP	HB
MH DROP TYPE																		
LINE NO.																		
PROPERTY CONNECTION DEPTH		1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
PROPERTY CONNECTION INVERT LEVEL		82 38.850	82 38.950	82 39.038	82 39.125	82 39.210	82 39.296	82 39.370	82 39.451	82 39.536	82 40.075	82 40.178	82 40.274	82 40.303	82 41.334	82 41.328	82 41.801	82 42.273
PROPERTY CONNECTION TYPE		RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT	RUT
LOT NO.																		

LEGEND - PROPOSED

FP DENOTES VERGE

MANHOLE TYPES	
A	CONCRETE MANHOLE 1.00
B	CONCRETE MANHOLE 1.20
C	CONCRETE MANHOLE 1.50
J	TYPE 'J' 1 MAINTENANCE SHAFT (DN300 RISER)
HB	HORIZONTAL BEND (3m HORIZ. RADIUS)

LID TYPES	
B	CLASS B NON TRAFFICABLE CONCRETE IN FILL
BD	CLASS B NON TRAFFICABLE BOLT DOWN
D	CLASS D TRAFFICABLE CONCRETE IN FILL

MAINTENANCE HOLE DROP TYPES	
V	FALL THROUGH MH
W	OBLIQUE 45° BACKDROP
X	INTERNAL DROP
Y	EXTERNAL DROP
VORT	INTERNAL VORTEX DROP

PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

NOTES

1. EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZE).
2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

HORIZONTAL BEND NOTE:

DEFLECTION ANGLES FOR IN LINE BENDS EXCEEDING 45° SHALL BE ACHIEVED BY THE R.R.J. CONNECTION OF TWO BENDS (MAXIMUM 45° INDIVIDUAL BEND DEFLECTION ANGLE).

PROPERTY CONNECTION NOTE:

CONTRACTOR TO ENSURE MINIMUM CLEARANCE BETWEEN PROPOSED PROPERTY CONNECTION AND PROPOSED WATER MAIN IS ACHIEVED.

DATUM RL

PROPERTY DESCRIPTION

PIPE SIZE (mm), CLASS

GRADE (1 IN X)

LENGTH

EMBEDMENT TYPE

DEPTH OF INVERT BELOW FSL

INVERT LEVEL (IL)

FINISHED SURFACE LEVEL (FSL)

EXISTING SURFACE LEVEL (ESL)

CHAINAGE (CH)

LINE

SCALE

CLIENT

PROJECT

LOCATION

SHEET TITLE

DESIGNER

CHECKED

PROJECT COORDINATOR

PROJECT CERTIFIER

SCALE

ORIGINAL SHEET SIZE A1

CLIENT

PROJECT

LOCATION

SHEET TITLE

DESIGNER

CHECKED

PROJECT COORDINATOR

PROJECT CERTIFIER

SCALE

ORIGINAL SHEET SIZE A1

CLIENT

PROJECT

LOCATION

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LOCATION

SHEET TITLE

DESIGNER

CHECKED

PROJECT COORDINATOR

PROJECT CERTIFIER

SCALE

ORIGINAL SHEET SIZE A1

CLIENT

MAINTENANCE HOLE / SHAFT NO.

MH / MS COVER TYPE					
MH / MS TYPE	HTP	HTP	HB	HTP	B
MH DROP TYPE					A
LINE NO.					V
PROPERTY CONNECTION					5
DEPTH					10
PROPERTY CONNECTION					
INVERT LEVEL					
PROPERTY CONNECTION TYPE					
LOT NO.					

LEGEND - PROPOSED

FP DENOTES VERGE

MANHOLE TYPES	
A	CONCRETE MANHOLE 1.00
B	CONCRETE MANHOLE 1.20
C	CONCRETE MANHOLE 1.50
J	TYPE 'J' 1 MAINTENANCE SHAFT (DN 300 RISER)
HB	HORIZONTAL BEND (3m HORIZ. RADIUS)

LID TYPES	
B	CLASS B NON TRAFFICABLE CONCRETE IN FILL
BD	CLASS B NON TRAFFICABLE BOLT DOWN
D	CLASS D TRAFFICABLE CONCRETE IN FILL

MAINTENANCE HOLE DROP TYPES	
V	FALL THROUGH MH
W	ORIENTED 45° BACK DROP
X	INTERNAL DROP
Y	EXTERNAL DROP
VORT	INTERNAL VORTEX DROP

PROPERTY CONNECTION TYPES	
A	TYPE A - STD
B	TYPE B - SLOPE UP
D	TYPE D - VERTICAL

- NOTES:
1. EMBEDMENT TYPE 3 SHALL USE CRUSHED ROCK NOMINAL 5-7mm (SINGLE SIZED).
 2. DUCTILE IRON PIPES SHALL HAVE MIN. 1300 MICRON POLYURETHANE INTERNAL LINING.

HORIZONTAL BEND NOTE:
DEFLECTION ANGLES FOR IN LINE BENDS EXCEEDING 45° SHALL BE ACHIEVED BY THE R.R.I. CONNECTION OF TWO BENDS (MAXIMUM 45° INDIVIDUAL BEND DEFLECTION ANGLE).

PROPERTY CONNECTION NOTE:
CONTRACTOR TO ENSURE MINIMUM CLEARANCE BETWEEN PROPOSED PROPERTY CONNECTION AND PROPOSED WATER MAIN IS ACHIEVED.

DATUM RL

PROPERTY DESCRIPTION	RR
PIPE SIZE (mm), CLASS	DN150 PE100 SDR21
GRADE (1 IN X)	160 160 160 160
LENGTH	17.987 0.046 0.042 3.255
EMBEDMENT TYPE	TYPE 3
DEPTH OF INVERT BELOW FSL	1.803 2.167 2.169 2.172 2.517
INVERT LEVEL (IL)	42.114 42.227 42.227 42.228 42.248
FINISHED SURFACE LEVEL (FSL)	43.913 44.394 44.397 44.399 44.565
EXISTING SURFACE LEVEL (ESL)	42.926 44.126 44.129 44.132 44.562
CHAINAGE (CH)	TP 356.270 374.237 374.304 374.346 377.600

LINE

3



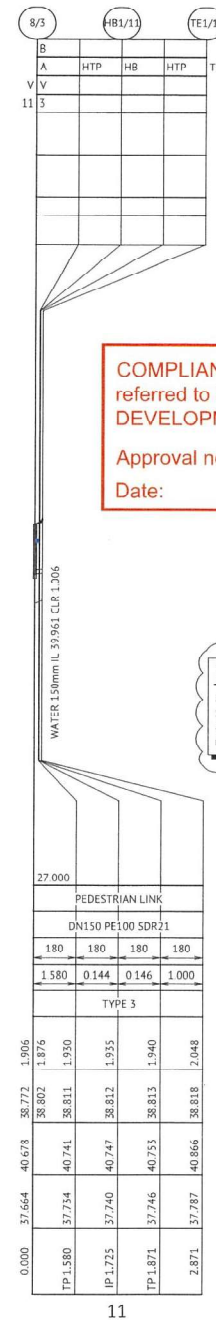
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9



10



11

COMPLIANCE ENDORSEMENT
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2018/999/10

Date: 15 December 2020



PROPERTY CONNECTION NOTE:

PROPOSED PROPERTY CONNECTIONS LOCATION AND DEPTHS ARE BASED ON UN-APPROVED LOT LAYOUT. FUTURE CONFLICTS WITH CHANGES TO FINAL LOT LAYOUT TO BE RECTIFIED AT DEVELOPER'S COSTS.

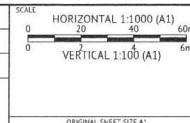
PRELIMINARY - FOR APPROVAL

DATE	REV	DESCRIPTION	REVISIONS
24/11/2020	L	ADDED PROPERTY CONNECTION NOTE AND AMENDED SEWER INVERT LEVELS AND EXTENT	SK FB
02/09/2020	D	ADDED SEWER LONG SECTIONS AND RISE SILE TO TYPE J1'S AND ATTACHED FINISHED SURFACE LEVELS	SK FB
05/07/20	C	AMENDED WATER CROSSING LOCATION AND DETAILS	MH FB
11/01/20	B	AMENDED SEWER LINE AND STORMWATER CROSSING DETAILS, ADDED MAINTENANCE SHAFT TO LEGEND.	MH JCS
03/01/20	A	ORIGINAL ISSUE	MH JCS



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DESIGNED K. KIANG	CHECKED M. MAJNER
PROJECT COORDINATOR R. LLEWELYN	PROJECT CERTIFIER P. BRADY
PATRICK BRADY	RPE 7112



CLIENT MIRVAC	PROJECT EVERLEIGH SCHOOL SITE PACKAGE 3 - ANDERSON DRIVE
LOCATION TEVIOT ROAD, GREENBANK	SHEET TITLE SEWERAGE RETICULATION LONG SECTIONS - SHEET 2 OF 2

JOB CODE MIR016-3	REVISION C503
SHEET NUMBER E	REV E

LIVE SEWER WORKS

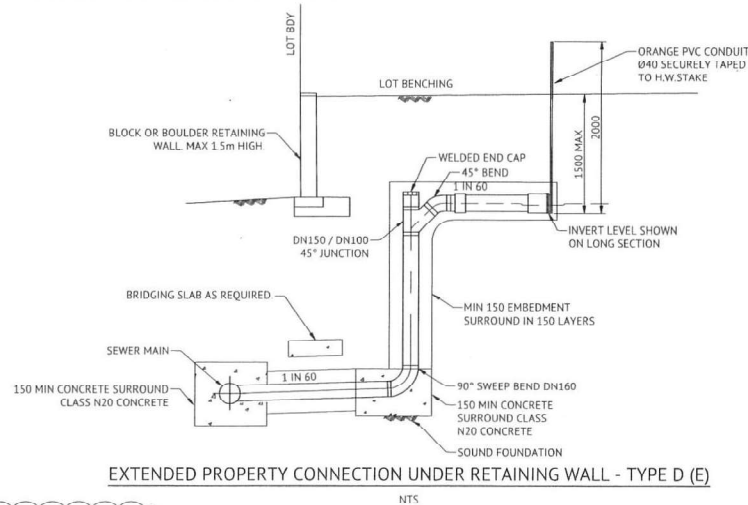
No.	DESCRIPTION	DIA. SEWER	MH NO.	MH TYPE	COVER TYPE	LOT NO.	F.S.L.	E.S.L.	I.L.	DEPTH
1(A)	0.5m FROM STUB END CAP, ON EXISTING MANHOLE 6/3, CONSTRUCTOR TO LAY NEW LINE 3. AFTER CLEANSING, TESTING AND INSPECTING, NOTIFY AGENCY.	150	6/3	MH	B	-	39.892	37.047	38.004	1.888
1(B)	AGENCY TO REMOVE TEMPORARY END CAP ON STUB AND LINE 3 AND MAKE LIVE CONNECTIONS AFTER SUCCESSFUL "ON MAINTENANCE" INSPECTION.									

LEVELS IN THE LIVE SEWER TABLE ARE DESIGN LEVELS AS CONSTRUCTED INFORMATION TO BE ADDED WHEN AVAILABLE.

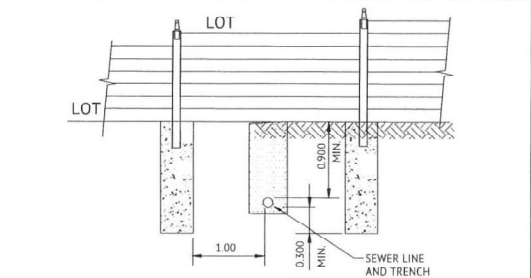
CONSULTING ENGINEERS ARE TO CONTACT PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR THIS WORK TO BE CARRIED OUT. (EXCAVATION, SAFE-SHORTING AND ASSOCIATED WORK BY CONTRACTOR). EXCAVATION WORKS CARRIED OUT BY CONTRACTORS AT DEPTH OF 1.5m OR GREATER MUST PROVIDE A "SAFE WORK PLAN" AS PER WORKPLACE HEALTH AND SAFETY LEGISLATION TO SEQ-SPS PRIOR TO SEQ-SPS COMMENCING ANY WORK. IT IS THE DEVELOPER'S RESPONSIBILITY TO ENSURE ALL LIVE SEWER WORKS ARE COMPLETE BEFORE ALLOWING PRIVATE DRAINAGE TO BE CONNECTED.

COMPLIANCE ENDORSEMENT
referred to in the PDA
DEVELOPMENT APPROVAL

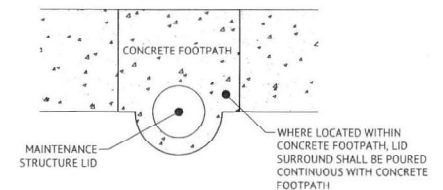
Approval no: DEV2018/999/10
Date: 15 December 2020



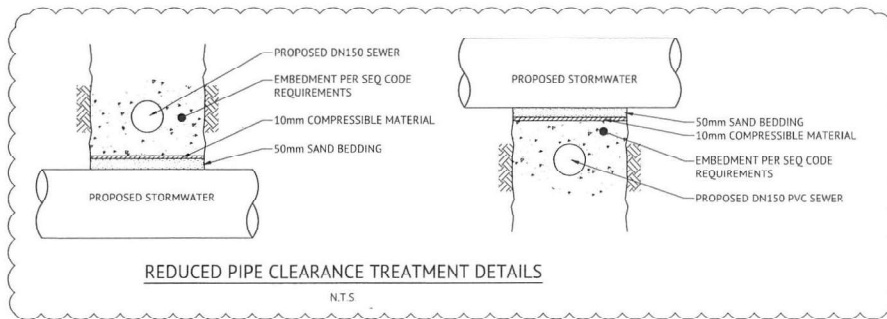
EXTENDED PROPERTY CONNECTION UNDER RETAINING WALL - TYPE D (E)



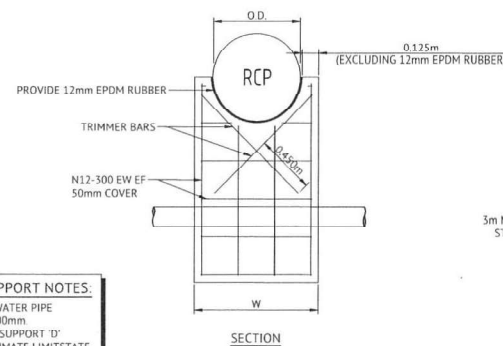
SEWER LINE CROSSING CONCRETE SLEEPER RETAINING WALL BRIDGING SLAB DETAIL



TYPICAL MAINTENANCE STRUCTURE IN CONCRETE FOOTPATH DETAIL

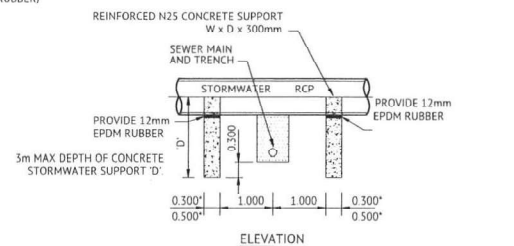


REDUCED PIPE CLEARANCE TREATMENT DETAILS



CONCRETE STORMWATER SUPPORT TYPICAL DETAIL

SCALE 1:20



CONCRETE STORMWATER SUPPORT IN ROCK SUBGRADE DETAIL

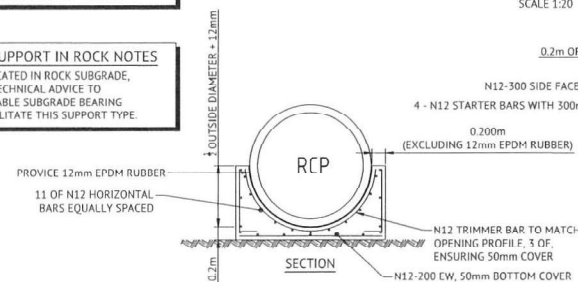
SCALE 1:40

GENERAL CONCRETE STORMWATER SUPPORT NOTES.

1. SUPPORTS TO BE INSTALLED WHERE STORMWATER PIPE DIAMETER IS EQUAL TO OR GREATER THAN 600mm
2. 3m MAX DEPTH OF CONCRETE STORMWATER SUPPORT 'D'
3. DESIGN BASED ON ACHIEVING 100kPa OF ULTIMATE LIMIT STATE BEARING CAPACITY, TO BE CONFIRMED BY CONTRACTOR DURING CONSTRUCTION
4. 0.300m* WIDTH UP TO 1050 RCP CLASS 2
5. 0.500m* WIDTH BETWEEN 1050 AND 1800 RCP CLASS 2

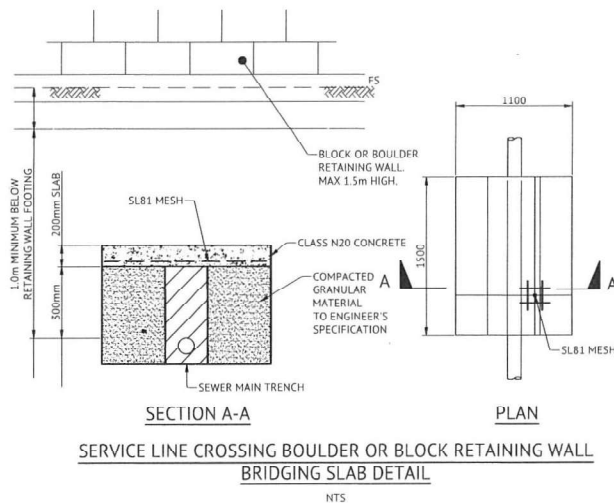
CONCRETE STORMWATER SUPPORT IN ROCK NOTES

WHERE BRIDGING STRUCTURE IS LOCATED IN ROCK SUBGRADE, CONTRACTOR SHALL PROVIDE GEOTECHNICAL ADVICE TO SUPERINTENDENT ADVISING IF SUITABLE SUBGRADE BEARING CAPACITY CAN BE ACHIEVED TO FACILITATE THIS SUPPORT TYPE.



CONCRETE STORMWATER SUPPORT IN ROCK SUBGRADE DETAIL

SCALE 1:40



SERVICE LINE CROSSING BOULDER OR BLOCK RETAINING WALL BRIDGING SLAB DETAIL

NTS

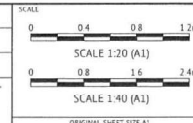
PRELIMINARY - FOR APPROVAL

DATE	REV	DESCRIPTION	REVISIONS
31/05/20	B	ADDED REDUCED PIPE CLEARANCE TREATMENT DETAILS	
10/06/20	A	ORIGINAL ISSUE	



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LEVEL 1, 100 BRUNSWICK STREET
PO BOX 361
FORTITUDE VALLEY, QLD 4006
PH: (07) 3253 2222
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DESIGNED: K. KIWANG
CHECKED: M. MAIZNER
PROJECT COORDINATOR: R. LLEWELYN
PROJECT CERTIFIER: PATRICK BRADY
RPEQ 7112



CL:UNT

MIRVAC
PROJECT: EVERLEIGH SCHOOL SITE PACKAGE 3 - ANDERSON DRIVE
LOCATION: TEVIOT ROAD, GREENBANK
SHEET TITLE: SEWERAGE RETICULATION NOTES AND DETAILS

STRUCTURAL DETAILS APPROVED: DATE: 10/06/20
BRADY HOOPER RPEQ 10854

MIR016-3

SHEET NUMBER: C504
REV: B



MIRVAC EVERLEIGH STATE SCHOOL TEMPORARY SEWAGE PUMP STATION

DRAWING LIST			
DRAWING NUMBER	REV	DATE	DESCRIPTION
d2020.02.03.00	C0	19/03/2020	TITLE & INDEX SHEET
d2020.02.03.01	C0	19/03/2020	SITE LAYOUT
d2020.02.03.02	C0	19/03/2020	PLAN, GENERAL NOTES & PUMP DETAILS
d2020.02.03.03	C0	19/03/2020	SECTION
d2020.02.03.04	C0	19/03/2020	BACKFILL DETAILS & CONSTRUCTION NOTES
d2020.02.03.05	C0	19/03/2020	BILL OF MATERIALS

SIGNATURE	
MARIO DELA CUADRA	
RPEQ NO.	18461
DATED	18/03/2020

CR	ISSUED FOR CONSTRUCTION	SL	IMS	IMS	18/03/20
REV	AMENDMENT	DHN	CKD	APP	DATE

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Checked - SL
Approved - IMS

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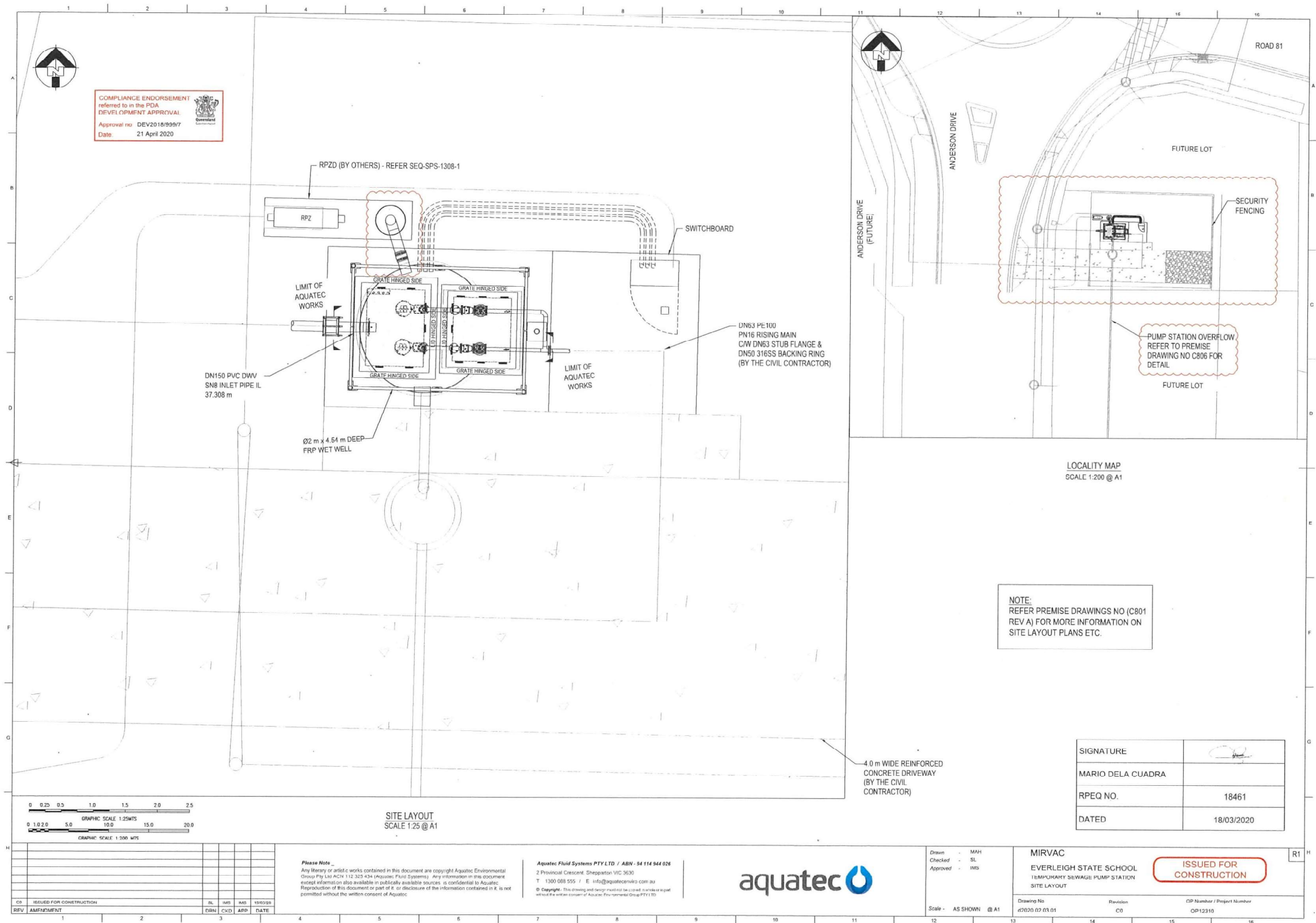
MIRVAC
EVERLEIGH STATE SCHOOL
TEMPORARY SEWAGE PUMP STATION
TITLE BLOCK & INDEX SHEET

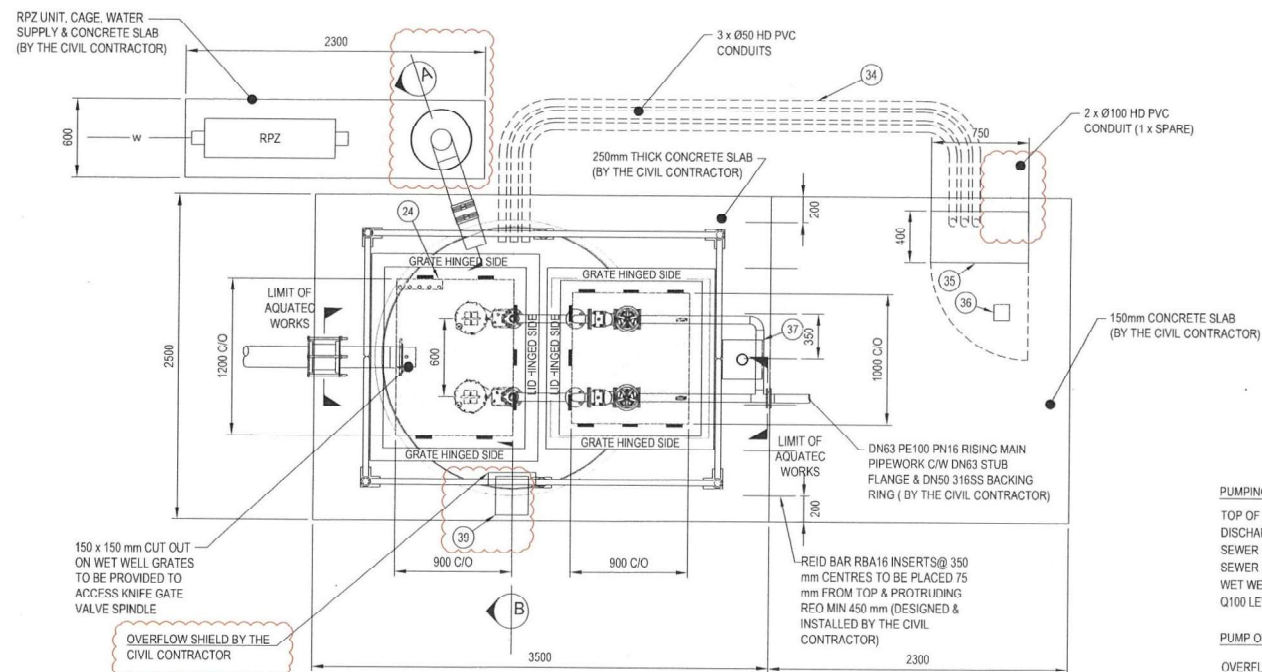
Drawing No.
d2020.02.03.00

Revision
C0

OP Number / Project Number
OP12310

ISSUED FOR
CONSTRUCTION





PLAN
(COVERS REMOVED FOR CLARITY)
SCALE 1:20 @ A1



05	ISSUED FOR CONSTRUCTION	SL	RMS	IMS	19/03/20
REV	AMENDMENT	DRN	CHD	APP	DATE

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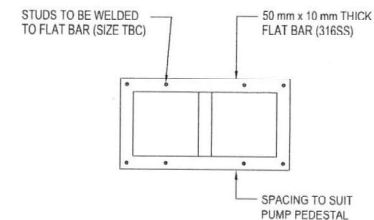
<i>Drawn</i>	-	MAH
<i>Checked</i>	-	SL
<i>Approved</i>	-	IMS

Scale - AS SHOWN @ A

MIRVAC
EVERLEIGH STATE SCHOOL
TEMPORARY SEWAGE PUMP STATION
PLAN, GENERAL NOTES & PUMP DETAILS

ISSUED FOR
CONSTRUCTION

Drawing No.	Revision	OP Number / Project Number
d2020.02.03.02	01	03212310



DETAIL "A"
TYPICAL PUMP PEDESTAL BASE PLAN
SCALE 1:10 @ A1

PUMPING STATION DETAILS

TOP OF SLAB LEVEL RL: 40 m
DISCHARGE PIPE IL: 38.3 m
SEWER INLET PIPE DIAMETER: DN150 (PVC DWV SNG)
SEWER INLET PIPE IL: 37.309 m
WET WELL FLOOR RL: 35.46 m
Q100 LEVEL: 38.90 m

PUMP OPERATING LEVELS:


OVERFLOW RL (ASSUMED): 38.8 m
HIGH LEVEL ALARM (FLOAT) RL: 36.61 m
STDBY START RL: 36.46 m
DUTY START RL: 36.31 m
PUMP STOP RL: 36.11 m
LOW LEVEL: 36.01 m

PUMP DETAILS:

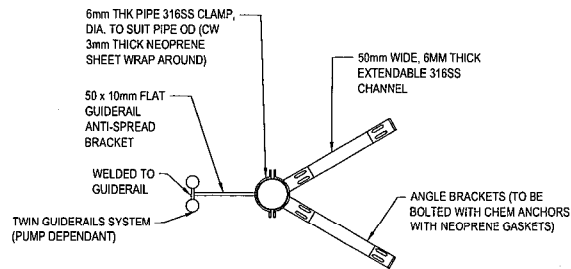
PUMP: FLYGT XYLEM
MODEL: MP 3090 HT 3 ~ 250 50Hz 4.3kW
IMPELLER MATERIAL: GREY CAST IRON
IMPELLER TYPE: SEMI-OPEN MULTI-CHANNEL
DESIGN DUTY: 2.90 l/s @ 41.29 m
PUMP OPERATION: DUTY / STDBY
PUMP DISCHARGE : DN40

GENERAL NOTES:

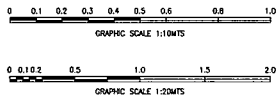
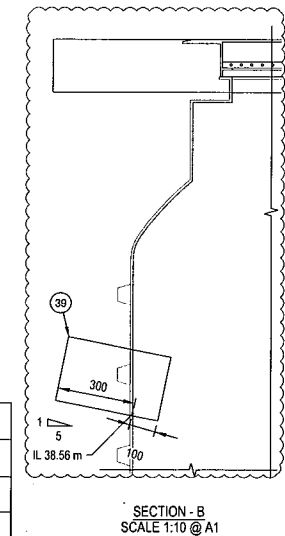
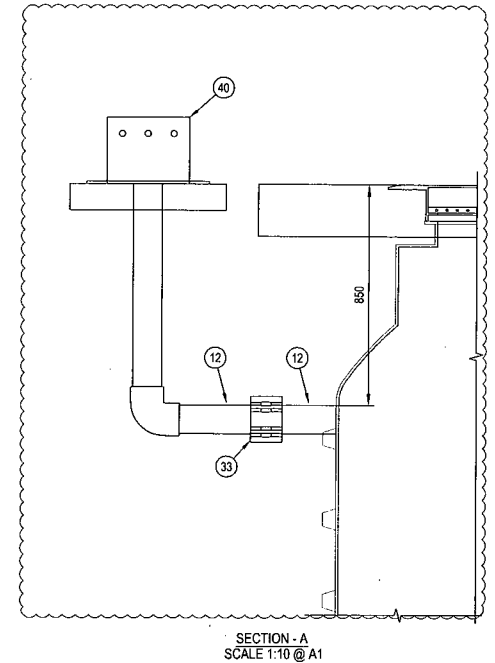
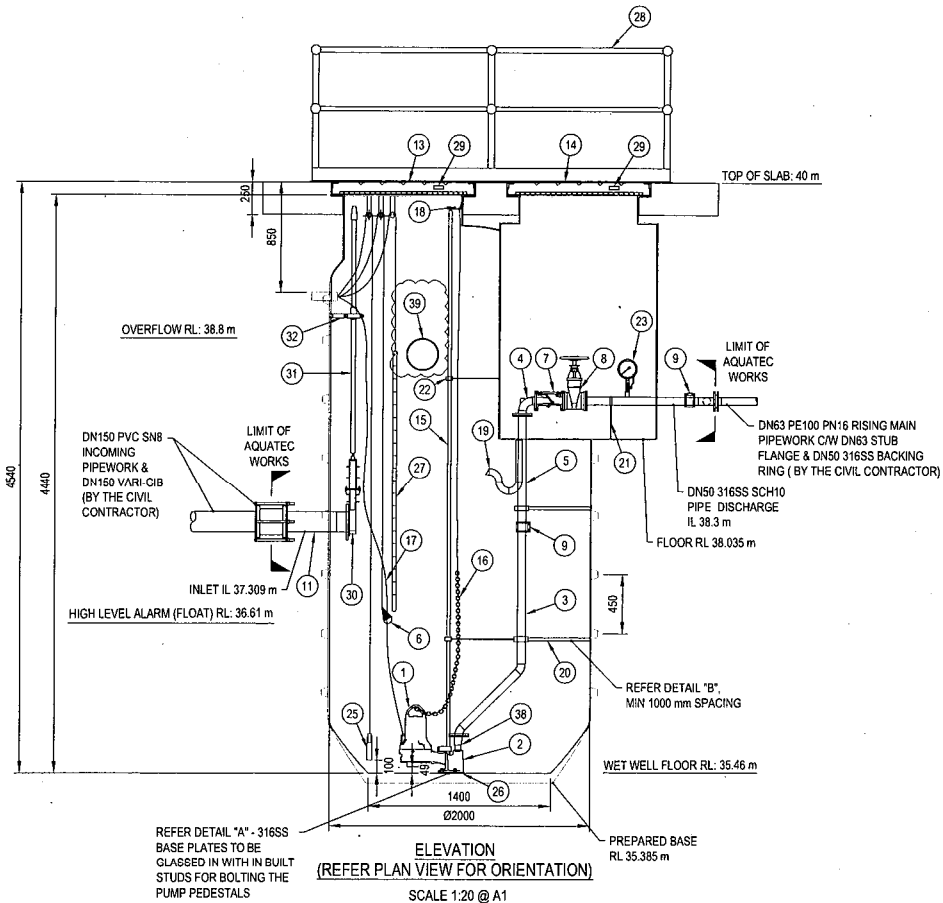
1. ALL PVC PENETRATIONS TO BE GLASSED IN WITH THE FRP VESSEL
2. REINFORCEMENT TO COMPLY WITH AS 1302 & AS 1304
3. ALL HOLES TO BE PRE-CORED AND GLASSED
4. ALL FLANGES TO BE DRILLED TO AS4087 PN16 UNO
5. FRP PIPE PENETRATION & 316SS FIXINGS TO THE FRP WALL TO BE PERFORMED IN ACCORDANCE WITH AS2534
6. SWITCHBOARD DOOR TO HAVE MIN 600mm CLEARANCE TO SURROUNDING ABOVE GROUND STRUCTURE AS PER AS/NZS 3000

SIGNATURE	
MARIO DELA CUADRA	
RPEQ NO.	18461
DATED	18/03/2020

COMPLIANCE ENDORSEMENT
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV2018/999/7
Date: 21 April 2020



DETAIL "B"
(TWIN LEG PIPE SUPPORT DETAIL)
SCALE 1:10 @ A1



SIGNATURE	
MARIO DELA CUADRA	
RPEQ NO.	18461
DATED	18/03/2020

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Drawn - MAH
Checked - SL
Approved - IMS

MIRVAC
EVERLEIGH STATE SCHOOL
TEMPORARY SEWAGE PUMP STATION
SECTION

ISSUED FOR
CONSTRUCTION

Scale - AS SHOWN @ A1

Drawing No.
d2020.02.03.03

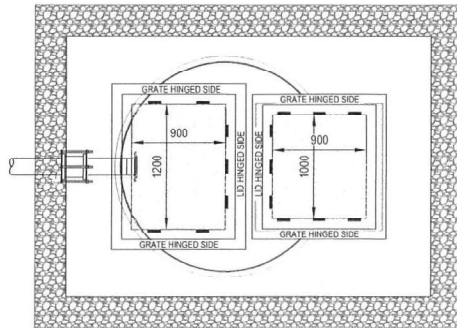
Revision
C0

OP Number / Project Number
OP12310

CD	ISSUED FOR CONSTRUCTION	RL	IMS	IMS	18/03/20
REV	AMENDMENT	DRN	CKO	APP	DATE
1					
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14					
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16					

NON-TRAFFICABLE

COMPLIANCE ENDORSEMENT
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DEVELOPMENT APPROVAL
Approval no. DEV2018/999/7
Date 21 April 2020



BACKFILL PLAN
SCALE 1:25 @ A1

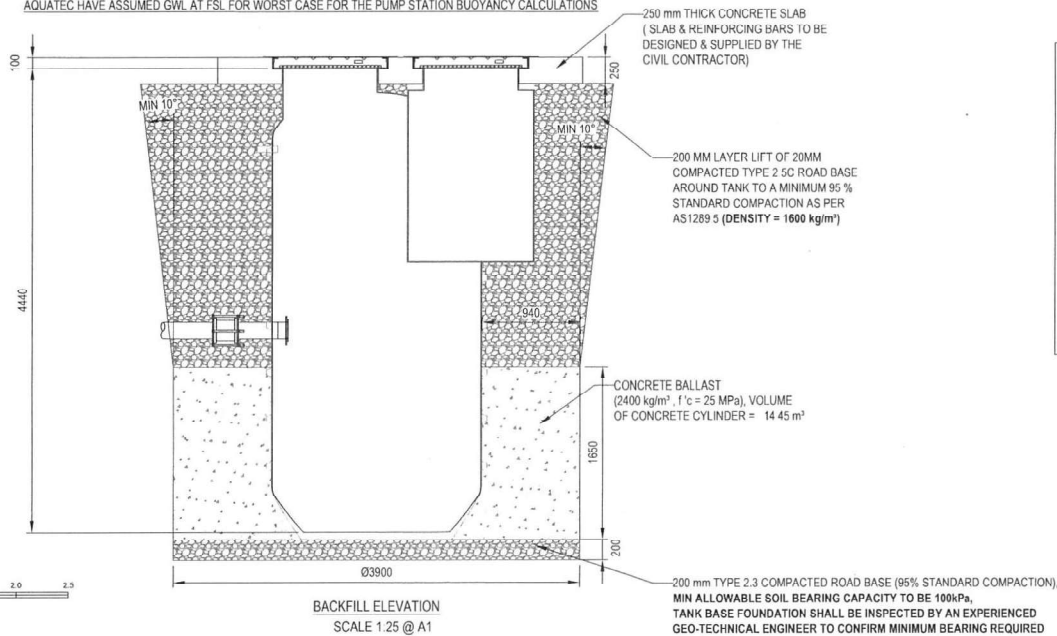
CAUTION:
HAND COMPACTION ONLY TO ALL
IMPORTED BACKFILL WITHIN 1 m RADIUS
OF PUMP STATION STRUCTURES

FIBRE-GLASS TANKS INSTALLATION PROCEDURE:

1. EXCAVATION DEPTH IS TO BE A MINIMUM OF 200MM BELOW BASE AND MAY BE DEEPER AS REQUIRED (OR POURING ADDITIONAL BLINDING) TO ACHIEVE A MINIMUM FOUNDATION BEARING CAPACITY OF 100KPA, AND BASE TO BE LEVELED WITH 200MM THICK LAYER OF COMPACTED ROAD BASE AS PER GIVEN LEVELS.
2. LOWER UNIT IN HOLE MAKING SURE THAT NO SHARP OBJECTS COME NEAR UNIT.
3. TO PREVENT VESSEL FROM FLOATATION DURING INSTALLATION, FILL VESSEL WITH WATER SUCH THAT IT IS HEAVIER THAN THE CONCRETE BALLAST. (INLET PIPE STUB TO BE PLUGGED TEMPORARY BY THE CIVIL CONTRACTOR PRIOR TO FILLING WATER)
4. POUR CALCULATED VOLUME OF CONCRETE AS RETAINER BALLAST AROUND BASE OF UNIT & SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN ON THE SECTION.
5. PUMP STATION SHALL HAVE MINIMUM OF 3 RIBS LOCATED WITHIN THE CONCRETE BALLAST.
6. COMPLETE BACKFILL WITH COMPACTED ROAD BASE MATERIAL AS SHOWN ON THE SECTION.
7. BOX OUT AND POUR COVERSLAB TO ENGINEERS REQUIREMENT WITHOUT ANY LOADS BEING TRANSFERRED DIRECTLY ONTO THE TANK.

NOTE:
CONTRACTOR TO GAIN GEO-TECHNICAL ENGINEERS DIRECTION THAT
THE PROPOSED BACKFILL DETAILED ON THIS DRAWING IS APPROPRIATE
FOR ON-SITE CONDITIONS PRIOR TO COMMENCING CONSTRUCTION

AQUATEC HAVE ASSUMED GWL AT FSL FOR WORST CASE FOR THE PUMP STATION BUOYANCY CALCULATIONS



SITE SPECIFIC RECOMMENDATIONS

1. CONTRACTORS TO LIAISE WITH RESPECTIVE GEOTECHNICAL ENGINEERS WHO HAVE CONDUCTED SITE SPECIFIC GEOTECHNICAL REPORTS, FOR TESTING REQUIREMENTS (I.E. FIELD DENSITY TESTING FREQUENCY/EXTENT) & INSPECTION REQUIREMENTS (I.E. LEVEL OF SUPERVISION)
2. CONTRACTORS TO ADHERE TO ANY EARTHWORK, EXCAVATION, BACKFILL, CONSTRUCTION, SITE SPECIFIC TREATMENT REQUIREMENTS/RECOMMENDATIONS STATED IN SITE SPECIFIC GEOTECHNICAL REPORTS (I.E. DRAINAGE MEASURES, DE-WATERING MEASURES, EXCAVATION SUPPORT REQUIREMENTS, MOISTURE CONTROL MEASURES, TREE REMOVAL/PLANTATION MEASURES, ROOT TREATMENTS, ASS MANAGEMENT MEASURES, EROSION & SEDIMENT CONTROL MEASURES)
3. CONTRACTORS TO ENSURE BEARING CAPACITY > 100 KPA IS AVAILABLE AT FOUNDATIONS
4. CONTRACTORS TO REMOVE ANY EXISTING SOIL (I.E. FILL, TOPSOIL, DISTURBED/WEAKENED SOILS, ORGANIC/DELETERIOUS/PERISHABLE MATTER) FROM THE PUMP STATION SITE, DENOTED IN SITE SPECIFIC GEOTECHNICAL REPORTS AS NOT RECOMMENDED/SUITABLE FOR STRUCTURAL FILL.
5. CONTRACTORS TO TAKE NECESSARY PRECAUTIONS/TREATMENTS TO PREVENT ANY STRUCTURAL DAMAGES TO THE PUMP STATION STRUCTURES & PIPEWORK DUE TO ANY ADVERSE SITE SOIL CONDITIONS (I.E. FILL, REACTIVE/ SOFT/ COLLAPSING/ DISPERSIVE/FISSURED SOILS, SETTLEMENTS, ABNORMAL MOISTURE CONDITIONS, TREES/ROOTS, ASS)* REFER SITE SPECIFIC GEOTECHNICAL REPORTS LISTED IN MORRISON GEOTECHNICAL'S GEOTECHNICAL INVESTIGATION SUMMARY (JOB NO. DE17/162, DATED: 14 JUNE 2017)

SIGNATURE	
MARIO DELA CUADRA	
RPEQ NO.	18461
DATED	18/03/2020

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Drawn - MAH
Checked - SL
Approved - IMS

Scale - AS SHOWN @ A1

MIRVAC
EVERLEIGH STATE SCHOOL
TEMPORARY SEWAGE PUMP STATION
BACKFILL DETAILS & CONSTRUCTION NOTES

ISSUED FOR
CONSTRUCTION

Drawing No.
d2020 02 03 04

Revision
C0

OP Number / Project Number
OP12310

BILL OF MATERIALS

MATERIALS SCHEDULE				
ITEM NUMBER	DESCRIPTION	QUANTITY	MATERIAL	REMARKS
1	SUBMERSIBLE PUMP	2	CAST IRON	REFER PUMP DETAILS
2	DN40 DISCONNECTION BEND	2	CAST IRON	ISO G2
3	DN50 RISER PIPEWORK FL-FL C/W 2 x DN50 L/R 45° ELBOW BW	2	316SS SCH10	LENGTHS TO SUIT
4	DN50 90° ELBOW L/R FL-FL C/W DN15 ROUND SOCKET (TAPPING PORT FOR TESTING)	2	316SS SCH10	
5	DN50 FL-SP PIPEWORK	4	316SS SCH10	LENGTHS TO SUIT
6	FLOAT LEVEL SWITCH	1	RUBBER	NOLTA
7	DN50 SWING CHECK VALVE (RESILIENT SEATED)	2	DUCTILE IRON	BROOK VALVES: RSCK, FUSION COATED BLUE
8	DN80 GATE VALVE C/W HAND-WHEEL, RESILIENT SEATED, CLOCKWISE CLOSE, PN16	2	DUCTILE IRON	AVFI MODE: RSGV - AS, FUSION COATED, DRILLED TO AS4087 PN16
9	DN50 PIPE COUPLING	4	316SS	NORMACONNECT® FLEX E
10	DN50 FL-SP-SP MANIFOLD C/W DN50 LR 90° ELBOW BW & DN80 EQUAL TEE	1	316 SS SCH10	
11	DN150 INLET SP-SP PIPEWORK C/W DN150 STUB FLANGE & 316SS BACKING RING	1	PVC DWV SN8	MIN 600 mm. INLET INVERT TO MATCH INCOMING SEWER INVERT
12	DN100 VENT PIPEWORK	2	PVC DWV SN8	ONE ITEM C/W 1 x 90° ELBOW
13	WET WELL ACCESS COVER - SPLIT HINGED SAFETY GRATE (CLASS B RATED) CLEAR OPENING: 1200 x 900mm	1	ALUMINIUM	McBERNS LFM, 150 SQUARE CUT-OUT TO BE PROVIDED TO ACCESS KGV SPINDLE. REFER LOGAN WIA STANDARD DRWG (PM001-01-S-DWG-CI-2010) - NOTE 2.B.d
14	VALVE CHAMBER ACCESS COVER - SINGLE OPENING, SPLIT HINGED SAFETY GRATE (CLASS B RATED) CLEAR OPENING: 1000 x 900mm	1	ALUMINIUM	McBERNS LFM
15	3/4" GUIDERAILS	4	316 SS	
16	LIFTING CHAINS (LOAD RATED)	2	316 SS	10MM LIFTING CHAIN ABOUT 1 M LENGTH FROM PUMP LIFTING LUG CONNECTED WITH 6MM ROPE. THE ROPE IS EXTENDED TO TOP OF THE WELL
17	PUMP CABLE	2		TO SUIT PUMPS
18	FLOAT & CHAIN HOOKS	TO SUIT	316 SS	
19	DN50 FLOOR DRAIN WITH TRAP, FLAP SEAL AND FLAP VALVE	1	PVC DWV SN6	

20	FRP BRACKETING WITH 316 SS FIXINGS	TO SUIT	316 SS/FRP	MIN 1000 mm CENTRES
21	PIPE SUPPORT BRACKETS (VERTICAL)	4	316SS	
22	ANTI - SPREAD BRACKETS FOR GUIDE-RAILS	4	316SS	
23	15 mm ROUND SOCKET (TAPPING POINT) C/W 15mm BALL VALVE & PRESSURE GAUGE (FLOYD)	1	316 SS	
24	FLOAT BAR	TO SUIT	316SS	
25	LEVEL TRANSDUCER	1	316 SS	VEGAWELL 52
26	10 mm PUMP PEDESTAL BASE	2	316 SS	REFER DETAIL "A"
27	BACKUP "MULTITRODE" LEVEL SWITCH	1		1.5/10-30FS FAILSAFE LEVEL PROBE WITH 2M STICK AND 30M CABLE PN: 837775
28	HANDRAIL C/W SELF CLOSING DOUBLE DOORS (MODULAR NO WELD HANDRAIL)	1	GALV. MS	MODDEX. REFER LOGAN WIA STANDARD DRWG (PM001-01-S-DWG-CI-2010) - NOTE 2.C.c
29	CONFINED SPACE SIGNS	2	PLASTIC	
30	DN150 KNIFE GATE VALVE (CLOCKWISE CLOSE)	1	316SS	HMA VALVECO GENERAL PURPOSE (LUGGED)
31	EXTENSION SPINDLE	1	316SS	
32	EXTENSION SPINDLE BRACKET	1	316SS	
33	DN100 DEKS COUPLER	1		
34	ELECTRICAL CONDUITS (1 x Ø32, 3 x Ø50 & 2 x Ø100)	6	HDPVC	
35	SWITCHBOARD	1		
36	EARTH STAKE PIT - 120 L x 120 W x 76 H mm	1	ALUMINIUM	ERB PART NO. DULERB1
37	DAVIT BASE	1	316SS	SPANSET SPXTN2007 (TBC)
38	DN40- DN50 PIPEWORK FL-BSP C/W DN40 BSP SOCKET & DN40-DN50 ECCENTRIC REDUCER	2	316SS SCH10	
39	DN225 OVERFLOW STUB	1	PVC DWV SN8	
40	GROUND MOUNT ODOUR FILTER	1	POLY	McBERNS GM150

SIGNATURE	
MARIO DELA CUADRA	
RPEQ NO.	18461
DATED	18/03/2020

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Drawn - MAH
Checked - SL
Approved - IMS

MIRVAC
EVERLEIGH STATE SCHOOL
TEMPORARY SEWAGE PUMP STATION
BILL OF MATERIALS

ISSUED FOR
CONSTRUCTION

Scale - AS SHOWN @ A1

Drawing No.
d2020.02.03.05

Revision
C0

OP Number / Project Number
OP12310

CO	ISSUED FOR CONSTRUCTION	SL	IMS	IMS	190320
REV	AMENDMENT	DRN	CKO	APP	DATE

A.10 APPENDIX J – TEMPORARY SPS – LW SUPPORT COMMUNICATIONS

Simon Steinhofer

From: O'Brien, Daniel <DanielO'Brien@logan.qld.gov.au>
Sent: Thursday, 3 March 2022 1:50 PM
To: Simon Steinhofer
Cc: Herath, Kumara; WaterDA; Clint Thorp; Mark Clancy; Brendan Saur; jason.augustine@mirvac.com; Marco Bonotto
Subject: RE: [#MIR-0800] Everleigh - School Site - Temporary sewage pump station - Utilising remaining capacity

Simon,

Logan Water is supportive for the spare capacity in the temporary sewage pump station to be reassigned to service residential lots should the proposed childcare centre not proceed.

I have cc. Marco Bonotto from EDQ on this email.

Daniel O'Brien
Water Developer Services & Connections Program Leader
Water Infrastructure Solutions Branch

RELIABLE · SUSTAINABLE · COMMITTED

danielo'brien@logan.qld.gov.au | 07 2899 7728 | 0401 256 668 | Teams [Call](#) / [Chat](#)

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*Logan City Council acknowledges the Traditional Custodians of the lands and waterways across the City of Logan.
We pay our respects to Elders past, present and emerging.*

From: Simon Steinhofer <simon.steinhofer@premise.com.au>
Sent: Wednesday, 2 March 2022 4:08 PM
To: O'Brien, Daniel <DanielO'Brien@logan.qld.gov.au>
Cc: Herath, Kumara <KumaraHerath@logan.qld.gov.au>; WaterDA <WaterDA@logan.qld.gov.au>; Clint Thorp <clint.thorp@premise.com.au>; Mark Clancy <mark.clancy@mirvac.com>; Brendan Saur <brendan.saur@mirvac.com>; jason.augustine@mirvac.com
Subject: [#MIR-0800] Everleigh - School Site - Temporary sewage pump station - Utilising remaining capacity

Hi Daniel,

We are in finalising the ROL design for both Precinct 8 & 10 at the Everleigh Development. In referencing earlier support from Logan Water of a proposed childcare centre to utilise the spare capacity exiting in the temporary sewage pump station provided to service the Everleigh School site (see attached support correspondence), we would like to utilise this referenced spare capacity to service residential lots within the Everleigh development. The application of the childcare centre is not progressing as it will be catered for elsewhere in the development. Therefore, the remaining spare capacity within the temporary pump station is still not allocated.

We would like to seek your support for the remaining capacity of the temporary sewage pump station provided to service the Everleigh School site to be used to service residential lots.

If you have any questions, please don't hesitate to call

Kind Regards



SIMON STEINHOFFER
Principal Civil Engineer

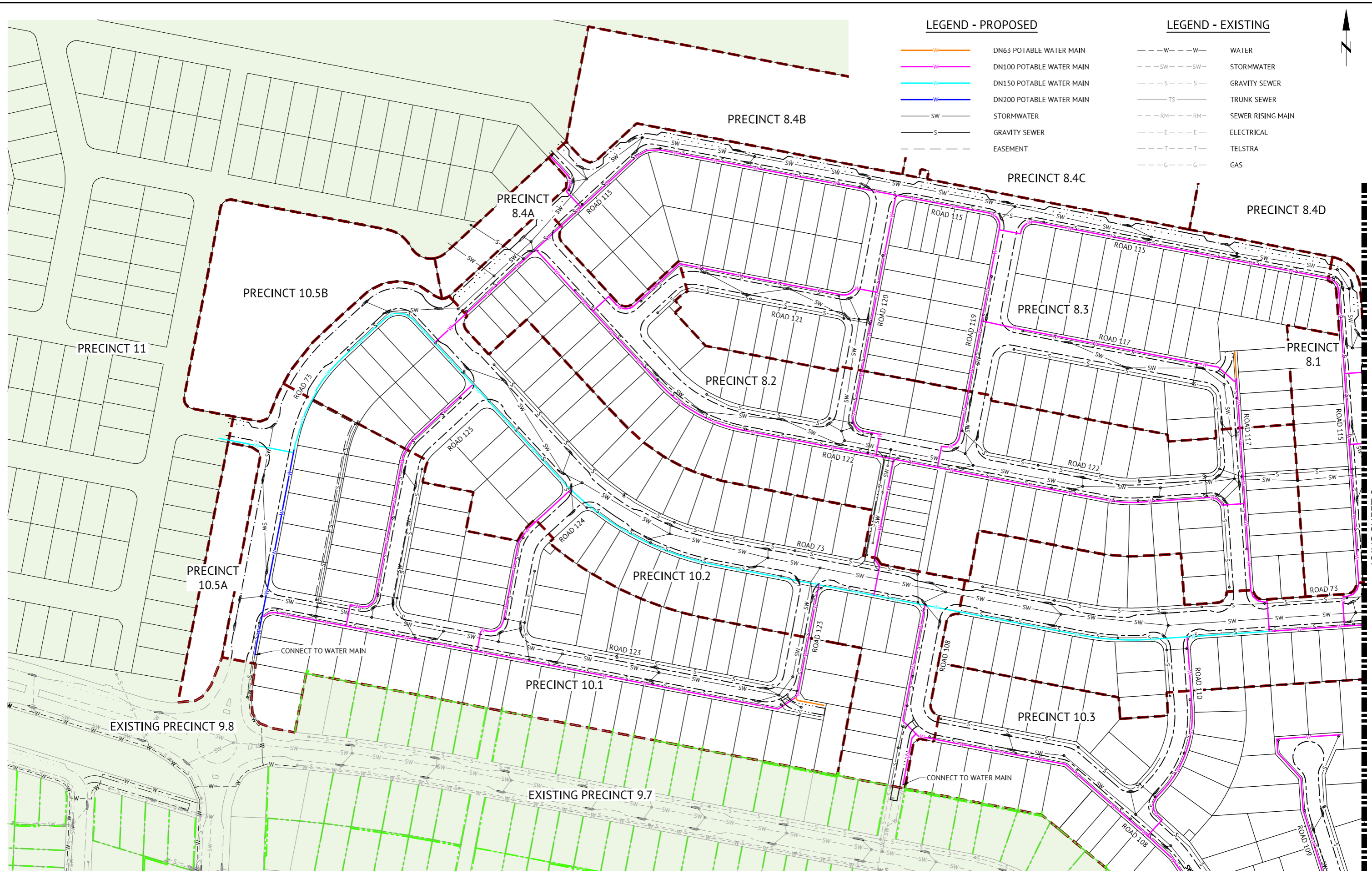
T 07 3253 2222 | **M** 0476 810 311
E simon.steinhofer@premise.com.au
A Level 11, 300 Adelaide St, Brisbane QLD 4000



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A.11 APPENDIX K – CONCEPTUAL WATER RETICULATION PLANS



PRELIMINARY - NOT FOR CONSTRUCTION				
08/07/2022	2	UPDATED AS PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



BRISBANE OFFICE
LEVEL 11, 300 ADELAIDE STREET
BRISBANE, QLD 4000
PH: (07) 3253 2222
WEB: www.premise.com.au

DESIGNED
KLYNT KIANG

CHECKED
ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

0 20 40 60m

SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT
MIRVAC QLD PTY LTD

PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

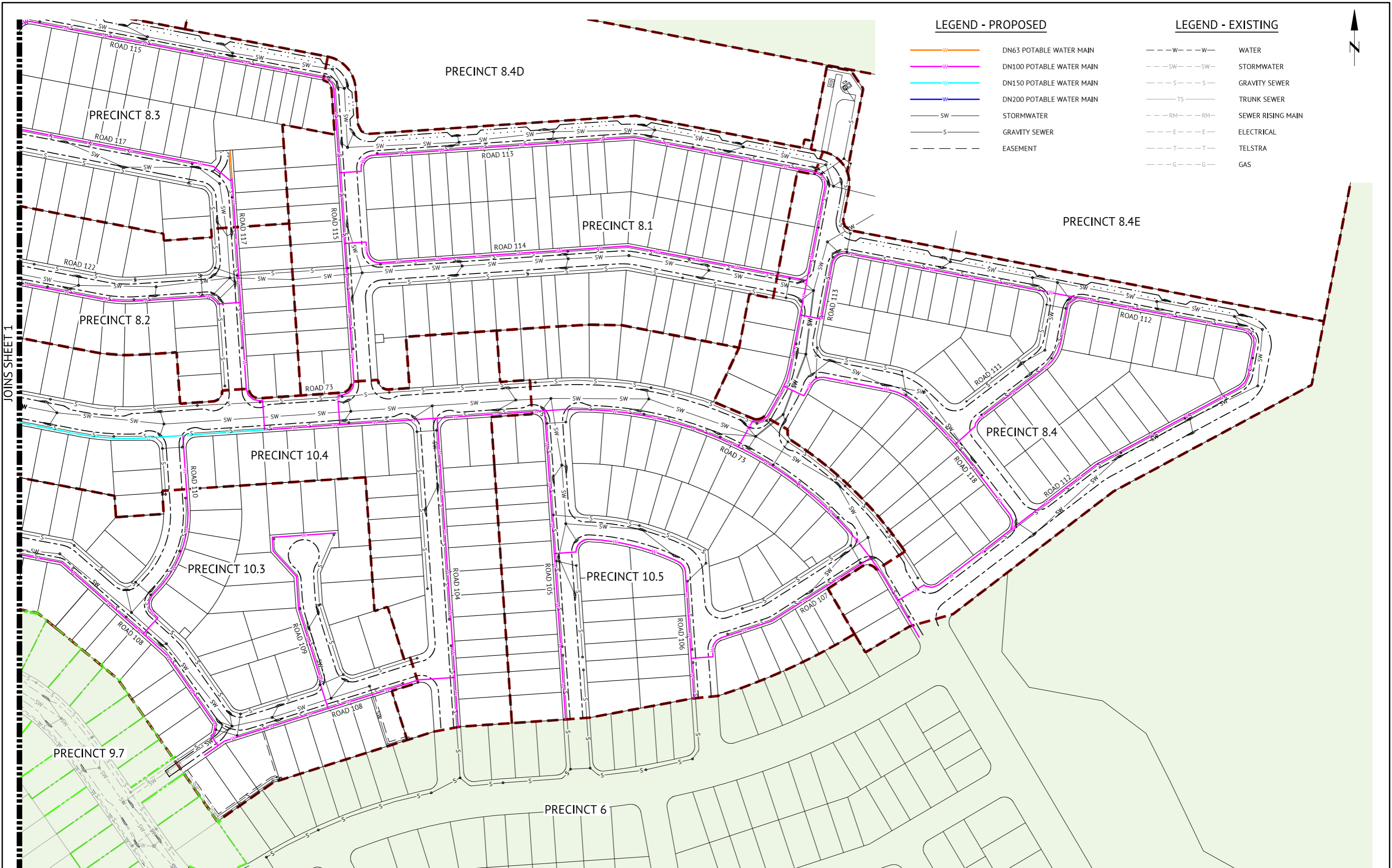
LOCATION
TEVIOT ROAD, GREENBANK

SHEET TITLE
PRELIMINARY WATER LAYOUT PLAN - SHEET 1

JOB CODE
MIR-1000

SHEET NUMBER
SKC40

REV
2



PRELIMINARY - NOT FOR CONSTRUCTION				
08/07/2022	2	UPDATED LOT LAYOUT ON PRECINCT 9.4 AND AS PER RFI DATED 22/05/16	KK	
10/02/2022	1	PRELIMINARY - NOT FOR CONSTRUCTION	KK	
DATE	REV	DESCRIPTION	REC	APP
REVISIONS				



BRISBANE OFFICE
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BRISBANE, QLD 4000
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DESIGNED
KLYNT KIANG

CHECKED
ANDREW LANGDON

PROJECT MANAGER
SIMON STEINHOFFER

ENGINEERING CERTIFICATION

SCALE

0 20 40 60m

SCALE 1:1000 (A1)

ORIGINAL SHEET SIZE A1

CLIENT
MIRVAC QLD PTY LTD

PROJECT
EVERLEIGH PRECINCT 10 SUBDIVISION DEVELOPMENT

LOCATION
TEVIOT ROAD, GREENBANK

SHEET TITLE
PRELIMINARY WATER LAYOUT PLAN - SHEET 2

JOB CODE	
MIR-1000	
SHEET NUMBER	REV
SKC41	2

A.12 APPENDIX L– ELECTRICAL SERVICING STATEMENT



**Robin
Russell**
& ASSOCIATES PTY. LTD.
ABN 78 010 589 661

Robin Russell
BE, BCom, FIEAust, CPEng
RPEQ 1548

**Consulting
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204/6 Babarra St. Stafford
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Email
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www.robrus.com.au

3 March 2022

Mirvac Queensland Pty Limited
Box 10047
Brisbane Adelaide Street
Qld 4000

Attention: Mr Mark Clancy

Dear Sir,

EVERLEIGH – PRECINCTS 8 & 10: ELECTRICAL SERVICING STATEMENT

As electrical engineering consultants who have previously been engaged to undertake design services for multiple stages of Everleigh Precincts (1, 9 & 12), we can confirm the following in relation to Everleigh – Precincts 8 & 10:

- Energex electrical network infrastructure, NBN telecommunications & gas reticulation services have been constructed and/or designed for multiple stages of Everleigh, Precinct 9, adjacent to proposed Precincts 8 & 10,
- Preliminary investigations including consideration of proposed PMT site locations for Precincts 8 & 10, have commenced,
- Sufficient network capacity exists in the existing electrical network infrastructure, following completion of Precinct 9.8 and the associated 11kV tie cable, to cater for the increased electrical load of the proposed precincts:
 - Refer to Figure 1 below, showing significant spare capacity at the adjacent Energex Zone Substation - North Maclean (SSNMC)
- Final arrangements will be confirmed during the detailed design phase for each stage of the precinct.

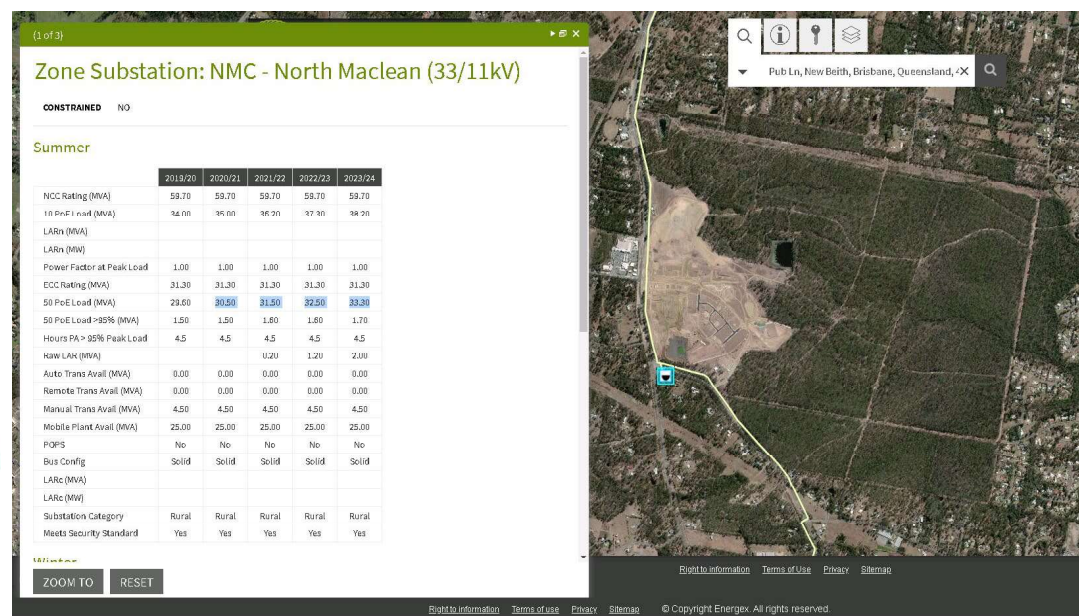


Figure 1: Zone Substation North Maclean - No Constraints

Please feel free to contact the undersigned if you require any further details.

Yours faithfully,
ROBIN RUSSELL & ASSOCIATES PTY. LTD.

A handwritten signature in blue ink, appearing to read 'Robin Russell', with a stylized, cursive script.

Robin Russell
(RPEQ 1546)

