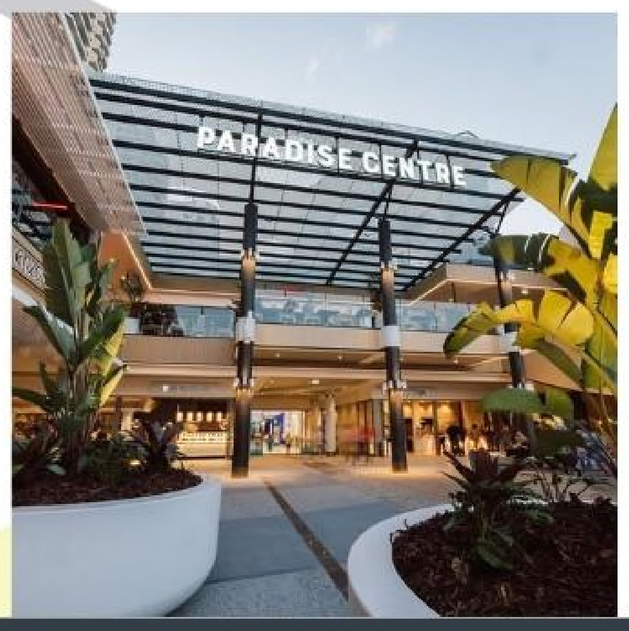
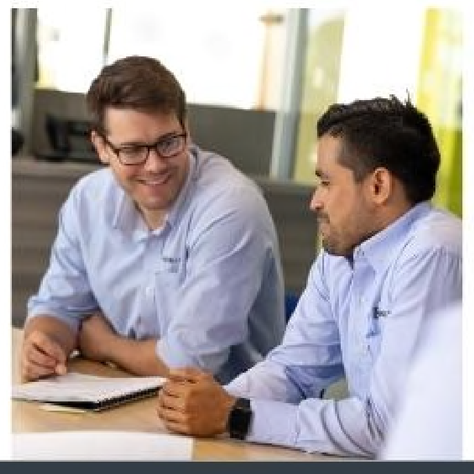
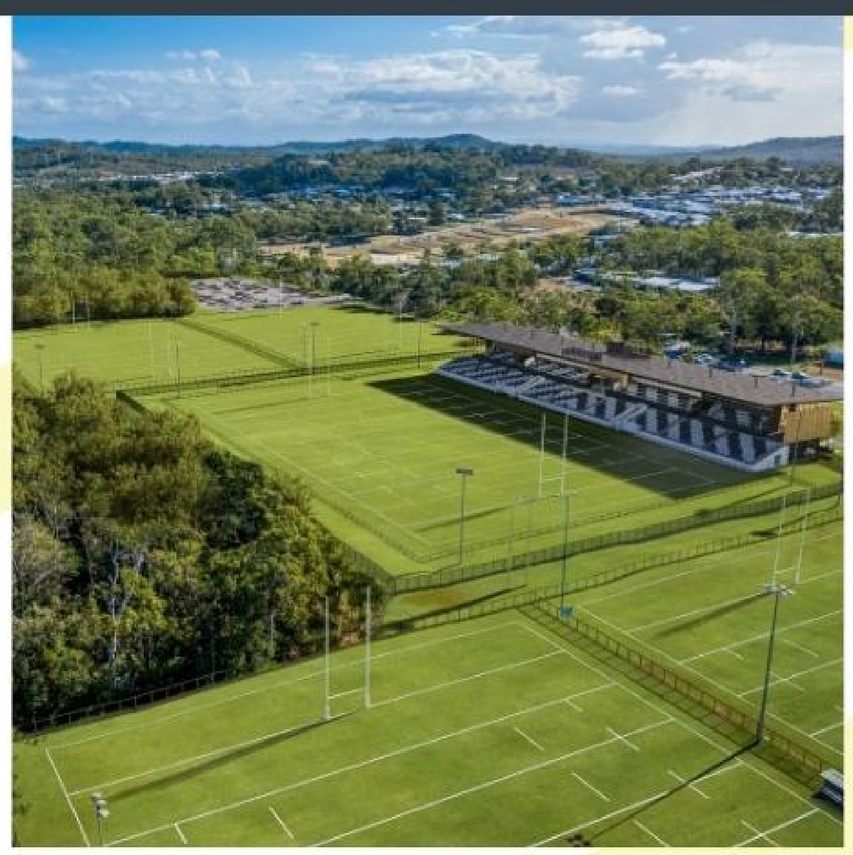
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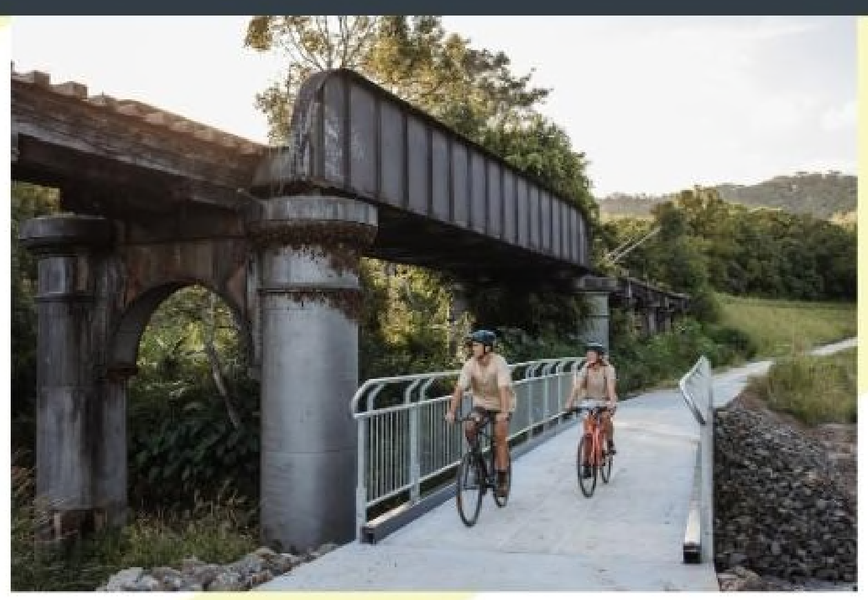


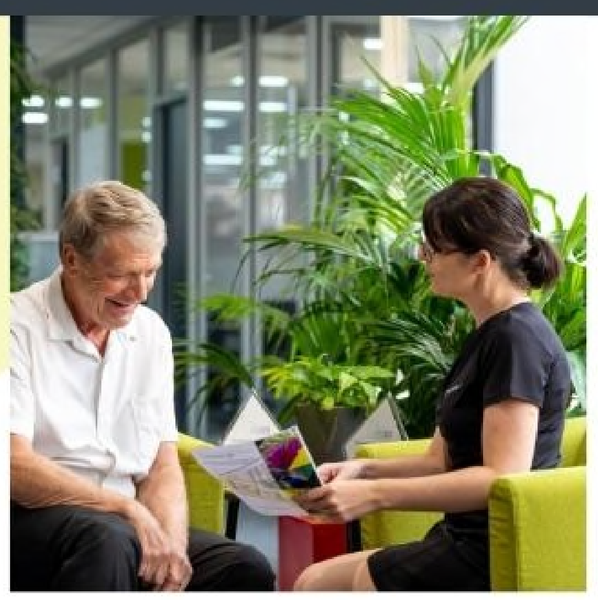




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1-63 Bryants Road & 101 Jackson Court, Ripley

Civil Engineering Report

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Appendix A – Plan of Development Layout (Saunders Havill)

Appendix B – Concept Civil Engineering Drawings

Appendix C – Urban Utilities Service Advice Notice

1. Executive Summary

This Civil Engineering Report has been prepared by Burchills Engineering Solutions on behalf of KDL Property Group Pty Ltd to support a Development Application for a Reconfiguration of a Lot over land located at 1-63 Bryants Road & 101 Jackson Court, Ripley.

The proposal comprises the reconfiguration of approximately 37.39 ha of land described as Lots 359 & 360 on S3173 into 162 residential lots and a balance lot, together with new roads, open space areas, drainage reserves, utility infrastructure and associated civil works. The development also incorporates land identified for a future railway corridor resumption in accordance with the current planning framework.

The site is bounded by Jackson Court to the north, Wensley Road to the east, and future Bryants Road to the south and is characterised by undulating to steep topography, with several ridgelines and gullies traversing the land. Local drainage paths convey runoff towards natural drainage lines crossing the site before discharging downstream.

Key servicing strategies for the development include:

- **Earthworks & Retaining Walls** – Moderate earthworks operations to create building platforms, with retaining walls generally up to 3.0 m (max) in height. Works to be undertaken under Level 1 AS3798-2007 supervision.

- **Roadworks & Access** – Primary access to the development is proposed via Jackson Court along the northern frontage of the site. The internal road network has been arranged to provide safe and efficient access to all proposed allotments and open space areas in accordance with EDQ and Austroads requirements. The development also incorporates frontage upgrades to Jackson Court to integrate with the ultimate planned road corridor, consistent with the recommendations of the Traffic Impact Assessment.

- **Stormwater Drainage, Flooding and Waterway** – Stormwater runoff generated by the development will be collected via a network of pits, pipes and overland flow paths and conveyed to stormwater management infrastructure prior to discharge at the site's lawful points of discharge. The stormwater strategy incorporates detention and water quality treatment measures to satisfy the applicable quantity and water quality objectives, while the proposed development has been demonstrated through hydraulic assessment to avoid unacceptable flood impacts to surrounding properties and the downstream drainage network.

- **Water Supply** – Preliminary advice from Urban Utilities indicates that the proposed development can be serviced from the existing low-pressure R084 supply zone. The final connection arrangement, internal network sizing and servicing requirements will be confirmed through detailed hydraulic assessment and the Urban Utilities Water Approval process.

- **Sewer Reticulation** – Wastewater generated by the development will be collected via a new internal gravity sewer reticulation network, connected to the permanent regional sewer system via the ultimate points nominated by Urban Utilities.

- **Utilities** – Electricity and telecommunications infrastructure will be designed in consultation with the relevant service authorities – By Others.

Based on the investigations completed to date, the site is capable of being serviced by the required civil infrastructure and utilities. The proposed development has been designed to respond to the site's physical, environmental and servicing constraints and is considered capable of achieving the applicable standards of service required by the relevant authorities.

2. Introduction

KDL Property Group Pty Ltd has engaged Burchills Engineering Solutions to prepare this Civil Engineering Report (CER) in support of a Development Application (DA) to be lodged with Economic Development Queensland (EDQ). The application seeks a Development Permit for Reconfiguring a Lot to facilitate a residential subdivision comprising 162 residential lots, associated roads, open space, drainage reserves, utility infrastructure and land identified for future medium density residential development.

The development relates to Lots 359 & 360 on S3173, located at 1-63 Bryants Road and 101 Jackson Court, Ripley.

2.1 Development Approval and Certification Framework

The subject development is located within the Ripley Valley Priority Development Area and will be assessed by Economic Development Queensland under the applicable PDA planning framework.

The functional civil engineering layouts presented with the Development Application are intended to establish the proposed infrastructure arrangements for assessment as part of the PDA Development Approval. Following approval, detailed design, construction and delivery of the civil infrastructure will be undertaken in accordance with the conditions of the PDA Development Approval and, where applicable, EDQ's Certification Procedures Manual (CPM).

The CPM provides a performance-based certification process for the design, construction and delivery of infrastructure required by PDA development conditions. Detailed engineering works undertaken through this process will be certified by appropriately qualified professionals in accordance with the requirements of the Development Approval and CPM.

Water and wastewater infrastructure will remain subject to the separate Urban Utilities Water Approval process and applicable SEQ Water Supply and Sewerage Design and Construction Code requirements.

2.2 Scope of Report

This report outlines the existing physical characteristics of the site and its suitability for the proposed development, with specific consideration given to the following:

- Project identification and existing conditions
- Proposed Development and staging
- Site earthworks
- Roadworks, access and traffic
- Stormwater drainage and waterway
- Water supply
- Sewer reticulation
- Electricity and telecommunications supply

The report represents an assessment of the facts and circumstances known to the author at the time of preparation.

2.3 Sources

This report has been prepared with reference to the following information sources:

- Ripley Valley Priority Development Area Development Scheme
- Economic Development Queensland PDA Guideline No. 6 - Street and Movement Network
- Economic Development Queensland Certification Procedures Manual

- Plan of Development (Ref: 13059 P 09 Rev J - CON 01) prepared by Saunders Havill, dated 29 June 2026
- Urban Utilities Services Advice Notice (Ref: 26-SAN-89563), dated 24 June 2026
- SEQ WS&S D&C Code (Version 2.0 – February 2020)
- Due Diligence Geotechnical Investigation Report (J003235-001-R-Rev0) dated 15 May 2026
- Traffic Impact Assessment prepared by R+L, dated September 2026
- Conceptual Stormwater Management Plan (CSMP) prepared by Burchills Engineering Solutions, dated September 2026
- Relevant Ipswich City Council standards and guidelines where referenced by the applicable PDA planning framework
- Site topographic information based on LiDAR data available at the time of assessment

2.4 Design Basis and Key Design Considerations

The proposed civil concept design has been prepared for Development Application purposes having regard to the applicable Ripley Valley PDA planning framework, including the Ripley Valley Development Scheme (RVDS), relevant EDQ guidelines and infrastructure planning requirements. In accordance with Ipswich City Council (ICC)'s published guidance for development within the Ripley Valley PDA, development applications are assessed against the RVDS, with the RVDS prevailing to the extent of any inconsistency with the Ipswich City Plan 2025. Council's Desired Standards of Service and engineering standards may also apply to relevant infrastructure.

The following key design considerations and design assumptions have been adopted in preparing the concept design. Where a proposed design outcome represents a departure from the applicable requirements of ICC, the relevant departure is identified below and will be subject to further consultation with Council.

- Retaining Walls
  - Retaining walls will be limited in height and extent where practicable, with the preliminary concept design incorporating single tier retaining walls of up to approximately 3.0 m in selected locations to respond to the site's topography and proposed development levels.
  - The retaining wall locations, heights, footing arrangements and offsets shown on the concept plans are indicative only and will be confirmed through detailed geotechnical assessment and engineering design. Retaining walls will be designed and certified by an appropriately qualified RPEQ in accordance with AS 4678.

- Future Rail Corridor
  - The interface between the proposed development and the future railway corridor has been developed based on the nominated Category C corridor planning.
  - Temporary batters as steep as approximately 1V:2H are proposed where the 20 m wide road reserve adjoins the future rail corridor. The final batter configuration will be subject to detailed geotechnical assessment and will be further developed and certified as part of detailed design in accordance with the PDA Development Approval and applicable CPM requirements.

- Wensley Road Interface
  - The proposed development interface with Wensley Road has been developed having regard to the applicable DCOP infrastructure planning.
  - The current concept design does not consider any future Wensley Road flyover associated with the ultimate rail corridor arrangement.

- Road Network
    - The proposed internal road network has been developed having regard to the applicable street classifications and road reserve requirements of EDQ PDA Guideline No. 6 – Street and Movement Network. The adopted road reserve widths and cross-sections are shown on the concept civil engineering plans.
    - The proposed road reserve widths and cross-sections represent a difference from the applicable ICC requirements. The departure will be subject to consultation with ICC prior to detailed design certification and construction.

- Detention Basin Batter Slopes
    - Batter slopes of up to approximately 1V:3H are proposed within the detention basin to respond to site constraints and achieve the required stormwater management outcomes and will be subject to geotechnical recommendations.
    - As the proposed batter arrangement represents a departure from the applicable ICC requirements, the departure will be subject to consultation with ICC prior to detailed design certification and construction.

Where any proposed design outcome represents a departure from the applicable ICC requirements for infrastructure that will ultimately be transferred to Council, the departure will be subject to consultation with and written agreement prior to detailed design certification and construction.

3. Project Identification

3.1 Real Property Description

The subject site is located at 1-63 Bryants Road & 101 Jackson Court, Ripley is formally described as Lots 359 & 360 on S3173.

The site is located within the Ripley Valley Priority Development Area (PDA). It is bounded by Jackson Court to the north, Wensley Road to the east, future Bryants Road to the south, and undeveloped land to the west. Primary vehicular access to the development is proposed via Jackson Court along the northern frontage of the site.

The proposed development layout is included in Appendix A. The location of the subject site is shown in Figure 3.1.



Figure 3.1 Site Locality Plan

3.2 Physical Description

The site comprises two existing parcels of land with a combined area of approximately 37.39 ha. The land is characterised by undulating to steep terrain, with several ridgelines, drainage gullies and established vegetation across the site. The site also contains a combination of existing dwellings, access tracks, cleared

corridors and extensive vegetation cover. Existing dwellings and access tracks are located within the site and will be removed or integrated as part of future development works.

Two existing Energex easements traverse the site in a generally northwest to southeast direction and are occupied by overhead electricity infrastructure. These easements have been considered in the preparation of the proposed development layout.

The site adjoins the following existing roads and land uses:

- **North**: Jackson Court
- **South**: Unformed Bryants Road
- **East**: Wensley Road
- **West**: Undeveloped Land

3.3 Proposed Development

The proposal comprises a residential subdivision containing 162 residential lots, together with drainage reserves, open space areas, pedestrian connections, and an internal road network.

The internal road network comprises approximately 2.174 ha of roads including a 20.0 m wide Collector Street 15.5 m wide Access Streets. External connectivity will be provided via a new intersection with Jackson Court.

The development will be supported by a range of external infrastructure works, including:

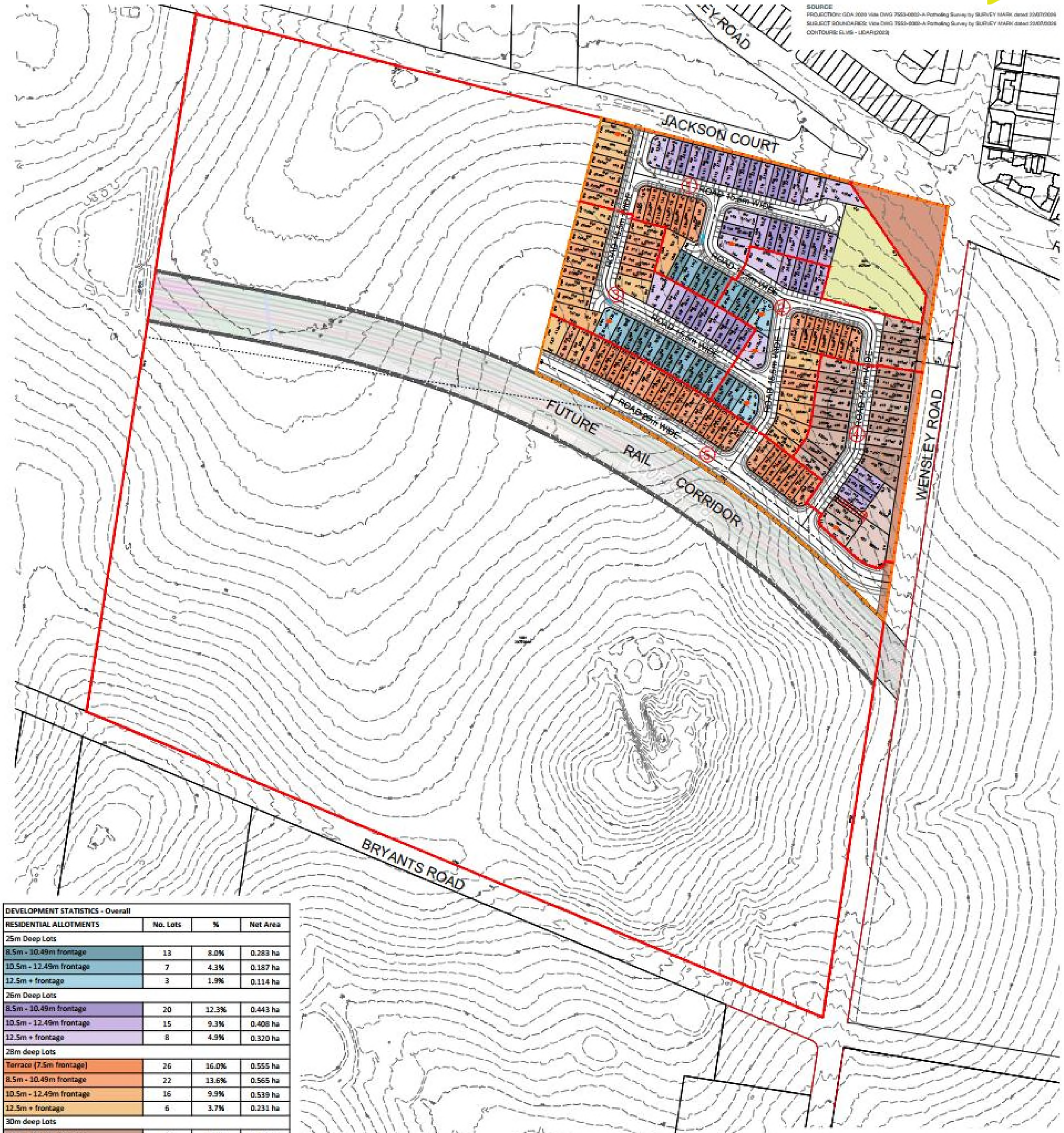
- Road upgrades to Jackson Court
- Construction of a new external gravity sewer
- Construction of a new water connection

The proposed development layout is shown in Figure 3.2.

Based on the SEQ Water Supply and Sewerage Design & Construction Code (Version 2.0 – February 2020), the Equivalent Tenements (ET) and Equivalent Population (EP) for the proposed development is shown in Table 3.1.

Table 3.1 Development Summary

Use	Unit	Total Units	ET's/Unit	EP Rate	Total ET	Total EP
Low Density Residential (This Application)	Dwelling	162	1	2.7 EP/ET	162	438
Low Density Residential (Future Application)	Dwelling	203	1	2.7 EP/ET	203	549
Multi-Unit Development (Future Application)	Ha	6.12	N/a	315 EP/ha	N/a	1,928
Retail Development (Future Application)	Ha	1.81	N/a	15 EP/Ha	N/a	27



DEVELOPMENT STATISTICS - Overall			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
25m Deep Lots			
8.5m - 10.49m frontage	13	8.0%	0.283 ha
10.5m - 12.49m frontage	7	4.3%	0.187 ha
12.5m + frontage	3	1.9%	0.114 ha
26m Deep Lots			
8.5m - 10.49m frontage	20	12.3%	0.443 ha
10.5m - 12.49m frontage	15	9.3%	0.408 ha
12.5m + frontage	8	4.9%	0.320 ha
28m deep Lots			
Terrace (7.5m frontage)	26	16.0%	0.555 ha
8.5m - 10.49m frontage	22	13.6%	0.565 ha
10.5m - 12.49m frontage	16	9.9%	0.539 ha
12.5m + frontage	6	3.7%	0.231 ha
30m deep Lots			
8.5m - 10.49m frontage	14	8.6%	0.384 ha
10.5m - 12.49m frontage	9	5.6%	0.313 ha
12.5m + frontage	3	1.9%	0.201 ha
Total Residential Allotments	162	100.0%	4.543 ha

Land Budget	**Area (Ha)**	**%**
Area of Subject Site / Stage	7.698 ha	
Net Residential Area (no roads)	4.543 ha	59.0%
Detention / Drainage	0.457 ha	5.9%
Road Widening	0.525 ha	6.8%
Road Areas	2.174 ha	28.2%
Total	7.699 ha	100.0%

Figure 3.2 Site Layout Plan

4. Site Earthworks

Earthworks associated with the proposed development are expected to be moderate in scale, generally limited to cut and fill operations for road formation, trenching of services, and allotment benching/retaining to achieve suitable building platforms. Site preparation and fill placement will be carried out in accordance with AS3798 - 2007 under Level 1 inspection and testing. The proposed earthworks and retaining wall arrangements presented in this report are conceptual only and have been prepared for Development Application purposes.

A due diligence geotechnical investigation has been undertaken to assess the site's subsurface conditions and identify potential geotechnical constraints. Consistent with the recommendations of the geotechnical report, additional geotechnical investigations and verification will be undertaken during detailed design and the EDQ certification process to refine design parameters, verify subgrade conditions and support the detailed design of earthworks, retaining structures and pavements. The Concept Bulk Earthworks Layout Plans & Sections prepared by Burchills Engineering Solutions illustrate the proposed extent of works.

4.1 Sediment and Erosion Control

The best management practices will be implemented according to the IECA Best Practice Erosion and Sediment Control (2008) guidelines.

The following is a procedure of water quality controls to be implemented for the construction stage of the development.

4.1.1 Phase 1 – Stripping, Benching and Retaining

- Identify and mark all trees to be retained and erect exclusions zones, if required.
- Prior to any demolition, stripping or bulk earthworks on site, sediment fences, inlet traps, gully protection and entry/exit pad shall be put in place.
- A wash-down area and entry/exit pad will be provided at the construction site entrance to minimise the amount of sediment being tracked off the site.
- The wash down area will be drained to a suitable sediment capture device installed downstream of the construction entry.
- Sediment fences are to be installed along the downstream property boundaries prior to stripping and earthworks commencing.
- Construct an appropriately sized sediment basin for the development.
- If refuelling of machinery is to occur on site, appropriate absorbent products for cleaning oil spills will be provided.
- Provide bins on site for the disposal of waste and building debris.
- All fresh water upstream of disturbed areas and stockpiles is to be diverted around the disturbed area to minimise the amount of sediment mobilization.
- If it is anticipated that stockpiled material will not be used for a period of two weeks or more, a polythene cover (or equivalent) shall be used to prevent sediment transport by rain during wet periods. Conversely during dry spells a cover shall be used to prevent fine sediments becoming airborne.
- The contractor shall provide on-going maintenance of sediment and erosion control devices around the site.
- The contractor is to stage all works so that disturbed areas remain exposed for a short a period as practicable.

Measures to minimise airborne pollutants during construction in the form of dust during dry and/or windy weather shall include the following:

- Exposed soils shall be kept damp to prevent particulates becoming airborne; and

- Stockpiles exposed for more than two weeks shall be maintained by the contractor in accordance with their approved management plan to prevent wind erosion.

4.1.2 Phase 2 – Infrastructure, Building & Roadworks

- The site stormwater pipes and pits shall be installed with drop inlets provided to all pits.
- Provide sediment fences, sandbags or fine mesh cover to all gully pits.
- Monitoring of new stormwater pipes and infrastructure to ensure they are free of sediment and debris.
- Maintain shake down and wash down area at entry/exit.
- All disturbed areas are to be surfaced or landscaped/grassed (maintained to minimum 70% ground cover) as soon as practicable after completion of localized works.

4.1.3 Phase 3 – Finishing Works & Defects Liability Period

All erosion and sediment control measures, including sediment fences and inlet traps shall be maintained until completion of surface finishes including landscaping and turfing:

- Maintain sediment fences.
- Tend to landscape areas to maintain ground cover.

4.2 Retaining Walls

Retaining walls will be limited in height and extent, with the subdivision layout designed to minimise large structures.

Design principles:

- Single-tier walls: max. height 3.0m, subject to detailed geotechnical investigation, engineering design, and EDQ approval.
- Maintain offsets from boundaries for maintenance access.
- Drainage gravel and ag-drains provided behind all walls, connected to stormwater.
- Walls designed and certified by an RPEQ in accordance with geotechnical parameters.

5. Roadworks, Access and Traffic

External access to the development is proposed via Jackson Court along the northern frontage of the site. The access arrangement has been assessed in the Traffic Impact Assessment (TIA), which concludes that the surrounding road network is capable of accommodating traffic generated by the proposed development subject to the recommended intersection and road upgrade works.

The proposed access intersection will be designed in accordance with the recommendations of the TIA and the requirements of EDQ Guidelines, where applicable.

The internal road network has been designed to provide safe and efficient access to all proposed allotments while maintaining connectivity to adjoining future development areas. The road layout comprises a neighbourhood connector and access streets, providing permeability throughout the development and opportunities for future network connections.

The proposed internal road network generally comprises:

- 20.0 m road reserve (Neighbourhood Connector)
- 15.5 m road reserves (Neighbourhood Access Street)

Road reserve widths, carriageway widths, intersection layouts and associated infrastructure will be designed in accordance with the relevant Street and Movement Network Guideline No. 6 published by Economic Development Queensland (EDQ).

6. Stormwater Quality and Quantity

A conceptual stormwater management strategy has been developed for the proposed development and is documented in the separate Conceptual Stormwater Management Plan (CSMP) prepared by Burchills Engineering Solutions. The proposed civil design has been developed having regard to the findings and recommendations of these supporting reports.

The proposed stormwater management strategy includes minor drainage via a conventional pit and pipe drainage network designed in accordance with QUDM and EDQ requirements, and major drainage conveyed via designated overland flow paths generally within the road network.

Further, bioretention basins will be sized to achieve the statutory stormwater quality objectives and stormwater detention basins sized to manage post-development discharge rates. The preliminary sizing for both bioretention basins and stormwater detention basins will be incorporated into the concept civil design (refer to CSMP).

7. Water Supply

To determine suitable pipe sizing for the proposed development, water demands are calculated according to the intended new development. The water criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (Version 2.0 – February 2020); and
- Water Services Association of Australia – WSA 03-2013 Water Supply Code of Australia, Part 1: Planning and Design.

The service mains internal of each building will be designed and constructed in accordance with AS/NZS 3500.1:2003 Plumbing and Drainage – Water services (Standards Australia, 2003).

The water flow parameters shown in Table 7.1, 7.2 and 7.3 required to meet Urban Utilities' Standards of Service and have been based on Single Supply (Drinking Water Only) Network parameters shown in SEQ Design Criteria Table 3.1.

Table 7.1 Potable Water Supply Demand and Peaking Factor

Property Type	Average Day Demand L/EP/day	Non-Revenue L/EP/day	Peaking Factors		
			MDMM	PD	PH
Residential	**230**	**30**	**1.5**	**2**	**4**

Notes:

MDMM Mean Day Maximum Month Demand
PD Peak Day Demand
AD Average Day Demand
PH Peak Hour Demand

Table 7.2 Potable Water Pressure Parameters

Item	Pressure Parameter
Minimum Service Pressure	22 metres (adjoining the property boundary)
Maximum Service Pressure	Target 55 metres (at the property boundary)

Table 7.3 Fire Fighting Parameters

Item	Pressure Parameter
Minimum Residential Mains Pressure (Emergency Fire operating conditions)	12 metres at the main at the property boundary 6 metres elsewhere
Fire Flow Urban Residential	25 L/s for a duration of 2 hrs by 2 hydrants
Fire Flow Commercial	45 L/s for a duration of 4 hrs by 4 hydrants
Background Demand	2/3 x residential peak hour demands plus 1 x non-residential peak hour demands.

The calculated water supply demand for the proposed development is shown in Table 7.4.

Table 7.4 Water Supply Demand Calculations

Use	EP	AD Flow (L/EP/d)	Non-Revenue	AD (L/s)	PH (L/s)
Total Proposed	438	230	30	1.166	4.826

Calculations of maximum peak demand and demand multiplier for the low-density residential aspect of the development are based on an allowance of 230 L/EP/day and a peak hour factor of 4 while applying the non-revenue flows of 30 L/EP/day as follows:

Maximum Peak Demand = PHF x Demand Rate x EP's + NR
= 4 x 230 x 438 + (30 x 438)
= 416,976 L/day
= 4.826 L/s

Demand Multiplier = Maximum Demand / EP's
= 0.011

Urban Utilities records indicate that the subject site is bounded by existing water infrastructure, including:

- 600mm DI Trunk main at the southern verge of Jackson Ct
- 100mm AC main at the northern verge of Jackson Ct
- 450mm DI Trunk main at Wensley Road
- 110mm PE main at Bryants Road

An Urban Utilities Services Advice Notice (Application No. 26-SAN-89563) has been obtained to inform the preliminary water servicing strategy. The advice provided by Urban Utilities indicates that the development is located within the Ripley Wensley Road Reservoir 1 (R084) supply zone, and the existing low-pressure supply is generally capable of servicing land up to approximately RL 70–75m AHD. The proposed DA footprint is located below this approximate service level and is therefore capable of being serviced from the existing low level pressure zone.

The proposed internal potable water reticulation network will be arranged to service all allotments via water mains generally located within the road reserve network, in accordance with the typical service corridor arrangements shown on Ipswich City Council Standard Drawing SR.23 – *Public Utilities in Subdivisions, Typical Service Conduit Sections*. Internal water main sizing and the final network configuration will be confirmed through detailed hydraulic network analysis undertaken during the detailed design phase.

Based on the current concept layout and Urban Utilities' advice, the proposed development can be serviced by the existing Urban Utilities water network, with the final servicing strategy and network sizing to be confirmed during detailed design and hydraulic assessment

A Combined Services Schematic showing the preliminary potable water reticulation concept has been prepared by Burchills Engineering Solutions and is included in Appendix B. This schematic is preliminary only and subject to detailed design, hydraulic assessment, final pipe sizing and approval by Urban Utilities.

8. Sewer Reticulation

The sewer criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (Version 2.0 – February 2020); and
- Water Services Association of Australia – WSA 02-2014 Sewerage Code of Australia, Part 1: Planning and Design.

The sewer flow generation, pipe design parameters, minimum sewer pipe grades and maximum capacity are shown below in Table 8.1, Table 7.2, and Table 7.3. The following parameters are based on a Conventional Sewer:

Table 8.1 Sewer Flow Generation Parameters

Flow	Parameter
Average Dry Weather Flow (ADWF)	180 L/EP/d
Peak Dry Weather Flow (PDWF)	d x SF + GWI
Peak Wet Weather Flow (PWWF)	PDWF + Rainfall Dependent Inflow (RDF)

Table 8.2 Pipe Design Parameters

Flow	Parameter
Mannings ‘n’	0.0128
Minimum velocity @ PDWF	0.75 m/s
Depth of Flow @ PWWF – Existing system	Up to 1.0 m below MH cover level and no spillage through overflow structures
Depth of Flow @ PWWF – Proposed sewers	Max flow depth shall not exceed ¾ pipe full (75% d/D).

Table 8.3 Minimum Pipe Capacity – New Sewers Flowing ¾ Full

Pipe Size (mm)	Min Pipe Grade (1 in x)	Capacity (L/s)
150	180	10.4
225	300	23.6
300	400	44.1
525	750	143.0

The total development yield has been considered, not just the increase in equivalent persons on the subject site. The calculated sewer demand generation for the proposed development is shown in Table 7.4

Table 8.4 Sewer Demand Calculation

	EP	ADWF Rate (L/EP/d)	ADWF (kL/d)	ADWF (L/s)	PDWF (L/s)	PWWF (L/s)
Total Proposed	2,942	180	529.56	6.13	14.81	27.07

The calculations indicate that the post-development PWWF is approximately 27.07 L/s.

Urban Utilities records indicate that there are currently no existing wastewater connections servicing the subject site. An Urban Utilities Services Advice Notice (Application No. 26-SAN-89563) identifies the following as the nominated preliminary connection points to the existing wastewater network:

- Manhole MH582232
- Sewer Flow Tee (SFT) 7901

A detailed sewer servicing strategy will be prepared to demonstrate compliance with the SEQ Water Supply and Sewerage Design and Construction Code. Preliminary advice indicates that the nominated connection points may facilitate a gravity sewer servicing solution for the development, subject to confirmation through detailed design.

A preliminary hydraulic assessment undertaken by Urban Utilities considered an estimated peak wet weather flow of 11.17 L/s based on an earlier conceptual development yield of 1,092 EP. Urban Utilities advised that sufficient downstream wastewater network capacity was available to accommodate this demand. Based on the current development concept, Burchills has estimated an ultimate development demand of 2,942 EP, corresponding to a peak wet weather flow of approximately 27.07 L/s. The updated development demand and PWWF will be provided to and further coordinated with Urban Utilities during the detailed design phase and incorporated into the detailed sewer servicing strategy.

The proposed wastewater servicing strategy comprises the construction of an internal gravity sewer reticulation network generally located within the proposed road reserve network, in accordance with the typical service corridor arrangements shown on Ipswich City Council Standard Drawing SR.23 – *Public Utilities in Subdivisions, Typical Service Conduit Sections* and discharging to the existing downstream sewer network via the nominated connection point(s). The detailed layout will be developed during the detailed design stage in consultation with Urban Utilities.

The sewer reticulation layout will be designed to maintain future servicing opportunities for adjoining land where required by Urban Utilities, with sewer infrastructure terminating in locations that facilitate future extension without requiring access through private property.

A Combined Services Schematic showing the preliminary sewer reticulation concept has been prepared by Burchills Engineering Solutions (refer Appendix B). The schematic is preliminary only and subject to detailed design, further consultation with Urban Utilities and confirmation of the ultimate servicing strategy.

9. Electrical and Telecommunications

It is envisaged that adequate power supply can be provided to the site from the existing infrastructure. However, a specialist electrical consultant will need to be engaged to provide advice in relation to internal electrical reticulation requirements, to prepare detailed designs and to liaise with the relevant authorities.

10. Conclusion

The findings of this Civil Engineering Report support the proposed Reconfiguration of a Lot over land located at 1-63 Bryants Road & 101 Jackson Court, Ripley.

The proposal comprises the reconfiguration of approximately 37.39 ha of land into 162 residential freehold allotments, together with associated roads, open space, drainage reserves, utility infrastructure and civil works.

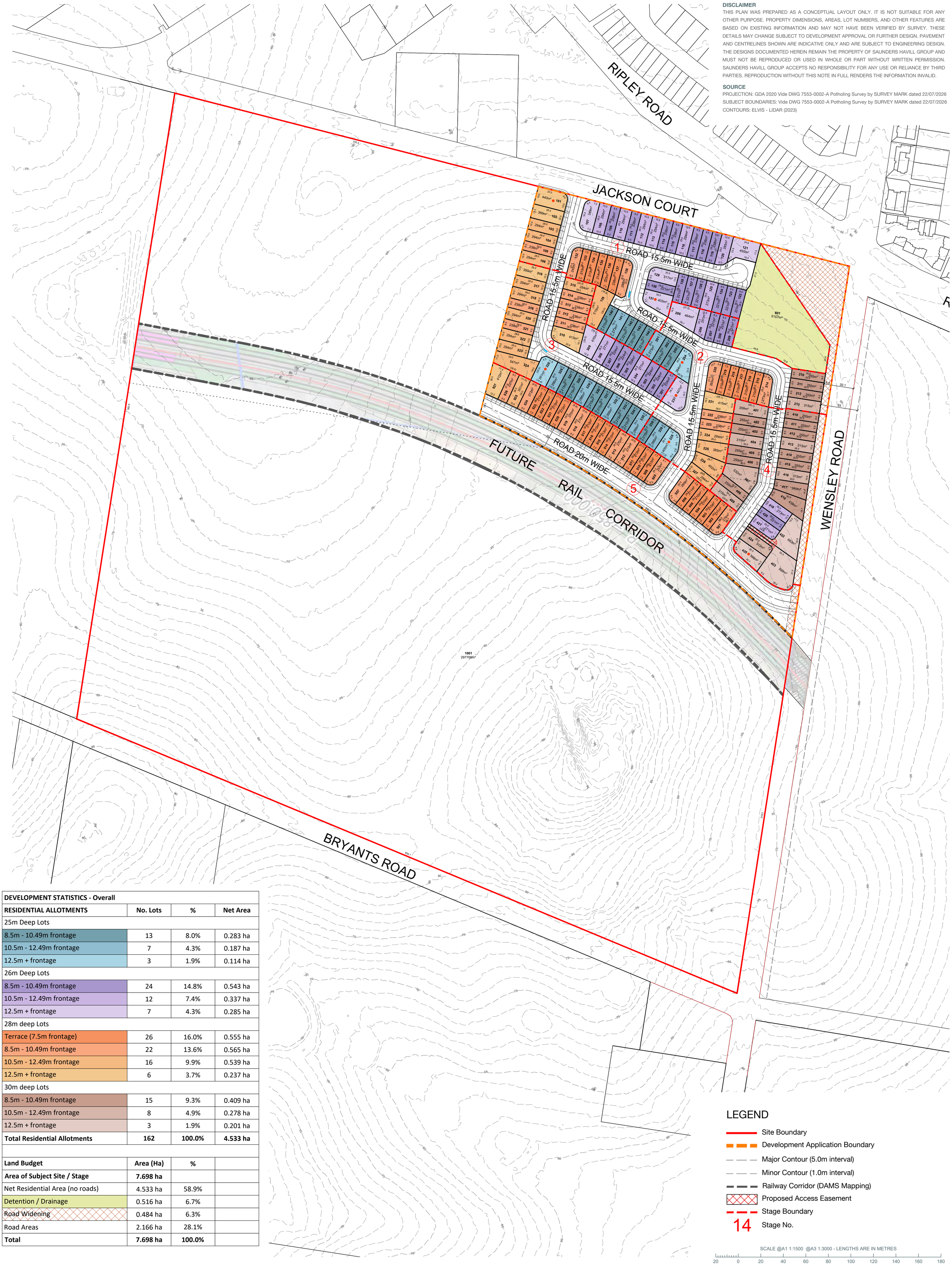
The investigations undertaken as part of this assessment demonstrate that the site can be appropriately developed and serviced. The proposed road network and access arrangements are supported by the Traffic Impact Assessment, earthworks are considered feasible, stormwater quality and quantity matters have been addressed through separate CSMP, and preliminary servicing advice from Urban Utilities confirms that potable water and wastewater servicing can be provided, subject to detailed design and the relevant authority approvals.

The functional civil engineering arrangements presented in this report have been developed having regard to the Ripley Valley PDA Development Scheme, applicable DCOP infrastructure planning and relevant EDQ requirements. Detailed design and delivery of the civil infrastructure will be undertaken in accordance with the conditions of the PDA Development Approval and the EDQ Certification Procedures Manual, where applicable.

Based on the investigations and servicing strategies presented in this report, the proposed development is considered capable of being appropriately serviced and is suitable to support approval of the Development Application.

Appendix A – Plan of Development Layout (Saunders Havill)

PROPOSAL PLAN



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CONTOURS: ELVIS - LIDAR (2023)

DEVELOPMENT STATISTICS - Overall			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
25m Deep Lots			
8.5m - 10.49m frontage	13	8.0%	0.283 ha
10.5m - 12.49m frontage	7	4.3%	0.187 ha
12.5m + frontage	3	1.9%	0.114 ha
26m Deep Lots			
8.5m - 10.49m frontage	24	14.8%	0.543 ha
10.5m - 12.49m frontage	12	7.4%	0.337 ha
12.5m + frontage	7	4.3%	0.285 ha
28m deep Lots			
Terrace (7.5m frontage)	26	16.0%	0.555 ha
8.5m - 10.49m frontage	22	13.6%	0.565 ha
10.5m - 12.49m frontage	16	9.9%	0.539 ha
12.5m + frontage	6	3.7%	0.237 ha
30m deep Lots			
8.5m - 10.49m frontage	15	9.3%	0.409 ha
10.5m - 12.49m frontage	8	4.9%	0.278 ha
12.5m + frontage	3	1.9%	0.201 ha
Total Residential Allotments	**162**	**100.0%**	**4.533 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	**7.698 ha**		
Net Residential Area (no roads)	4.533 ha	58.9%	
Detention / Drainage	0.516 ha	6.7%	
Road Widening	0.484 ha	6.3%	
Road Areas	2.166 ha	28.1%	
Total	**7.698 ha**	**100.0%**	

LEGEND

- Site Boundary
- Development Application Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Railway Corridor (DAMS Mapping)
- Proposed Access Easement
- Stage Boundary
- 14 Stage No.

SCALE @A1 1:1500 @A3 1:3000 - LENGTHS ARE IN METRES

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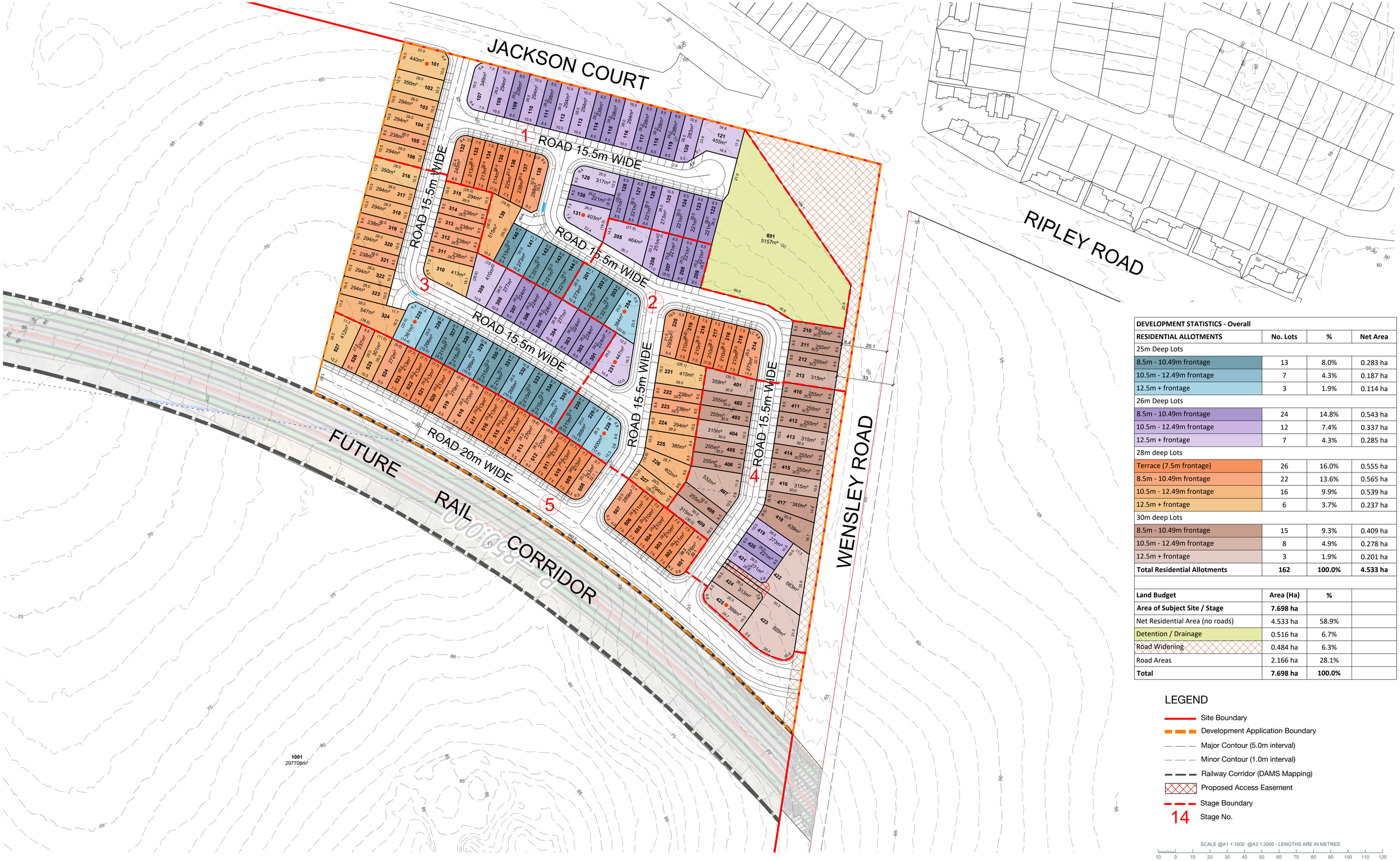
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PROPOSAL PLAN



DEVELOPMENT STATISTICS - Overall			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
25m Deep Lots			
8.5m - 10.49m frontage	13	8.0%	0.283 ha
10.5m - 12.49m frontage	7	4.3%	0.187 ha
12.5m + frontage	3	1.9%	0.114 ha
26m Deep Lots			
8.5m - 10.49m frontage	24	14.8%	0.543 ha
10.5m - 12.49m frontage	12	7.4%	0.337 ha
12.5m + frontage	7	4.3%	0.285 ha
28m deep Lots			
Terrace (7.5m frontage)	26	16.0%	0.555 ha
8.5m - 10.49m frontage	22	13.6%	0.565 ha
10.5m - 12.49m frontage	16	9.9%	0.539 ha
12.5m + frontage	6	3.7%	0.237 ha
30m deep Lots			
8.5m - 10.49m frontage	15	9.3%	0.409 ha
10.5m - 12.49m frontage	8	4.9%	0.278 ha
12.5m + frontage	3	1.9%	0.201 ha
Total Residential Allotments	**162**	**100.0%**	**4.533 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	**7.698 ha**		
Net Residential Area (no roads)	4.533 ha	58.9%	
Detention / Drainage	0.516 ha	6.7%	
Road Widening	0.484 ha	6.3%	
Road Areas	2.166 ha	28.1%	
Total	**7.698 ha**	**100.0%**	

LEGEND

- Site Boundary
- Development Application Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Railway Corridor (DAMS Mapping)
- Proposed Access Easement
- Stage Boundary
- 14 Stage No.

SCALE @A1 1:1000 @A3 1:2000 - LENGTHS ARE IN METRES

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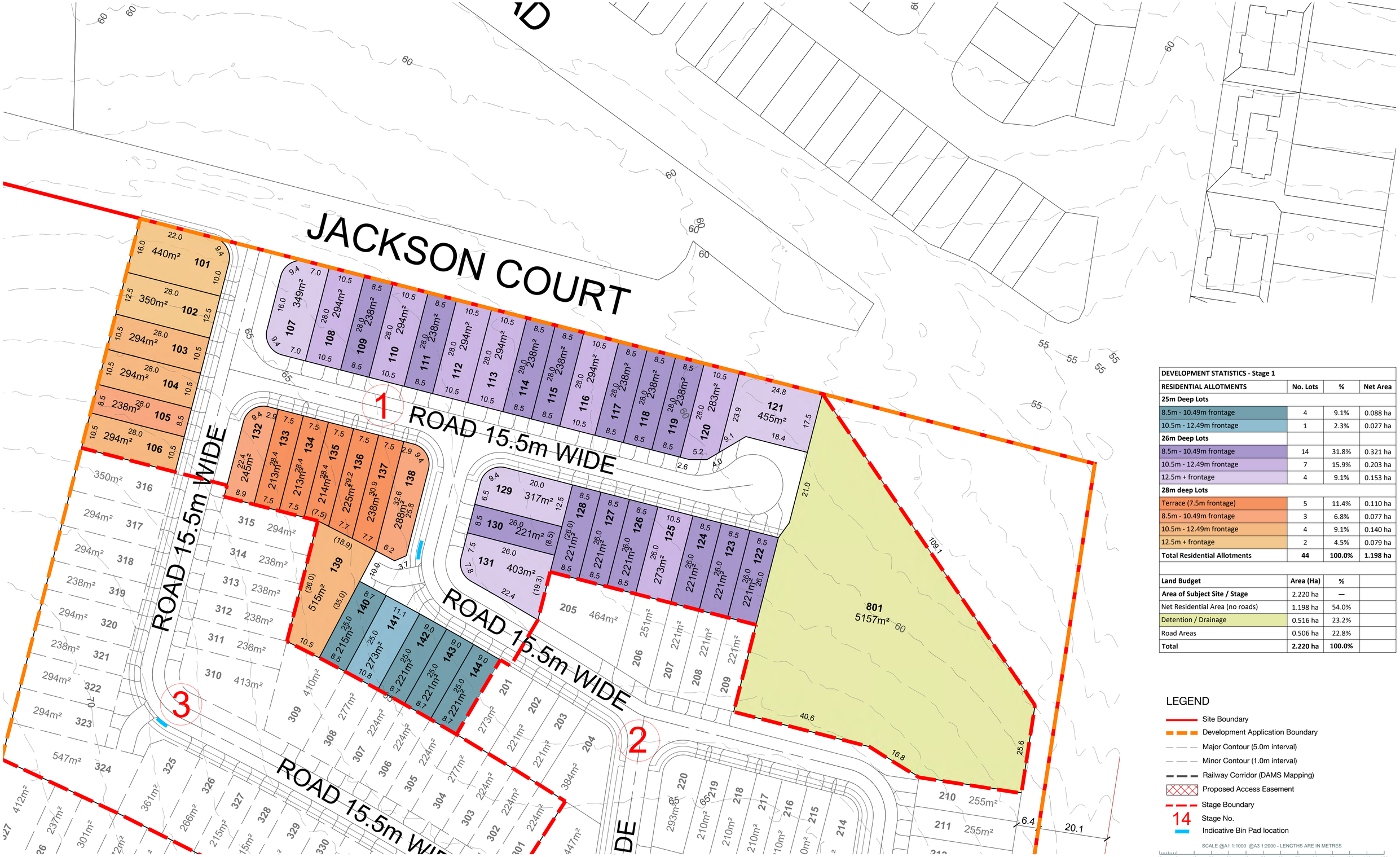
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STAGING PLAN - STAGE 1



DEVELOPMENT STATISTICS - Stage 1			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
25m Deep Lots			
8.5m - 10.49m frontage	4	9.1%	0.088 ha
10.5m - 12.49m frontage	1	2.3%	0.027 ha
26m Deep Lots			
8.5m - 10.49m frontage	14	31.8%	0.321 ha
10.5m - 12.49m frontage	7	15.9%	0.203 ha
12.5m + frontage	4	9.1%	0.153 ha
28m deep Lots			
Terrace (7.5m frontage)	5	11.4%	0.110 ha
8.5m - 10.49m frontage	3	6.8%	0.077 ha
10.5m - 12.49m frontage	4	9.1%	0.140 ha
12.5m + frontage	2	4.5%	0.079 ha
Total Residential Allotments	**44**	**100.0%**	**1.198 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	2.220 ha	—	
Net Residential Area (no roads)	1.198 ha	54.0%	
Detention / Drainage	0.516 ha	23.2%	
Road Areas	0.506 ha	22.8%	
Total	**2.220 ha**	**100.0%**	

LEGEND

- Site Boundary
- Development Application Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Railway Corridor (DAMS Mapping)
- Proposed Access Easement
- Stage Boundary
- 14 Stage No.
- Indicative Bin Pad location

SCALE @A1 1:1000 @A3 1:2000 - LENGTHS ARE IN METRES

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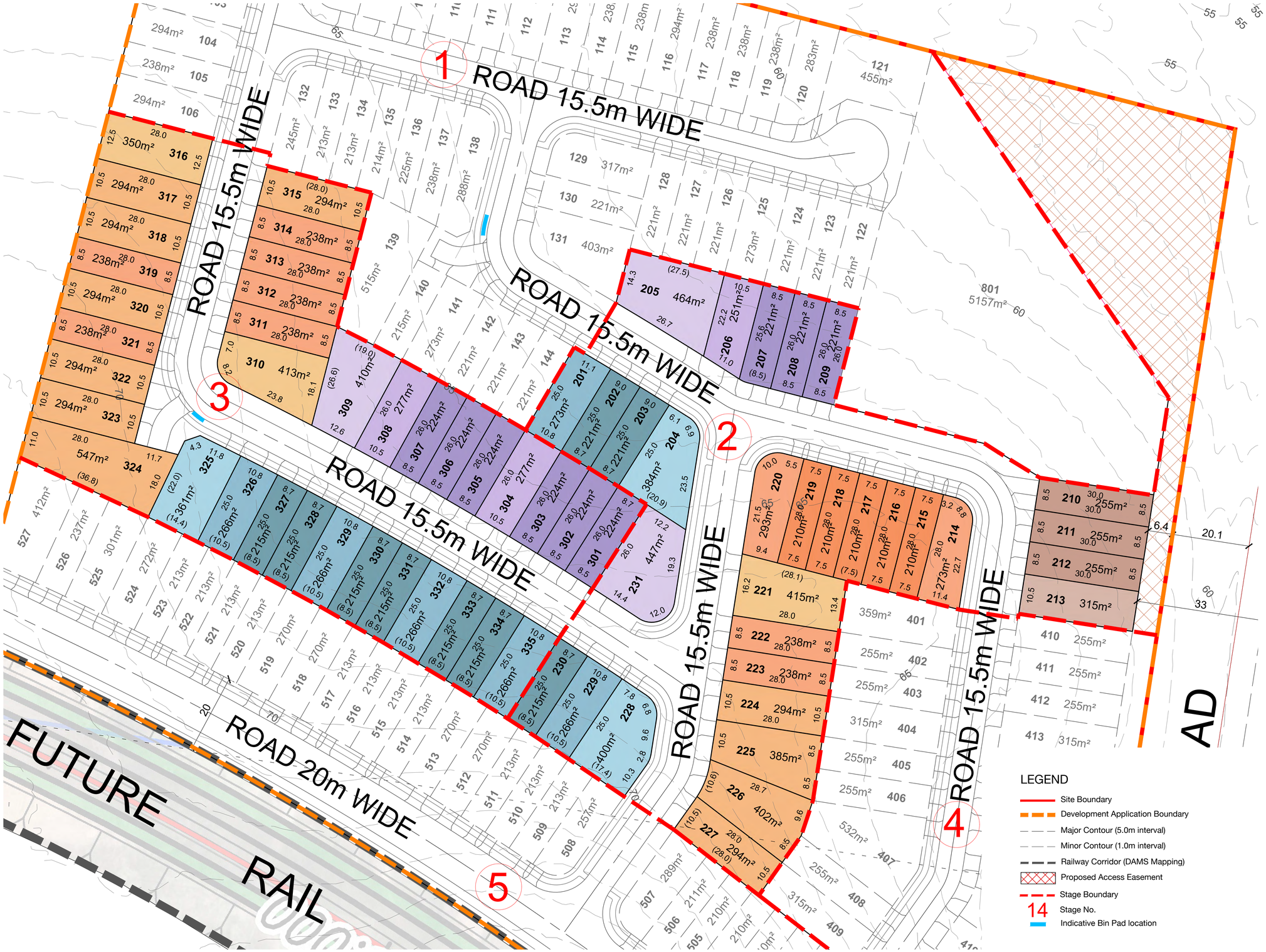
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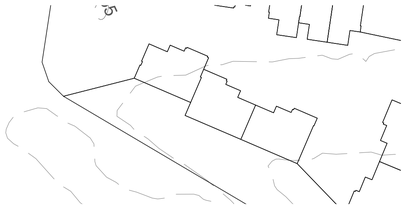
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STAGING PLAN - STAGE 2 & 3





DEVELOPMENT STATISTICS - Stage 2			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
25m Deep Lots			
8.5m - 10.49m frontage	3	9.7%	0.066 ha
10.5m - 12.49m frontage	2	6.5%	0.054 ha
12.5m + frontage	2	6.5%	0.078 ha
26m Deep Lots			
8.5m - 10.49m frontage	3	9.7%	0.066 ha
10.5m - 12.49m frontage	1	3.2%	0.025 ha
12.5m + frontage	2	6.5%	0.091 ha
28m deep Lots			
Terrace (7.5m frontage)	5	16.1%	0.105 ha
8.5m - 10.49m frontage	4	12.9%	0.104 ha
10.5m - 12.49m frontage	4	12.9%	0.138 ha
12.5m + frontage	1	3.2%	0.041 ha
30m deep Lots			
8.5m - 10.49m frontage	3	9.7%	0.076 ha
10.5m - 12.49m frontage	1	3.2%	0.032 ha
Total Residential Allotments	**31**	**100.0%**	**0.876 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	1.664 ha	0.0%	
Net Residential Area (no roads)	0.876 ha	52.7%	
Road Widening	0.356 ha	21.4%	
Road Areas	0.432 ha	25.9%	
Total	**1.664 ha**	**100.0%**	

DEVELOPMENT STATISTICS - Stage 3			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
25m Deep Lots			
8.5m - 10.49m frontage	6	17.1%	0.129 ha
10.5m - 12.49m frontage	4	11.4%	0.106 ha
12.5m + frontage	1	2.9%	0.036 ha
26m Deep Lots			
8.5m - 10.49m frontage	6	17.1%	0.134 ha
10.5m - 12.49m frontage	2	5.7%	0.055 ha
12.5m + frontage	1	2.9%	0.041 ha
28m deep Lots			
8.5m - 10.49m frontage	6	17.1%	0.143 ha
10.5m - 12.49m frontage	7	20.0%	0.231 ha
12.5m + frontage	2	5.7%	0.076 ha
Total Residential Allotments	**35**	**100.0%**	**0.951 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	1.251 ha	—	
Net Residential Area (no roads)	0.951 ha	76.0%	
Road Areas	0.300 ha	24.0%	
Total	**1.251 ha**	**100.0%**	

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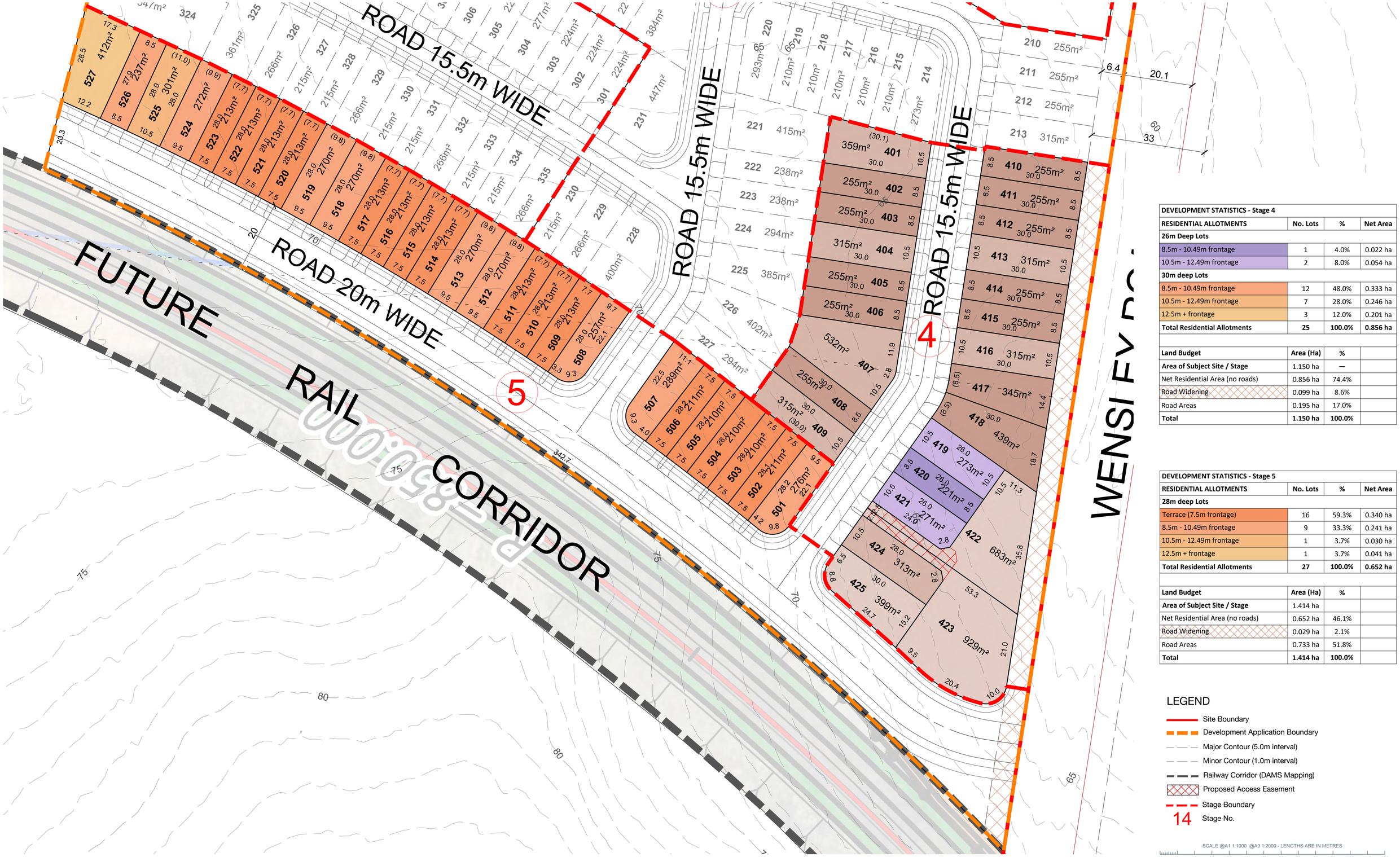
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STAGING PLAN - STAGE 4 & 5



DEVELOPMENT STATISTICS - Stage 4			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
26m Deep Lots			
8.5m - 10.49m frontage	1	4.0%	0.022 ha
10.5m - 12.49m frontage	2	8.0%	0.054 ha
30m deep Lots			
8.5m - 10.49m frontage	12	48.0%	0.333 ha
10.5m - 12.49m frontage	7	28.0%	0.246 ha
12.5m + frontage	3	12.0%	0.201 ha
Total Residential Allotments	**25**	**100.0%**	**0.856 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	1.150 ha	—	
Net Residential Area (no roads)	0.856 ha	74.4%	
Road Widening	0.099 ha	8.6%	
Road Areas	0.195 ha	17.0%	
Total	**1.150 ha**	**100.0%**	

DEVELOPMENT STATISTICS - Stage 5			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
28m deep Lots			
Terrace (7.5m frontage)	16	59.3%	0.340 ha
8.5m - 10.49m frontage	9	33.3%	0.241 ha
10.5m - 12.49m frontage	1	3.7%	0.030 ha
12.5m + frontage	1	3.7%	0.041 ha
Total Residential Allotments	**27**	**100.0%**	**0.652 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	1.414 ha		
Net Residential Area (no roads)	0.652 ha	46.1%	
Road Widening	0.029 ha	2.1%	
Road Areas	0.733 ha	51.8%	
Total	**1.414 ha**	**100.0%**	

LEGEND

- Site Boundary
- Development Application Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Railway Corridor (DAMS Mapping)
- Proposed Access Easement
- Stage Boundary
- 14 Stage No.

SCALE @A1 1:1000 @A3 1:2000 - LENGTHS ARE IN METRES

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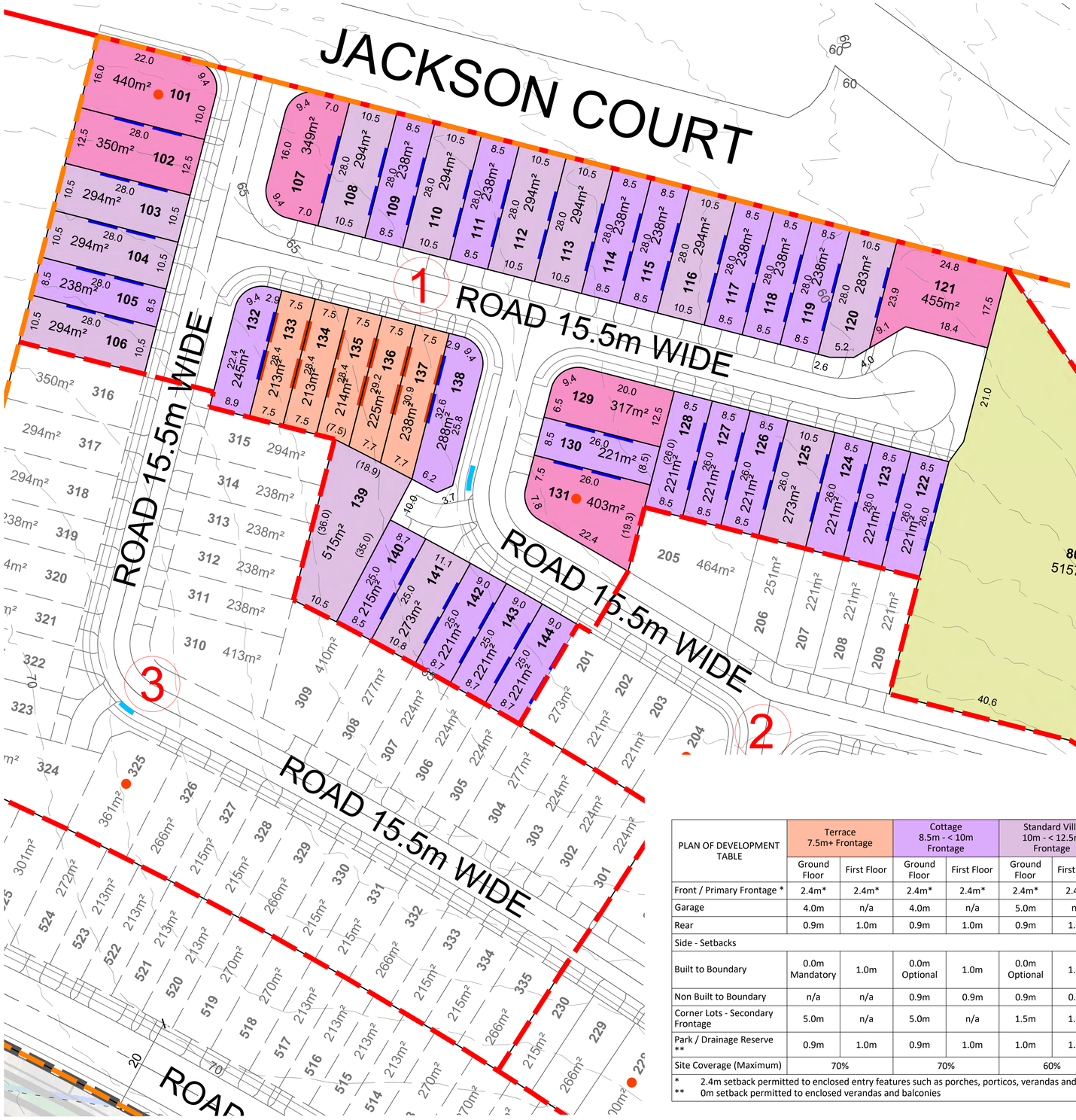
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PLAN OF DEVELOPMENT - STAGE 1



LEGEND

- Site Boundary
- Development Application Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Railway Corridor (DAMS Mapping)
- Proposed Access Easement
- Stage Boundary
- 14 Stage No.
- Mandatory Built to Boundary Wall location
- Optional Built to Boundary Wall location
- Indicative Driveway Location
- Potential Multiple Residential Allotment (maximum 2 dwellings)
- Indicative Bin Pad location

PLAN OF DEVELOPMENT TABLE	Terrace 7.5m+ Frontage		Cottage 8.5m - < 10m Frontage		Standard Villa 10m - < 12.5m Frontage		Premium Villa 12.5 - < 14.0m Frontage		Multiple Residential Allotments ●	
	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor
Front / Primary Frontage *	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*
Garage	4.0m	n/a	4.0m	n/a	5.0m	n/a	5.0m	n/a	5.0m	n/a
Rear	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m
Side - Setbacks										
Built to Boundary	0.0m Mandatory	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m
Non Built to Boundary	n/a	n/a	0.9m	0.9m	0.9m	0.9m	1.0m	1.0m	1.0m	1.0m
Corner Lots - Secondary Frontage	5.0m	n/a	5.0m	n/a	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m
Park / Drainage Reserve **	0.9m	1.0m	0.9m	1.0m	1.0m	1.0m	1.0m	1.0m	1.0m	1.0m
Site Coverage (Maximum)	70%		70%		60%		60%		60%	

* 2.4m setback permitted to enclosed entry features such as porches, porticos, verandas and balconies
** 0m setback permitted to enclosed verandas and balconies

NOTES:

General

1. All development is to be undertaken in accordance with the Development Approval.
2. The maximum height of buildings shall not exceed two (2) storeys.
3. Building height is measured from natural ground level (to avoid any doubt, natural ground level is taken to be the level of the land when the survey plan creating the subject lot was registered).
4. Maximum building location envelopes may be subject to future proposed easements and/or other underground services.
5. A lot can have only one primary frontage. Secondary frontages are nominated on this Plan of Development.
6. For corner lots, no building or structure over 2 metres high is to be built within a 4m x 4m truncation at the corner of two road frontages.

Setbacks

7. Setback, for a building or structure, means the shortest distance, measured horizontally, between the outermost projection of the building or structure to the vertical projection of the boundary of the lot where the building or structure is.
8. Setbacks are as per the Plan of Development Table unless otherwise specified.
9. Where a setback is located adjacent to a 3m retaining wall, a minimum side and rear setback of 1.5m applies or half the overall building height is desirable.
10. The location of the built to boundary walls are indicated on the Plan of Development. Where built to boundary walls are not adopted, side setbacks shall be in accordance with the Plan of Development Table unless otherwise specified in these notes.
11. If a built to boundary wall is constructed, it must be constructed on the boundary nominated in this Plan of Development.
12. The maximum length of a built-to-boundary wall is 15 metres, unless it abuts a higher or longer existing or simultaneously constructed wall.
13. First floor setbacks must not encroach the minimum ground floor setbacks.
14. Garages must not project forward of the front building setback.
15. Eaves should not encroach (other than where buildings are built to boundary) closer than 450mm to the lot boundary, exceptions include:
    - Primary Street frontage, where eaves should not be closer than 2400mm.

Garages

16. For lots without rear lane access:
    - Double garages are not permitted on any lot less than 10m wide
    - Double garages may be permitted on lots 10m or greater in width and less than 12.5m wide where the dwelling is more than one storey in height and the garage is setback at least 1.0m behind the main face (excluding balconies) of the dwelling and the garage doors are articulated, comprise a mix of materials and colours, or are staggered.
    - Double garages may be permitted on single storey dwellings on lots 10m or greater in width and less than 12.5m wide where all of the following requirements are achieved:
        a. the garage door does not exceed 4.8m in width and does not exceed 40% of the front façade elevation;
        b. at least one habitable room fronts the public street and projects a minimum of 1.0m forward of the garage;
        c. the garage is setback a minimum of 240mm behind the pillar or wall framing the garage door opening;
        d. the dwelling incorporates a minimum 450mm eave overhang to the primary street frontage;
        e. the front façade incorporates a clearly identifiable pedestrian entry with glazing within the front door or adjoining sidelight;
        f. the front façade incorporates large or multiple habitable room windows addressing the street;
        g. the front façade incorporates a minimum of three complementary materials and/or colours, including the garage door;
        h. garage doors comprise sectional, tilt-panel or similarly articulated doors and are visually integrated into the overall dwelling design.

On-Site Parking and Driveways

17. Off street car park is to be provided in accordance with the following minimum requirements:
    - One room or one bedroom or two bedroom house/dwelling unit - 1 covered space per dwelling.
    - Three or more bedroom house/dwelling unit - 2 spaces per dwelling, one of which must be capable of being covered (may be provided in tandem).
18. The maximum width of a driveway at the lot boundary shall be 4.0 metres for a lot, except where a reduced width of 2.5 metres is specified to enable street parking.
19. Garages are to be located along the Built to Boundary wall. Where no Built to Boundary wall is proposed, garages are to be located on the low side of the lot. Where the lot has no low side, garages are to be located on the western or southern side of the lot.
20. Maximum of one driveway per dwelling unless it is a corner lot where the minimum distance required in note 21 can be achieved and no retaining walls are present.
21. Minimum distance of a driveway from an intersection of one street with another street is 6.0 meters.

Private Open Space

22. Private open space is to be provided in accordance with the following requirements:
    - Two bedroom house/dwelling unit – minimum 9m² with a minimum dimension of 2.4m;
    - Three of more bedroom house/dwelling – minimum 12m² with a minimum dimension 2.4m
23. Private open space must be in accordance with the following requirements:
    - Accessible from a living room; and
    - Adequate space to accommodate a table, chair, planting, barbeque and shade; and
    - Maximum gradient not exceeding 1:10.

Street Address

24. Letterboxes must be clearly visible and identifiable from street.
25. Pedestrian access and letterboxes are required for all primary frontages.
26. Buildings must address each street, pathway or park frontage through the inclusion of window openings / glazing in doors and one or more of the following design elements in the related facade:
    - Verandahs; and/or
    - Porches; and/or
    - Awning and shade structures; and/or
    - Variation to roof and building lines; and/or
    - Use of varying building materials.
27. All buildings with a width of more than 10 metres that are visible from a street or a park must be articulated to reduce the mass of the building by one or more of the following:
    - Windows recessed into the façade; and/or
    - Balconies, porches or verandah; and/or
    - Window Hoods/Screens; and/or
    - Shadow lines are created on the building through minor changes in the façade (100 millimetres minimum).
28. Carports and garages are to be compatible with the main building design in terms of height, roof form, detailing, materials and colours.

Fencing

29. Fencing, screening or level changes to provide privacy but still allow for overlooking of the street and park to promote casual surveillance.
30. Fencing on all primary frontages has a maximum height of 1.2 metres where solid or has a maximum height of 1.8 metres where containing openings that make the fence at least 50% transparent. Fencing on all secondary frontages has a maximum height of 1.8 where containing openings that make the fence at least 25% transparent.
31. Fences on pedestrian linkages are to have a maximum height of 1.2m where solid or have a maximum height of 1.8m where containing openings that make the fence more than 50% transparent.

Bushfire Management

32. Lots may be subject to bushfire hazard requiring compliance with a relevant Australian Standard – Please refer to the Bushfire Management Plan prepared by Queensland Bushfire Planning

Additional Criteria for Secondary Dwellings

33. Design criteria for Secondary Dwellings is as per Schedule 3 of the Ripley Valley Development Scheme.

Additional Criteria for Lots Adjoining Public Open Space

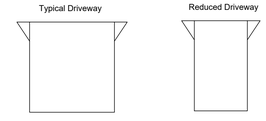
34. Lots with a common boundary with public open space (being park, drainage or reserve) provide for passive surveillance/overlooking of the open space by inclusion of two of the following design elements:
    - Habitable room windows facing the open space; or
    - For double storey dwellings, balconies overlooking the open space; or
    - For single storey dwellings, 1.2 metre high fencing with a minimum of 50% transparency along the common boundary with the open space; or
    - Aluminium pool fencing to the common boundary with the open space.

Additional Criteria for Multiple Residential Allotments

35. Must comply with Multiple Residential Allotment setbacks.
36. Buildings must address all street frontages with driveways, pedestrian entries or both.
37. All dwellings must have a clearly identifiable front door, which is undercover.
38. Bin storage and clothes drying areas must be located behind a fence and not be visible from any street frontage.
39. All designs must positively address the street through inclusion of at least three of the following design elements:
    - Verandah, porch or portico;
    - Awning and shade structures;
    - Variation to roof and building lines;
    - Inclusion of window openings; or
    - Use of varying building materials and treatments
40. A minimum of two on-site car parking spaces must be provided for each dwelling, one of which must be within a garage.
41. Each house / dwelling unit has a clearly defined outdoor living space which:
    - Has an area of at least:
        - 12m² with a minimum dimension of 2.4m for a 3 or more bedroom house / dwelling unit;
        - 9m² with a minimum dimension of 2.4m for a 2 room or 1 bedroom house / dwelling unit; or
        - 5m² with a minimum dimension of 1.2m for a 1 room or 1 bedroom house / dwelling unit.
    - Is accessible from a living area;
    - Has a ground slope of not more than 1 in 10; and
    - Provides visual privacy from outdoor living spaces on adjacent lots.

      Or communal open space is provided which:
    - Has an area of at least 25% of the area of the lot; and
    - Is of a shape which can include a circle with a 4.0m diameter.
42. Fencing along primary and secondary street frontages (where it adjoins private open space) must be a minimum 1.5m high solid screen fencing and may extend up to a maximum of 1.8m where the upper 0.3m is 50% transparent.
    - Fence must be painted in a colour that compliments the dwelling.

DRIVEWAY



SCALE @A1 1:1000 @A3 1:2000 - LENGTHS ARE IN METRES

10 0 10 20 30 40 50 60 70 80 90 100 110 120

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SOURCE
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SUBJECT BOUNDARIES: Vide DWG 7553-0002-A Potholing Survey by SURVEY MARK dated 22/07/2026
CONTOURS: ELVIS - LIDAR (2023)

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SITE ADDRESS
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

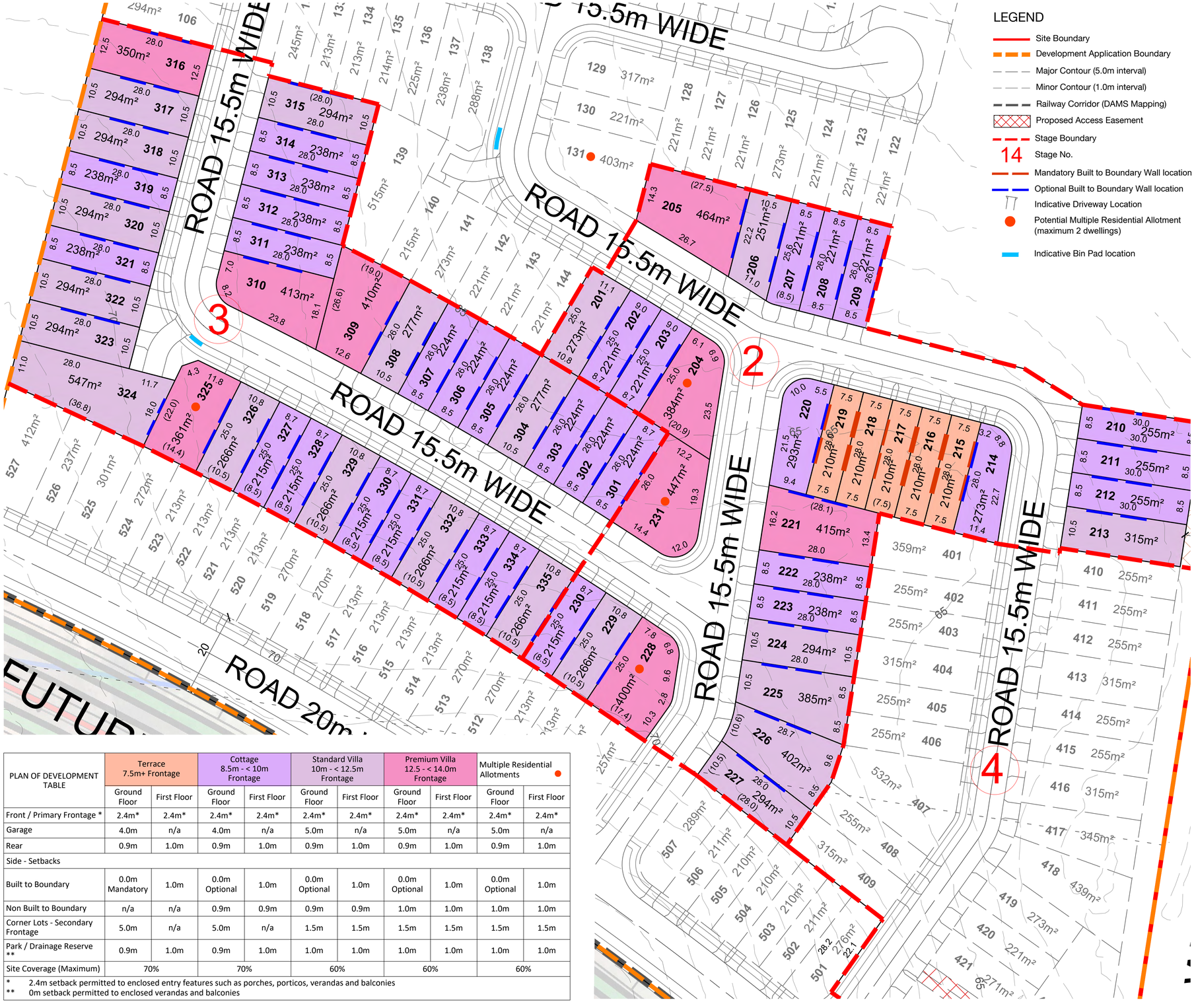
RP DESCRIPTION
LOTS 359 & 360 on S3173

DRAWN
KA

DATE
01/09/2026

DRAWING NO.
13059 P 09 Rev J - POD 01

PLAN OF DEVELOPMENT - STAGE 2 & 3



PLAN OF DEVELOPMENT TABLE	Terrace 7.5m+ Frontage		Cottage 8.5m - < 10m Frontage		Standard Villa 10m - < 12.5m Frontage		Premium Villa 12.5 - < 14.0m Frontage		Multiple Residential Allotments ●	
	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor
Front / Primary Frontage *	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*
Garage	4.0m	n/a	4.0m	n/a	5.0m	n/a	5.0m	n/a	5.0m	n/a
Rear	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m
Side - Setbacks										
Built to Boundary	0.0m Mandatory	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m
Non Built to Boundary	n/a	n/a	0.9m	0.9m	0.9m	0.9m	1.0m	1.0m	1.0m	1.0m
Corner Lots - Secondary Frontage	5.0m	n/a	5.0m	n/a	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m
Park / Drainage Reserve **	0.9m	1.0m	0.9m	1.0m	1.0m	1.0m	1.0m	1.0m	1.0m	1.0m
Site Coverage (Maximum)	70%		70%		60%		60%		60%	

* 2.4m setback permitted to enclosed entry features such as porches, porticos, verandas and balconies
** 0m setback permitted to enclosed verandas and balconies

NOTES:

General

1. All development is to be undertaken in accordance with the Development Approval.
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5. A lot can have only one primary frontage. Secondary frontages are nominated on this Plan of Development.
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        a. the garage door does not exceed 4.8m in width and does not exceed 40% of the front façade elevation;
        b. at least one habitable room fronts the public street and projects a minimum of 1.0m forward of the garage;
        c. the garage is setback a minimum of 240mm behind the pillar or wall framing the garage door opening;
        d. the dwelling incorporates a minimum 450mm eave overhang to the primary street frontage;
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    - Verandahs; and/or
    - Porches; and/or
    - Awning and shade structures; and/or
    - Variation to roof and building lines; and/or
    - Use of varying building materials.
27. All buildings with a width of more than 10 metres that are visible from a street or a park must be articulated to reduce the mass of the building by one or more of the following:
    - Windows recessed into the façade; and/or
    - Balconies, porches or verandah; and/or
    - Window Hoods/Screens; and/or
    - Shadow lines are created on the building through minor changes in the façade (100 millimetres minimum).
28. Carports and garages are to be compatible with the main building design in terms of height, roof form, detailing, materials and colours.

Fencing

29. Fencing, screening or level changes to provide privacy but still allow for overlooking of the street and park to promote casual surveillance.
30. Fencing on all primary frontages has a maximum height of 1.2 metres where solid or has a maximum height of 1.8 metres where containing openings that make the fence at least 50% transparent. Fencing on all secondary frontages has a maximum height of 1.8 where containing openings that make the fence at least 25% transparent.
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Additional Criteria for Lots Adjoining Public Open Space

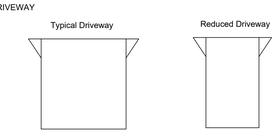
34. Lots with a common boundary with public open space (being park, drainage or reserve) provide for passive surveillance/overlooking of the open space by inclusion of two of the following design elements:
    - Habitable room windows facing the open space; or
    - For double storey dwellings, balconies overlooking the open space; or
    - For single storey dwellings, 1.2 metre high fencing with a minimum of 50% transparency along the common boundary with the open space; or
    - Aluminium pool fencing to the common boundary with the open space.

Additional Criteria for Multiple Residential Allotments

35. Must comply with Multiple Residential Allotment setbacks.
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37. All dwellings must have a clearly identifiable front door, which is undercover.
38. Bin storage and clothes drying areas must be located behind a fence and not be visible from any street frontage.
39. All designs must positively address the street through inclusion of at least three of the following design elements:
    - Verandah, porch or portico;
    - Awning and shade structures;
    - Variation to roof and building lines;
    - Inclusion of window openings; or
    - Use of varying building materials and treatments
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41. Each house / dwelling unit has a clearly defined outdoor living space which:
    - Has an area of at least:
        - 12m² with a minimum dimension of 2.4m for a 3 or more bedroom house / dwelling unit;
        - 9m² with a minimum dimension of 2.4m for a 2 room or 1 bedroom house / dwelling unit; or
        - 5m² with a minimum dimension of 1.2m for a 1 room or 1 bedroom house / dwelling unit.
    - Is accessible from a living area;
    - Has a ground slope of not more than 1 in 10; and
    - Provides visual privacy from outdoor living spaces on adjacent lots.

      Or communal open space is provided which:
    - Has an area of at least 25% of the area of the lot; and
    - Is of a shape which can include a circle with a 4.0m diameter.
42. Fencing along primary and secondary street frontages (where it adjoins private open space) must be a minimum 1.5m high solid screen fencing and may extend up to a maximum of 1.8m where the upper 0.3m is 50% transparent.
    - Fence must be painted in a colour that compliments the dwelling.

DRIVEWAY



SCALE @A1 1:1000 @A3 1:2000 - LENGTHS ARE IN METRES

10 0 10 20 30 40 50 60 70 80 90 100 110 120

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SITE ADDRESS
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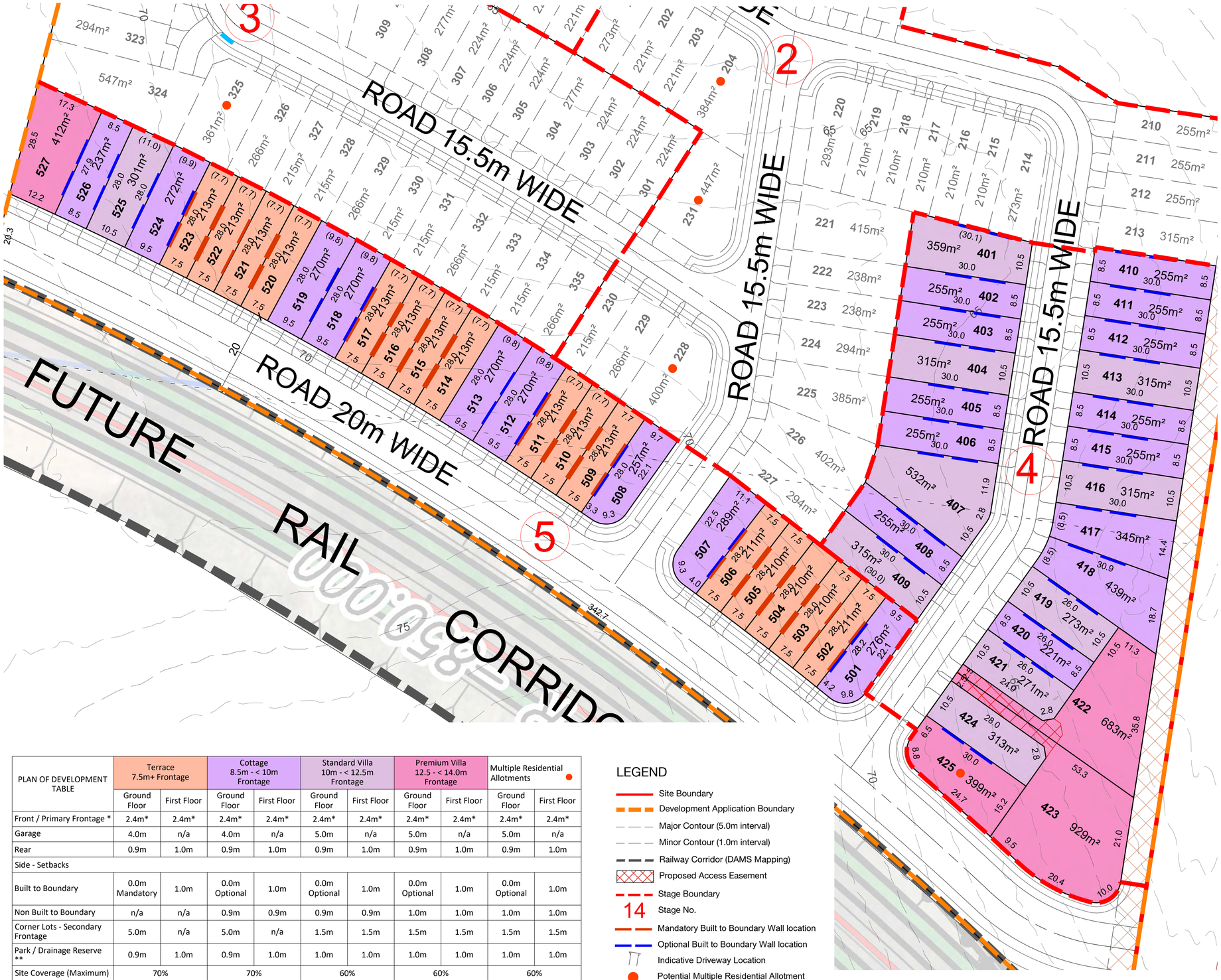
RP DESCRIPTION
LOTS 359 & 360 on S3173

DRAWN
KA

DATE
01/09/2026

DRAWING NO.
13059 P 09 Rev J - POD 2 & 3

PLAN OF DEVELOPMENT - STAGE 4 & 5



PLAN OF DEVELOPMENT TABLE	Terrace 7.5m+ Frontage		Cottage 8.5m - < 10m Frontage		Standard Villa 10m - < 12.5m Frontage		Premium Villa 12.5 - < 14.0m Frontage		Multiple Residential Allotments ●	
	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor
Front / Primary Frontage *	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*	2.4m*
Garage	4.0m	n/a	4.0m	n/a	5.0m	n/a	5.0m	n/a	5.0m	n/a
Rear	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m	0.9m	1.0m
Side - Setbacks										
Built to Boundary	0.0m Mandatory	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m	0.0m Optional	1.0m
Non Built to Boundary	n/a	n/a	0.9m	0.9m	0.9m	0.9m	1.0m	1.0m	1.0m	1.0m
Corner Lots - Secondary Frontage	5.0m	n/a	5.0m	n/a	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m
Park / Drainage Reserve **	0.9m	1.0m	0.9m	1.0m	1.0m	1.0m	1.0m	1.0m	1.0m	1.0m
Site Coverage (Maximum)	70%		70%		60%		60%		60%	

* 2.4m setback permitted to enclosed entry features such as porches, porticos, verandas and balconies
** 0m setback permitted to enclosed verandas and balconies

LEGEND

- Site Boundary
- Development Application Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Railway Corridor (DAMS Mapping)
- Proposed Access Easement
- Stage Boundary
- 14 Stage No.
- Mandatory Built to Boundary Wall location
- Optional Built to Boundary Wall location
- Indicative Driveway Location
- Potential Multiple Residential Allotment (maximum 2 dwellings)

NOTES:

General

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16. For lots without rear lane access:
    - Double garages are not permitted on any lot less than 10m wide
    - Double garages may be permitted on lots 10m or greater in width and less than 12.5m wide where the dwelling is more than one storey in height and the garage is setback at least 1.0m behind the main face (excluding balconies) of the dwelling and the garage doors are articulated, comprise a mix of materials and colours, or are staggered.
    - Double garages may be permitted on single storey dwellings on lots 10m or greater in width and less than 12.5m wide where all of the following requirements are achieved:
        a. the garage door does not exceed 4.8m in width and does not exceed 40% of the front façade elevation;
        b. at least one habitable room fronts the public street and projects a minimum of 1.0m forward of the garage;
        c. the garage is setback a minimum of 240mm behind the pillar or wall framing the garage door opening;
        d. the dwelling incorporates a minimum 450mm eave overhang to the primary street frontage;
        e. the front façade incorporates a clearly identifiable pedestrian entry with glazing within the front door or adjoining sidelight;
        f. the front façade incorporates large or multiple habitable room windows addressing the street;
        g. the front façade incorporates a minimum of three complementary materials and/or colours, including the garage door;
        h. garage doors comprise sectional, tilt-panel or similarly articulated doors and are visually integrated into the overall dwelling design.

On-Site Parking and Driveways

17. Off street car park is to be provided in accordance with the following minimum requirements:
    - One room or one bedroom or two bedroom house/dwelling unit - 1 covered space per dwelling.
    - Three or more bedroom house/dwelling unit - 2 spaces per dwelling, one of which must be capable of being covered (may be provided in tandem).
18. The maximum width of a driveway at the lot boundary shall be 4.0 metres for a lot, except where a reduced width of 2.5 metres is specified to enable street parking.
19. Garages are to be located along the Built to Boundary wall. Where no Built to Boundary wall is proposed, garages are to be located on the low side of the lot. Where the lot has no low side, garages are to be located on the western or southern side of the lot.
20. Maximum of one driveway per dwelling unless it is a corner lot where the minimum distance required in note 21 can be achieved and no retaining walls are present.
21. Minimum distance of a driveway from an intersection of one street with another street is 6.0 meters.

Private Open Space

22. Private open space is to be provided in accordance with the following requirements:
    - Two bedroom house/dwelling unit – minimum 9m² with a minimum dimension of 2.4m;
    - Three of more bedroom house/dwelling – minimum 12m² with a minimum dimension 2.4m
23. Private open space must be in accordance with the following requirements:
    - Accessible from a living room; and
    - Adequate space to accommodate a table, chair, planting, barbeque and shade; and
    - Maximum gradient not exceeding 1:10.

Street Address

24. Letterboxes must be clearly visible and identifiable from street.
25. Pedestrian access and letterboxes are required for all primary frontages.
26. Buildings must address each street, pathway or park frontage through the inclusion of window openings / glazing in doors and one or more of the following design elements in the related facade:
    - Verandahs; and/or
    - Porches; and/or
    - Awning and shade structures; and/or
    - Variation to roof and building lines; and/or
    - Use of varying building materials.
27. All buildings with a width of more than 10 metres that are visible from a street or a park must be articulated to reduce the mass of the building by one or more of the following:
    - Windows recessed into the façade; and/or
    - Balconies, porches or verandah; and/or
    - Window Hoods/Screens; and/or
    - Shadow lines are created on the building through minor changes in the façade (100 millimetres minimum).
28. Carports and garages are to be compatible with the main building design in terms of height, roof form, detailing, materials and colours.

Fencing

29. Fencing, screening or level changes to provide privacy but still allow for overlooking of the street and park to promote casual surveillance.
30. Fencing on all primary frontages has a maximum height of 1.2 metres where solid or has a maximum height of 1.8 metres where containing openings that make the fence at least 50% transparent. Fencing on all secondary frontages has a maximum height of 1.8 where containing openings that make the fence at least 25% transparent.
31. Fences on pedestrian linkages are to have a maximum height of 1.2m where solid or have a maximum height of 1.8m where containing openings that make the fence more than 50% transparent.

Bushfire Management

32. Lots may be subject to bushfire hazard requiring compliance with a relevant Australian Standard – Please refer to the Bushfire Management Plan prepared by Queensland Bushfire Planning

Additional Criteria for Secondary Dwellings

33. Design criteria for Secondary Dwellings is as per Schedule 3 of the Ripley Valley Development Scheme.

Additional Criteria for Lots Adjoining Public Open Space

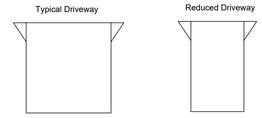
34. Lots with a common boundary with public open space (being park, drainage or reserve) provide for passive surveillance/overlooking of the open space by inclusion of two of the following design elements:
    - Habitable room windows facing the open space; or
    - For double storey dwellings, balconies overlooking the open space; or
    - For single storey dwellings, 1.2 metre high fencing with a minimum of 50% transparency along the common boundary with the open space; or
    - Aluminium pool fencing to the common boundary with the open space.

Additional Criteria for Multiple Residential Allotments

35. Must comply with Multiple Residential Allotment setbacks.
36. Buildings must address all street frontages with driveways, pedestrian entries or both.
37. All dwellings must have a clearly identifiable front door, which is undercover.
38. Bin storage and clothes drying areas must be located behind a fence and not be visible from any street frontage.
39. All designs must positively address the street through inclusion of at least three of the following design elements:
    - Verandah, porch or portico;
    - Awning and shade structures;
    - Variation to roof and building lines;
    - Inclusion of window openings; or
    - Use of varying building materials and treatments
40. A minimum of two on-site car parking spaces must be provided for each dwelling, one of which must be within a garage.
41. Each house / dwelling unit has a clearly defined outdoor living space which:
    - Has an area of at least:
        - 12m² with a minimum dimension of 2.4m for a 3 or more bedroom house / dwelling unit;
        - 9m² with a minimum dimension of 2.4m for a 2 room or 1 bedroom house / dwelling unit; or
        - 5m² with a minimum dimension of 1.2m for a 1 room or 1 bedroom house / dwelling unit.
    - Is accessible from a living area;
    - Has a ground slope of not more than 1 in 10; and
    - Provides visual privacy from outdoor living spaces on adjacent lots.

    Or communal open space is provided which:
    - Has an area of at least 25% of the area of the lot; and
    - Is of a shape which can include a circle with a 4.0m diameter.
42. Fencing along primary and secondary street frontages (where it adjoins private open space) must be a minimum 1.5m high solid screen fencing and may extend up to a maximum of 1.8m where the upper 0.3m is 50% transparent.
    - Fence must be painted in a colour that compliments the dwelling.

DRIVEWAY



SCALE @A1 1:1000 @A3 1:2000 - LENGTHS ARE IN METRES

10 0 10 20 30 40 50 60 70 80 90 100 110 120

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BOWEN HILLS | SPRINGFIELD
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SUBJECT BOUNDARIES: Vide DWG 7553-0002-A Potholing Survey by SURVEY MARK dated 22/07/2026
CONTOURS: ELVIS - LIDAR (2023)

N

CLIENT	KDL PROPERTY GROUP PTY LTD
SITE ADDRESS	1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY
RP DESCRIPTION	LOTS 359 & 360 on S3173
DRAWN	KA
DATE	01/09/2026
DRAWING NO.	13059 P 09 Rev J - POD 4 & 5

Appendix B – Concept Civil Engineering Drawings

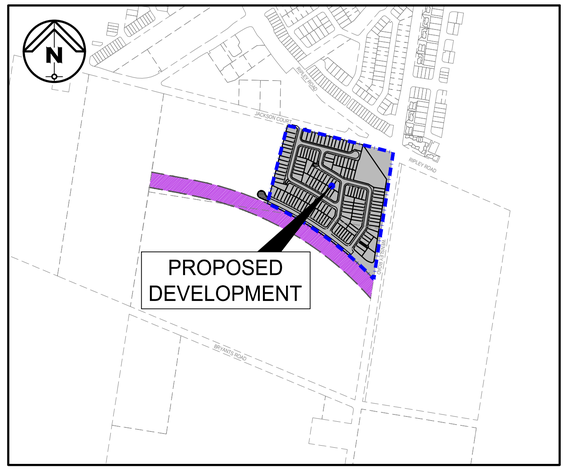
PROPOSED RESIDENTIAL DEVELOPMENT

AT BRYANTS ROAD

RIPLEY, QUEENSLAND

ROADWORKS & CIVIL SERVICES
DEVELOPMENT APPLICATION
CONTRACT BE260182-DA1

DRAWING INDEX	
DRG No.	DESCRIPTION
C1000	COVER SHEET, LOCALITY PLAN, DRAWING INDEX & NOTES
C1001	OVERALL SITE LAYOUT PLAN
C1002	ROAD HIERARCHY PLAN
C1101	TYPICAL SECTIONS
C2001	BULK EARTHWORKS OVERALL LAYOUT PLAN
C2201	BULK EARTHWORKS LAYOUT PLAN (SHEET 1 OF 2)
C2202	BULK EARTHWORKS LAYOUT PLAN (SHEET 2 OF 2)
C2301	BULK EARTHWORKS SECTIONS (SHEET 1 OF 2)
C2302	BULK EARTHWORKS SECTIONS (SHEET 2 OF 2)
C2401	BULK EARTHWORKS TYPICAL DETAILS
C3201	ROAD 1 LONGITUDINAL SECTION
C3202	ROAD 2 LONGITUDINAL SECTION
C3203	ROAD 3 LONGITUDINAL SECTION
C3204	ROAD 4 LONGITUDINAL SECTION
C3205	ROAD 5 LONGITUDINAL SECTION
C5001	CIVIL SERVICES OVERALL LAYOUT PLAN
C5101	CIVIL SERVICES LAYOUT PLAN (SHEET 1 OF 2)
C5102	CIVIL SERVICES LAYOUT PLAN (SHEET 2 OF 2)
C5201	BASIN 1 LAYOUT PLAN



LOCALITY PLAN

N.T.S.

PREPARED FOR

KDL PROPERTY GROUP

PREPARED BY

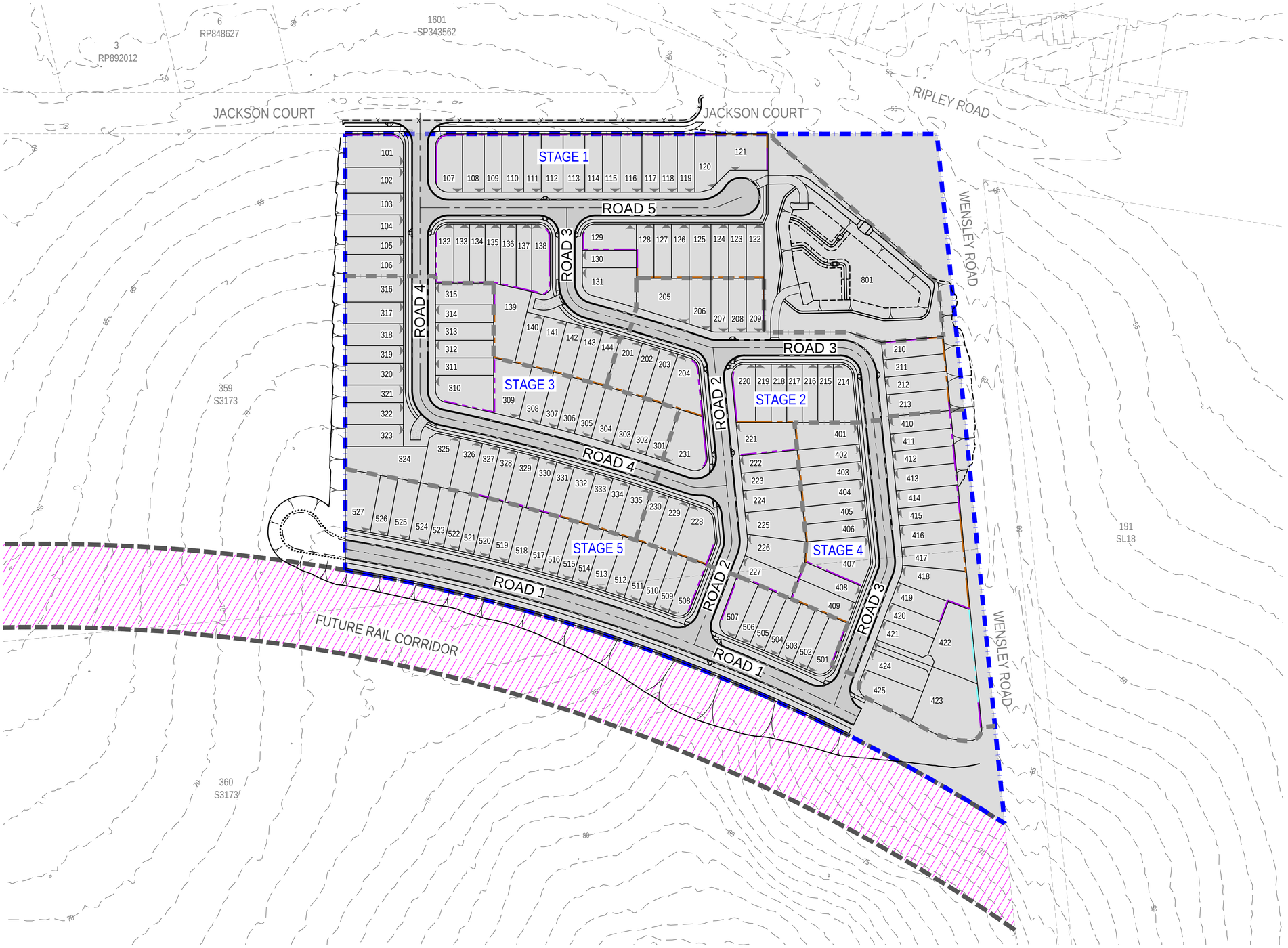
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ABN 76 166 942 365

PROJECT No.:	DRAWING No. :	VERSION:	DATE :
BE260182-DA1	C1000	A	11-09-26

LEGEND

- EXISTING SURFACE CONTOURS
- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- PROPOSED SINGLE TIER RETAINING WALL 0.6 - 1.5m
- PROPOSED SINGLE TIER RETAINING WALL 1.5 - 3.0m
- PROPOSED DOUBLE TIER RETAINING WALL 1.5-3.0m
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY
- DEVELOPMENT APPLICATION AREA
- RAILWAY CORRIDOR



OVERALL SITE LAYOUT PLAN

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CLIENT : KDL PROPERTY GROUP

DRAWING TITLE : OVERALL SITE LAYOUT PLAN

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

PRELIMINARY
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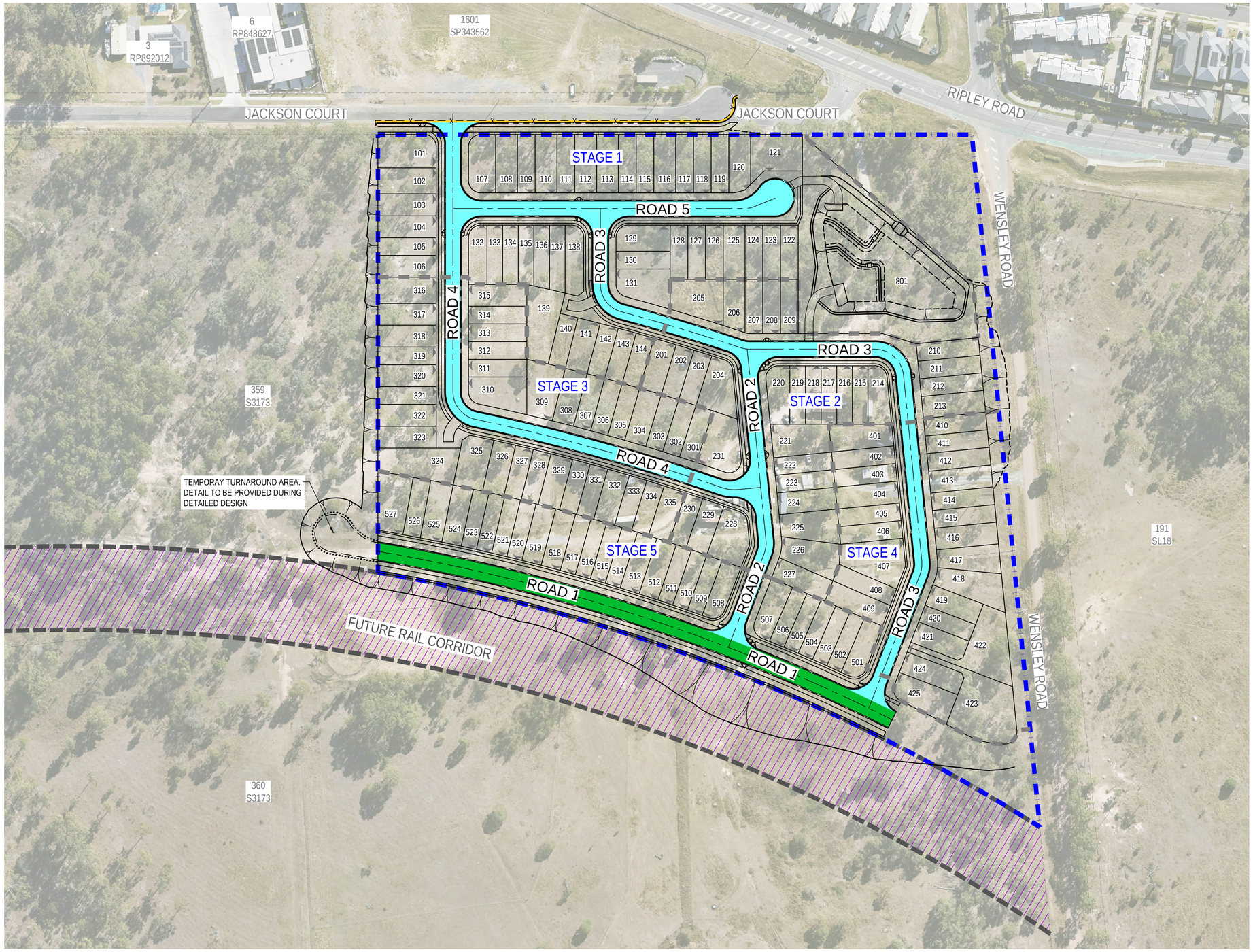
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PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

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PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C1001	A

LEGEND

- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY
- FUTURE RAIL CORRIDOR
- PROPOSED MAJOR COLLECTOR STREET (20.0m)
- PROPOSED MODIFIED COLLECTOR STREET (~20.0m)
- PROPOSED NEIGHBOURHOOD ACCESS STREET (15.5m)



ROAD HIERARCHY PLAN

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DRAWING TITLE : ROAD HIERARCHY PLAN

PROJECT : RESIDENTIAL SUBDIVISION
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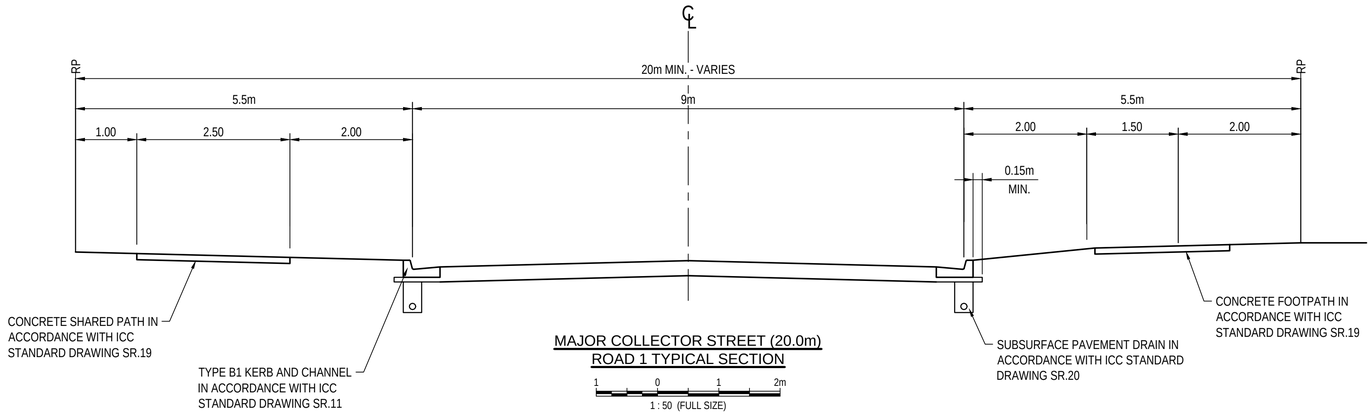
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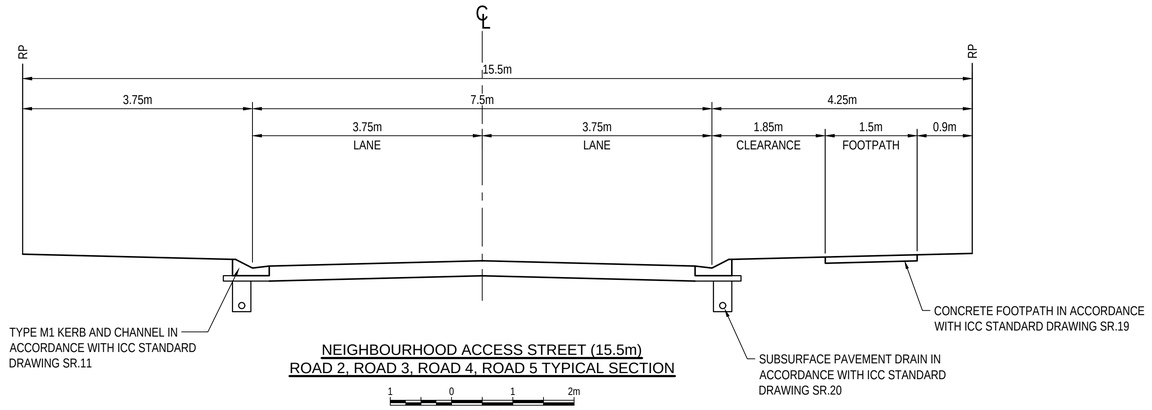
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PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

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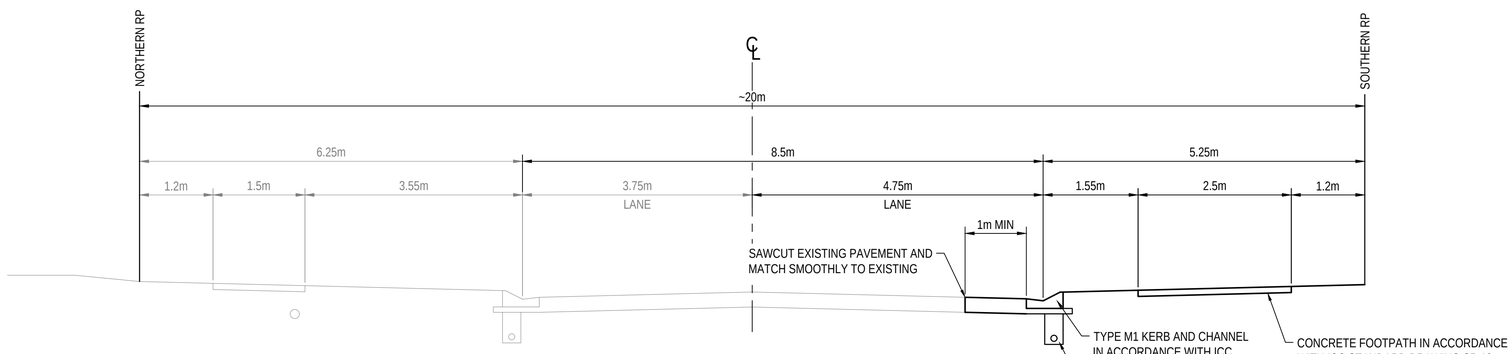
PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C1002	A



MAJOR COLLECTOR STREET (20.0m)
ROAD 1 TYPICAL SECTION



NEIGHBOURHOOD ACCESS STREET (15.5m)
ROAD 2, ROAD 3, ROAD 4, ROAD 5 TYPICAL SECTION



MODIFIED COLLECTOR STREET (20.0m)
JACKSON COURT
TYPICAL SECTION

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DRAWING TITLE : TYPICAL SECTIONS

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

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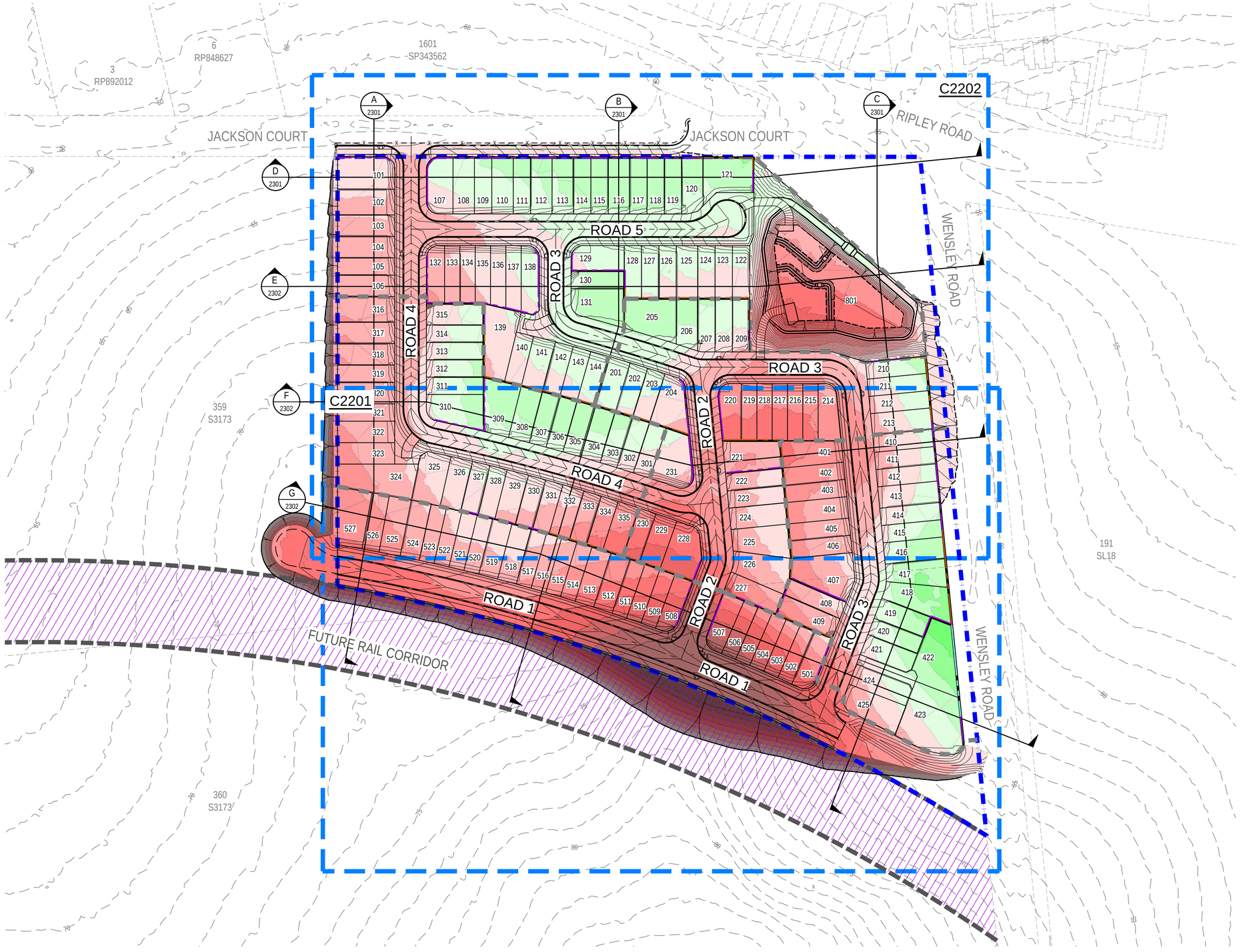
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PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
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PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C1101	A

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- DESIGN SURFACE CONTOURS
- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- PROPOSED SINGLE TIER RETAINING WALL 0.6 - 1.5m
- PROPOSED SINGLE TIER RETAINING WALL 1.5 - 3.0m
- PROPOSED DOUBLE TIER RETAINING WALL 1.5-3.0m
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY



EARTHWORKS DEPTH ANALYSIS LEGEND

LOWER		UPPER	COLOUR
-4.0m	TO	-3.5m	
-3.5m	TO	-3.0m	
-3.0m	TO	-2.5m	
-2.5m	TO	-2.0m	
-2.0m	TO	-1.5m	
-1.5m	TO	-1.0m	
-1.0m	TO	-0.5m	
-0.5m	TO	0.0m	
0.0m	TO	0.5m	
0.5m	TO	1.0m	
1.0m	TO	1.5m	
1.5m	TO	2.0m	
2.0m	TO	2.5m	
2.5m	TO	3.0m	
3.0m	TO	3.5m	
3.5m	TO	4.0m	

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ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
BULK EARTHWORKS OVERALL LAYOUT PLAN

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

PRELIMINARY
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SCALE AT FULL SIZE (A1) :
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DEVEL. APPLIC. No. :	DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

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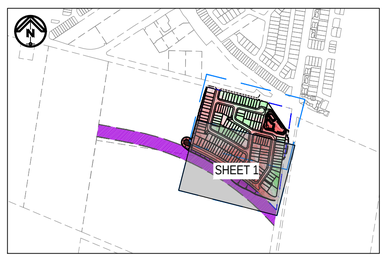
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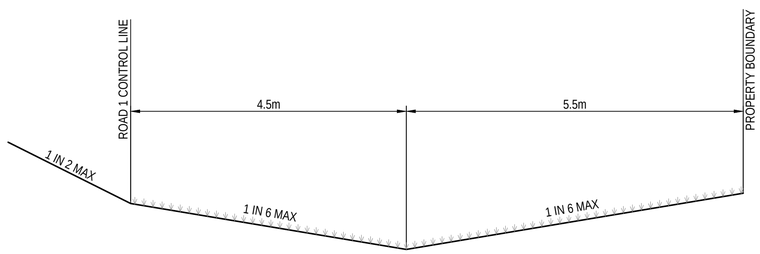
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- EXISTING EASEMENT
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- PROPOSED EARTHWORKS PAD
- PROPOSED SINGLE TIER RETAINING WALL 0.6 - 1.5m
- PROPOSED SINGLE TIER RETAINING WALL 1.5 - 3.0m
- PROPOSED DOUBLE TIER RETAINING WALL 1.5-3.0m
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY
- 69.00 PREFERRED BENCH LEVEL

EARTHWORKS DEPTH ANALYSIS LEGEND

LOWER		UPPER	COLOUR
-10.0m	TO	-3.5m	
-3.5m	TO	-3.0m	
-3.0m	TO	-2.5m	
-2.5m	TO	-2.0m	
-2.0m	TO	-1.5m	
-1.5m	TO	-1.0m	
-1.0m	TO	-0.5m	
-0.5m	TO	0.0m	
0.0m	TO	0.5m	
0.5m	TO	1.0m	
1.0m	TO	1.5m	
1.5m	TO	2.0m	
2.0m	TO	2.5m	
2.5m	TO	3.0m	
3.0m	TO	3.5m	
3.5m	TO	4.0m	



KEY PLAN
SCALE NTS



TYPICAL DIVERSION SWALE
SCALE 1:50

ROAD 1
ROAD 2
ROAD 3
ROAD 4
FUTURE RAIL CORRIDOR
WENSLEY ROAD

PROVIDE DIVERSION SWALE TO ENSURE EXTERNAL FLOWS ARE SAFELY CONVEYED TO WENSLEY ROAD. REFER DETAIL ON THIS PAGE

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VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	11-09-26

BURCHILLS ENGINEERING SOLUTIONS
GOLD COAST | BRISBANE | TOOWOOMBA
IPSWICH | MORETON BAY
PHONE: +61 7 5509 6400
FAX: +61 7 5509 6411
EMAIL: ADMIN@BURCHILLS.COM.AU
COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
BULK EARTHWORKS LAYOUT PLAN
SHEET 1 OF 2

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

SCALE AT FULL SIZE (A1) :
5 0 5 10 15 20 25m
1 : 500 (FULL SIZE)

DEVEL. APPLIC. No. :	DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

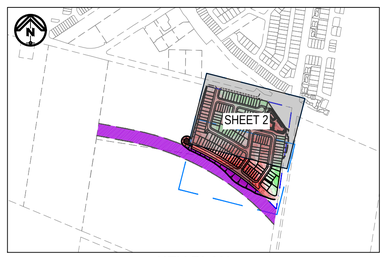
PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C2201	A

LEGEND

- EXISTING SURFACE CONTOURS
- DESIGN SURFACE CONTOURS
- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- PROPOSED EARTHWORKS PAD
- PROPOSED SINGLE TIER RETAINING WALL 0.6 - 1.5m
- PROPOSED SINGLE TIER RETAINING WALL 1.5 - 3.0m
- PROPOSED DOUBLE TIER RETAINING WALL 1.5-3.0m
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY
- 69.00 PREFERRED BENCH LEVEL
- PROPOSED PAVEMENT SAWCUT

EARTHWORKS DEPTH ANALYSIS LEGEND

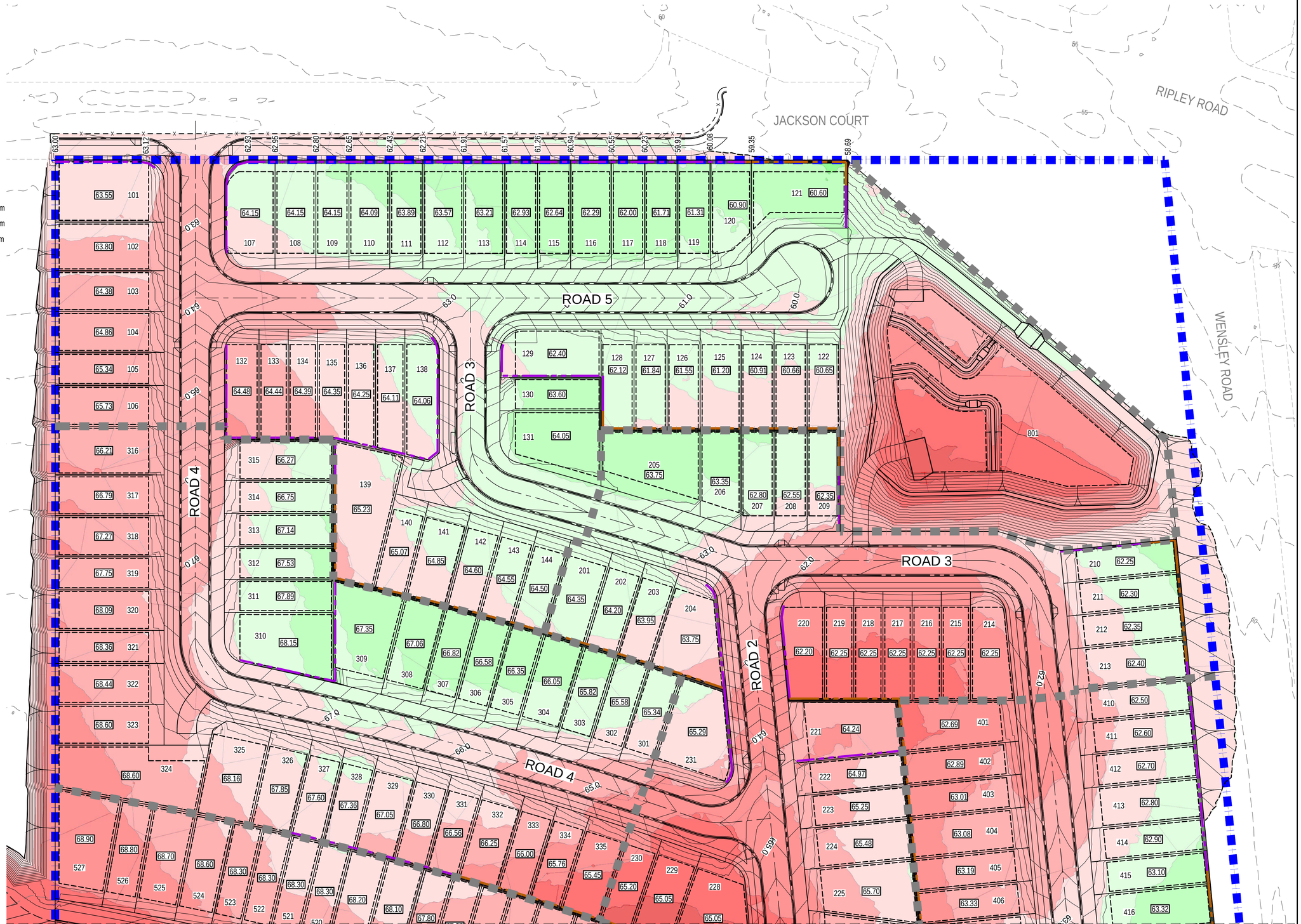
LOWER		UPPER	COLOUR
-4.0m	TO	-3.5m	
-3.5m	TO	-3.0m	
-3.0m	TO	-2.5m	
-2.5m	TO	-2.0m	
-2.0m	TO	-1.5m	
-1.5m	TO	-1.0m	
-1.0m	TO	-0.5m	
-0.5m	TO	0.0m	
0.0m	TO	0.5m	
0.5m	TO	1.0m	
1.0m	TO	1.5m	
1.5m	TO	2.0m	
2.0m	TO	2.5m	
2.5m	TO	3.0m	
3.0m	TO	3.5m	
3.5m	TO	4.0m	



KEY PLAN
SCALE NTS

NOTE:
ALL DESIGN/SETOUT INFORMATION SHOWN ON THIS DRAWING IS AVAILABLE IN DIGITAL FORMAT FROM THE OFFICE OF THE SUPERINTENDENT UPON REQUEST BY THE CONTRACTOR.

WARNING: UNDERGROUND SERVICES:
UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.



FOR CONTINUATION REFER DRG. C2002

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A	ORIGINAL ISSUE	11-09-26

BURCHILLS ENGINEERING SOLUTIONS
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FAX: +61 7 5509 6411
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COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
BULK EARTHWORKS LAYOUT PLAN
SHEET 2 OF 2

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

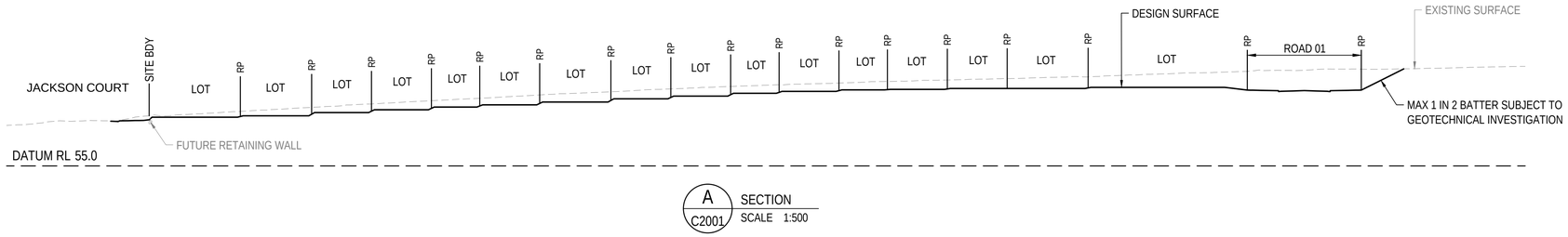
PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

SCALE AT FULL SIZE (A1) :
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1 : 500 (FULL SIZE)

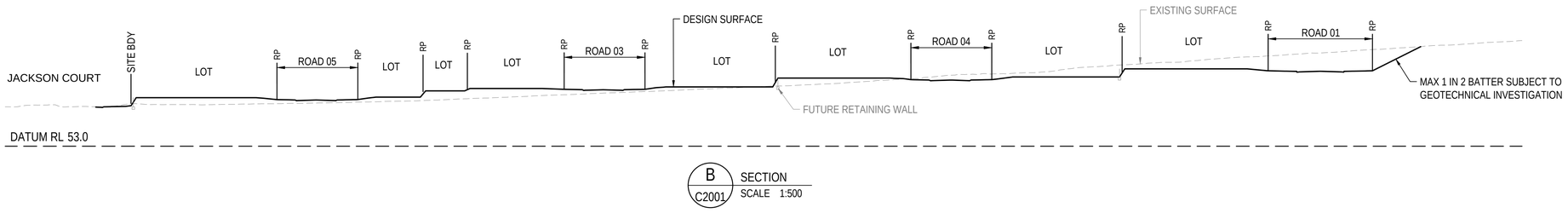
DEVEL. APPLIC. No. :	DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

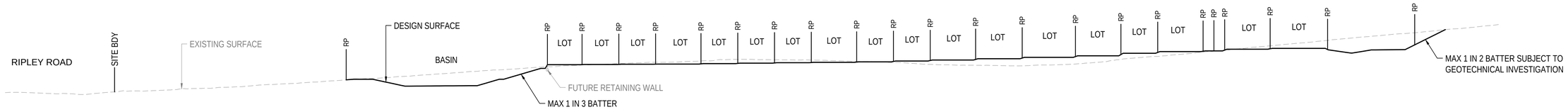
PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C2202	A



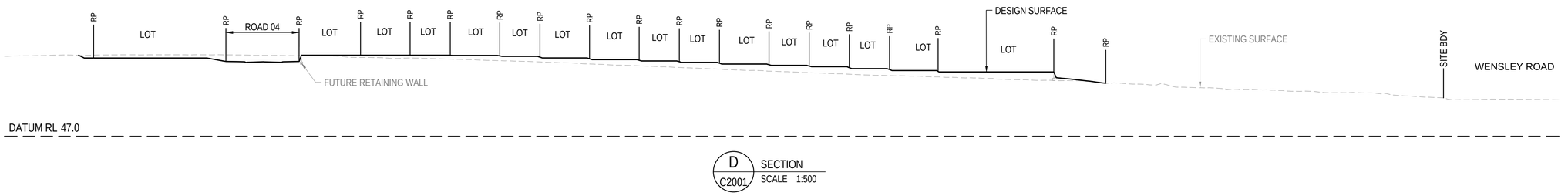
A C2001 SECTION
SCALE 1:500



B C2001 SECTION
SCALE 1:500



C C2001 SECTION
SCALE 1:500



D C2001 SECTION
SCALE 1:500

EARTHWORKS SECTIONS

SCALE 5 0 5 10 15 20 25 (metres)
1 : 500 (FULL SIZE)

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ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
BULK EARTHWORKS SECTIONS
SHEET 1 OF 2

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

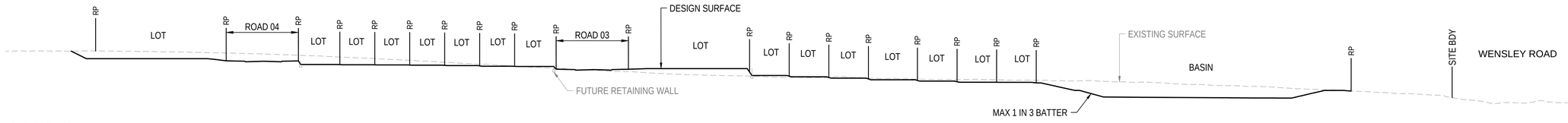
PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

SCALE AT FULL SIZE (A1) :
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1 : 500 (FULL SIZE)

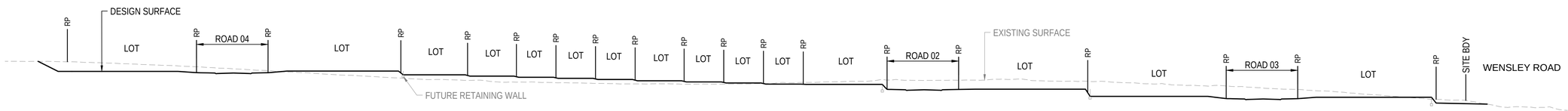
DEVEL. APPLIC. No. :		DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS	
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO	

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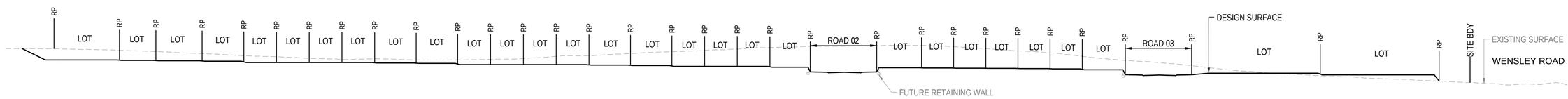
PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C2301	A



E C2001 SECTION
SCALE 1:500



F C2001 SECTION
SCALE 1:500



G C2001 SECTION
SCALE 1:500

EARTHWORKS SECTIONS

SCALE 5 0 5 10 15 20 25 (metres)
1 : 500 (FULL SIZE)

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COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
BULK EARTHWORKS SECTIONS
SHEET 2 OF 2

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

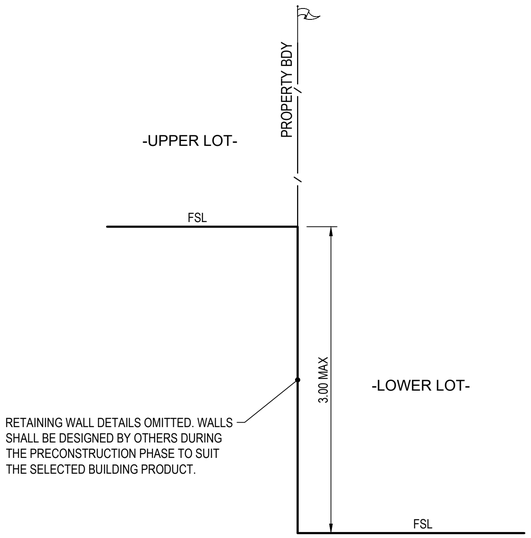
PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

SCALE AT FULL SIZE (A1) :
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1 : 1000 (FULL SIZE)

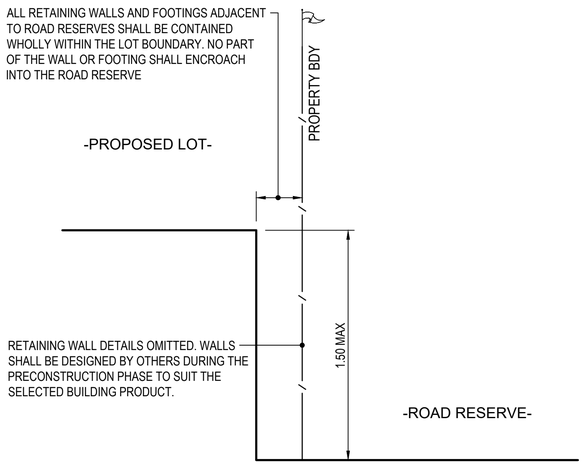
DEVEL. APPLIC. No. :	DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

APPROVED FOR AND ON BEHALF OF
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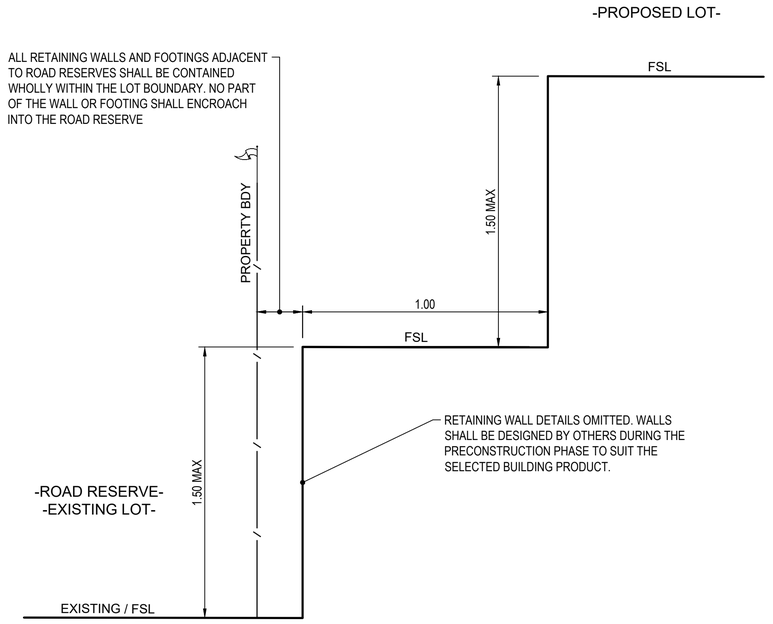
PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C2302	A



TYPICAL RETAINING WALL
REAR OF PROPOSED LOTS
N.T.S.



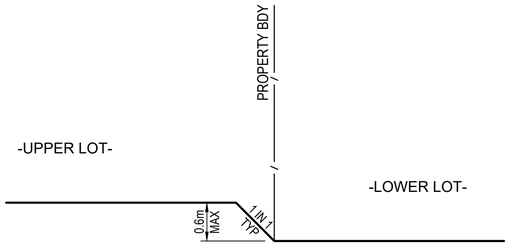
TYPICAL RETAINING WALL
SIDE OF PROPOSED LOTS AND ROAD RESERVE
N.T.S.



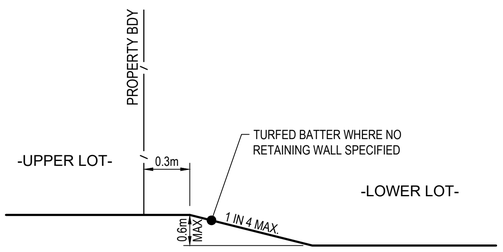
RETAINING WALL CONFIGURATION - 2 TIER
BETWEEN LOT & EXISTING LOT/ROAD RESERVE

RETAINING WALL NOTES:

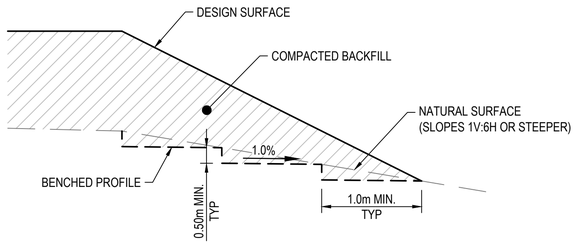
1. RETAINING WALLS, FOOTINGS, DRAINAGE, BACKFILL AND CONNECTION OF AGGREGATE DRAINS TO STORMWATER DRAINAGE SYSTEM TO BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR AND CERTIFIED BY AN SUITABLY QUALIFIED RPEQ.
2. THESE DRAWINGS IDENTIFY SURFACE PROFILES, RETAINING WALL LOCATIONS, AND SETOUT INFORMATION ONLY. REFER TO CONTRACTOR SUPPLIED DRAWINGS FOR RPEQ STRUCTURAL DETAILS, WALL MATERIALS AND COMPACTION SPECIFICATIONS AND CONSTRUCTIBILITY INFORMATION.
3. RETAINING WALL DESIGN ENGINEER TO PROVIDE RPEQ FORM 15 STRUCTURAL CERTIFICATE INCLUDING GEOTECHNICAL GLOBAL STABILITY CERTIFICATION BY GEOTECHNICAL ENGINEER. WALL DESIGN TO ASSUME SURCHARGE LOADING BEHIND WALL. DESIGN TO BE IN ACCORDANCE WITH AS4678 INCLUDING ALL REQUIRED DESIGN LOAD CASES AND COMBINATIONS.
4. RETAINING WALLS TO BE DESIGNED TO CONSIDER ALL LOADS INCLUDING CONSTRUCTION LOADS AND OPERATIONAL LOADS.
5. ANY GEOTECHINCAL INFORMATION PROVIDED BY THE PRINCIPAL OR THE SUPERINTENDENT SHALL BE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR AND THE RETAINING WALL DESIGN ENGINEER SHOULD SATISFY THEMSELVES OF THE DESIGN SOIL PARAMETERS AND UNDERTAKE AND ADDITIONAL GEOTECHNICAL INVESTIGATION DEEMED NECESSARY BY THE DESIGN ENGINEER.
6. THE CONTRACTOR SHALL ENSURE THAT ANY CONFLICT BETWEEN THESE PROJECT DRAWINGS AND THE RETAINING WALL DRAWINGS PREPARED BY THE RETAINING WALL DESIGN ENGINEER IS RESOLVED WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCING.
7. A COPY OF THE RETAINING WALL DESIGN DRAWINGS, INCLUDING CONNECTION OF AGGREGATE DRAINS TO THE STORMWATER DRAINAGE SYSTEM, DESIGN PARAMETERS AND CERTIFICATION BE PROVIDED TO THE SUPERINTENDENT AT THE PRE-START MEETING PRIOR TO CONSTRUCTION COMMENCING.
8. ANY RETAINING WALL AND BATTER EXCEEDING THE HEIGHT OF 1.5m, THE CONTRACTOR SHALL UNDERTAKE A THIRD PARTY RPEQ REVIEW OF THE PROPOSED DESIGN.
9. RETAINING WALLS AND DIMENSIONS SHOWN ON THIS PLAN ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN.



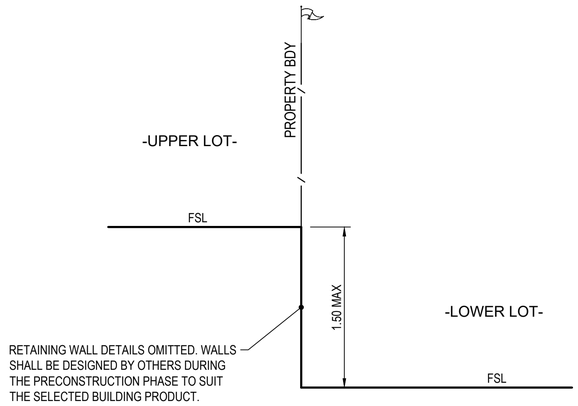
TEMPORARY BATTER
BETWEEN ZERO LOTS DETAIL
N.T.S.



BATTER BETWEEN
NON-ZERO LOTS DETAIL
N.T.S.



TYPICAL FILL ON SLOPES BENCHING DETAIL
N.T.S.



TYPICAL RETAINING WALL
SIDE OF PROPOSED LOTS
N.T.S.

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VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	28-08-26

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COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE : BULK EARTHWORK TYPICAL DETAILS

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

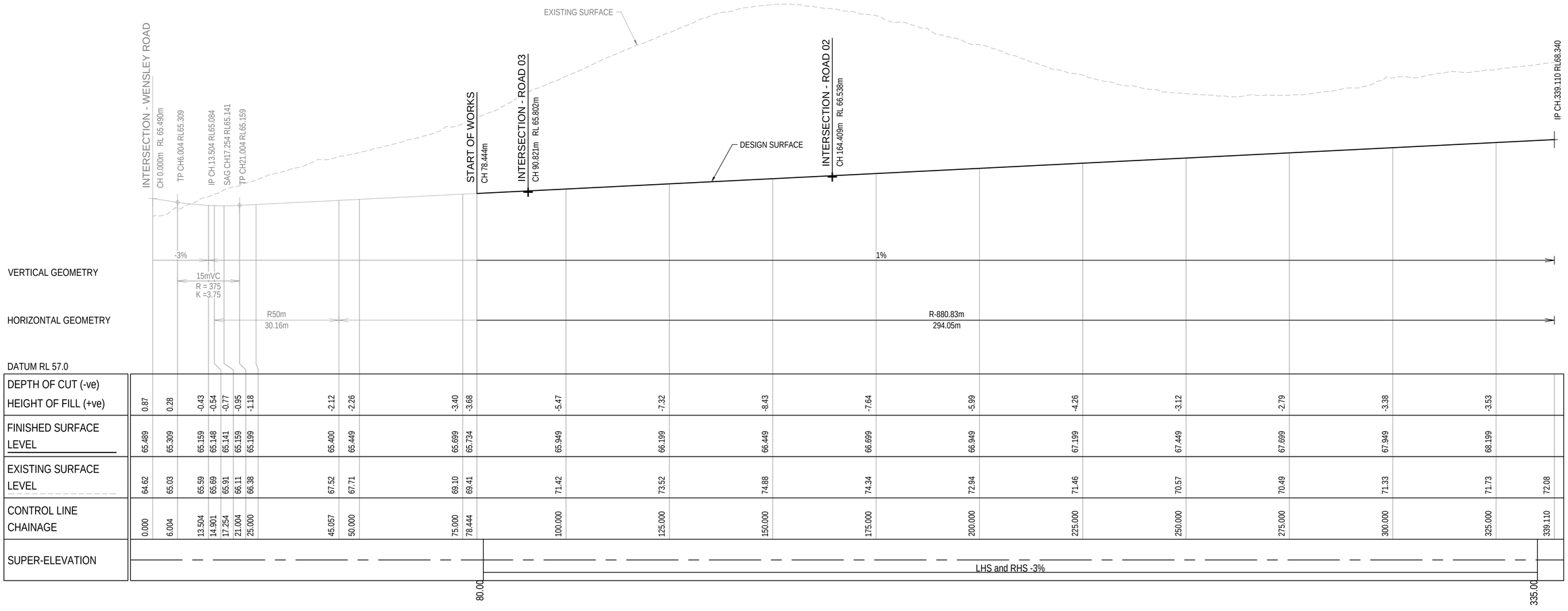
PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

SCALE AT FULL SIZE (A1) :

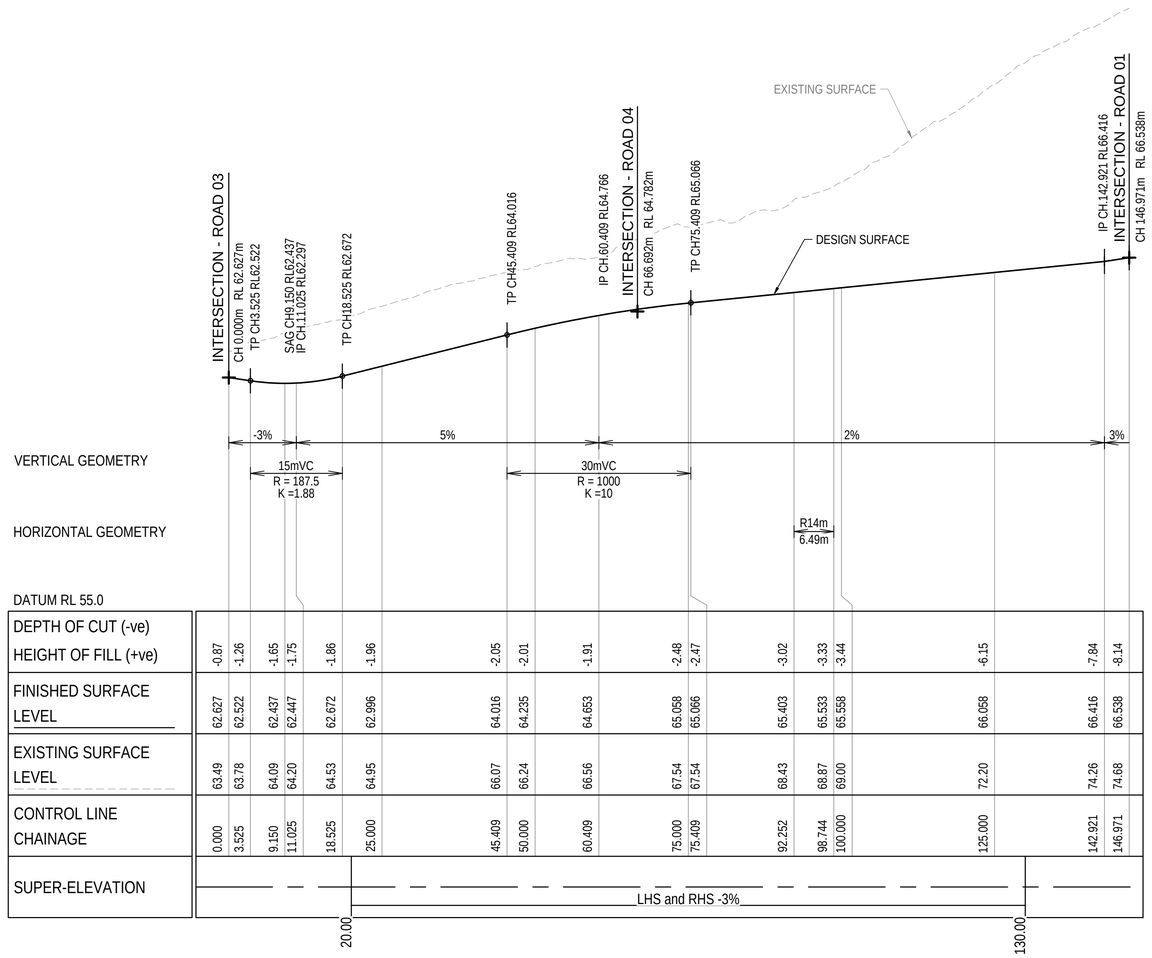
DEVEL. APPLIC. No. :	DATE : 28-08-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C2401	A


EXISTING SURFACE
DESIGN SURFACE
INTERSECTION - WENSLEY ROAD
CH 0.000m RL 65.490m
TP CH6.004 RL65.309
IP CH13.504 RL65.084
SAG CH17.254 RL65.141
TP CH21.004 RL65.159
START OF WORKS
CH 78.444m
INTERSECTION - ROAD 03
CH 90.821m RL 65.802m
INTERSECTION - ROAD 02
CH 164.409m RL 66.538m
IP CH339.110 RL68.340
-3%
1%
15mVC
R = 375
K =3.75
R50m
30.16m
R-880.83m
294.05m
VERTICAL GEOMETRY
HORIZONTAL GEOMETRY
DATUM RL 57.0
LHS and RHS -3%
80.00
335.00

| | | |



LONGITUDINAL SECTION - ROAD 02

Horizontal scale 1:500
Vertical scale 1:100

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EMAIL: ADMIN@BURCHILLS.COM.AU
COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE : ROAD 2 LONGITUDINAL SECTION

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

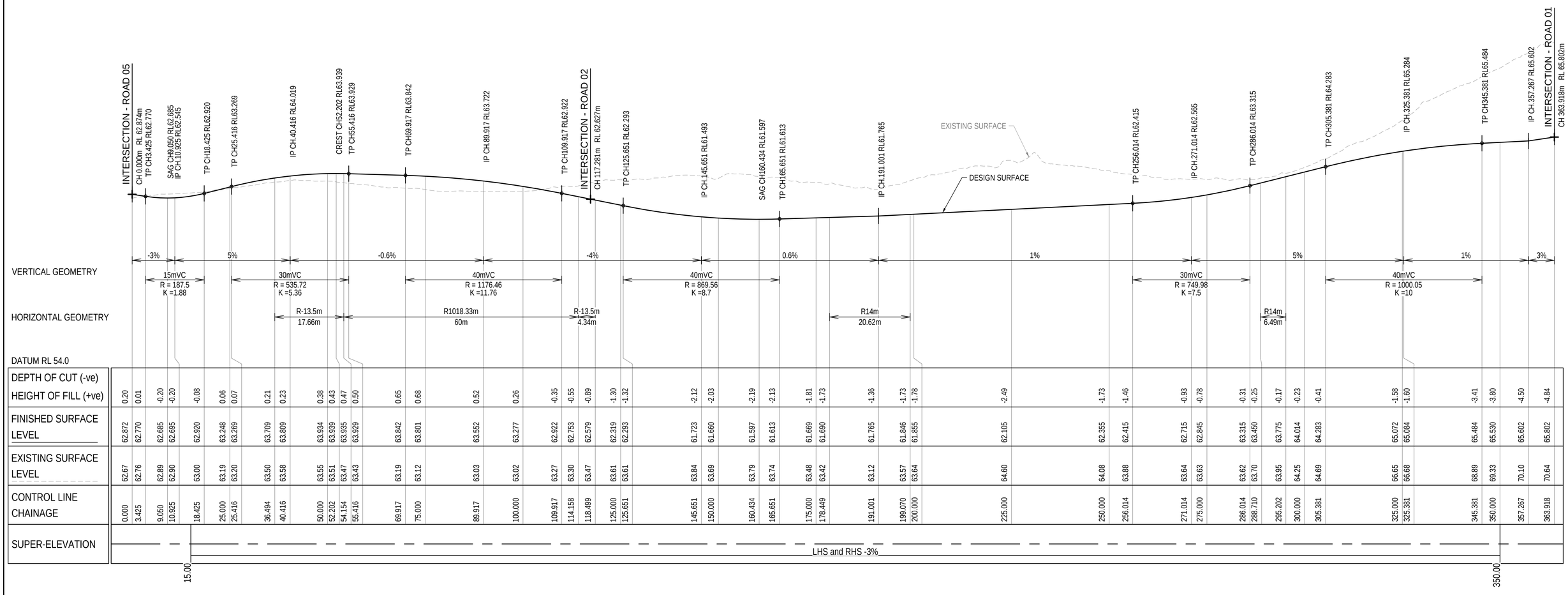
PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

SCALE AT FULL SIZE (A1) :
1 : 100 VERTICAL (FULL SIZE)
1 0 1 2 3 4 5m
5 0 5 10 15 20 25m
1 : 500 HORIZONTAL (FULL SIZE)

DEVEL. APPLIC. No. :	DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C3202	A



LONGITUDINAL SECTION - ROAD 03

Horizontal scale 1:500
Vertical scale 1:100

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COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE : ROAD 3 LONGITUDINAL SECTION

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

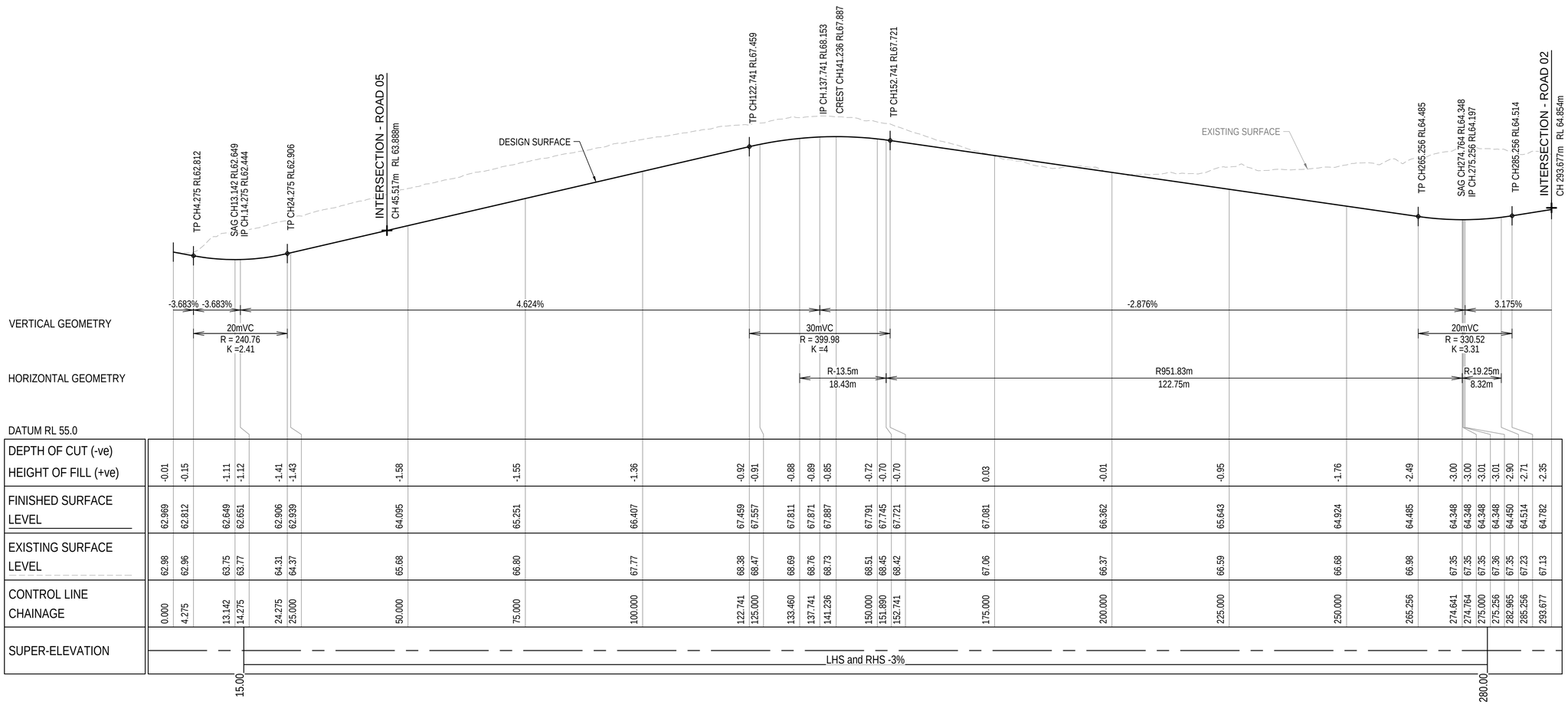
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1 : 500 HORIZONTAL (FULL SIZE)

DEVEL. APPLIC. No. :	DATE : 11-09-26
PROJECT LEADER : J. GARCIA	DESIGNER : J. BURNS
DRAFTSPERSON : J. HUYNH	CHECKED : J.SHAO

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C3203	A



LONGITUDINAL SECTION - ROAD 04

Horizontal scale 1:500
Vertical scale 1:100

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COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE : ROAD 4 LONGITUDINAL SECTION

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

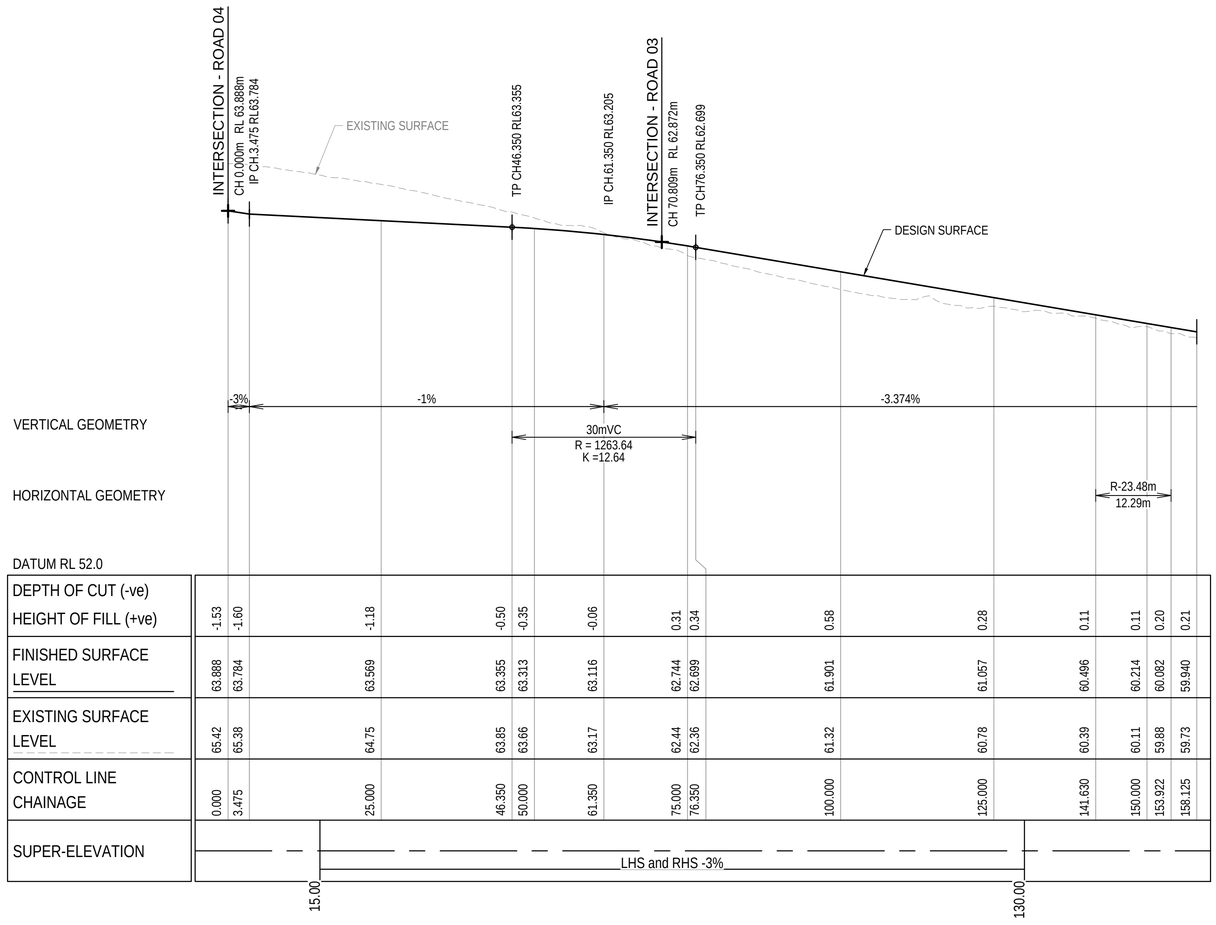
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LONGITUDINAL SECTION - ROAD 05

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Vertical scale 1:100

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ABN 76 166 942 365

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DRAWING TITLE : ROAD 5 LONGITUDINAL SECTION

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

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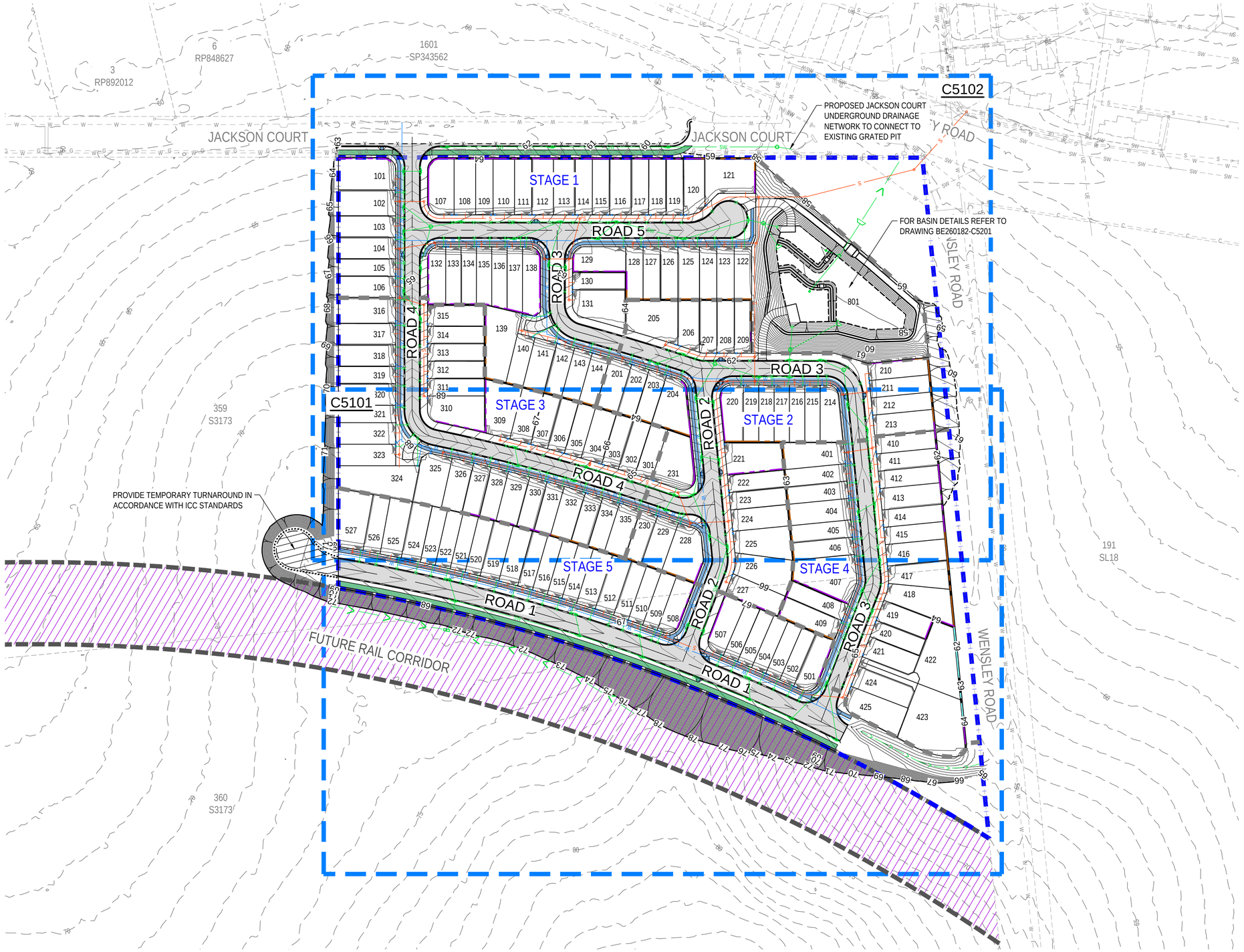
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LEGEND

- EXISTING STORMWATER
- EXISTING WATER
- EXISTING SEWER
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMS
- EXISTING GAS
- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- DESIGN SURFACE CONTOURS
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED STORMWATER
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- PROPOSED SINGLE TIER RETAINING WALL 0.6 - 1.5m
- PROPOSED SINGLE TIER RETAINING WALL 1.5 - 3.0m
- PROPOSED DOUBLE TIER RETAINING WALL 1.5-3.0m
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY
- PROPOSED PAVEMENT ASPHALTIC CONCRETE
- RAILWAY CORRIDOR
- PROPOSED 1.5m FOOTPATH
- PROPOSED 2.5m FOOTPATH
- CONCRETE PAVEMENT
- INDICATIVE FUTURE DRIVEWAY LOCATION
- TEMPORARY TURNAROUND
- BOLLARD



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ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE : CIVIL SERVICES OVERALL LAYOUT PLAN

PROJECT : RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

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SCALE AT FULL SIZE (A1) :
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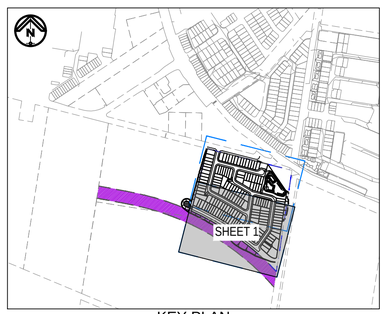
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PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C5001	A

FOR CONTINUATION REFER DRG. C5102

LEGEND

- EXISTING STORMWATER
- EXISTING WATER
- EXISTING SEWER
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMS
- EXISTING GAS
- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- DESIGN SURFACE CONTOURS
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED STORMWATER
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB
- PROPOSED SINGLE TIER RETAINING WALL 0.6 - 1.5m
- PROPOSED SINGLE TIER RETAINING WALL 1.5 - 3.0m
- PROPOSED DOUBLE TIER RETAINING WALL 1.5-3.0m
- DEVELOPMENT APPLICATION BOUNDARY
- STAGING BOUNDARY
- PROPOSED PAVEMENT ASPHALTIC CONCRETE
- RAILWAY CORRIDOR
- PROPOSED 1.5m FOOTPATH
- PROPOSED 2.5m FOOTPATH
- CONCRETE PAVEMENT
- INDICATIVE FUTURE DRIVEWAY LOCATION



KEY PLAN
SCALE NTS

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ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
CIVIL SERVICES LAYOUT PLAN
SHEET 1 OF 2

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

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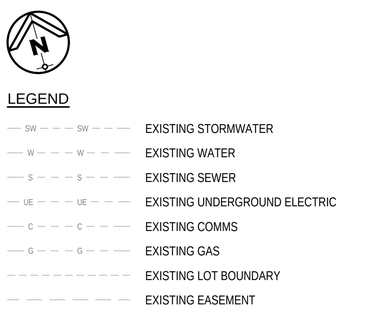
DEVEL. APPLIC. No. :	DATE : 11-09-26
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BE260182-DA1	C5101	A

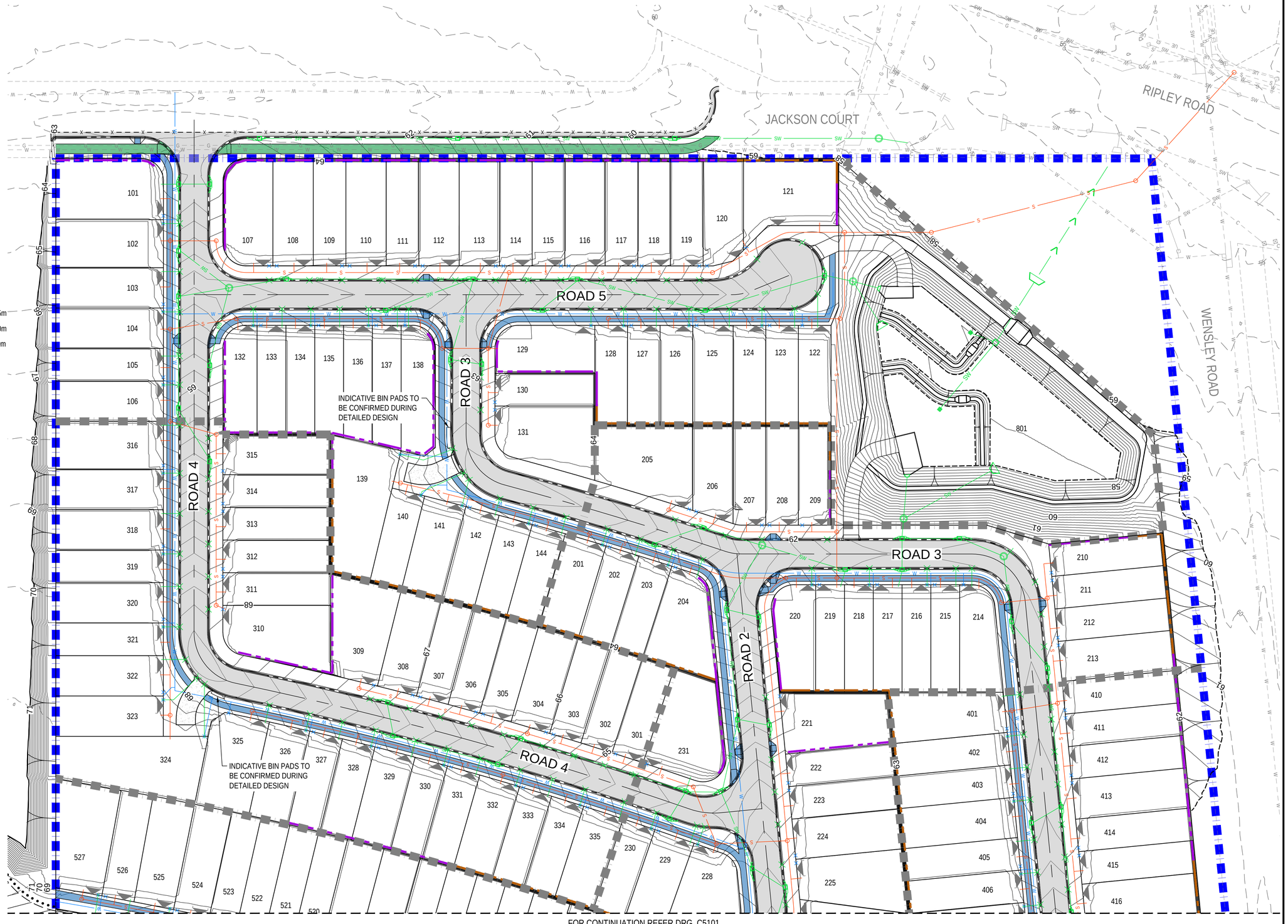
LEGEND

- EXISTING STORMWATER
- EXISTING WATER
- EXISTING SEWER
- EXISTING UNDERGROUND ELECTRIC
- EXISTING COMMS
- EXISTING GAS
- EXISTING LOT BOUNDARY
- EXISTING EASEMENT
- 65 DESIGN SURFACE CONTOURS
- PROPOSED LOT BOUNDARY
- PROPOSED EASEMENT
- PROPOSED STORMWATER
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED ROAD CONTROL LINE
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ABN 76 166 942 365

CLIENT : KDL PROPERTY GROUP

DRAWING TITLE :
CIVIL SERVICES LAYOUT PLAN
SHEET 2 OF 2

PROJECT :
RESIDENTIAL SUBDIVISION
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

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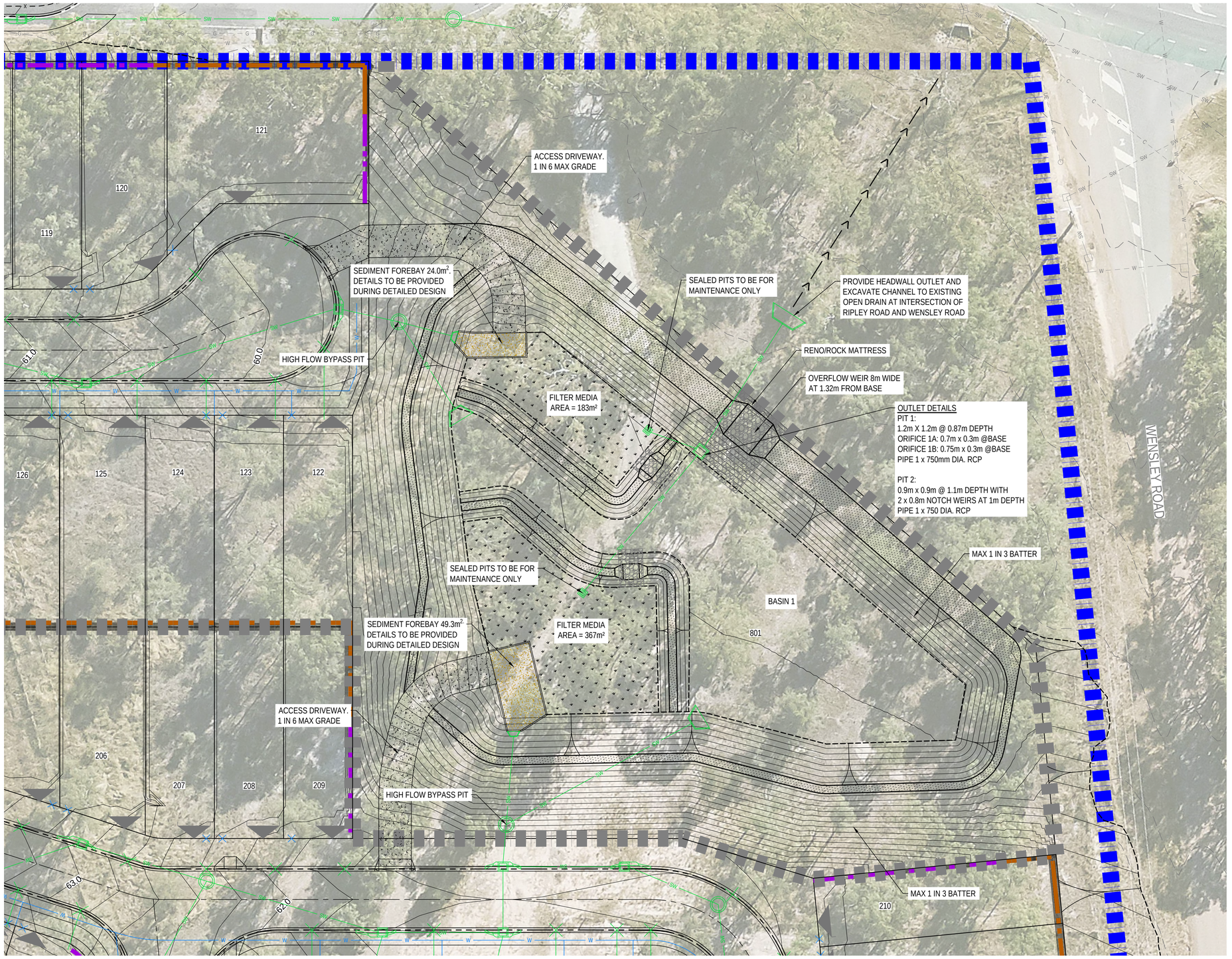
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PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C5102	A

LEGEND

- EXISTING SURFACE CONTOURS
- DESIGN SURFACE CONTOURS
- PROPOSED STORMWATER
- BASIN BATTER TOP / BASIN BATTER TICK / BASIN BATTER BOTTOM
- BASIN ROCK PROTECTION
- BASIN FOREBAY
- BASIN CONCRETE
- TOP OF BUND
- BIO BASIN



BASIN 1 LAYOUT PLAN

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DRAWING TITLE : BASIN 1 LAYOUT PLAN

PROJECT : RESIDENTIAL SUBDIVISION
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1 : 250 (FULL SIZE)

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PROJECT No.:	DRAWING No. :	VERSION:
BE260182-DA1	C5201	A

Appendix C – Urban Utilities Service Advice Notice

24/06/2026

Urban Utilities
GPO Box 2765
BRISBANE QLD 4001
Phone: 07 3432 2200
www.urbanutilities.com.au/development

Mr. Lachlan Putt
Burchills Engineering Solutions
Level 25/215 Adelaide St
Brisbane QLD 4000
Via Email: lachlan.putt@burchills.com.au

Dear Lachlan

Urban Utilities Services Advice Notice

This Urban Utilities Services Advice Notice, applies in accordance with section 99BRAC(3) of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* and has regard to the Water Netserv Plan Connections Policy. This advice is guidance only, is not lawfully binding and does not constitute approval to connect, disconnect or alter Urban Utilities networks. Urban Utilities provides no warranty or assurance that this information is correct. The service network is dynamic and subject to change. Independent site physical investigation are recommended to verify site conditions and the location, condition and size of any existing infrastructure.

Urban Utilities application number:	26-SAN-89563
Applicant name:	Lachlan Putt
Street address:	1 BRYANTS RD, RIPLEY, IPSWICH CITY, QLD 4306
Real Property Description:	Lot 359 on S3173
Services Advice Notice request received:	01/05/2026
Proposed Development:	390 Residential Lots
Service connection/alteration/disconnection proposed:	☒Drinking water ☒Wastewater
Development Demand Type:	☒Reconfiguration of a lot
In a Priority Development Area:	☒Yes (Ripley PDA) - Economic Development Queensland assessment and infrastructure charging framework applies.
Site Details:	☒Subject site – aligns to existing boundary configuration
Urban Utilities Services Advice Notice Contact:	Name: Brett Carruthers Email: Brett.Carruthers@urbanutilities.com.au Telephone: 07 3856 7005 or Developer Services: 07 3432 2200 DevelopmentEnquiries@urbanutilities.com.au.

Infrastructure

Water

Connection Area - the proposed development is:

☒Outside the Water Connection Area and Future Water Connection Area (not a prioritised network investment area/unserviced area) – Urban Utilities does not guarantee a connection. Any infrastructure will be at the full cost of the development.

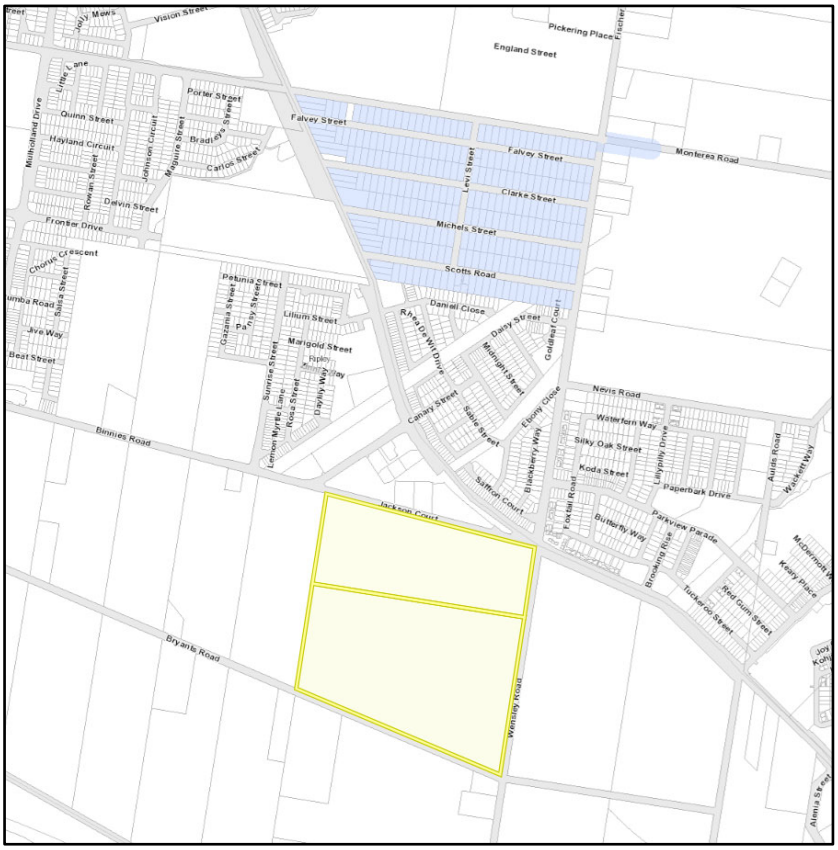


Figure 1: Water Connection Area

Water connection for site:

☒No existing water connection

As per the urban utilities GIS, there are no water connections around the vicinity of the subject site.



Figure 2: Existing infrastructure around the subject site

Dead-end main:
☒Not applicable

Water Connection Reuse:
☒Not applicable

Proposed new Water Connection or Infrastructure:
☒Applicable:

The applicant has not proposed a water servicing strategy to service the proposed development.

The site is surrounded by networks forming part of the Ripley Wensley Rd Res 1 - R084 supply zone.

- Bottom water level (BWL): 102.8 AHD
- Top water level (TWL): 109.8 AHD

According to **Figure 2**, the following water mains are at the vicinity of the proposed development site which can be utilised to service the site:

- 600mm DI Trunk main at southern verge of Jackson Ct.
- 100mm AC main at nortern verge of Jackson Ct.
- 450mm DI Trunk main at Wensley Rd.

- 110mm PE main at Bryants Rd.

The proposed site ranges in elevation between 65m -95m. The Ripley Wensley Rd Res 1 - R084 supply is estimated to enable connection to land with a surface level no greater than 70-75m whilst maintaining the minimum standards of service. Therefore, portions of the site will require service from a higher pressure system.

Current master planning prepared by UU and EDQ outlines the need for trunk water network extensions from the existing Ripley HL R085 located south of the subject site. Figure 3 provides an extract from the current EDQ DCOP infrastructure mapping. Infrastructure intended to form an extension of the existing higher pressure R085 supply zone has been highlighted in Green. DCOP planning is only sufficient to illustrate the strategic intent for service. Ultimately the extension of these systems must be designed to accommodate all areas of development beyond the service limits of the Ripley low level R084 pressure zone.

Urban Utilities have illustrated the general expanse of the future R085 high pressure zone directly north of the HW in figure 4 based on existing contour information which would need to be considered further detailed planning. Main sizing south of the HW extending from the reservoir needs further wider planning considerations, and input from EDQ.

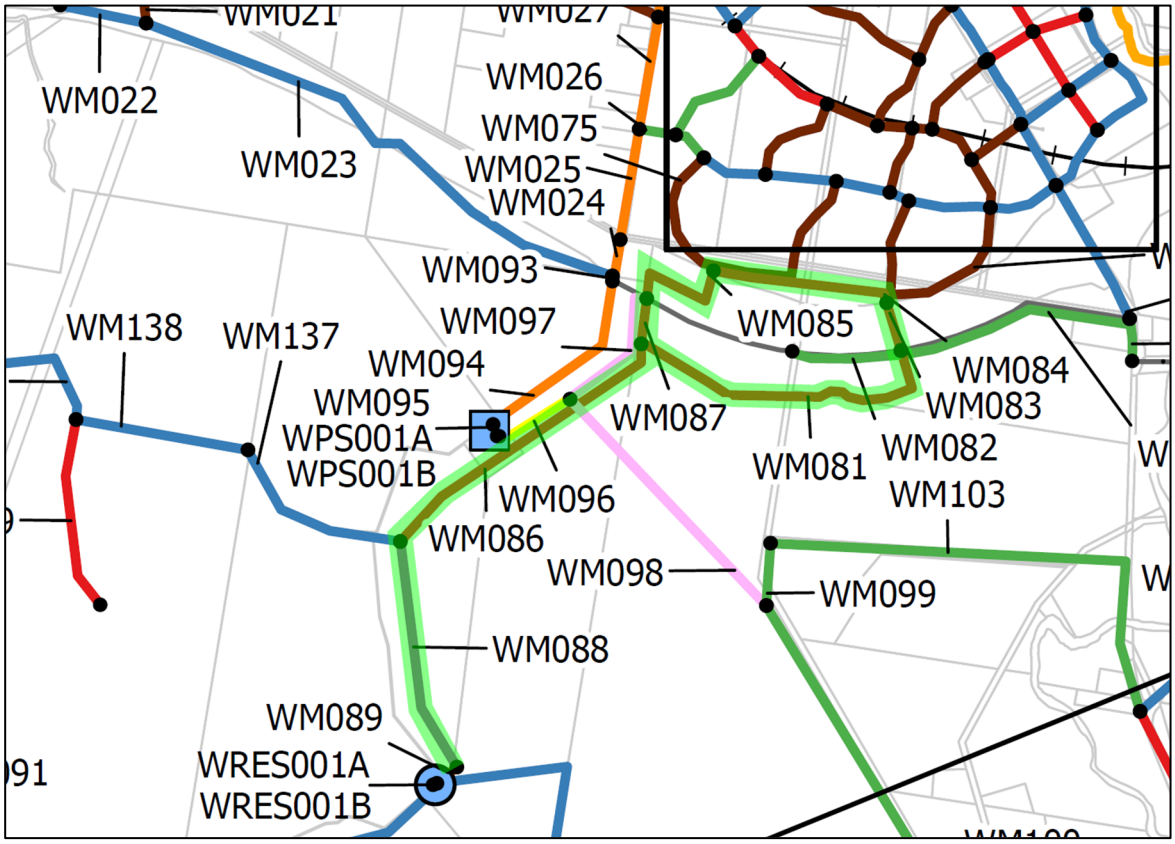


Figure 3 Indicative DCOP: HLZ supply mains

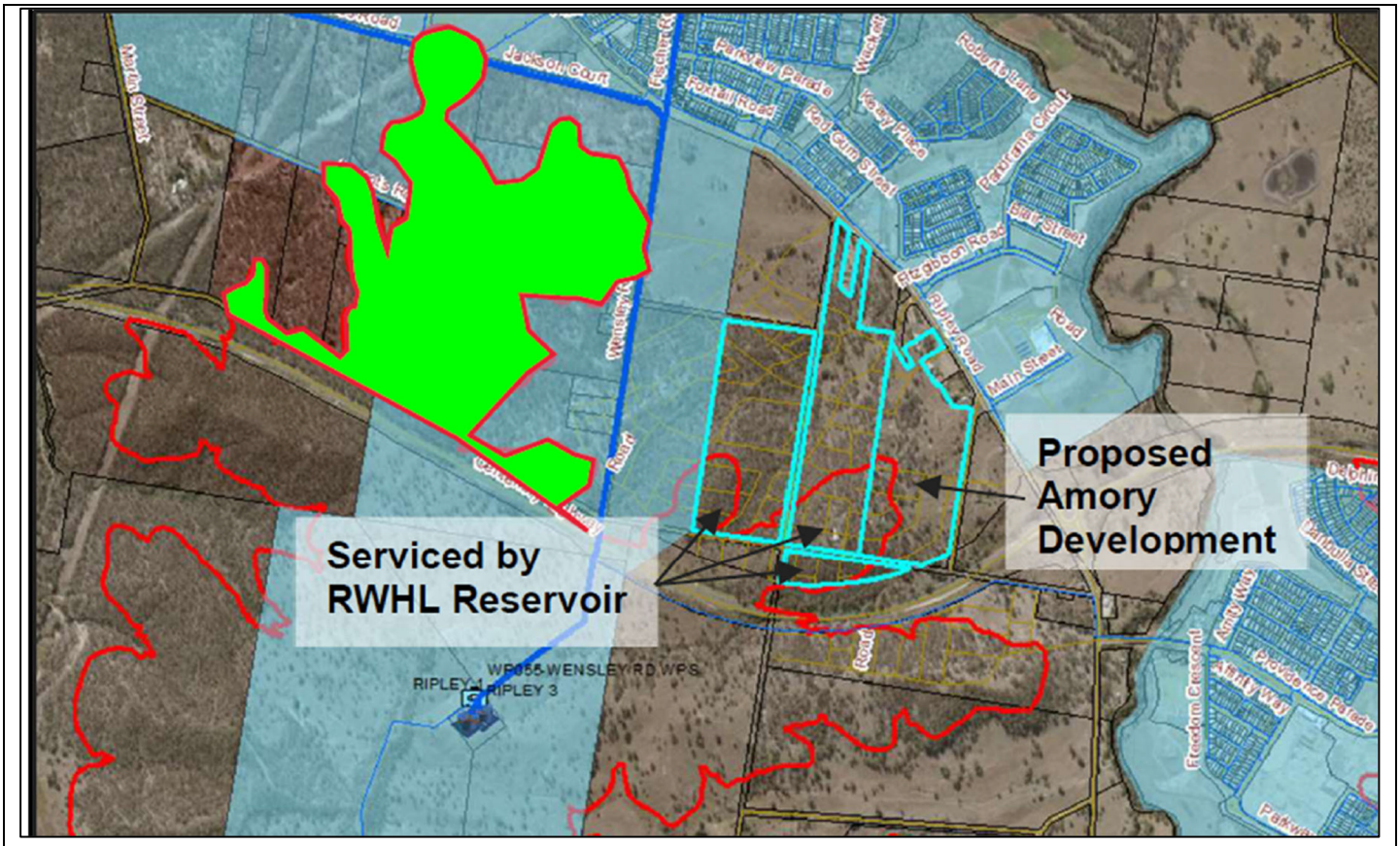


Figure 4: HLZ zone extents north of HW

Contour information has been presented on draft concept layout plans prepared and submitted with this request. The plans indicate the site partitioned by a major future rail/transport corridor. According to contour information, land located on the northern side of the rail corridor sits generally below the 70mRL, with land to the south above. Based on these levels, and general service limit of the R085 supply zone, development areas north and south of the transit corridor would likely represent the extent of additional demand that requires connection to the low and high pressure systems respectively. Refer Appendix 2

Wensley Road – DCOP Items

The Wensley road corridor has been identified to accommodate both a proposed DN525/750 trunk distribution main amplifying supply from the Ripley R084 reservoirs, together with a proposed DN750 water transfer main designed to directly feed the R084 reservoirs from the Swanbank SRWP offtake. Both mains are scheduled as required within the immediate 5 year planning horizon. Accordingly, it can be expected that portions of these items will form conditions of approval, particularly where formation of Wensley road is necessary to provide access for the estate. At the very least, additional corridor allocations need to be preserved to allow ease of future construction. Refer appendix 3 for copy of EDQs current water supply DCOP maps highlighting the subject mains. See appendix 3

Formation of Wensley road must also consider the protection and integrity of the existing DN450. Any change made to the surrounding conditions of the main must consider how SEQ Code compliance is maintained particularly with respect to standard cover, obstruction and clearance of other services.

DTMR

Urban Utilities note that there are multiple sections of works proposed to transect DTMR corridors. Early discussion should commence with this authority regarding these matters. The applicant should become familiar with TN163 guidelines prepared by DTMR outlining acceptable solutions within state controlled roads. Although the current service study depicts conceptual service configurations only, it is noted that some of the proposed line items appear proposed to accommodate the verge of state controlled roads. These arrangements would directly conflict with TN163. Urban Utilities are also apposed to the proposal of infrastructure accommodating highway verges unless agreed by DTMR, and include provision of safe access configurations.

Wastewater

Connection Area - the proposed development is:

☒Outside the Future Wastewater Connection Area and inside the Future Connection Area – The 'Outside Wastewater Connection Area' provisions apply with consideration to any draft land use planning commenced. Additional ahead of sequence costs may apply. Any future Water Approval will be assessed in accordance with the Water Netserv Plan, related legislation and the *SEQ Water Supply and Sewerage Design and Construction Code* current at lodgement.

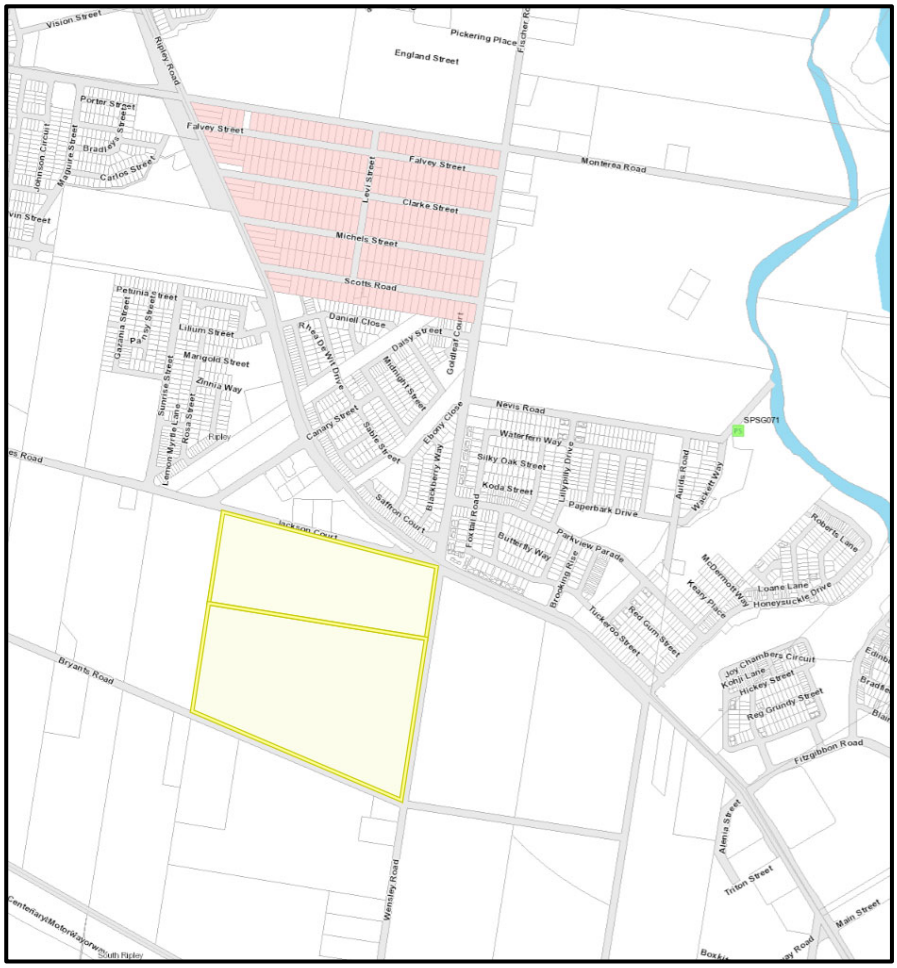


Figure 3: Wasterwater Connection Area

Wastewater connection for site:

☒No existing wastewater connection

As per the urban utilities GIS, there are no sewer connections around the vicinity of the subject site.

Sewer Connection Reuse:

☒Not applicable

Proposed new Sewer Connection or Infrastructure:

☒Applicable:

The applicant has not proposed a sewer servicing strategy to service the proposed development.

As per the Urban Utilities GIS records the nearest point of connection would be:

- Manhole MH582232 (IL 56.58 mAHD)
- SFT 7901 (IL 51.88 mAHD)

Urban Utilities would require a service plan created having demonstrated how a complete gravity commanded solution may be achieved whilst maintaining the desired standards of service of the SEQ Code. The above referenced connections were chosen as it would seem they would offer a complete gravity command for the proposed

development. MH582232 has been terminated as a DN250 and designed with the hydraulic capacity to accommodate for all upstream development within its immediate drainage catchment.

A standard Water Approval condition is that wastewater infrastructure shall terminate in a location and in an arrangement that allows future connection to the network to be made without requiring the consent of private landowners. Where upstream properties do not have an existing property connection, and where the development is likely to isolate upstream properties from the sewer, a property connection through the subject site and servicing the upstream lot must be provided.

Neighbouring Property Owner's Access Consent required:
☒Applicable:

Please note that, if the proposed sewer infrastructure works are connected to and MH582232 then it will be impacted by the requirement of an Access Consent from the owners of the property Lot 91 on SP343562 (7001 Binnies Rd Ripley) and Lot 6 on RP848627 (50 Jackson Ct Ripley). The signed access consent including but not limited to the evidence of agreement/disagreement if applicable is to be obtained at the Water Approval stage.

Network Demand and Capacity

Water

Hydraulic assessment:
(including modelling of network conditions with peak demand and fire flow)
☒Undertaken:

- Analysis assumes a peak demand from the development of 12.1 L/s for 1037 EP
- The analysis indicates there to be deficiencies in the existing networks ability to service the development. A key item determined necessary including the DCOP identified trunk DN825/750 duplicating
- The analysis also identified that the existing mains bounding the size (Ripley Low level supply) are also insufficient to service elevated regions of the estate.
- Urban Utilities can advise that there is no remaining storage capacity in the existing R085 HLZ supply zone. Additional storage will need to be provided in order to support further growth within the HLZ. Stocklands are currently co-ordinating the design for this reservoir upgrade in support of Botanica developments. It is anticipated that additional storage will be provided within the next two years.

A hydraulic report will be required upon submission of the (proposed development). The assessment will include but not be limited to;

- An assessment of the network's capacity and the effect the proposed development has on the existing network, including proposed measures to overcome any identified problems;
- An assessment of any new works required (both internal and external to the proposed development), including an appreciation of the infrastructure needs of nearby existing or future developments;
- Demonstrate security of supply to the service area; and
- The assessment has been conducted to demonstrate compliance with the SEQ Code design criteria.

- The applicant should contact Urban Utilities prior to commencing any assessment to ensure that the latest information and boundary conditions are considered.

Wastewater

Hydraulic assessment:
(including modelling of peak wet weather flow conditions)
☒Undertaken:

Detail:
- Analysis assumes a Peak Wet Weather Flow from the development of 11.17 L/s
- Sufficient capacity available in accordance with the *SEQ Water Supply and Sewerage Design and Construction Code (with the caveat that analysis assumes a total of 1092EP for the site)*
- *A 70%/30% split of this anticipated demand was assumed applied to MH582232/ SFT17901 respectively for the purpose of this analysis.*

Property Easements

☒Unknown at this time

Infrastructure in Private Property
All reticulated water supply and/or sewerage infrastructure should be located within the public road reserve wherever possible and cannot be located in private property. Where this is not possible easements will need to be established for construction, and ongoing management of water and wastewater network traversing private ownership/multiple sites and to access land to be contributed for complex assets i.e. pumping stations, reservoirs. Please refer to the *SEQ Water Supply and Sewerage Design and Construction Code* and following link for Easement Guidelines at: **https://urbanutilities.com.au/development/our-services/easements.**

Park and Open Space Easements
State and local governments now requiring easements also for any water or wastewater infrastructure in public park/open space. It is recommended that applicants liaise with the relevant authority in the first instance as this can be a lengthy process.

State Controlled Routes

☒This development is unlikely to impact a State Controlled Route

Water Meters

☒It is unknown at this time if this development will involve a CTS or volumetric /title/management subdivision.

Infrastructure Charges

☒Infrastructure charges are likely to apply, in accordance with legislation
Infrastructure Charges are levied in accordance with the Urban Utilities' Water Netserv Plan (Part A) Charges Schedule applicable (online Developer Customer Price List) at the time the water approval application is lodged. Infrastructure charges are paid at the time of connection in accordance with legislation. Further information on what are infrastructure charges is available at: **https://www.urbanutilities.com.au/development/help-and-advice/fees-and-services** and information of the Water Netserv Plan provisions can be found at the following link:

www.urbanutilities.com.au/development/help-and-advice/water-netserv-plan

Network Access Permit (NAP)

☒Likely to involve a NAP (Type 1 or 2) – work within 2 m of an asset/won't impact asset

A Network Access Permit is required for work on our near our assets and for network isolations related to development new connections, alterations and disconnection. Development metering information and infrastructure charges are required at this Water Approval stage to help manage non-revenue water and Water Approval compliance in accordance with legislation. Refer to Network Access Permit Application Guidelines at the following link: **https://www.urbanutilities.com.au/development/our-services/network-access-permits**

Water Approval Application Process

A formal Water Approval assessment will determine if your application qualifies as a:

- *Standard Connection Water Approval* (generally up to 3 residential dwellings / lots) where Urban Utilities assesses the request for development to connect, disconnect or alter Urban Utilities network and a quote is provided for an Urban Utilities engaged contractor to undertake design and construction works once paid (customers are responsible for privately engaging plumbing expertise).

  From receipt of a paid and properly made application, it will take five business days for the Water Approval assessment and five business days to issue a decision notice. Urban Utilities' contractor will contact you within three business days to arrange construction. You will need to confirm that the site is cleared, ready for construction and a plumber organised. If conditions are deemed unsafe due to wet weather, works will be postponed and rescheduled as necessary. The contractor will commence construction within 15-25 business days. A Connection Certificate will be issued once your connection is complete and all fees and charges have been paid. **https://www.urbanutilities.com.au/development/our-services/how-to-connect-water-and-sewerage/standard-connections**

- *Non-Standard Connection Water Approval - Minor Works* (not deemed a Standard Connection and generally with water reticulation up to 80m and wastewater reticulation up to 90m, and no more than two maintenance structures). This is where Urban Utilities assesses the request for development to connect, disconnect or alter Urban Utilities network and design and construction certification is undertaken by a customer engaged Endorsed Consultant, from those that qualified to meet Urban Utilities Certification Scheme Guidelines, and who will be subjected to audits. A 12 month security bond 'warranty period' applies to infrastructure certified as Water Approval compliant but it remains private infrastructure, not owned or maintained by Urban Utilities, until then. Refer to the 'Minor Works Design Technical Guidelines': **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

- *Non-Standard Connection Water Approval - Major Works* (generally all other property and network connections, not deemed a Standard Connection Water Approval, including complex assets, i.e. pumping infrastructure, and multistage developments). This is where Urban Utilities assesses the request for development to connect, disconnect or alter Urban Utilities network and there is a Water Approval condition for a Design Approval. Appropriately registered and licenced specialists are privately engaged by applicants to design and construct works with Urban Utilities undertaking assurance at key construction points and post construction. A 12 month to 2 year security bond 'warranty period' applies to infrastructure certified as Water Approval compliant but it remains private infrastructure, not owned or maintained by Urban Utilities, until then.

  From receipt of a paid and properly made Non-Standard Water Approval application, it will take 20 business days for assessment unless otherwise agreed. Information requests may apply (up to 20 business days for you to respond and up to 20 business days to review from receipt of requested information and paid invoice. A Design Approval must be assessed in 20 business days of receipt of all designs and invoice payment. Refer also to 'Our Service Commitments' at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

Fees and Charges

Urban Utilities fees and charges, including scope of works, are stated in the Urban Utilities' Water Netserv Plan 'Developer Customer Price List': **https://www.urbanutilities.com.au/development/help-and-advice/fees-and-services.** Water Approval related fees and charges:

- *Assessment fees* - service costs for assessing Water Approval applications (connect, disconnect or alter water and wastewater connection for development), detailed designs, build over asset referrals and amendments from lodgement stage to post construction compliance
- *Construction fees* – paid to a contractor to undertake construction work related to a water approval (via Urban Utilities only for Standard Connection Water Approvals, otherwise privately engaged by an applicant e.g. plumber, builder, engineer)
- *Developer Product/Service fees* – purchased item or services e.g. complex engineering search, or products e.g. large water meters, security bonds, re-checking/re-inspection fees
- *Infrastructure charges* – State legislated, already discounted rates for new trunk demand, paid at connection (physical connection or certified connection e.g. Connection Certificate) and only used for trunk (shared major infrastructure as per Water Netserv Plan).

Visibility of Activity

- *You can follow Application Progress* – Site owners and agents can see the progress of an application by being a registered and activated contact for an application in the Developer Services Portal. Refer to the 'Application Contact' quick reference guide and 'Adding a Contact' Explainer Byte at the following link: **https://www.urbanutilities.com.au/development/developer-services-portal**
- *GIS* – Urban Utilities owned and operated (not under construction) infrastructure is available for viewing online via 'GIS Open Data'. Refer to the 'GIS Mapping System Guideline' at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

Properly Made Application

You are required to submit a lawful Water Approval application. This means ensuring the following are complete and correct:

- all the Owner, Billing Entity and Agent details in the Developer Services Portal
- proposed development and site details with plans (including sequencing for multistage development)
- Proof of ownership and relevant consent of all landowners affected by the development service design.

Refer to the 'Check for completeness guidelines' and relevant consent forms at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/development-forms**

This Services Advice Notice is current for 12 months from the date of issue. Should you wish to proceed with applying for a service connection please lodge your application via Urban Utilities Developer Applications Portal at **www.urbanutilities.com.au/development**. Please include your Services Advice Notice reference number in your application.

CONCEPT PLAN

APPENDIX 2

RIPLEY LL R084
SUPPLY SYSTEMS
< 70mRL

RIPLEY HL R085
SUPPLY SYSTEMS
> 70mRL

JACKSON COURT

RIPLEY ROAD

FUTURE RAIL CORRIDOR

WENSLEY ROAD

BRYANTS ROAD

ROAD 23m WIDE

ROAD 16m WIDE

ROAD 14m WIDE

1334
24708m²

1257
20080m²

1128
50040m²

764
68974m²

1129
22260m²

DISCLAIMER

THIS PLAN WAS PREPARED AS A CONCEPTUAL LAYOUT ONLY. IT IS NOT SUITABLE FOR ANY OTHER PURPOSE. PROPERTY DIMENSIONS, AREAS, LOT NUMBERS, AND OTHER FEATURES ARE BASED ON EXISTING INFORMATION AND MAY NOT HAVE BEEN VERIFIED BY SURVEY. THESE DETAILS MAY CHANGE SUBJECT TO DEVELOPMENT APPROVAL OR FURTHER DESIGN. PAVEMENT AND CENTRELINES SHOWN ARE INDICATIVE ONLY AND ARE SUBJECT TO ENGINEERING DESIGN. THE DESIGNS DOCUMENTED HEREIN REMAIN THE PROPERTY OF SAUNDERS HAVILL GROUP AND MUST NOT BE REPRODUCED OR USED IN WHOLE OR PART WITHOUT WRITTEN PERMISSION. SAUNDERS HAVILL GROUP ACCEPTS NO RESPONSIBILITY FOR ANY USE OR RELIANCE BY THIRD PARTIES. REPRODUCTION WITHOUT THIS NOTE IN FULL RENDERS THE INFORMATION INVALID.

SOURCE

PROJECTION: GDA2020 MGA56
SUBJECT BOUNDARIES: DCDB
CONTOURS: ELVIS - LIDAR (2023)

DEVELOPMENT STATISTICS - Overall			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Net Area**
Terrace	42	12.4%	0.983 ha
< 250m²	71	20.9%	1.689 ha
250m² - < 300m²	125	36.9%	3.408 ha
300m² - < 350m²	29	8.6%	0.920 ha
350m² - < 400m²	38	11.2%	1.398 ha
400m² - < 450m²	15	4.4%	0.637 ha
450m² - < 500m²	11	3.2%	0.525 ha
500m² - < 600m²	6	1.8%	0.306 ha
600m² - < 1000m²	2	0.6%	0.131 ha
Total Residential Allotments	**339**	**100.0%**	**9.997 ha**

Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	**37.661 ha**		
Net Residential Area (no roads)	9.997 ha	26.5%	
Detention / Drainage	0.952 ha	2.5%	
District Recreation Park	5.004 ha	13.3%	
Pedestrian Links	0.047 ha	0.1%	
Road Widening	1.195 ha	3.2%	
Road Areas	6.864 ha	18.2%	
Railway Corridor	6.897 ha	18.3%	
Multi Unit Development Sites	4.697 ha	12.5%	
Neighbourhood Centre	2.008 ha	5.3%	
Total	**37.661 ha**	**100.0%**	

LEGEND

- Site Boundary
- Major Contour (5.0m interval)
- Minor Contour (1.0m interval)
- Rail Corridor (DAMS Mapping) - 2.645 ha
- Rail Corridor (DTMR as supplied) - 6.897 ha

SCALE @A1 1:1500 @A3 1:3000 - LENGTHS ARE IN METRES

20 0 20 40 60 80 100 120 140 160 180

Saunders Havill
BOWEN HILLS | SPRINGFIELD
1300 123 744 | saundershavill.com

N

CLIENT
KDL PROPERTY GROUP PTY LTD

SITE ADDRESS
1-63 BRYANTS ROAD & 101 JACKSON COURT, RIPLEY

RP DESCRIPTION
LOTS 359 & 360 on S3173

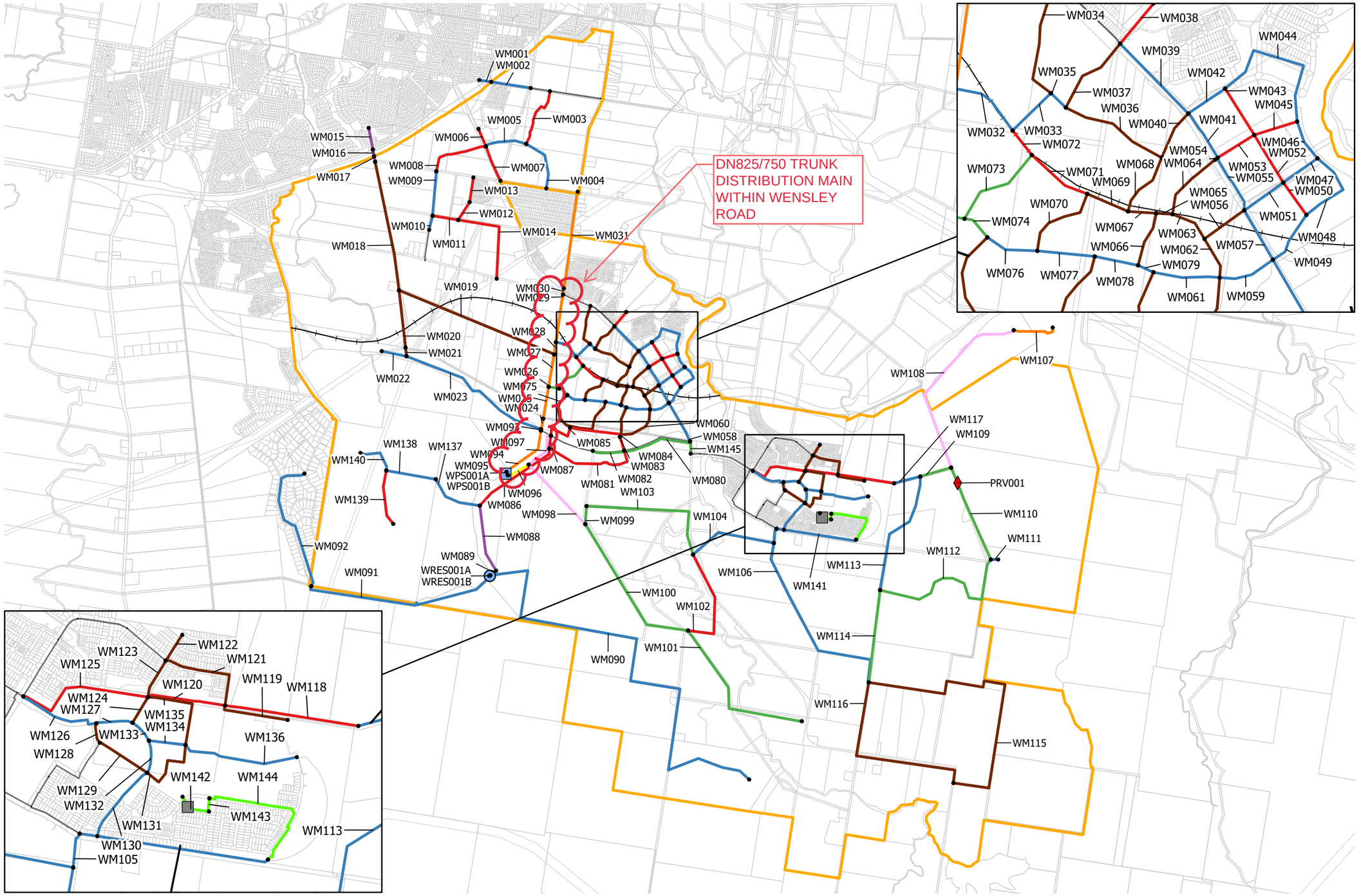
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DATE
08/04/2026

DRAWING NO.
13059 P 03 Rev A - CON 01

APPENDIX 3 -
EDQ DCOP

Ripley Valley
Map 9: Water Supply - Trunk Infrastructure



Legend

- Development Area (PDA) Boundary
- Property Boundary
- Future Railway

Water supply

- 225mm Water main
- 250mm Water main
- 300mm Water main
- 315mm Water main
- 375mm Water main
- 450mm Water main
- 525mm Water main
- 600mm Water main
- 675mm Water main
- Existing Water Main
- Pressure Reduction Valve
- Water Reservoir
- Water Pump Station
- Existing Water Pump Station

N

0 250 500 1,000 1,500 2,000

Metres

Map created at: **A3**

Projection: GDA 1994 MGA Zone 56
Coordinate system: GCS GDA 1994
Datum: GDA 1994
Projection: Transverse Mercator

Map produced by the Department of State Development, Infrastructure, Local Government and Planning
Spatial Services Unit in conjunction with Integran
on behalf of EDQ, 17/06/2022

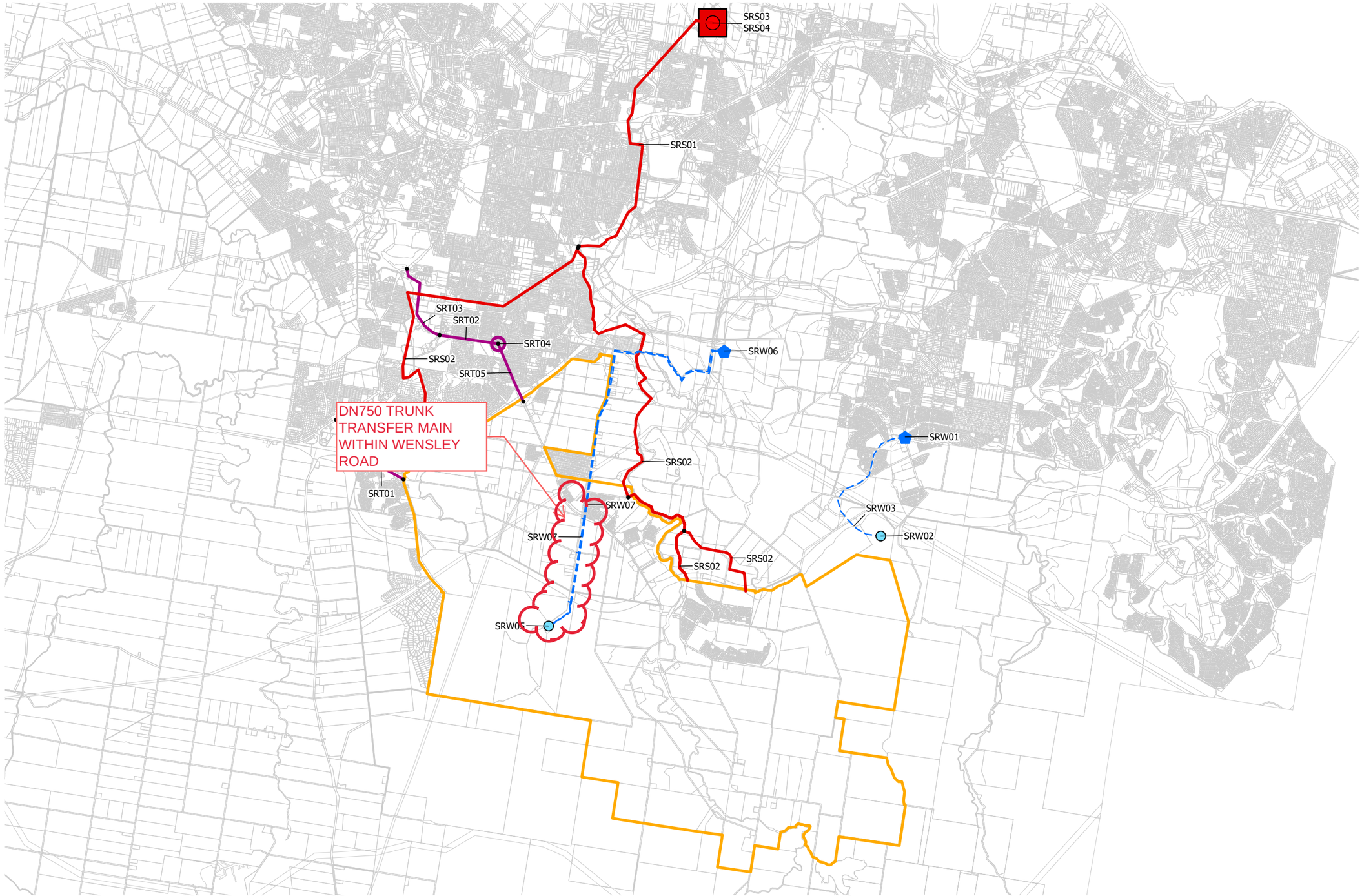
Department of State Development, Infrastructure, Local Government and Planning

Queensland Government

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Ripley Valley
Map 11: Sub-regional Trunk Infrastructure



Legend

- Development Area (PDA) Boundary
- Property Boundary

Water

- Pump Station
- Reservoir
- Water Supply Mains

Sewerage

- Environmental Costs
- Treatment Plant Upgrade
- Sewer Gravity Mains

Transport

- Local Roads
- Intersection

N

0 412.5 825 1,650 2,475 3,300

Metres

Map created at: **A3**

Projection: GDA 1994 MGA Zone 56
Coordinate system: GCS GDA 1994
Datum: GDA 1994
Projection: Transverse Mercator

Map produced by the Department of State Development, Infrastructure, Local Government and Planning Spatial Services Unit in conjunction with Integran on behalf of EDQ, 16/06/2022

Department of State Development, Infrastructure, Local Government and Planning

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