



SOUTH BURNETT
REGIONAL COUNCIL

Enquiries: Senior Planner - Vanessa
Direct Telephone: 07 4189 9100
Our Reference: RAL24/0013

9 June 2025

GLW Constructions
C/- Land Partners
Level 1, 18 Little Cribb Street
MILTON QLD 4064

South Burnett Regional Council

ABN 89 972 463 351

PO Box 336

Kingaroy QLD 4610

☎ 1300 789 279 or (07) 4189 9100

☎ (07) 4162 4806

✉ info@southburnett.qld.gov.au

🌐 www.southburnett.qld.gov.au

Dear Sir/Madam

Decision Notice

Planning Act 2016

I refer to your application and advise that on 4 June 2025, Council's delegated authority decided to approve the application in full subject to conditions.

Details of the decision are as follows:

APPLICATION DETAILS

Application No: RAL24/0013
Street Address: 162 Bowman Road BLACKBUTT NORTH QLD 4314
Real Property Description: Lot 4 on RP166571
Planning Scheme: South Burnett Regional Council

DECISION DETAILS

Type of Decision: Approval
Type of Approval: Development Permit for Reconfiguration of a Lot - Subdivision (1 Lot into 18 Lots)
Date of Decision: 4 June 2025

CURRENCY PERIOD OF APPROVAL

The currency period for this development approval is four (4) years starting the day that this development approval takes effect. (Refer to Section 85 "Lapsing of approval at end of currency period" of the *Planning Act 2016*.)

INFRASTRUCTURE

Where conditions relate to the provision of infrastructure, these are non-trunk infrastructure conditions unless specifically nominated as a "**necessary infrastructure condition**" for the provision of trunk infrastructure as defined under Chapter 4 of the *Planning Act 2016*.

ASSESSMENT MANAGER CONDITIONS

GENERAL

GEN1. The approved development must be completed and maintained generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Approved Plans

Drawing No.	Prepared By	Drawing Title	Date	Rev
BRJD8285-000-9-6 (Sheet 1 of 2)	LandPartners Surveyors and Planners	Proposed Reconfiguration of Lot 4 on RP166571	02/08/24	6
BRJD8285-000-9-6 (Sheet 2 of 2)	LandPartners Surveyors and Planners	Proposed Reconfiguration of Lot 4 on RP166571	02/08/24	6
C0400-DA-BE-101	Urban Engineering Solutions	Bulk Earthworks Layout Plan	28/02/25	P2
C0400-DA-RW-101	Urban Engineering Solutions	Roadworks Layout Plan – Sheet 1	28/02/25	P2
C0400-DA-RW-102	Urban Engineering Solutions	Roadworks Layout Plan – Sheet 2	28/02/25	P2
C0400-DA-RW-103	Urban Engineering Solutions	Roadworks Layout Plan – Sheet 3	28/02/25	P2
C0400-DA-RW-301	Urban Engineering Solutions	Roadworks Longitudinal Sections – Sheet 1	28/02/25	P2
C0400-DA-RW-302	Urban Engineering Solutions	Roadworks Longitudinal Sections – Sheet 2	28/02/25	P2
C0400-DA-RW-303	Urban Engineering Solutions	Roadworks Longitudinal Sections – Sheet 3	28/02/25	P2
C0400-DA-RW-401	Urban Engineering Solutions	Roadworks Cross Sections – Sheet 1	28/02/25	P2
C0400-DA-SD-101	Urban Engineering Solutions	Stormwater Layout Plan – Sheet 1	28/02/25	P2
C0400-DA-SD-102	Urban Engineering Solutions	Stormwater Layout Plan – Sheet 2	28/02/25	P2
C0400-DA-SE-101	Urban Engineering Solutions	Sewerage Layout Plan	28/02/25	P2

Approved Documents

Document Title	Prepared By	Date	Ref. No.	Revision
Septic Percolation Report	Enviro Water Design	06/03/2024	-	-
Bushfire Management Plan	Wollemi Eco-Logical Pty Ltd	18/03/2024	24120	-
Stormwater Quantity, Quality and Flood Assessment Report	Storm Water Consulting Pty Ltd	03/03/2025	J9425	v1.1
Traffic Engineering Report	TTM Consulting Pty Ltd	04/04/25	24BRT0	-

Advisory Note: The 'Structure Plan' of Lot 4 on RP166571 (162 Bowman Road, Blackbutt North, QLD, 4314) included in the Traffic Engineering Report does not form part of this approval.

- GEN2. Any new earthworks or structures are not to concentrate or impede the natural flow of water across property boundaries and onto any other lots.

DEVELOPMENT PERIOD - RAL

- GEN3. The currency period for this development approval for reconfiguring a lot is four (4) years after the development approval takes effect. The development approval will lapse unless the survey plan for all works and stages required to be given to Council for approval is provided within this period.

COMPLIANCE/ENDORSEMENT

- GEN4. All conditions of this approval are to be satisfied prior to Council endorsing the Survey Plan, and it is the applicant's responsibility to notify Council to inspect compliance with conditions.

A fee will be charged, with payment required prior to Council's approval of the associated documentation requiring assessment.

OUTSTANDING FEES

- GEN5. Prior to sealing the Plan of Survey, the applicant is required to pay the Council all rates and charges or any expenses being charged over the subject land under any Act in accordance with Schedule 18 Section 69 of the Planning Regulation 2017.

Timing – As indicated.

SURVEY MARKS

- GEN6. Prior to the sealing of the Plan of Survey the applicant is to provide a certificate signed by a licensed surveyor stating that after the completion of all works associated with the reconfiguration, survey marks were reinstated where necessary and all survey marks are in their correct position in accordance with the Plan of Survey.

Timing – As indicated.

VALUATION FEES

- GEN7. Payment of Department of Natural Resources, Mines and Energy valuation fees that will result from the issue of split valuations prior to Council sealing the Plan of Survey. The contribution is currently assessed at \$53.20 per lot however, the actual amount payable will be based on Council's Register of Fees & Charges and the rate applicable at the time of payment.

Timing – As indicated.

FENCING

- GEN8. Fauna fencing is to be provided to the perimeter of all lots which provides for gaps and spacing to allow for the safe movement of fauna.

Timing – Prior to sealing of survey plan and to be maintained at all times.

ENVIRONMENT (BUSHFIRE MANAGEMENT)

GEN9. The development must be carried out in accordance with the Approved *Bushfire Management Plan* (BMP) prepared by *Wollemi Eco-Logical Pty Ltd* as referenced at GEN1 of this conditions package and noting the following:

- Subdivision layout to be in accordance with 'Figure 2' of the BMP;
- Subdivision works to be carried out in accordance with recommendations in Section 4.0 of the BMP (where relevant to Reconfiguring a Lot);
- All lots are to retain or install access and egress in accordance with outcomes specified in Section 3.4 of the BMP;
- All lots are to be provided with dedicated fire fighting water storage with a volume of water not less than 25,000 litres for each building, as specified in **Section 3.5** of the BMP; and
- All future purchasers of the subject lots to be notified of bushfire management requirements at time of sale and/or other method of disposal.

Provide certification to Council from an accredited bushfire professional which certifies that subdivisional works have been constructed in accordance with the bushfire management conditions of this Development Approval.

Timing – Prior to sealing of the survey plan.

PROPERTY NOTE

PN1. In accordance with the approved Bushfire Management Plan (as referenced at GEN1 of this conditions package). Future dwellings on Lots 3-10 and 13-18 are required to be Located within the located BLE's.

VALIDITY OF BUSHFIRE MANAGEMENT REPORT

BMR1. Prior to sealing of the survey plan provide written evidence from an accredited bushfire professional that the approved bushfire management report (BMR) and its recommendations are current and in accordance with the BMR disclaimer.

Timing - As indicated.

ENGINEERING WORKS

ENG1. Submit to Council, an Operational Work application for all works that will become Council infrastructure, and for earthworks.

ENG2. Complete all works approved and works required by conditions of this development approval and/or any related approvals at no cost to Council, prior to Council's endorsement of the Survey Plan unless stated otherwise.

ENG3. Undertake Engineering designs and construction in accordance with the Planning Scheme, Standard Drawings, relevant Australian Standards, WBBROC Regional Standards Manual and relevant design manuals.

ENG4. Be responsible for any alteration necessary to electricity, telephone, water mains, sewer mains, stormwater drainage systems or easements and/or other public utility installations resulting from the development or from road and drainage works required in connection with the development.

ENG5. Submit to Council, Certification from a suitably qualified Engineer (RPEQ) that the works have been undertaken in accordance with the Approved Plans and specifications and to Council's requirements, prior to commencement of the use.

LOCATION, PROTECTION AND REPAIR OF DAMAGE TO COUNCIL AND PUBLIC UTILITY SERVICES INFRASTRUCTURE AND ASSETS

- ENG6. Be responsible for the location and protection of any Council and public utility services infrastructure and assets that may be impacted on during construction of the development.
- ENG7. Repair all damages incurred to Council and public utility services infrastructure and assets, as a result of the proposed development immediately should hazards exist for public health and safety or vehicular safety. Otherwise, repair all damages immediately upon completion of works associated with the development.

STORMWATER MANAGEMENT

- ENG8. Provide stormwater and flood management generally in accordance with the Stormwater Quantity, Quality and Flood Assessment Report prepared by Storm Water Consulting, Rev 1.1 dated 3 March 2025, subject to detailed design and except as altered by conditions of this development approval.
- ENG9. Construct stormwater drainage to ensure that the development will achieve "no nuisance" as described in the Queensland Urban Drainage Manual (QUDM) to all downstream properties including road reserves and the like for design storms of ARI2, ARI5, ARI10, ARI20 and ARI50, and ARI100.
- ENG10. Construct energy dissipation at culvert outlets, table drains, and open channels to prevent erosion with the drainage channels, and at properties on the downstream outlets of culverts.
- ENG11. Provide overland flow paths that do not adversely alter the characteristics of existing overland flows on other properties or that create an increase in flood damage on other properties.
- ENG12. The open channel at the rear of Lots 9,10, and 11 shall be designated as a drainage reserve to be owned by Council
- ENG13. Adjoining properties and roadways to the development are to be protected from ponding or nuisance from stormwater as a result of any site works undertaken as part of the proposed development.

ON-SITE WASTEWATER DISPOSAL

- ENG14. Future Dwellings must be connected to an on-site wastewater disposal system, in accordance with AS 1547 and the Queensland Plumbing and Waste Water Code.

Timing: Prior to the issue of a Building Approval for a future Dwelling on the proposed lots.

VEHICLE ACCESS

- ENG15. Construct a vehicle crossover/access to each lot in accordance with Council's Standard Drawing No. 00049.

VEHICLE ACCESS - REAR ACCESS LOTS

- ENG16. Construct a driveway of 100mm compacted gravel with a minimum width of 4m along the full length of the access handle.
- ENG17. Design and construct all services along the full length of the access strip.

- ENG18. Construct any new crossovers such that the edge of the crossover is no closer than 1 metre to any existing or proposed infrastructure including any stormwater gully pit, manhole, service infrastructure (e.g. power pole, telecommunications pit), road infrastructure (e.g. street sign, street tree, etc).

ROADWORKS - INTERNAL/NEW ROADS

- ENG19. Design and construct the new roads identified on proposed plan/s of development as an in accordance with SC6.2 PSP1 – Design and Construction Standards of the SBRC Planning Scheme, relevant Austroads' Standards, and more specifically, include the following:
- a. a minimum road reserve width of 20 metres;
 - b. a bitumen prime and Double/Double bitumen seal width of 6.0m, with 1.5m gravel shoulders. Minimum road crossfall shall be 3%;
 - c. provision for stormwater drainage, line marking, tapers to existing/new road pavements, signage, street lighting associated with the required road works and road reserve transitions between existing and proposed roads;
 - d. provision of right and left turn treatments from Crumpton Drive into Road 1, determined in accordance with Austroads Guide to Road Design; and
 - e. cul-de-sac ends with a minimum 9 metres with a minimum 18 metre approach curve, all measured to the invert of kerb and channel and designed in accordance with the requirements of the applicable Planning Scheme and Council's adopted standards.

STREET SIGNS AND LINE MARKING

- ENG20. Obtain written approval from Council for any works involving the removal or relocation of existing Council traffic signs prior to commencement of works.
- ENG21. Install and/or relocate any street signs and/or line marking in accordance with the Manual of Uniform Traffic Control Device (MUTCD). Install new or relocated signage using the V-Lok installation system.
- ENG22. Provide all new signage with Class 1 retro-reflective material in accordance with Australian Standard 1743 - Road Signs - Specification.

ROADWORKS AND PEDESTRIAN SAFETY

- ENG23. Install signage for all works on or near roadways in accordance with the "Manual for Uniform Traffic Control Devices – Part 3, Works on Roads".
- ENG24. Submit to Council, an application for any road or lane closures and ensure all conditions of that approval are complied with during construction of the works.
- ENG25. Maintain safe pedestrian access along Council's footpaths at all times.

TELECOMMUNICATION

- ENG26. Design and provide underground telecommunications to all lots within the development.

ELECTRICITY

- ENG27. Design and provide electricity supply to all lots within the development to comply with Ergon Energy's requirements.
- ENG28. Submit to Council, written confirmation from an electricity provider that an agreement has been made for the supply of electricity.

ENG29. Submit electrical plans for Council's review prior to Council's endorsement of the Survey Plan. Be responsible to check and ensure that electrical drawings do not conflict with the civil engineering design.

SERVICES - EXISTING CONNECTIONS

ENG30. Ensure that all services provided to the existing house on proposed Lot 2 are wholly located within the lot(s) it serves.

STREET LIGHTING

ENG31. Design and install street lighting to the full frontage of the site/intersections and all streets within the development in accordance with AS/NZS1158.3.1:2020 to a PR6 L33 standard. Submit to Council, street light design plans showing the proposed public lighting system for Council's endorsement.

ENG32. Enter into an agreement with an electricity supplier to provide a public lighting system in accordance with the lighting design plans as required by the previous condition. Submit to Council, written confirmation from an electricity provider that an agreement has been made to provide a public lighting system.

EARTHWORKS - GENERAL

ENG33. Undertake earthworks in accordance with the provisions of AS3798 Guidelines on Earthworks for Commercial and Residential Developments.

ENG34. Ensure that each lot is self-draining.

ENG35. Submit to Council, detailed engineering drawings and information with the Operational Work application, including, but not limited to the following;

- a. long and cross sections of proposed cut or fill and retaining walls as applicable;
- b. existing and proposed surface levels;
- c. proposed drainage works to accommodate existing overland flows;
- d. proposed haulage route(s) that will be used; and
- e. details identifying the source/disposal site(s) for material imported/exported. The site(s) must have a current development approval enabling them to export/accept any material.

ENG36. Obtain Council approval for the haulage truck sizes and the final haul route(s) prior to commencement of any approved works.

EROSION AND SEDIMENT CONTROL - GENERAL

ENG37. Ensure that all reasonable actions are taken to prevent sediment or sediment laden water from being transported to adjoining properties, roads and/or stormwater drainage systems.

ENG38. Remove and clean-up the sediment or other pollutants in the event that sediment or other pollutants are tracked or released onto adjoining streets or stormwater systems, at no cost to Council.

EASEMENTS

ENG39. Register Stormwater drainage easements covering the open channel on proposed lots 9, 10 and 11 as shown on the approved plan(s) of development or as determined in any approval for Operational Work, whichever is the greater, to the benefit of Council. The easement document shall make it clear that maintenance of the drainage easement remains with the owner of the respective lot in which it is located.

Timing: Prior to the sale of any proposed lots.

- ENG40. The restrictions imposed (non-permanent fixtures) on the property within a drainage easement, will include:
- a building (habitable or not), regardless of size;
 - a bridge or culvert;
 - a tower, mast, pillar, or post;
 - a wall or a fence (other than a dividing fence);
 - a shipping container or similar object;
 - a sculpture or statue;
 - a viaduct, railway line, roadway or path;
 - a swimming pool or a tank; or
 - anything else that may be reasonably characterised as a structure when placed upon land (whether by affixation or by resting upon its own weight).

PERMANENT SURVEY MARKS

- ENG41. Install a minimum of one permanent survey marks (PSM) and connect to Australian Height Datum. Ensure that the PSMs are located and installed in accordance with the *Survey and Mapping Infrastructure Act 2003*.

Timing: Prior to Council's endorsement of the Plan of Survey for the applicable stage.

REFERRAL AGENCIES

Not Applicable.

APPROVED PLANS

The following plans are Approved plans for the development:

Approved Plans

Plan No.	Rev.	Plan Name	Date
BRJD8285-000-9-6 (Sheet 1 of 2)	6	<i>Reconfiguration of Lot 4 on RP166571</i> , prepared by LandPartners Surveyors and Planners.	02/08/24
BRJD8285-000-9-6 (Sheet 2 of 2)	6	<i>Reconfiguration of Lot 4 on RP166571</i> , prepared by LandPartners Surveyors and Planners.	02/08/24
C0400-DA-BE-101	P2	<i>Bulk Earthworks Layout Plan</i> , prepared by Urban Engineering Solutions.	28/02/25
C0400-DA-RW-101	P2	<i>Roadworks Layout Plan – Sheet 1</i> , prepared by Urban Engineering Solutions.	28/02/25
C0400-DA-RW-102	P2	<i>Roadworks Layout Plan – Sheet 2</i> , prepared by Urban Engineering Solutions.	28/02/25
C0400-DA-RW-103	P2	<i>Roadworks Layout Plan – Sheet 3</i> , prepared by Urban Engineering Solutions.	28/02/25
C0400-DA-RW-301	P2	<i>Roadworks Longitudinal Sections – Sheet 1</i> , prepared by Urban Engineering Solutions.	28/02/25
C0400-DA-RW-302	P2	<i>Roadworks Longitudinal Sections – Sheet 2</i> , prepared by Urban Engineering Solutions.	28/02/25
C0400-DA-RW-303	P2	<i>Roadworks Longitudinal Sections – Sheet 3</i> , prepared by Urban Engineering Solutions.	28/02/25

REFERENCED DOCUMENTS

The following documents are referenced in the assessment manager conditions:

Referenced Documents

Document No.	Rev.	Document Name	Date
-	-	<i>Septic Percolation Report</i> , prepared by Enviro Water Design.	06/03/2024
24120	-	<i>Bushfire Management Report</i> , prepared by Wollemi Eco-Logical Pty Ltd.	18/03/2024
J9425	V1.1	<i>Stormwater Quantity, Quality and Flood Assessment Report</i> , prepared by Storm Water Consulting Pty Ltd.	03/03/2025
24BRT0	-	<i>Traffic Engineering Report</i> , prepared by TTM Consulting Pty Ltd.	04/04/25

ADVISORY NOTES

The following notes are included for guidance and information purposes only and do not form part of the assessment manager conditions:

ADVICE

- ADV1. This development approval does not authorise any activity that may harm Aboriginal Cultural Heritage. Under the *Aboriginal Cultural Heritage Act 2003* you have a duty of care in relation to such heritage. Section 23(1) provides that "*A person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal Cultural Heritage.*" Council does not warrant that the approved development avoids affecting Aboriginal Cultural Heritage. It may therefore, be prudent for you to carry out searches, consultation, or a Cultural Heritage assessment to ascertain the presence or otherwise of Aboriginal Cultural Heritage. The Act and the associated duty of care guidelines explain your obligations in more detail and should be consulted before proceeding. A search can be arranged by visiting <https://www.datsip.qld.gov.au> and filling out the Aboriginal and Torres Strait Islander Cultural Heritage Search Request Form.
- ADV2. It is the developer/owner's responsibility to ensure that any subsequent earthworks required as a consequence of this approval and/or ongoing operations complies with all aspects of Council's planning scheme either directly or indirectly. All erosion and sediment control measures should be to a standard as specified by a suitably qualified professional.
- ADV3. Attached for your information is a copy of Chapter 6 of the *Planning Act 2016* as regards Appeal Rights.

INFRASTRUCTURE CHARGES

- ADV4. Infrastructure charges are now levied by way of an Infrastructure Charges Notice, issued pursuant to section 119 of the *Planning Act 2016*.

DEVELOPER INCENTIVE

- ADV5. Council is offering a reduction in infrastructure charges payable through the development incentive scheme which is available between 1 December 2020 and 31 December 2025. Eligible development under this scheme is required to be completed by 31 December 2025.

For further information or application form please refer to the rules and procedures available on Council's website.

VEGETATION CLEARANCE

ADV6. It is incumbent upon the developer and future owners of all lots to ensure that the clearance of on-site vegetation can be undertaken in accordance with the provisions of the *Vegetation Management Act 1999*, the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*. These regulations permit the clearance of high value regrowth vegetation of State significance in some instances as 'exempt clearing work'.

For further information on the vegetation management framework:

Phone 135VEG (135 834);

Email vegetation@resources.qld.gov.au; or

Visit <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

FUTURE DWELLING HOUSES AND BUSHFIRE MANAGEMENT

ADV7. All future buildings should be designed and constructed to meet the prevailing standards to ensure suitable Bushfire Attack Levels (BALs). In accordance with the Bushfire Management Report (as referenced at GEN1 of this conditions package). However, bushfire risk to built assets can be effectively managed/addressed at design and construction phase of the project through the following:

- National Construction Code; and
- Australian Standard Construction of Buildings in Bushfire Prone Areas (AS3050-2018); and
- Ongoing vegetation management.

ADV8. This bushfire management plan will be noted on Council's rates search system and will hence be discoverable information.

PROPERTY NOTES

The following property notes will be placed against the subject property in Council's property record system:

PROPERTY NOTE

PN1. In accordance with the approved Bushfire Management Plan (as referenced at GEN1 of this conditions package). Future dwellings on Lots 3-10 and 13-18 are required to be Located within the located BLE's.

VARIATION APPROVAL

Not Applicable.

FURTHER DEVELOPMENT PERMITS REQUIRED

- Development Permit for Operational Work (Infrastructure and Earthworks)

SUBMISSIONS

Not Applicable.

RIGHTS OF APPEAL

You are entitled to appeal against this decision. A copy of the relevant appeal provisions from the *Planning Act 2016* is attached.

During the appeal period, you as the applicant may suspend your appeal period and make written representations to council about the conditions contained within the development approval. If council agrees or agrees in part with the representations, a “negotiated decision notice” will be issued. Only one “negotiated decision notice” may be given. Taking this step will defer your appeal period, which will commence again from the start the day after you receive a “negotiated decision notice”.

OTHER DETAILS

If you wish to obtain more information about Council’s decision, electronic copies are available on line at www.southburnett.qld.gov.au, or at Council Offices.

Yours faithfully



DAVID HURSTHOUSE
COORDINATOR DEVELOPMENT SERVICES

Enc: Adopted Infrastructure Charge Notice
 Approved Plans/Documents
 Appeal Rights

INFRASTRUCTURE CHARGES NOTICE

(Section 119 of the Planning Act 2016)

APPLICANT: GLW Constructions Pty Ltd
C/- Land Partners
PO Box 1399
MILTON QLD 4064

APPLICATION: Reconfiguration of a Lot - Subdivision (1 Lots into 19 Lots), New Road and Drainage Easements - Impact Assessable

DATE: 4/6/2025

FILE REFERENCE: RAL24/0013

AMOUNT OF THE LEVIED CHARGE: **\$79,542.00** **Total**
(Details of how these charges were calculated are shown overleaf)

\$0.00	Water Supply Network
\$0.00	Sewerage Network
\$43,380.00	Transport Network
\$36,162.00	Parks and Land for Community Facilities Network
\$0.00	Stormwater Network

AUTOMATIC INCREASE OF LEVIED CHARGE: The amount of the levied charge is subject to an automatic increase. Refer to the Information Notice attached to this notice for more information on how the increase is worked out.

LAND TO WHICH CHARGE APPLIES: Lot 4 on RP166571

SITE ADDRESS: 162 Bowman Rd, Blackbutt North

PAYABLE TO: **South Burnett Regional Council**

WHEN PAYABLE: Reconfiguring a Lot – When South Burnett Regional
(In accordance with the timing stated in Section 122 of the Planning Act 2016)

OFFSET OR REFUND: Not Applicable.

This charge is made in accordance with South Burnett Regional Council's ***Charges Resolution (No. 3) 2019***

DETAILS OF CALCULATION

Water Supply

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	\$0.00	-	\$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	\$0.00	-	\$0.00

Sewerage

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	\$0.00	-	\$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	\$0.00	-	\$0.00

Transport

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	19	allotments	\$2,410.00	CR Table 2.3	\$45,790.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Existing Lots	1	allotments	\$2,410.00	CR Table 2.3	\$2,410.00

Parks and Land for Community Facilities

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	19	allotments	\$2,009.00	CR Table 2.3	\$38,171.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Existing Lots	1	allotments	\$2,009.00	CR Table 2.3	\$2,009.00

Stormwater

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	\$0.00	-	\$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	\$0.00	-	\$0.00

Levied Charges

Development Description	Water Supply	Sewerage	Transport	Parks & Land for Community Facilities	Stormwater	Total
Reconfiguring a Lot (2 into 15 lots)	\$0.00	\$0.00	\$43,380.00	\$36,162.00	\$0.00	\$79,542.00
Total	\$0.00	\$0.00	\$43,380.00	\$36,162.00	\$0.00	\$79,542.00

* In accordance with Section 3.3 of the Charges Resolution, the discount may not exceed the adopted charge. Any surplus discounts will not be refunded, except at South Burnett Regional Council's discretion.

INFORMATION NOTICE

Authority and Reasons for Charge	This Infrastructure Charges Notice has been given in accordance with section 119 of the <i>Planning Act 2016</i> to support the Local government's long-term infrastructure planning and financial sustainability.
Appeals	Pursuant to section 229 and Schedule 1 of the <i>Planning Act 2016</i> a person may appeal an Infrastructure Charges Notice. Attached is an extract from the <i>Planning Act 2016</i> that details your appeal rights.
Automatic Increase Provision of charge rate (\$)	An infrastructure charge levied by South Burnett Regional Council is to be increased by the difference between the Producer Price Index (PPI) applicable at the time the infrastructure charge was levied, and PPI applicable at the time of payment of the levied charge, adjusted by reference to the 3-yearly PPI average¹. If the levied charge is increased using the method described above, the charge payable is the amount equal to the sum of the charge as levied and the amount of the increase. However, the sum of the charge as levied and the amount of the increase is not to exceed the maximum adopted charge the Authority could have levied for the development at the time the charge is paid.
GST	The Federal Government has determined that contributions made by developers to Government for infrastructure and services under the <i>Planning Act 2016</i> are GST exempt.
Making a Payment	This Infrastructure Charges Notice cannot be used to pay your infrastructure charges. To pay the levied charge, you must request an Itemised Breakdown showing the total levied charge payable at the time of payment. An Itemised Breakdown must be presented at the time of payment. An Itemised Breakdown may be requested by emailing info@southburnett.qld.gov.au

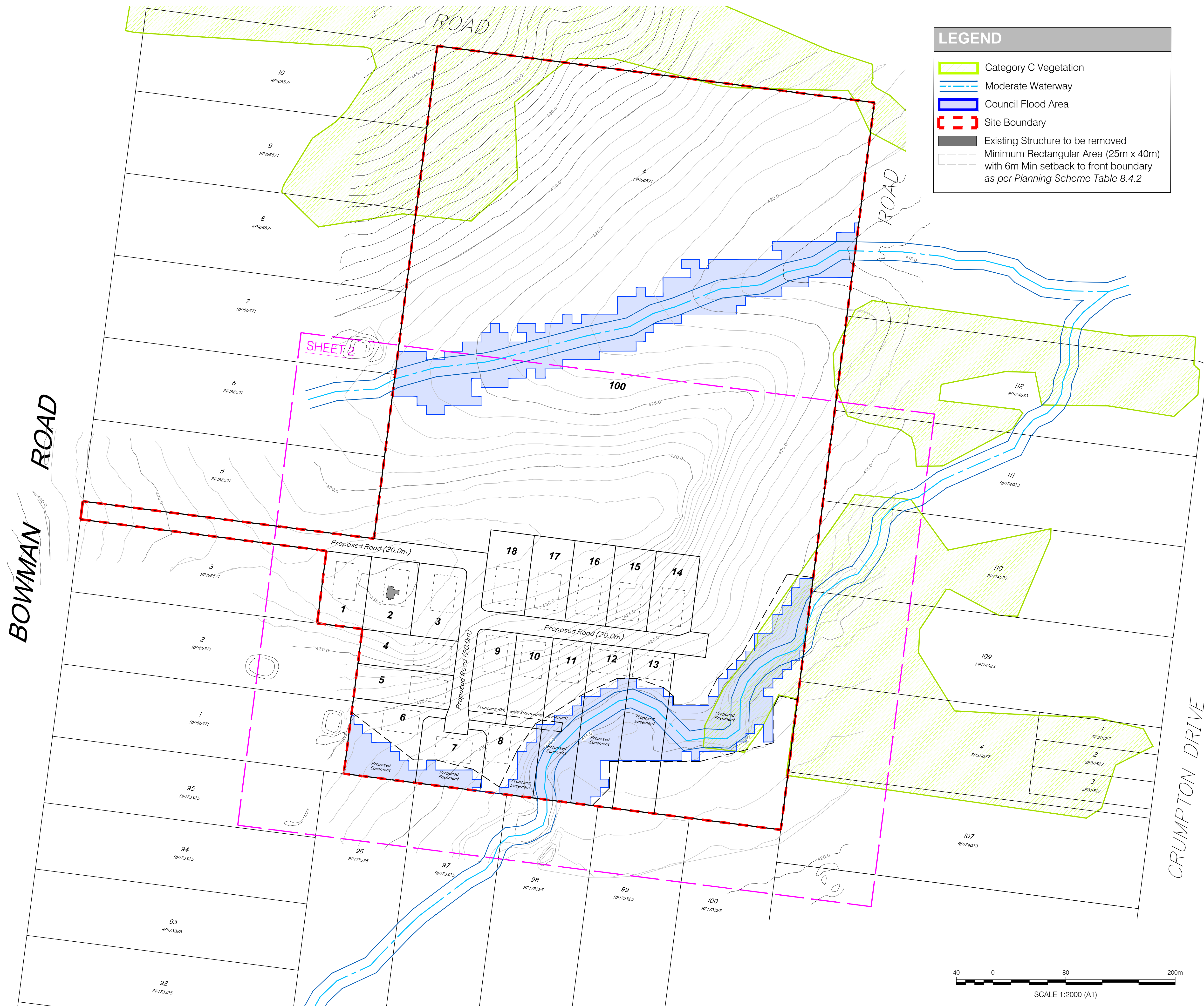
¹ 3-yearly PPI average is defined in section 114 of the *Planning Act 2016* and means the PPI adjusted according to the 3-year moving average quarterly percentage change between financial quarters. PPI Index is the producer price index for construction 6427.0 (ABS PPI) index number 3101 – Road and Bridge construction index for Queensland published by the Australian Bureau of Statistics.

Payment can be made at any of the following South Burnett Regional Council Offices:

- 69 Hart Street, Blackbutt, 4314;
- 45 Glendon Street, Kingaroy, 4610;
- 42 Stephens Street West, Murgon, 4605;
- 48 Drayton Street, Nanango, 4615;
- McKenzie Street, Wondai, 4606; or
- via other methods identified on the Itemised Breakdown.

Enquiries

Enquiries regarding this Infrastructure Charges Notice should be directed to the SOUTH BURNETT REGIONAL COUNCIL, Department of Planning and Land Management, during office hours, Monday to Friday by phoning (07) 4189 9100 or email at info@southburnett.qld.gov.au



CLIENT

PROJECT

LOCAL AUTHORITY

NOTES

6	JHK	02/08/2024	Amend Lot Bdys and Flood
5	CGW	5/3/2024	Amend Emt width
4	JHK	2/21/2024	Amended Issue
3	JHK	20/02/2024	Added STWTR EMT
2	JHK	24/01/2024	Amended Issue
#	DRAWN	DATE	COMMENT

TOTAL	19	1.792ha	N/A	N/A	39.9he

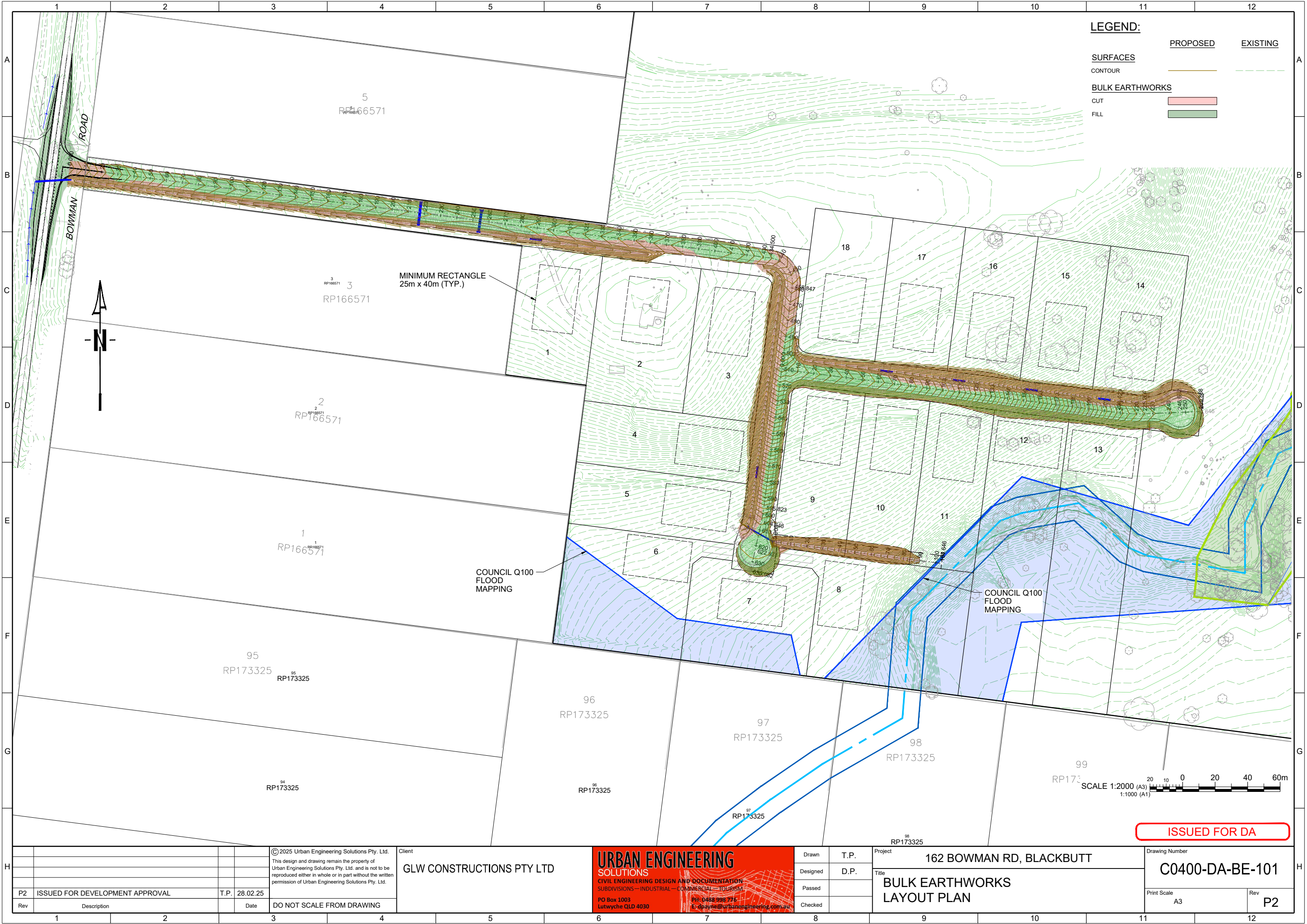


LEVEL DATUM		LiDAR Contours (22.01.2024)	
LEVEL ORIGIN		N/A	
CONTOUR INTERVAL		1.0m (LiDAR)	
DRAWN	JHK	DATE	02/08/2024
CHECKED	CGW	DATE	02/08/2024
APPROVED	CGW	DATE	02/08/2024
UDN		SHEET 1 OF 7	

BR.ID8285-000-9-6

NOTE: ALL DIMENSIONS AND AREAS ON THIS PLAN ARE SUBJECT TO SURVEY AND REQUIREMENTS FOR LODGEMENT OF SURVEY PLANS IN THE DEPARTMENT OF NATURAL RESOURCES, MINES AND ENERGY

©LANDPARTNERS 2024



© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	
P2	ISSUED FOR DEVELOPMENT APPROVAL
Rev	Description
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

Client	GLW CONSTRUCTIONS PTY LTD
DO NOT SCALE FROM DRAWING	

URBAN ENGINEERING SOLUTIONS

CIVIL ENGINEERING DESIGN AND DOCUMENTATION

SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM

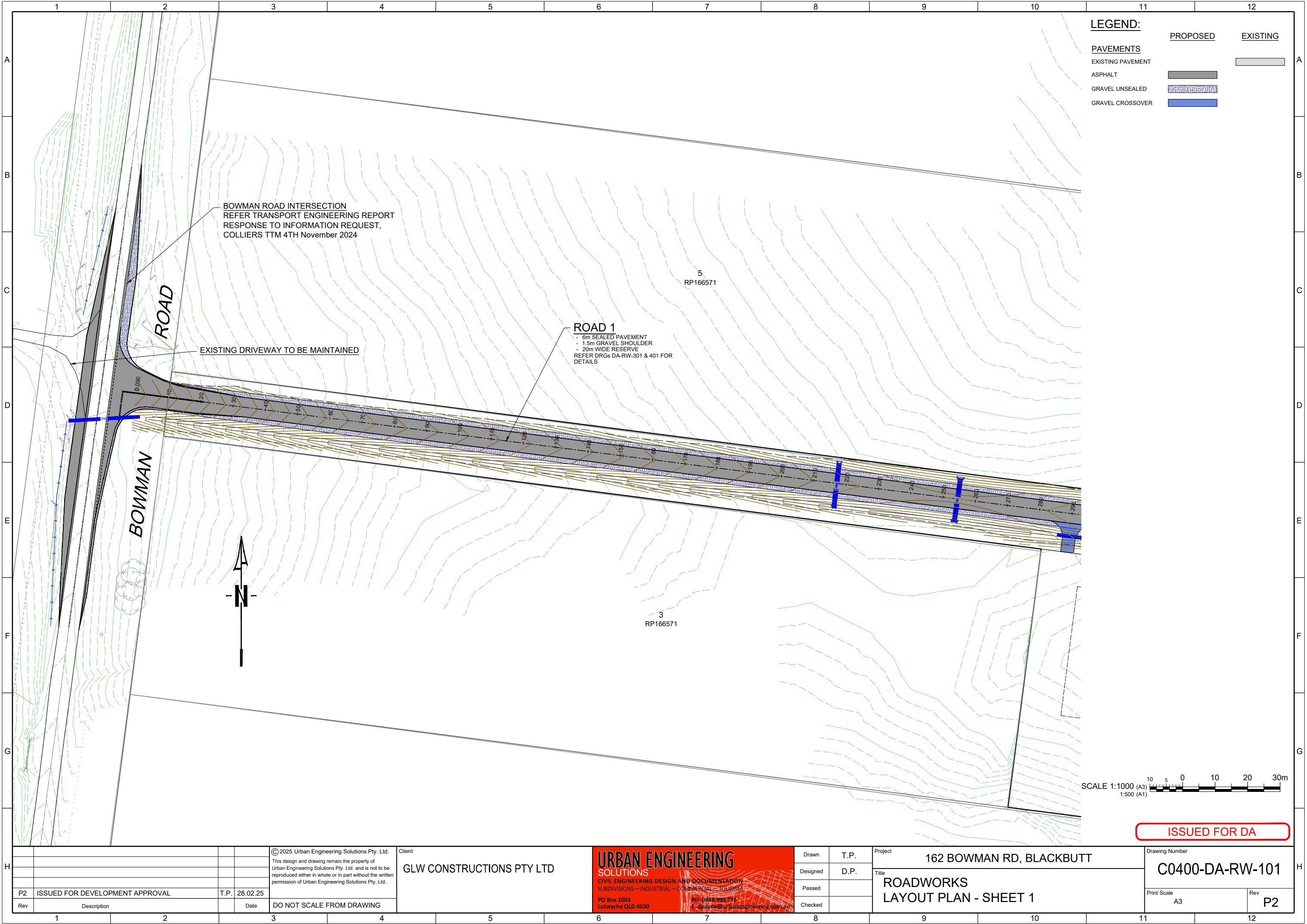
PO Box 1003
Lutwyche QLD 4030

PH: 0488 998 775
E: dwayne@urbanengineering.com.au

Drawn	T.P.
Designed	D.P.
Passed	
Checked	

Project	162 BOWMAN RD, BLACKBUTT
Title	BULK EARTHWORKS LAYOUT PLAN

Drawing Number	C0400-DA-BE-101
Print Scale	A3
Rev	P2



LEGEND:

PAVEMENTS

EXISTING PAVEMENT

ASPHALT

GRAVEL UNSEALED

GRAVEL CROSSOVER

PROPOSED

EXISTING

BOWMAN ROAD INTERSECTION
REFER TRANSPORT ENGINEERING REPORT
RESPONSE TO INFORMATION REQUEST,
COLLIERS TTM 4TH November 2024

EXISTING DRIVEWAY TO BE MAINTAINED

ROAD 1
- 6m SEALED PAVEMENT
- 1.5m GRAVEL SHOULDER
- 20m WIDE RESERVE
REFER DRGs DA-RW-301 & 401 FOR
DETAILS



SCALE 1:1000 (A3)
1:500 (A1)

ISSUED FOR DA

© 2025 Urban Engineering Solutions Pty. Ltd.
This design and drawing remain the property of
Urban Engineering Solutions Pty. Ltd. and is not to be
reproduced either in whole or in part without the written
permission of Urban Engineering Solutions Pty. Ltd.

Client
GLW CONSTRUCTIONS PTY LTD

URBAN ENGINEERING

SOLUTIONS

CIVIL ENGINEERING DESIGN AND DOCUMENTATION
SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM

PO Box 1003
Lutwyche QLD 4030

PH: 0488 998 775
E: d@urbanengineering.com.au

Drawn	T.P.
Designed	D.P.
Passed	
Checked	

Project	162 BOWMAN RD, BLACKBUTT
Title	ROADWORKS LAYOUT PLAN - SHEET 1

Drawing Number	C0400-DA-RW-101
Print Scale	A3
Rev	P2



LEGEND:

PAVEMENTS

EXISTING PAVEMENT

ASPHALT

GRAVEL UNSEALED

GRAVEL CROSSOVER

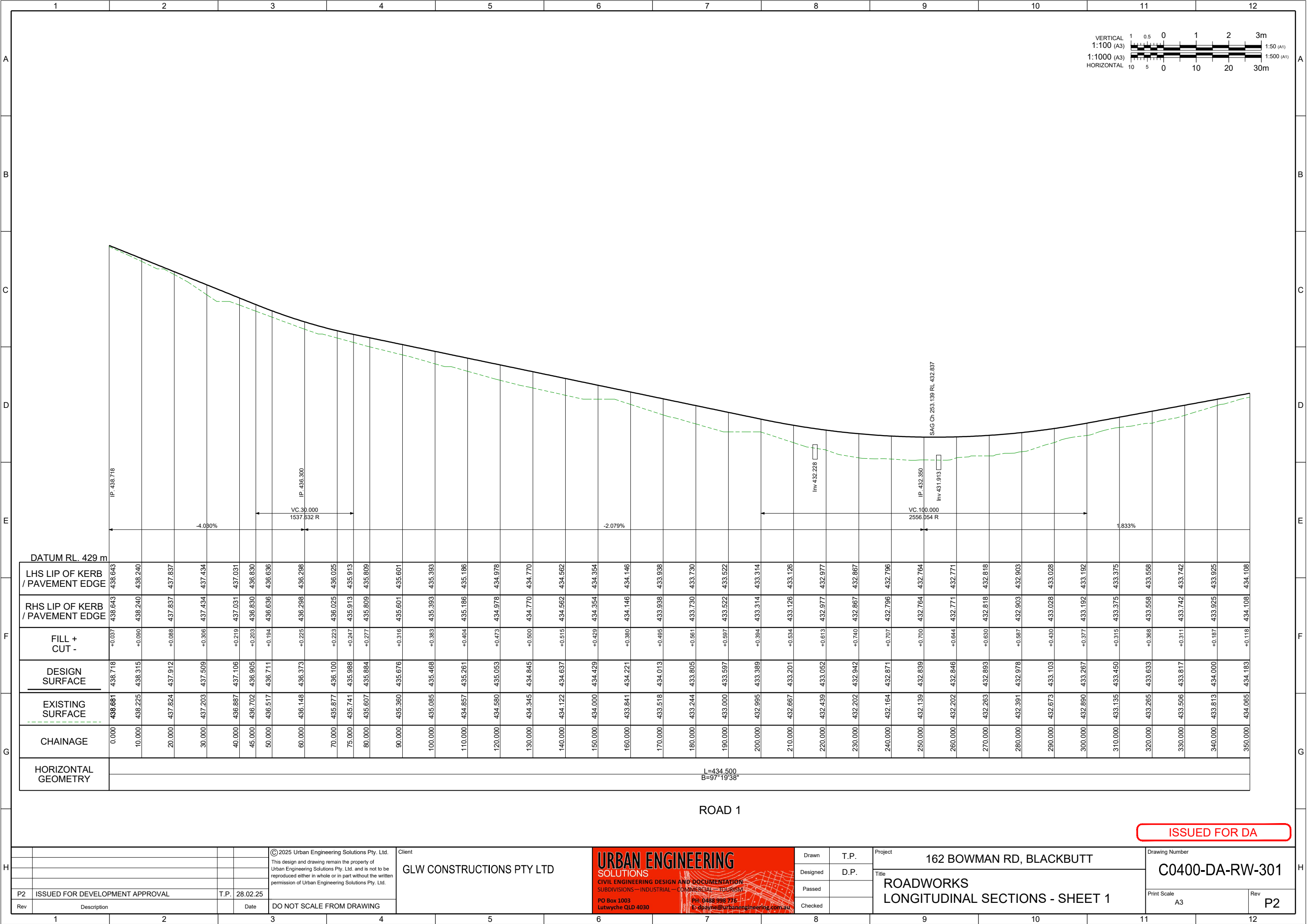
PROPOSED

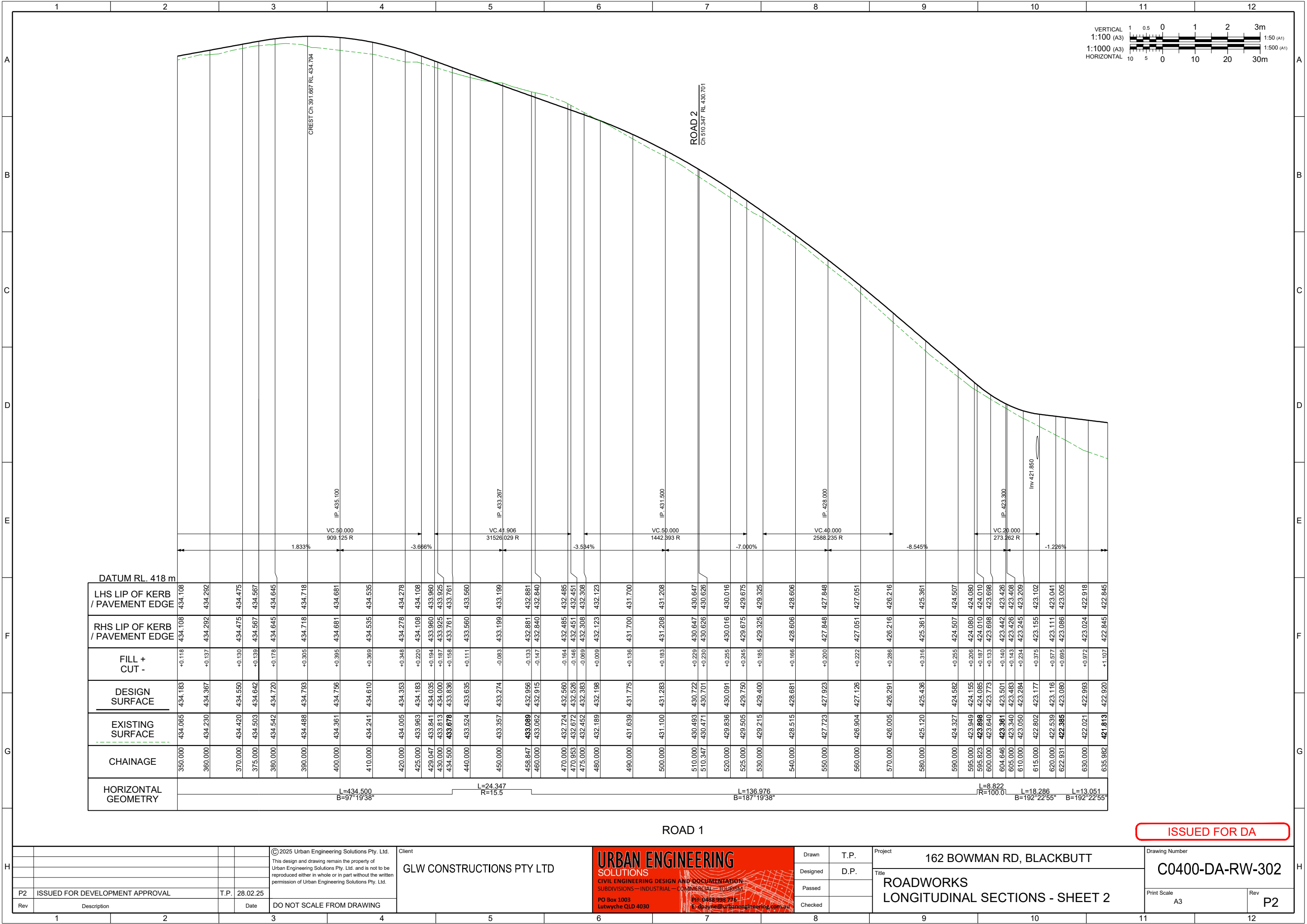
EXISTING



ISSUED FOR DA

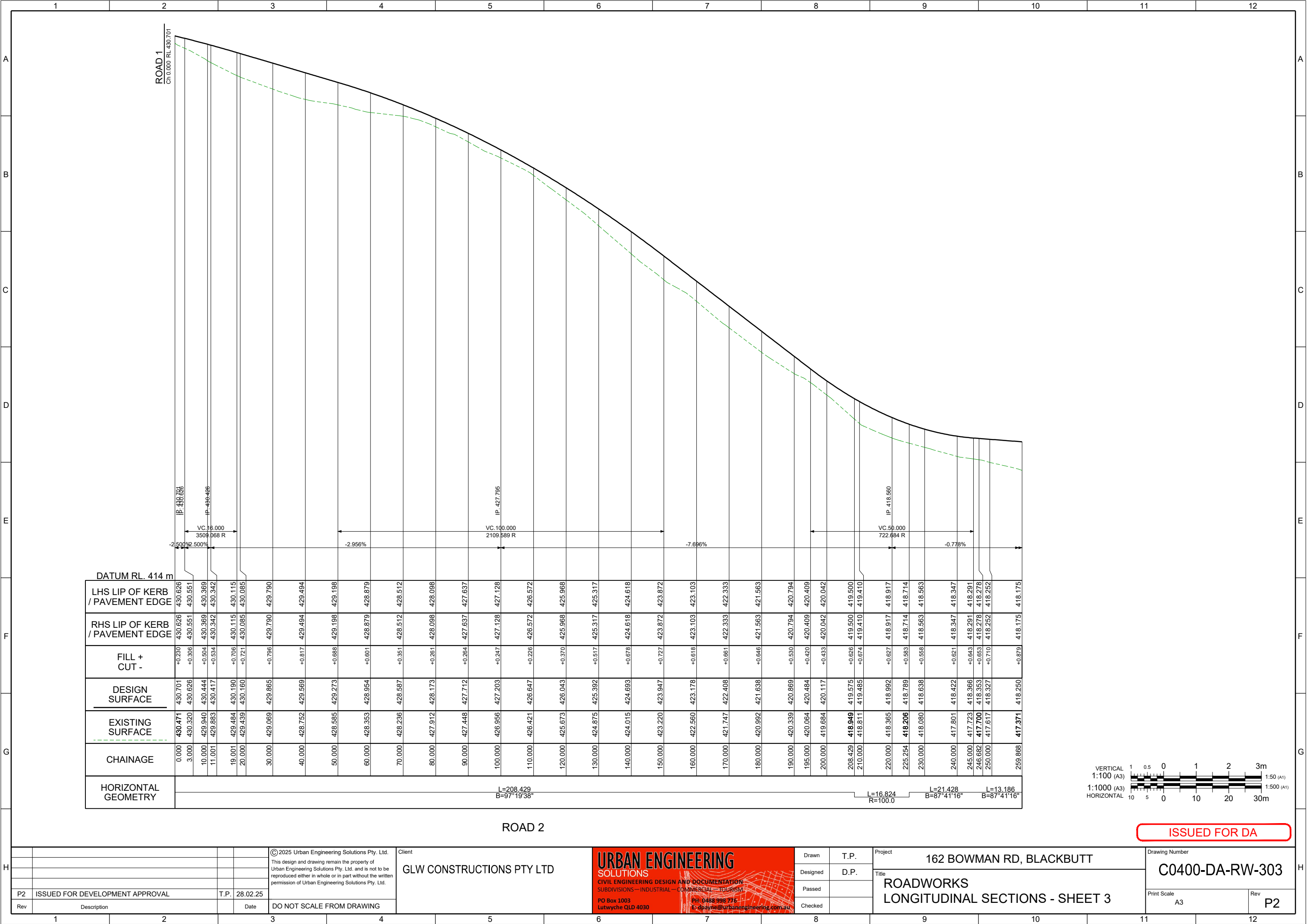
H						© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	Client GLW CONSTRUCTIONS PTY LTD	 URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM PO Box 1003 Lutwyche QLD 4030 PH: 0488 998 775 E: d@urbanengineering.com.au	Drawn	T.P.	Project 162 BOWMAN RD, BLACKBUTT	Drawing Number C0400-DA-RW-102
						Designed	D.P.		Title ROADWORKS LAYOUT PLAN - SHEET 2			
						Passed						
						Checked						
	P2	ISSUED FOR DEVELOPMENT APPROVAL	T.P.	28.02.25								
Rev	Description	Date	DO NOT SCALE FROM DRAWING									
	1	2	3	4	5	6	7	8	9	10	11	12

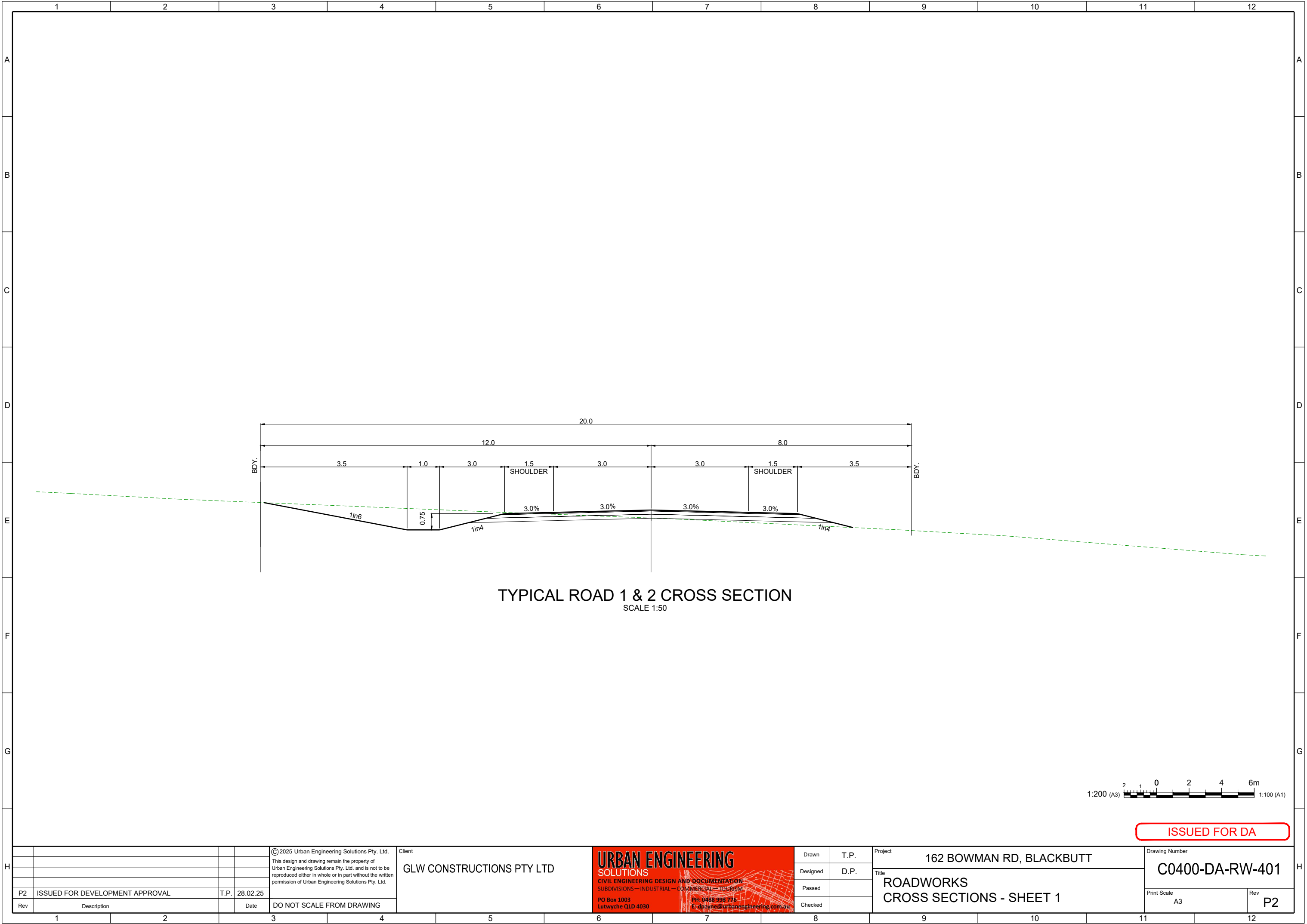




ISSUED FOR DA

H				© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	Client	URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS — INDUSTRIAL — COMMERCIAL — TOURISM PO Box 1003 Lutwyche QLD 4030 PH 0488 998 776 E doayne@urbanengineering.com.au	Drawn	T.P.	Project 162 BOWMAN RD, BLACKBUTT	Drawing Number			
				GLW CONSTRUCTIONS PTY LTD	Designed		D.P.	Title ROADWORKS LONGITUDINAL SECTIONS - SHEET 2		C0400-DA-RW-302			
	P2	ISSUED FOR DEVELOPMENT APPROVAL	T.P.	28.02.25			Passed				Print Scale	Rev	
	Rev	Description		Date	DO NOT SCALE FROM DRAWING		Checked				A3	P2	
	1	2	3	4	5	6	7	8	9	10	11	12	H



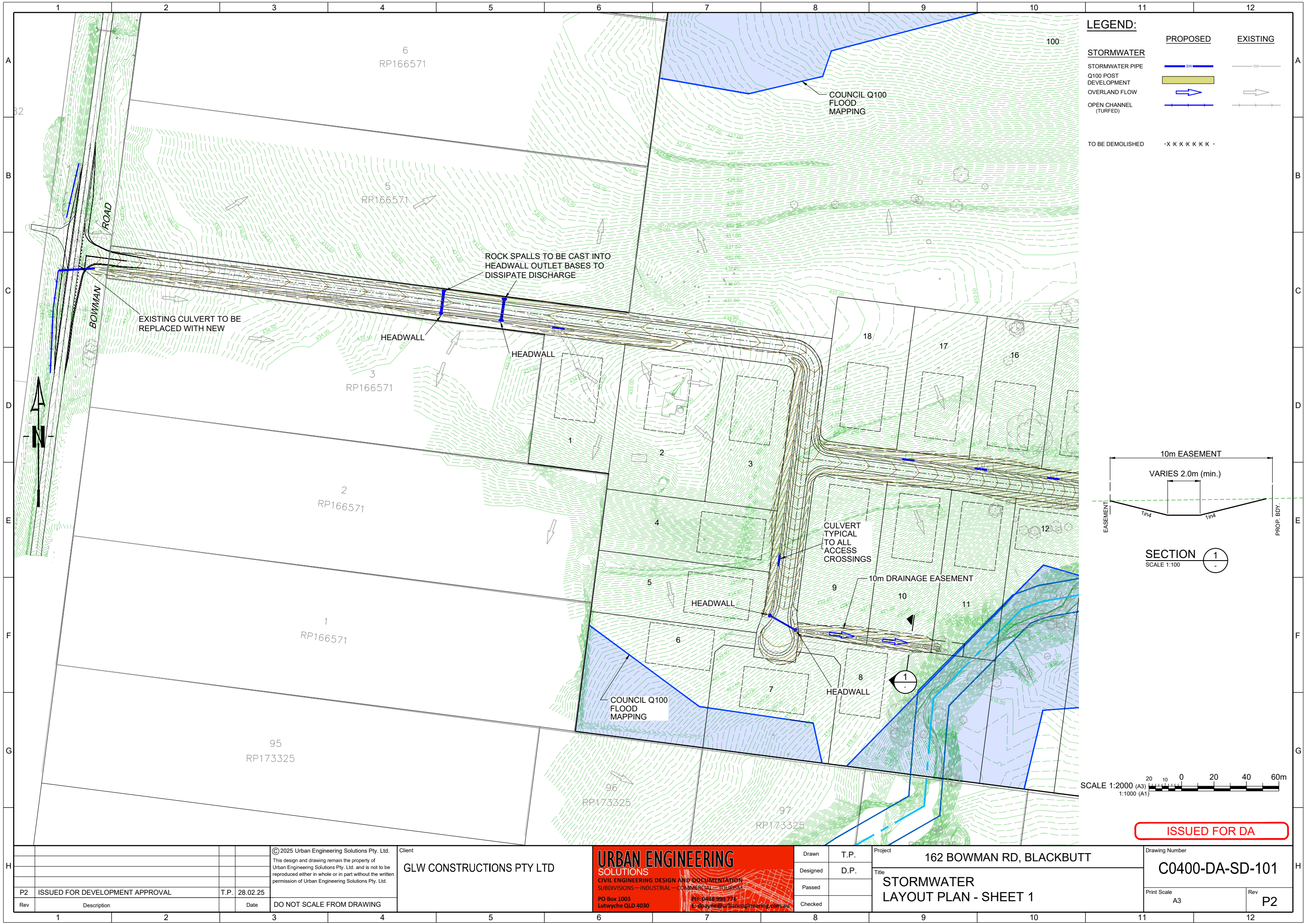


TYPICAL ROAD 1 & 2 CROSS SECTION
SCALE 1:50



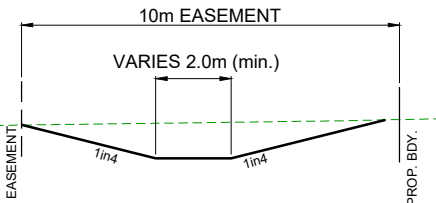
ISSUED FOR DA

				© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.		Client GLW CONSTRUCTIONS PTY LTD				Drawn T.P.		Project 162 BOWMAN RD, BLACKBUTT		Drawing Number C0400-DA-RW-401	
P2		ISSUED FOR DEVELOPMENT APPROVAL		T.P.		28.02.25				Designed D.P.		Title ROADWORKS CROSS SECTIONS - SHEET 1		Print Scale A3	
Rev		Description				Date		DO NOT SCALE FROM DRAWING		Checked				Rev P2	



LEGEND:

	PROPOSED	EXISTING
STORMWATER		
STORMWATER PIPE	— SW —	— SW —
Q100 POST	■	■
DEVELOPMENT	→	→
OVERLAND FLOW	→	→
OPEN CHANNEL (TURFED)	→	→
TO BE DEMOLISHED	· X X X X X X ·	

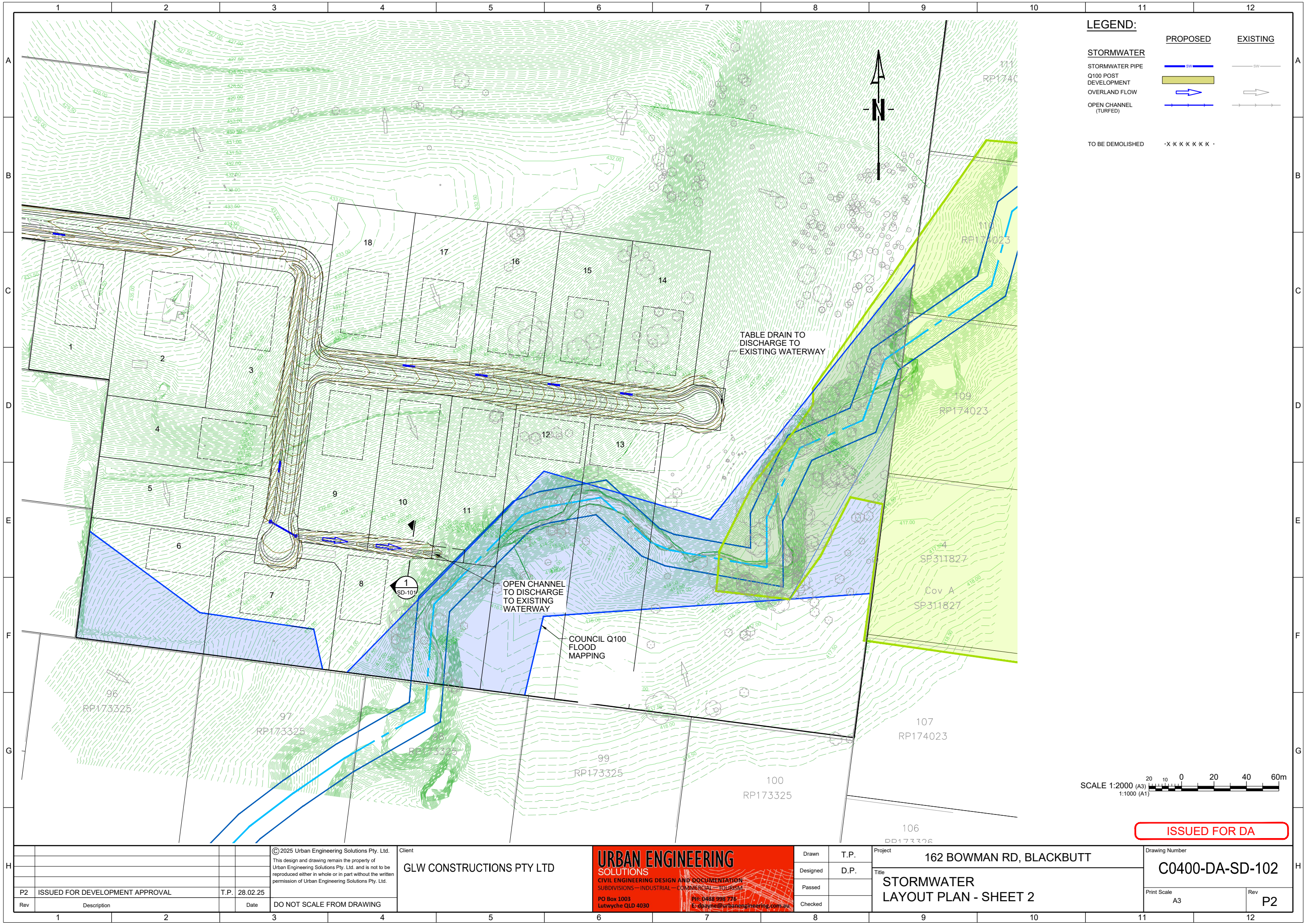


SECTION 1
SCALE 1:100



ISSUED FOR DA

© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.			Client GLW CONSTRUCTIONS PTY LTD			URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM PO Box 1003 Lutwyche QLD 4030 PH: 0488 998 775 E: dwayne@urbanengineering.com.au			Project 162 BOWMAN RD, BLACKBUTT			Drawing Number C0400-DA-SD-101		
P2 ISSUED FOR DEVELOPMENT APPROVAL			T.P. 28.02.25			Title STORMWATER LAYOUT PLAN - SHEET 1			Print Scale A3			Rev P2		
Rev			Description			Date			DO NOT SCALE FROM DRAWING					
1			2			3			4			5		
6			7			8			9			10		
11			12											



Appendix E:
Bushfire Management Plan
Prepared by Wollemi Eco-Logical Pty Ltd



Bushfire Management Plan

162 Bowman Road, Blackbutt North

Lot 4 on RP166571

South Burnett Regional Council, Qld

Prepared by:

Wollemi Eco-Logical Pty Ltd

PO BOX 123

WAMURAN QLD 4512

Project Reference: **24120**

Version / Date: **18 March 2024**

Author: **Scott Edwards**

Prepared for:

GLW Constructions Pty Ltd

501/53A Newstead Tce

Newstead Q 4006



Proviso

This report has been prepared for the sole use of [GLW Constructions Pty Ltd](#) for the purposes for which it is provided. No part of this report, its attachments or appendices may be reproduced or distributed to third parties, not connected with the delivery of the purpose, by or on behalf of the client, without the express written consent of Wollemi Eco-Logical.

It should be noted that the recommendations within this BMP have been formulated based on site conditions at the time of writing and utilising current best-practise hazard and impact assessment methodologies, and have been developed to reduce the potential severity of impacts on the proposed development in the event of a bushfire emergency rather than prevent impacts altogether. No guarantee is provided or assumed that the area will not be affected by bushfire at some time.



Contents

1.0 INTRODUCTION.....	4
1.1 Suitably Qualified Person	4
1.2 Subject Site	5
1.3 Proposed Development	5
2.0 Bushfire Hazard Assessment	7
2.1 Current Bushfire Hazard Mapping	7
2.2 On-Site Hazard Assessment	8
2.2.1 Site Inspection & Findings	9
2.2.2 Vegetation Classification	10
2.2.3 Potentially Hazardous Vegetation	12
3.0 Bushfire Risk Mitigation Measures	13
3.1 Asset Protection Zones	13
3.1.1 Performance Outcomes	13
3.2 Bushfire Hazard & APZ Modelling.....	14
3.2.1 APZ & BAL Conclusions.....	14
3.3 Landscaping and Vegetation Management	14
3.4 Emergency Access & Egress.....	15
3.5 Water Availability for Fire-Fighting Purposes	15
4.0 Recommendations and Conclusions	17



1.0 INTRODUCTION

Wollemi Eco-Logical has been commissioned to undertake a Site-Specific Bushfire Hazard Assessment and to prepare a Bushfire Management Plan (BMP) for a proposed development on the subject site (**Figure 1**).

This report aims to assess the Bushfire Hazard and risk to the proposed development with regard to: the Queensland State Government Single State Planning Policy - Part E (SPP 2017); & the Bushfire Resilient Communities Technical Reference Guide (QFES, 2019); the *Australian Standard – Construction in Bushfire Prone Areas (AS3959-2018)*; and the *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay*; and. These references, detail State and Council requirements and guidelines, with regard to Bushfire Hazard Assessment and Risk Mitigation, for the purpose of informing suitability of development applications.

The potential Bushfire Hazard acting on the proposed development, is informed by vegetation composition and extent, slope and industry standard fuel load classifications, and assessment methodologies. Bushfire Risk Mitigation Measures are subsequently detailed in order to demonstrate compliance with Councils Planning Scheme Performance Outcomes, and to inform the safety of people and property in the event of a bushfire emergency.

1.1 Suitably Qualified Person

This BMP has been prepared by Scott Edwards, a suitably qualified and experienced Bushfire Consultant with over 23 years of relevant experience in Environmental Management & Bushfire Planning and Design experience specific to South East Queensland. Scott is the Managing Director of Wollemi Eco-Logical Pty Ltd, and has Degree qualifications in Environmental Science supported by diverse experience in Ecological Assessment, Land Management and Environmental Resource Management consistent with the requirements for suitably qualified persons as per the *SPP State Planning Policy (SPP) – Natural Hazards, Risk & Resilience – Bushfire (DSDMIP 2019)* and the supporting document *Bushfire Resilient Communities Technical Reference Guide (QFES, 2019)*.

1.2 Subject Site

Address:	162 Bowman Road, Blackbutt North.
Titles:	Lot 4 on RP166571
Local Government:	South Burnett Regional Council
Total Area:	399,400m ²
Zoning:	Rural Residential
Topography:	The proposed development footprint has an effective downslope to the southeast at up to ~6 degrees, from the relative high point associated with the existing dwelling.
Current Use:	Established rural land uses.



Figure 1: Subject Site

1.3 Proposed Development

It is understood a Reconfiguration of a Lot (1 into 18) is proposed for rural residential land uses on the subject site. The proposed development location is represented in **Figure 2**.

[illegible]

www.wollemi-eco.com.au



2.0 Bushfire Hazard Assessment

The prevalence of Bushfire in the landscape is dependent on vegetation type and fuel load available to sustain a bushfire. Bushfire intensity and rate of spread are influenced by fuel load, (including type and extent of vegetation), topography and to a lesser extent aspect. Land uses surrounding potentially hazardous vegetation, and consequently the connectivity of vegetation communities, all influence the potential for a bushfire to develop and be sustained.

2.1 Current Bushfire Hazard Mapping

A review of State Bushfire Hazard Overlay Mapping, as maintained by the Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP), revealed the site is within a potential bushfire hazard area (**Figure 3**).

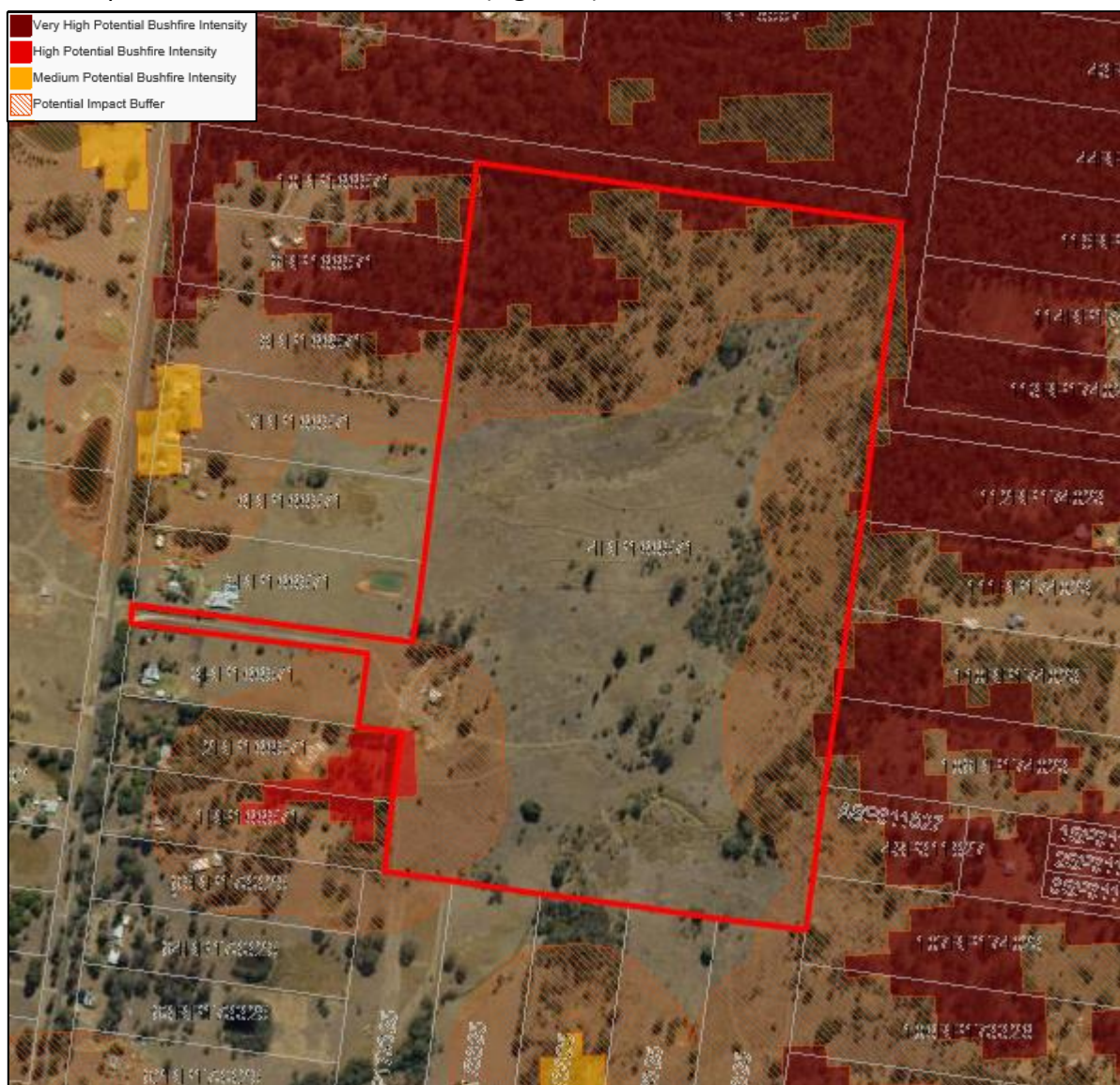


Figure 3: State Bushfire Hazard Overlay Mapping



To verify the Council Bushfire Hazard mapping, a Site-Specific Bushfire Hazard Assessment is triggered, and is addressed below.

2.2 On-Site Hazard Assessment

This site-specific Bushfire Hazard Assessment, Classification, Fire-line intensity and Management Plan, references: *State Planning Policy (SPP) – Natural Hazards, Risk & Resilience – Bushfire* (DSDMIP 2019); *A new methodology for state-wide mapping of bushfire prone areas in Queensland*. CSIRO, Australia. (2014)¹; the Bushfire Resilient Communities Technical Reference Guide (QFES, 2019)²; the Bushfire Attack Level (BAL), Building setback requirements and Construction Standards as per the Australian Standard AS 3959- 2018 - *Construction of buildings in bushfire prone areas*³; and current industry best-practice assessment and Risk Mitigation Measures in compliance with the SPP Assessment Benchmarks where triggered. Additionally, this BMP will address the requirements of the proposed development against the *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay*, with regard to the proposed development.

Vegetation composition and extent, slope and industry standard Fuel Load calculations will be used to determine the Potential Bushfire Hazard acting on the proposed development.

Two key features of the landscape strongly contribute towards the behaviour of bushfires:

1. Vegetation community structure/composition

The structure and composition of vegetation communities determine the rate at which dry fuel accumulates. Some vegetation communities protect fuel from drying out in all but extreme bushfire seasons, making the vegetation susceptible to very destructive bushfires, whilst other vegetation communities may expose fuels to drying and therefore be frequently available for burning.

2. Slope

As a general rule, bushfire intensity and the rate of spread of bushfires rises in proportion to slope, with bushfires burning faster uphill and slower downhill. Studies have shown that the speed and intensity of fires moving up slopes generally doubles every 10 degrees of slope. Steeper slopes also increase the difficulty of constructing ring roads and firebreaks and limit the access for emergency crews.

¹ This methodology updates the calculations apparent in the Australian Standard AS3959: 2018 based on current fire weather modelling and includes detailed Vegetation Hazard Classes, used to inform State-wide Mapping.

² The Bushfire Resilient Communities Technical Reference Guide (QFES, 2019), supports the SPP 2017 by providing technical guidance for bushfire hazard assessment and bushfire management Planning.

³ The Australian Standard AS3959: 2018 defines Fire Danger Index as the chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long and short term drought effects.



Several investigative tools were utilised to determine the site specific bushfire hazard risk including:

- A review of local aerial photography;
- A review of site and local topography;
- Review of site development plan;
- A review of DERM Regional Ecosystem Mapping; and
- An inspection of the site.

The risk assessment comprised an analysis of the site and the surrounding lands (i.e. within 100m) to determine characteristic bushfire risk based on Vegetation Hazard Classifications for vegetation within 100m of the site.

2.2.1 Site Inspection & Findings

A site inspection was completed on the 15th March 2024 to verify the bushfire hazard mapping over the site and surrounds. All vegetated areas of the site and within 100m of the proposed development site were assessed during the site investigations.

A summary of the findings of the site inspection is provided:

1. Site access is Bowman Road, a formed public bitumen roadway, from the west of the site via an existing driveway.
2. The subject site contains established rural land uses and associated infrastructure.
3. The proposed development footprint has an effective downslope to the southeast at up to ~6 degrees, from the relative high point associated with the existing dwelling.
4. Regulated Vegetation as maintained by Qld Department of Natural Resources & Mines (DNRM), maps patches of the eastern site extent and adjacent, and to the north of the site as containing Regional Ecosystem (RE) 12.5.6 (dominant) and (Refer **Figure 4**), described as '*Eucalyptus siderophloia*, *E. propinqua*, *E. microcorys* and/or *E. pilularis* open forest on remnant Tertiary surfaces. Usually deep red soils'(Refer **Figure 4**).

Site assessment observed vegetation to the east of the proposed development, within the subject site, contains a narrow corridor of woodland associated with an existing water way corridor. Additionally, a small patch of fragmented regrowth vegetation is apparent to the northeast on the subject site. The balance of the site contains scattered trees associated with grassland within 100m of the proposed development.

5. Adjacent vegetation to the south of the site contains small, <1ha patches of woodland, associated with large tracts of grassland communities and rural residential land uses.
6. Adjacent vegetation to the west consists of scattered treed and narrow small patches of vegetation associated with established rural residential land uses.

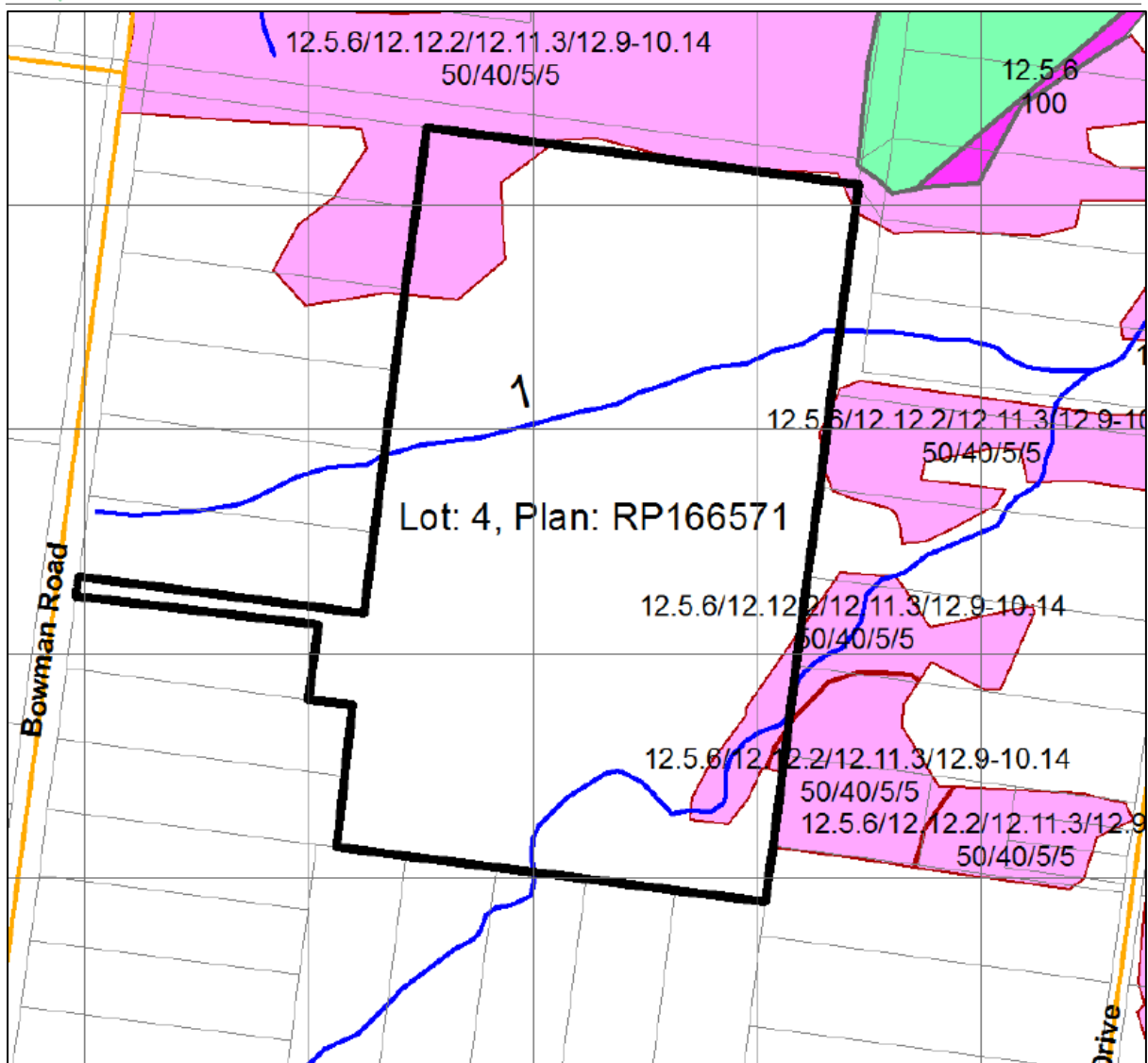


Figure 4: Regional Ecosystem Mapping

2.2.2 Vegetation Classification

The structure and composition of vegetation communities determine the rate at which dry fuel accumulates. Some vegetation communities protect fuel from drying out in all but extreme bushfire seasons, making the vegetation susceptible to very destructive bushfires, whilst other vegetation communities may expose fuels to drying and therefore be frequently available for burning.

Vegetation communities surrounding the proposed development were referenced against mapped RE's in the general vicinity, and Vegetation Hazard Classifications and Potential Fire-line Intensity calculations as detailed in Leonard et.al. (2014) & the BRCTRG 2019. Potential Fuel Load calculations were undertaken on site to validate vegetation classifications and subsequently potential bushfire hazard to the proposed development.

Vegetation ecotones result in varying fuel load availability. Subsequently, vegetation communities have been referenced against predominant vegetation with highest fuel loads with regard to potential sources of Bushfire Hazard posed to the proposed development. Observed vegetation communities are described in **Table 1**.

Patch Filtering has been applied as per BRCTRG 2019, which specifies in Section 4.2.6, Step 2 *‘downgrade the effective fuel load of continuous vegetation patches measuring (a) 1 to 2 hectares (by 66 %), and (b) 2-3 hectare patches (by 50 %) if the patch is surrounded by either non-continuous fuel or a low-hazard vegetation of land use type, and if the patch is further than 100m from and any other continuous-fuel vegetation patch greater than 2 hectares’*.

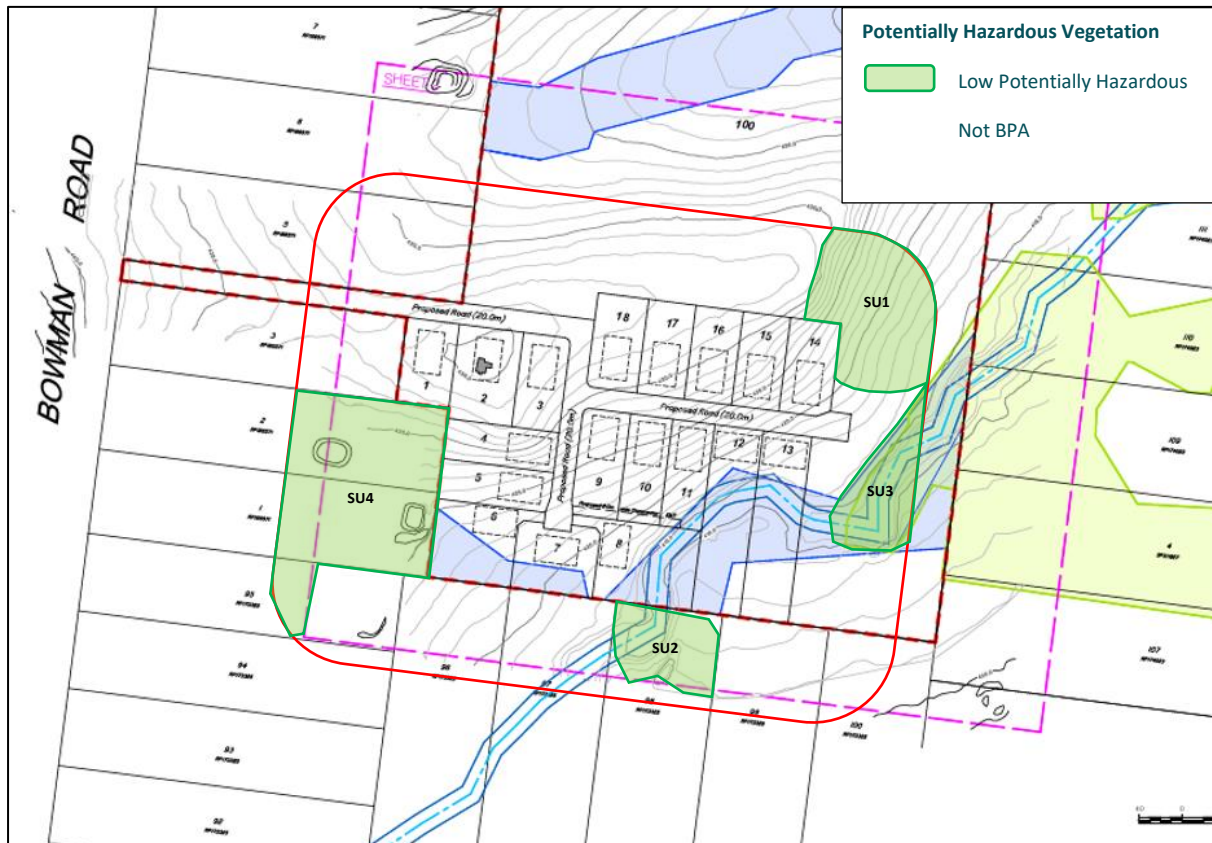
Corridor filtering has been applied as per BRCTRG 2019, which specifies in Section 4.2.6, Step 3: To *‘remove narrow corridors and areas of continuous fuel <50m in width that are not sufficiently wide to support a fully developed flame front. These areas are less likely to ignite due to their disconnection with fuels that can carry running fire fronts...is likely to result in fireline intensity of <4000 kW/m, and this presents a low hazard to land use planning and development assessment’*.

Table 1 Vegetation Hazard Classifications

Direction of Bushfire Hazard	Vegetation Description (Sub-Unit – if relevant)	DNRM Regional Ecosystem	Vegetation Hazard Class (QFES, 2019)	Potential Fuel Load (t/ha)	Potential Fire-line Intensity (kw/m)	Potential Bushfire Hazard
North subject site) through northwest	Scattered trees with associated grassland	NA	Class 40.4 Continuous low grass or tree cover	5t/ha	<1000	Low
Northeast	Scattered trees with associated grassland (SU1)	NA	Class 40.4 Continuous low grass or tree cover	5t/ha	<4000	Low
South (central)	Small (<1ha) isolated patches of woodland (SU2)	NA	Class 9.2 Moist to dry eucalypt woodland on coastal lowlands & ranges	6.8t/ha (patch filtering applied)	<4000	Low
South (Balance)	Scattered trees and grassland	NA	Class 40.4 Continuous low grass or tree cover	5t/ha	<4000	Low
East (subject site)	Narrow (<50m wide) corridor of woodland associated with waterway (SU3)	RE:12.5.6	Class 9.1 Moist to dry eucalypt open forests on coastal lowlands & ranges	Corridor Filtering applied	<4000	Low
West	Scattered, vegetation & managed land uses (SU4)	NA	Class 41.4 Discontinuous low grass or tree cover	3t/ha	<4000	Low

2.2.3 Potentially Hazardous Vegetation

Based on the above assessment, vegetation within 100m of the proposed development footprint in all directions has been classified as posing a low potential bushfire hazard to the proposed development. Consequently, the proposed development is not considered to be in a bushfire prone area. **N.B.** Where revegetation of the subject site are implemented, the above determinations is recommended to be recalculated.



The following section details Bushfire Risk Mitigation measures to be implemented on the site to address the Bushfire Hazard and compliance requirements acting on the proposed development.



3.0 Bushfire Risk Mitigation Measures

The following section describes Bushfire Risk Mitigation measures, recommended to be utilised at the subject site to reduce the risk of Bushfire impacting on people and property.

The scope of proposed Bushfire Risk Mitigation Measures have been drawn from the following sources:

- the *Queensland State Government Single State Planning Policy - Part E (SPP 2017)*;
- the *Bushfire Resilient Communities Technical Reference Guide (QFES, 2019)*;
- the *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay*; and
- the Australian Standard (AS3959:2018) - *Construction of buildings in bushfire prone areas*.

The intent of the above legislation is to protect people and premises in the event of a bushfire emergency, through achieving acceptable Performance Outcomes for the development given the identified bushfire hazard. Performance Outcomes are generally achieved by appropriate separation of a development from bushfire hazard, appropriate access for fire-fighting vehicles, and appropriate construction standards of buildings. Additional factors are detailed where considered appropriate.

3.1 Asset Protection Zones

Asset protection zones (APZ's) provide a defensive tool to assist in the reduction of potential bushfire impact to people and property situated in bushfire prone areas. APZ's are the most strategically valuable defence against radiant heat and flame, and to a lesser extent, embers.

Whilst APZ's should prevent buildings from being subjected to direct contact from flames, and reduced levels of radiant heat in the event of a bushfire, building construction standards will also be key to ensuring the performance of buildings subjected to ember attack. Bushfire Attack Level for the proposed development is determined in **Section 3.2**.

3.1.1 Performance Outcomes

APZ and setback distances have not been prescribed in the SPP 2017. The SPP refers to 'provision of appropriate defensible space between dwellings and medium or above Bushfire Hazard'. The *Bushfire Resilient Communities Technical Reference Guide (QFES, 2019)*, refers to determining APZ's based on achieving a maximum 29kW/m² radiant heat flux exposure. This is achieved by using either the *Method 2 Bushfire Attack Level Assessment as per the AS3959:2018 for Construction of Buildings in Bushfire Prone Areas* or *Bushfire Asset Protection Zone Width Calculator (QFES, 2019)*, which uses the calculations underpinned by the AS3959:2018 calculation.



The *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay (PO19)* prescribes: *‘Development is not placed at unacceptable risk from bushfire, does not increase the extent or severity of bushfire and maintains the safety of people and property from bushfire’.*

Consequently, and as per the *Bushfire Resilient Communities Technical Reference Guide* (QFES, 2019), the required setbacks (APZ’s) detailed in the AS3959:2018, with regard the minimum distance required to achieve achieving a maximum 29kW/m² radiant heat flux exposure for the proposed development, are considered appropriate to inform the identified bushfire hazard to the proposed development and consequently meeting the intent of Councils Planning Scheme and State Methodologies.

3.2 Bushfire Hazard & APZ Modelling

The Building Code of Australia (BCA) requires all Class 1-3, and Class 10a structures associated with a dwelling, to be constructed in accordance with the Australian Standard 3959 (2018) - *Construction of buildings in bushfire-prone areas* (AS 3959-2018). This Standard provides minimum construction standards for new dwellings in designated Bushfire Prone Areas.

The construction standards are intended to improve the performance of buildings subjected to burning debris, radiant heat or flame contact. The AS3959:2018 methodology prescribes Bushfire Attack Levels (BAL’s) to the facades of proposed buildings to which corresponding construction safety standards are applied. AS3959-2018 defines Bushfire Attack Levels as:

‘A means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared, which is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.’

3.2.1 APZ & BAL Conclusions

Based on the above assessment, the proposed development is not considered to be in a bushfire prone area. Consequently, no APZ’s are applicable to the proposed development and BAL Low is applicable to future proposed dwellings.

N.B. Where revegetation of the subject site are implemented, the above determinations is recommended to be recalculated.

3.3 Landscaping and Vegetation Management

The landscaping and ongoing management of vegetation in areas susceptible to Bushfire Hazard is an important tool to mitigate bushfire risk. The previously detailed Low potential bushfire hazard should prevent buildings from being subjected to direct contact from flames, and reduced levels of radiant heat in the event of a bushfire.



Landscaping and vegetation retention within the site should consider the following guidelines:

- Immediately adjacent proposed buildings should either be fully cleared and regularly maintained (i.e. lawn) or retain trees as isolated individuals, small isolated clumps or islands and provide a tree canopy cover of less than 15% and tree canopies should be located greater than 2 metres from any part of the roofline of a building. Any trees should have lower limbs removed up to a height of 2 metres above the ground.
- Any landscaping performed on site shall maintain the site effectively free of available fuel. Landscaping plants may be used in this area so long as they are selected for their low combustibility, by virtue of high moisture content, low volatile oil content, high leaf mineral levels, large fleshy leaves, and absence of shedding bark. They should be placed so as to not provide either vertical or horizontal connectedness of plant material, and avoid overhanging rooflines or contact with flammable parts of buildings. Any planted trees should be of species which grow to over 2m, to maintain separation between lower canopy and the ground.
- Turf is to be maintained regularly to reduce the potential for long grass to fuel an advancing fire toward buildings.

3.4 Emergency Access & Egress

New developments in bushfire prone areas should be serviced by safe access/exit points for both residents and emergency services personnel in the event of an emergency. The *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay* does not prescribe access and egress requirements.

The proposed development is understood to be serviced by a new 20m wide road connecting the site to Bowman Road to the immediate west. Given the above low potential bushfire hazard to the proposed development, this road is considered appropriate to accommodate a turning area for fire-fighting appliances in accordance with *Qld Fire & Emergency Services (QFES) Fire Hydrant and Vehicle Access Guideline* and subsequently access and egress is considered appropriate to service the site in the unlikely event of a bushfire emergency.

3.5 Water Availability for Fire-Fighting Purposes

The *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay* does not prescribe requirements for water supply for fire-fighting purposes. PO19 simply prescribes ‘*Development is not placed at unacceptable risk from bushfire, does not increase the extent or severity of bushfire and maintains the safety of people and property from bushfire*’. Acceptable Outcome AO19.3 refers to provision of ‘*one tank within 100m of each residential building that has: (i) fire brigade tank fittings; and (ii) 25,000 litres dedicated for fire fighting purposes*’. The development must maintain the safety of people and property by ensuring that an adequate water supply for fire fighting purposes is provided. The



proposed development will be on tank water, and it is subsequently recommended the following be included for each Lot:

- *a dedicated fire fighting water storage must have a volume of water not less than 25,000 litres for each building, be provided within 10m of each building and be (a) a separate tank that is either below ground or of non-flammable construction or (b) a reserve section in the bottom part of the main water supply tank that is either below ground level or of non-flammable construction'.*
- *all fire-fighting water storage tanks, including domestic water supply tanks, are fitted with the standard rural fire brigade fittings' being '50mm outlet fitted with 50mm ball valve and 50mm male camlock (standard rural fire brigade fitting).*
- *water supply provided for fire fighting purposes is safely located and accessible for fire-fighting purposes at all times' being 'at least 9m from any potential fire hazards such as venting gas bottles and combustible structures', and*
- *have a safe assessable hard stand area capable of accommodating a fire fighting vehicle, not more than 6m from the water supply outlet'.*

With the above recommendations being met, the proposed development will be considered to be appropriately services in the event of a bushfire emergency.



4.0 Recommendations and Conclusions

This report details the assessment of Bushfire Hazard and risk mitigation measures acting on the proposed development, with consideration to the requirements of: the *Queensland State Government Single State Planning Policy - Part E* (SPP 2017); the *Bushfire Resilient Communities Technical Reference Guide* (QFES,2019); the Australian Standard (AS3959:2018) - *Construction of buildings in bushfire prone areas*; and the *South Burnett Regional Council Planning Scheme Version 1.4 (2017) – Bushfire Hazard Overlay*.

This assessment has confirmed vegetation within 100m of the proposed development footprint in all directions has been classified as posing a low potential bushfire hazard to the proposed development (Refer Section 2.2). Consequently, the proposed development is not considered to be in a bushfire prone area. **N.B.** Where revegetation of the subject site are implemented, the above determinations is recommended to be recalculated.

The following Bushfire Risk Mitigation Measures, as detailed above, are considered appropriate to substantially mitigate the Bushfire Hazard acting on the proposed development:

- Asset Protection Zone (APZ) widths have been determined for areas of the proposed development (refer Section 3.1). Based on this assessment, the proposed development is not considered to be in a bushfire prone area. Consequently, no APZ's are applicable to the proposed development.
- BAL determination and Construction Standard requirements have been determined for the proposed development (refer Section 3.2). Based on this assessment, the proposed development is not considered to be in a bushfire prone area. Consequently, BAL Low is applicable to future proposed dwellings.
- Recommendations for vegetation management within the site APZ has been detailed to ensure low fuel availability and reduced connectivity to buildings (refer Section 3.3).
- Vehicular Access and Egress of the proposed development has been considered and is considered to service the site in the event of a bushfire emergency (refer Section 3.4).
- Water Availability for Fire-fighting Purposes as per Councils Planning Scheme has been detailed and recommendations to achieve compliance have been made (refer Section 3.5). The proposed development will be on tank water, and it is subsequently recommended this include a dedicated fire fighting water storage must have a volume of water not less than 25,000 litres for each building, with recommendations made for fittings and accessibility.

This assessment has been undertaken based on vegetative condition and bushfire hazards identified on and adjacent the subject site in March 2024.

It should be noted that the recommendations within this BMP have been formulated based on site conditions at the time of writing and utilising current best-practise hazard and impact



assessment methodologies, and have been developed to reduce the potential severity of impacts on the proposed development in the event of a bushfire emergency rather than prevent impacts altogether. No guarantee is provided or assumed that the area will not be affected by bushfire at some time.

Site occupants should seek advice from the local fire authority every 5 years (as a minimum) to ensure the subject recommendations remain appropriate as site conditions and hazard assessment methodologies may change over time.

Bushfires are an intrinsic part of Australia's environment, are often unpredictable, and have potentially extremely serious consequences. All Queenslanders should be familiar with the official Bushfire Warnings system and have a completed Bushfire Survival Plan. Print ready guides for preparing a Bushfire Survival Plan and to assist in the interpretation of the official Bushfire Warnings system are available for download from the Rural Fire Service Queensland website:

<https://ruralfire.qld.gov.au/bushfires/>

https://www.ruralfire.qld.gov.au/BushFire_Safety/Pages/Create-your-bushfire-survival-plan.aspx

There are three formal Bushfire Warning levels:



Advice

Monitor conditions and review your bushfire survival plan.



Watch and act

Conditions are changing. Start taking action and follow your bushfire survival plan.



Emergency Warnings

You are in danger. Act on your bushfire survival plan now.



Stormwater Quantity, Quality and Flood Assessment Report

162 Bowman Road, Blackbutt North

J9425 v1.1

3 March 2025

STORM
WATER CONSULTING

Job No: J9425 v1.1

Job Name: 162 Bowman Road, Blackbutt North

Report Name	Date	Report No.
Stormwater Quantity, Quality and Flood Assessment Report	25 February 2025	J9425 v1.0
Stormwater Quantity, Quality and Flood Assessment Report	3 March 2025	J9425 v1.1

Project Engineer: Jack Hu
BE Civil (Hons), MIEAust, CPEng, NER, RPEQ
E jack@stormw.com.au

Reviewed By: Steve Hughes
BE Civil, MIEAust, CPEng, NER, RPEQ 16468

Storm Water Consulting Pty Ltd

ACN 105 078 377

1/820 Old Cleveland Rd, Carina QLD 4152

07 3398 4992

www.stormw.com.au

Table of Contents

1.0	Introduction.....	1
2.0	Site Conditions	2
2.1	Existing Site	2
2.2	Developed Site	3
3.0	Hydrologic Analysis	4
3.1	Existing URBS Model	4
3.2	Developed URBS Model	5
3.3	TUFLOW Inflow Hydrographs	5
4.0	Hydrodynamic Modelling	6
4.1	Minimum Lot Levels.....	7
5.0	Stormwater QQuality Management.....	8
5.1	State Planning Policy (July 2017)	8
5.2	Water Quality – Construction Phase	9
5.3	Water Quality – Operational Phase	10
6.0	State Planning Policy – Natural Hazards, Risk and Resilience	11
7.0	Conclusions.....	14
	List of Appendices	15

1.0 INTRODUCTION

Storm Water Consulting Pty Ltd was commissioned by GLW Constructions Pty Ltd to prepare a Stormwater Quantity, Quality and Flood Assessment Report for the proposed subdivision of 162 Bowman Road, Blackbutt North.

This report has been prepared to address the following:

- Identify the 1% AEP flood extent affecting the property and assess potential hydraulic impacts;
- Recommend minimum lot levels for the subdivision;
- Assess the potential impacts to stormwater quantity discharging from the development on the downstream environment;
- Recommend a suitable stormwater treatment train to manage the quality of stormwater discharging from the development.

2.0 SITE CONDITIONS

2.1 Existing Site

The subject site is located approximately 1.7 km north of the Blackbutt town centre. A dwelling is located on the large rural residential property. The property is bound by Bowman Road to the west and by other rural residential properties in all other directions. A copy of the site survey is presented in Appendix B. A locality plan is presented below. An existing site plan is presented in Figure 1, Appendix A.



Figure 2.1 – Locality Plan

The subject site is located within Council's Flood Hazard Overlay (Overlay Map 03), as depicted in the extract presented in Figure 2.2 on the following page. Taromeo Creek flows through the south-eastern portion of the property. An overland flow path traverses the northern portion of the property and flows into Taromeo Creek downstream of the property.

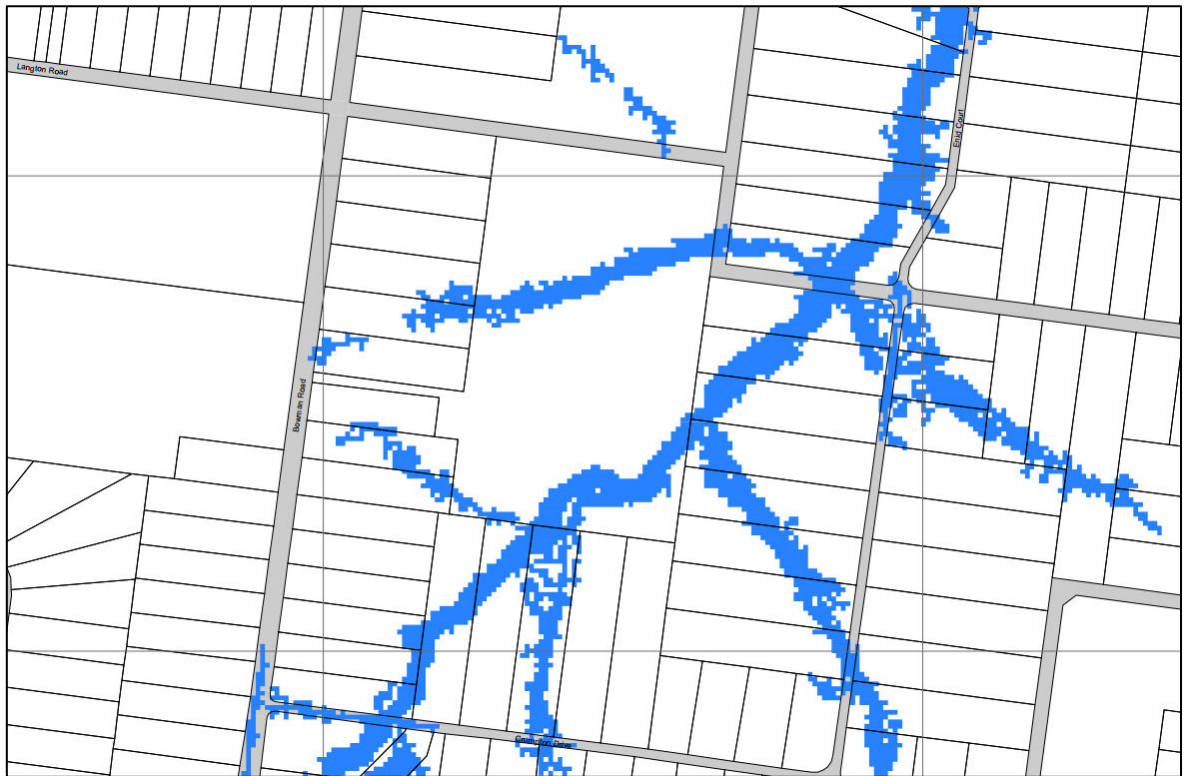


Figure 2.2 – Extract of Overlay Map 03

2.2 Developed Site

The southern portion of the subject site is proposed to be subdivided into large rural residential lots. A new road is proposed as part of the development. The northern portion of the subject site will remain undeveloped. A copy of the civil design plans is presented in Appendix C. A developed site plan is presented in Figure 2, Appendix A.

3.0 HYDROLOGIC ANALYSIS

A catchment plan is presented in Figure 3, Appendix A. Runoff from Catchment A contributes to flows in Taromeo Creek through the southern portion of the property (Point-1). Runoff from Catchment B contributes to flows through the northern portion of the property. Runoff from Catchment B combines with the runoff from Catchment A downstream of the property (around Point-2). URBS hydrologic modelling was undertaken to assess the potential stormwater quantity impacts from the proposed development. The URBS model parameters and results are presented below.

3.1 Existing URBS Model

A schematic of the URBS model is presented in Figures 4a and 4b, Appendix A. Adopted URBS model parameters are summarised in Table 3.1 below. The existing URBS model peak discharges at Point-1 and Point-2 are presented in Table 3.2 below.

Table 3.1 – URBS Model Parameters

AEP %	Alpha	Non-Linearity Index	Initial Loss mm	Continuing Loss mm/hr
63	1.2	0.8	15	2.5
50	1.2	0.8	15	2.5
20	1.2	0.8	15	2.5
10	1.2	0.8	15	2.5
5	1.2	0.8	15	2.5
2	1.2	0.8	15	2.5
1	1.2	0.8	15	2.5

Table 3.2 – Existing URBS Model Peak Discharges

AEP %	Point-1 m³/s	Point-2 m³/s
63	32.00	33.78
50	37.87	40.03
20	56.46	60.18
10	73.29	76.35
5	87.34	91.23
2	107.09	112.20
1	122.02	128.13

3.2 Developed URBS Model

The fraction imperviousness of sub-areas representing the site was increased to represent the proposed development. A comparison of the existing URBS model and developed URBS model peak discharges at Point-1 and Point-2 is presented in Tables 3.3 and 3.4 below.

Table 3.3 – Comparison of URBS Peak Discharges (Ex v Dev) at Point-1

AEP %	Existing URBS m³/s	Developed URBS Unmitigated m³/s	Increase m³/s	Increase %
63	32.00	32.02	0.02	0.06%
50	37.87	37.89	0.02	0.05%
20	56.46	56.48	0.02	0.04%
10	73.29	73.30	0.01	0.01%
5	87.34	87.35	0.01	0.01%
2	107.09	107.10	0.01	0.01%
1	122.02	122.04	0.02	0.02%

Table 3.4 – Comparison of URBS Peak Discharges (Ex v Dev) at Point-2

AEP %	Existing URBS m³/s	Developed URBS Unmitigated m³/s	Increase m³/s	Increase %
63	33.78	33.80	0.02	0.06%
50	40.03	40.05	0.02	0.05%
20	60.18	60.20	0.02	0.03%
10	76.35	76.36	0.01	0.01%
5	91.23	91.24	0.01	0.01%
2	112.20	112.22	0.02	0.02%
1	128.13	128.14	0.01	0.01%

The above results show that the proposed development would result in minute increases to the peak discharges at Point-1 and Point-2. The minute increases are not anticipated to create any material worsening on the flooding at Point-1 and Point-2. On-site detention is therefore not recommended for the proposed development.

3.3 TUFLOW Inflow Hydrographs

The developed URBS hydrologic model was modified to generate inflows for the TUFLOW hydrodynamic model. The model was simulated using default alpha and non-linearity index values of 1.2 and 0.8 respectively. An initial loss of 0 mm and a continuing loss of 2.5 mm/hr was adopted for the 1% AEP event. The critical storm duration for the 1% AEP event is the 3-hour storm. The 1% AEP peak discharges for boundary conditions INFLOW-1 and INFLOW-2 are 132.00 m³/s and 10.98 m³/s respectively.

4.1 Minimum Lot Levels

The South Burnett Regional Council Planning Scheme 2017 does not stipulate any requirements for minimum lot levels for a rural residential subdivision. However, the Reconfiguring a Lot Code requires all new allotments to include an area of sufficient size to accommodate the intended land use outside the area identified on Overlay Map 03. An extract of Overlay Map 03 is presented in Figure 2.2 of this report.

An extract of Table 8.4.2 of the Reconfiguring a Lot Code is presented below. A minimum rectangle of 25m x 40m (an area of 1,000 m²) would be required to be contained within each lot. The proposed lots are therefore able to satisfy Council's minimum lot dimension requirements.

Table 8.4.2 — Minimum Lot Dimensions

Zone	Minimum Area ^(a)	Minimum road frontage	Minimum rectangle contained within a lot ^(b)
Low density residential zone	600m ²	Standard lot – 17m Corner lot – 25m Rear lot – 6m	10m x 20m
Medium density residential zone	400m ²	Standard lot – 14m Corner lot – 20m	10m x 20m
Principal centre zone	400m ²	Not specified	Not specified
Local centre zone	400m ²	Not specified	Not specified
Low impact industry zone	1,000m ²	20m	20m x 25m
Medium impact industry zone	1,500m ²	20m	20m x 25m
Emerging community zone	600m ²	Standard lot – 17m Corner lot – 25m Rear lot – 6m	10m x 15m
Rural zone	100ha	100m	Not specified.
Rural residential zone other than in a precinct	2ha	Standard lot – 80m Rear lot – 10m	60m x 90m
Rural residential zone (4,000m ² RR1 precinct)	4,000m ²	Standard lot – 30m Rear lot – 10m	25 x 40m
Township zone	1,000m ²	20m	15m x 20m
All other circumstances (including community titles scheme in any zone)	Not specified	Not specified	Not specified

^(a) For rear allotments, the minimum area excludes the area of the proposed access way.

^(b) A minimum street frontage setback of 6m applies to this rectangle.

5.0 STORMWATER QUALITY MANAGEMENT

5.1 State Planning Policy (July 2017)

The State Planning Policy (SPP) sets out the requirements for water quality in the interest of the State. Developments which trigger the requirements summarised in Table 5.1 below would need to meet water quality objectives listed in Table B, Appendix 2 of the SPP.

Table 5.1 – Development Applications affecting Receiving Waters

State Planning Policy Criteria	Application to Development
(1) A material change of use for urban purposes that involves a land area greater than 2500 square metres that: (a) will result in an impervious area greater than 25 per cent of the net developable area, or	Criterion is NOT applicable to development.
(b) will result in six or more dwellings, or	Criterion is NOT applicable to development.
(2) Reconfiguring a lot for urban purposes that involves a land area greater than 2500 square metres and will result in six or more lots, or	Criterion is NOT applicable to development.
(3) Operational works for urban purposes that involve disturbing more than 2500 square metres of land.	Criterion is NOT applicable to development.

The SPP triggers presented above apply to developments for “urban purposes”. Within the appendix of the SPP, reference is made to the Planning Regulation 2017 document for the definition of an “urban purpose”. This definition is presented below.

urban purpose means a purpose for which land is used in cities or towns—

(a) including residential, industrial, sporting, recreation and commercial purposes; but

(b) not including rural residential, environmental, conservation, rural, natural or wilderness area purposes.

The proposed subdivision would not trigger any requirements of the SPP, as the subdivision is not for an “urban purpose”, but rather, for rural residential purposes. As such, the management of stormwater quality discharging from the subdivision will focus on lot-based best management practice solutions.

5.2 Water Quality – Construction Phase

During the construction phase of a development, the pollutants listed in Table 5.2 are typically generated. Measures are required during the construction phase to manage each of these pollutants. These measures may include but are not limited to; bins and mini-skips, erosion and sediment control measures (discussed below), wash down and spill containment areas, bunds, spill clean-up kits, street sweeping and chemical agents.

Table 5.2 – Pollutants Generated during the Construction Phase

Pollutant	Source
Litter	Paper, construction packaging, food packaging, cement bags, off-cuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building operations
Hydrocarbons	Fuel and oil spills leaks from construction equipment
Toxic materials	Cement slurry, asphalt primer, solvents, cleaning agents, wash waters (e.g. from tile works)
pH altering substances	Acid sulphate soils, cement slurry and wash waters

5.2.1 Erosion and Sediment Control

During the construction phase of the development, an Erosion and Sediment Control Program (E&SCP) is required to minimise water quality impacts. Such an E&SCP should provide complete and detailed instructions on the following procedures;

- Before construction activities begin, sediment fences should be constructed on the downstream site boundaries and at the base of all proposed soil stockpiles;
- Areas for plant and construction material storage should be designated. Runoff from these areas should be directed to small holding ponds in case of spillages;
- Catch drains at the downstream boundary of construction activities should also be created to ensure that any sediment-laden runoff is contained and directed into a sediment basin and not permitted to flow unmitigated to downstream areas;
- Sediment basins should be constructed at appropriate locations to collect sediment at the downstream ends of the catch drains that convey runoff from exposed areas;
- Site personnel should be educated on the sediment and control measures implemented on site; and
- Following rainfall events greater than 20mm, inspection of silt fences, sedimentation basins and other erosion control measures should be carried out. Where necessary, collected material should be removed and damaged equipment should be replaced immediately.

5.3 Water Quality – Operational Phase

During the operational (post-construction) phase of the proposed development, the following pollutants are typically generated;

- Sediment,
- Litter,
- Faecal coliforms,
- Hydrocarbons,
- Heavy Metals,
- Thermal Pollution,
- Nutrients (N & P) and
- Surfactants.

5.3.1 Best Management Practice

The proposed development involves subdividing to create large rural residential lots. The majority of the runoff from lots of this nature would be from grassed areas, which are generally considered to be clean runoff. Rainwater tanks are recommended for each new house to capture and store rainwater for on-site domestic reuse. Rainwater tanks are considered to be the best management practice solution for the proposed subdivision.

6.0 STATE PLANNING POLICY – NATURAL HAZARDS, RISK AND RESILIENCE

A detailed assessment against the assessment benchmarks of the Natural Hazards, Risk and Resilience section (contained in Part E of the State Planning Policy, July 2017) is presented below.

Table 6.1 – Natural Hazards, Risk and Resilience – Assessment Benchmarks

Assessment Benchmarks	Response
(1) Natural hazard areas are identified, including: a. Bushfire prone areas b. Flood hazard areas c. Landslide hazard areas d. Storm tide inundation areas e. Erosion prone areas	The site is located within an area affected by flood hazard. The site may also be located within other hazard areas. However, this report focuses on the natural hazard associated with flooding.
(2) A fit-for-purpose risk assessment is undertaken to identify and achieve an acceptable or tolerable level of risk for personal safety and property in natural hazard areas.	This report presents a fit-for-purpose risk assessment to identify and achieve an acceptable or tolerable level of risk for personal safety and property in flood hazard areas.
Bushfire, flood, landslide, storm tide inundation and erosion prone areas: (3) Land in an erosion prone area is not to be used for urban purposes, unless the land is located in: a. An urban area in a planning scheme; or b. An urban footprint identified in a regional plan.	The site is not located in an identified erosion prone area.
(4) Development in bushfire, flood, landslide, storm tide inundation or erosion prone natural hazard areas: a. Avoids the natural hazard area; or b. Where it is not possible to avoid the natural hazard area, development mitigates the risks to people and property to an acceptable or tolerable level.	The proposed development involves a site subject to hazards during flood events. The proposed development is considered unable to avoid the natural hazard area. The proposed development mitigates the risks to people and property to an acceptable or tolerable level by identifying suitable minimum rectangles on each lot that would be flood-free during the defined flood event. In addition, the proposed development design allows the creek to flow through the site and meets safe flood hazard criteria for areas outside of the creek potentially accessible by people. The risks have been managed to an acceptable level.

(5) Development in natural hazard areas: a. Supports, and does not hinder disaster management capacity and capabilities b. Directly, indirectly and cumulatively avoids an increase in the exposure or severity of the natural hazard and the potential for damage on the site or to other properties c. Avoids risks to public safety and the environment from the location of the storage of hazardous materials and the release of these materials as a result of a natural hazard d. Maintains or enhances the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard.	The proposed development achieves the following: a. Disaster management capacity and capabilities would not be hindered as a result of the proposed development. The proposed development supports disaster management by incorporating new road designs that would be trafficable during the defined flood event. b. The proposed development does not directly, indirectly or cumulatively increase the exposure or severity of flooding on the site or on other properties. The proposed development would not create any potential for damage or adverse impacts on adjoining properties. c. The proposed development does not involve the storage of hazardous materials. d. The proposed development maintains the natural landform surrounding the creek at the rear of the site, which acts as a protective function that can mitigate risks associated with the natural hazard
(6) Community infrastructure is located and designed to maintain the required level of functionality during and immediately after a natural hazard event.	The proposed development is not associated with a community infrastructure.
(7) Coastal protection work in an erosion prone area is undertaken only as a last resort where coastal erosion or inundation presents an imminent threat to public safety or existing buildings and structures, and all of the following apply: a. The building or structure cannot reasonably be relocated or abandoned. b. Any erosion control structure is located as far landward as practicable and on the lot containing the property to the maximum extent reasonable.	The site is not located in an erosion prone area or involve coastal protection works.

c. Any increase in coastal hazard risk for adjacent areas from the coastal protection work is mitigated.	
Erosion prone areas within a coastal management district: (8) Development does not occur unless the development cannot feasibly be located elsewhere and is: a. Coastal-dependent development; or b. Temporary, readily relocatable or able to be abandoned development; or c. Essential community infrastructure; or d. Minor redevelopment of an existing permanent building or structure that cannot be relocated or abandoned.	The site is not located within an erosion prone area or within a coastal management district.
(9) Development permitted in policy 8 above, mitigates the risks to people and property to an acceptable or tolerable level.	The site is not located within an erosion prone area or within a coastal management district.

The assessment presented above demonstrates that the proposed development would mitigate the risks to people and property to an acceptable or tolerable level. The proposed development design also meets safe flood hazard criteria and mitigates areas subject to flood hazards to a safe and tolerable level. Disaster management capacity and capabilities would not be hindered as a result of the proposed development. The proposed development would not create any potential for damage or adverse impacts on adjoining properties.

7.0 CONCLUSIONS

This Stormwater Quantity, Quality and Flood Hazard Assessment Report was prepared to address flood and stormwater issues relating to the proposed subdivision of 162 Bowman Road, Blackbutt North.

TUFLOW hydrodynamic modelling was undertaken to establish the existing flow characteristics, to assess potential hydraulic impacts and to set minimum lot levels for the subdivision. The model results show that the proposed subdivision would not create any material worsening on adjoining properties. A discussion on minimum lot levels is presented in Section 4.1.

URBS hydrologic modelling was undertaken to assess the potential stormwater quantity impacts from the proposed development. The model results show that the proposed development would result in minute increases to the peak discharges at immediately downstream of the property. The minute increases are not anticipated to create any material worsening on downstream flooding. On-site detention is therefore not recommended for the proposed development.

The proposed subdivision would not trigger any requirements of the State Planning Policy (July 2017), as the subdivision is not for an “urban purpose”, but rather, for rural residential purposes. As such, the management of stormwater quality discharging from the subdivision will be through adopting lot-based best management practice solutions. The majority of the runoff from the proposed large rural residential lots would be from grassed areas, which are generally considered to be clean runoff. Rainwater tanks are recommended for each new house to capture and store rainwater for on-site domestic reuse. Rainwater tanks are considered to be the best management practice solution for the proposed subdivision.

Responses to the relevant flood codes are presented in Appendix E.



Steve Hughes
BE Civil, MIE Aust, CPEng, RPEQ 16468

LIST OF APPENDICIES

APPENDIX A – Figures

APPENDIX B – Site Survey

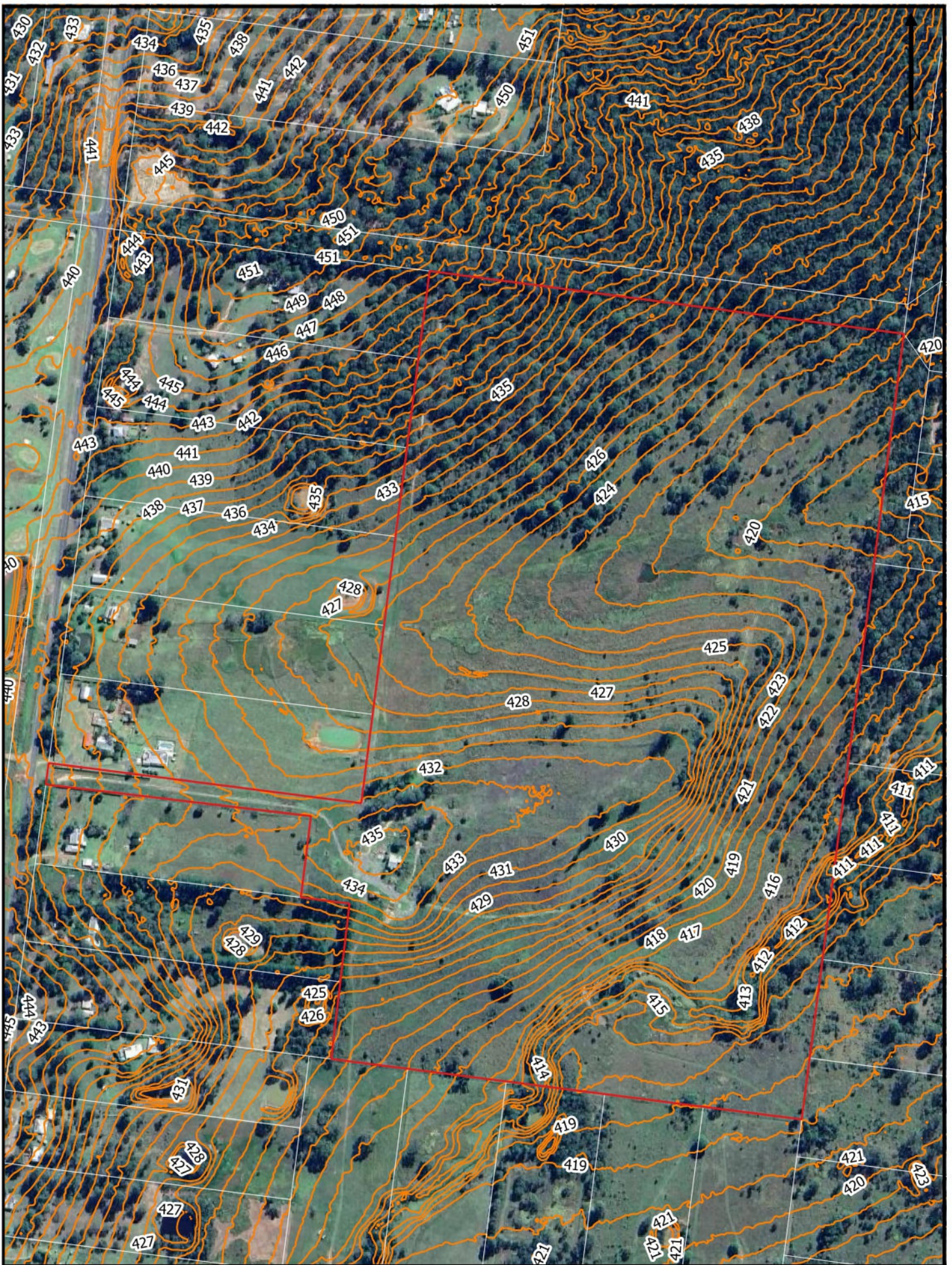
APPENDIX C – Civil Design Plans

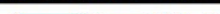
APPENDIX D – URBS Data

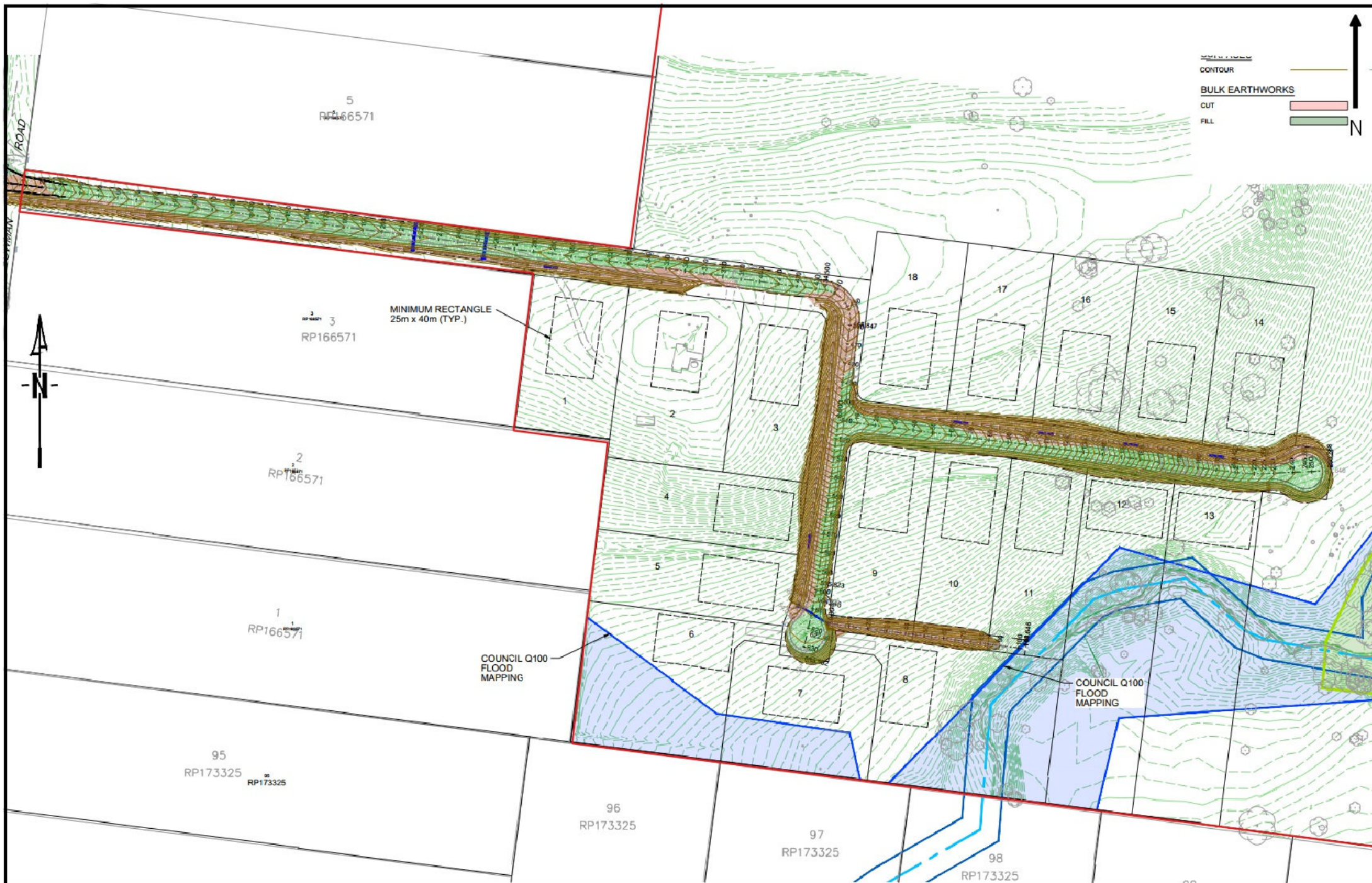
APPENDIX E – Code Responses

APPENDIX A

Figures



 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	162 Bowman Rd, Blackbutt North		Figure 1
	Checked	SNH			
	Date	25/02/25			
	Scale	1:5,000 (A4)	Job No.	J9425	



STORM
WATER CONSULTING

1/820 Old Cleveland Rd, Carina QLD 4152
Phone (07) 3398 4992

Drawn	JH
Checked	SNH
Date	03/03/25
Scale	1:2,500 (A4)

162 Bowman Rd, Blackbutt North

Job No. J9425

Figure 2
Developed Site Plan



STORM
WATER CONSULTING

1/820 Old Cleveland Rd
Carina QLD 4152
Phone (07) 3398 4992

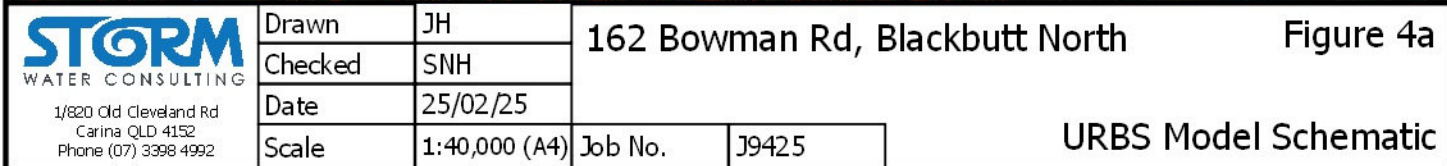
Drawn	JH
Checked	SNH
Date	25/02/25
Scale	1:40,000 (A4)

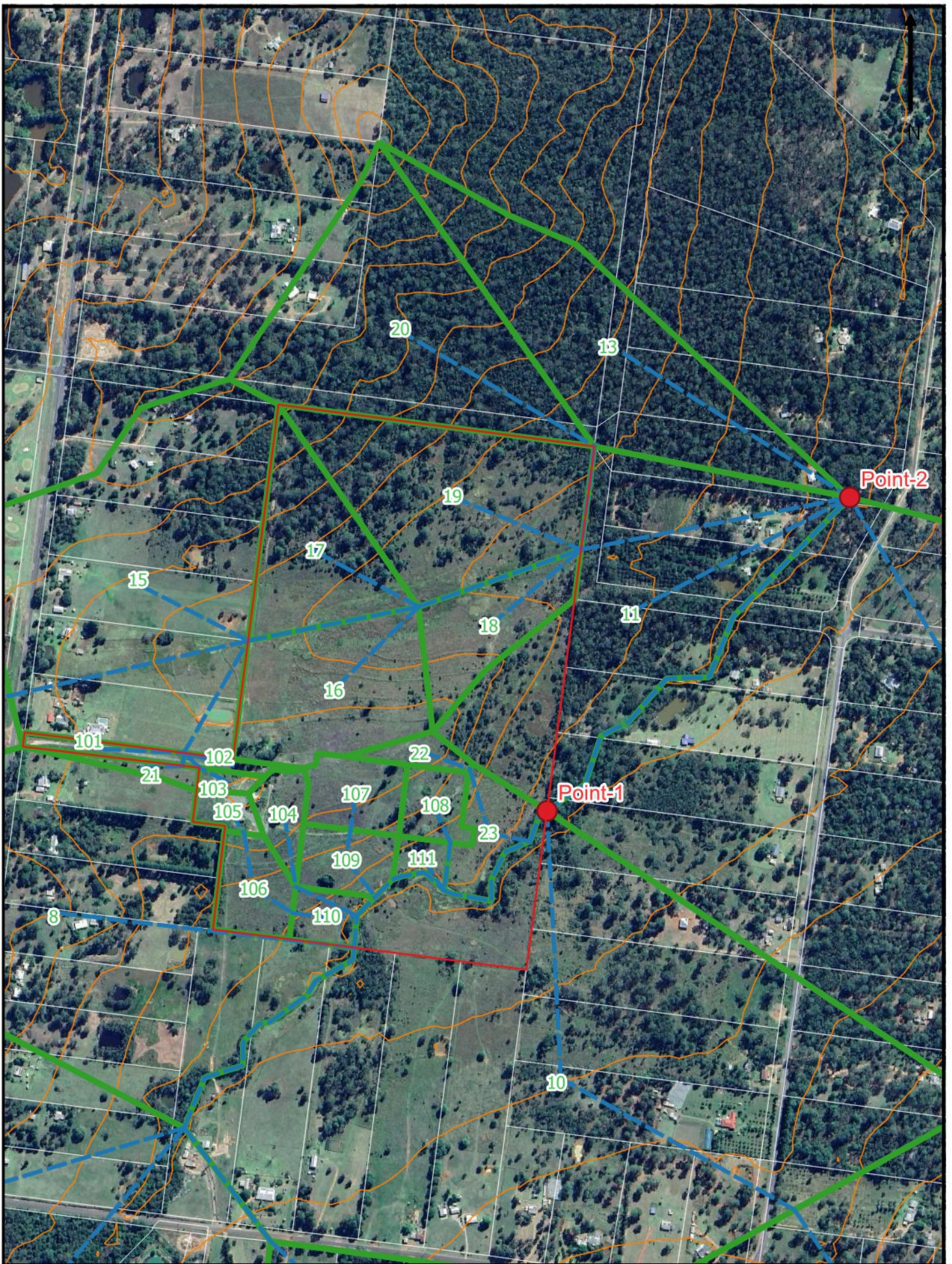
162 Bowman Rd, Blackbutt North

Job No. J9425

Figure 3

Catchment Plan





STORM
WATER CONSULTING

1/820 Old Cleveland Rd
Carina QLD 4152
Phone (07) 3398 4992

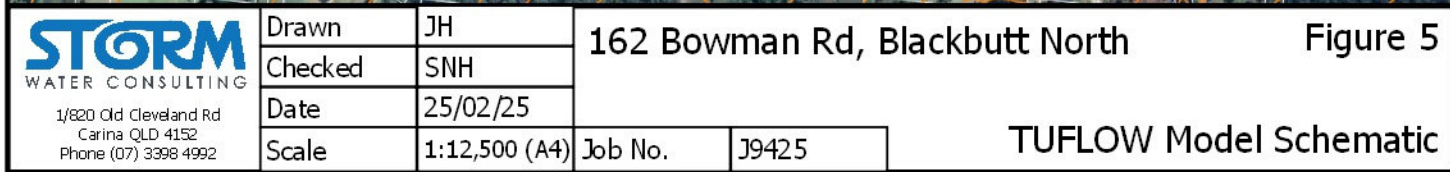
Drawn	JH
Checked	SNH
Date	25/02/25
Scale	1:7,500 (A4)

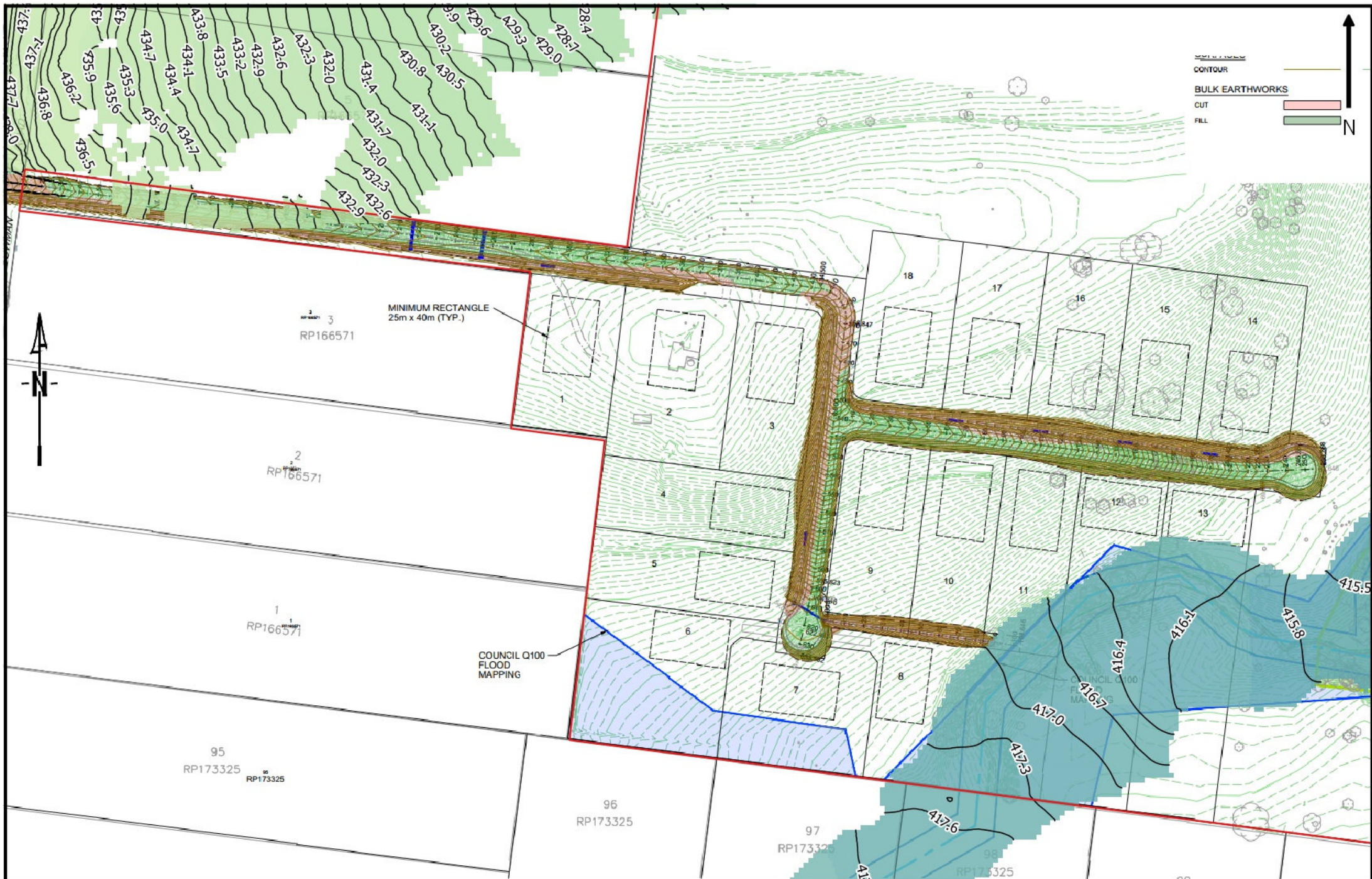
162 Bowman Rd, Blackbutt North

Figure 4b

Job No. J9425

URBS Model Schematic (Site)





STORM
WATER CONSULTING

1/820 Old Cleveland Rd, Carina QLD 4152
Phone (07) 3398 4992

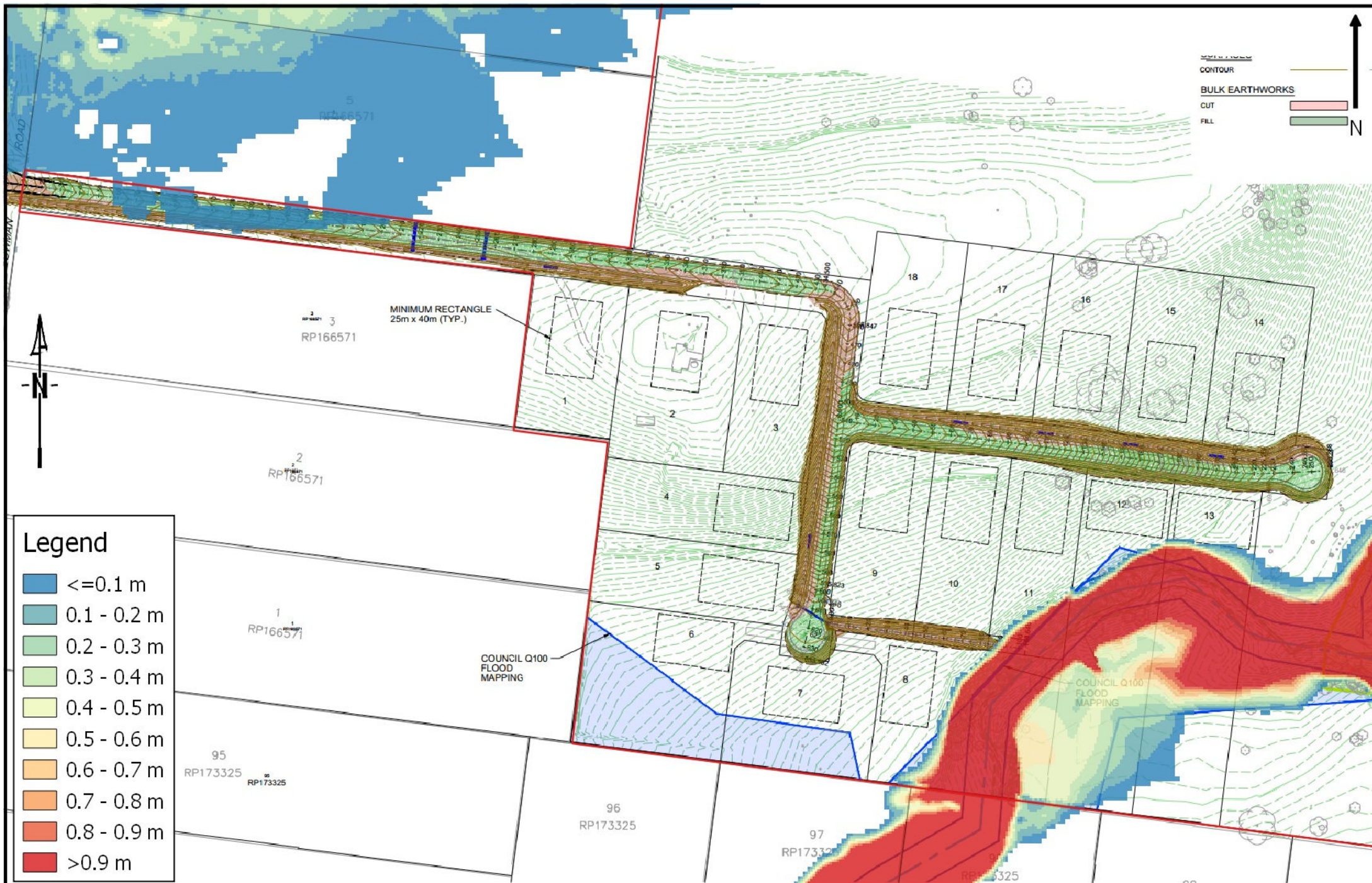
Drawn	JH
Checked	SNH
Date	03/03/25
Scale	1:2,500 (A4)

162 Bowman Rd, Blackbutt North

Job No. J9425

Figure 6a

1% AEP Flood Levels (m AHD)



STORM
WATER CONSULTING

1/820 Old Cleveland Rd, Carina QLD 4152
Phone (07) 3398 4992

Drawn
Checked
Date
Scale

JH
SNH
03/03/25
1:2,500 (A4)

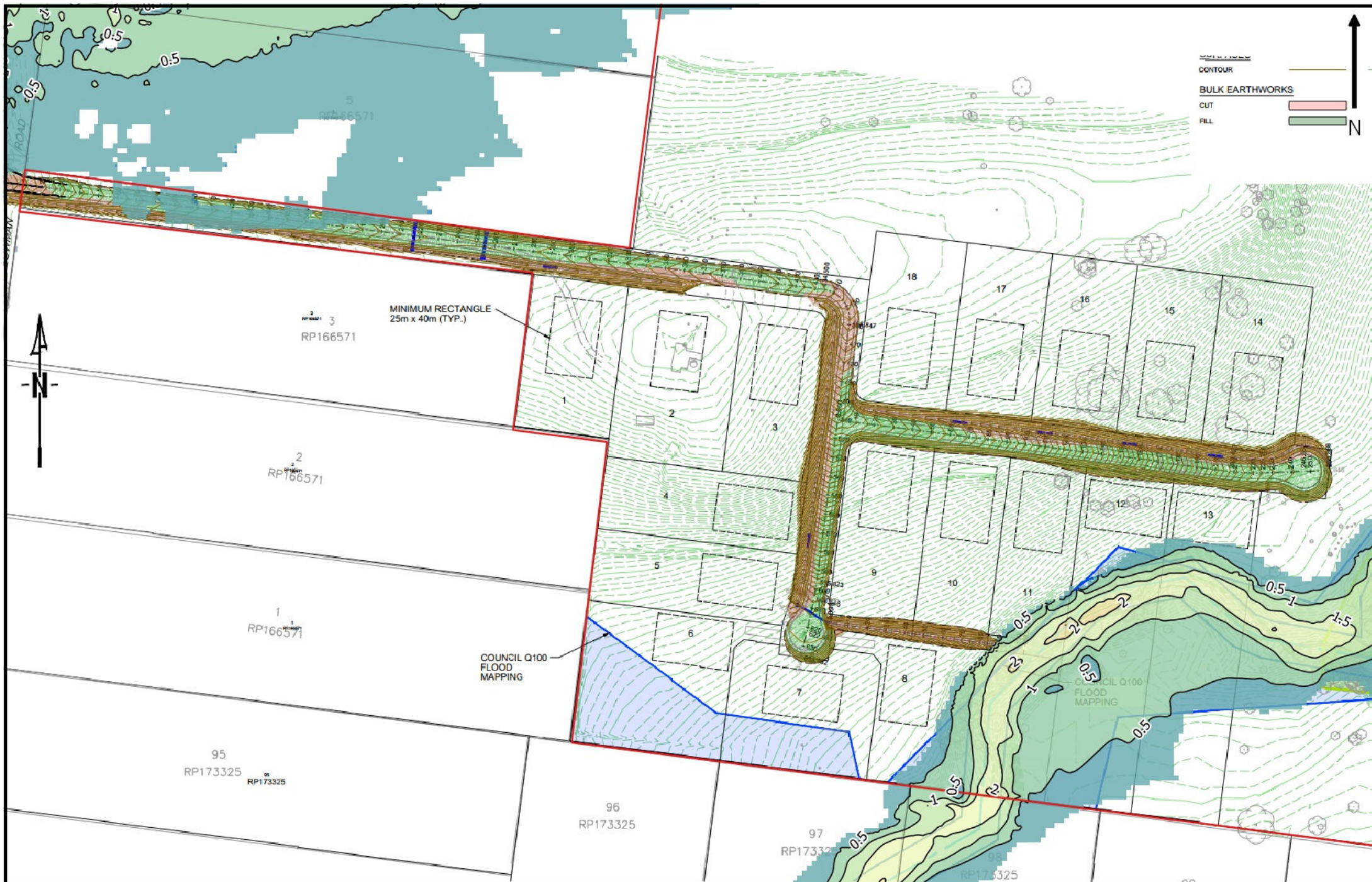
162 Bowman Rd, Blackbutt North

Job No.

J9425

Figure 6b

1% AEP Flood Depths (metres)



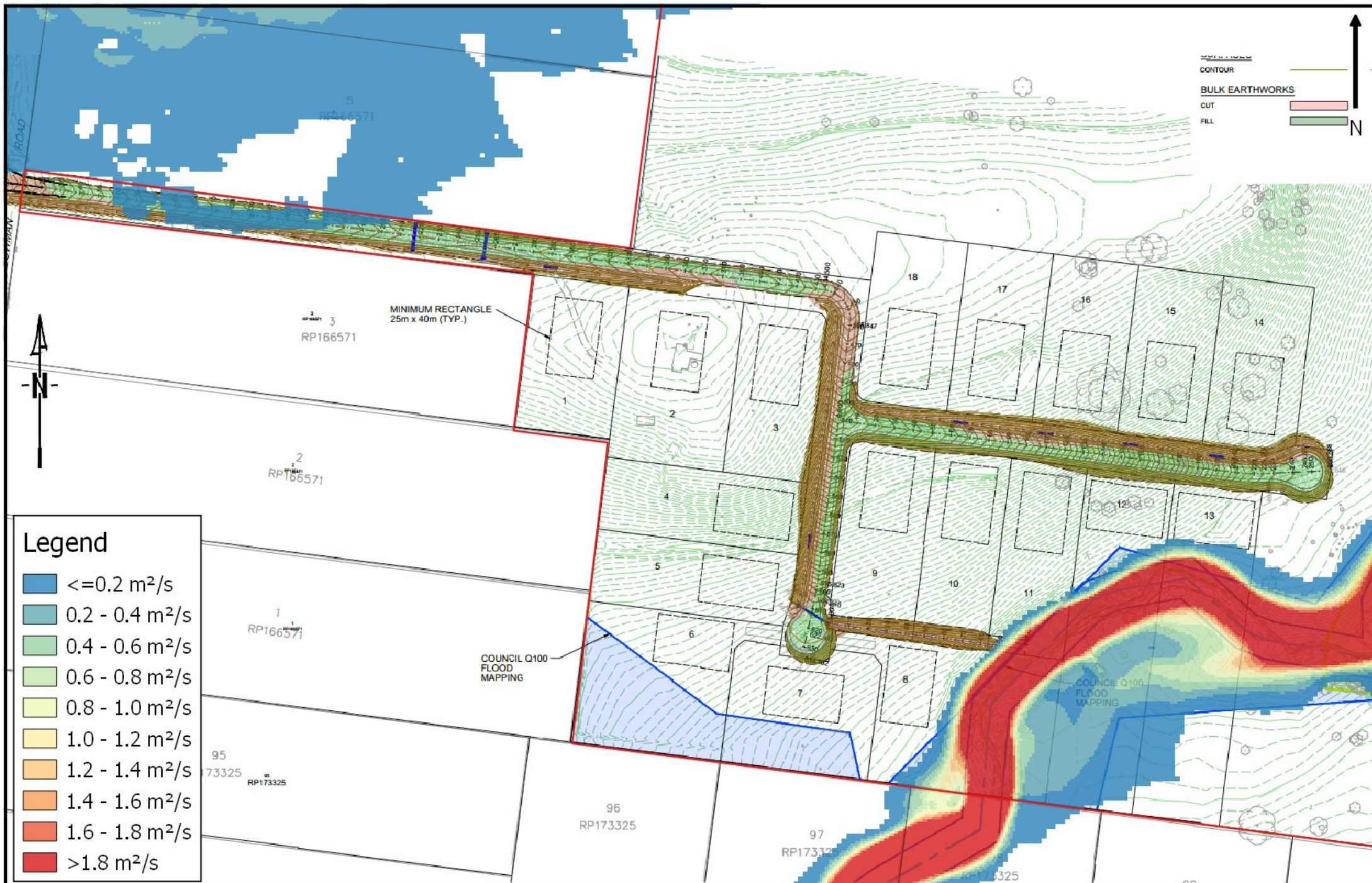
STORM
WATER CONSULTING

1/820 Old Cleveland Rd, Carina QLD 4152
Phone (07) 3398 4992

Drawn	JH
Checked	SNH
Date	03/03/25
Scale	1:2,500 (A4)

162 Bowman Rd, Blackbutt North

Job No. J9425



STORM
WATER CONSULTING

1/820 Old Cleveland Rd, Carina QLD 4152
Phone (07) 3398 4992

Drawn

JH

Checked

SNH

Date

03/03/25

Scale

1:2,500 (A4)

162 Bowman Rd, Blackbutt North

Job No.

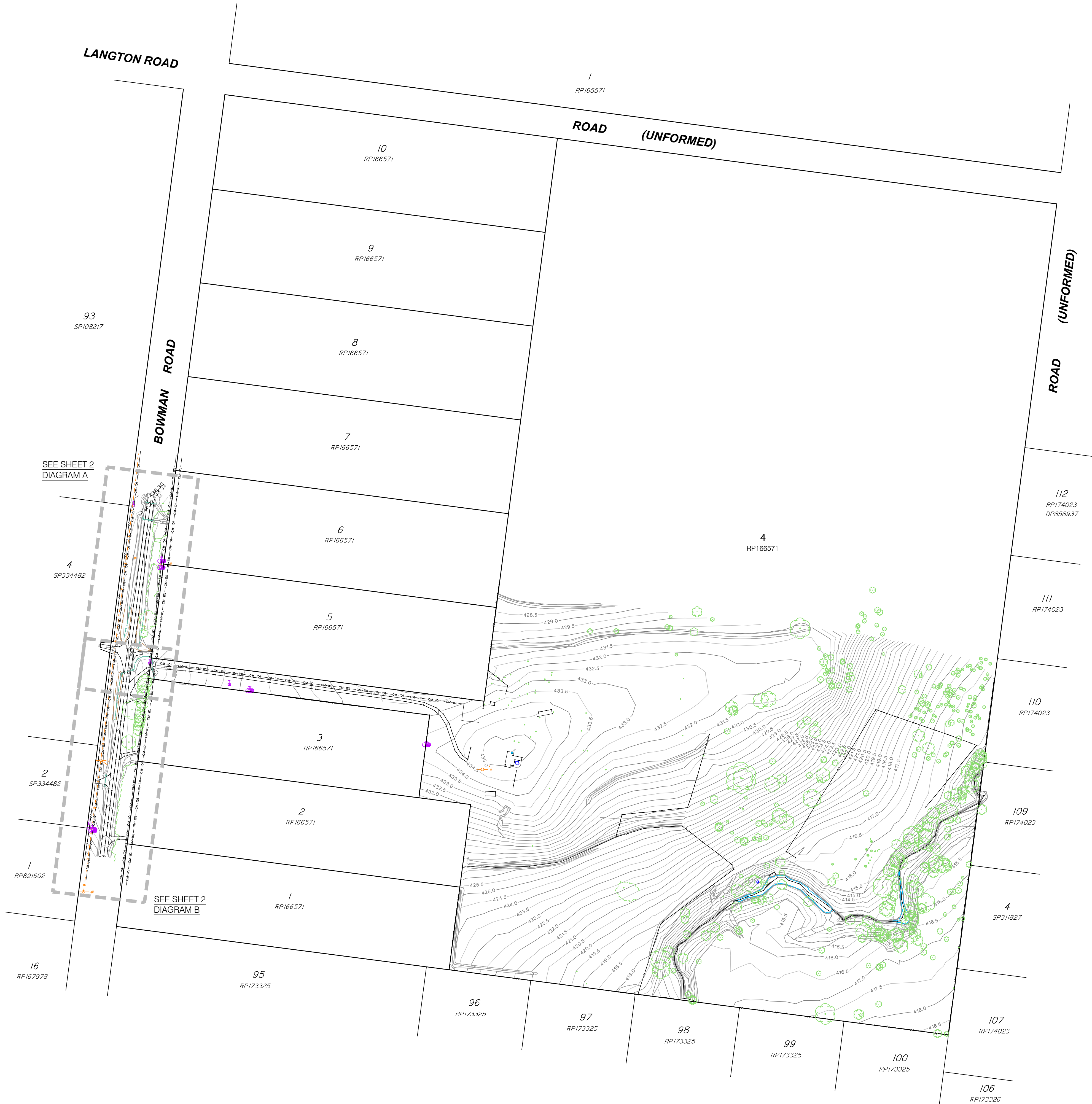
J9425

Figure 6d

1% AEP Flood Velocity-Depth Products (m^2/s)

APPENDIX B

Site Survey



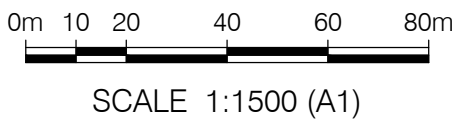
UNDERGROUND SERVICES - DIGITISED FROM DIAL BEFORE YOU DIG RECORDS
Quality Classification D Data (based on AS5488 recommendations)

COMMUNICATIONS	— CM — CM — CM — CM —
DRAINAGE PIPES (STORMWATER)	— D — D — D — D —
ELECTRICAL CABLES	— E — E — E — E —
ELEC. CABLE U/G	— E — E — E — E —
GAS PIPES	— G — G — G — G —
PETROLEUM	— P — P — P — P —
RECYCLED WWTAR PIPES	— R — R — R — R —
SEWER PIPES	— S — S — S — S —
UNIDENTIFIED SERVICES	— U — U — U — U —
POTABLE WATER PIPES	— W — W — W — W —

QUALITY CLASSIFICATIONS AND ACCURACY OF DATA
The relative accuracy of Located Data shown on this plan has been Classified based on AS5488 recommendations.

Quality Classification D Data
Quality Classification D data is the lowest level of the four Quality levels. Position is compiled from DBVD records or from Visual site inspections only.

No accuracy tolerance is able to be attributed to Quality D data: It is diagrammatic only, the purpose is to indicate the likely presence of a service in the area.



CLIENT

**GLW CONSTRUCTIONS
PTY LTD**

PROJECT

**DETAIL SURVEY
OF PART OF
LOT 4 ON RP166571
(162 BOWMAN ROAD,
BLACKBUTT)**

NOTES

(i) This plan has been prepared for the exclusive use of GLW CONSTRUCTIONS PTY LTD and their consultants for design purposes and is not to be used for any other purpose or by any other entity without the express permission of LandPartners Pty Ltd.

(ii) The title boundaries as shown hereon were not marked or surveyed at the time of survey and have been determined from the dimensions shown on plans of survey registered in the Department of Natural Resources, Mines and Energy.

(iii) Services shown hereon have been located where visible by field survey. If not able to be so located, services have been plotted from the records of relevant authorities where available and have been noted or symbolised accordingly. Where such records do not exist or are inadequate a notation has been made hereon.

(iv) Underground connections between services have been joined based on relevant authority records and have been symbolised accordingly.

(v) Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

(vi) This data should not be reproduced in any way without the permission of LandPartners Pty Ltd. Any reproduction of this data must contain these notes.

1	MEA	03/10/2024	INITIAL ISSUE
---	-----	------------	---------------

SYM	CODE	DESCRIPTION
●	BM	BENCHMARK
○	BOL	BOLLARD
●	CP	COLUMN / PILLAR
□	EBX	ELECTRICAL BOX
—	ECM	ELEC CABLE MARKER
—	ELP	ELEC LIGHT POLE
—	EM	ELECTRICAL PIT
—	EP	ELECTRICITY POLE
—	ESP	ELECTRICITY STAY POLE
⊕	FH	FIRE HYDRANT
⊕	FHP	FIRE HYDRANT PILLAR
—	FP	FLAG POLE
○	GMH	GAS MANHOLE
■	GMK	GAS MARKER
—	GP	GUIDE POST
—	GS	GUIDE SIGN
—	GT	GULLY TRAP
—	GV	GAS VALVE
—	HB	HOSE BOX/REEL
—	HM	HYDRANT MARKER
—	MHJ	MANHOLE UNKNOWN
—	PLM	PALM TREE
—	PIL	TELECOM PILLAR
—	PKM	PARKING METER
—	PSM	PERM. SURVEY MARK
—	SEV	SEWERAGE VENT
—	SHB	SHRUB

SYM	CODE	DESCRIPTION
—	SGN	SIGNS
—	SIO	INSPECTION OPENING
—	SM	SEWERAGE MANHOLE
—	SN	STREET NAME SIGN
—	SPR	SPRINKLER
—	SPR	TREE
—	SSV	STOP/SUICE VALVE
—	STN	SURVEY STATION
—	SW	STORMWTR. MANHOLE
—	TAP	TAP
—	TE	TELECOM PIT
—	TM	TELECOM MANHOLE
—	TOH	TRANSFORMER O/H-HEAD
—	TP	TELEPHONE POLE
—	TRL	TRAFFIC LIGHTS
—	TRP	TRAFFIC PIT
—	WAV	WATER AIR VALVE
—	WCU	WATER END CAP
—	WM	WATER METER
—	WMH	WATER MANHOLE
—	WPR	WATER REDUCER
—	WRV	WATER REFLUX VALVE
—	WSP	WATER SAMPLE POINT
—	WSV	WATER SCOUR VALVE
—	WTE	WATER TEE JUNCTION
—	WV	WATER VALVE
—	WVM	WATER VALVE MARKER

Symbols shown are indicative only. The symbol size and orientation does not necessarily represent the real size or orientation of the feature.

DRAINAGE PIPE U/G	— SW — SW — SW — SW —
DRAIN	— D — D — D — D —
ELECT. CABLE A/G	— E — E — E — E —
ELEC. CABLE U/G	— E — E — E — E —
GAS PIPE	— GAS — GAS — GAS — GAS —
FENCE LINE	— // — // — // — // —
SEWERAGE PIPE	— S — S — S — S —
TELSTRA CABLE	— T — T — T — T —
WATER PIPE	— W — W — W — W —

LANDPARTNERS
surveyors and planners

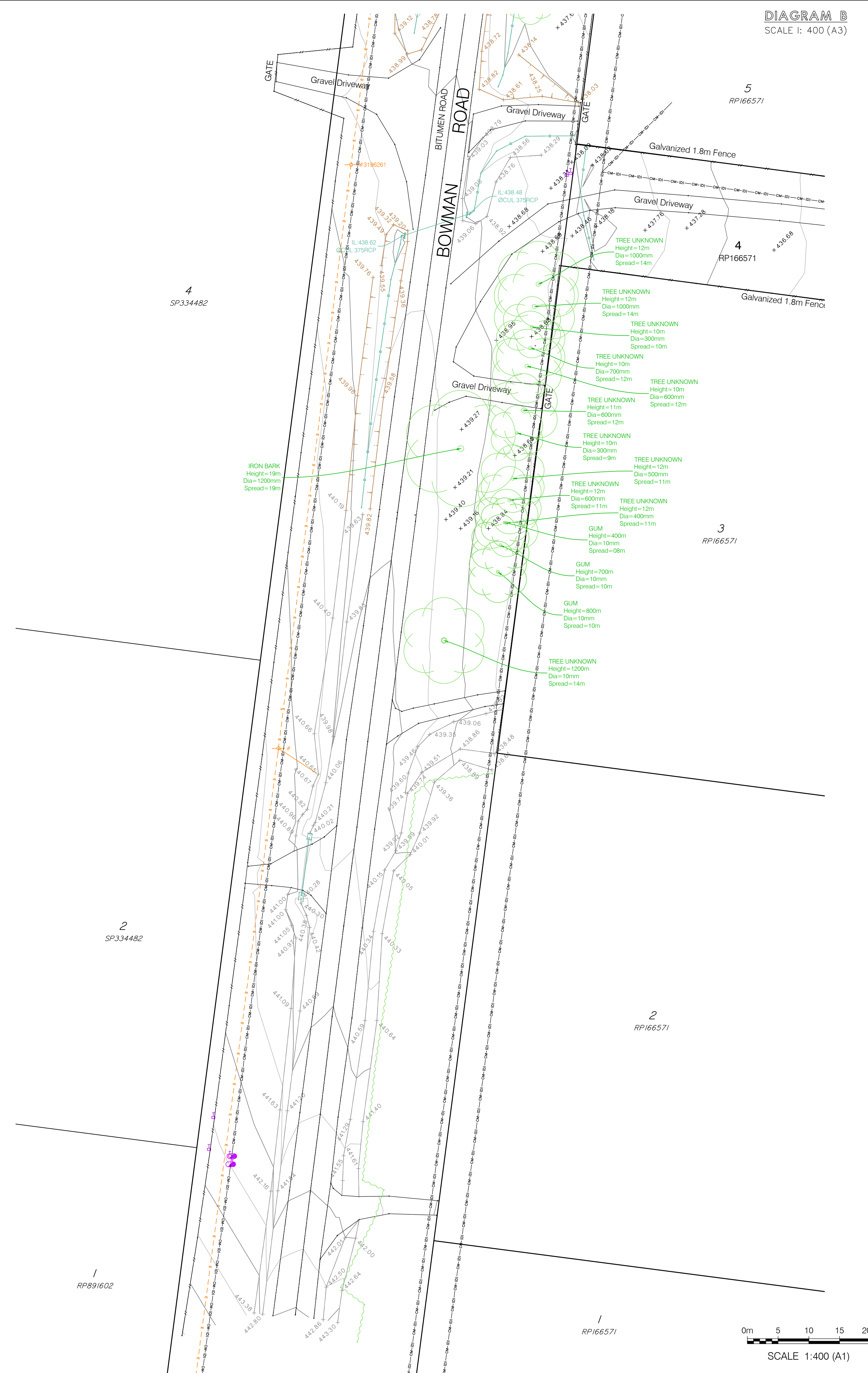
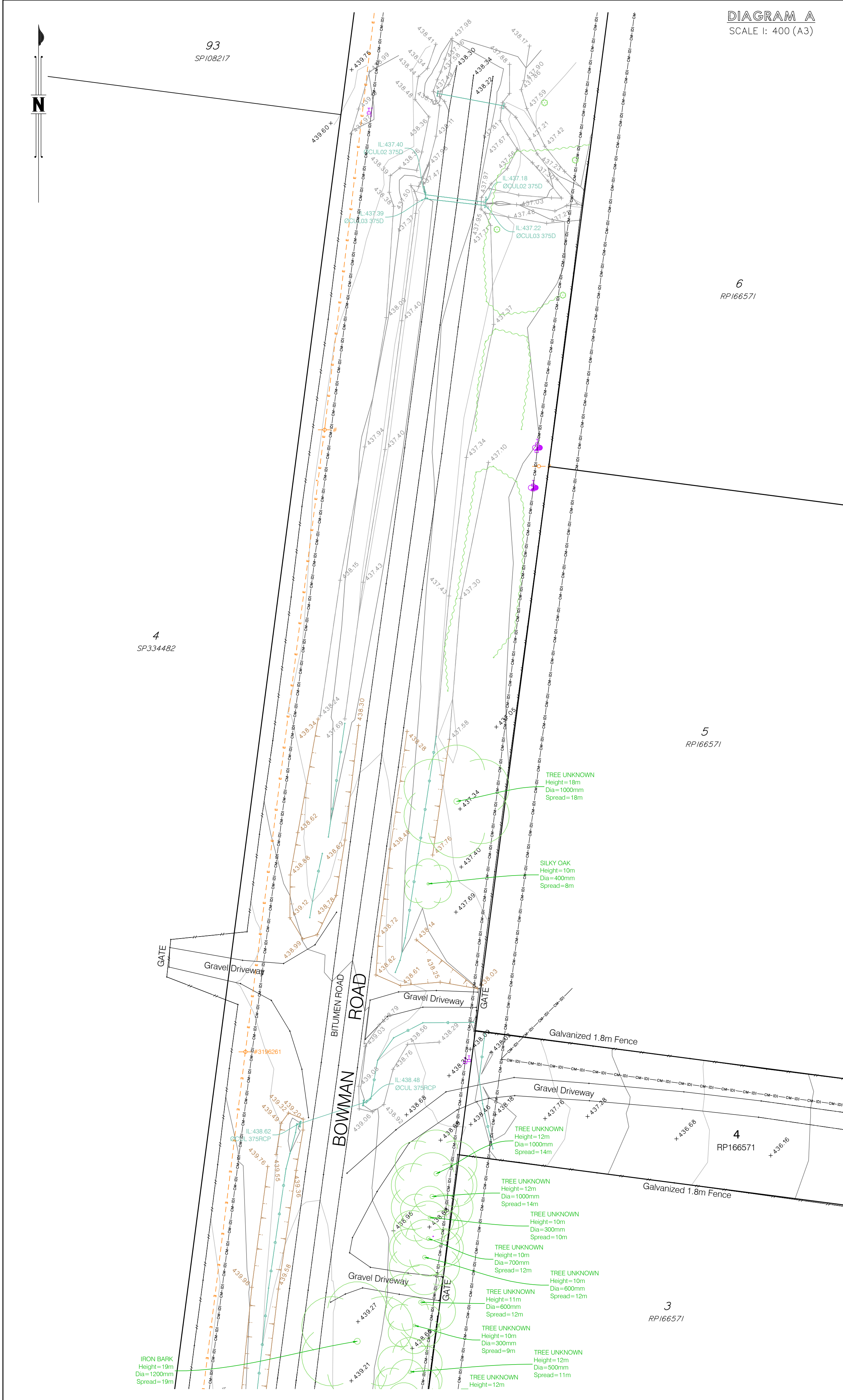
Brisbane Office
Level 1
18 Little Cribb Street
Milton QLD 4064

PO Box 1399
Milton
QLD 4064

P: (07) 3842 1000
F: (07) 3842 1001
E: info@landpartners.com.au
W: www.landpartners.com.au

LEVEL DATUM AHD D	LOCAL AUTHORITY SOUTH BURNETT R.C.		
LEVEL ORIGIN PSM11950 RL442.505	SCALE 1:1500 (A1)		
MERIDIAN MGA	CONTOUR INTERVAL 0.5 Metre		
CO-ORD SYSTEM Arbitrary Plane	DRAWN MEA	DATE 03/10/2024	
SURVEYOR ETC & EGR	DATE OF SURVEY 09/08/2024 & 11/09/2024	CHECKED CGW	DATE 03/10/2024
FIELD FILE BRJD8285-000-34-1 & 37-1	APPROVED CGW	DATE 03/10/2024	
UDN			SHEET 1 OF 2

BRJD8285-000-39-1



CLIENT

GLW CONSTRUCTIONS
PTY LTD

PROJECT

DETAIL SURVEY
OF PART OF
LOT 4 ON RP166571
(162 BOWMAN ROAD,
BLACKBUTT)

NOTES

(i) This plan has been prepared for the exclusive use of GLW CONSTRUCTIONS PTY LTD and their consultants for design purposes and is not to be used for any other purpose or by any other entity without the express permission of LandPartners Pty Ltd.

(ii) The title boundaries as shown hereon were not marked or surveyed at the time of survey and have been determined from the dimensions shown on plans of survey registered in the Department of Natural Resources, Mines and Energy.

(iii) Services shown hereon have been located where visible by field survey. If not able to be so located, services have been plotted from the records of relevant authorities where available and have been noted or symbolised accordingly. Where such records do not exist or are inadequate a notation has been made hereon.

(iv) Underground connections between services have been joined based on relevant authority records and have been symbolised accordingly.

(v) Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

(vi) This data should not be reproduced in any way without the permission of LandPartners Pty Ltd. Any reproduction of this data must contain these notes.

1	MEA	03/10/2024	INITIAL ISSUE
---	-----	------------	---------------

SYM	CODE	DESCRIPTION	SYM	CODE	DESCRIPTION
●	BM	BENCHMARK	▲	SGN	SIGNS
●	BOL	BOLLARD	○	SIO	INSPECTION OPENING
●	CP	COLUMN / PILLAR	○	SM	SEWERAGE MANHOLE
●	EBX	ELECTRICAL BOX	▲	SN	STREET NAME SIGN
●	ECM	ELEC CABLE MARKER	▲	SPR	SPRINKLER
●	ELP	ELECTRICITY POLE	▲	SPR	TREE
●	EM	ELECTRICAL PIT	▲	SV	STOP/SUICE VALVE
●	ESP	ELECTRICITY STAY POLE	▲	STN	SURVEY STATION
●	FH	FIRE HYDRANT	▲	SW	STORMWTR. MANHOLE
●	FHP	FIRE HYDRANT PILLAR	▲	TAP	TAP
●	FP	FLAG POLE	▲	TE	TELECOM PIT
●	GMH	GAS MANHOLE	▲	TM	TELECOM MANHOLE
●	GMK	GAS MARKER	▲	TOH	TRANSFORMER O/H
●	GP	GUIDE POST	▲	TP	TELEPHONE POLE
●	GS	GUIDE SIGN	▲	TRL	TRAFFIC LIGHTS
●	GT	GULLY TRAP	▲	TRP	TRAFFIC PIT
●	GV	GAS VALVE	▲	WAV	WATER AIR VALVE
●	HB	HOSE BOX/REEL	▲	WCJ	WATER END CAP
●	HM	HYDRANT MARKER	▲	WM	WATER METER
●	MHJ	MANHOLE UNKNOWN	▲	WMH	WATER MANHOLE
●	PALM	PALM TREE	▲	WPR	WATER REDUCER
●	PIL	TELECOM PILLAR	▲	WRV	WATER REFLEX VALVE
●	PKM	PARKING METER	▲	WSP	WATER SAMPLE POINT
●	PSM	PERM. SURVEY MARK	▲	WSV	WATER SCOUR VALVE
●	SEV	SEWERAGE VENT	▲	WTE	WATER TEE JUNCTION
●	SHB	SHRUB	▲	WV	WATER VALVE
●			▲	WWM	WATER VALVE MARKER

Symbols shown are indicative only. The symbol size and orientation does not necessarily represent the real size or orientation of the feature.

DRAINAGE PIPE U/G	— SW — SW — SW — SW —
DRAIN	— D — D — D — D —
ELECT. CABLE A/G	— E — E — E — E —
ELEC. CABLE U/G	— E — E — E — E —
GAS PIPE	— GAS — GAS — GAS — GAS —
FENCE LINE	— // — // — // — // —
SEWERAGE PIPE	— S — S — S — S —
TELSTRA CABLE	— T — T — T — T —
WATER PIPE	— W — W — W — W —

LANDPARTNERS
surveyors and planners

bsi ISO 9001
CERTIFIED

bsi ISO 45001
CERTIFIED

CERTIFIED
LOCATOR

Brisbane Office
Level 1
18 Little Cribb Street
Milton QLD 4064

PO Box 1399
Milton
QLD 4064

P: (07) 3942 1000
F: (07) 3942 1001
E: info@landpartners.com.au
W: www.landpartners.com.au

LEVEL DATUM	LOCAL AUTHORITY		
AHD D	SOUTH BURNETT R.C.		
LEVEL ORIGIN	SCALE		
PSM11950 RL442.505	1:400 (A1)		
MERIDIAN	CONTOUR INTERVAL		
MGA	0.5 Metre		
CO-ORD SYSTEM	DRAWN	DATE	
Arbitrary Plane	MEA	03/10/2024	
SURVEYOR	DATE OF SURVEY	CHECKED	DATE
ETC & EGR	09/08/2024 & 11/09/2024	CGW	03/10/2024
FIELD FILE	APPROVED	DATE	
BRJD8285-000-34-1 & 37-1	CGW	03/10/2024	
UDN	SHEET 2 OF 2		

BRJD8285-000-39-1

0m 5 10 15 20m

SCALE 1:400 (A1)

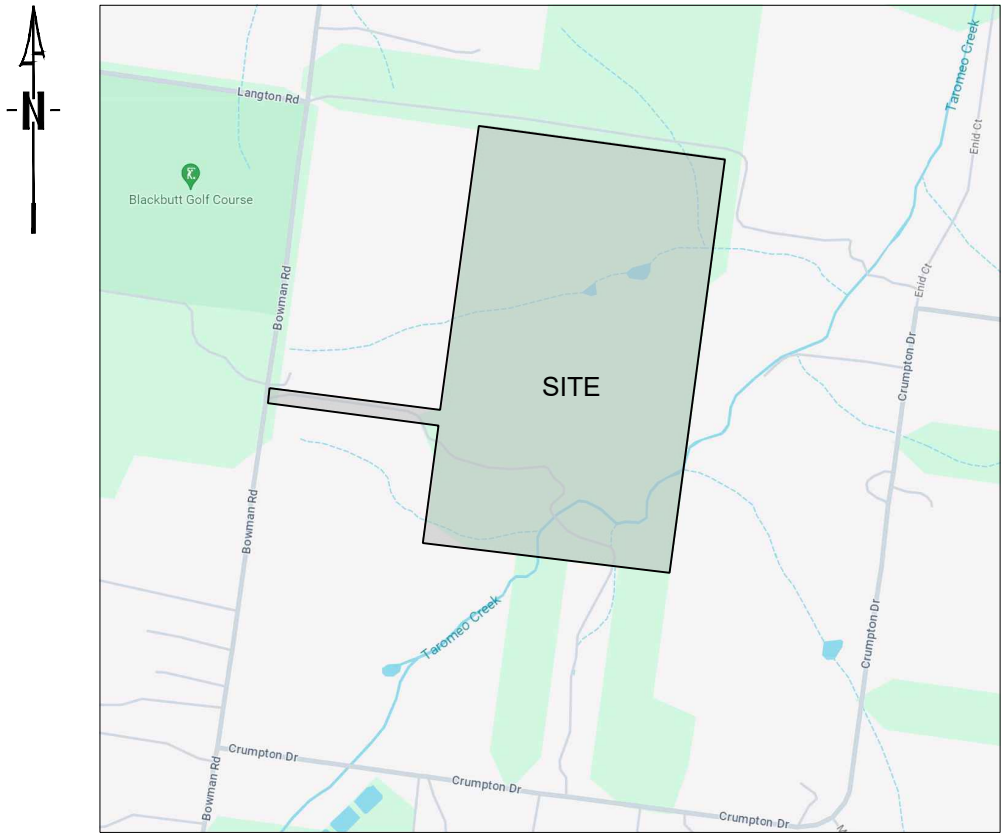
©LANDPARTNERS 2024

APPENDIX C

Civil Design Plans

EVERGREEN MEADOWS
162 BOWMAN RD
BLACKBUTT
FOR GLW CONSTRUCTIONS PTY LTD

DRAWING LIST		
DRG No.	TITLE	TITLE
OVERALL		
DA-AA-000	OVERALL	LOCALITY PLAN AND DRAWING LIST
BULK EARTHWORKS		
DA-BE-101	BULK EARTHWORKS	LAYOUT PLAN
ROADWORKS		
DA-RW-101	ROADWORKS	LAYOUT PLAN - SHEET 1
DA-RW-102	ROADWORKS	LAYOUT PLAN - SHEET 2
DA-RW-103	ROADWORKS	LAYOUT PLAN - SHEET 3
DA-RW-301	ROADWORKS	LONGITUDINAL SECTIONS - SHEET 1
DA-RW-302	ROADWORKS	LONGITUDINAL SECTIONS - SHEET 2
DA-RW-302	ROADWORKS	LONGITUDINAL SECTIONS - SHEET 3
DA-RW-401	ROADWORKS	CROSS SECTIONS - SHEET 1
STORMWATER		
DA-SD-101	STORMWATER	LAYOUT PLAN - SHEET 1
DA-SD-102	STORMWATER	LAYOUT PLAN - SHEET 2

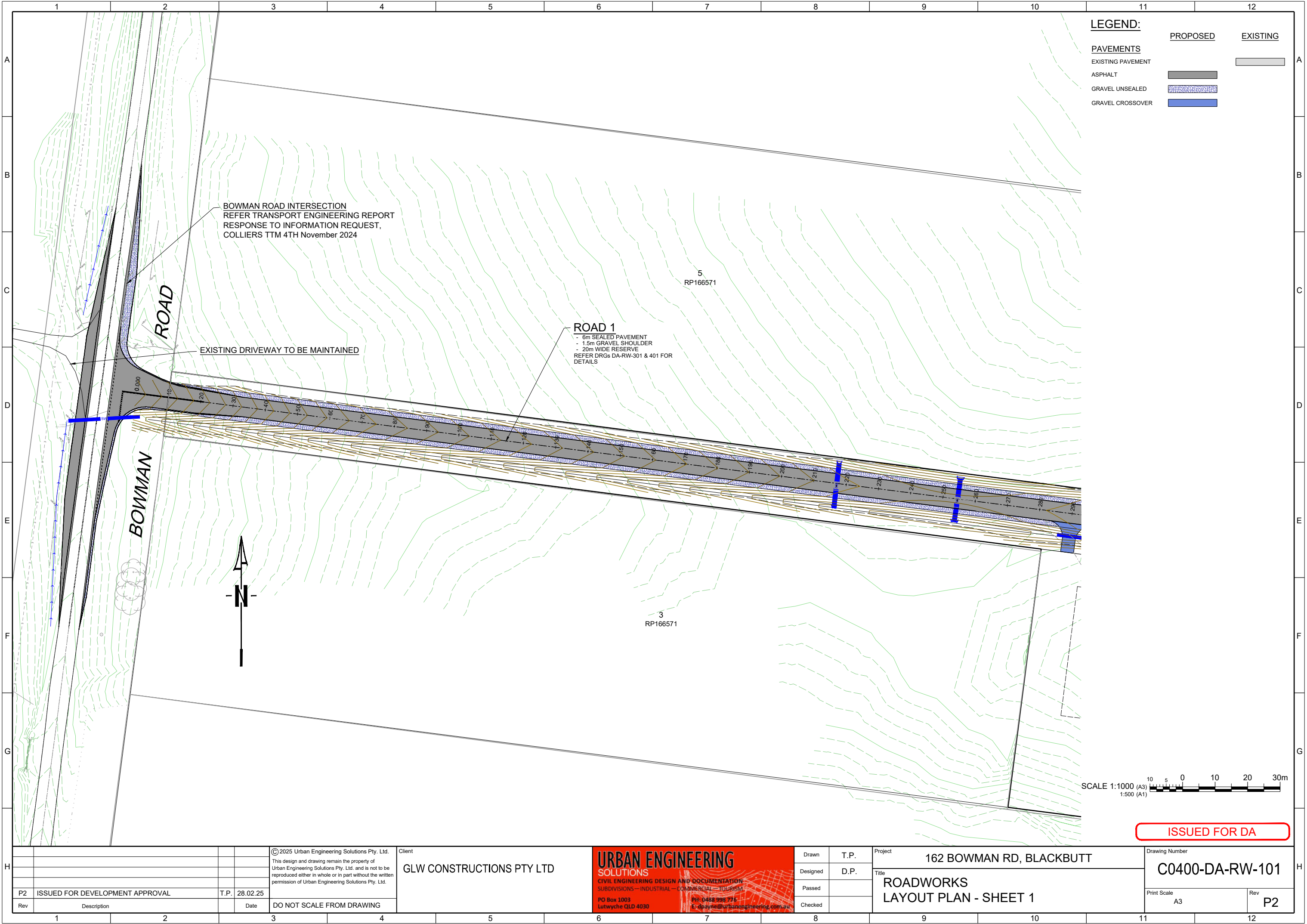


LOCALITY PLAN

GOOGLE MAPS

ISSUED FOR DA

				© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	Client GLW CONSTRUCTIONS PTY LTD	URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS — INDUSTRIAL — COMMERCIAL — TOURISM PO Box 1003 Lutwyche QLD 4030 PH: 0488 998 775 E: d@urbanengineering.com.au	Drawn	T.P.	Project	162 BOWMAN RD, BLACKBUTT		Drawing Number		C0400-DA-AA-000		
							Designed	D.P.	Title		OVERALL LOCALITY PLAN AND DRAWING LIST		Print Scale	A3	Rev	P2
P2	ISSUED FOR DEVELOPMENT APPROVAL			T.P.			28.02.25	Passed								
Rev	Description			Date			DO NOT SCALE FROM DRAWING	Checked								



LEGEND:

PAVEMENTS

EXISTING PAVEMENT

ASPHALT

GRAVEL UNSEALED

GRAVEL CROSSOVER

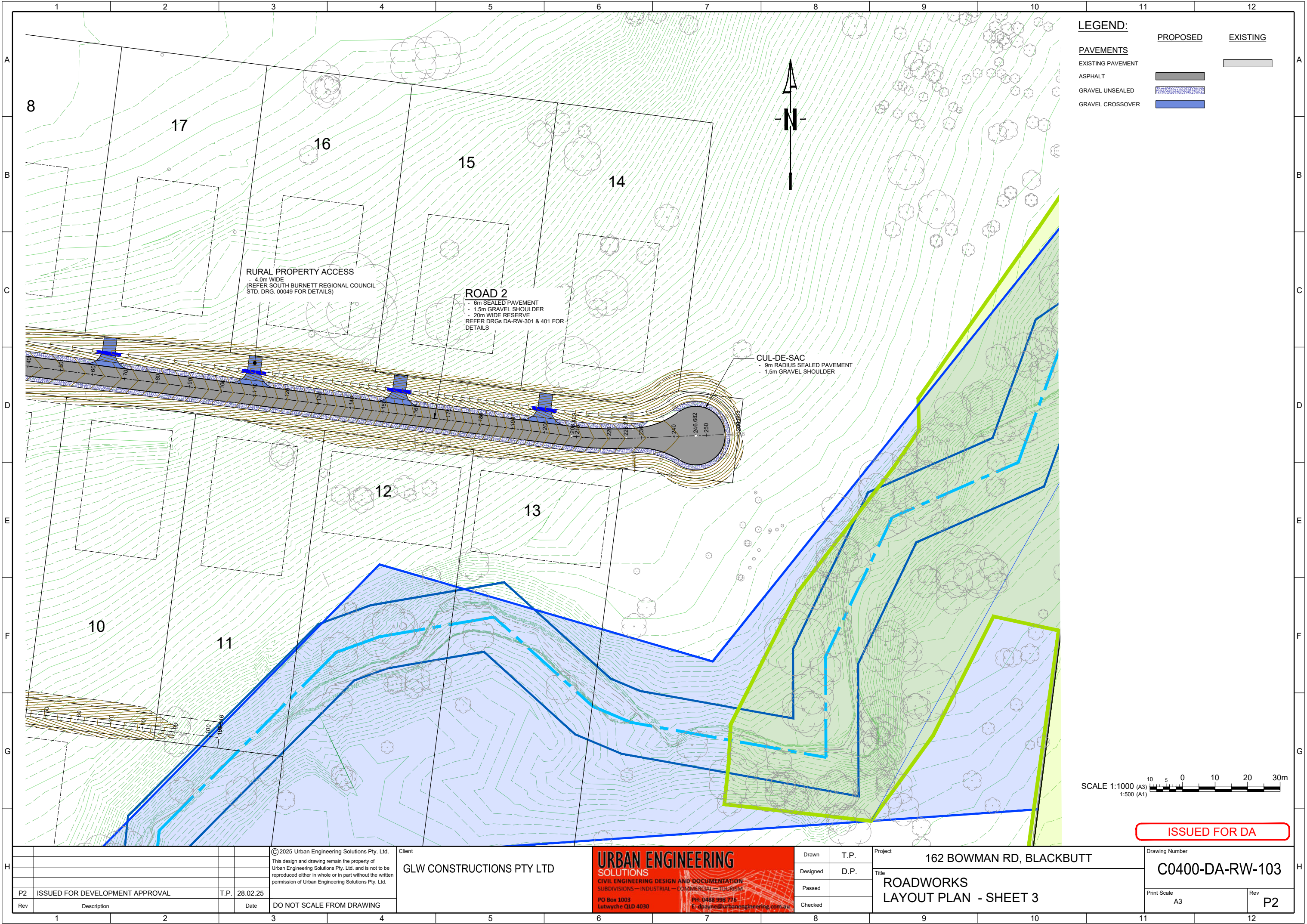
PROPOSED

EXISTING

SCALE 1:1000 (A3)
1:500 (A1)

ISSUED FOR DA

© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.		Client GLW CONSTRUCTIONS PTY LTD		Drawn T.P.		Project 162 BOWMAN RD, BLACKBUTT		Drawing Number C0400-DA-RW-101	
P2 ISSUED FOR DEVELOPMENT APPROVAL		T.P. 28.02.25		Designed D.P.		Title ROADWORKS LAYOUT PLAN - SHEET 1		Print Scale A3	
Rev Description		Date DO NOT SCALE FROM DRAWING		Passed		Checked		Rev P2	



LEGEND:

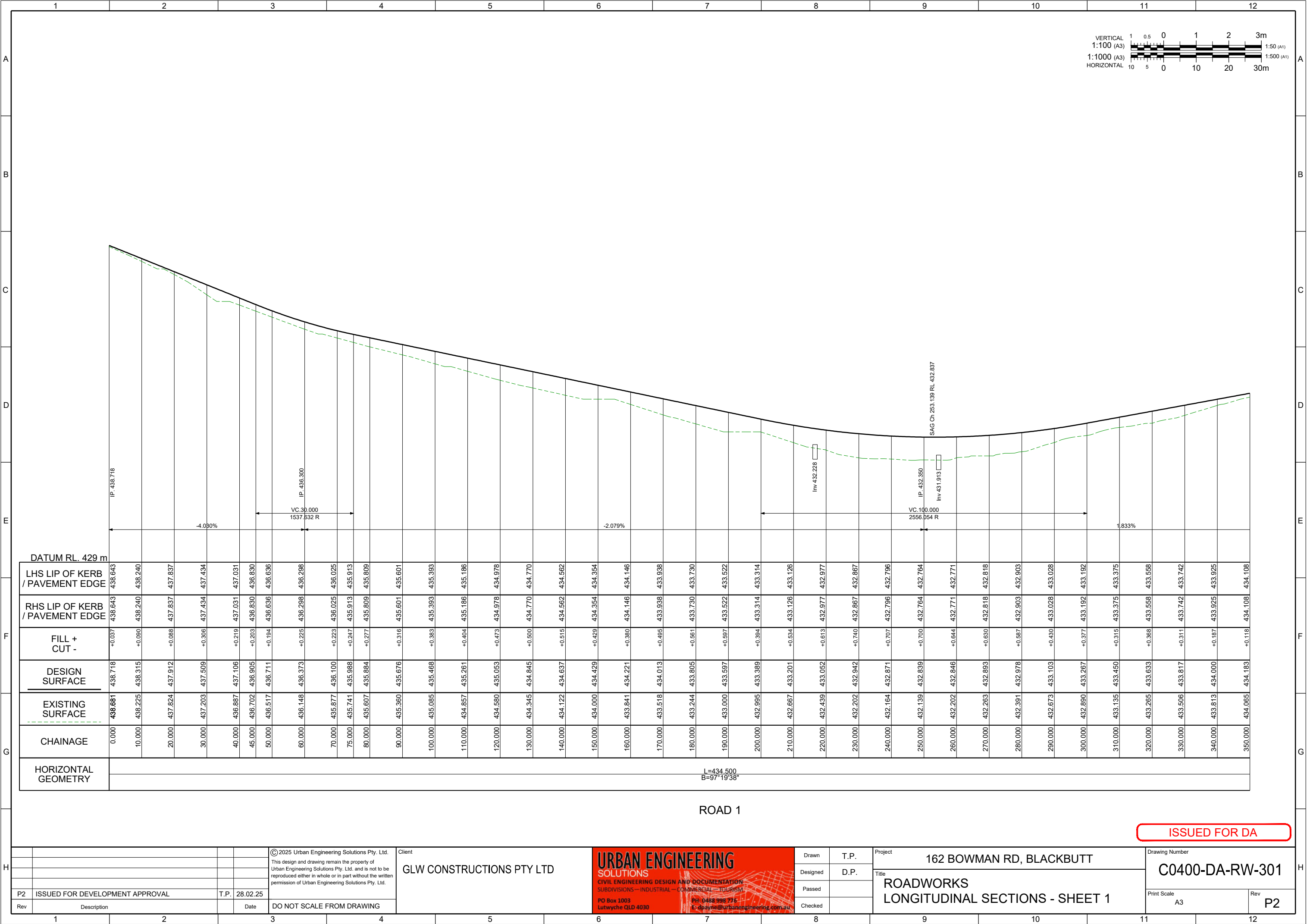
PAVEMENTS

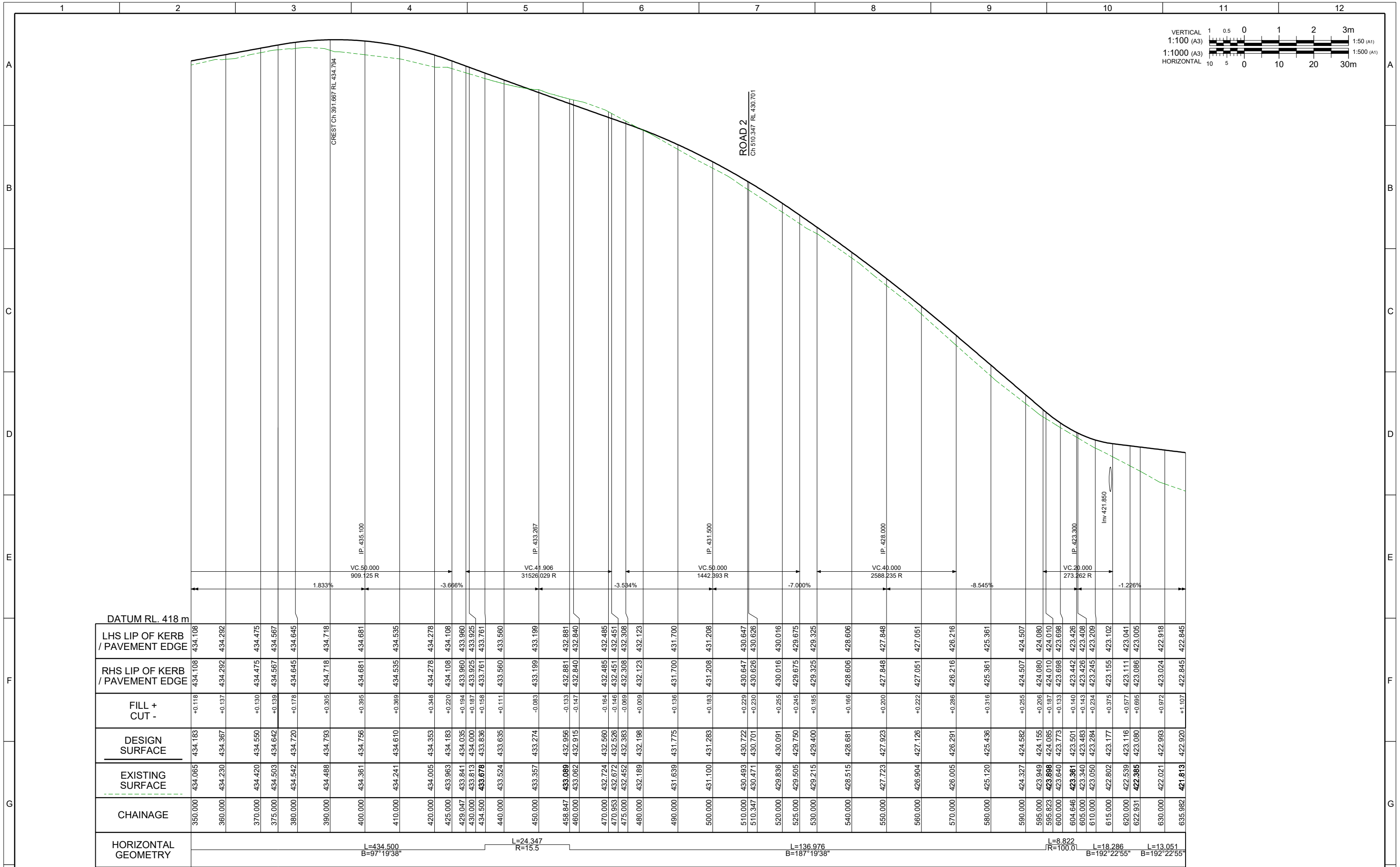
	PROPOSED	EXISTING
EXISTING PAVEMENT		
ASPHALT		
GRAVEL UNSEALED		
GRAVEL CROSSOVER		



ISSUED FOR DA

H					© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	Client GLW CONSTRUCTIONS PTY LTD	URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM PO Box 1003 Lutwyche QLD 4030 PH: 0488 398 775 E: d@urbanengineering.com.au	Drawn	T.P.	Project 162 BOWMAN RD, BLACKBUTT	Drawing Number C0400-DA-RW-103	
					Designed			D.P.	Title ROADWORKS LAYOUT PLAN - SHEET 3			
					Passed					Print Scale A3	Rev P2	
	P2	ISSUED FOR DEVELOPMENT APPROVAL	T.P.	28.02.25	Checked							
	Rev	Description	Date	DO NOT SCALE FROM DRAWING								
	1	2	3	4	5	6	7	8	9	10	11	12

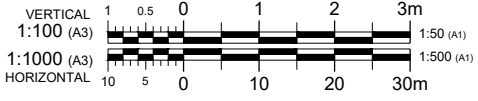
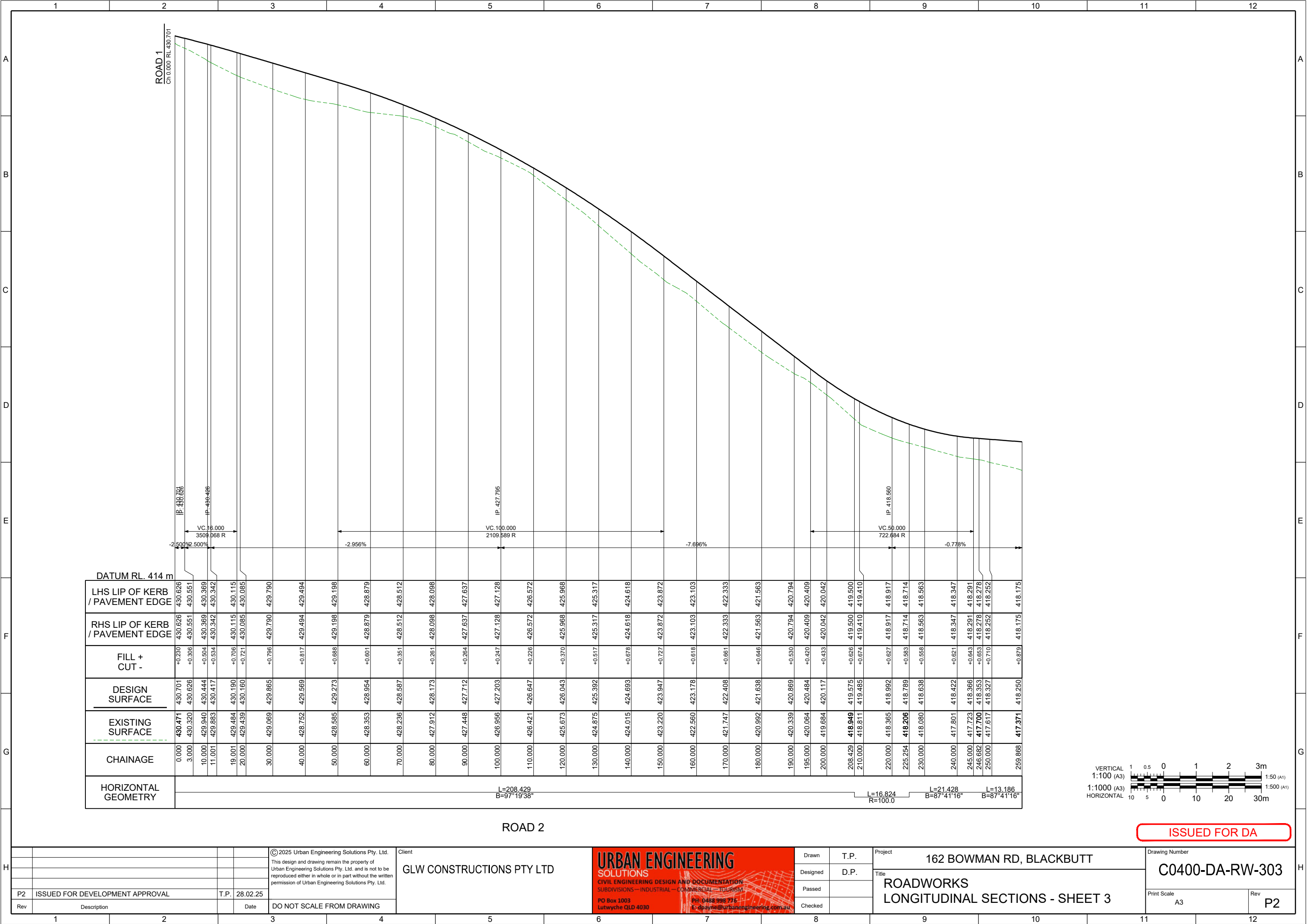




ISSUED FOR DA

H

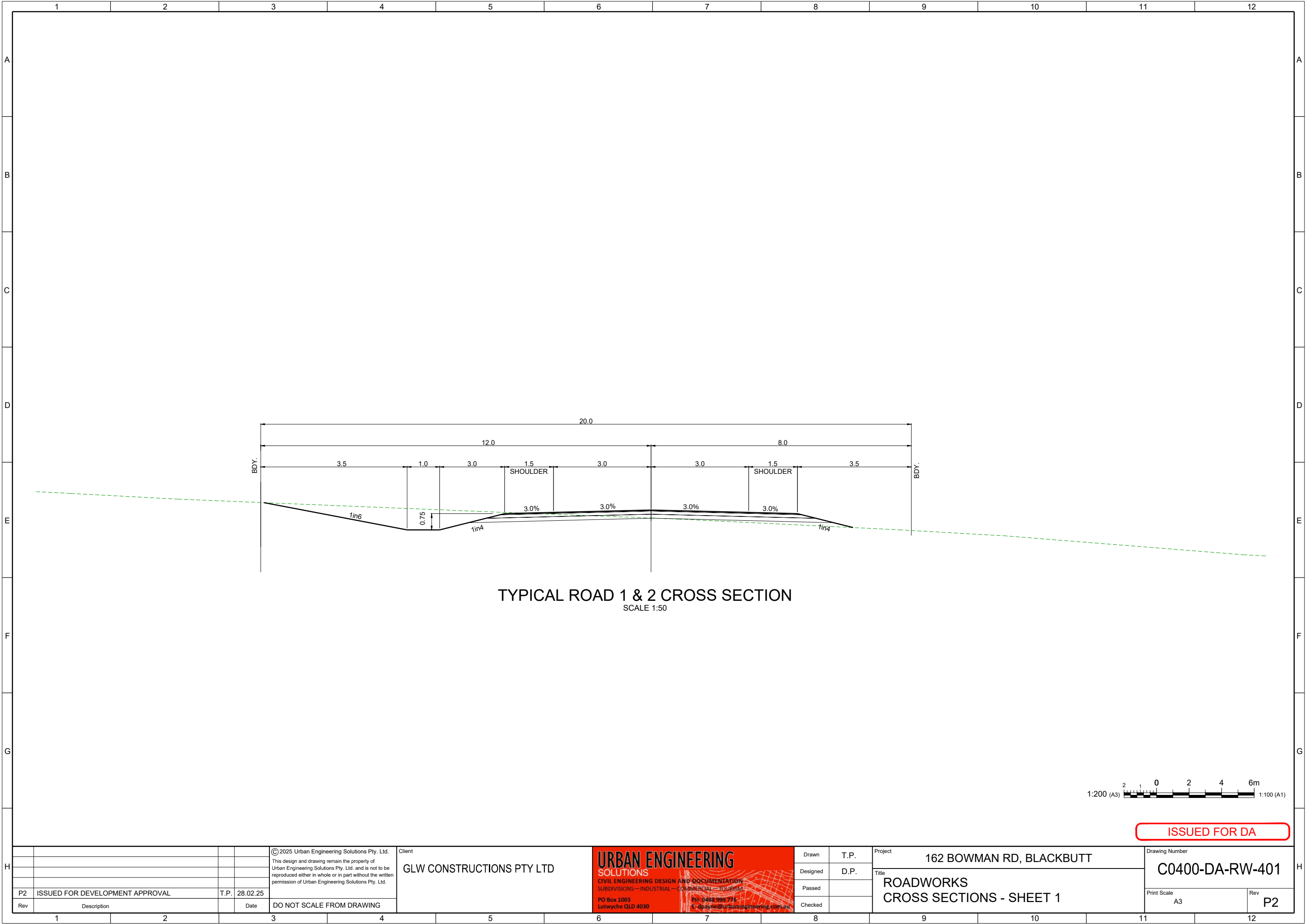
				© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	Client	URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS — INDUSTRIAL — COMMERCIAL — TOURISM PO Box 1003 Lutwyche QLD 4030 PH: 0488 998 776 E: dpyne@urbanengineering.com.au	Drawn	T.P.	Project	162 BOWMAN RD, BLACKBUTT			Drawing Number		C0400-DA-RW-302	H
				GLW CONSTRUCTIONS PTY LTD	Designed		D.P.	Title	ROADWORKS			Print Scale	Rev			
					Passed			LONGITUDINAL SECTIONS - SHEET 2			A3	P2				
P2	ISSUED FOR DEVELOPMENT APPROVAL		T.P.		28.02.25											
Rev	Description				Date		DO NOT SCALE FROM DRAWING									
	1	2		3	4	5	6	7	8	9	10	11	12			

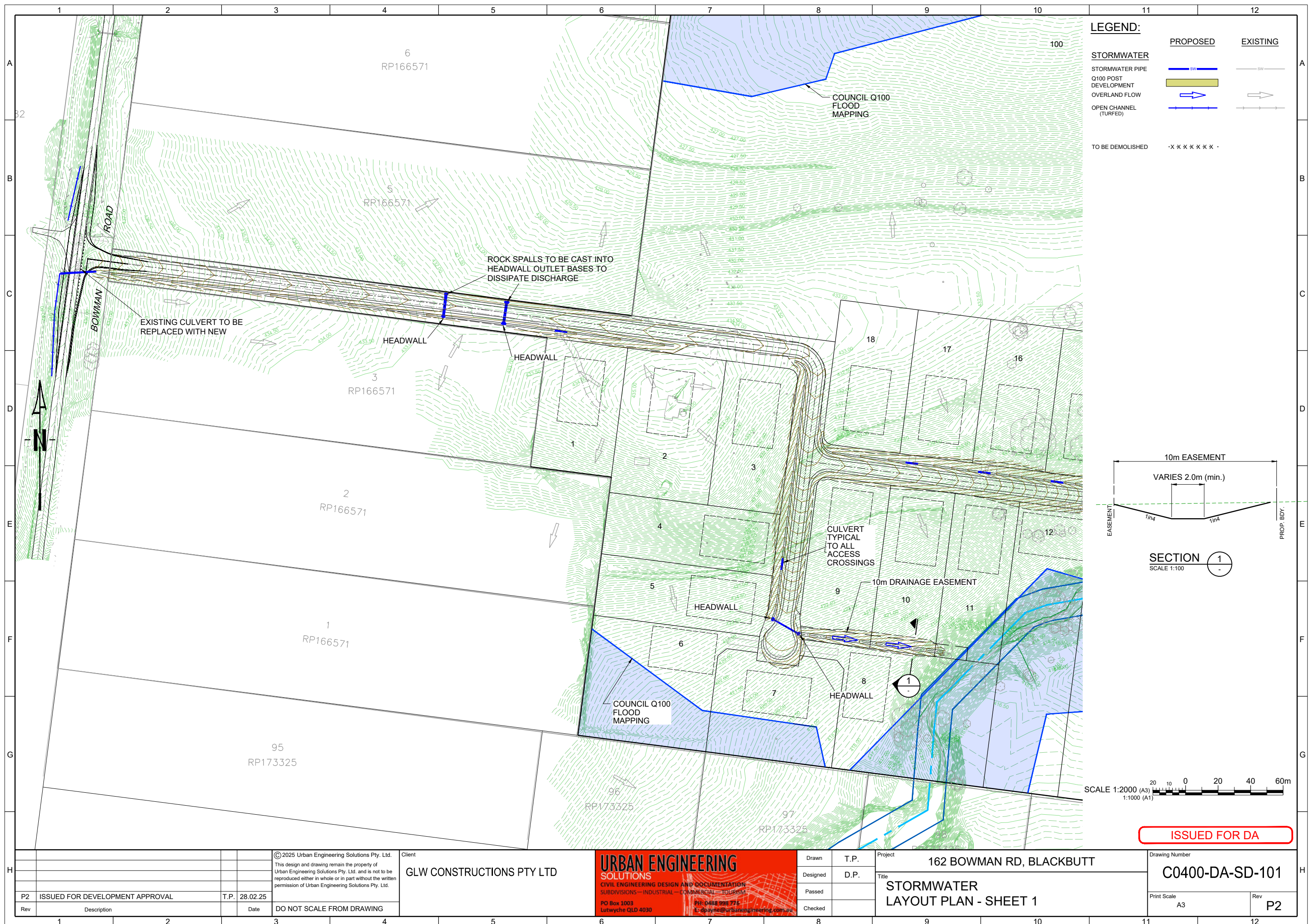


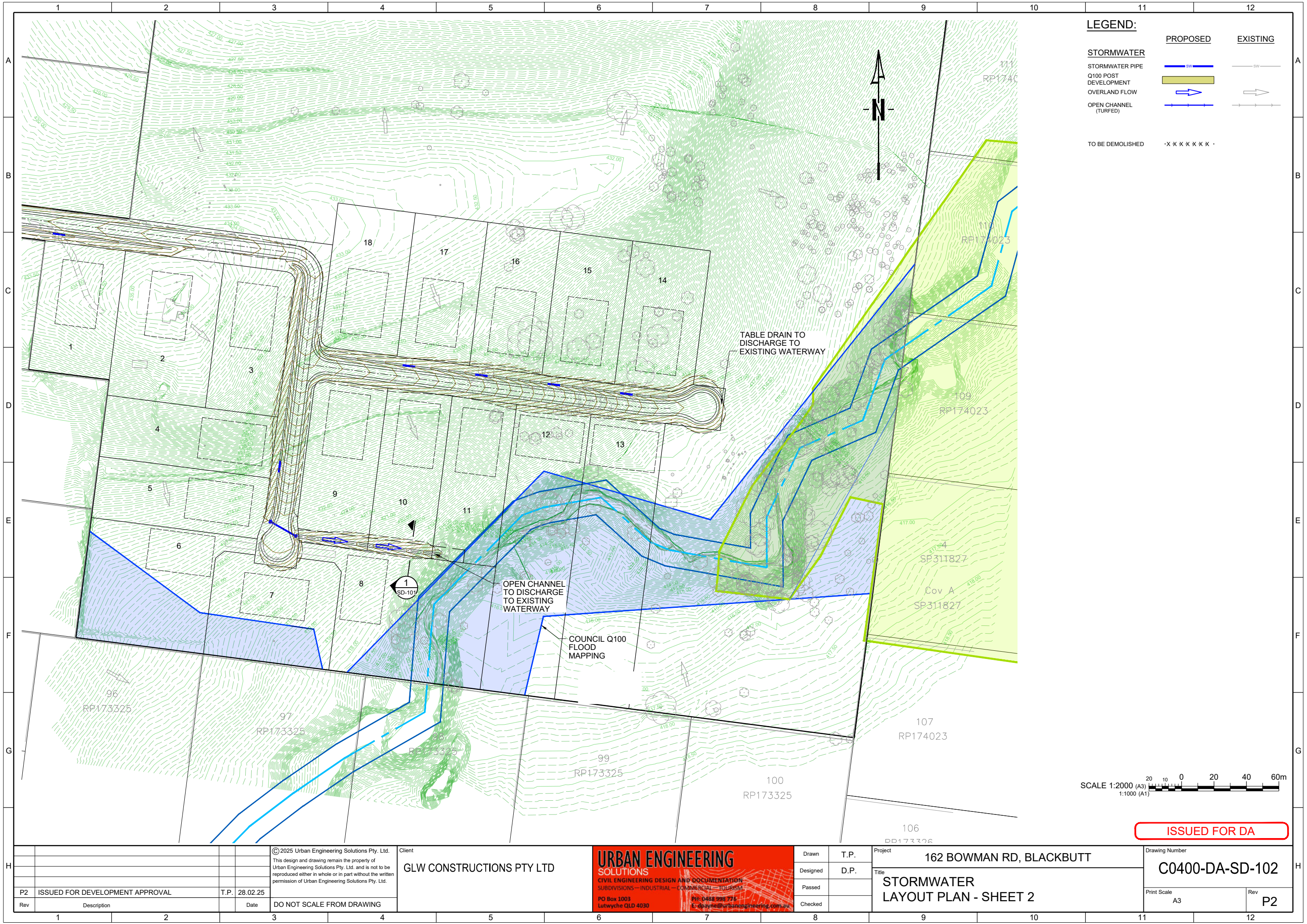
ROAD 2

ISSUED FOR DA

						© 2025 Urban Engineering Solutions Pty. Ltd. This design and drawing remain the property of Urban Engineering Solutions Pty. Ltd. and is not to be reproduced either in whole or in part without the written permission of Urban Engineering Solutions Pty. Ltd.	Client GLW CONSTRUCTIONS PTY LTD	 URBAN ENGINEERING SOLUTIONS CIVIL ENGINEERING DESIGN AND DOCUMENTATION SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM PO Box 1003 Lutwyche QLD 4030 PH: 0488 998 775 E: d@syne@urbanengineering.com.au	Drawn	T.P.	Project 162 BOWMAN RD, BLACKBUTT	Drawing Number C0400-DA-RW-303	
						Designed	D.P.		Title ROADWORKS LONGITUDINAL SECTIONS - SHEET 3	Print Scale A3		Rev P2	
P2	ISSUED FOR DEVELOPMENT APPROVAL			T.P.	28.02.25					Passed			
Rev	Description				Date	DO NOT SCALE FROM DRAWING				Checked			







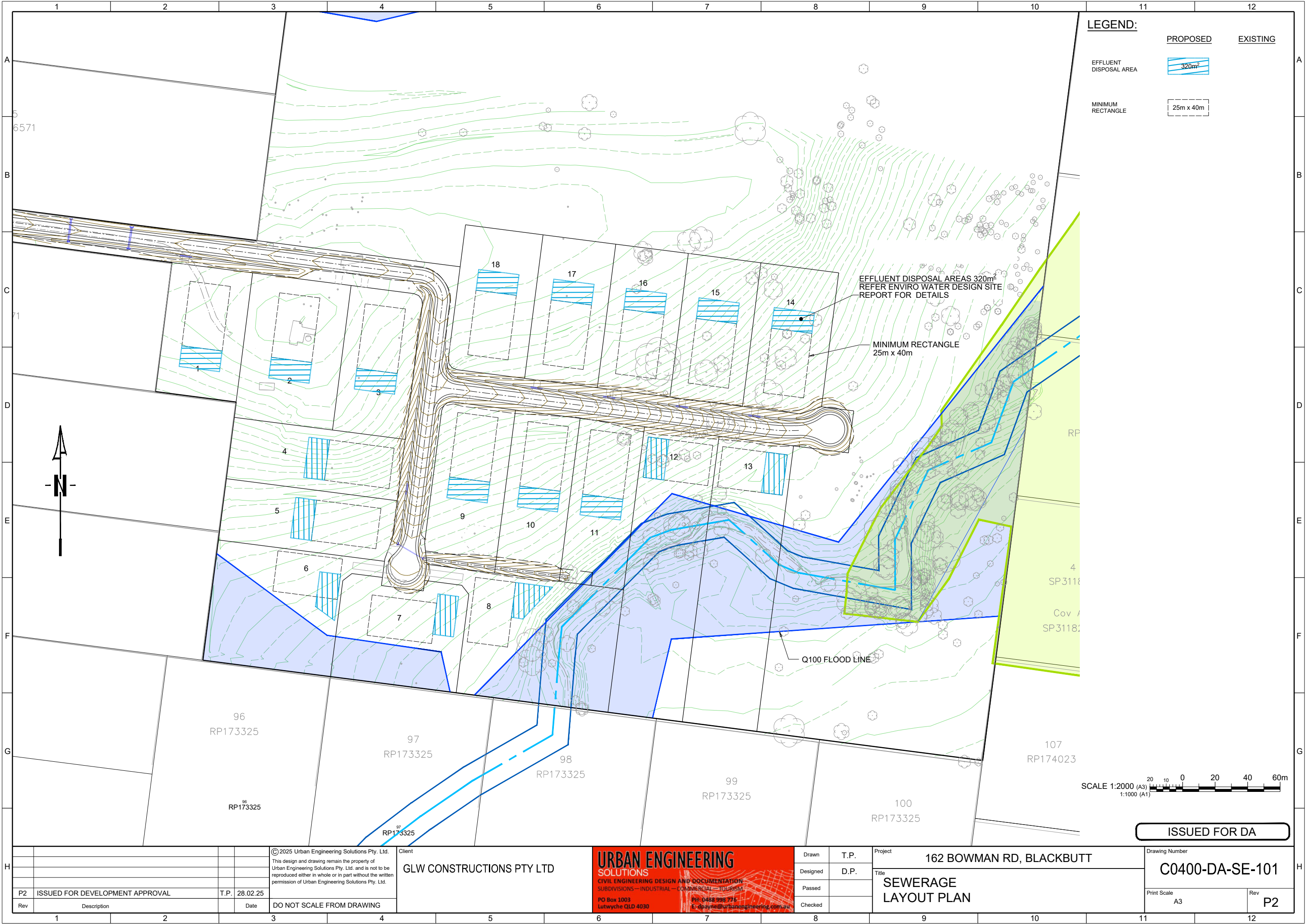
LEGEND:

	PROPOSED	EXISTING
STORMWATER		
STORMWATER PIPE	— SW —	— SW —
Q100 POST DEVELOPMENT OVERLAND FLOW	→	→
OPEN CHANNEL (TURFED)	—+—+—+—	—+—+—+—
TO BE DEMOLISHED	·X·X·X·X·X·X·	

SCALE 1:2000 (A3)
1:1000 (A1)

ISSUED FOR DA

H																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



LEGEND:

	PROPOSED	EXISTING
EFFLUENT DISPOSAL AREA	320m²	
MINIMUM RECTANGLE	25m x 40m	

EFFLUENT DISPOSAL AREAS 320m²
REFER ENVIRO WATER DESIGN SITE
REPORT FOR DETAILS

MINIMUM RECTANGLE
25m x 40m

Q100 FLOOD LINE

SCALE 1:2000 (A3)
1:1000 (A1)

ISSUED FOR DA

© 2025 Urban Engineering Solutions Pty. Ltd.
This design and drawing remain the property of
Urban Engineering Solutions Pty. Ltd. and is not to be
reproduced either in whole or in part without the written
permission of Urban Engineering Solutions Pty. Ltd.

Client
GLW CONSTRUCTIONS PTY LTD

URBAN ENGINEERING

SOLUTIONS

CIVIL ENGINEERING DESIGN AND DOCUMENTATION
SUBDIVISIONS—INDUSTRIAL—COMMERCIAL—TOURISM

PO Box 1003
Lutwyche QLD 4030

PH: 0488 398 775
E: d@urbanengineering.com.au

Drawn	T.P.
Designed	D.P.
Passed	
Checked	

Project	162 BOWMAN RD, BLACKBUTT
Title	SEWERAGE LAYOUT PLAN

Drawing Number	C0400-DA-SE-101
Print Scale	A3
Rev	P2

P2	ISSUED FOR DEVELOPMENT APPROVAL	T.P.	28.02.25
Rev	Description	Date	DO NOT SCALE FROM DRAWING

APPENDIX D

URBS Data

9425_Ex.DAT

```

"Index","Area","UF","UR","UL","I"
#1,4.35341,0.00,1.00,0.00,0.20
#2,2.88744,0.00,1.00,0.00,0.20
#3,2.28313,0.00,0.80,0.20,0.30
#4,2.22420,0.00,0.50,0.50,0.45
#5,0.28346,0.00,1.00,0.00,0.20
#6,0.22176,0.00,1.00,0.00,0.25
#7,0.71179,0.00,1.00,0.00,0.20
#8,0.27604,0.00,1.00,0.00,0.20
#9,0.51609,0.50,0.50,0.00,0.13
#10,0.51533,0.15,0.85,0.00,0.18
#11,0.14568,0.50,0.50,0.00,0.13
#12,0.87810,0.40,0.60,0.00,0.14
#13,0.10192,1.00,0.00,0.00,0.05
#14,0.15586,0.00,1.00,0.00,0.20
#15,0.18817,0.00,1.00,0.00,0.20
#16,0.05644,0.00,1.00,0.00,0.20
#17,0.04569,0.00,1.00,0.00,0.20
#18,0.02973,0.00,1.00,0.00,0.20
#19,0.08625,0.00,1.00,0.00,0.20
#20,0.11772,1.00,0.00,0.00,0.05
#21,0.00410,0.00,1.00,0.00,0.20
#22,0.00584,0.00,1.00,0.00,0.00
#23,0.01628,0.00,1.00,0.00,0.00
#101,0.00513,0.00,1.00,0.00,0.30
#102,0.00294,0.00,1.00,0.00,0.10
#103,0.00287,0.00,1.00,0.00,0.15
#104,0.00959,0.00,1.00,0.00,0.15
#105,0.00523,0.00,1.00,0.00,0.35
#106,0.01582,0.00,1.00,0.00,0.00
#107,0.01606,0.00,1.00,0.00,0.00
#108,0.01075,0.00,1.00,0.00,0.00
#109,0.01377,0.00,1.00,0.00,0.00
#110,0.00837,0.00,1.00,0.00,0.00
#111,0.00474,0.00,1.00,0.00,0.00

```

9425_Ex.U

```

Blackbutt - Existing
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=9425_Ex.dat

Rain    #1      L=1.475
Route thru    #2      L=0.960
Add Rain      #2      L=0.898
Route thru    #3      L=0.544
Add Rain      #3      L=0.746
Route thru    #4      L=0.649
Add Rain      #4      L=0.739
Route thru    #7      L=0.604
Store.
Rain    #7      L=0.448
Store.
Rain    #5      L=0.236
Route thru    #6      L=0.212
Add Rain      #6      L=0.340
Route thru    #7      L=0.218
Get.
Get.
Route thru    #8      L=0.413
Store.
Rain    #8      L=0.455
Get.
Print. SOUTH
Route thru    #8      L=0.049
Store.
Rain    #105    L=0.042
Route thru    #106    L=0.084
Add Rain      #106    L=0.072
Route thru    #110    L=0.053
Add Rain      #110    L=0.046
Store.
Rain    #104    L=0.114
Route thru    #110    L=0.103
Get.
Get.

```



```

Route thru      #8      L=0.040
Store.
Rain   #107      L=0.055
Route thru      #109     L=0.046
Add Rain        #109     L=0.073
Get.
Route thru      #8      L=0.128
Store.
Rain   #111      L=0.058
Store.
Rain   #108      L=0.063
Route thru      #111     L=0.074
Get.
Get.
Route thru      #8      L=0.195
Store.
Rain   #22      L=0.078
Route thru      #23      L=0.102
Add Rain        #23      L=0.064
Get.
Route thru      #8      L=0.055
Store.
Rain   #9       L=0.301
Route thru      #10      L=0.409
Add Rain        #10      L=0.409
Get.
Print. POINT-1
Route thru      #11      L=0.703
Store.
Rain   #11      L=0.378
Store.
Rain   #12      L=0.578
Store.
Rain   #13      L=0.446
Store.
Rain   #14      L=0.235
Route thru      #15      L=0.374
Store.
Rain   #15      L=0.184
Store.
Rain   #101     L=0.125
Store.
Rain   #21      L=0.063
Route thru      #101     L=0.020
Store.
Rain   #102     L=0.076
Store.
Rain   #103     L=0.047
Route thru      #102     L=0.033
Get.
Get.
Get.
Route thru      #15      L=0.197
Get.
Get.
Route thru      #16      L=0.265
Store.
Rain   #16      L=0.178
Store.
Rain   #17      L=0.178
Get.
Get.
Route thru      #18      L=0.263
Store.
Rain   #18      L=0.182
Store.
Rain   #19      L=0.212
Store.
Rain   #20      L=0.350
Route thru      #19      L=0.159
Get.
Get.
Get.
Print. NORTH
Route thru      #11      L=0.418
Get.
Get.
Get.
Get.
Print. POINT-2

```

end of catchment details.

9425_Dev.DAT

```
"Index", "Area", "UF", "UR", "UL", "I"
#1,4.35341,0.00,1.00,0.00,0.20
#2,2.88744,0.00,1.00,0.00,0.20
#3,2.28313,0.00,0.80,0.20,0.30
#4,2.22420,0.00,0.50,0.50,0.45
#5,0.28346,0.00,1.00,0.00,0.20
#6,0.22176,0.00,1.00,0.00,0.25
#7,0.71179,0.00,1.00,0.00,0.20
#8,0.27604,0.00,1.00,0.00,0.20
#9,0.51609,0.50,0.50,0.00,0.13
#10,0.51533,0.15,0.85,0.00,0.18
#11,0.14568,0.50,0.50,0.00,0.13
#12,0.87810,0.40,0.60,0.00,0.14
#13,0.10192,1.00,0.00,0.00,0.05
#14,0.15586,0.00,1.00,0.00,0.20
#15,0.18817,0.00,1.00,0.00,0.20
#16,0.05644,0.00,1.00,0.00,0.20
#17,0.04569,0.00,1.00,0.00,0.20
#18,0.02973,0.00,1.00,0.00,0.20
#19,0.08625,0.00,1.00,0.00,0.20
#20,0.11772,1.00,0.00,0.00,0.05
#21,0.00410,0.00,1.00,0.00,0.20
#22,0.00584,0.00,1.00,0.00,0.00
#23,0.01628,0.00,1.00,0.00,0.00
#101,0.00513,0.00,1.00,0.00,0.50
#102,0.00294,0.00,1.00,0.00,0.50
#103,0.00287,0.00,1.00,0.00,0.30
#104,0.00959,0.00,1.00,0.00,0.50
#105,0.00523,0.00,1.00,0.00,0.20
#106,0.01582,0.00,1.00,0.00,0.30
#107,0.01606,0.00,1.00,0.00,0.50
#108,0.01075,0.00,1.00,0.00,0.50
#109,0.01377,0.00,1.00,0.00,0.50
#110,0.00837,0.00,1.00,0.00,0.30
#111,0.00474,0.00,1.00,0.00,0.30
```

9425_Dev.U

```
Blackbutt - Development
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=9425_Dev.dat

Rain #1 L=1.475
Route thru #2 L=0.960
Add Rain #2 L=0.898
Route thru #3 L=0.544
Add Rain #3 L=0.746
Route thru #4 L=0.649
Add Rain #4 L=0.739
Route thru #7 L=0.604
Store.
Rain #7 L=0.448
Store.
Rain #5 L=0.236
Route thru #6 L=0.212
Add Rain #6 L=0.340
Route thru #7 L=0.218
Get.
Get.
Route thru #8 L=0.413
Store.
Rain #8 L=0.455
Get.
Print. SOUTH
Route thru #8 L=0.049
Store.
Rain #105 L=0.042
Route thru #106 L=0.084
Add Rain #106 L=0.072
Route thru #110 L=0.053
Add Rain #110 L=0.046
Store.
Rain #104 L=0.114
```



```

Route thru      #110      L=0.103
Get.
Get.
Route thru      #8        L=0.040
Store.
Rain      #107      L=0.055
Route thru      #109      L=0.046
Add Rain      #109      L=0.073
Get.
Route thru      #8        L=0.128
Store.
Rain      #111      L=0.058
Store.
Rain      #108      L=0.063
Route thru      #111      L=0.074
Get.
Get.
Route thru      #8        L=0.195
Store.
Rain      #22       L=0.078
Route thru      #23       L=0.102
Add Rain      #23       L=0.064
Get.
Route thru      #8        L=0.055
Store.
Rain      #9        L=0.301
Route thru      #10       L=0.409
Add Rain      #10       L=0.409
Get.
Print. POINT-1
Route thru      #11       L=0.703
Store.
Rain      #11       L=0.378
Store.
Rain      #12       L=0.578
Store.
Rain      #13       L=0.446
Store.
Rain      #14       L=0.235
Route thru      #15       L=0.374
Store.
Rain      #15       L=0.184
Store.
Rain      #101      L=0.125
Store.
Rain      #21       L=0.063
Route thru      #101      L=0.020
Store.
Rain      #102      L=0.076
Store.
Rain      #103      L=0.047
Route thru      #102      L=0.033
Get.
Get.
Get.
Route thru      #15       L=0.197
Get.
Get.
Route thru      #16       L=0.265
Store.
Rain      #16       L=0.178
Store.
Rain      #17       L=0.178
Get.
Get.
Route thru      #18       L=0.263
Store.
Rain      #18       L=0.182
Store.
Rain      #19       L=0.212
Store.
Rain      #20       L=0.350
Route thru      #19       L=0.159
Get.
Get.
Get.
Print. NORTH
Route thru      #11       L=0.418
Get.
Get.

```

Get.
Get.
Print. POINT-2
end of catchment details.

APPENDIX E

Code Responses

Table 8.4.1 – Assessable Development

Section 4 – All reconfiguring a lot subject to an overlay – Flood Hazard Overlay		
Performance Outcomes	Acceptable Outcomes	SWC Responses
PO20 Development is not exposed to risk from flood events by responding to flood potential and maintains personal safety at all times	AO20.1 All new allotments include an area of sufficient size to accommodate the intended land use outside the area identified on Overlay Map 03.	AO20.1 addressed: The proposed lots are considered to be of sufficient size to accommodate the intended land use outside the area identified on Overlay Map 03.
PO21 Development directly, indirectly and cumulatively avoids any significant increase in water flow, velocity or flood level, and does not increase the potential for flood damage either on site or other properties.	AO21.1 Works associated with the proposed development do not: (a) involve a net increase in filling greater than 50m³; or (b) result in any reductions of on-site flood storage capacity and contain within the site any changes to depth / duration/velocity of flood waters; or (c) change flood characteristics outside the site in ways that result in: (i) loss of flood storage; (ii) loss of/changes to flow paths; (iii) acceleration or retardation of flows; or (iv) any reduction in flood warning times.	AO21.1 addressed: b) The proposed development would not involve filling of land within a flood storage area. As such, the proposed works would not result in any reductions of on-site flood storage capacity. c) The model results show that the 1% AEP flood inundation would not impact the building rectangles shown on the proposed subdivision layout. The proposed development would therefore not change flood characteristics outside the site in ways that result in: (i) loss of flood storage; (ii) loss of/changes to flow paths; (iii) acceleration or retardation of flows; or (iv) any reduction in flood warning times.



4 April 2025

Our Ref: 24BRT0501

Your Ref:

Attention: Grant Washington

GLW Constructions Pty Ltd
501/53A Newstead Terrace
Newstead QLD 4006

Dear Grant,

**RE: 162 Bowman Road, Blackbutt North – Proposed Sub-Division Development
Transport Engineering Report – Response to Information Request**

1 Introduction

TTM Consulting Pty Ltd (TTM) has been engaged to prepare a response to the issues relating to traffic engineering raised in South Burnett Regional Council's (SBRC's) Request for Information (RFI) dated 18 July 2024. This RFI relates to a development application supporting a proposed Subdivision Development at 162 Bowman Road, Blackbutt North (Ref: RAL24/0013).

The traffic engineering issues raised by SBRC in the RFI, and TTM's subsequent responses, are outlined as follows:

2 Engineering: Issue 2 – Development Design Item 1

Provide a design layout of the intersection of Bowman Road and the new road, including an assessment of the turning treatments required in accordance with Austroads Guide to Road Design. The turn treatment assessment should also identify trigger levels for upgraded turn treatments for possible further subdivision of the lot.

Based on the above, it is understood that TTM's transport impact assessment (TIA) is required to inform the detailed design aspect of the site access treatment to accommodate both the proposed 18 Lots and further subdivision of the balance lot.

3 Proposed Site Access Intersection Assessment

3.1 Scope of Assessment

Our assessment of the proposed new site access intersection is limited to an assessment of the major road turn treatments required on Bowman Road approaches to the intersections and has been undertaken in accordance with Section 3.3.7 of Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossing Management (2020).

3.2 Proposed Development Yield

The proposed development is for a Reconfiguration of a Lot (ROL) from 1 into 18 lots and a balance lot. TTM notes that the structure plan prepared by LANDPARTNERS, provided in **Attachment 1**, indicates that the balance lot will potentially be subdivided into approximately 50 lots.

3.3 Existing Traffic Volumes

TTM have conducted traffic survey along Bowman Road between 23 of August 2024 to 29 of August 2024. The road network peak hours were found to be 8:00 AM to 9:00 AM and 4:00 PM to 5:00 PM on Thursday 20 of August 2024. These peak hour traffic volumes identified by the survey were adopted as through volumes at the site access.

3.4 Development Transport Demands

To estimate the expected traffic generation for the proposed land uses, reference has been made to the RTA's *Guide to Traffic Generating Developments*. The guide suggests adopting a weekday peak hour traffic generation rate of 0.85 vehicles per dwelling.

Regarding directional splits, and in accordance with standard traffic engineering practices, it is assumed that staff trips will predominantly enter during the morning peak and exit during the evening peak. This distribution is estimated to be:

- AM Peak Hour: 20% inbound /80% outbound
- PM Peak Hour: 70% inbound /30% outbound

Application of the above generation rates and directional splits would result in proposed development traffic demand estimates as shown in Table 1.

Table 1: Traffic Generation Estimate

Stage	Yield	AM Peak Hour (vph)				PM Peak Hour (vph)			
		Generation rate	In	Out	Total	Generation rate	In	Out	Total
Proposed	18 lots	0.85 per dwelling	3	12	15	0.85 per dwelling	11	4	15
Future	50 lots	0.85 per dwelling	9	34	43	0.85 per dwelling	30	13	43
Total	68 lots		12	46	58		41	17	58

The following traffic distribution characteristics have been adopted based on the proximity to the D'Aguilar Highway and township south of the site along Coulson Street:

- 90% of trips will travel to/from the south
- 10% of trips will travel to/from the north

3.4.1 Future Traffic Demands

3.4.2 Assessment Years and Traffic Growth

The targeted completion date for the development is estimated to be 2026. On this basis, the following assessment years have been considered:

- Opening Year (Full Completion): 2026
- Design Horizon (Opening + 10 years): 2036

3.4.3 Future Year Scenarios

For the purposes of assessing future traffic demands on the external road network, SDRC Local Government Infrastructure Plan (LGIP) within the Council's Planning Scheme provides guidance on future traffic growth expectations.

The subject site is located within the Blackbutt Service Catchment. By comparing the projected traffic demand for 2031 (in terms of total vehicle trips per day) with the 2026 base volumes, an equivalent annual growth rate of 1.2% has been identified for the catchment.

To ensure a conservative approach, TTM has adopted a growth rate of 5% per annum. This rate has been applied to the key through movements from the 2024 survey to estimate the base traffic volumes for the opening year and the 10-year design horizon.

The Traffic Network Diagrams for the 2024 Survey Case, 2026 and 2036 Base + Development Cases are included in **Attachment 3**.

The scope of this TIA is limited Turn Warrant Assessment only at the site access on Bowman Road.

3.5 Turn Warrant Assessment

To determine the appropriate configuration of the site access, a turn warrants assessment has been conducted in line with the methodology contained within the Austroads Guide to Traffic Management Part 6 (AGTM06). The assessment is shown in Figure 3.1 and considers future traffic demands at the 2036 design horizon.

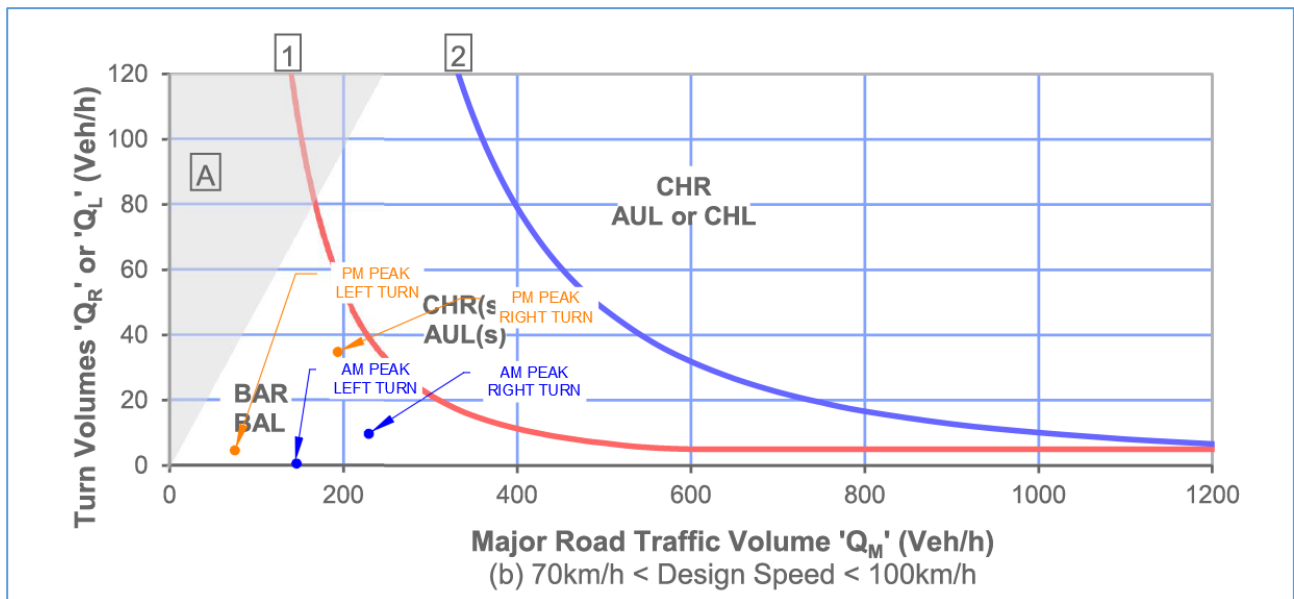


Figure 3.1: Site Access – Turn Warrant Assessment (AGTM06)

Based on this assessment, the access requires provision for the following treatments:

- A BAR on the southern approach
- A BAL on the northern approach

Allowance has been made for these turning treatments within the access design as shown in TTM Drawing 24BRT0501-01 (Attachment 2).

4 Summary and Conclusion

Based on the assessment undertaken as detailed herein it is concluded that the proposed new site access intersection requires Type BAR and Type BAL turn treatments on the Bowman Road approaches. These treatments are the minimum that should be provided as part of Stage 1 of the development and are adequate to accommodate the overall future potential subdivision development (approximately 68 lots).

It is TTM's assertion that the above adequately addresses the traffic engineering issues raised by ICC in the RFI.

Should you have any questions in relation to the content of this letter, please contact David Grummitt or myself on (07)33279500.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Tenzin Kuensel".

Tenzin Kuensel
Consultant

TTM Consulting Pty Ltd

Checked and certified by:

A handwritten signature in black ink, appearing to read "D. Grummitt".

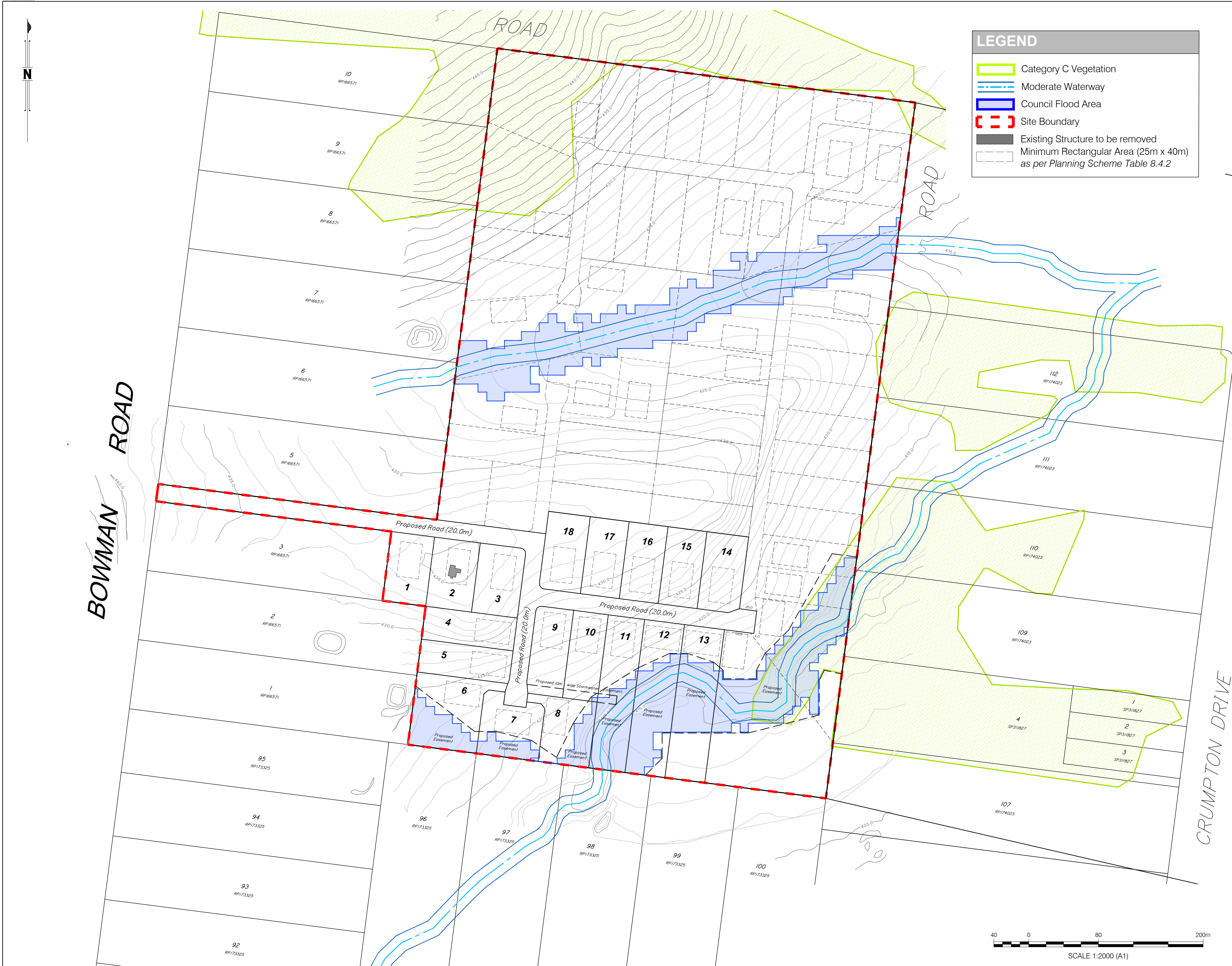
David Grummitt (RPEQ 19356)
Director

TTM Consulting Pty Ltd

Attachment 1 – Development Plans



©LANDPARTNERS 202



LEGEND

- Category C Vegetation
- Moderate Waterway
- Council Flood Area
- Site Boundary
- Existing Structure to be removed
- Minimum Rectangular Area (25m x 40m) as per Planning Scheme Table 8.4.2

CLIENT

GLW Constructions Pty Ltd

PROJECT

STRUCTURE PLAN
OF LOT 4 ON RP166571
(162 Bowman Road,
Blackbutt North, QLD, 4314)

LOCAL AUTHORITY

South Burnett Regional Council (S.B.R.C)

NOTES

(i) This plan was prepared for the purpose and exclusive use of GLW Constructions Pty Ltd to accompany an application to South Burnett Regional Council for approval to reconfigure the land described in this plan and is not to be used for any other purpose or by any other person or corporation. LandPartners Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this plan in contravention of the terms of this clause or clauses (ii), (iii) or (iv) hereof.

(ii) The contours shown in this plan are suitable only for the purposes of this application. The accuracy of the contours has not been verified and no reliance should be placed upon such contours for any other purpose other than the purpose of this application for reconfiguration.

(iii) The dimensions, areas, number of lots, size and location of improvements & flood information (if shown) are approximate only and may vary subject to engineering design changes, field survey and requirements for lodgement of survey plans in the Department of Natural Resources, Mines and Energy.

(iv) This plan may not be copied unless these notes are included.

1	CGW	02/08/2024	Initial layout
---	-----	------------	----------------

LANDPARTNERS
surveyors and planners

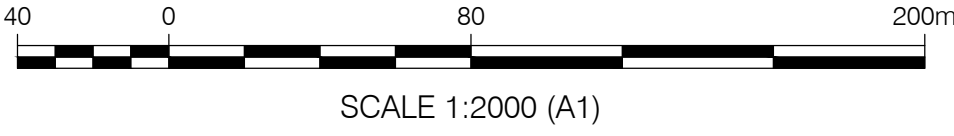
bsi
Level 1
18 Little Cribb Street
Milton QLD 4064

PO Box 1399
Milton
QLD 4064

p (07) 3842 1000
f (07) 3842 1001
info@landpartners.com.au
www.landpartners.com.au

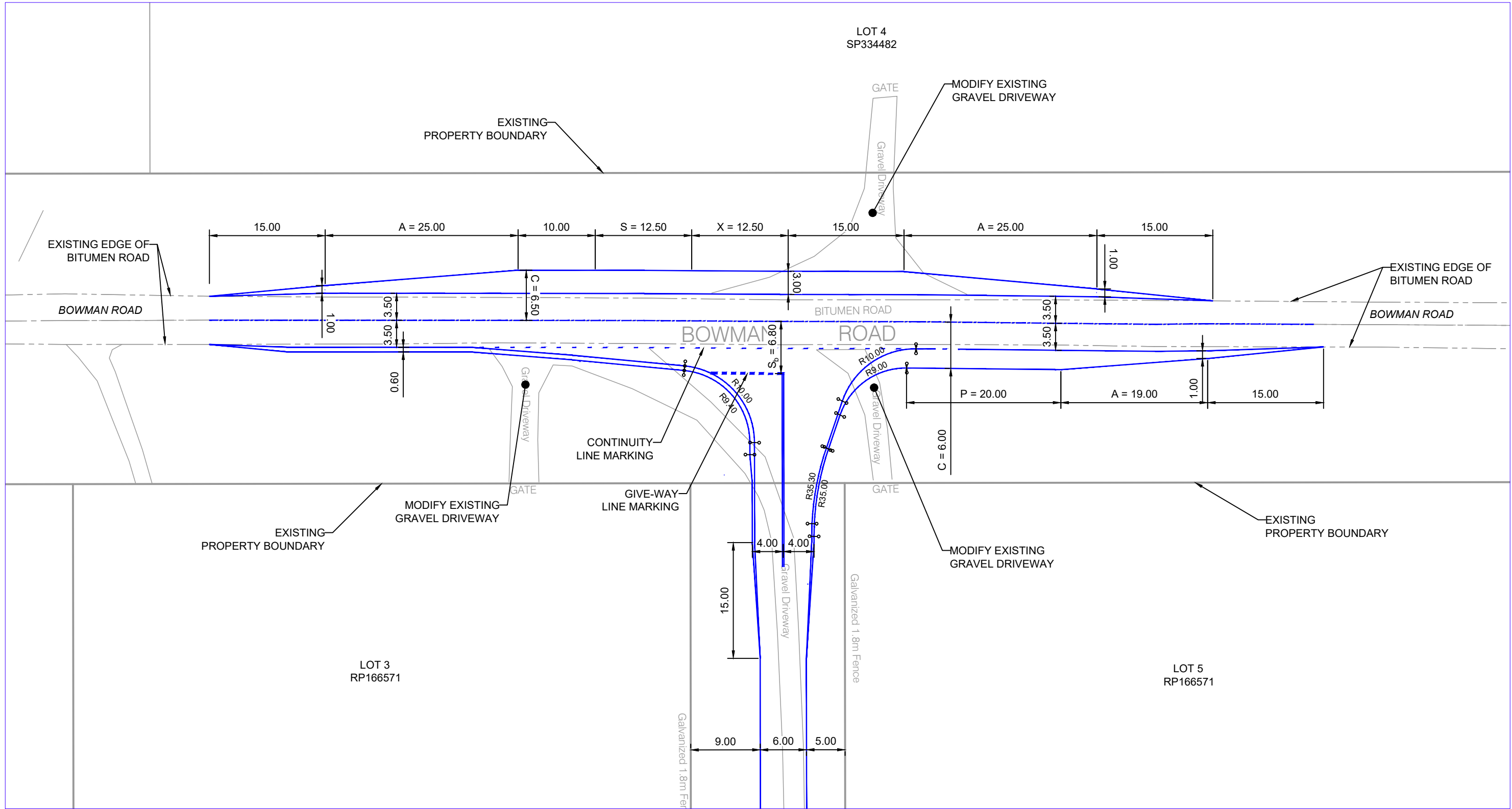
CERTIFIED LOCATOR

LEVEL DATUM	LiDAR Contours (22.01.2024)		
LEVEL ORIGIN	N/A		
CONTOUR INTERVAL	1.0m (LiDAR)		
DRAWN	CGW	DATE	02/08/2024
CHECKED	LPL	DATE	02/08/2024
APPROVED	CGW	DATE	02/08/2024
UDN	BRJD8285-000-30-1		



NOTE: ALL DIMENSIONS AND AREAS ON THIS PLAN ARE SUBJECT TO SURVEY AND REQUIREMENTS FOR LODGEMENT OF SURVEY PLANS IN THE DEPARTMENT OF RESOURCES.

Attachment 2 – TTM Drawings



**PRELIMINARY
ADVICE ONLY**
28 October 2024

A	28-10-24	ORIGINAL ISSUE	LK	TK	DG
REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED

SCALE
0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

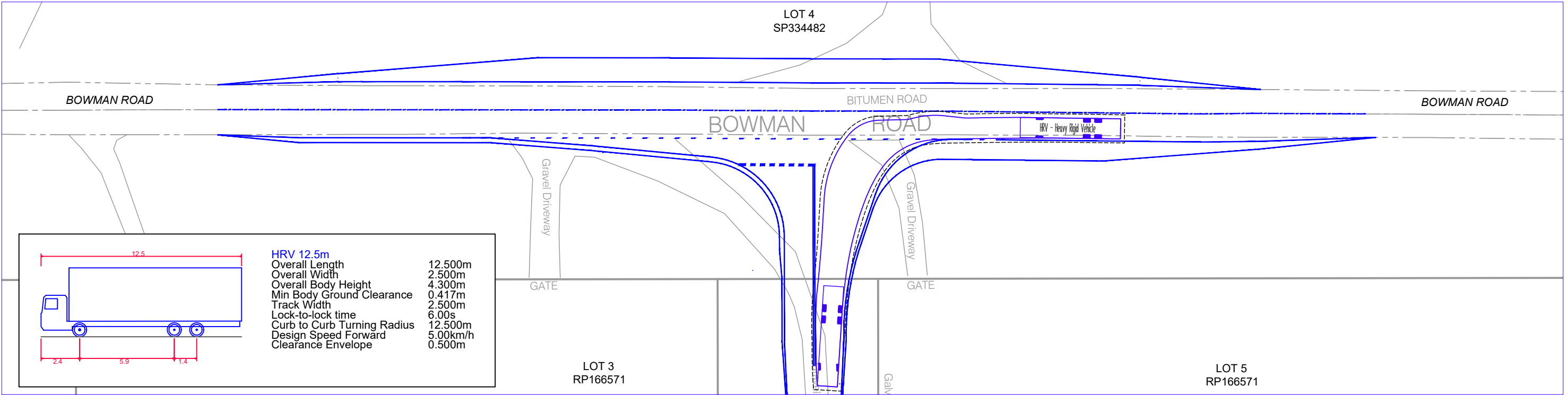
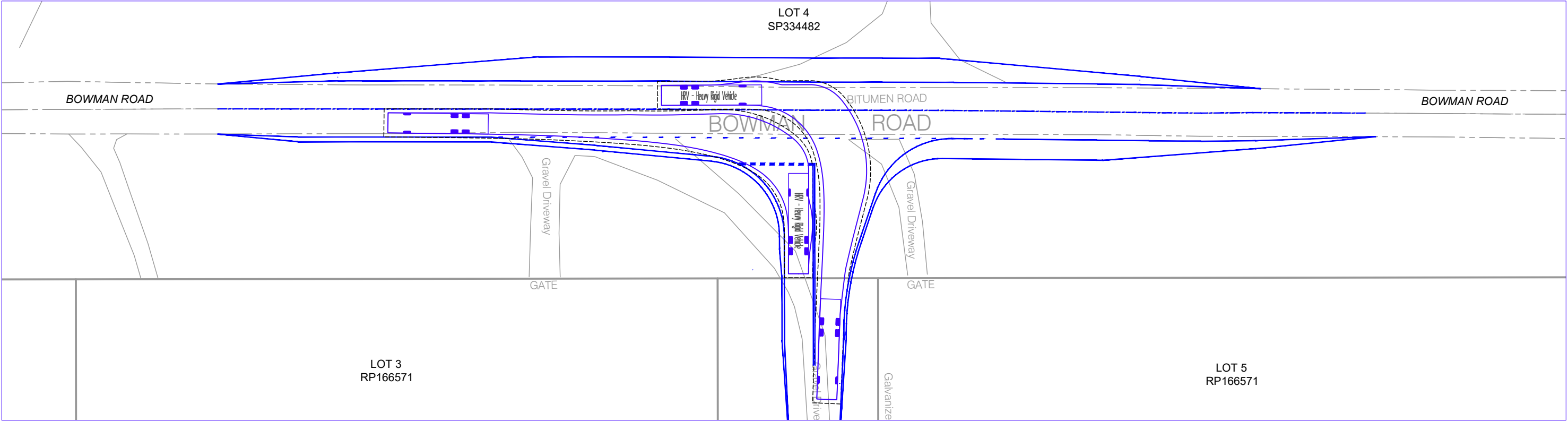
NORTH

CLIENT
GLW CONSTRUCTIONS PTY LTD



TTM CONSULTING PTY LTD
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
T: (07) 3327 9500 F: (07) 3327 9501
E: ttmbri@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT 162 BOWMAN ROAD, BLACKBUTT NORTH	PROJECT NUMBER 24BRT0501	ORIGINAL SIZE A3
DRAWING TITLE PRELIMINARY FUNCTIONAL LAYOUT PLAN BOWMAN ROAD / PROPOSED NEW ROAD INTERSECTION	DRAWING NUMBER 24BRT0501-01	REVISION A
	DATE 28 Oct 2024	SHEET 1 OF 1



HRV 12.5m
Overall Length 12.500m
Overall Width 2.500m
Overall Body Height 4.300m
Min Body Ground Clearance 0.417m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m
Design Speed Forward 5.00km/h
Clearance Envelope 0.500m

VEHICLE CLEARANCE
500mm (DASHED LINE)

BLUE - VEHICLE BODY

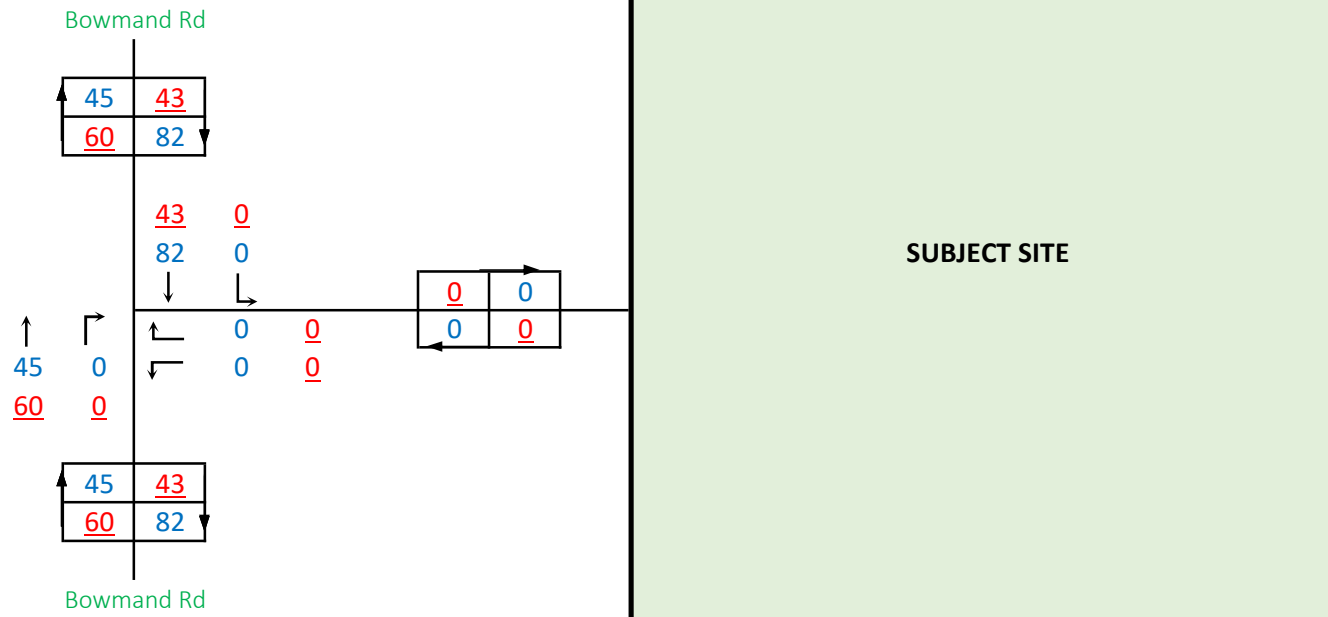
**PRELIMINARY
ADVICE ONLY**

28 October 2024

									SCALE 02.557.51012.5m SCALE 1:250 AT ORIGINAL SIZE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

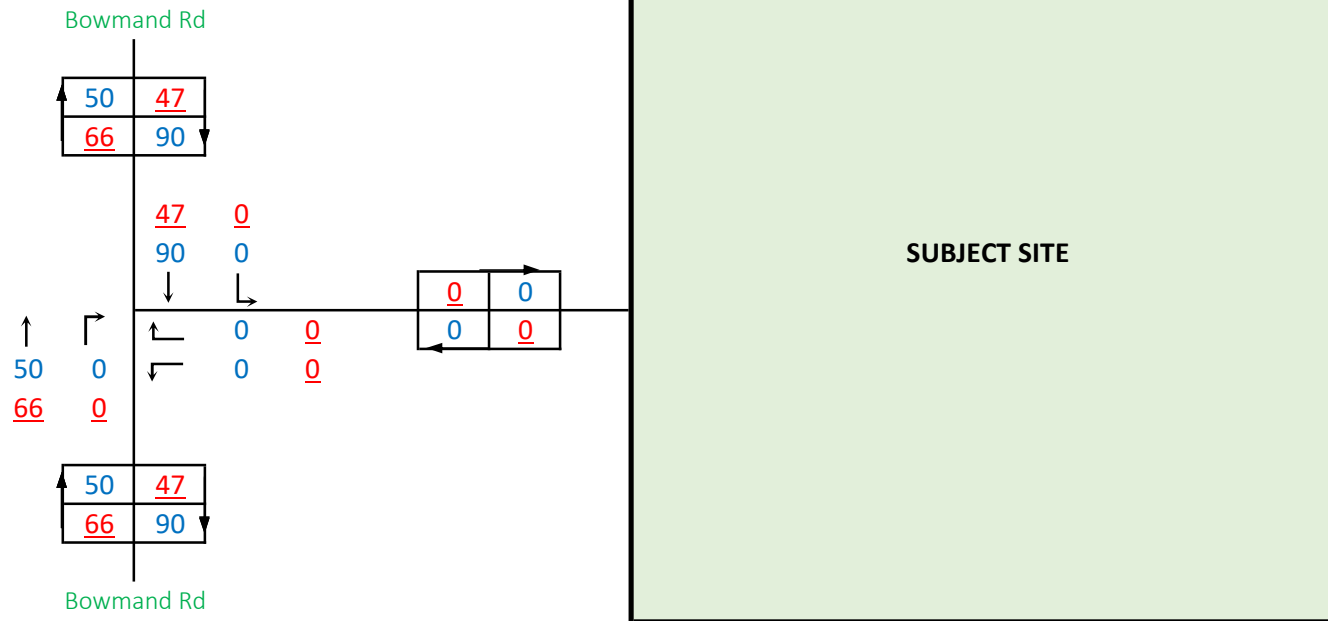
Attachment 3 – Traffic Network Diagrams

TRAFFIC NETWORK DIAGRAM: 2024 TRAFFIC SURVEY



AM Peak 8:00 - 9:00
PM Peak 4:00 - 5:00

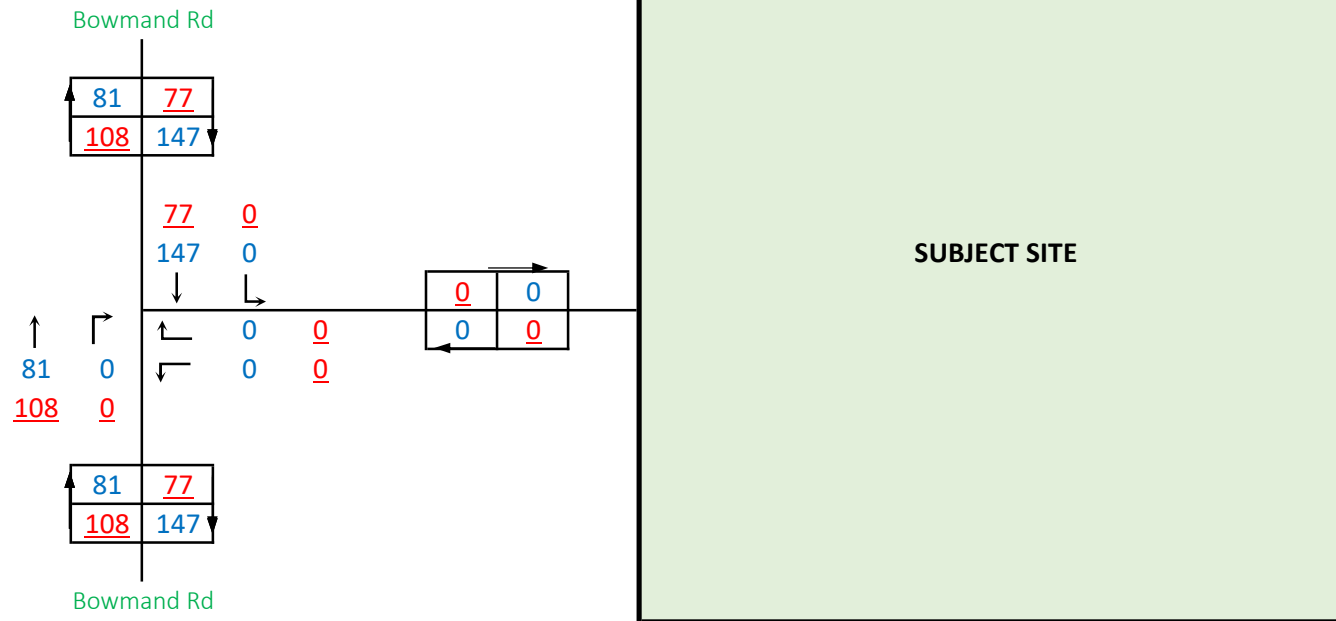
TRAFFIC NETWORK DIAGRAM: 2026 BASE CASE



AM Peak 8:00 - 9:00

PM Peak 4:00 - 5:00

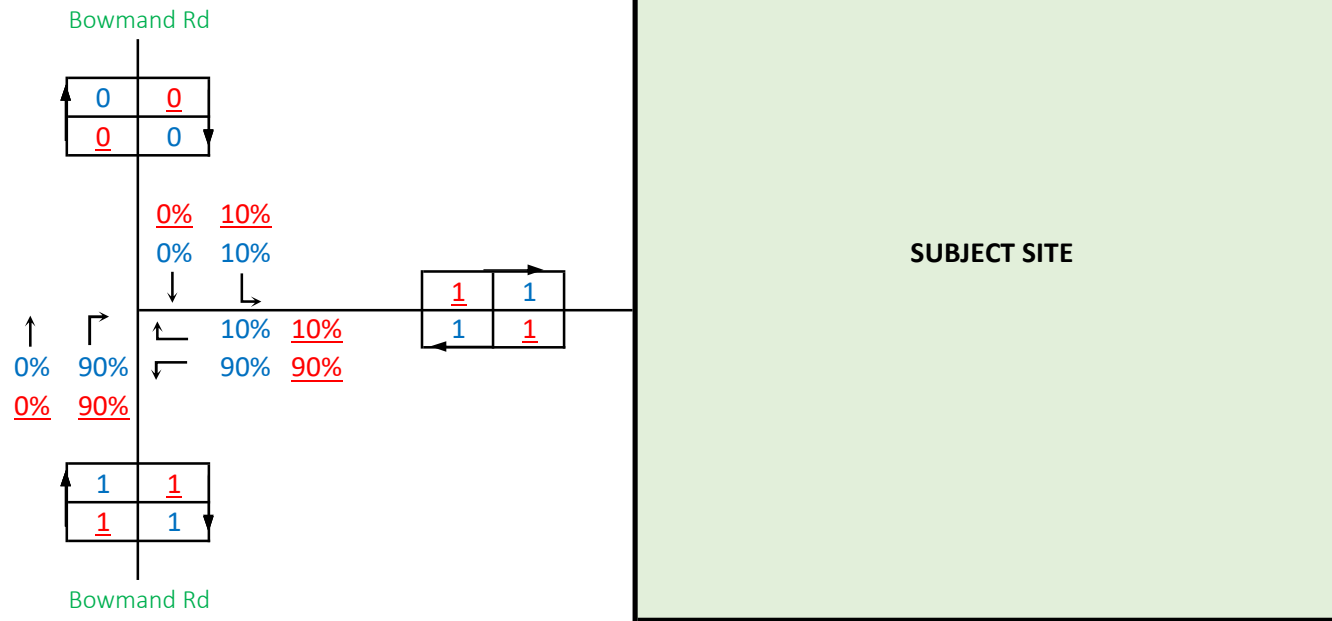
TRAFFIC NETWORK DIAGRAM: 2036 BASE CASE



AM Peak 8:00 - 9:00

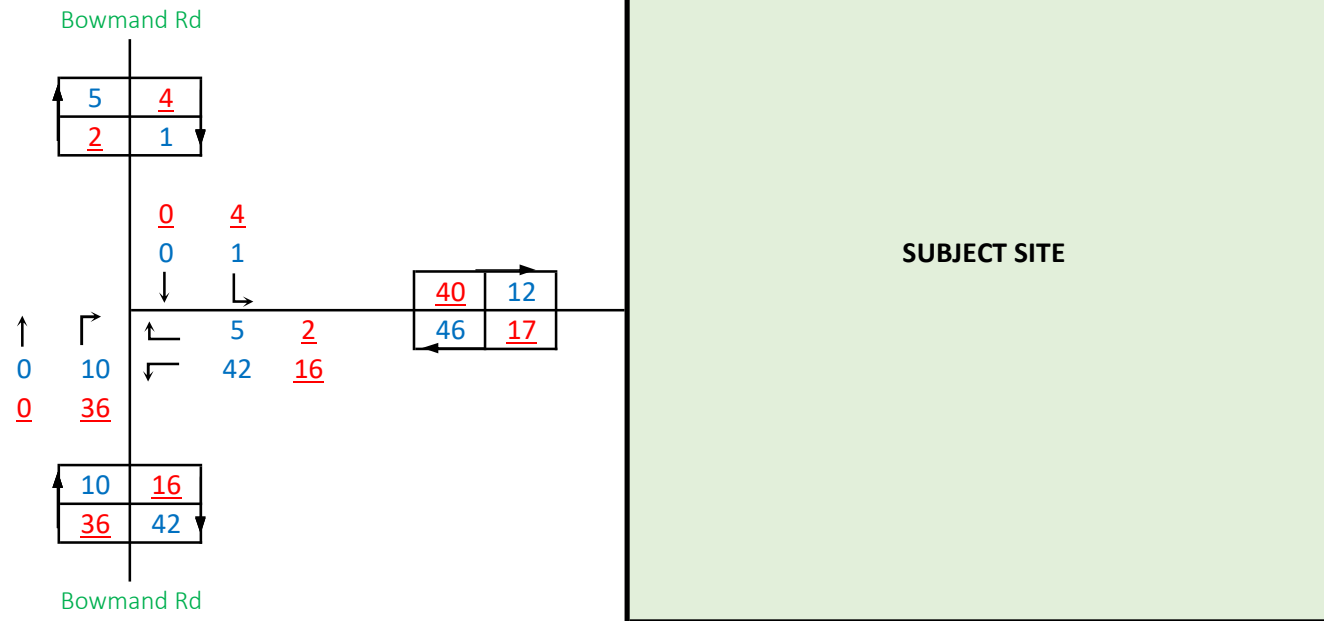
PM Peak 4:00 - 5:00

TRAFFIC NETWORK DIAGRAM: DEVELOPMENT DISTRIBUTION

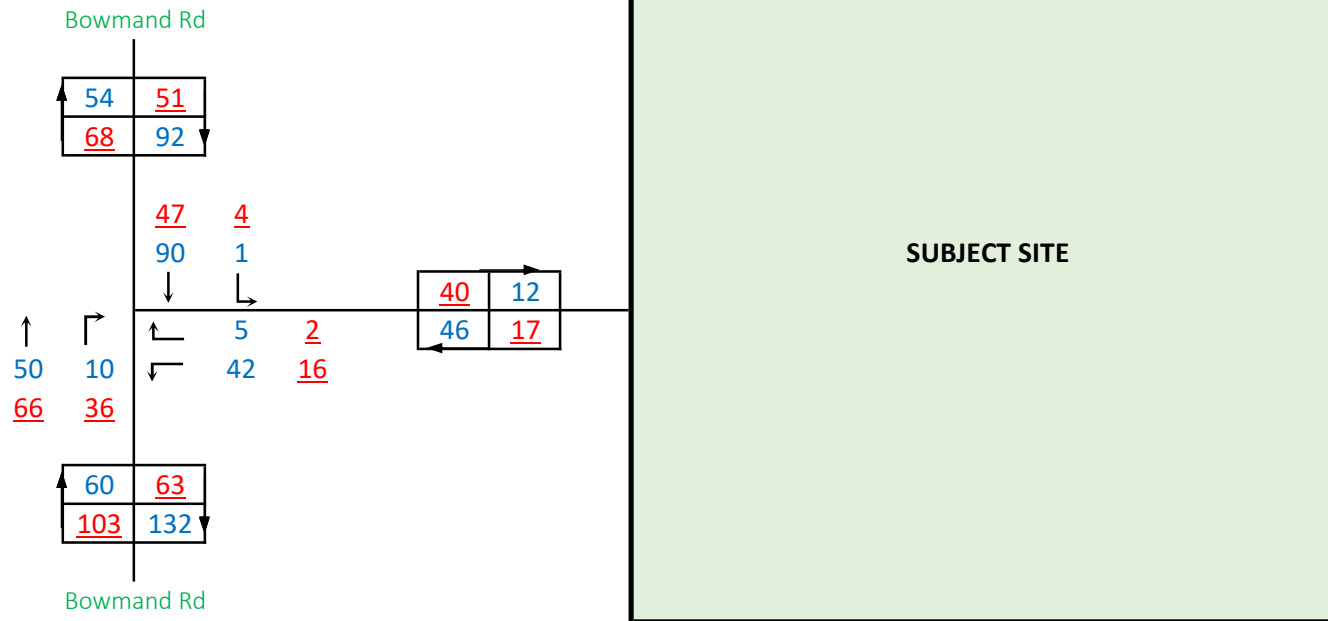


AM Peak 8:00 - 9:00
PM Peak 4:00 - 5:00

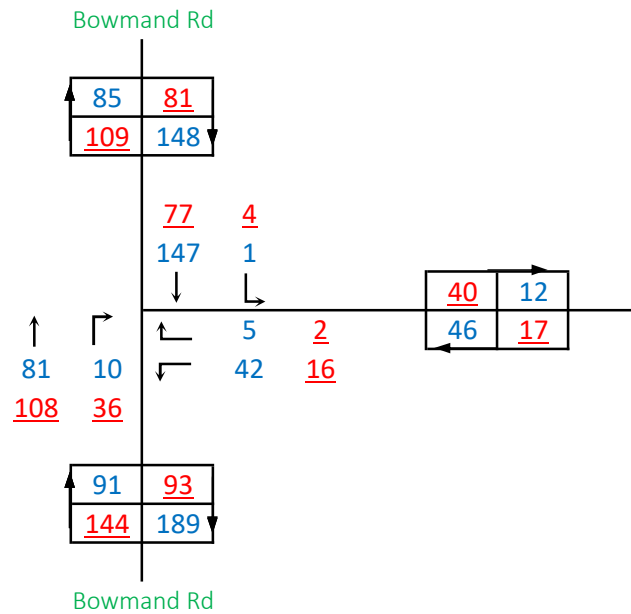
TRAFFIC NETWORK DIAGRAM: DEVELOPMENT VOLUMES



TRAFFIC NETWORK DIAGRAM: 2026 DEV CASE



TRAFFIC NETWORK DIAGRAM: 2036 DEV CASE



AM Peak 8:00 - 9:00
PM Peak 4:00 - 5:00

Appendix F:
Septic Percolation Report
Prepared by Enviro Water Design



www.envirowaterdesign.com.au

SEPTIC PERCOLATION REPORT

Client: GLW Constructions Pty Ltd

Plan Details: Lot 4 on RP166571

Address: 162 Bowman Road
Blackbutt

www.envirowaterdesign.com.au

CONTENTS

- SEPTIC PERCOLATION REPORT
 - PERCOLATION SITE PLAN SKETCH
 - EVALUATOR COMPLIANCE CERTIFICATE
-

Andrew Smith

m: 0427 287 600
e: info@envirowaterdesign.com.au
a: PO Box 639
Hervey Bay QLD 4655

ABN 35 622 809 376

QBCC 15336345

1.0 SITE INFORMATION

1.1 Location details

Locality Blackbutt
Local authority South Burnett Regional

1.2 Intended water supply resource

Town reticulated ☐
Rain water ☒
Bore/well/dam ☐

2.0 ON-SITE EVALUATION

2.1 Work undertaken

Details Percolation
Date 06/03/2024
Weather
• on day Fine
• Preceding week storms

2.2 Topography

Slope Slight to Moderate Ground cover Grasses
Drainage patterns Toward toward the rear of the proposed sub-division
Water ways Nil
Wells/bores Nil
Buildings Nil
Other Nil

2.3 Site exposure

Site aspect Western
Pre-dominant wind direction South East

2.4 Environmental concerns (water table, native plants, swamp, dams etc)

Nil

2.5 Drainage controls

Depth of water table Not encountered
Need for cut off drains/diversion drains or banks YES ☐ NO ☒

2.6 Photographs attached YES ☒ NO ☐

SOIL PROFILE AND DATA SHEET

Project Proposed Reconfiguration of Lots

3.1 Soil profile determination

Method

- 100mm diameter bore hole 1000mm deep with a Jarret style mechanical auger.
- Constant head permeameter test

3.2 Reporting

Refer to attached detailed soil report.

3.3 Estimated Soil Category

Site test	1	2	3	4	5	6
Soil Category	☐	☐	☐	☐	☒	☐

Remarks

- Percolation 0.06-0.12
- Structure Moderate

(In accordance with AS 1547:2012 appendix 4.1F)

Bore Hole No. 1 of 5 Date 06/03/2024 Logged By Andrew

DEPTH (M)	STRUCTURE	CONSISTENCY	MOISTURE CONDITION	CLASSIFICATION
0.0-0.2	Moderate	Firm	Dry	Red Loamy Topsoil
0.2-1.0	Moderate	Firm	Slightly Moist	Red Clay Loams

Depth of water table if noted Not Encounted

Drill type 100mm diameter Jarret style auger

Land surface notes

SOIL PROFILE AND DATA SHEET

Project Proposed Reconfiguration of Lots

3.1 Soil profile determination

Method

- 100mm diameter bore hole 1000mm deep with a Jarret style mechanical auger.
- Constant head permeameter test

3.4 Reporting

Refer to attached detailed soil report.

3.5 Estimated Soil Category

Site test	1	2	3	4	5	6
Soil Category	☐	☐	☐	☐	☒	☐

Remarks

- Percolation 0.06-0.12
- Structure Moderate

(In accordance with AS 1547:2012 appendix 4.1F)

Bore Hole No.2 of 5 Date 06/03/2024 Logged By Andrew

DEPTH (M)	STRUCTURE	CONSISTENCY	MOISTURE CONDITION	CLASSIFICATION
0.0-0.2	Moderate	Firm	Dry	Red Loamy Topsoil
0.2-1.0	Moderate	Firm	Slightly Moist	Red Clay Loams

Depth of water table if noted Not Encounted

Drill type 100mm diameter Jarret style auger

Land surface notes

SOIL PROFILE AND DATA SHEET

Project Proposed Reconfiguration of Lots

3.1 Soil profile determination

Method

- 100mm diameter bore hole 1000mm deep with a Jarret style mechanical auger.
- Constant head permeameter test

3.6 Reporting

Refer to attached detailed soil report.

3.7 Estimated Soil Category

Site test	1	2	3	4	5	6
Soil Category	☐	☐	☐	☐	☒	☐

Remarks

- Percolation 0.06-0.12
- Structure Moderate

(In accordance with AS 1547:2012 appendix 4.1F)

Bore Hole No. 3 of 5 Date 06/03/2024 Logged By Andrew

DEPTH (M)	STRUCTURE	CONSISTENCY	MOISTURE CONDITION	CLASSIFICATION
0.0-0.2	Moderate	Firm	Dry	Red Loamy Topsoil
0.2-1.0	Moderate	Firm	Slightly Moist	Red Clay Loams

Depth of water table if noted Not Encounted

Drill type 100mm diameter Jarret style auger

Land surface notes

SOIL PROFILE AND DATA SHEET

Project Proposed Reconfiguration of Lots

3.1 Soil profile determination

Method

- 100mm diameter bore hole 1000mm deep with a Jarret style mechanical auger.
- Constant head permeameter test

3.8 Reporting

Refer to attached detailed soil report.

3.9 Estimated Soil Category

Site test	1	2	3	4	5	6
Soil Category	☐	☐	☐	☐	☒	☐

Remarks

- Percolation 0.06-0.12
- Structure Moderate

(In accordance with AS 1547:2012 appendix 4.1F)

Bore Hole No. 4 of 5 Date 06/03/2024 Logged By Andrew

DEPTH (M)	STRUCTURE	CONSISTENCY	MOISTURE CONDITION	CLASSIFICATION
0.0-0.2	Moderate	Firm	Dry	Red Loamy Topsoil
0.2-1.0	Moderate	Firm	Slightly Moist	Red Clay Loams

Depth of water table if noted Not Encounted

Drill type 100mm diameter Jarret style auger

Land surface notes

SOIL PROFILE AND DATA SHEET

Project Proposed Reconfiguration of Lots

3.1 Soil profile determination

Method

- 100mm diameter bore hole 1000mm deep with a Jarret style mechanical auger.
- Constant head permeameter test

3.10 Reporting

Refer to attached detailed soil report.

3.11 Estimated Soil Category

Site test	1	2	3	4	5	6
Soil Category	☐	☐	☐	☐	☒	☐

Remarks

- Percolation 0.06-0.12
- Structure Moderate

(In accordance with AS 1547:2012 appendix 4.1F)

Bore Hole No. 5 of 5 Date 06/03/2024 Logged By Andrew

DEPTH (M)	STRUCTURE	CONSISTENCY	MOISTURE CONDITION	CLASSIFICATION
0.0-0.2	Moderate	Firm	Dry	Red Loamy Topsoil
0.2-1.0	Moderate	Firm	Slightly Moist	Red Clay Loams

Depth of water table if noted Not Encounted

Drill type 100mm diameter Jarret style auger

Land surface notes



perc test

perc test

perc test

perc test

perc test

4
RP16657.1

96
RP173325

97











a: PO Box 639
Hervey Bay QLD 4655
m: 0427 287 600

On Site Sewerage Facilities Site/Soil Evaluator Compliance Certificate

This certification is to be submitted to *Council's Plumbing Services Section* for all *new On Site Sewerage Facility Installations*, additions to existing facilities and conversions from septic to treatment plant/sand filter systems.

Property Details: **Lot 4 on RP166571**

On Site Sewerage Facility Application, No: _____

Type of Construction: **Proposed Sub-Division**

Site Address: **162 Bowman Road Blackbutt**

Postcode: **4317**

Evaluator Compliance Certificate

I, the undersigned, state that the information provided on this form is true and correct and I certify that the site and soil evaluation report complies with AS/NZ 1547-2012. Calculations for the selected land application system are to be provided by the Facility Designer.

Evaluator's Details

Evaluator's Name: **Andrew Smith**

Evaluator Registration Number: **25718**

A handwritten signature in blue ink, appearing to read "ASmH", is placed over a light pink rectangular background.

Evaluator's Signature: _____ Date: **06/03/2024**



a: PO Box 639
Hervey Bay Q 4655

m: 0427 287 600

e: info@envirowaterdesign.com.au

QBCC:15336345

GLW Constructions Pty Ltd ATF the GLW Constructions Trust'
501/53A Newstead Tce
Newstead Q 4006

SITE REPORT

PROPOSED LAND SUBDIVISION AT 162 Bowman Road Blackbutt QLD 4314

Of lot 4 on RP166571 Bowman Road Blackbutt

The Investigation was authorised by GLW Constructions Pty Ltd ATF the GLW Constructions Trust. A Percolation test was carried out on 06/03/2024 by Enviro Water Design Pty Ltd. The proposed subdivision is for eighteen blocks in size ranging between 4002sqm to 8169sqm and one Balance lot.

Based on the percolation test report the findings indicate that all eighteen proposed blocks would be suited to Advanced Secondary Treatment for the onsite surface effluent disposal system. There is sufficient room for up to a 5-bedroom dwelling on all proposed blocks to dispose of their wastewater based on AS/NZS 1547:2012 On-site domestic Wastewater management code. This equal (8) persons with an average daily water consumption of 120 litres per person per day based on Table "H1" of the AS/NZS 1547:2012 On-site domestic Wastewater management code. Based on the Percolation Report giving the area a Category "5" a Design Irrigation Rate (DIR) of 3 for surface spray method therefore 320 sqm of spray area will be required or if a sub-surface dripper method, Evapotranspiration Bed, trench/bed method is utilised the size of the disposal area can be reduced. As a result, it is likely that a house greater than 5 bedrooms could be developed on each residential lot, subject to further detailed assessment as part of a plumbing and drainage application. This report does not limit houses on each residential lot to 5 bedrooms."

Some of the proposed subdivision blocks comes with a proposed stormwater easement and some have "Council Flood Hazard Area" in part that requires 10m setback of any effluent disposal area to meet the setback requirements of the QLD Wastewater code.

TABLE T7

Feature	Separation	Distance (metres)
For onsite – see Appendix 1	Advanced Secondary	Secondary Primary *
For greywater – see T1A or T1B	High	Medium Low
Top of bank of permanent water course; or Top of bank of intermittent water course; or Top of bank of a lake, bay or estuary or; Top water level of a surface water source used for agriculture, aquaculture or stock purposes or; Casement boundary of unlined open stormwater drainage channel or drain; Bore or a dam used or likely to be used for human and or domestic consumption	10	30 50
Unsaturated soil depth to a permanent water table (vertically)	0.3	0.6 1.2

* Note: Primary effluent typically has a BOD (Biochemical Oxygen Demand) of between 120 -240 mg/L and Total Suspended Solids of between 65 -180 mg/L.

Lot 1	4002 sqm	Lot 10	4040 sqm
Lot 2	5459 sqm	Lot 11	4040 sqm
Lot 3	4019 sqm	Lot 12	8169 sqm
Lot 4	4028 sqm	Lot 13	8169 sqm
Lot 5	4004 sqm	Lot 14	4254 sqm
Lot 6	6142 sqm	Lot 15	4005 sqm
Lot 7	4914 sqm	Lot 16	4005 sqm
Lot 8	7436 sqm	Lot 17	4005 sqm
Lot 9	4517sqm	Lot 18	4271 sqm

Regards



P 0427 287 600

E info@envirowaterdesign.com.au



PROPOSED REGONFIGURATION OF LOT 4 ON RP166571

CLIENT:-	_____
CLIENT:-	_____
DATE:-	_____
BUILDER:-	_____
DATE:-	_____



www.envirowaterdesign.com.au
M: 0427 287 600
E: info@envirowaterdesign.com.au - A: PO Box 639, Hervey Bay Qld 4655
QBCC 15336345 ABN 35 622 809 376

PROJECT: PROPOSED SUB-DIVISION		
CLIENT: GLW CONSTRUCTIONS PTY LTD		
REAL PROPERTY DESCRIPTION: LOT 4 ON RP166571 162 BOWMAN ROAD BLACKBUTT NORTH QLD 4314		
DRAWN: A.SMITH	DESIGNED: A.SMITH	QBCC 15336345
SCALE: 1:20000	DATE: 06/03/2024	JOB NO. EWD4986
THESE DESIGNS ARE COPYRIGHT AND ARE NOT TO BE USED OR REPRODUCED WHOLLY OR IN PART WITHOUT THE WRITTEN CONSENT OF 'ENVIRO WATER DESIGN'		SHEET SIZE: A3
		SHEET: 1 OF 2

GENERAL NOTES:

1.

All Plumbing and drainage works are to be carried out in accordance with the Plumbing and Drainage Act 2018, the Plumbing and Drainage Regulation 2019 and all relevant Australian Standards and Codes.
2.

These drawings are to be read in conjunction with Architects/ Designers, other consultants drawings and Building and Plumbing approvals.
3.

Plumbing and drainage work is not to commence until contractor is in possession of Council stamped approved plans and Compliance Permit.
4.

The location of existing services on site have not been confirmed. The contractor must verify all locations of services before commencement of work.
5.

The contractor is to verify that invert and surface levels and required cover over all pipes are correct and achievable before commencing work.
6.

Where the contractor deviates from the positions or locations nominated or adds additional fixtures or makes other changes from the original design, the contractor will be responsible for the resubmission of any documents, and any additional fees.
7.

The contractor is to compile as constructed drawings of the works during construction and to provide a copy of the updated drawings to the Architect/ designer at the completion of the contract.
8.

All materials are to comply and be installed in accordance with the relevant Australian Standards and manufacturer's instructions.
9.

All levels shown are Australian Height Datum (AHD) unless otherwise noted.
10.

All sanitary drainage to be 100mm PVC installed at minimum grade of 1.65% (1:60) unless otherwise noted.
11.

All existing services which are no longer required are to be removed or sealed off in an approved manner.
12.

All inspection openings under concrete are to be taken to surface level with approved flush mounted removable caps.
13.

All water pipe sizes nominated are Nominal Size (DN). Refer to AS/NZS 3500.1:2018 Table 1.1 for equivalent pipe sizes.
14.

All hose taps are to be fitted with appropriate backflow devices
15.

Locations of control valves are shown diagrammatically only. Determine location on site in an accessible position.
16.

All stormwater is to be graded at 1% (1:100) unless otherwise noted.
17.

Advanced enviro-septic system is to be installed in strict accordance with manufacturer's written instructions.

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE	ORG	OVERFLOW RELIEF GULLY
AC	AIR CONDITIONER	PLV	PRESSURE LIMITING VALVE
AES	ADVANCED ENVIRO SEPTIC	PM	POST MIX
AT	ABLUTION TROUGH	RCP	REINFORCED CONCRETE PIPE
AP	ACCESS PANEL	RL	REDUCED LEVEL
BN	BASIN	RPZD	REDUCED PRESSURE ZONE DEVICE
BTH	BATH	S	SINK
BS	BAR SINK	SB	SHOWER BATH
BT	BUCKET TRAP	SHR	SHOWER
BWU	BOILING WATER UNIT	SL	SURFACE LEVEL
C/A	CEILING ABOVE	SJ	SWIVAL JOINT
C/B	CEILING BELOW	SP	SAMPLE POINT
CI	CAST IRON	ST	STACK
COS	CLEAR OUT TO SURFACE	SW	STORMWATER
C/O	COMBI OVEN	T/A	TO ABOVE
CD	CONDENSATE DRAIN	T/B	TO BELOW
CI	CAST IRON	TD	TUNDISH
CS	CLEANERS SINK	TG	TEST GATE
CU	COPPER	TYP	TYPICAL
CV	CONTROL VALVE	TW	TEMPERED WATER
CW	COLD WATER	TMV	THERMOSTATIC MIXING VALVE
CWD	COLD WATER DROPPER	TV	TEMPERING VALVE
CWR	COLD WATER RISER	U	URINAL
CWEV	COLD WATER EXPANSION VALVE	U/B	UNDER BENCH
DCV	DOUBLE CHECK VALVE	U/GRD	UNDERGROUND
DF	DRINKING FOUNTAIN	UNO	UNLESS NOTED OTHERWISE
DG	DISCONNECTOR GULLY	U/S	UNDER SLAB
DP	DOWN PIPE	VB	VANITY BASIN
DW	DISHWASHER	VC	VENT COWL
DIS/WC	DISABLED WATER CLOSET	VCP	VITRIFIED CLAY PIPE
EJ	EXPANSION JOINT	VP	VENT PIPE
EPD	ELEVATED PIPE DROPPER	VPR	VENT PIPE RISER
EXT	EXISTING	WC	WATER CLOSET
F/A	FROM ABOVE	WM	WASHING MACHINE
F/B	FROM BELOW	WP	WASTE PIPE
FF	FROG FLAP	WS	WATER SERVICE
FFL	FINISHED FLOOR LEVEL	WU	WALL HUNG URINAL
FH	FIRE HYDRANT		
FHR	FIRE HOSE REEL		
FSD	FIRE SERVICE DROPPER		
FSR	FIRE SERVICE RISER		
FU	FIXTURE UNITS		
FW	FLOOR WASTE		
FWG	FLOOR WASTE GULLY		
GAL	GALVANIZED		
GIT	GREASE INTERCEPTOR TRAP		
GRD	GROUND		
GW	GLASS WASHER		
HC	HOSE COCK		
HD	HOUSE DRAIN		
HDPE	HIGH DENSITY POLYETHYLENE		
H/L	HIGH LEVEL		
HW	HOT WATER		
HWD	HOT WATER DROPPER		
HWR	HOT WATER RISER		
HWF	HOT WATER FLOW		
HWR	HOT WATER RETURN		
HWU	HOT WATER UNIT		
IC	INSPECTION CHAMBER		
IJ	INSPECTION JUNCTION		
IV	INVERT LEVEL		
IO	INSPECTION OPENING		
IOS	INSPECTION OPENING TO SURFACE		
IM	ICE MACHINE		
IW	ICE WELL		
JU	JUMP UP		
L/L	LOW LEVEL		
LT	LAUNDRY TROUGH		
LV	LANDING VALVE		
M	WATER METER		
MH	MANHOLE		
MW	MIXED WATER		
MWD	MIXED WATER DROPPER		
MWR	MIXED WATER RISER		
NRV	NON RETURN VALVE		
NTS	NOT TO SCALE		
OD	OUTSIDE DIAMETER		

LEGEND

	SANITARY DRAINAGE & SANITARY PLUMBING
	STORMWATER DRAINAGE
	COLD WATER SERVICE
	HOT WATER SERVICE
	TEMPERED WATER SERVICE
	FIRE SERVICE
	WASTEWATER EFFLUENT LINE
	RAIN/TANK WATER SERVICE
	VENT PIPE
	PIPE RISER OR DROPPER
	SANITARY PLUMBING FIXTURE
	WATER CLOSET FEATURE
	CAPPED SANITARY SERVICE
	MIXED WATER SERVICE
	TRADE WASTE
	NEW COUNCIL SEWER
	GAS SERVICE LINE
	EXISTING GAS SERVICE LINE
	EXISTING TRADE WASTE DRAINAGE
	EXISTING COUNCIL SEWER DRAIN
	EXISTING COLD WATER
	EXISTING HOT WATER
	EXISTING COUNCIL WATER MAIN
	EXISTING COUNCIL STORMWATER DRAINAGE
	EXISTING SANITARY DRAINAGE
	STORMWATER BY CIVIL CONTRACTOR

ALL CONSTRUCTION WORK TO BE
CARRIED OUT BY A QUALIFIED,
LICENSED INSTALLER

CONTRACTOR TO VERIFY ALL
MEASUREMENTS ON-SITE PRIOR TO THE
COMMENCEMENT OF ANY SUCH WORKS.

CLIENT:-

CLIENT:-

DATE:-

BUILDER:-

DATE:-

Enviro

Water Design

www.envirowaterdesign.com.au
M: 0427 287 600
E: info@envirowaterdesign.com.au - A: PO Box 639, Hervey Bay Qld 4655
QBCC 15336345 ABN 35 622 809 376

PROJECT:

PROPOSED SUB-DIVISION

CLIENT:

GLW CONSTRUCTIONS PTY LTD

REAL PROPERTY DESCRIPTION:

LOT 4 ON RP166571
162 BOWMAN ROAD
BLACKBUTT NORTH QLD 4314

DRAWN:

DESIGNED:

QBCC

A.SMITH

A.SMITH

15336345

SCALE:

DATE:

JOB NO.

NTS

06/03/2024

EWD4986

THESE DESIGNS ARE COPYRIGHT AND ARE NOT TO BE USED
OR REPRODUCED WHOLLY OR IN PART WITHOUT THE WRITTEN
CONSENT OF 'ENVIRO WATER DESIGN'

SHEET SIZE:

SHEET:

A3

2 OF 2

Appeal Rights

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

- (1) Schedule 1 of the Planning Act 2016 states –
 - (a) Matters that may be appealed to –
 - (i) either a tribunal or the P&E Court; or
 - (ii) only a tribunal; or
 - (iii) only the P&E Court; and
 - (b) The person-
 - (i) who may appeal a matter (**the appellant**); and
 - (ii) who is a respondent in an appeal of the matter; and
 - (iii) who is a co-respondent in an appeal of the matter; and
 - (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

- (2) An appellant may start an appeal within the appeal period.
- (3) The **appeal period** is –
 - (a) for an appeal by a building advisory agency – 10 business days after a decision notice for the decision is given to the agency; or
 - (b) for an appeal against a deemed refusal – at any time after the deemed refusal happens; or
 - (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises – 20 business days after a notice is published under section 269(3)(a) or (4); or
 - (d) for an appeal against an infrastructure charges notice – 20 business days after the infrastructure charges notice is given to the person; or
 - (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given – 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
 - (f) for any other appeal – 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note –

See the P&E Court Act for the court's power to extend the appeal period.

- (4) Each respondent and co-respondent for an appeal may be heard in the appeal.
- (5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
- (6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-
 - (a) the adopted charge itself; or
 - (b) for a decision about an offset or refund-
 - (i) the establishment cost of trunk infrastructure identified in a LGIP; or
 - (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

- (1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
 - (a) is in the approved form; and
 - (b) succinctly states the grounds of the appeal.
- (2) The notice of appeal must be accompanied by the required fee.
- (3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to –
 - (a) the respondent for the appeal ; and
 - (b) each co-respondent for the appeal; and

- (c) for an appeal about a development application under schedule 1, table 1, item 1 – each principal submitter for the development application; and
 - (d) for an appeal about a change application under schedule 1, table 1, item 2 – each principal submitter for the change application; and
 - (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
 - (f) for an appeal to the P&E Court – the chief executive; and
 - (g) for an appeal to a tribunal under another Act – any other person who the registrar considers appropriate.
- (4) The **service period** is –
 - (a) if a submitter or advice agency started the appeal in the P&E Court – 2 business days after the appeal has started; or
 - (b) otherwise – 10 business days after the appeal is started.
 - (5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
 - (6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

231 Other appeals

- (1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
- (2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
- (3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
- (4) In this section –

decision includes-

 - (a) conduct engaged in for the purpose of making a decision; and
 - (b) other conduct that relates to the making of a decision; and
 - (c) the making of a decision or failure to make a decision; and
 - (d) a purported decision ; and
 - (e) a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter-

 - (a) is final and conclusive; and
 - (b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
 - (c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

232 Rules of the P&E Court

- (1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal. However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.