

# APPENDIX C

## CIVIL ENGINEERING DESIGN

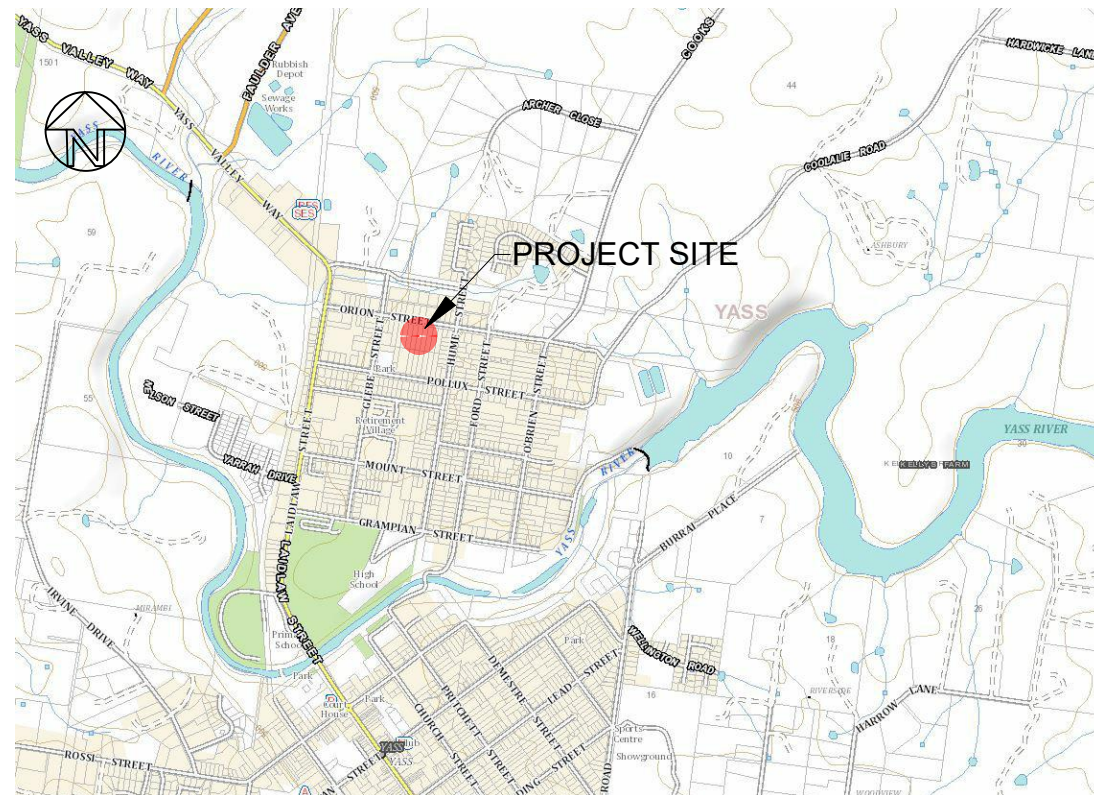


# JOSH BARKER

## 29 ORION STREET

### TWO LOT SUBDIVISION

Genium Project No. 24029



Site Plan - Not to Scale

#### DRAWING LIST

- 24029-010 Cover Sheet, Drawing List, and Locality Plan
- 24029-020 General Notes, Standard Details and Longitudinal Sections
- 24029-050 Existing Site
- 24029-100 General Arrangement



Rev	Date	Description
A	11/09/2024	Initial Issue

29 Orion Street  
Two Lot Subdivision



ABN: 36 169 355 122  
7 Adele Street Yass NSW  
Ph: 0418 484 138  
PO Box 15 Yass NSW 2582  
email: admin@genium.com.au

Client: Josh Barker

Cover Sheet, Drawing List and Locality Plan

Status	For Approval		
Datum	Scale	Size	A3
GDA2020/AHD	AS SHOWN		
Drawing Number	Sheet	Revision	
24029 -010	1 of 4	A	

**GENERAL NOTES**

- G1. All works shall be undertaken in accordance with the drawings and specifications and completed in a sound, efficient, and workmanlike manner in accordance with sound engineering practice.
- G2. Where details are not shown in the drawings, works are to be completed to meet the requirements of relevant Australian Standards, AusSpec, Austroads, WSA Codes, and Council Policies and conditions.
- G3. Locations of existing services shown on the drawings are approximate only. The Contractor is to check the location of existing services prior to commencing works including potholing to verify both location and depth. The Contractor is solely responsible for any damage caused to utility services as a result of the construction works.
- G4. The Contractor shall at all times comply with the requirements of the Work Health and Safety Act 2011 and relevant Workcover codes of practice and at all times exercise appropriate care and control of the works to ensure the safety of workers and others in the vicinity of the site.
- G5. All works are to be set out by a competent surveyor and recovery pegs provided to ensure the setout location and levels of the works are available throughout the project.
- G6. The Contractor shall not disturb any survey control marks. Should any survey control marks be inadvertently disturbed or removed the Contractor shall advise the Superintendent immediately. The Contractor shall replace any damaged or removed survey marks at their expense.
- G7. Prior to commencing any excavation in sealed or concrete roadways or paths, the extent of the excavation is to be saw-cut to create a neat edge. The depth of the saw-cut shall be deep enough to prevent the surface of the road or pathway breaking away during excavation.

**REVEGETATION**

- R1. Unless otherwise specified, all disturbed areas and roadside embankments are to be prepared with 100mm of topsoil and stabilised using Hydromulch in accordance with the *NSW RMS Guideline for Better Surface Stabilisation using vegetation*.
- R2. Where road pavements are 'daylighted' to the table drains, topsoil is to be placed on the road side slope of the table drain. The topsoil is to extend vertically 200mm up the side slope, measured from the invert of the table drain.

**EROSION & SEDIMENT CONTROL**

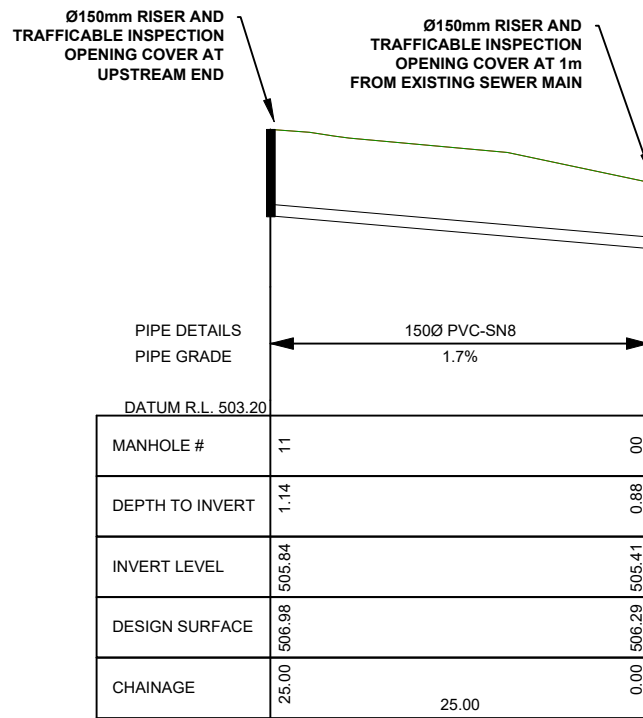
- ES1. The Contractor is to prepare a detailed Erosion and Sediment Control plan (ESCP) to the satisfaction of the Superintendent/Council prior to commencing works.
- ES2. The Contractor is to implement, maintain and progressively modify erosion and sediment control measures in accordance with the NSW Department of Housing - managing Urban Stormwater, Soils and Construction ("Blue Book") and any Council requirements. Control measures will be implemented to suit the Contractors staging and work methods and are to be maintained for the duration of the works or until disturbed areas are revegetated.
- ES3. The Contractor is to provide and maintain adequate dust control measures for the duration of the works including outside normal working hours where required.
- ES4. The Contractor shall be responsible for implementation, operation, and maintenance of all required erosion and sediment control measures. All control features are to be regularly inspected to ensure they are working satisfactorily.
- ES5. Appropriate protection shall be provided to all trees and other vegetation which are not required to be removed as part of the works. Protection is to be provided prior to commencing works to the satisfaction of the Superintendent/Council.

**WATER DISTRIBUTION REQUIREMENTS**

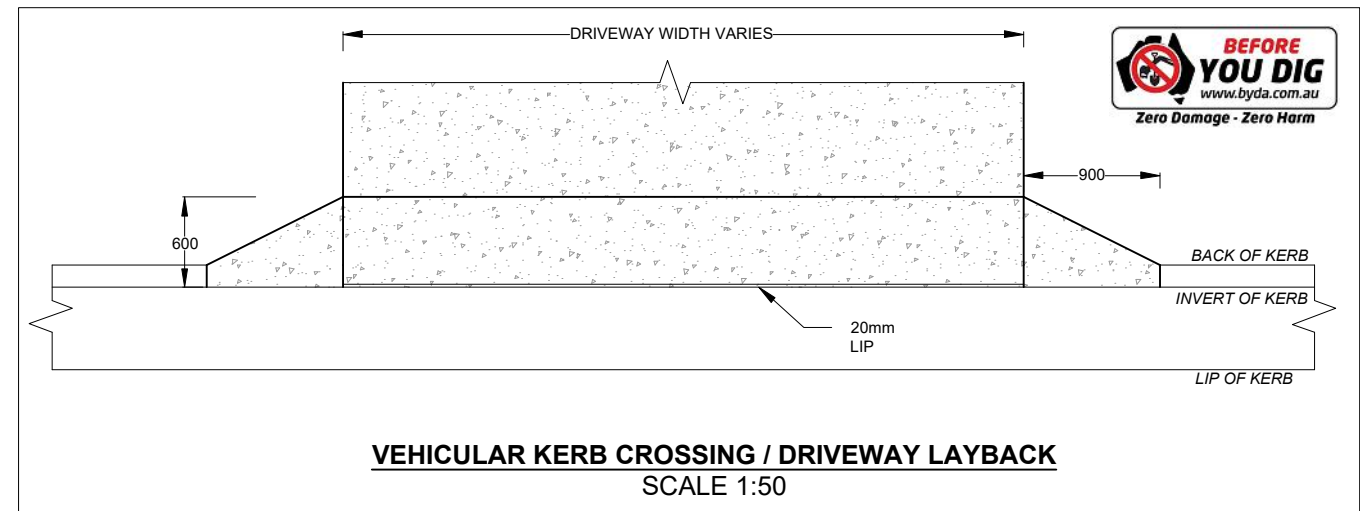
- W1. All reticulation mains shall be 100mm MPVC, PN16, S2 RRJ except at road crossings. Road crossings shall be with DICL pipe class PN 35.
- W2. A tracing wire shall be placed over all PVC pipes. Marker tape shall be installed over all water mains.
- W3. All water mains shall have a 600mm minimum cover unless noted otherwise.
- W4. All valves shall be anti-clockwise close and shall conform to Council standards.
- W5. All water mains shall be tested in accordance with Council requirements.
- W6. All property services shall be with copper pipes as per plumbing standards. All water services shall be 25 mm diameter.
- W7. Road crossing water services shall be placed in a 100mm uPVC conduit which extends 300mm past the kerb.
- W8. All meter cocks of each property service shall be installed at 200 mm — 300 mm below finished ground level and shall be covered with meter boxes. Meter boxes will be supplied by the Council.
- W9. Tapping saddle, main cock and meter cock shall meet Council requirements.
- W10. All main cocks shall be fitted with a 90mm riser to 150mm below FSL, capped off and topsoiled over.
- W11. Connections to existing water mains shall be carried out by Council at the Developer's cost.

**SEWER RETICULATION REQUIREMENTS**

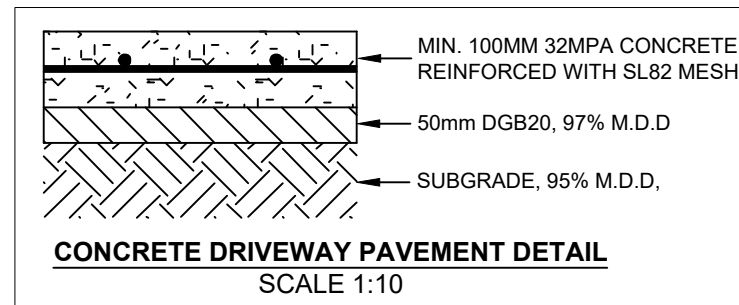
- S1. All sewer reticulation mains shall be with PVC, RRJ, Class SN8 with a minimum diameter of 150 mm.
- S2. Trench stops shall be installed for mains designed for grades 5% and above as per the Sewerage Code of Australia.
- S3. Sewer mains shall be air pressure tested as per approved methods and sewer manholes shall be vacuum tested as per approved methods.
- S4. Sewer connections to existing sewer manholes or existing main shall be carried out by a licensed plumber in accordance with Council requirements.
- S5. All sewer ties are to be 150mm diameter SN8 solid wall PVC with solvent welded joints and fitted with a boundary riser and capped. All sewer ties are to be laid at a grade 1.7%.
- S6. Marker peg system or marker tape system shall be installed to each sewer tie as per the Sewerage Code of Australia.
- S7. All tie connections directly to mains are to be made with 45° junctions.



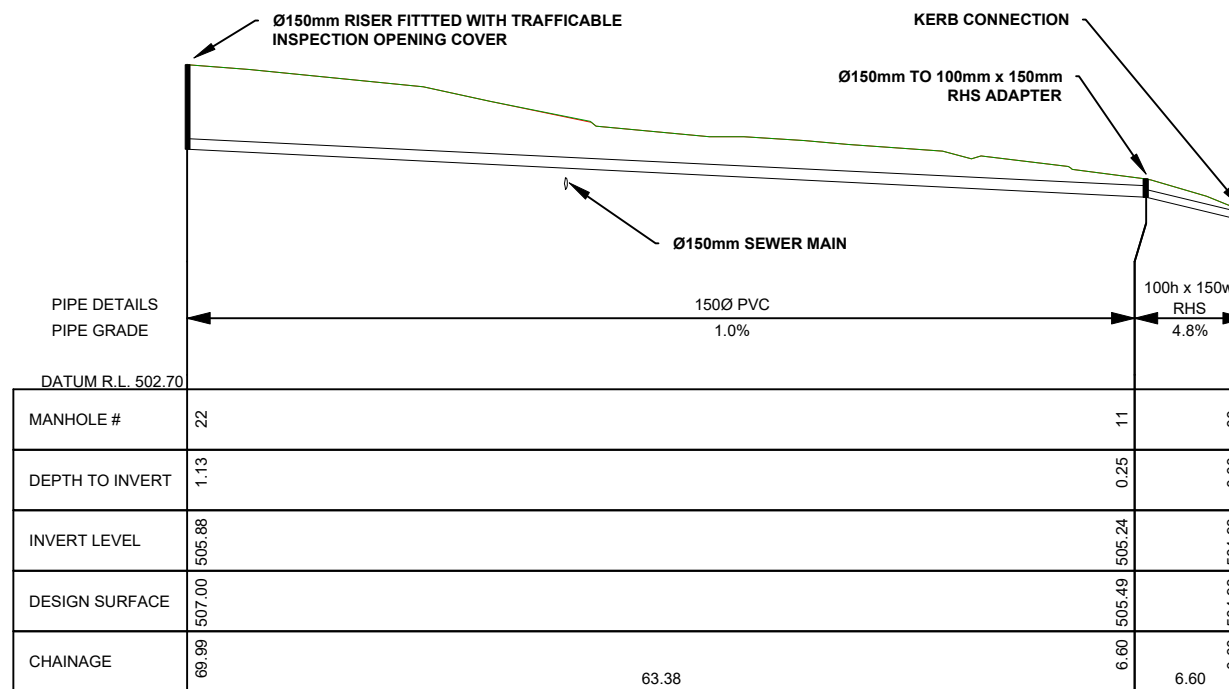
**LONGITUDINAL SECTION FOR SEWER (SEE SHEET 24029-100)**  
SCALE 1:500H 1:100V



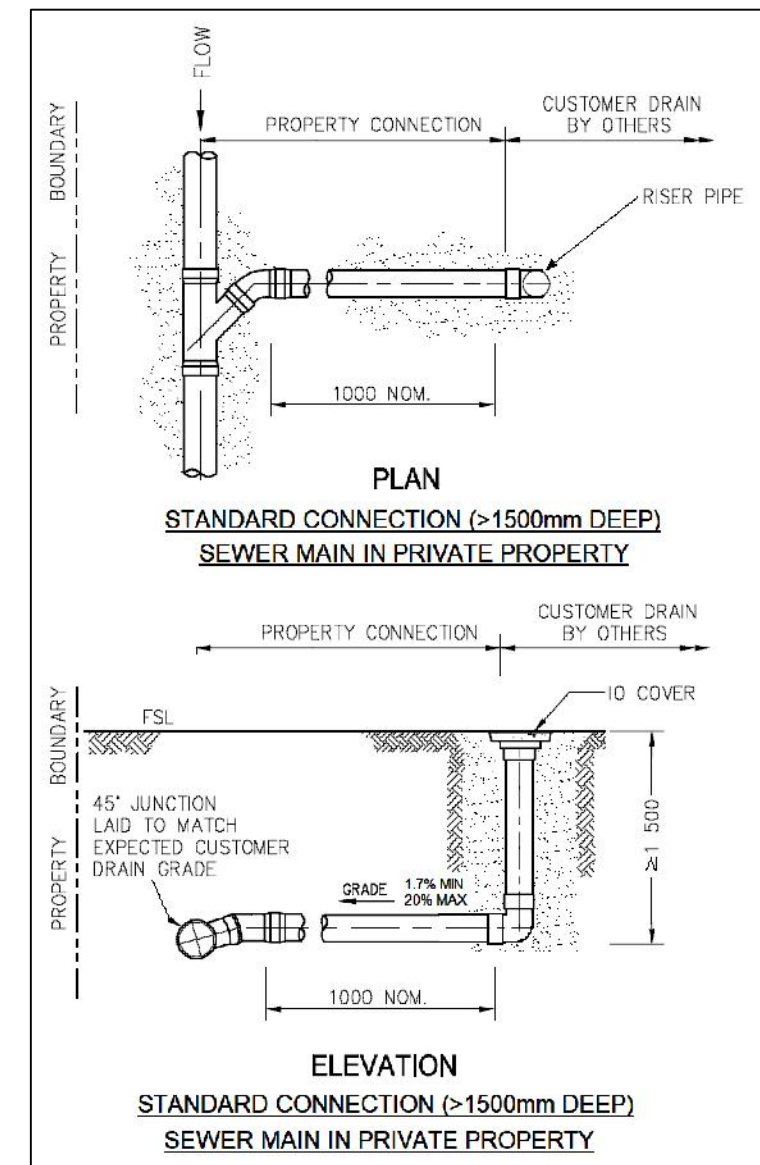
**VEHICULAR KERB CROSSING / DRIVEWAY LAYBACK**  
SCALE 1:50



**CONCRETE DRIVEWAY PAVEMENT DETAIL**  
SCALE 1:10



**LONGITUDINAL SECTION FOR STORMWATER (SEE SHEET 24029-100)**  
SCALE 1:500H 1:100V



**PLAN**  
**STANDARD CONNECTION (>1500mm DEEP)**  
**SEWER MAIN IN PRIVATE PROPERTY**

**ELEVATION**  
**STANDARD CONNECTION (>1500mm DEEP)**  
**SEWER MAIN IN PRIVATE PROPERTY**

Rev	Date	Description
A	11/09/2024	Initial Issue
B	13/09/2024	Update Long Sections

29 Orion Street  
Two Lot Subdivision



ABN: 36 169 355 122  
7 Adele Street Yass NSW  
Ph: 0418 484 138  
PO Box 15 Yass NSW 2582  
email: admin@genium.com.au

Client: Josh Barker		Status: For Approval	
General Notes, Standard Details and Longitudinal Sections		Datum: GDA2020/AHD	Scale: AS SHOWN
		Sheet: 2 of 4	Revision: B



LOT 23  
SEC 35  
DP759136

LOT 22  
SEC 35  
DP759136

LOT 1  
DP779030

LOT 20  
SEC 35  
DP759136

LOT 19  
SEC 35  
DP759136

EXISTING SEWER MANHOLE  
DEPTH = 1.16m

EXISTING WATER METER  
AND SERVICE TO REMAIN

EXISTING SEWER MAIN.  
APPROX DEPTH = 1.2m.

EXISTING CARPORT TO  
BE REMOVED

EXISTING RETAINING WALL  
(APPROX 200-400mm HIGH)  
TO BE REMOVED

PLAN VIEW  
SCALE 1:300

ORION STREET

Rev	Date	Description
A	11/09/2024	Initial Issue

29 Orion Street  
Two Lot Subdivision



ABN: 36 169 355 122  
7 Adele Street Yass NSW  
Ph: 0418 484 138  
PO Box 15 Yass NSW 2582  
email: admin@genium.com.au

Client: Josh Barker

Existing Site

Status: For Approval

Datum	Scale	Size
GDA2020/AHD	1:300	A3
Drawing Number	Sheet	Revision
24029 -050	3 of 4	A

**SEWER TIE NOTE:**  
 THE SEWER TIE FOR PROPOSED LOT 2 MAY NOT BE CAPABLE OF SERVICING THE ENTIRETY OF THE LOT AS A GRAVITY SYSTEM. TO ENSURE ANY FUTURE DEVELOPMENT ON PROPOSED LOT 2 IS APPROPRIATELY SERVICED, THE FOLLOWING WORDING SHALL BE INCLUDED ON THE 88B INSTRUMENT FOR THIS SUBDIVISION:

"TO ENSURE THAT THE SANITARY DRAINAGE ON LOT 2 OPERATES EFFECTIVELY, THE FINISHED FLOOR LEVEL (FFL) OF ANY DWELLING SHALL BE NO LOWER THAN 507.20m AHD. ALTERNATIVELY THE FOLLOWING SHALL APPLY:

1. THE SANITARY DRAINAGE SHALL BE DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED ENGINEER AND SHALL DEMONSTRATE THAT THE PROPOSED DWELLING CAN BE APPROPRIATELY SERVICED BY THE EXISTING SEWER TIE; OR
2. THE PROPOSED DWELLING IS TO BE SERVICED BY A PRIVATELY OWNED AND MAINTAINED SEWER PUMP SYSTEM (SPS). THE SPS SHALL COMPLY WITH COUNCILS REQUIREMENTS AND BE INSTALLED AT NO COST TO COUNCIL."



**LOT 23  
 SEC 35  
 DP759136**

**LOT 22  
 SEC 35  
 DP759136**

**LOT 2  
 (1192m<sup>2</sup>)**

**LOT 1  
 (856m<sup>2</sup>)**

**LOT 20  
 SEC 35  
 DP759136**

**LOT 19  
 SEC 35  
 DP759136**

TO ENSURE DRIVEWAY WILL NOT NEED TO BE RE-EXCAVATED. PROVIDE LEVEL 2 SERVICE CONDUIT FROM POWER PILLAR LOCATION TO END OF BATTLE AXE HANDLE. CAP OFF AND PROVIDE 'DUCT END' MARKER TAPE. 600mm OFFSET FROM PROPERTY BOUNDARY

25mm WATER SERVICE TO BE EXTENDED TO END OF BATTLE AXE HANDLE AND CAPPED OFF

PROVIDE 100mm x 150mm (OD) RHS STEEL TUBE. CONNECT TO EXISTING KERB AND MAKE GOOD.

NEW 25mm WATER SERVICE FROM COUNCIL MAIN TO PROPOSED WATER METER TO BE INSTALLED BY COUNCIL AT NO COST TO COUNCIL.

PROPOSED POWER PILLAR CONNECTION POINT

PROVIDE 1.5m x 2.5m CHAMFER TO FRONT AND SIDE BOUNDARY OF BATTLE AXE HANDLE TO ACCOMMODATE NEW WATER AND POWER SERVICES

CONSTRUCT NEW Ø150mm SN8-PVC SEWER TIE AT A GRADE OF 1.7%. CONNECT TO EXISTING SEWER MAIN USING 45° SADDLE SLOPE CONNECTION. PROVIDE BOUNDARY RISER AND TRAFFICABLE I/O COVER AT UPSTREAM END AND 1m FROM DOWNSTREAM END. REFER TO LONG SECTION ON SHEET 24029-020.

CONSTRUCT NEW Ø150mm PVC STORMWATER TIE AT A GRADE OF 1%. PROVIDE BOUNDARY RISER AND TRAFFICABLE I/O COVER AT UPSTREAM END. REFER TO LONG SECTION ON SHEET 24029-020.

LOCATION OF NEW WATER METER. 500mm FROM EDGE OF NEW CONCRETE DRIVEWAY

EXACT LOCATION AND DEPTH OF SEWER MAIN AT STORMWATER CROSSING TO BE CONFIRMED PRIOR TO WORKS COMMENCING STORMWATER INSTALLATION

PROVIDE PVC SOCKETED Ø150mm TO 100mm x 150mm ADAPTER BY HOLMAN PLUMBING (OR APPROVED EQUIVALENT)

TO ENSURE DRIVEWAY WILL NOT NEED TO BE RE-EXCAVATED. EXTEND P20 COMMS CONDUIT TO END OF BATTLE AXE HANDLE AND CAP OFF. TYPICAL OFFSET OF 500mm FROM PROPERTY BOUNDARY.

CONSTRUCT NEW 4.5m WIDE REINFORCED CONCRETE DRIVEWAY. MINIMUM 100mm THICK 32 MPa CONCRETE REINFORCED WITH SL82 MESH. PROVIDE TYPICAL 1.5% CROSS FALL TO CENTRE OF DRIVEWAY. REINSTATE EITHER SIDE OF NEW DRIVEWAY WITH 100mm OF TOPSOIL AND REVEGETATE. ENSURE TOPSOIL IS GRADED TO PREVENT WATER PONDING.

RECONSTRUCT VEHICULAR KERB CROSSING TO SUIT DRIVEWAY WIDTH OF 4.5m

CONSTRUCT NEW RETAINING WALL (APPROX 200-400mm HIGH). EXPOSED FACE OF WALL TO BE SET AT 750mm FROM SIDE BOUNDARY.

**STORMWATER TIE NOTE:**  
 Ø150 PVC AND 100mm x 150mm (OD) RHS STORMWATER TIE SIZED TO CATER FOR A 5% AEP RAINFALL EVENT FOR A DWELLING WITH A ROOF PLAN AREA OF 500m<sup>2</sup> WITH A MINIMUM TIE SLOPE OF 1%.

PLAN VIEW  
 SCALE 1:300

Rev	Date	Description
A	11/09/2024	Initial Issue
B	13/09/2024	Update Boundary Locations and Service Lengths/Levels

29 Orion Street  
 Two Lot Subdivision



ABN: 36 169 355 122  
 7 Adele Street Yass NSW  
 Ph: 0418 484 138  
 PO Box 15 Yass NSW 2582  
 email: admin@genium.com.au

Client: Josh Barker

General Arrangement

Status: For Approval

Datum	Scale	Size
GDA2020/AHD	1:300	A3
Drawing Number	Sheet	Revision
24029 -100	4 of 4	B