TRIAXIAL
CONSULTING

COMPLEX PROBLEMS
RESOLVED SIMPLY

Suite 12, Level 14, 327 Pitt St
Sydney NSW 2000

triaxial.com.au
1300 874 294

PROVISION OF CONSULTING ENGINEERING SERVICES

ST MATTHEWS CATHOLIC SCHOOL
BROADHEAD RAOD, MUDGEE

CIVIL AND STORMWATER REPORT

21ST APRIL 2020
REFERENCE: TX13798.00-04.RPT.JD-REV1

Document Control:

Client	TSA Project Management		
Prepared By:	Triaxial Consulting Ltd		
Report Author	Jim Disher		
File Reference:	TX13843.04.rpt.jd – Rev 1		
Report Date:	21st April 2020		
Current Revision:	1		
Revision History:	**Report Author**	**Reviewed By**	**Report Date**
0	JD	JK	20/04/20
1	JD	JK	21/04/20

INDEX

1 INTRODUCTION AND PROJECT DESCRIPTION

Triaxial have been engaged by TSA Project Management to undertake the civil and stormwater design of the proposed Catholic School located at Lot 40, Broadhead Road, Mudgee.

The SSD DA seeks consent for the construction of a new multi-purpose secondary education facility within the Mudgee Region that meets future demands for the developing region.

The new secondary school to be known as St Matthews Catholic High School Mudgee School will cater for 680 secondary school students (4-Stream Year 7-12) and will comprise of a cluster of five low-rise school buildings (1-2 storeys) including;

- Block A - Professional Hub (office and administration)
- Block B - Spiritual Hub (Chapel)
- Block C - Community Hub (Multi purpose hall, Music/Dance Studio and canteen)
- Block D – STEM Research Hub (teaching spaces)
- Block E - Knowledge and Learning Hubs (General Teaching spaces)
- Yarning Circle (Outdoor learning area)
- Outdoor Student Assembly Area and COLA
- Student free play area
- Staff and student amenities
- Associated site landscaping and public domain improvements
- On-site parking and access arrangements off Bruce Road, including:
    - On-grade car park for staff, students and visitors (75 spaces – including 2 accessible spaces)
    - A 12 bay student drop-off and pick-up area
    - A 3-bay bus drop-off and layover area
    - Bus turning area and servicing access
    - Dedicated separate driveway for service vehicles
    - Bicycle parking for 30 bicycles
- Associated earthworks, civil works, perimeter roadworks, fencing, services and utilities connections and augmentation, including:
    - Roadworks to Broadhead Road and Bruce Road to the full extent of the site frontages
    - Roadworks to the Broadhead Road and Bruce Road intersection to cater for bus movements
    - Footpath along the site frontage of Broadhead Road and suitable pedestrian crossing to connect to existing footpath.
    - Stormwater infrastructure upgrades adjacent to and within the site, including new culverts and drains, levee, and bioswale.
    - Connection to existing sewer line within the site
    - Electrical and water connections into the site

Figure 1: Existing Site

2 EXISTING SITE CONDITIONS

2.1 DEVELOPMENT SITE

The site is proposed to be developed as a secondary school, in line with the preliminary architectural plans provided.

The proposed development site is located at the intersection of Bruce Road and Broadhead Road in Mudgee as shown in Figure 1.

Bruce Road is unsealed along the frontage of the site. Broadhead Road is sealed with a narrow pavement of 6m width constructed from the Northern side of the site. Towards the Southern end of the site Broadhead Road has been recently upgraded to a 7m wide sealed road with table drains either side.

A large 3 cell culvert has been constructed under Broadhead Road, consisting of 3 x 2.4m wide by 0.9m high culvert cells to allow the passage of stormwater. Bruce Road has 2 x 900mm stormwater culverts currently allowing stormwater to cross the Western side of the Broadhead

Road intersection where it continues to flow towards the new 3-cell culvert under Broadhead Road.

Refer Appendix A – Triaxial Plan TX13843.00-C2.0

A large diameter water main runs along the Northern side of Bruce Road where it crosses the intersection with Broadhead Road before continuing Southwards along the Eastern side of Broadhead Road.

A large diameter sewer main runs through Lot 40 DP 756894 (the proposed school site) along the alignment of the riparian corridor. The sewer main is a 225mm diameter sewer line with capacity to convey sewer from the proposed school and upstream developed catchment.

2.2 STORMWATER CATCHMENT

The proposed site sits within a large natural catchment that is noted as "Sawpit Gully" on extends well into Avisford Nature Reserve to the South and West of Mudgee township.

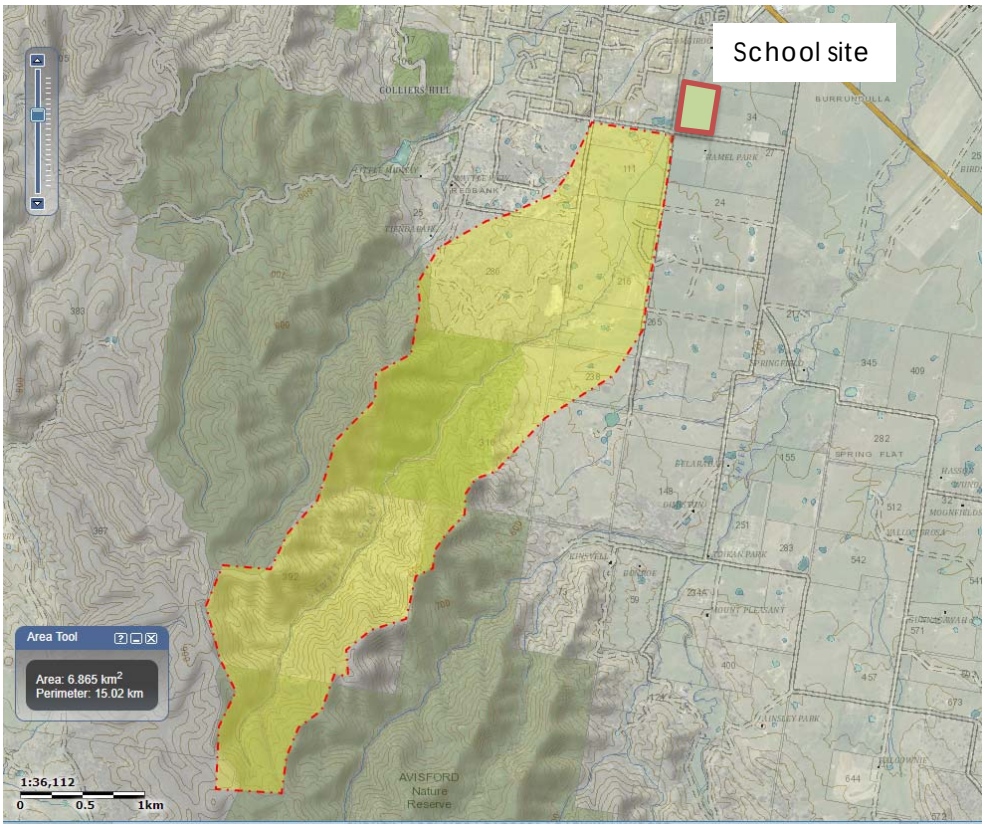


Figure 2: Catchment draining through proposed school site.

The total size of the catchment at the school site was measured as 686Ha. The length of the catchment from top to bottom was calculated at 6.7km.

At the upper end of the catchment the flow is contained in well defined channels and creek beds, however when the channel descends into the lower part of the catchment it spreads to become overland sheet flow, especially after the flow crosses Plenty Road, 600m upstream from the School site. At the school site the stormwater from the catchment flows through the

existing twin 900mm diameter culverts under Bruce Road and through the larger culverts on Broadhead Road before heading North East towards the Castlereagh Highway.

The existing culverts under Bruce Road have capacity to take the minor flows up to the 2-year event, but anything above these flow rates will be inundated.

Flow rates generated from the study of the upstream catchment are listed below:

	100yr Event	**20yr Event**	**5yr Event**
Flow Rate (m^3/s)	41.1	23.5	8.75

Table 1: Flow rates used at the School site based on catchment analysis.

The flow rates generated in the modelling were obtained using a RAFTS model with the following characteristics:

- Initial loss = 25mm/hr
- Continuing loss = 2.5mm/hr
- Catchment fraction impervious = 15% for rural areas, 0% for natural undisturbed areas (heavily vegetated).

These parameters are in line with previous catchment studies completed within the Mudgee region.

3 PROPOSED SITE REQUIREMENTS

3.1 ROAD UPGRADES – SURROUNDING ROAD NETWORK

It is proposed to upgrade the surrounding road network in accordance with Triaxial plans TX13843.00-C1.0 through C7.0. Upgrades to the existing road network are proposed to be in accordance with the rural position of the school, including table drains in lieu of kerb and guttering.

Refer Appendix A – Triaxial Plan TX13843.00-C3.0

A summary of the proposed surrounding road upgrades is listed below:

- Upgrade Bruce Road for the full frontage of the site. Full road construction, minimum 7m wide pavement with table drains either side.
- Upgrade Broadhead Road for the full frontage of the site. Full road construction, minimum 7m wide pavement with table drains either side.

3.2 FLOOD MITIGATION WORKS

Proposed works to mitigate the effects of the large catchment draining through the site includes:

- Upgrade to the existing culverts under Bruce Road to have sufficient capacity to allow flood waters under Bruce Road and Broadhead Road to pass through and

around the site. Currently the flood waters are constricted by the existing culverts under Bruce Road. Upgrading these culverts will allow the passage of stormwater through the Bruce Road and Broadhead Road intersection along the North Western side of the school site.

- Construction of a levee bank running along the perimeter of the riparian zone to protect the school site from the stormwater flowing through the Broadhead Road culverts.
- Increase in the level of Broadhead road around the intersection with Bruce Road.

These upgrades to existing stormwater infrastructure are shown on Triaxial plans along with the extent of the existing and future flooding.

Refer Appendix A – Triaxial Plan TX13843.00-C3.0

In order to determine the effectiveness of the proposed levee bank and culvert upgrades on the school site, a HECRAS model was developed. The image below shows the terrain model as run with the levee bank included through the proposed school site and the culvert upgrades on Broadhead and Bruce Roads. Cross sections were developed from the terrain model and the flood extent at each cross section is indicated by the thick blue line.

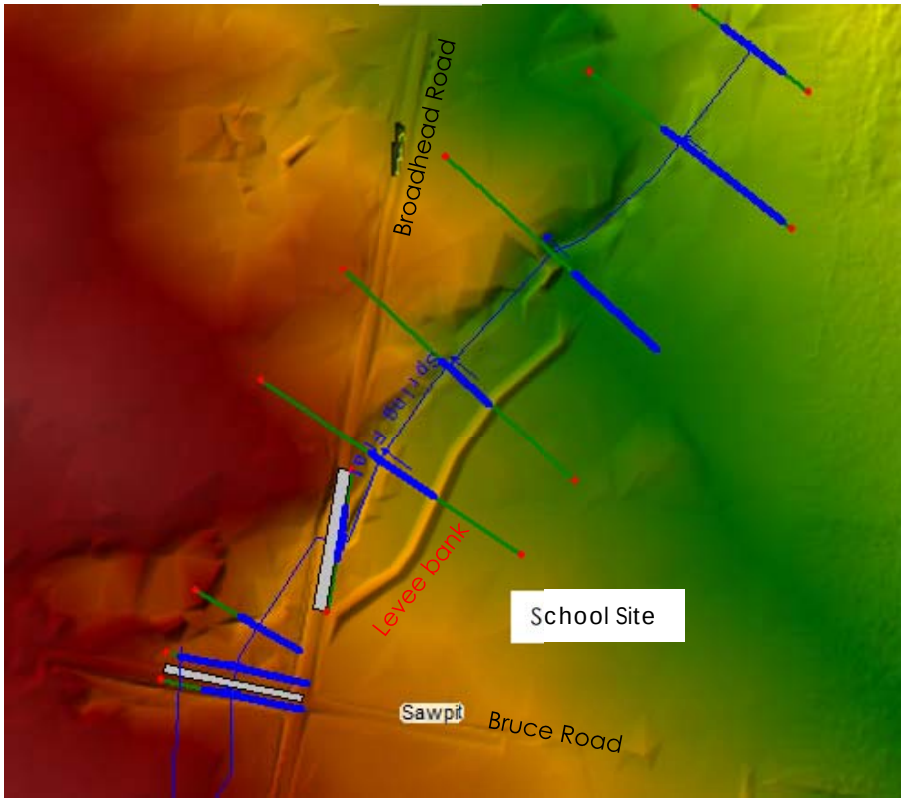


Figure 3: Hecras model cross sections and extent of water flow at each cross section in the model.

In order to determine the required levels of the levee bank the water surface level was obtained from the Hecras model and used to set the height of the levee bank. A 500mm freeboard was applied to the water surface level in line with Mid Western Regional Council requirements.

3.3 INTERNAL SITE STORMWATER MANAGEMENT

Proposed works to allow the safe passage of stormwater through the site include the following measures in accordance with Mid Western Regional Council Development Control Plan guidelines:

3.3.1. Stormwater Modelling – DRAINS Model

A DRAINS model was developed for the internal site drainage. The DRAINS model included modelling nodes for each surface and roof catchment, as well as all downpipes, pits and pipes throughout the site.

The hydrological model used in the modeling of the stormwater was an ILSAX type model with the following characteristics typical to the Mudgee area:

Paved area depression storage = 1mm

Supplementary area depression storage = 1mm

Grassed (pervious) area depression storage = 5mm

Soil type typically 2.5

Rainfall data was then input for a range of storms directly from the Australian Rainfall and Runoff module in the DRAINS program. Design storms included the 5, 20 and 100 yr ARI for durations of 5, 10, 20, 30, 60 and 90 minutes.

For the minor system drainage (piped drainage), the worst-case 5yr ARI storm was used as the design criteria to select the pipe sizes for the development.

Pit and pipe layout was input into the model and catchments were assigned to each pit based on the site contours. Fraction impervious for each of the catchment areas is as per the example given in Australian Rainfall and Runoff (AR&R, 1987) section 14.5:

Carparking, Roof areas or Roads = 100%

Soft Landscaped areas (grassed) = 5%

Existing pre-developed conditions = 5%

These percentages of impervious area are in line with the recommended values listed in Table 5.2 of the DRAINS software manual that were obtained from a study of 16 different gauged fully developed catchments in Victoria.

For catchments with combinations of these different land types were present (ie. Landscaping areas combined with an area of roadway), an interpolated fraction impervious was calculated based on the area of land in each category.

Overflow routes were included in the model to ensure that the flow width of any overflow route in the minor storm would not exceed the allowable 2.5m gutter flow width.

ILSAX model results were checked in the DRAINS software by running an extended rational method model to check the results. The values obtained in the extended rational method model were within 5% of the values obtained using the ILSAX hydrological model.

3.3.2. Stormwater Modelling – MUSIC Model

A MUSIC model was developed to ensure that the stormwater runoff from the site has been treated to ANZECC guidelines as outlined in Mid Western Regional Council DCP with specific pollution targets as follows:

- Reduction of Total Suspended Solids (TSS) of 85%
- Reduction of Phosphorus (P) of 65%
- Reduction of Nitrogen (N) of 45%
- Reduction of Gross Pollutants of 100%

MUSIC and DRAINS models have been included with this report.

The treatment train for the MUSIC model includes having two bioretention basins, one at the outlet location to the North of the site adjacent to the riparian corridor, and the other within the carpark to treat the local carpark runoff before discharging the stormwater along Bruce Road.

A schematic of the MUSIC model is shown below:

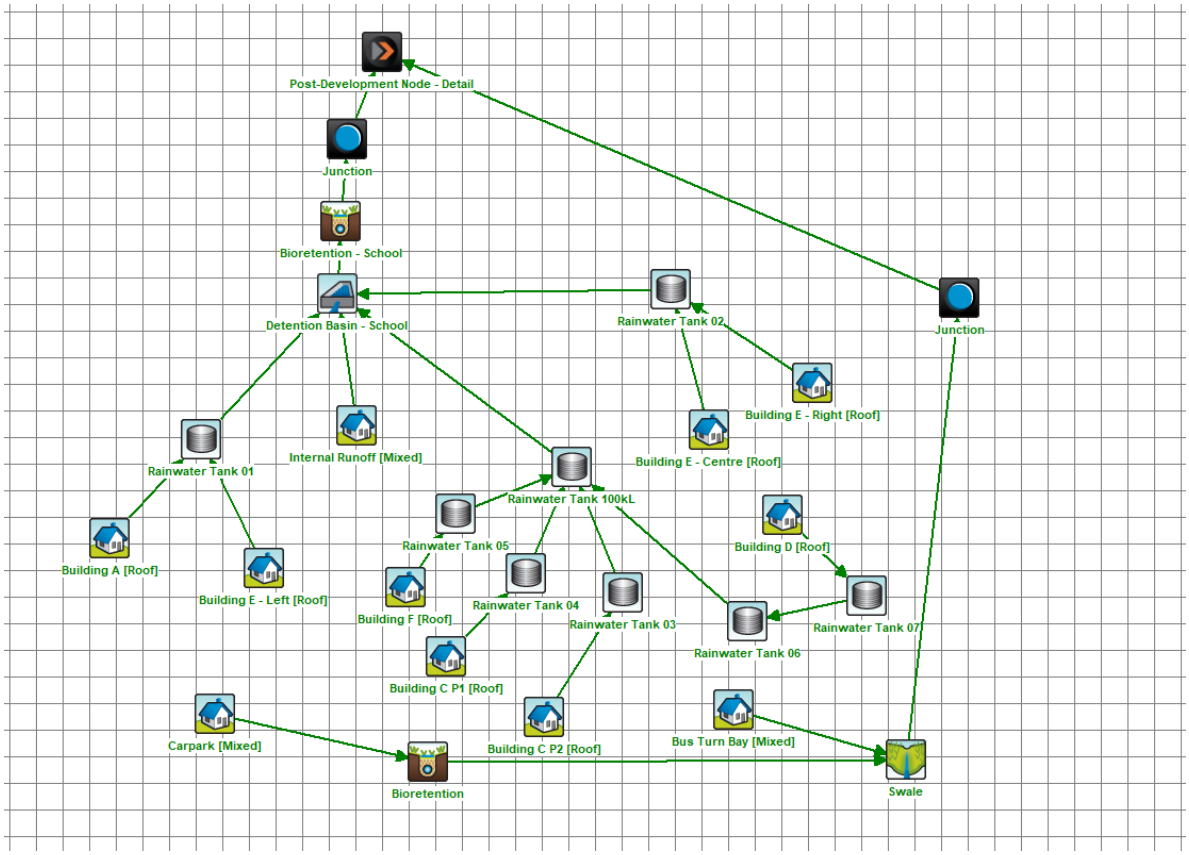


Figure 4: MUSIC model setup.

The results of the MUSIC model with the total site post-developed treatment methods modelled are as shown below:

Treatment Train Effectiveness - Post-Development Node - Detail

	Sources	Residual Load	% Reduction
Flow (ML/yr)	5.99	4.05	32.5
Total Suspended Solids (kg/yr)	768	105	86.3
Total Phosphorus (kg/yr)	1.8	0.594	67
Total Nitrogen (kg/yr)	15.4	7.73	49.9
Gross Pollutants (kg/yr)	205	0	100

Include Pre-Development

Figure 5: MUSIC model output

Pollution results from the modelling are all above the recommended reduction targets.

4 SUMMARY

In summary, the proposed upgrades to the surrounding road network along with the upgrades to the culverts under Bruce Road and the construction of a levee bank through the site will provide safe passage for stormwater and protect the school buildings and infrastructure during a large storm event.

DRAINS and MUSIC models have been developed to allow sizing of stormwater network requirements and pollution reduction treatment methods.

.

APPENDIX A – TRIAXIAL PLANS TX13843.00-C1.0

APPENDIX B – DRAINS MODEL INFORMATION

SUB-CATCHMENT DETAILS

Name	Pit or Node	Total Area (ha)	Paved Area %	Grass Area %	Supp Area %	Paved Time (min)
Cat-BLDG-1E	BLDG-E-DP	0.07	100	0	0	5
Cat-BLDG-2B	BLDG-2B-DP	0.14	100	0	0	5
Cat-A2	A2	0.026	60	40	0	5
Cat-BLDG-Da	BLDG-D-DPa	0.1	100	0	0	5
Cat-A1	A1	0.02	50	50	0	5
Cat-C1	C1	0.032	100	0	0	5
Cat-Y1	Y1	0.017	100	0	0	5
Cat-X5	X5	0.065	100	0	0	5
Cat-Z2	Z2	0.047	100	0	0	5
Cat-X1	X1	0.16	20	80	0	5
Cat-W1	X2	0.189	90	10	0	5
Cat-Z1	Z1	0.0115	100	0	0	5
Cat-BLDG-Ca	BLDG-C-DPa	0.105	100	0	0	5
Cat-BLDG-F	F-DP	0.0309	100	0	0	5
Cat-BLDG-A	BLDG-A-DP	0.0948	100	0	0	5
Cat-BLDG-Cb	BLDG-C-DPb	0.105	100	0	0	5
Cat-BLDG-Db	BLDG-D-DPb	0.1	100	0	0	5

PIPE DETAILS

Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Dia (mm)
Pipe129	BLDG-E-DP	A3	8.496	487.453	487.368	1	225
PipeA3	A3	OSD	48.856	486.79	486	1.62	500
Pipe-ROOF-B2	BLDG-2B-DP	A2	44.092	494.379	487.313	16.03	225
PipeA2	A2	A3	30.918	486.945	486.79	0.5	375
Pipe-ROOF-D1	BLDG-D-DPa	O/3	24.556	494.453	488.453	24.43	225
PipeOP3	O/3	A1	47	488.28	488.045	0.5	375
PipeA1	A1	A2	44.809	488.015	487.167	1.89	375
PipeC1	C1	C2	50.148	487.353	487.102	0.5	225
PipeC2	C2	A3	30.99	487.072	486.917	0.5	375
PipeY1	Y1	X5	10.865	488.892	488.112	7.18	100
PipeX5	X5	Z2	37.13	487.778	487.592	0.5	375
PipeZ2	Z2	N158	72.989	487.592	487.197	0.54	450
PipeX1	X1	X2	10.296	488.963	488.673	2.82	225

PipeX4	X2	X5	25.217	488.611	487.911	2.78	300
PipeZ1	Z1	Z2	100.395	491.077	489.707	1.36	100
Pipe-ROOF-Ca	BLDG-C-DPa	O/1	15	494.453	488.453	40	225
PipeOP1	O/1	O/2	10	488.4	488.391	0.09	300
PipeOP2	O/2	O/3	16.3	488.391	488.31	0.5	300
Pipe-ROOF-F	F-DP	C2	25	494.392	487.922	25.88	100
Pipe-ROOF-A	BLDG-A-DP	C2	130.4	501.453	487.983	10.33	225
Pipe-ROOF-Cb	BLDG-C-DPb	O/2	15	494.453	488.453	40	225
Pipe-ROOF-Db	BLDG-D-DPb	A2	54.3	494.453	487.313	13.15	225

PIT / NODE DETAILS

Name	Type	Size	Surface Elev (m)	Max Pond Depth (m)	x	y
BLDG-E-DP	OnGrade	Downpipe	488		743787.7	6387764
A3	OnGrade	Junction Pit or Manhole	488.37		743783.6	6387772
BLDG-2B-DP	OnGrade	DP2	495		743861.7	6387787
A2	Sag	900 x 900	487.86	0.2	743831.3	6387756
BLDG-D-DPa	OnGrade	Downpipe	495		743874.1	6387681
O/3	OnGrade	Junction Pit or Manhole	489		743830.3	6387687
A1	Sag	900 x 900	488.84	0.2	743832.4	6387721
C1	Sag	900 x 900	487.9	0.2	743798.9	6387737
C2	OnGrade	900 x 900	488.53		743775.5	6387742
Y1	OnGrade	SA1	489.5		743731.3	6387677
X5	Sag	SA1	488.72	0.15	743756.5	6387686
Z2	OnGrade	Single SO1 Pit	490.43		743767.7	6387651
N158	Node		489.2		743839.5	6387637
X1	OnGrade	SA1	489.71		743731.4	6387717
X2	Sag	900 x 900	489.42	0.2	743745.6	6387698
Z1	OnGrade	SA1	491.8		743669.1	6387669
BLDG-C-DPa	OnGrade	DP2	495		743781.6	6387684
O/1	OnGrade	Junction Pit or Manhole	489		743783.3	6387677
O/2	OnGrade	Junction Pit or Manhole	489		743826.8	6387670
F-DP	OnGrade	Downpipe	495		743762.3	6387714
N198	Node				743805.1	6387864
N331	Node		488		743918.4	6387652
BLDG-A-DP	OnGrade	DP2	502		743739.5	6387745
BLDG-C-DPb	OnGrade	DP2	495		743815.8	6387678
BLDG-D-DPb	OnGrade	Downpipe	495		743886.3	6387722

PROPOSED SCHOOL DEVELOPMENT
CNR OF BRUCE ROAD & BROADHEAD ROAD
CIVIL DRAWINGS

DRAWING LIST

Drawing No.	Drawing Title
C1.0	COVER SHEET
C1.1	GENERAL NOTES
C2.0	EXISTING SITE PLAN
C2.1	PROPOSED SITE WORKS
C3.0	EROSION & SEDIMENT CONTROL PLAN
C3.01	EROSION & SEDIMENT CONTROL DETAILS
C4.0	BULK EARTHWORKS PLAN - INTERNAL
C4.1	FINISHED LEVELS PLAN - INTERNAL
C5.0	BROADHEAD ROAD LONG SECTION SHEET 1
C5.1	BROADHEAD ROAD LONG SECTION SHEET 2
C6.0	BRUCE ROAD LONG SECTION SHEET 1
C7.0	FLOOD MITIGATION WORKS
C7.1	STORMWATER PLAN
C7.2	BIO-FILTRATION SWALE - DETAILS
C8.0	SEWER PLAN
C9.0	WATER PLAN
C10.0	VEHICLE SIMULATION PLAN
C11.0	PAVEMENT PLAN - INTERNAL
C12.0	BRUCE ROAD CULVERT DETAILS

LOCATION PLAN
SCALE 1:2000 AT A1

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

20.0m 0.0 40.0 80.0 120.0 160.0 200.0m
SCALE 1:2000 AT A1 SHEET | 1:4000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	18.11.19	D	JI.D.
ISSUED FOR INFORMATION	21.04.20	G	JI.D.
ISSUED FOR INFORMATION	10.03.20	F	JI.D.
ISSUED FOR INFORMATION	25.11.19	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
COVER SHEET

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C1.0	G

GENERAL NOTES

GENERAL

CG1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

CG2 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.

CG3 ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.

CG4 UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETERS.

CG5 ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

SURVEY

SU1 THE EXISTING SITE CONDITIONS SHOWN ON THE DRAWINGS HAVE BEEN INVESTIGATED BY OTHERS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN.

SU2 THE FOLLOWING ENGINEERING SURVEY SHALL NOT BE TAKEN AS A CADASTRAL OR BOUNDARY IDENTIFICATION SURVEY. BOUNDARY DATA SHALL BE TAKEN AS A GUIDE ONLY UNLESS NOTED OTHERWISE.

SU3 SHOULD DISCREPANCIES BE FOUND BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA THE CONTRACTOR SHALL NOTIFY TRIAXIAL CONSULTING PRIOR TO COMMENCEMENT OF THE WORKS. THE CONTRACTOR SHALL ACCEPT ALL RESPONSIBILITY FOR ERRORS MADE DURING CONSTRUCTION WHERE SURVEY DISCREPANCIES WERE NOT RELAYED AND RESOLVED BY TRIAXIAL CONSULTING PRIOR TO COMMENCEMENT OF THE WORKS.

SU4 EXISTING SURVEY BY:
BARNSON PTY LTD
REFERENCE NUMBER 30760

EXCAVATION

EX1 REFER TO REPORT ON GEOTECHNICAL STABILITY ASSESSMENT FOR INFORMATION PERTAINING TO EXISTING SITE STABILITY, EXCAVATION AND GEOTECHNICAL ISSUES.

EX2 ALL SITE EXCAVATION TO BE PERFORMED IN ACCORDANCE WITH ITEMS NOTED IN THE ABOVE LISTED REPORT.

EX3 THE EARTHWORKS CONTRACTOR IS TO CONTACT OR MEET WITH THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF ANY EXCAVATION TO DETERMINE APPROPRIATE TECHNIQUES AND HOLD POINTS.

EX4 TEMPORARY BATTER CUT TO ROCK TO BE FORMED AT NO STEEPER THAN 1 V : 1 H. PERMANENT BATTER TO BE CONFIRMED ON SITE IN CONSULTATION WITH THE GEOTECHNICAL ENGINEER.

EXISTING UNDERGROUND SERVICES

EU1 THE EXISTING UNDERGROUND SERVICES INDICATED ON THESE DRAWINGS HAVE BEEN OBTAINED FROM SURVEY AND SERVICE AUTHORITY INFORMATION. THE SERVICES INFORMATION SHOWN ARE THOSE OF KNOWN SERVICES ONLY. THE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND MAY NOT BE 'AS CONSTRUCTED' OR ACCURATE. THE PRESENCE OR ABSENCE OF SERVICES SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.

EU2 THE CONTRACTOR SHALL TAKE ALL DUE CARE WHEN EXCAVATING ON SITE INCLUDING HAND EXCAVATION WHERE NECESSARY.

EU3 THE CONTRACTOR SHALL CONTACT ALL RELEVANT SERVICE AUTHORITIES PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORKS.

EU4 THE CONTRACTOR SHALL UNDERTAKE A THOROUGH SERVICES SEARCH PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORKS. THE RESULTS OF SERVICES SEARCHES SHALL BE RECORDED AND KEPT ON SITE AT ALL TIMES.

DIAL BEFORE YOU DIG www.1100.com.au

SITE PREPARATION

SP1 REFER TO GEOTECHNICAL REPORT FOR EXISTING SOIL CONDITIONS.

SP2 ALL ORGANIC & DELETERIOUS MATERIAL TO BE COMPLETELY CLEARED FROM SITE WORKS AREA.

SP3 PRIOR TO THE COMMENCEMENT OF ANY CIVIL OR STRUCTURAL CONSTRUCTION THE ENTIRE SITE AREA IS TO BE COMPACTED AND TESTED IN ACCORDANCE WITH AS1289.5.1.1 OR .5.1.2 - 1993 TO PRODUCE THE FOLLOWING: -98.0% STANDARD COMPACTION AT THE SURFACE AND AT 200MM BELOW SURFACE LEVEL. FREQUENCY OF FIELD DENSITY TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3798 - 2007 TABLE 8.1 TESTING SHALL BE EVENLY SPACED OVER THE ENTIRE SITE, AND AT RANDOM LOCATIONS. TEST RESULTS SHALL BE FORWARDED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORKS.

SP4 PROOF ROLL EXPOSED SUBGRADE PRIOR TO COMMENCEMENT OF CIVIL AND STRUCTURAL CONSTRUCTION. CONDUCTED UNDER GEOTECHNICAL SUPERVISION.

SP5 BOX OUT ANY SOFT AREAS AND FILL AND COMPACT WITH IMPORTED FILL.

SP6 PLACE IMPORTED FILL IN MAXIMUM 200 LOOSE LAYERS & COMPACT TO 98%STD >1M BELOW B.E.L.) AND 100%STD (<1m BELOW B.E.L.) AND TO WITHIN +/-2% OF OMC.

SP7 IMPORTED FILL IS TO BE CRUSHED SANDSTONE OR RIPPED SHALE, WITH A MINIMUM CBR OF 30%, PI 8% AND A MAX PARTICLE SIZE OF 75mm.

SITEWORKS

SW1 THE CONTRACTOR SHALL VERIFY ALL LEVELS AND DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORKS.
ANY DISCREPANCIES SHALL BE REPORTED TO TRIAXIAL CONSULTING FOR FURTHER INSTRUCTION.

SW2 ALL CONNECTIONS WITH EXISTING WORKS SHALL BE MADE SMOOTH.

SW3 ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO ACHIEVE A DENSITY EQUIVALENT TO THE ADJACENT MATERIAL.

SW4 ALL SERVICE TRENCHES SHALL BE BACKFILLED WITH SAND TO A LEVEL 300mm ABOVE THE PIPE. WHERE SERVICE TRENCHES ARE CONSTRUCTED UNDER VEHICULAR PAVEMENTS, BACKFILL THE REMAINDER OF THE TRENCH (TO UNDERSIDE OF PAVEMENT) WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN LAYERS NOT EXCEEDING 150mm DEPTH. BACKFILL MATERIAL SHALL BE COMPACTED TO A MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 (CURRENT EDITION) OR A DENSITY INDEX OF NOT LESS THAN 75.

SW5 PROVIDE A 10mm WIDE EXPANSION JOINT BETWEEN ALL BUILDINGS AND CONCRETE OR UNIT PAVEMENTS.

SW6 ALL BASE-COURSE MATERIAL SHALL BE MINIMUM 95% MODIFIED DRY DENSITY (UNO) IN ACCORDANCE WITH AS 1289 5.2.1 (CURRENT EDITION).

SEDIMENT AND EROSION CONTROL

SE1 CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION" (2004) (THE BLUE BOOK).

SE2 DISTURBANCE SHALL BE KEPT TO A MINIMUM AND WITHIN THE LIMITS OF THE CONSTRUCTION SITE.

SE3 ADDITIONAL CONTROLS SHALL BE INSTALLED AS REQUIRED AND IN ACCORDANCE WITH "THE BLUE BOOK".

SE4 ALL INSTALLED CONTROLS SHALL BE INSPECTED AT LEAST WEEKLY AND IMMEDIATELY FOLLOWING A RAIN EVENT. MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.

SE5 COMPLETED AREAS SHALL BE PROGRESSIVELY VEGETATED.

SE6 CONTROL DEVICES, AS DETAILED, SHALL BE INSTALLED TO STORMWATER PITS IMMEDIATELY FOLLOWING THEIR CONSTRUCTION.

STORMWATER DRAINAGE

SD1 PIPES UP TO 300mm DIAMETER SHALL BE SEWER GRADE UPVC WITH SOLVENT WELDED JOINTS.

SD2 ALL "INTERNAL WORKS" WITHIN PROPERTY BOUNDARIES SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.3 (CURRENT EDITION).

SD3 ALL STORMWATER PIPES SHALL BE PROVIDED WITH MINIMUM PIPE COVER TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.3 (CURRENT EDITION).

SD4 INSTALLATION OF ALL BURIED CONCRETE STORMWATER PIPES SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 3725 (CURRENT EDITION) *DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES*.

SD5 ENLARGERS, CONNECTORS AND JUNCTIONS SHALL BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300mm DIAMETER.

SD6 ALL STORMWATER DRAINAGE LINES SHALL HAVE A MINIMUM FALL OF 1% UNLESS NOTED OTHERWISE ON THE DRAWINGS. CARE SHALL BE TAKEN WITH SETTING LEVELS OF STORMWATER DRAINAGE LINES. GRADES SHOWN ON THE DRAWINGS SHALL NOT BE REDUCED WITHOUT THE WRITTEN CONSENT OF TRIAXIAL CONSULTING.

SD7 GRATES AND COVERS SHALL COMPLY WITH THE REQUIREMENTS OF AS 3996 (CURRENT EDITION).

SD8 AT ALL TIMES DURING THE CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE DOCUMENTED AND EXECUTED TO MITIGATE THE RISK OF PERSONAL INJURY AS A RESULT OF FALLS INTO PITS.

SD9 ALL EXISTING STORMWATER LOCATIONS, INCLUDING INVERTS, TO BE CONFIRMED BY THE BUILDER/CONTRACTOR PRIOR TO THE COMMENCEMENT OF CIVIL WORKS ON SITE.

SD10 ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN SHALL BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDANT/ENGINEER FOR FURTHER DIRECTIONS.

CONCRETE

C1 ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

C2 READYMIX CONCRETE SUPPLY SHALL COMPLY WITH AS1379.

C3 CONCRETE QUALITY ALL THE REQUIREMENTS OF THE ACSE SPECIFICATION DOCUMENT 1 (EDITION 6) SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	STRENGTH GRADE (MPa)	SLUMP AGG SIZE	MAX. TYPE	CEMENT
(REFER TO PLANS)	-	-	-	

C4 PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE AS1379.

C5 NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.

C6 CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE.

EXPOSURE CLASS. TO AS3600:	CONCRETE GRADE: GROUND:	CAST AGAINST EXPOSED:	CAST IN FORMS & EXPOSED:	CAST IN FORMS NOT EXPOSED:
A1 & A2	25 50mm	30mm	20mm(A1)	
B1	32 60mm	40mm	-	
B2	40 65mm	45mm	-	

COVER REQUIREMENTS MAY NEED TO BE INCREASED TO IT FIRE RATING. EXPOSURE CLASSIFICATION SHALL BE AS INDICATED ON THE DRAWING.

DURABILITY REQUIREMENTS FOR CONCRETE.

EXPOSURE CLASS. TO AS3600:	MINIMUM CEMENT CONTENT:	MAXIMUM W/C RATIO:
A1 & A2	-	0.56
B1	320	0.56
B2	390	0.46
C	450	0.40

C7 ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT 1m CENTRES MAXIMUM BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. USE PLASTIC CHAIRS IN EXPOSURE CONDITION GREATER THAN B1.

C8 CONCRETE SIZES DO NOT INCLUDE THICKNESSES OF APPLIED FINISHES.

C9 DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.

C10 REFER TO ARCHITECT'S DETAILS, FOR CHAMFERS, DRIP GROOVES, REGLETS, ETC., MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.

C11 NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.

C12 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C13 ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.

C14 USE ALIPHATIC ALCOHOLS SPRAYED OVER THE SURFACE PRIOR TO AND AFTER FINISHING TO REDUCE RATE OF EVAPORATION FROM THE SURFACE AND HELP CONTROL PLASTIC SHRINKAGE CRACKING. NOTE THAT THE USE OF ALIPHATIC ALCOHOLS IS NOT A SUBSTITUTE FOR CURING.

C15 COMMENCE CURING OPERATIONS PROMPTLY AFTER SURFACE FINISHING IS COMPLETE. CURING COMPOUNDS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND ARE TO BE CHECKED FOR COMPATIBILITY WITH PROPOSED FLOOR FINISHES. SOME COMPOUNDS MAY REQUIRE REMOVAL FOR GLUED DOWN FLOOR COVERINGS OR WET CURING AS DESCRIBED BELOW.

CONCRETE IS TO BE CURED BY KEEPING THE SURFACES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND PREVENTING THE LOSS OF MOISTURE FOR A FURTHER 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT.

CONCRETE (CONTINUED)

C16 PROPPING WHICH SUPPORTS CONSTRUCTION OVER IS TO BE LEFT IN PLACE AS REQUIRED TO AVOID OVER STRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING.

C17 THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTIONS AND CONCRETE SHALL NOT BE DELIVERED UNTIL ENGINEERS APPROVAL IS OBTAINED.

C18 CONDUITS, PIPES ETC. SHALL ONLY BE LOCATED IN THE MIDDLE ONE THIRD OF SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS OF THE CONDUIT. PIPES ETC. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.

C19 REINFORCEMENT SYMBOLS:
N DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY CLASS BARS TO AS4671.
R DENOTES PLAIN ROUND GRADE 250 NORMAL DUCTILITY CLASS BARS TO AS4671.
RL DENOTES RECTANGULAR MESH GRADE 500 LOW DUCTILITY CLASS TO AS4671.
SL DENOTES SQUARE MESH GRADE 500 LOW DUCTILITY CLASS TO AS4671.
TM DENOTES TRENCH MESH GRADE 500 LOW DUCTILITY CLASS TO AS4671.
THE MEMBER IMMEDIATELY FOLLOWING THE BAR GRADE SYMBOL REPRESENTS THE NOMINAL BAR DIAMETER IN MILLIMETERS. THE FIGURES FOLLOWING THE FABRIC SYMBOL SL & RL IS THE REFERENCE NUMBER FOR FABRIC TO AS4671.

C20 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.

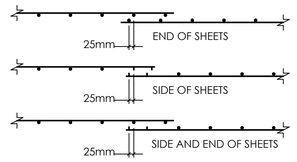
C21 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH AS3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR.

C22 WHERE TRANSVERSE TIE BARS ARE NOT SHOWN PROVIDE N12-400 SPLICED WHERE NECESSARY AND LAPPED 500mm WITH MAIN BARS.

C23 STANDARD LAP AND COG LENGTHS UNLESS NOTED OTHERWISE ON DRAWINGS:

BAR DIAMETER	MIN LAP LENGTH (mm)	MIN COG LENGTH (mm)
N12	500	180
N16	750	210
N20	1000	260
N24	1375	310
N28	1560	360
N32	1810	400

C24 MINIMUM MESH LAPS:



C25 A 0.2mm POLYETHYLENE MEMBRANE SHALL BE CONTINUOUS UNDER SLAB LAPPED 200mm MIN. WHERE REQUIRED AND TAPED AT ALL SERVICE PENETRATIONS, LAPS AND PUNCTURES. THE MEMBRANE IS TO EXTEND UNDER AND TO THE SIDES OF SLABS, BEAMS AND THICKENINGS

NOTE:
THIS IS A PLANNING DRAWING ONLY. FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

2m 0 5 10 15 20m
SCALE 1:200 AT A1 SHEET | 1:400 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	D	JI.D.
ISSUED FOR INFORMATION	25.11.19	C	JI.D.
ISSUED FOR INFORMATION	04.07.19	B	JI.D.
ISSUED FOR INFORMATION	24.05.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

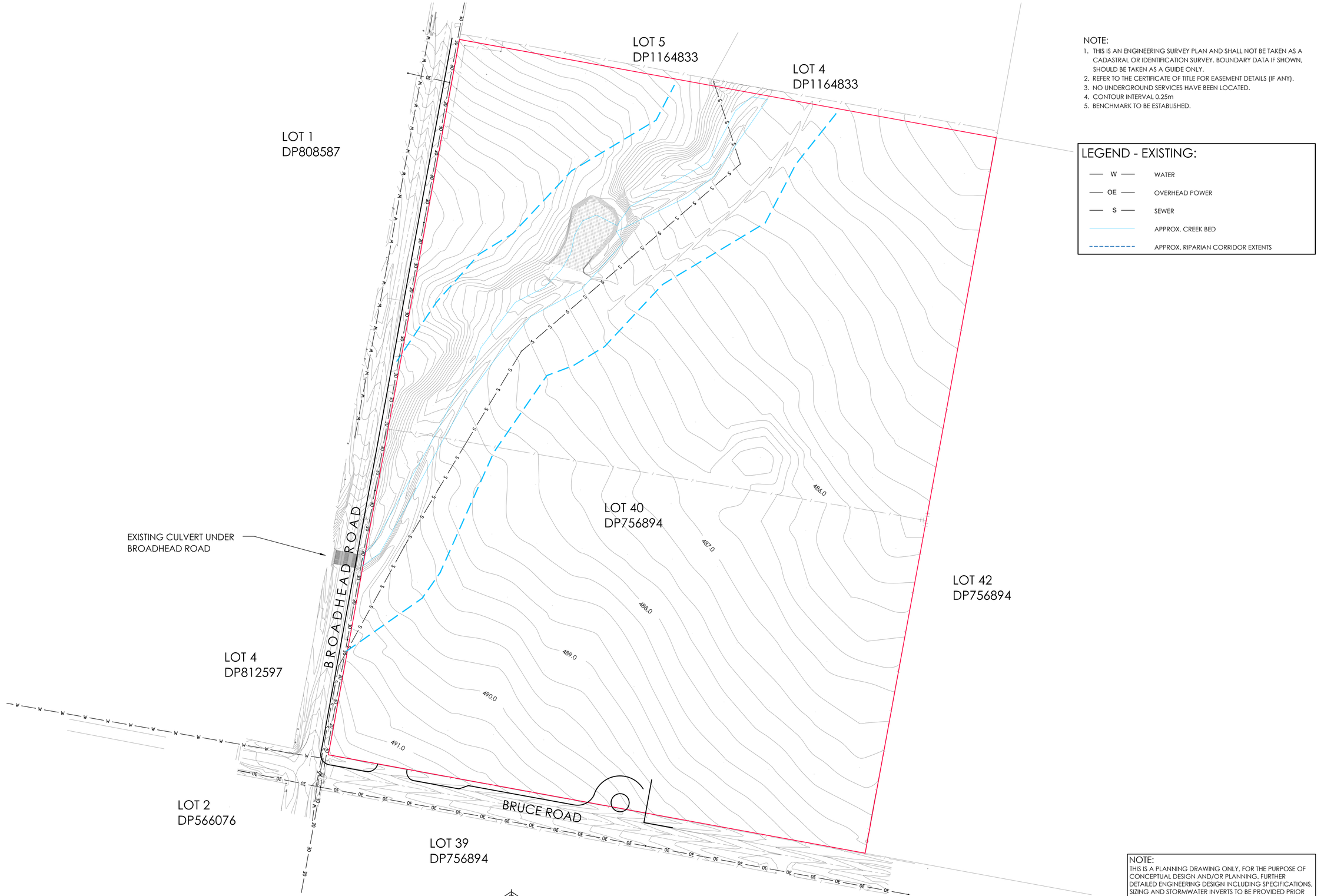
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
GENERAL NOTES

PROJECT No. TX13843.00 - DRAWING No. C1.1 ISSUE D



NOTE:
1. THIS IS AN ENGINEERING SURVEY PLAN AND SHALL NOT BE TAKEN AS A CADASTRAL OR IDENTIFICATION SURVEY. BOUNDARY DATA IF SHOWN, SHOULD BE TAKEN AS A GUIDE ONLY.
2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.
4. CONTOUR INTERVAL 0.25m
5. BENCHMARK TO BE ESTABLISHED.

LEGEND - EXISTING:

- W — WATER
- OE — OVERHEAD POWER
- S — SEWER
- APPROX. CREEK BED
- APPROX. RIPARIAN CORRIDOR EXTENTS

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

10m 0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

EXISTING SITE PLAN

SCALE 1:1000 AT A1

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	D	JI.D.
ISSUED FOR INFORMATION	25.11.19	C	JI.D.
ISSUED FOR INFORMATION	04.07.19	B	JI.D.
ISSUED FOR INFORMATION	24.05.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
EXISTING SITE PLAN

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C2.0	D

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

NOTE:
REFER SHEET C10.0 FOR LIONS DRIVE AND BROADHEAD ROAD INTERSECTION DETAILS

WORKS LEGEND

SYMBOL	DESCRIPTION
	PROPOSED ROAD WORKS
	2.5m CONCRETE FOOTPATH
	ELEVATED 2.5m WALKWAY (TBC)
	RETAINING WALL
	RIPARIAN CORRIDOR

NO KERB & GUTTER EITHER SIDE IS PROPOSED PAST INTERSECTION

UPGRADE TO BRUCE ROAD CULVERT 3 CELL 2400mm WIDE BY 900mm DEEP CULVERTS. PROVIDE ROCK LINED TAIL IN AND OUT EITHER SIDE OF CULVERT

ELEVATED WALKWAY PAST EXISTING CULVERTS

9m WIDTH FORMATION. KERB & GUTTER EASTERN SIDE ONLY.

EXISTING CONCRETE FOOTPATH CONSTRUCTED BY OTHERS

LOCATION OF SCHOOL CROSSING. INSTALL CHILDRENS CROSSING TO AS1742.10

SWEPT PATH OF 12.5m BUS SHOWN

CONNECTION TO EXISTING WATER MAIN

BRUCE RD 9m WIDE ROAD WITH TABLE DRAIN SOUTHERN SIDE

BUS BAY OFF BRUCE ROAD

BUS TURNING BAY AC SEAL

TRANSITION FROM 9m TO 6m ROAD CARRIAGEWAY AFTER BUS BAY. 50m TRANSITION LENGTH

EXTENT OF KERB & GUTTER ALONG PROPOSED SCHOOL SIDE.

6m SEALED ROAD TO EXTENT OF SCHOOL PROPERTY FRONTAGE

EXISTING GRAVEL ROAD

2.5m CONCRETE PATHWAY ON EASTERN SIDE

CONNECTION TO EXISTING SEWER MAIN

RIPARIAN CORRIDOR

LEVEE BANK

SITE BOUNDARY

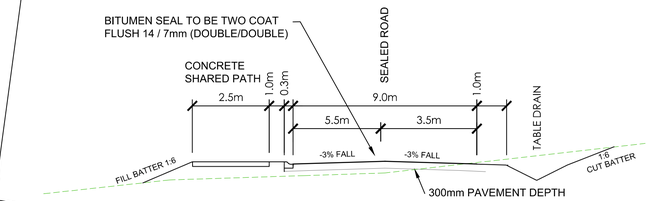
BROADHEAD ROAD

BRUCE ROAD

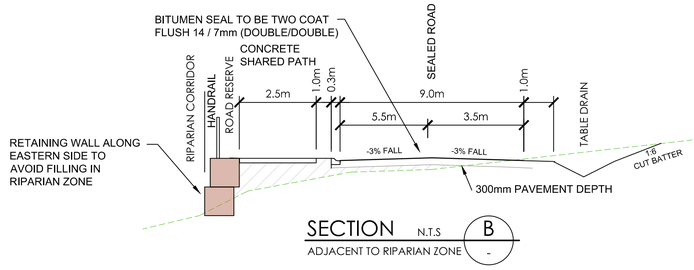
NOTE:
1. THIS IS AN ENGINEERING SURVEY PLAN AND SHALL NOT BE TAKEN AS A CADASTRAL OR IDENTIFICATION SURVEY. BOUNDARY DATA IF SHOWN, SHOULD BE TAKEN AS A GUIDE ONLY.
2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.
4. CONTOUR INTERVAL 0.2m
5. BENCHMARK TO BE ESTABLISHED.

10.0m 0.0 20.0 40.0 60.0 80.0 100.0m
SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

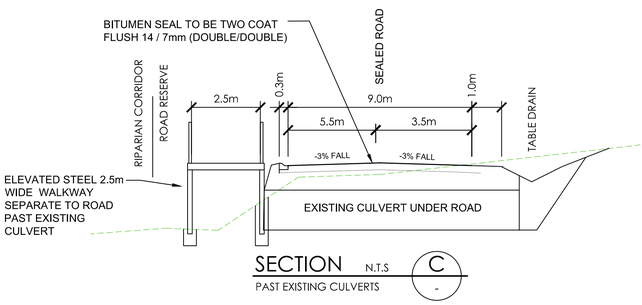
PROPOSED SITE WORKS
SCALE 1:1000 AT A1



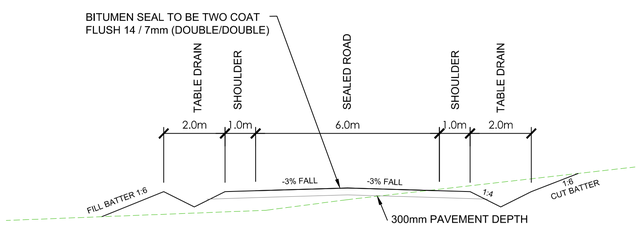
SECTION N.T.S A
TYPICAL BROADHEAD RD



SECTION N.T.S B
ADJACENT TO RIPARIAN ZONE



SECTION N.T.S C
PAST EXISTING CULVERTS



SECTION N.T.S D
BRUCE ROAD

ISSUED FOR INFORMATION	17.01.20	H	JI.D.
ISSUED FOR INFORMATION	15.01.20	G	JI.D.
ISSUED FOR INFORMATION	13.01.20	F	JI.D.
ISSUED FOR INFORMATION	10.03.20	I	JI.D.
AMENDMENTS	DATE	ISSUE	BY

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

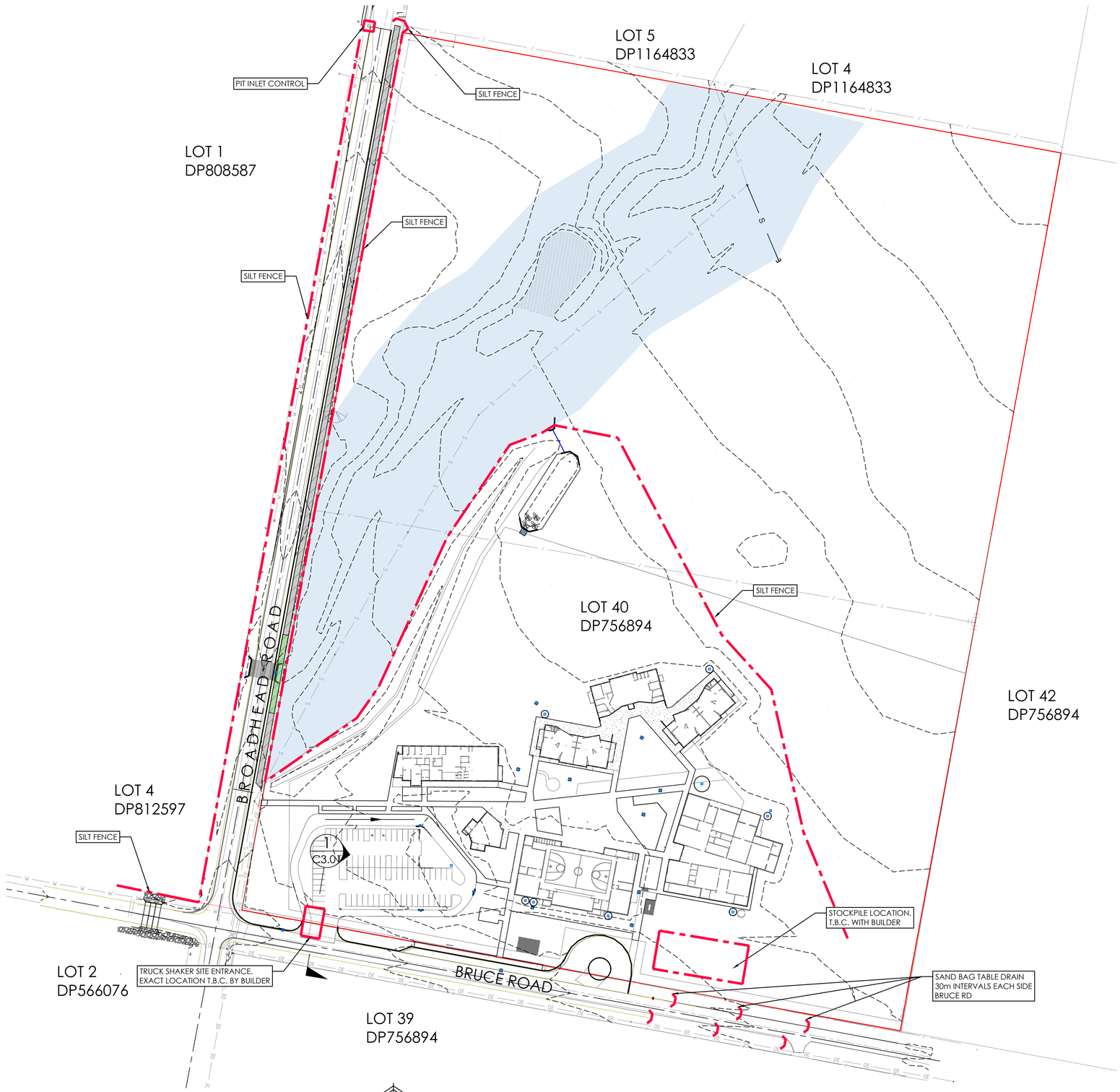
1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
PROPOSED SITE WORKS AND ROAD SECTIONS

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C2.1	I



NOTES:

1. ALL EROSION & SEDIMENT CONTROL MEASURES TO BE IMPLEMENTED PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS.
2. ALL EROSION & SEDIMENT CONTROL MEASURES TO BE INSPECTED & MAINTAINED DAILY BY SITE MANAGER.
3. SILT FENCES TO BE RETAINED AND MAINTAINED UNTIL FINAL COMPLETION, UNLESS APPROVED OTHERWISE BY COUNCIL/ENGINEER.
4. CONTRACTOR SHALL MINIMISE THE PASSAGE OF CONSTRUCTION TRAFFIC OVER THE LAND SO AS TO PREVENT DISTURBANCE OF NATURAL GROUND.
5. EXISTING VEGETATION AND TOPSOIL SHALL NOT BE STRIPPED FROM AREAS THAT DO NOT REQUIRE FILLING, ANY AREAS THAT ARE STRIPPED SHALL BE PROTECTED BY SILT FENCES TO THE REQUIREMENTS OF THE COUNCIL/ENGINEER.
6. BETTERS TO BE STABILISED BY VEGETATING, TURFING OR OTHER APPROVED METHOD WITHIN 30 DAYS OF COMPLETION.
7. DUST MINIMISATION CONTROL BY WATERING TO BE IMPLEMENTED BY SITE MANAGER AS REQUIRED OR AS PER COUNCIL SPECIFICATIONS.
8. ROADS & FOOTPATHS TO BE SWEPT DAILY. NO MUD OR DIRT ALLOWED ON PUBLIC FOOTPATH OR ROAD PAVEMENTS.
9. VEHICLE TRAFFIC SHALL BE LIMITED TO 15KM/H.
10. CONSTRUCTION TRAFFIC TO BE LIMITED TO ONE ENTRY/EXIT POINT.
11. NO MATERIAL TO BE STOCKPILED ON SITE. EXCESS MATERIAL WHICH IS NOT UTILISED AS BULK FILL, SHALL BE REMOVED AND DISPOSED OFF SITE.

LEGEND:

PROVIDE 1m RETURNS TO SILT FENCE AT 30m MAX. INTERVALS.
TYPICAL (N.S.O.P.)

- SILT FENCE ONLY (UNLESS NOTED OTHERWISE)
- CONTOUR 1m INTERVALS

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

10m 0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

EROSION & SEDIMENT CONTROL PLAN

SCALE 1:1000 AT A1

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	21.04.20	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

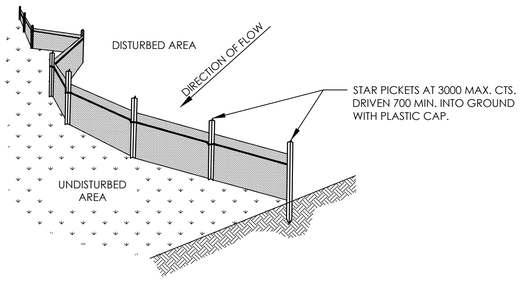
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
			A1	TX13843.00 -

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
EROSION & SEDIMENT CONTROL PLAN

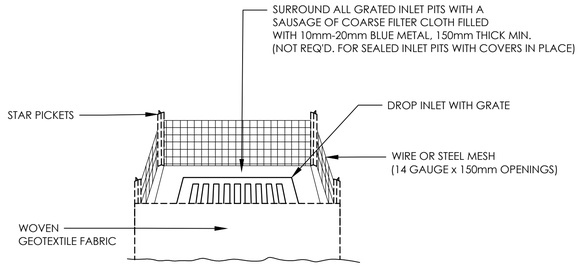
PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C3.0	A



SILT FENCE DETAIL

NOT TO SCALE

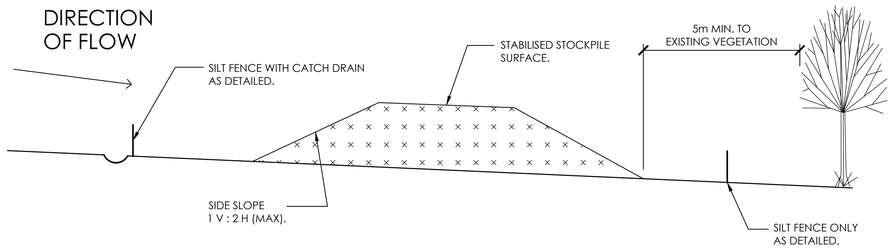
NOTE :
PROVIDE 1m RETURNS AT 30m INTERVALS. TYPICAL.



GRATED INLET PIT FILTER DETAIL

NOT TO SCALE

NOTE :
ADOPT ABOVE DETAIL AROUND ALL PITS WITHIN
AREA ENCOMPASSED BY SILT FENCE.



TYPICAL STOCKPILE DETAIL

N.T.S.

STOCKPILE NOTES:
1. PLACE ALL STOCKPILES IN LOCATIONS MORE THAN 5m FROM EXISTING VEGETATION, ROADS & HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT ELONGATED MOUNDS. SIDE SLOPE TO BE 1 V: 2 H MAX.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
4. WHERE STOCKPILES ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE USING WOOD CHIP MULCH - 16 TONNE/Ha.
5. CONSTRUCT SILT FENCE WITH CATCH DRAIN ON UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES & SILT FENCE ONLY 1 TO 2m DOWNSLOPE AS SHOWN.

NOTES :
ALL EROSION & SEDIMENT CONTROL MEASURES TO BE IMPLEMENTED PRIOR TO COMMENCEMENT OF SITE WORKS.

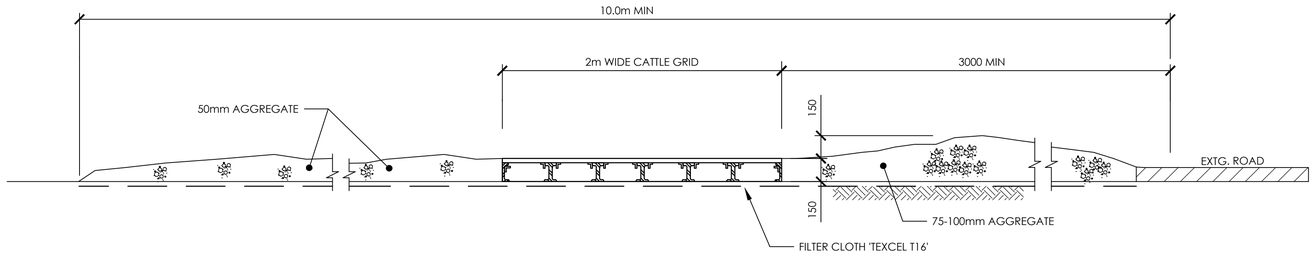
ALL EROSION & SEDIMENT CONTROL MEASURES TO BE INSPECTED & MAINTAINED DAILY BY SITE MANAGER.

MINIMISE DISTURBED AREAS.

ROADS & FOOTPATHS TO BE SWEPT DAILY.
NO MUD OR DIRT ALLOWED ON FOOTPATH OR ROAD PAVEMENTS.

BATTERS TO BE STABILISED BY VEGETATING, TURFING OR OTHER APPROVED METHOD WITHIN 30 DAYS OF COMPLETION.

DUST MINIMISATION CONTROL BY WATERING TO BE IMPLEMENTED BY SITE MANAGER AS REQUIRED OR AS PER COUNCIL SPECIFICATIONS.



STABILISED CONSTRUCTION ENTRANCE 'SHAKER PAD'

NOT TO SCALE

NOTE:
TO BE CONSTRUCTED PRIOR TO COMMENCEMENT OF ANY WORKS.

ISSUED FOR INFORMATION	21.04.20	A	JI.D.
AMENDMENTS	DATE	ISSUE	BY

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

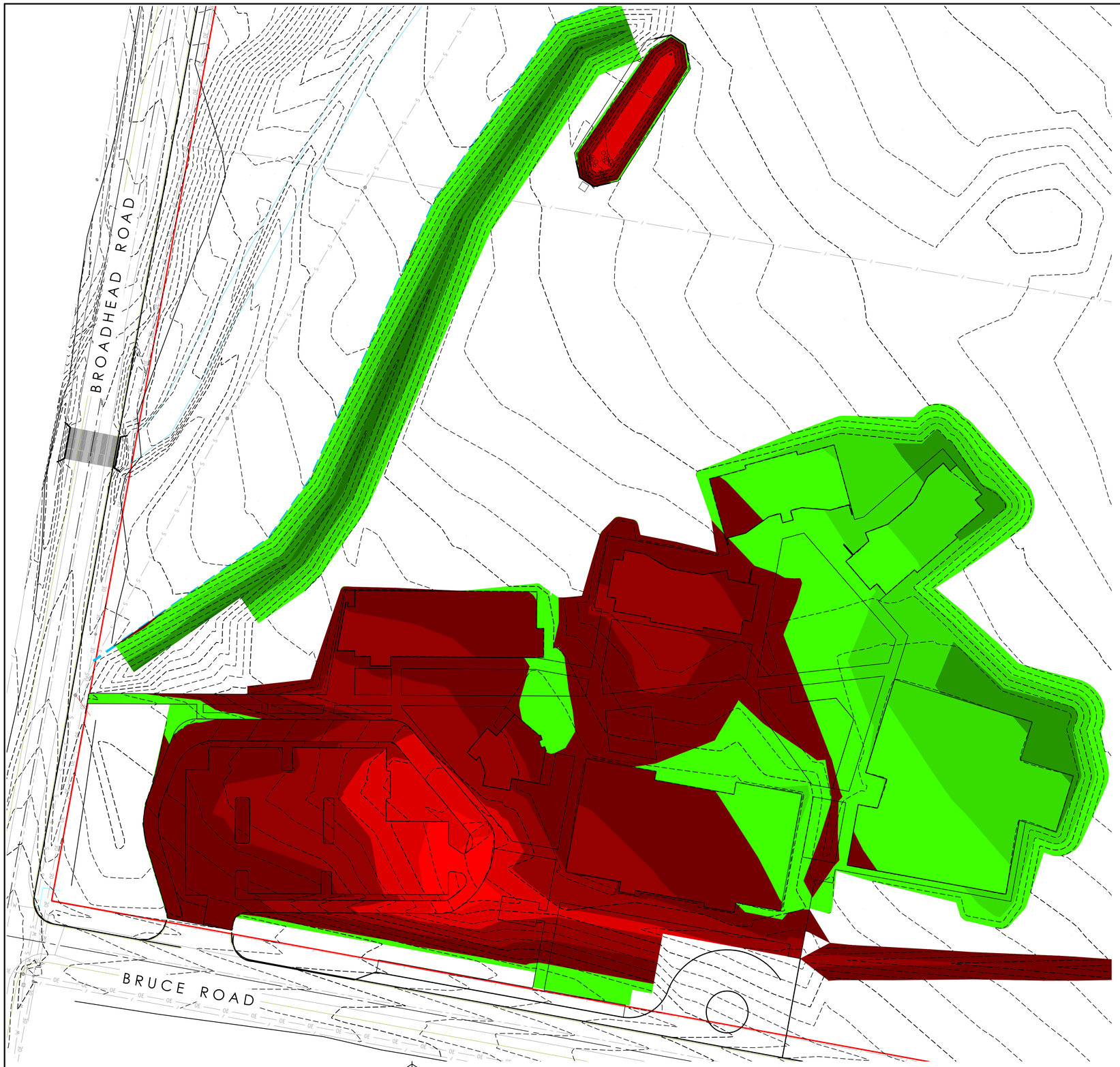
1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
EROSION & SEDIMENT CONTROL DETAILS

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C3.1	A



CUT/FILL:

CUT AND FILL TO UNDERSIDE OF BUILDING PADS, CARPARK & ROAD PAVEMENT.

CUT / FILL FOR SITE AS FOLLOWS:

BUILDING LEVELS + SWALE + LEVEE BANK:
NET = 43m³ (CUT)

* ASSUMED BUILDING PAD THICKNESS 0.25m, ROAD + CARPARK PAVEMENT 0.35m
* NO BULKING OR COMPACTION FACTOR HAS BEEN USED
* BUILDING PAD LEVEL SLOPE ASSUMED 6:1
* ACCESS PATH INTO SITE TO COMPLY WITH ACCESSIBLE GRADING REQUIREMENTS.

CARPARK AND BUSBAY DETAILS

	AREA (m²)	VOLUME PAVEMENT (m³)	VOLUME AC (m³)	KERB LENGTH (m)
CARPARK	2750	962	138	703
BUSBAY	764	267	38	139

Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)
1		-2.000	-1.500
2		-1.500	-1.000
3		-1.000	-0.500
4		-0.500	0.000
5		0.000	0.500
6		0.500	1.000
7		1.000	1.500
8		1.500	2.000

BULK EARTHWORKS PLAN - INTERNAL

SCALE 1:500 AT A1

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING CONSENT. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	13.01.20	D	JI.D.
ISSUED FOR INFORMATION	11.03.20	G	JI.D.
ISSUED FOR INFORMATION	10.03.20	F	JI.D.
ISSUED FOR INFORMATION	26.02.20	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
BULK EARTHWORKS PLAN - INTERNAL

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C4.0	G

BULK EARTHWORKS CONTOURS - INTERNAL

SCALE 1:500 AT A1

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING CONSENT. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	D	JI.D.
ISSUED FOR INFORMATION	26.02.20	C	JI.D.
ISSUED FOR INFORMATION	13.01.20	B	JI.D.
ISSUED FOR INFORMATION	11.03.20	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

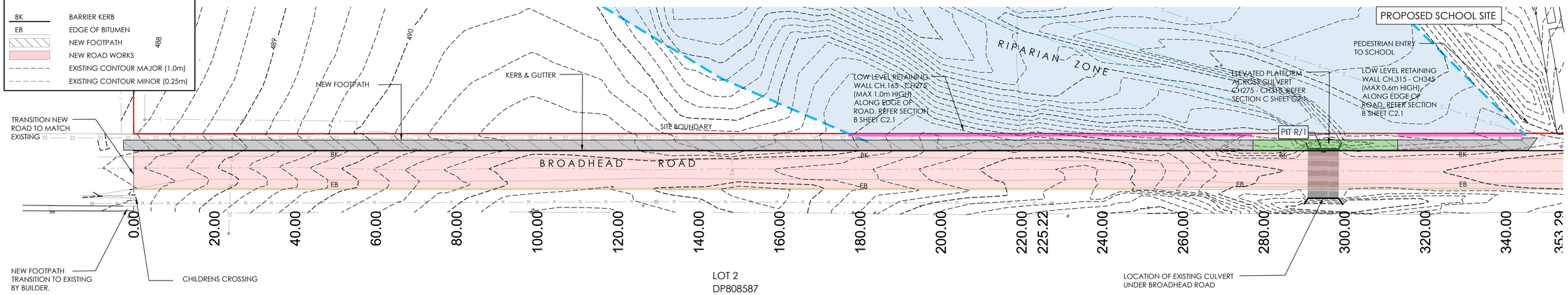
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
BULK EARTHWORKS CONTOURS - INTERNAL

PROJECT No. TX13843.00 - DRAWING No. C4.1 ISSUE E

LEGEND - ROAD

- BK — BARRIER KERB
- EB — EDGE OF BITUMEN
- NEW FOOTPATH
- NEW ROAD WORKS
- EXISTING CONTOUR MAJOR (1.0m) — 488
- EXISTING CONTOUR MINOR (0.25m)

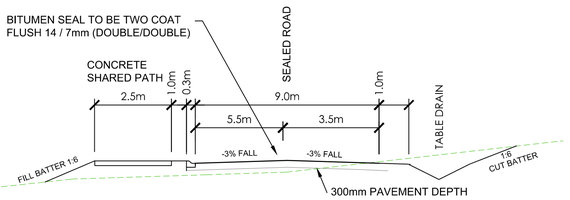


LOT 2
DP808587

BROADHEAD ROAD PLAN

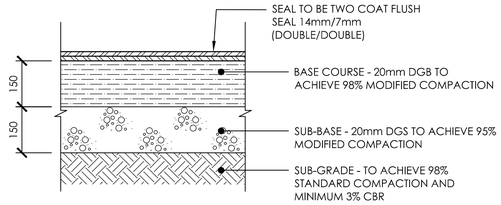
SCALE 1:500 AT A1

NOTE: ROAD CONTOURS SHOWN ARE EXISTING ONLY



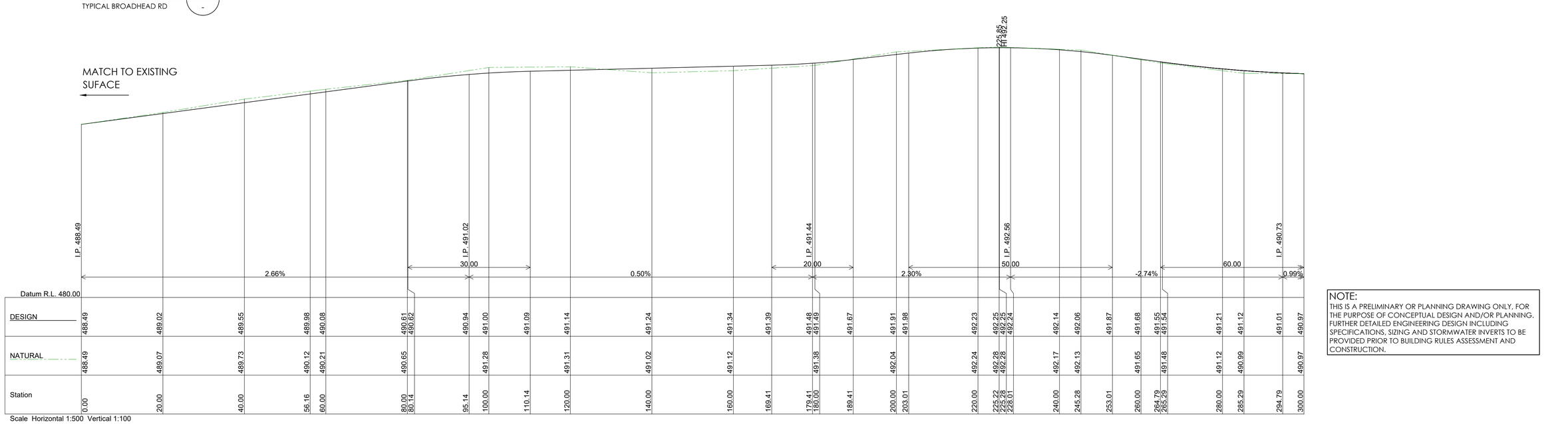
SECTION N.T.S A

TYPICAL BROADHEAD RD



SPRAY SEALED PAVEMENT

(VEHICULAR)
SCALE 1:10 AT A1



BROADHEAD LONG SECTION

SCALE 1:500 AT A1(HORIZONTAL)
SCALE 1:100 AT A1(VERTICAL)

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	18.11.19	D	JI.D.
ISSUED FOR INFORMATION	10.03.20	G	JI.D.
ISSUED FOR INFORMATION	15.01.20	F	JI.D.
ISSUED FOR INFORMATION	25.11.19	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

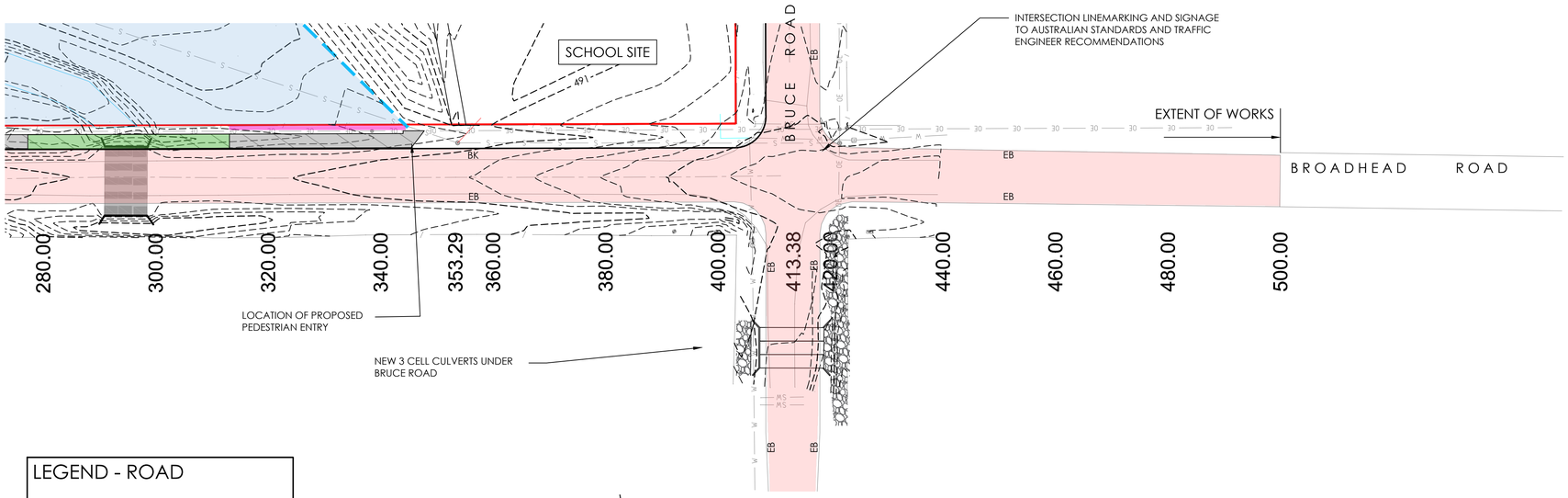
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
BROADHEAD ROAD LONG SECTION - SHEET 1

PROJECT No. TX13843.00 - DRAWING No. C5.0 ISSUE G



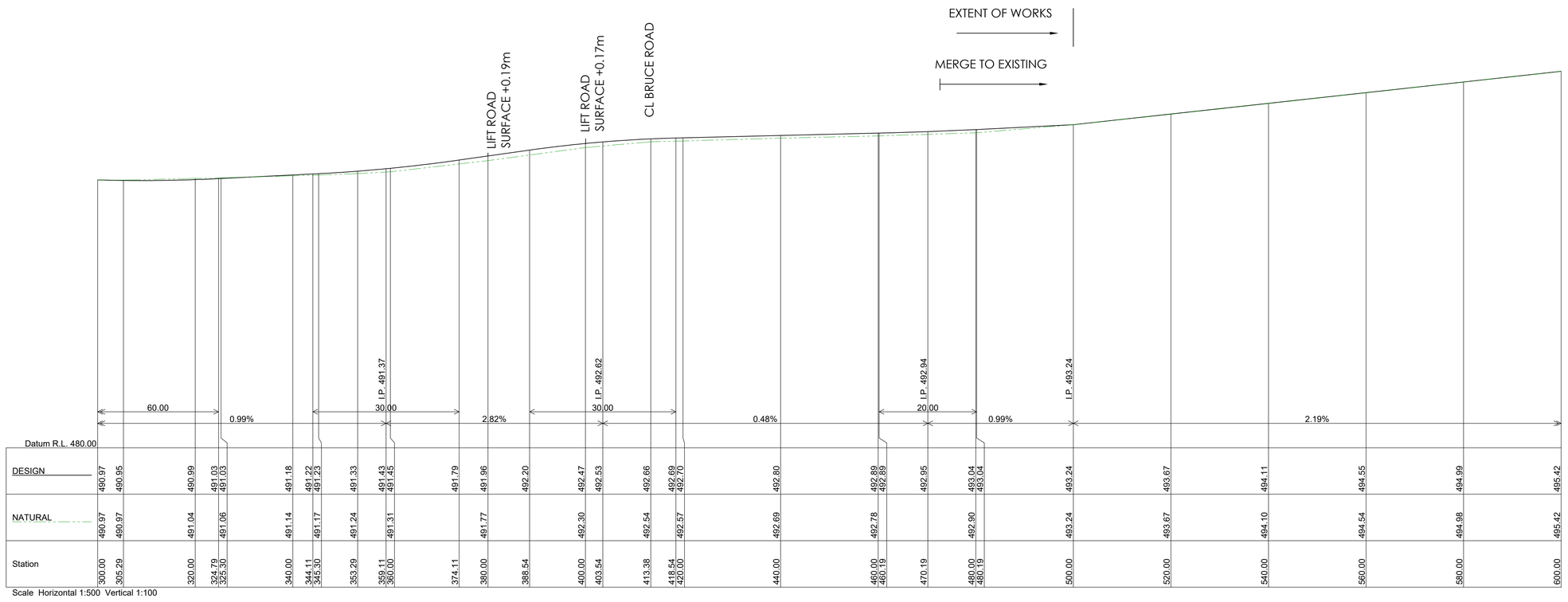
LEGEND - ROAD

BK	BARRIER KERB
EB	EDGE OF BITUMEN
	NEW FOOTPATH
	NEW ROAD WORKS
	EXISTING CONTOUR MAJOR (1.0m)
	EXISTING CONTOUR MINOR (0.25m)

BROADHEAD ROAD PLAN

SCALE 1:500 AT A1

NOTE: ROAD CONTOURS SHOWN ARE EXISTING ONLY



Station	NATURAL	DESIGN
300.00	490.97	490.97
305.29	490.97	490.95
320.00	491.04	490.99
324.79	491.06	491.03
325.30	491.06	491.03
340.00	491.14	491.18
344.11	491.17	491.22
345.30	491.17	491.23
353.29	491.24	491.33
359.11	491.31	491.43
360.00	491.31	491.45
374.11	491.77	491.79
380.00	491.77	491.96
388.54	492.30	492.20
400.00	492.30	492.47
403.54	492.54	492.53
413.38	492.54	492.66
418.54	492.57	492.69
420.00	492.57	492.70
440.00	492.69	492.80
460.00	492.78	492.89
460.19	492.78	492.89
470.19	492.90	492.95
480.00	492.90	493.04
480.19	493.04	493.04
500.00	493.24	493.24
520.00	493.67	493.67
540.00	494.10	494.11
560.00	494.54	494.55
580.00	494.98	494.99
600.00	495.42	495.42

BROADHEAD LONG SECTION

SCALE 1:500 AT A1 (HORIZONTAL)
SCALE 1:100 AT A1 (VERTICAL)

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m
SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	25.11.19	D	JI.D.
ISSUED FOR INFORMATION	10.03.20	G	JI.D.
ISSUED FOR INFORMATION	17.01.20	F	JI.D.
ISSUED FOR INFORMATION	15.01.20	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

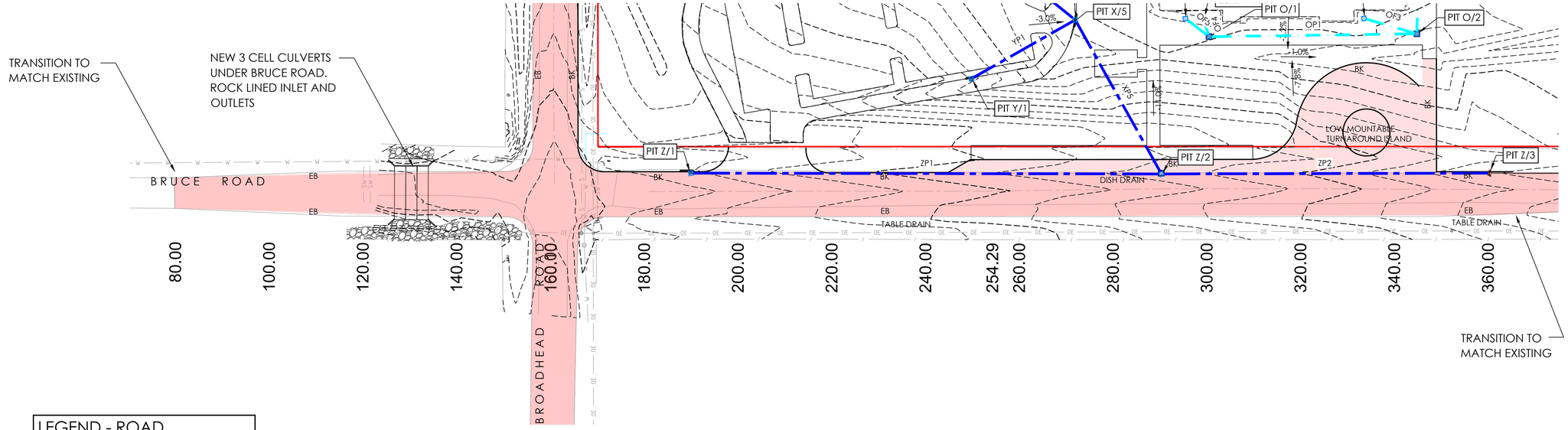
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
BROADHEAD ROAD LONG SECTION - SHEET 2

PROJECT No. TX13843.00 - DRAWING No. C5.1 ISSUE G



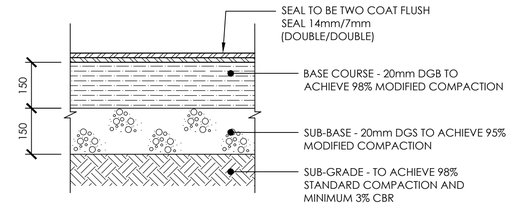
LEGEND - ROAD

BK	BARRIER KERB
EB	EDGE OF BITUMEN
	NEW FOOTPATH
	NEW ROAD WORKS
	EXISTING CONTOUR MAJOR (1.0m)
	EXISTING CONTOUR MINOR (0.25m)

BRUCE ROAD PLAN

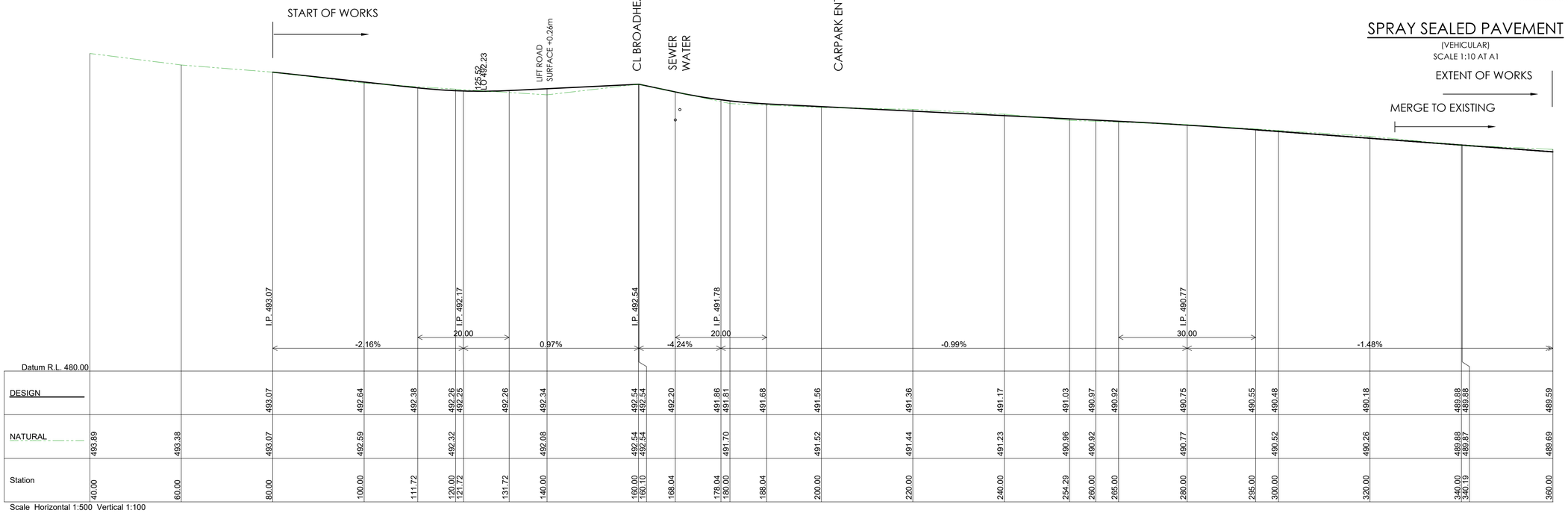
SCALE 1:500 AT A1

NOTE: ROAD CONTOURS SHOWN ARE EXISTING ONLY



SPRAY SEALED PAVEMENT

(VEHICULAR)
SCALE 1:10 AT A1



Scale Horizontal 1:500 Vertical 1:100

BRUCE ROAD LONG SECTION

SCALE 1:500 AT A1 (HORIZONTAL)
SCALE 1:100 AT A1 (VERTICAL)

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	H	JI.D.
ISSUED FOR INFORMATION	17.01.20	G	JI.D.
ISSUED FOR INFORMATION	15.01.20	F	JI.D.
ISSUED FOR INFORMATION	25.11.19	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

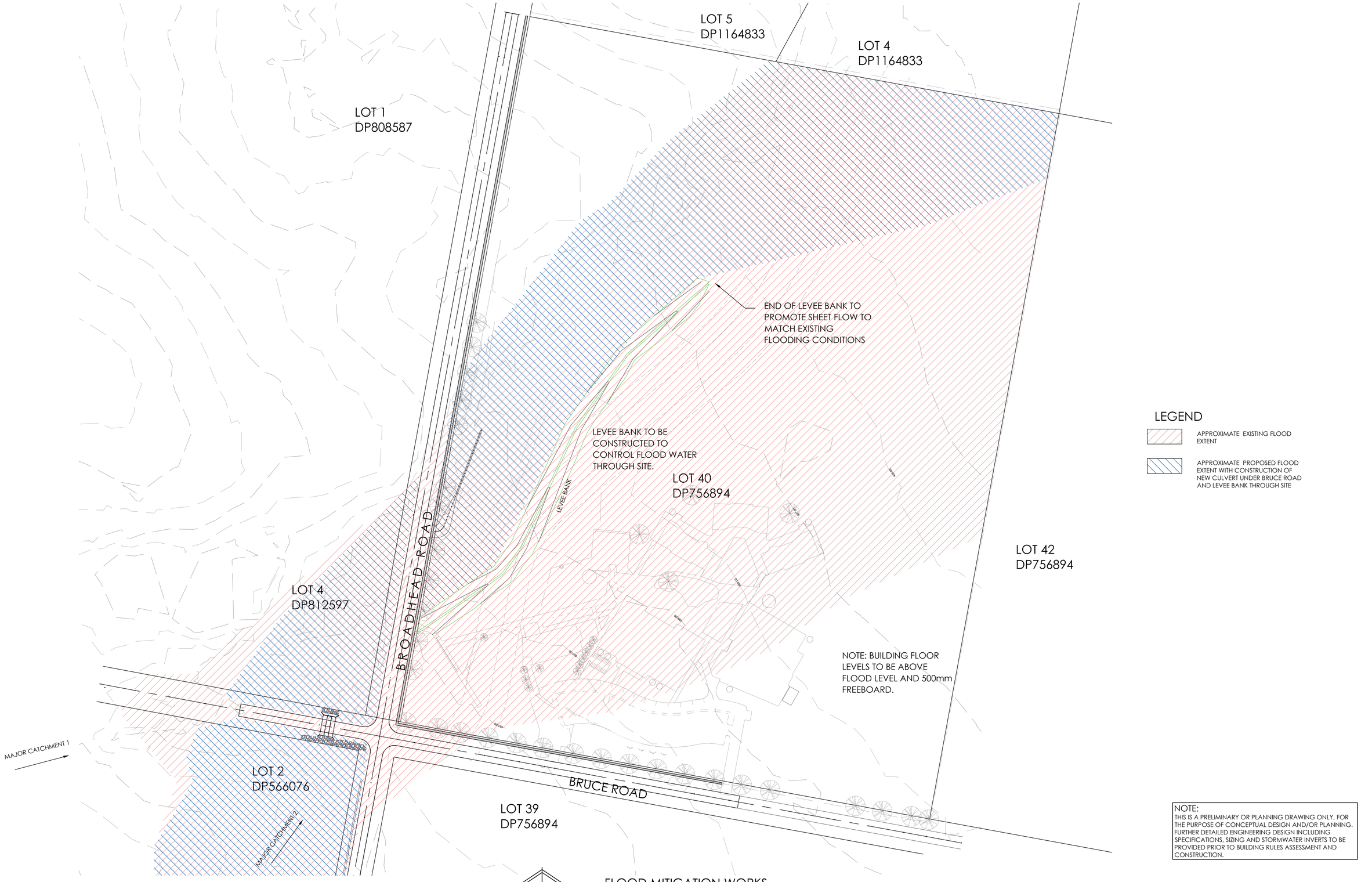
DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
BRUCE ROAD LONG SECTION - SHEET 1

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C6.0	H



NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

FLOOD MITIGATION WORKS

SCALE 1:1000 AT A1

10m 0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	02.10.19	C	JI.D.
ISSUED FOR INFORMATION	04.07.19	B	JI.D.
ISSUED FOR INFORMATION	24.05.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

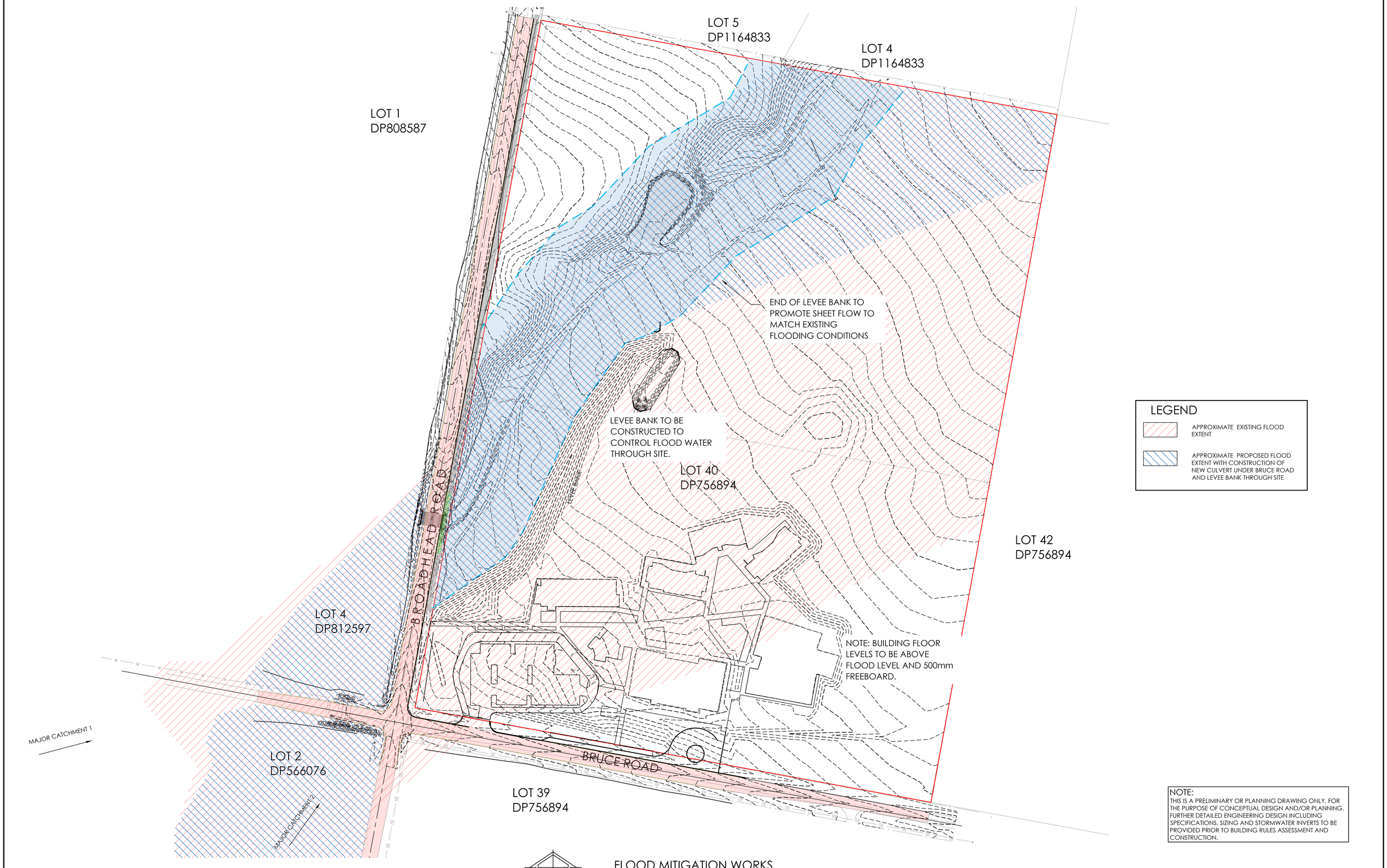
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
FLOOD MITIGATION WORKS

PROJECT No. TX13843.00 - DRAWING No. C7.0 ISSUE C



FLOOD MITIGATION WORKS

SCALE 1:1000 AT A1

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY. FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

10m 0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	25.11.19	D	JI.D.
ISSUED FOR INFORMATION	02.10.19	C	JI.D.
ISSUED FOR INFORMATION	09.03.20	F	JI.D.
ISSUED FOR INFORMATION	13.01.20	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

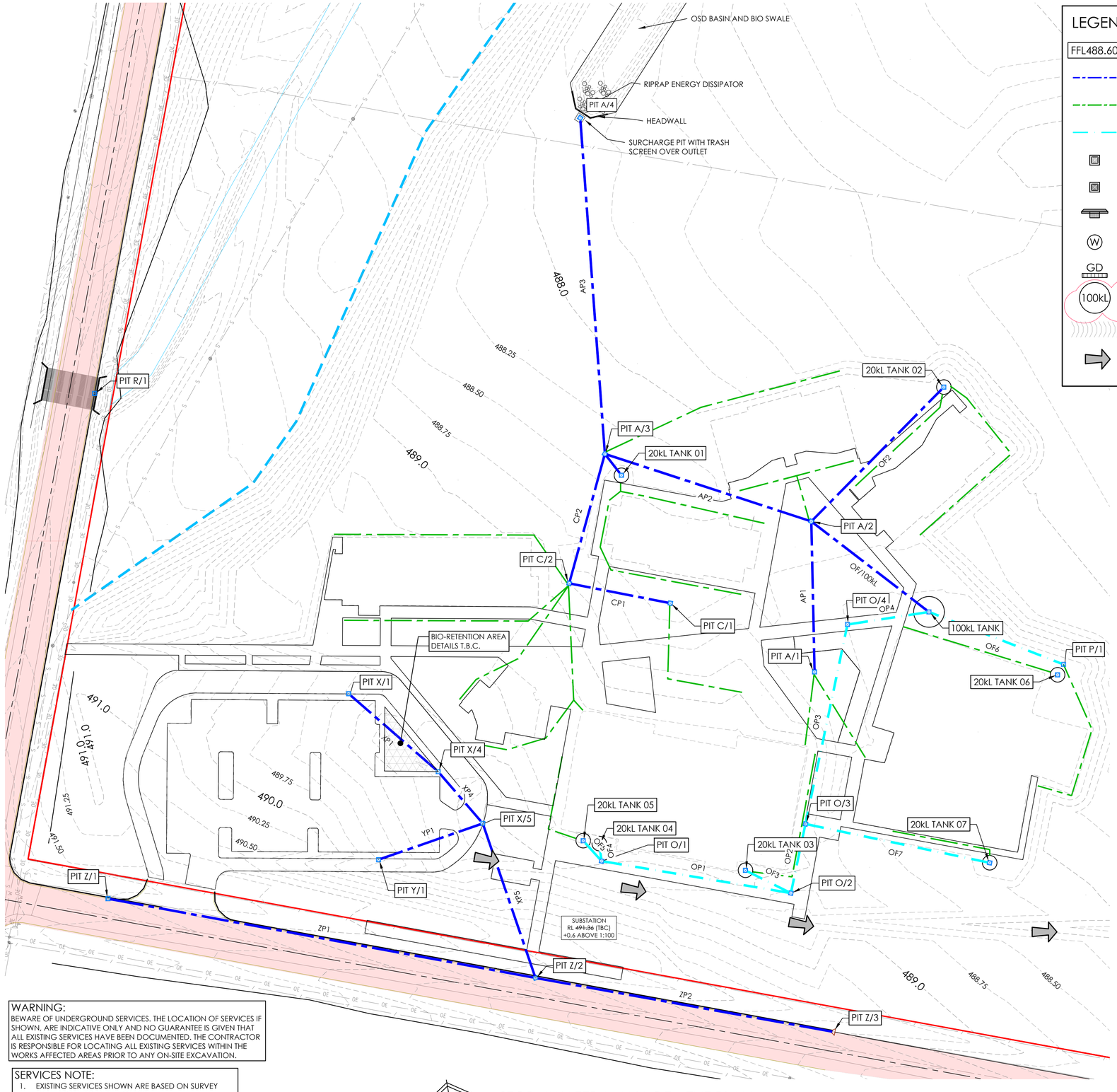
1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
FLOOD MITIGATION WORKS

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C7.0	F



LEGEND

- FFL488.60 — FINISHED FLOOR LEVEL (m A.H.D.)
- STORMWATER PIPE
- ROOF DRAINAGE COLLECTION PIPE
- ROOF OVERFLOW LINE TO 100kL TANK
- GRATED STORMWATER INLET PIT
- SEALED PIT
- KERB INLET PIT
- (W) — 20kL RAINWATER ABOVE GROUND COLLECTION TANK (ROOF ONLY) 7 TOTAL = 140kL
- GD — GRATED DRAIN
- 100kL — 100kL RAINWATER OVERFLOW COLLECTION UNDERGROUND TANK FOR IRRIGATION (ROOF ONLY)
- ROAD SIDE TABLE DRAIN
- OVERLAND FLOW PATH

PIPE SCHEDULE FOR: Network 1

NAME	PIPE TYPE	PIPE Ø [mm]	U/S PIT	D/S PIT	LENGTH (m)
AP1	225NB UPVC PN 6	Ø 238	A/1	A/2	34.740
AP2	375 NB UPVC PN 6	Ø 380	A/2	A/3	50.146
AP3	500 OD PE100 PN6.3	Ø 500	A/3	A/4	77.737
CP1	225NB UPVC PN 6	Ø 238	C/1	C/2	23.792
CP2	225NB UPVC PN 6	Ø 238	C/2	A/3	30.993
OF/100kL	375 NB UPVC PN 6	Ø 380	100kL TANK	A/2	34.261
OF1	225NB UPVC PN 6	Ø 238	20kL TANK 01	A/3	6.234
OF2	225NB UPVC PN 6	Ø 238	20kL TANK 02	A/2	43.535
OF3	225NB UPVC PN 6	Ø 238	20kL TANK 03	O/2	11.734
OF4	225NB UPVC PN 6	Ø 238	20kL TANK 04	O/1	4.066
OF5	225NB UPVC PN 6	Ø 238	20kL TANK 05	O/1	6.335
OF6	225NB UPVC PN 6	Ø 238	P/1	100kL TANK	33.344
OF7	225NB UPVC PN 6	Ø 238	20kL TANK 07	O/3	43.466
OP1	300 NB UPVC PN 6	Ø 300	O/1	O/2	44.329
OP2	300 NB UPVC PN 6	Ø 300	O/2	O/3	16.302
OP3	375 NB UPVC PN 6	Ø 380	O/3	O/4	47.030
OP4	375 NB UPVC PN 6	Ø 380	O/4	100kL TANK	19.032
XP1	225NB UPVC PN 6	Ø 238	X/4	X/1	27.383
XP4	300 NB RCP CLASS 2	Ø 300	X/4	X/5	15.792
XP5	375 NB UPVC PN 6	Ø 380	X/5	Z/2	37.654
YP1	225 NB RCP CLASS 2	Ø 225	Y/1	X/5	25.465
ZP1	375 NB RCP CLASS 4	Ø 375	Z/1	Z/2	100.358
ZP2	375 NB RCP CLASS 4	Ø 375	Z/2	Z/3	69.642

PIT SCHEDULE FOR: Network 1

PIT NAME	DESCRIPTION	SETOUT COORDS
20kL TANK 01	20kL TANK	E: 743787.601 N: 6387766.727
20kL TANK 02	20kL TANK	E: 743862.034 N: 6387787.060
20kL TANK 03	20kL TANK	E: 743816.240 N: 6387675.563
20kL TANK 04	20kL TANK	E: 743782.469 N: 6387681.734
20kL TANK 05	20kL TANK	E: 743778.780 N: 6387682.408
20kL TANK 06	20kL TANK	E: 743888.305 N: 6387720.665
20kL TANK 07	20kL TANK	E: 743872.628 N: 6387677.306
100kL TANK	100kL TANK	E: 743858.602 N: 6387735.188
A/1	GIP 900 x 900	E: 743832.199 N: 6387721.348
A/2	GIP 900 x 900	E: 743831.448 N: 6387756.080
A/3	JP 1200 x 1200	E: 743783.782 N: 6387771.654
A/4	OUTLET PIT	E: 743778.087 N: 6387849.182
C/1	GIP 600 x 600	E: 743798.887 N: 6387737.211
C/2	GIP 600 x 600	E: 743775.537 N: 6387741.778
O/1	JP 900 x 900	E: 743783.026 N: 6387677.707

PIT SCHEDULE FOR: Network 1

PIT NAME	DESCRIPTION	SETOUT COORDS
O/2	JP 900 x 900	E: 743826.735 N: 6387670.316
O/3	JP 900 x 900	E: 743830.096 N: 6387686.268
O/4	JP 900 x 900	E: 743839.793 N: 6387732.287
P/1	900 x 900 Cess pit	E: 743889.673 N: 6387723.087
R/1	SAG 2.4m LINTEL	E: 743665.954 N: 6387785.606
X/1	KIP 900 x 900	E: 743724.625 N: 6387716.319
X/4	GIP 900 x 900	E: 743745.287 N: 6387698.350
X/5	KIP 900 x 900	E: 743755.590 N: 6387686.382
Y/1	KIP 900 x 900	E: 743731.532 N: 6387678.035
Z/1	KIP 900 x 900	E: 743669.077 N: 6387669.031
Z/2	VPIT 900 x 900	E: 743767.755 N: 6387650.748
Z/3	HEADWALL	E: 743836.286 N: 6387638.352

WARNING:
BEWARE OF UNDERGROUND SERVICES. THE LOCATION OF SERVICES IF SHOWN, ARE INDICATIVE ONLY AND NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES HAVE BEEN DOCUMENTED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES WITHIN THE WORKS AFFECTED AREAS PRIOR TO ANY ON-SITE EXCAVATION.

SERVICES NOTE:
1. EXISTING SERVICES SHOWN ARE BASED ON SURVEY DATA RECEIVED BY THIS OFFICE.
2. ALL EXISTING SERVICES ARE SHOWN DIAGRAMMATIC ONLY. ALL SERVICES ARE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

STORMWATER MANAGEMENT PLAN

SCALE 1:500 AT A1

NOTES:
1. PIPE SIZES BASED ON 20yrARI 5MIN STORM EVENT.
2. PIPE SIZES TO BE CONFIRMED WITH DOWNPIPE INFORMATION FROM HYDRAULIC CONSULTANT.
3. INTERNAL PIPES NOTED AS AS CONCRETE RCP CLASS 2 MAY BE SUBSTITUTED WITH uPVC OR 'BLACKMAX' EQUIVALENT DIAMETER.
4. PIPE SIZES SHOWN FOR PRICING PURPOSES ONLY.

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m
SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	18.11.19	D	JO.M.
ISSUED FOR INFORMATION	09.03.20	G	JI.D.
ISSUED FOR INFORMATION	18.12.19	F	JI.D.
ISSUED FOR INFORMATION	25.11.19	E	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

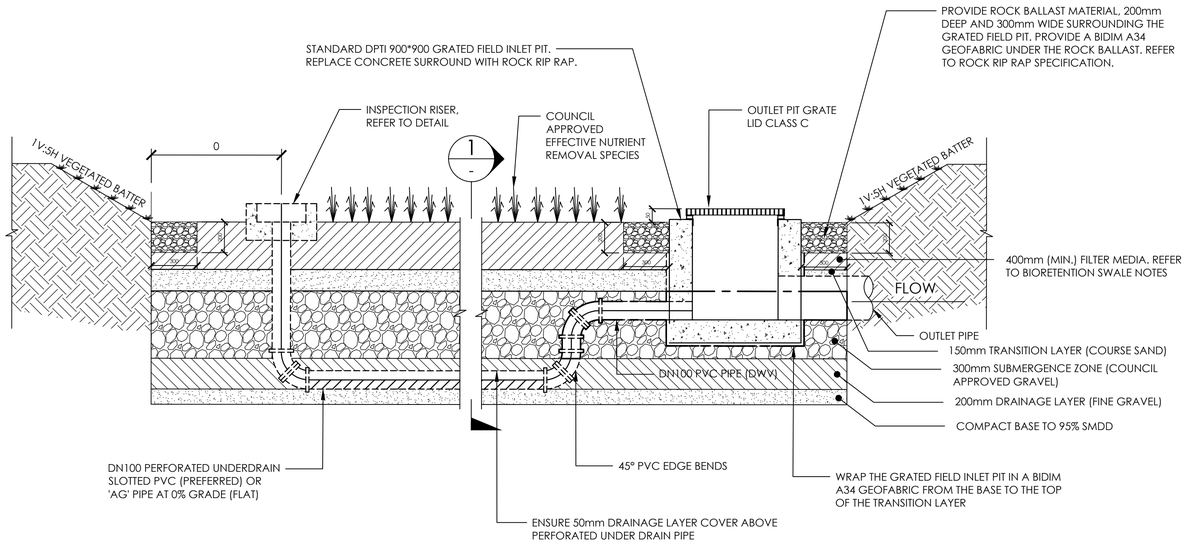
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

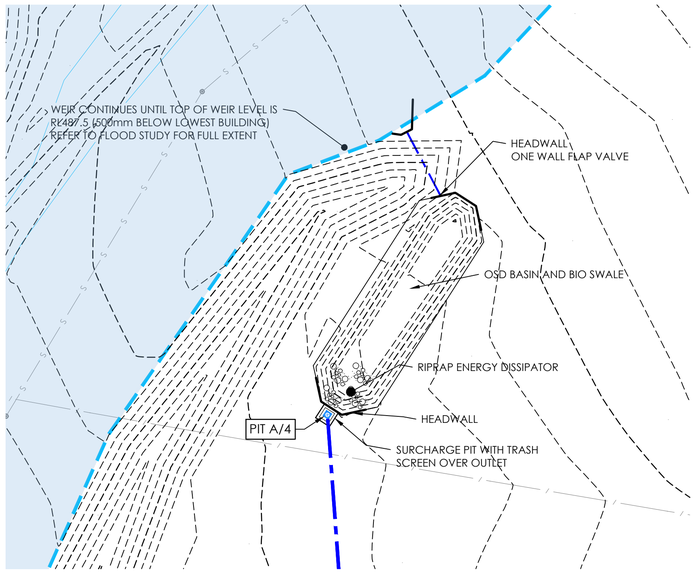
DRAWING TITLE
STORMWATER MANAGEMENT PLAN

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C7.1	G



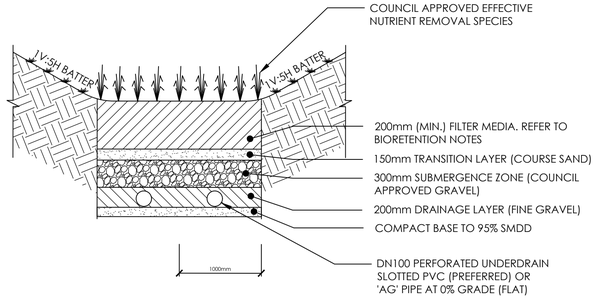
TYPICAL BIORETENTION SWALE LONGITUDINAL SECTION

N.T.S.



O.S.D. BASIN & BIOSWALE DETAIL

SCALE 1:500 AT A1



CROSS SECTION 1

N.T.S.

BIORETENTION BASIN NOTES:

FOR PLANTING AND MIX SPECIFICATION REFER LANDSCAPING SCHEDULE

FILTER MEDIA (TOP LAYER)

THE FILTER MEDIA LAYER SHALL BE PLACED IN LIFTS NOT EXCEEDING 150mm
THE FILTER MEDIA LAYER SHALL CONSIST OF MIN. 400mm (SUBJECT TO OUTLET INVERTLEVEL CONSTRAINTS) SANDY LOAM/LOAMY SAND AND SHALL HAVE:

- TOTAL NITROGEN (TN) CONTENT < 1000mg/kg;
- ORTHOPHOSPHATE ($PO4^3$) CONTENT < 80mg/Kg;
- ORGANIC MATTER CONTENT MUSTBE AT LEATS 3-5% (W/W);
- LOW NUTRIENT ORGANIC MATTER;
- PH MODIFIED TO BETWEEN 5.5 AND 7.5 (PH 1:5 IN WATER);
- ELECTRICAL CONDUCTIVITY (EC) < 1.2 DS/M;
- TOTAL CLAY AND SILT MIX < 3% (W/W);
- WELL GRADED MATERIAL, BETWEEN 0.075mm - 4.74mm WITH NO GAPS (AS 1289.6.6.1 - 1995);
- LIGHT COMPACTION - SINGLE PASS WITH ROLLER MACHINERY (E.G. 1 TONNE DRUM ROLLER);
- SATURATED HYDRAULIC CONDUCTIVITY WITHIN THE RANGE OF 180 TO 400mm/HR ONCE COMPACTED.

COMPOST USED IN FILTER MEDIA LAYER SHALL CONFIRM TO THE DESCRIPTION OF COMPOSTS, SOIL CONDITIONERS AND MULCHES DESCRIBED IN AS 4454

TRANSITION LAYER

THE TRANSITION LAYER SHALL BE 150mm THICK, CLEAN, COURSE SAND AND SHALL CONFORM TO THE FOLLOWING:

- TRANSITION LAYER < 2% FINES
- WELL GRADED MATERIAL, BETWEEN O.O74 - 4.74mm WITH NO GAPS (AS 1298.6.6.1 - 1995);
- d (TRANSITION LAYER) < 5 * d (FILTER MEDIA) BY SIEVE ANALYSIS.

SUBMERGENCE ZONE

THE SUBMERGENCE ZONE SHALL BE 450mm THICK, CLEAN, FINE GRAVEL AND SHALL CONFORM TO THE FOLLOWING:

- GRAVEL AND CARBON SOURCE;
- GRAVEL: 2mm < d < 6mm WASHED SCREENINGS (d REFERS TO MEAN GRAVEL SIZE)
- CARBON SOURCE CONSISTS OF 5% VOLUME OF CARBON (E.G. UNTREATED HARDWOOD CHIPS) AND 5% VOLUME OF UNTREATED MULCH (E.G. SUGARCANE MULCH);
- COMPOSITION SHALL BE CHEMICALLY TREATED.

DRAINAGE LAYER

THE DRAINAGE LAYER SHALL BE 200mm THICK, CLEAN, FINE GRAVEL AND SHALL CONFORM TO THE FOLLOWING:

- d (DRAINAGE LAYER) < 5 * d (TRANSITION LAYER) BY SIEVE ANALYSIS;
- d (TRANSITION LAYER) < PERFORATION IN UNDERDRAIN PIPE;
- FINE GRAVEL: 2mm < d < 6mm WASHED SCREENING. WHERE d REFERS TO MEAN GRAVEL SIZE;
- GEOFABRIC IS NOT RECOMMENDED TO COVER LAYER DUE TO CLOGGING, BUT OPEN-WEAVE SHADE CLOTH CAN BE USED IF REQUIRED.

THE DRAINAGE LAYER SHALL EXTEND TO 50mm ABOVE THE PERFORATED PVC PIPE.

TOLERANCES

CONSTRUCT THE WORKS TO UNIFORM GRADES AND IN CONFORMANCE WITH THE DRAWINGS. FINISH EARTHWORKS TO A SMOOTH UNIFORM SURFACE CONFORMING TO THE FOLLOWING TOLERANCES:

- BASE LEVEL ±50mm;
- BATTERS ±50mm;
- UNDERDRAIN ±15mm;
- HYDRAULIC STRUCTURES ±15mm;
- SURFACE LEVEL AND LAYER LEVELS ±20mm.

THE BASE OF SWALES SHALL BE SELF-DRAINING AND FREE OF DEPRESSIONS CAPABLE OF HOLDING WATER

DEWATERING

MAINTAIN EXCAVATIONS, EMBANKMENTS AND FILLED AREAS FREE FROM WATER AT ALL TIMES. IMMEDIATELY BEFORE PLACING ANY MEMBRANE OR BIORETENTION MATERIALS, REMOVE ALL FREE WATER AND FOREIGN MATTER FROM THE BASE. PREVENT ANY WATER FLOW OVER NEW WORK UNTIL IT IS CAPABLE OF WITHSTANDING SUCH FLOW WITHOUT DAMAGE. DISPOSE OF WATER AND MATERIALS LEGALLY.

WARNING:
BEWARE OF UNDERGROUND SERVICES. THE LOCATION OF SERVICES IF SHOWN, ARE INDICATIVE ONLY AND NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES HAVE BEEN DOCUMENTED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES WITHIN THE WORKS AFFECTED AREAS PRIOR TO ANY ON-SITE EXCAVATION.

SERVICES NOTE:

1. EXISTING SERVICES SHOWN ARE BASED ON SURVEY DATA RECEIVED BY THIS OFFICE.
2. ALL EXISTING SERVICES ARE SHOWN DIAGRAMMATIC ONLY. ALL SERVICES ARE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	B	JI.D.
ISSUED FOR INFORMATION	18.11.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

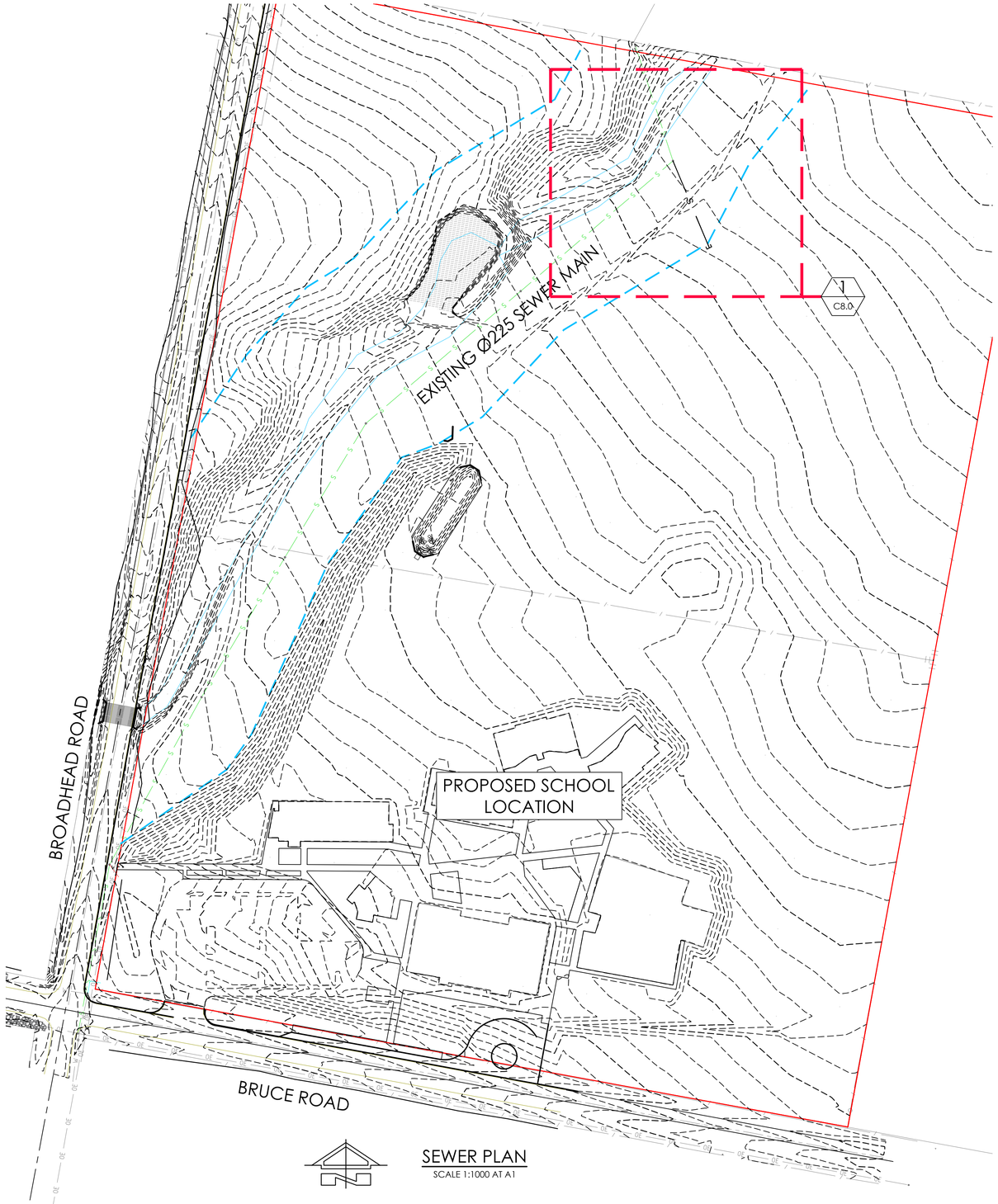
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

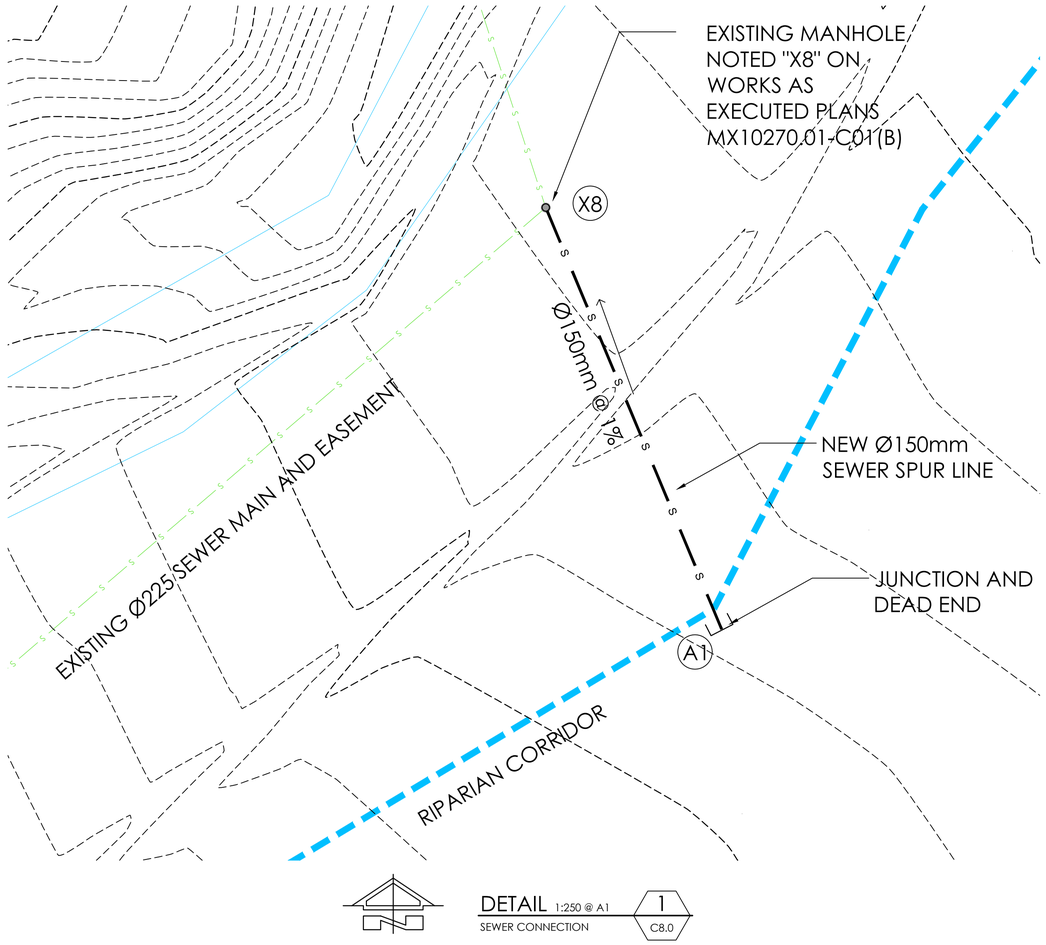
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
BIO FILTRATION SWALE DETAILS

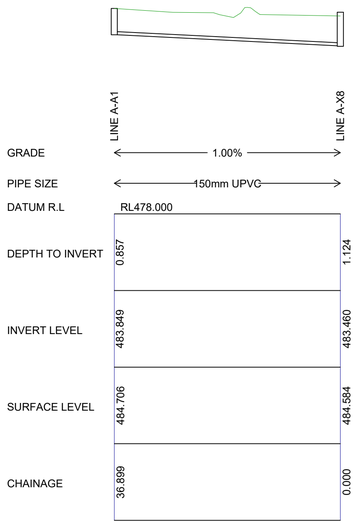
PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C7.2	B



SEWER PLAN
SCALE 1:1000 AT A1



DETAIL 1:250 @ A1 — 1 / C8.0
SEWER CONNECTION



SEWER LONG SECTION
SCALE 1:500(H) 1:100(V) @A1

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A1 SHEET | 1:200 AT A3 SHEET

2m 0 5 10 15 20 25m
SCALE 1:250 AT A1 SHEET | 1:500 AT A3 SHEET

5m 0 10 20 30 40 50m
SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

10m 0 10 20 30 40 50 60 70 80 90 100m
SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR CLIENT REVIEW	10.03.20	D	JI.D.
ISSUED FOR CLIENT REVIEW	17.01.20	C	JI.D.
ISSUED FOR CLIENT REVIEW	09.12.19	B	JI.D.
ISSUED FOR CLIENT REVIEW	25.11.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

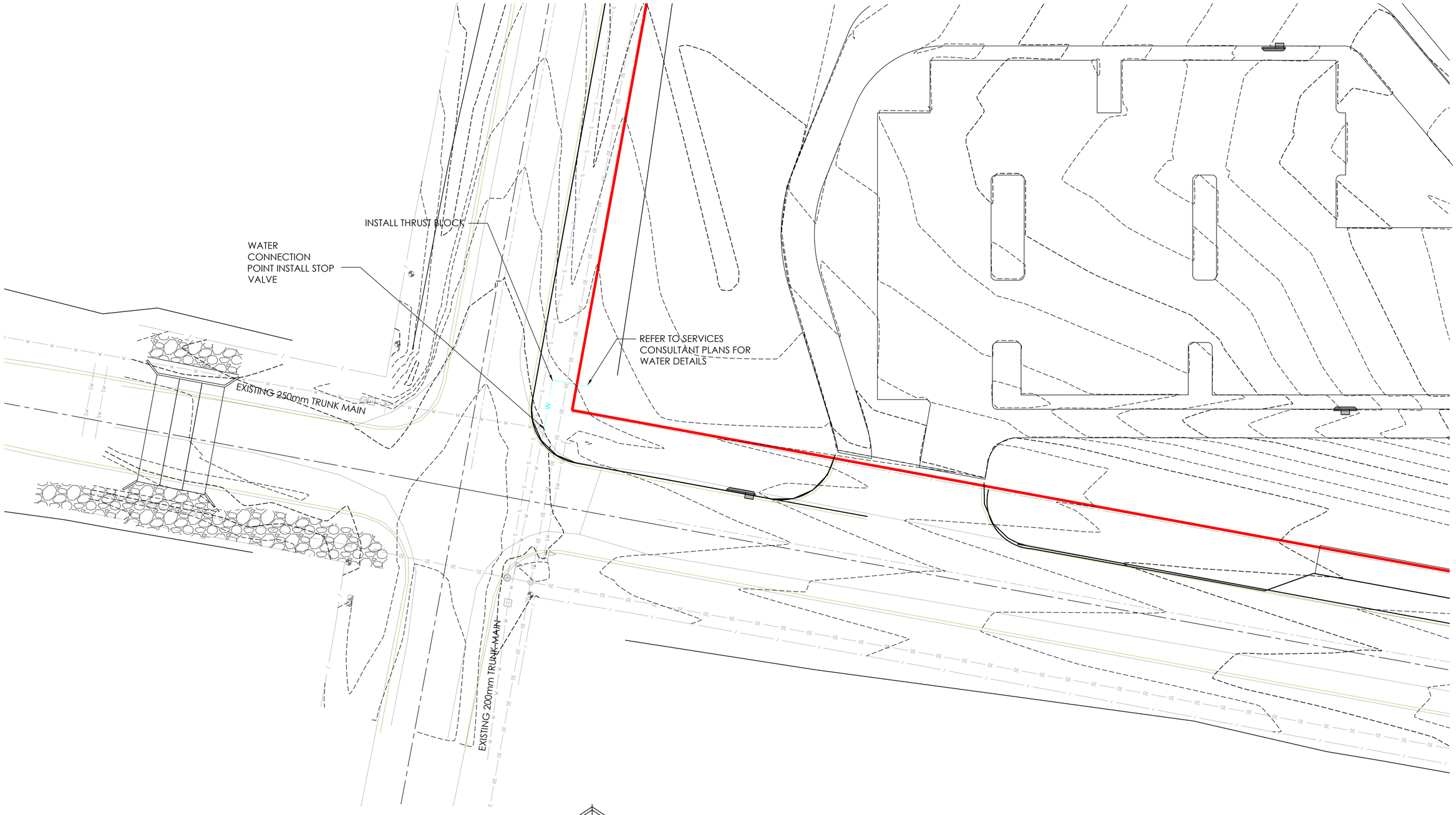
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JO.M.	JO.M.	APRIL '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
SEWER PLAN

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C8.0	D



WATER PLAN

SCALE 1:200 AT A1

2m 0 5 10 15 20m

SCALE 1:200 AT A1 SHEET | 1:400 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR CONSTRUCTION	09.03.20	C	JI.D.
ISSUED FOR CONSTRUCTION	13.01.20	B	JI.D.
ISSUED FOR CONSTRUCTION	25.11.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

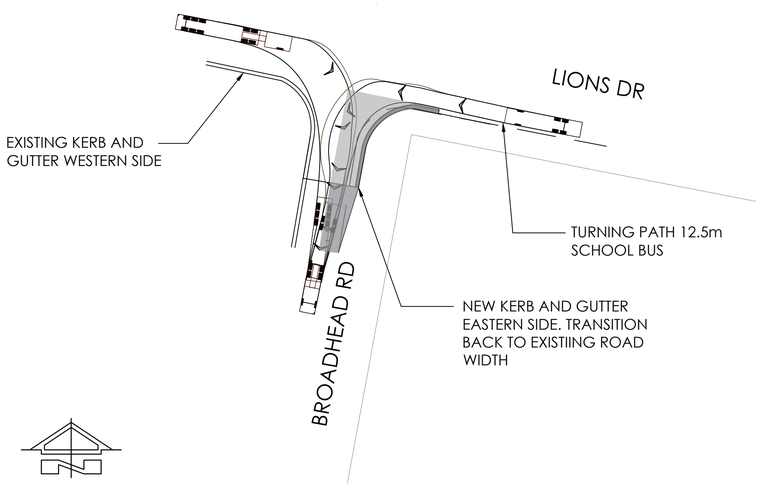
PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JO.M.	JO.M.	APRIL '19	A1	TX13843.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
WATER PLAN

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C9.0	C



BUS ACCESS TO BROADHEAD RD FROM LIONS DRIVE

SCALE 1:500 AT A1

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	C	JI.D.
ISSUED FOR INFORMATION	25.11.19	B	JI.D.
ISSUED FOR INFORMATION	18.11.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

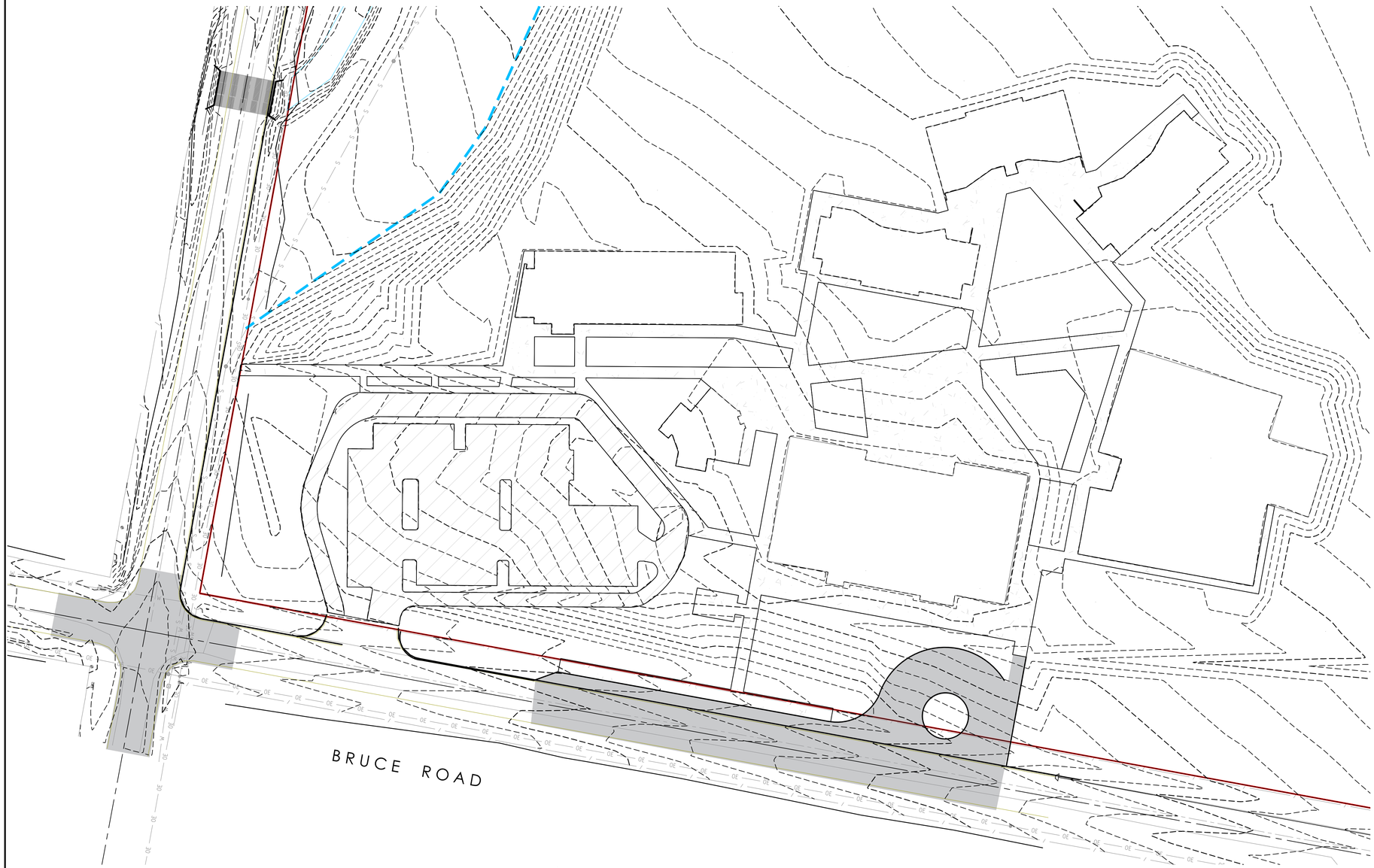
1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

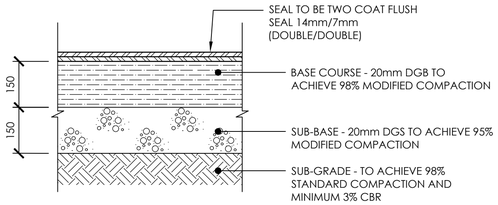
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
VEHICLE SIMULATION PLAN

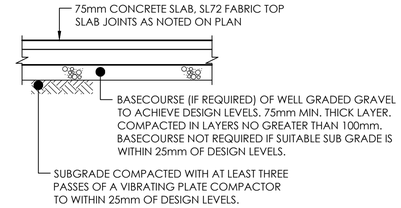
PROJECT No. TX13843.00 - DRAWING No. C10.0 ISSUE C



INTERNAL PAVEMENT PLAN
SCALE 1:500 AT A1



SPRAY SEALED PAVEMENT
(VEHICULAR)
SCALE 1:10 AT A1



FOOTPATH PAVEMENT
SCALE 1:10

AREA

	MATERIAL	AREA (m²)
INTERNAL CARPARK	2 COAT SEAL	2748
INTERNAL FOOTPATH	CONCRETE / PAVING	4045
EXTERNAL ROAD	2 COAT SEAL/ HOT MIX	5722
EXTERNAL ROAD (BUS BAY + INTERSECTION)	HOT MIX	2388
EXTERNAL FOOTPATH	CONCRETE	787
EXTERNAL FOOTPATH ELEVATED	STEEL	94

LEGEND - PAVEMENT

- CONCRETE FOOTPATH/PAVING (REFER LANDSCAPE PLAN)
- CARPARK (2 COAT ASPHALT SEAL)
- BUSBAY/INTERSECTION (AC HOTMIX)

NOTE:
1. AC PAVEMENT PROFILE TO BE DETERMINED.

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

5m 0 10 20 30 40 50m
SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	D	JI.D.
ISSUED FOR INFORMATION	13.01.20	C	JI.D.
ISSUED FOR INFORMATION	25.11.19	B	JI.D.
ISSUED FOR INFORMATION	18.11.19	A	JI.D.

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU

46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

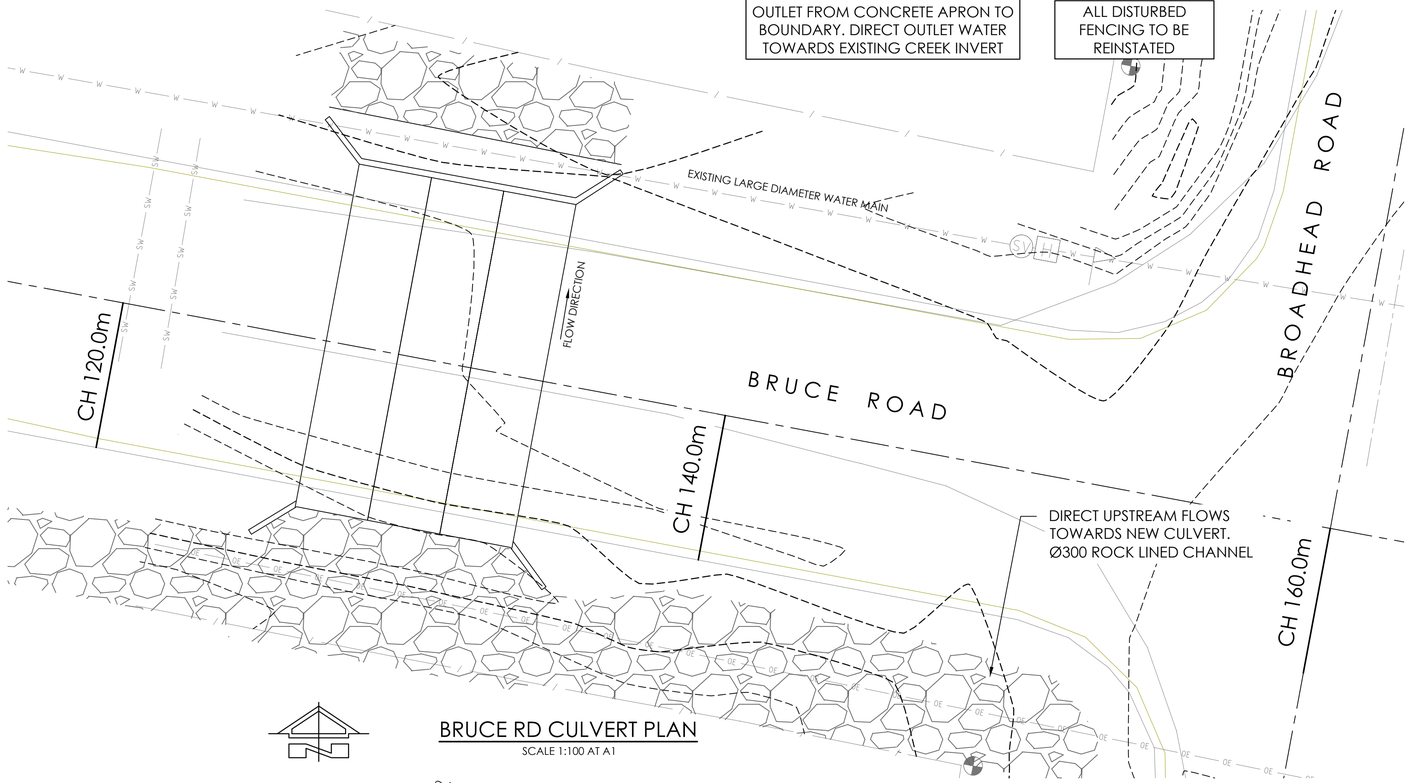
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
PAVEMENT PLAN - INTERNAL

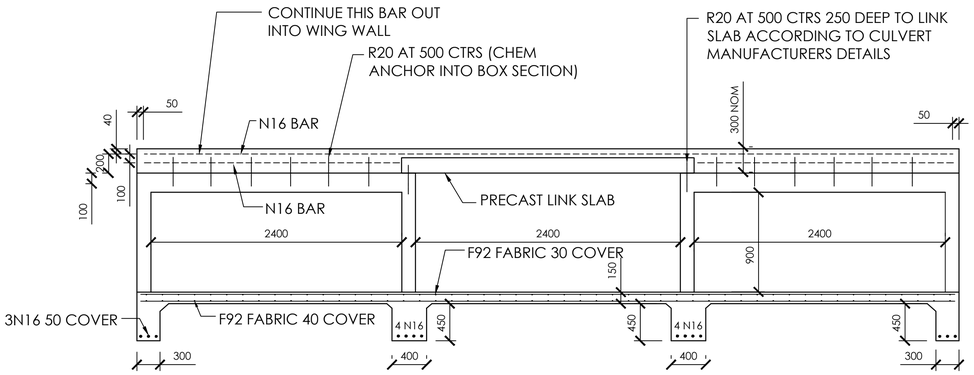
PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C11.0	D

PROVIDE ROCK STABILISATION AT OUTLET FROM CONCRETE APRON TO BOUNDARY. DIRECT OUTLET WATER TOWARDS EXISTING CREEK INVERT

ALL DISTURBED FENCING TO BE REINSTATED

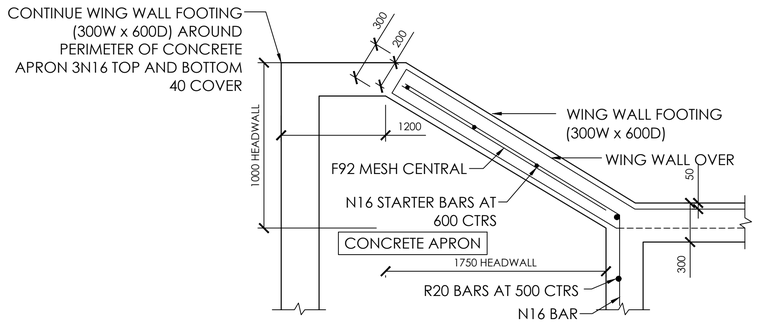


BRUCE RD CULVERT PLAN
SCALE 1:100 AT A1

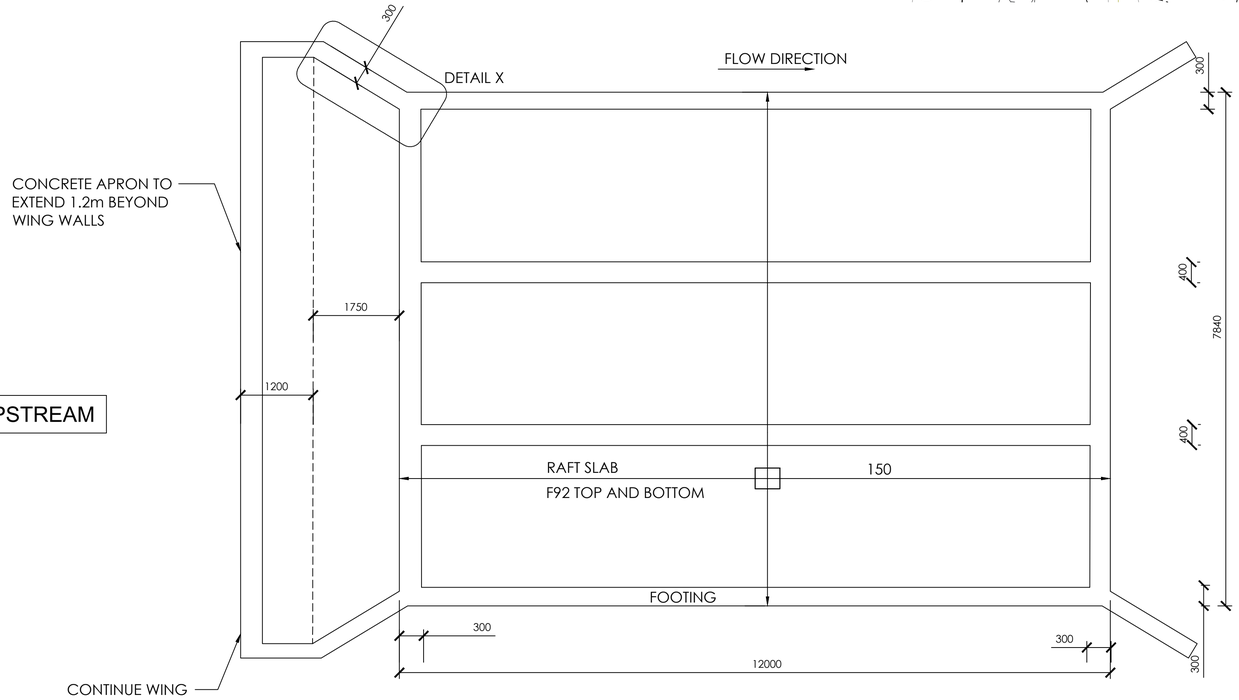


BRUCE ROAD CULVERT
SECTION A
N.T.S

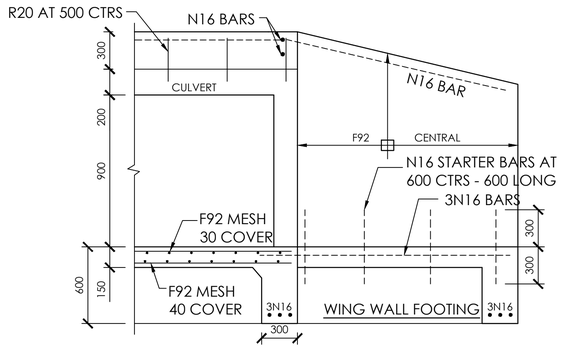
NOTE:
DETAILS TO BE CONFIRMED BY STRUCTURAL ENGINEER



CULVERT
WING WALL DETAIL X
N.T.S



BRUCE ROAD CULVERT
SLAB PLAN
N.T.S



CULVERT
WING WALL ELEVATION
N.T.S

NOTE:
THIS IS A PRELIMINARY OR PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A1 SHEET | 1:200 AT A3 SHEET

	DATE	ISSUE	BY
ISSUED FOR INFORMATION	10.03.20	A	JI.D.
AMENDMENTS	DATE	ISSUE	BY

NOT FOR CONSTRUCTION

ARCHITECT
ALLEANZA ARCHITECTURE

CLIENT
TSA MANAGEMENT
LEVEL 15, 207 KENT ST
SYDNEY, NSW, 2000
TSA MANAGEMENT

PROJECT
PROPOSED SCHOOL
LOT 40 BROADHEAD ROAD
MUDGEE, NSW, 2850

DESIGNED	DRAWN	DATE	SIZE	CAD REF
JI.D.	JO.M.	MAY '19	A1	TX13843.00 - C1.0

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
ADELAIDE | BAROSSA | DARWIN | MUDGEE | PARRAMATTA | SYDNEY

DRAWING TITLE
CIVIL DETAILS -
BRUCE RD CULVERT

PROJECT No.	DRAWING No.	ISSUE
TX13843.00 -	C12.0	A