Pacific Brook Christian School, Muswellbrook

72 - 74 Maitland St, Muswellbrook NSW 2333

STORMWATER DRAINAGE AND CIVIL WORKS PLAN FOR DA APPROVAL - STAGE 1

LOCALITY MAP. (COURTESY OF SIX MAPS)

DRAWING REGISTER	
NO.	TITLE
C.00	COVER SHEET
C.01	CONSTRUCTION NOTES - SHEET 01
C.02	CONSTRUCTION NOTES - SHEET 02
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C.11	SOIL EROSION AND SEDIMENT CONTROL DETAILS
C.20	OVER ALL SITE PLAN
C.21	STORMWATER AND EXTERNAL WORKS - SHEET 01
C.22	STORMWATER AND EXTERNAL WORKS - SHEET 02
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C.24	STORMWATER AND EXTERNAL WORKS - SHEET 02 PART PLAN 2
C.30	STORMWATER DRAINAGE DETAILS - SHEET 01
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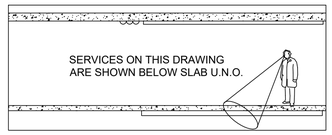
C.40	CIVIL EXTERNAL WORK DETAILS - SHEET 01
C.41	CIVIL EXTERNAL WORK DETAILS - SHEET 02



NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

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PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
COVER SHEET

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

All levels and dimensions are to be checked and verified on site prior to the commencement of any work, making of shop drawings or fabrication of components. Do not scale drawings. Use figured Dimensions.

ISSUE	PROJECT No.	DRAWING No.
A	9247	C.00

GENERAL NOTES

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONSULTANTS DRAWINGS, THE ARCHITECTURAL DRAWINGS "ISSUED FOR CONSTRUCTION", AND ALL OTHER SPECIFICATIONS SUCH AS WRITTEN INSTRUCTIONS ISSUED DURING CONSTRUCTION, CHECKLISTS AND APPROVING AUTHORITY SPECIFICATIONS. ANY DISCREPANCIES IN THESE DOCUMENTS SHALL BE REFERRED TO THE RELEVANT PARTIES AND NOT LESS THAN THE PROJECT MANAGER, THE ENGINEER AND THE SUPERINTENDENT FOR A DECISION PRIOR TO CONTINUING WITH THE WORKS.

2. ALL EXISTING DRAINAGE SHOWN ON THE PLANS THAT IS PROPOSED TO BE RE-USED IS TO BE INSPECTED BY A LICENCED PLUMBER AND CERTIFIED THAT IT IS IN GOOD WORKING CONDITION, OTHERWISE ALLOW TO RECTIFY AND OR REPLACE.

3. PROVIDE HEELGUARD OR EQUIVALENT TO ALL PIT LIDS AND GRATED DRAINS IN PEDESTRIAN AREAS.

4. THE CONTRACTOR OR PRINCIPLE CONTRACTOR SHALL CHECK ALL DIMENSIONS ONSITE FOR CORRECTNESS, WHERE RELEVANT THIS CAN BE FOR NCC (BCA) COMPLIANCE, EFSG COMPLIANCE, TfNSW COMPLIANCE, LEPs, DCPs, AND SEPPs. ANY DISCREPANCY SHALL BE REPORTED TO THE SUPERINTENDENT AND ALSO NOT LESS THAN THE PROJECT MANAGER AS SOON AS PRACTICABLE. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

5. IT IS THE RESPONSIBILITY OF THE BUILDER AND CONTRACTOR TO ENSURE THAT DURING WORKS THE STABILITY OF EXISTING STRUCTURES SHALL BE MAINTAINED WITHOUT UNDUE DISTURBANCE. DURING THE PROCESSES OF DISTURBANCE SUCH AS EXCAVATION, SERVICE MODIFICATION, UNDERPINNING, PILING, COMPACTION, VIBRATION, DEMOLITION, DUST, EXCESSIVE NOISE, REWORKING STORMWATER, PARKING OF HEAVY MACHINERY OR STOCKPILING OF MATERIALS, NO PART OF AN EXISTING STRUCTURE OR BUILDING SHALL BE OVERSTRESSED.

6. WORKS SHALL NOT BEGIN WITHOUT THE WRITTEN APPROVAL OF THE RELEVANT CERTIFYING AUTHORITY.

7. INSPECTIONS ARE REQUIRED TO CONFIRM AND CERTIFY THE STANDARD OF CONSTRUCTION BY BIRZULIS ASSOCIATES. WE ARE REQUIRED TO BE PROVIDED WITH 48 HOURS NOTICE PRIOR TO ALL STORMWATER ELEMENTS BEING BACKFILLED OR CONCEALED TO INSPECT. THIS DOES NOT REMOVE THE NEED FOR OTHER AUTHORITIES SUCH AS CERTIFIERS TO CONDUCT INSPECTIONS. ADDITIONAL INSPECTIONS OF PAVEMENT MATERIALS AND LAYERS MAY ALSO BE REQUIRED. REFER TO PAVEMENT OR SUB-GRADE SPECIFIC NOTES AND RELEVANT SPECIFICATIONS.

8. WHERE SHOWN, EXISTING SERVICES ARE BASED ON INFORMATION PROVIDED TO BIRZULIS ASSOCIATES AND ARE NOT A SUBSTITUTE FOR ONSITE TESTING AND CONFIRMATION. IT IS THE RESPONSIBILITY OF CONTRACTORS WORKING IN VICINITY OF THESE SERVICES TO CONFIRM THEIR LOCATION.

9. ALL SERVICE TRENCHES SHALL BE BACKFILLED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARD CORRESPONDING TO THE TYPE OF PIPING IN THE TRENCH OR TFNSW STANDARDS IF WORKING ON A TFNSW MANAGED ROAD.

10. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LEGAL OR RELEVANT REQUIREMENTS OF CURRENT AUSTRALIAN STANDARDS, NATIONAL CONSTRUCTION CODES, SAA CODES, REQUIREMENTS OR STIPULATIONS OF RELEVANT CERTIFYING AUTHORITY, AND RELEVANT SPECIFICATIONS. IF IN DOUBT ALL RFIS (REQUESTS FOR INFORMATION) SHALL BE SUBMITTED IN WRITING AND RFIS SHALL BE IN ACCORDANCE WITH BEST PRACTICE AND STANDARDS.

11. NO CHANGES TO THE WORKS AS REFLECTED ON THE DESIGN ENGINEERING DRAWINGS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

12. UNO OR U.N.O DENOTES “UNLESS NOTED OTHERWISE” ON THESE DRAWINGS.

13. ALL PROPRIETARY PRODUCTS SHALL BE CHECKED FOR BUILDING CODE COMPLIANCE WITH THE CERTIFYING AUTHORITY AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IF REQUIRED BY AN APPROVED CONTRACTOR ENDORSED BY THE MANUFACTURER.

14. IT IS THE RESPONSIBILITY OF THE PRINCIPLE CONTRACTOR OR EQUIVALENT TO OBTAIN ALL PERMITS AND AUTHORITY APPROVALS.

15. A DILAPIDATION REPORT OF ELEMENTS IN VICINITY OF THE DEVELOPMENT SHALL BE UNDERTAKEN PRIOR TO WORKS COMMENCING.

16. EXISTING DOWNPIPES WHICH ARE BEING RECONFIGURED SHOULD BE CONNECTED TO FLEXIBLE HOSING AND DISCHARGED IN A SAFE LOCATION IN ACCORDANCE WITH REQUIREMENTS OF SEDIMENT AND EROSION CONTROL.THE TOP OF EXCAVATIONS SHALL BE PROTECTED FROM OVERLAND FLOW AND IF NECESSARY OVERLAND FLOW PATHS SHOULD BE REDIRECTED DURING PHASES IN THE CONSTRUCTION PARTICULARLY BULK EXCAVATION AND SITE WORKS.

17. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING LIGHTS, TEMPORARY BARRIERS AROUND EXCAVATIONS/TRENCHES, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH WORK COVER AND OH&S REGULATIONS, AND ALL OTHER RELEVANT SAFETY REQUIREMENTS.

18. NO TREES SHALL BE REMOVED/DESTABILISED/CUT BACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.

STORMWATER DRAINAGE NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3500.3 AND OTHER RELEVANT CODES WHERE OTHER MATERIALS ARE USED.

2. FOR DOWNPIPE LOCATIONS REFER ARCHITECTURAL DRAWINGS AND THE HYDRAULIC ENGINEERS DRAWINGS. USE OF DOWNPIPE CHAINS SHALL BE SPECIFICALLY CHECKED WITH THE CERTIFYING AUTHORITY AND A DETERMINATION MADE IF COMPLIANT WITH CURRENT CODES IN THE APPLICATION.

3. ESTABLISH AND LOCATE EXISTING INVERT LEVELS OF EXISTING SERVICES PRIOR TO COMMENCING WORKS AND CONFIRM WITH THE ENGINEER IF THE DESIGN IS BASED ON AN ASSUMPTION IN THE LEVELS.

4. PIPES SHALL HAVE A MINIMUM FALL OF 1% UNLESS NOTED OTHERWISE. A MINIMUM OF 1:60 FALL SHALL BE PROVIDED FOR DOWNPIPES CONNECTING TO DRAINAGE LINES.

5. RESPONSIBILITY OF ROOF DRAINAGE IS BY OTHERS UNLESS SPECIFICALLY NOTED OTHERWISE.

6. ALL uPVC STORMWATER DRAINAGE LINES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF AS1254 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST VERSION OF AS 3500.3, AS 2032 & AS 2566 UNLESS NOTED OTHERWISE.

7. ALL REINFORCED CONCRETE STORMWATER DRAINAGE PIPE WORK (RCP) SHALL BE IN ACCORDANCE WITH AS1342, TfNSW STANDARDS REQUIREMENTS AND SPECIFICATIONS AND SHALL BE INSTALLED IN ACCORDANCE WITH AS 3725 OR THE PREVIOUS RELEVANT STANDARD/SPECIFICATION WHICHEVER IS THE GREATER OR MORE APPROPRIATE. THE PIPES SHALL BE OF THE FOLLOWING MINIMUM CLASSES IN ACCORDANCE WITH AS 1342 UNLESS NOTED OTHERWISE:
   a. CLASS 4 UNDER FLEXIBLE PAVEMENTS WITH MIN 600MM COVER
   b. CLASS 2 IN OTHER AREAS WITH NO FLEXIBLE PAVEMENT OVER AND HEAVY MACHINERY/TRUCKS DO NOT NEED TO PASS OVER AND NOT SURCHARGED BY VEHICLES LOADS OR GREATER.

8. SUBSOIL DRAINAGE FOR RIGID AND FLEXIBLE TRAFFICABLE PAVEMENTS SHALL BE IN ACCORDANCE WITH TfNSW REQUIREMENTS.

9. SUBSOIL DRAINAGE (MINIMUM 100mm DIAMETER WRAPPED IN A GEOTEXTILE SOCK SHALL BE PROVIDED BEHIND AND AT THE BASE OF ALL RETAINING WALLS, UPTURN WALLS (WITH THE EXCEPTION OF UNDERPINNING AND CONTIGUOUS/SOLDIER PILING) AND SHALL BE BACKFILLED WITH CRUSHED ROCK WITH 10% CEMENT. THE WALL SHALL ALSO BE WATERPROOFED AND A LAYER OF CORFLUTE APPLIED BETWEEN THE WATERPROOFING AND THE BACKFILL. THE BACKFILL SHALL BE WRAPPED IN A GEOFABRIC.
   THE SUBSOIL DRAIN SHALL CONNECT TO THE DOWNSTREAM STORMWATER SYSTEM AND HAVE SUFFICIENT CLEAN OUT POINTS TO BE ADEQUATELY MAINTAINED.

10. SUBSOIL DRAINAGE SHALL BE PROVIDED IN POORLY DRAINED LAWN STYLE AREAS IN ACCORDANCE WITH BEST PRACTICE.

11. STEP DOWNS IN FLOORING FROM INTERNAL TO EXTERNAL SHALL BE IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE UNLESS NOTED OTHERWISE.

12. FALLS IN PAVEMENTS SHALL BE MINIMUM 1% FOR EXTERNAL AREAS AND 0.5% FOR EXTERNAL AREAS PROTECTED BY A ROOF OR UNDERCOVER. SUFFICIENT SURFACE DRAINAGE SHALL BE PROVIDED TO FACILITATE THESE FALLS.

13. ALL DRAINAGE TRENCHES SHALL NOT UNDERMINE EXISTING STRUCTURES AND SHALL BE IN SOUND MATERIAL. IF SOFT SPOTS EXIST THEY SHOULD BE REMOVED AND BACKFILLED WITH A COMPACTED ROADBASE DGB20 OR 40 AND COMPACTED TO MINIMUM 98% STANDARD DRY DENSITY AT PLUS OR MINUS 2% OPTIMUM MOISTURE CONTENT.

14. ALL STORMWATER PITS OR ACCESS TO STORMWATER TANKS SHALL HAVE:
   14.1. HAVE STEP IRONS INSTALLED (WHERE DEEPER THAN 900mm). UNO, STEP IRONS SHALL BE IN ACCORDANCE WITH TFNSW STANDARD DRAWINGS.
   14.2. HAVE A LID AS PER SPECIFICATION OR A PIT SCHEDULE
   14.3. HAVE BEDDING AS REQUIRED
   14.4. HAVE ANY PROOF LOCKS OR BETTER CHILD PROTECTION AS REQUIRED BY COUNCIL OR OTHER CONSULTANT SPECIFICATIONS
   14.5. HAVE BENCHING AS REQUIRED

15. COVER FOR STORMWATER PIPES SHALL BE:
   a. RCP: 600mm UNDER FLEXIBLE PAVEMENTS OR AREAS OF VEHICULAR LOADING
   b. RCP: 300mm UNDER LANDSCAPE AREAS OR RIGID PAVEMENTS.
   c. uPVC: 300mm NOT SUBJECT TO VEHICULAR LOADING
   d. uPVC: 600mm SUBJECT TO VEHICULAR LOADING WITH SEALED FLEXIBLE CARRIAGEWAYS.
   e. IF NOT NOTED IN THE ABOVE THE MINIMUM COVERS SHALL BE OBTAINED FROM THE RELEVANT AUSTRALIAN STANDARD:
      I. AS 2041.1 FOR CORRUGATED METAL STORMWATER PIPES
      II. AS 2032 FOR PVC STORMWATER PIPES
      III. AS.NZS 2566.2 FOR FLEXIBLE STORMWATER PIPES
      IV. AS 3725 FOR REINFORCED CONCRETE STORMWATER PIPES
      V. AS 2033 FOR POLYETHYLENE STORMWATER PIPES.

16. LIDS OF STORMWATER PITS SHALL HAVE THE FOLLOWING CLASS LIDS UNLESS NOTED OTHERWISE:
   a. CLASS 'A' FOR AREAS ACCESSED STRICTLY BY ONLY PEDESTRIANS
   b. CLASS 'C' FOR AREAS OF RESIDENTIAL ROADS AND CAR PARKS AND AREAS SUBJECT TO VEHICLE LOADS BUT NOT HEAVY VEHICLE LOADS.
   c. CLASS 'D' FOR AREAS WHERE HEAVY VEHICLES CAN ACCESS AND USE

17. MINIMUM PIT SIZES REGARDLESS OF WHAT IS SHOWN ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH TABLE 7.5.2.1 OF AS/NZS 3500.3

18. SITE THAT HAVE A HIGH WATER TABLE A MINIMUM OF 1.5 TIMES THE DIAMETER OVER uPVC OR LIGHTWEIGHT PIPES SHALL BE PROVIDED AS COVER TO PREVENT BUOYANCY.

19. ALL SET OUT IS TO THE FACE OF THE KERB, CENTRELINE OF FENCE/BOLLARD/PIPE.

20. SMOOTH ALL TRANSITIONS BETWEEN NEW AND EXISTING STORMWATER DRAINAGE WORKS IN LEVEL AND ALIGNMENT.

21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL SET OUT AND LEVEL PRIOR TO COMMENCEMENT OF WORKS AND TO REPORT ANY DISCREPANCIES FOUND TO THE SUPERINTENDENT.

22. THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTIONS AND PAVEMENT THICKNESS FROM A N.A.T.A. REGISTERED TESTING AUTHORITY AT THE RATE OF A MINIMUM THREE TESTS PER LAYER AS FOLLOWS:

PIPE BACKFILL	DENSITY INDEX 75
SELECT FILL	95% STANDARD
SELECT FILL (LESS THAN 300mm BELOW BASE COURSE)	98% MODIFIED
BASE COURSE	100% MODIFIED

23. THE AUS-SPEC SPECIFICATION SHALL BE THE SPECIFICATION FOR THESE WORKS.

SURVEY NOTES

1. THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY THE PROJECT SURVEYOR.

2. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. BIRZULIS ASSOCIATES DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

3. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT BIRZULIS ASSOCIATES.

NOTES:

ALL EXISTING DRAINAGE TO BE INSPECTED BY A REGISTERED PLUMBER AND CERTIFIED THAT IT IS IN GOOD WORKING CONDITION. OTHERWISE, ALLOW TO RECTIFY AND/OR REPLACE AS NECESSARY.

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

ALL SUBSOIL DRAINAGE NOT SHOWN ON PLAN ARE TO BE PROVIDED AND CONNECTED TO THE STORMWATER DRAINAGE SYSTEM.

ABBREVIATIONS

Ø OR DIA	DIAMETER
@ 1 %	AT 1 PERCENT
AHD	AUSTRALIAN HEIGHT DATUM
CBR	CALIFORNIA BEARING RATIO
CH	CHAINAGE
CL	CENTRE LINE
CO	CLEAR OUT
DD	DISH CROSSING
DDO	DISH DRAIN OUTLET
DEJ	DOWELLED EXPANSION JOINT
DGB	DENSE GRADED BASECOURSE
DGS	DENSE GRADED SUB-BASE
DN	DIAMETER NOMINAL
DP	DOWNPIPE
ex	EXISTING
FFL	FINISHED FLOOR LEVEL
FW	FLOOR WASTE
GTD	GRATED TRENCH DRAIN
GSIP	GRATED SURFACE INLET PIT
HDG	HOT DIP GALVANISED
HYD	HYDRANT
IJ	ISOLATING JOINT
IK	INTEGRAL KERB
IL	INVERT LEVEL
IP	INTERSECTION POINT
KIP	KERB INLET PIT
KO	KERB ONLY
K&G	KERB & GUTTER
KR	KERB RETURN
LS	LONGITUDINAL SECTION
m	METER
mm	MILLIMETER
MIN	MINIMUM
NGL	NATURAL GROUND LEVEL
NO.	NUMBER
NOM.	NOMINAL
OFP	OVERLAND FLOW PATH
OSD	ON-SITE DETENTION
r	RADIUS
RCP	REINFORCED CONCRETE PIPE
RHS	RECTANGULAR HOLLOW SECTION
RK	ROLL KERB & GUTTER
RL	REDUCED LEVEL
RW	RETAINING WALL
RWO	RAINWATER OUTLET
RWT	RAINWATER TANK
SJ	SAWN CONTROL JOINT
SMH	SEWER MAN HOLE
SW	STORMWATER
SWP	STORMWATER PIT
SWRM	STORMWATER RISING MAIN
SWS	STORMWATER SUMP
SV	STOP VALVE
TOK	TOP OF KERB
TOW	TOP OF WALL
TP	TANGENT POINT
TYP.	TYPICAL
uPVC	UNPLASTICISED POLYVINYL CHRLORIDE
UNO	UNLESS NOTED OTHERWISE
WPJ	WEAKENED PLANE JOINT

LEGEND

AAPT LINE — AAPT — AAPT
COMMS LINE — C — C
ELECTRICAL LINE — E — E
FIRE LINE — F — F
GAS LINE — G — G
WATER LINE — W — W
NBN LINE — NBN — NBN
OPTUS LINE — OP — OP
TPG LINE — TPG — TPG
TELECOMMUNICATION LINE — T — T
OVERFLOW LINE — OFP — OFP
SEWER LINE — S — S
SEWER EXISTING LINE — EX.S — EX.S
SUBSOIL DRAINAGE LINE — SSD — SSD
SITE BOUNDARY
DEMOLISHED
STORMWATER LINE
EXISTING STORMWATER LINE — EX. SW — EX. SW
PROPOSED CONTOUR
S/W RISING MAIN LINE — SWRM — SWRM
SWALE DRAIN INVERT AND DIRECTION OF FLOW
GRATED STORMWATER PIT
EXISTING STORMWATER PIT
KERB INLET PIT
TELEPHONE PIT
DOWN PIPE — DP
EXISTING DOWN PIPE — Ex. DP.
FLOOR WASTE — FW
NEW GRATED DRAIN
K&G
VEE DRAIN
KO

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

DESIGN NOTES:

THE SITE IS LOCATED IN MUSSWELLBROOK SHIRE COUNCIL AND IS APPENDED TO THE FRONT WITH CLASSIFIED ROAD (TfNSW).

SITE AREA = 2.432ha

OSD WAS DESIGNED USING DRAINS ON THE BELOW PARAMETERS.

ONLY THE BOTTOM OF THE SITE IS FLOOD AFFECTED THE DEVELOPMENT AREA IS NOT FLOOD AFFECTED.

PRE-DEVELOPMENT IMPERVIOUS AREA = 1589m^2.

PROPOSED IMPERVIOUS AREA = 2237m^2.

INCREASE IN IMPERVIOUS AREA = 648m^2.

OSD TARGETS
POST DEVELOPMENT DISCHARGE RATES DO NOT EXCEED THE PRE-DEVELOPMENT DISCHARGE RATE FOR STORMS UP TO 1% AEP.

STORAGE REQUIRED FROM DRAINS = 42m^3
STORAGE PROVIDED = 42m^3

ON-SITE DETENTION DESIGN SUMMARY:

DRAINS MODEL HAS BEEN PREPARED FOR CALCULATION OF PRE & POST DEVELOPMENT FLOWS WITH OSD.

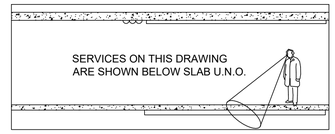
DEVELOPMENT SITE AREA DRAINING TO OSD = 1812m^2

DEVELOPMENT AREA BYPASSING OSD = 425m^2

UN-DEVELOPED AREA = 22083m^2

DRAINS RESULT(PRE & POST DEVELOPMENT FLOWS SUMMARY):

AVERAGE RECURRENCE INTERVAL (ARI)	5 YEARS	10 YEARS	20 YEARS	100 YEARS
PRE-DEVELOPED FLOWS (L/s)	163	236	329	524
POST-DEVELOPED FLOWS (L/s)	161	233	322	508



DIAL BEFORE YOU DIG

DIAL BEFORE YOU DIG
www.1100.com.au

IMPORTANT: THE CONTRACTOR IS TO MAINTAIN A CURRENT SET OF "DIAL BEFORE YOU DIG" DRAWINGS ON SITE AT ALL TIMES.

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

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PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
CONSTRUCTION NOTES - SHEET 01

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

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ISSUE	PROJECT No.	DRAWING No.
A	9247	C.01

PREPARATION FOR SLAB ON GROUND

1. CLEAR THE AREA TO BE OCCUPIED BY THE PAVEMENT AND ITS ADJUNCTS. BREAK UP AND REMOVE SLABS, FOUNDATIONS, PAVING, ETC. FOUND ON THE SURFACE OR WITHIN 300mm OF THE BASECOURSE. REMOVE ALL TOPSOIL AND ORGANIC MATTER AND GRUB OUT ALL ROOTS AND STUMPS. REMOVE ALL RUBBLE REMAINING FROM EXCAVATIONS.

2. THE SUBGRADE MATERIAL (NATURAL GROUND BELOW THE EXCAVATIONS) SHALL BE THOROUGHLY COMPACTED BY PROOF ROLLING WITH A MINIMUM OF 8 PASSES OF A 10 TONNE DEAD WEIGHT ROLLER. THIS PROOF ROLLING SHALL BE INSPECTED BY AN APPROVED GEOTECHNICAL ENGINEERING CONSULTANT, TO DETERMINE THE EXTENT OF REPLACEMENT OF ANY UNSUITABLE MATERIAL. THE COST OF THIS SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACTORS TENDER.

3. ANY SOFT, YIELDING, ORGANIC OR OTHER UNSUITABLE MATERIAL IN THE SUBGRADE SHALL BE REMOVED FOR A DEPTH OF AT LEAST 300mm AND HOLES SO FORMED SHALL BE FILLED WITH APPROVED FILLING COMPACTED IN 150mm LAYERS AS SPECIFIED BELOW.

4. BRING ALL FILLING ON TO THE SITE UNLESS IT CAN BE PROVIDED FROM SPOIL RECOVERED FROM THE SITE. FILLING SHALL BE SOUND CLEAN STABLE MATERIAL FREE OF PERISHABLE MATERIAL OR ANY OTHER MATERIAL THAT WILL NOT FORM STABLE FILL. THE FILL MATERIAL SHALL BE CAPABLE OF CONSOLIDATION SO THAT IT IS FIRM AND UNYIELDING THROUGHOUT ITS DEPTH.

5. PLACE FILLING IN LAYERS NOT EXCEEDING 200mm THICK WHEN MEASURED LOOSE. BRING FILLING TO OPTIMUM MOISTURE CONTENT (+/- 2%) BY WATERING AND COMPACT EACH LAYER THOROUGHLY AND UNIFORMLY WITH A VIBRATING ROLLER WHERE PRACTICABLE. HAND TAMP IN AREAS NOT ACCESSIBLE TO A VIBRATING ROLLER.

6. FOR THE BACKFILLING OF LOCALISED EXCAVATIONS LIGHTWEIGHT COMPACTION EQUIPMENT IS TO BE USED AND FILLING PLACED IN LAYERS NOT EXCEEDING 100mm THICK WHEN MEASURED LOOSE.

7. CONSOLIDATE EACH LAYER OF FILLING TO OBTAIN A UNIFORM DENSITY STRICTLY BETWEEN 98% AND 102% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AS DETERMINED BY AS2159.5.1.1.

8. THE BASECOURSE LAYER (DIRECTLY BELOW THE SLAB) SHALL CONSIST OF 100mm FINISHED COMPACTED THICKNESS OF CRUSHED ROCK BLINDED WITH 25mm OF SAND.

9. THE BASECOURSE MATERIAL SHALL BE CLEAN, TOUGH, DURABLE AND FREE OF ANY WEATHERED OR DISINTEGRATED STONE, CLAY, ORGANIC MATTER OR ANY OTHER DELETERIOUS MATERIALS.

10. THE CRUSHED ROCK SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO OBTAIN A UNIFORM DENSITY OF NOT LESS THAN 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AS DETERMINED BY AS1289.5.1.1.

11. FINISH THE BASECOURSE TO THE FOLLOWING TOLERANCES:
    VARIATION FROM DESIGN LEVEL - 5mm
    VARIATION FROM 3000mm STRAIGHT EDGE - 5mm

12. ALL EARTHWORKS SHALL BE CARRIED OUT UNDER LEVEL 1 CONTROL AS DEFINED IN AS3798.

13. THE CONTRACTOR SHALL ALLOW FOR TESTING AT THE RATE OF ONE TEST PER 200 SQUARE METRES OF SURFACE AREA FOR EACH OF THE FOLLOWING FINISHED SURFACES, WITH A MINIMUM OF THREE TESTS FOR EACH COMPACTED LAYER:

- SUBGRADE
- BASECOURSE (AT SURFACE OF CRUSHED ROCK)

13. THE CONTRACTOR SHALL ALLOW FOR TESTING AT THE RATE OF ONE TEST PER 30 CUBIC METRES FOR THE FILLING, WITH A MINIMUM OF THREE TESTS FOR EACH COMPACTED LAYER.

14. THE LOCATION OF ALL TESTS SHALL BE TO THE APPROVAL OF THE SUPERINTENDENT.

15. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM A REGISTERED N.A.T.A. TESTING AUTHORITY DOCUMENTED TEST EVIDENCE PROVING THAT THE COMPACTION FIGURES AS REQUIRED FOR THE MATERIALS SPECIFIED HEREIN HAVE BEEN OBTAINED. THE COST OF SUCH WORK SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACTORS TENDER.

CONCRETE

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

2. CONCRETE QUALITY:
   CLASS = NORMAL
   SLUMP = 80mm
   MAXIMUM SIZE OF AGGREGATE IN STRUCTURAL CONCRETE = 20mm U.N.O.
   CEMENT TYPE = SL
   ADMIXTURES = NIL, U.N.O OR APPROVED IN WRITING.

   FOR CONCRETE CAST IN CONTACT WITH GROUND PROVIDE THE FOLLOWING ADDITIONAL PROPERTIES:
   MINIMUM CEMENT CONTENT = 330 kg/m^3
   MAXIMUM WATER/CEMENT RATIO = 0.50

   CONCRETE SHALL HAVE A CHARACTERISTIC COMPRESSIVE STRENGTH AT 28 DAYS (f'c) AS SHOWN IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

ELEMENT	f'c MPa (28 Days)
BORED PIERS	32
FOOTINGS	32
BLOCKWORK WALLS	32

3. PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 3600.

4. CLEAR CONCRETE COVER IN MM TO THE REINFORCEMENT SHALL BE AS FOLLOWS (UNLESS NOTED OTHERWISE ON THE DRAWINGS):

EXPOSURE CLASSIFICATION TO AS3600	CAST AGAINST FORMORK			CAST AGAINST GROUND	
	INTERIOR	EXTERIOR	CONTACT WITH GROUND	PROTECTED BY MEMBRANE	NO MEMBRANE
A1	20			30	
A2	25	30	30		50
B1		40			
B2		45			

   EXPOSURE CLASSIFICATION FOR INTERIOR CONCRETE - A2
   EXPOSURE CLASSIFICATION FOR EXTERIOR CONCRETE - B1

5. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METRE CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. IN EXPOSURE CONDITIONS GREATER THAN B1 USE ONLY PLASTIC CHAIRS.

6. CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

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

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

9. 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 SUPERINTENDENT.

10. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.

11. CONCRETE CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE SUPERINTENDENT.

12. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS, AND PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 14 DAYS FOLLOWED BY GRADUAL DRYING OUT. APPROVED SPRAYED ON CURING COMPOUNDS MAY BE USED WHERE NO FLOOR FINISHES ARE PROPOSED. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED IF PROTECTED FROM WIND AND TRAFFIC.

13. CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. NO MASONRY OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL ALL PROPPING IS REMOVED AND THE MEMBER HAS ABSORBED ITS DEAD LOAD DEFLECTION.

14. THE SUPERINTENDENT SHALL BE GIVEN 48 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL OBTAINED.

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

16. REINFORCEMENT SYMBOLS:
    S DENOTES GRADE 230 S HOT ROLLED DEFORMED BARS TO AS 1302
    N DENOTES GRADE 500 N DEFORMED BARS TO AS 4671
    R DENOTES GRADE 230 R HOT ROLLED PLAIN BARS TO AS 1302
    SL/RL/L DENOTES GRADE 500 L DEFORMED RIBBED WELDED MESH TO AS 4671
    THE FIGURES FOLLOWING THE SYMBOL ARE THE NUMBER OF MILLIMETRES IN THE BAR DIAMETER. THE FIGURES FOLLOWING THE MESH SYMBOL SL, RL, L IS THE REFERENCE NUMBER FOR MESH TO AS 4671.

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

18. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE SUPERINTENDENT. LAPS SHALL BE IN ACCORDANCE WITH AS 3600 AND NOT LESS THAN 1.25 TIMES THE DEVELOPMENT LENGTH FOR EACH BAR.

19. MESH REINFORCEMENT SHALL HAVE SPLICES MADE SO THAT THE OVERLAP, MEASURED BETWEEN THE OUTERMOST TRANSVERSE WIRES OF EACH SHEET OF MESH, IS NOT LESS THAN THE SPACING OF THOSE WIRES PLUS 50mm.

20. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE SUPERINTENDENT.

21. JOGGLES TO BARS SHALL BE 1 BAR DIAMETER OVER A LENGTH OF 12 BAR DIAMETERS.

22. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH THREE WRAPS OF TIE WIRE.

23. WHERE TRANSVERSE TIE BARS ARE NOT SHOWN PROVIDE N12 AT 400mm DISTRIBUTION BARS UNLESS NOTED OTHERWISE. SPLICE DISTRIBUTION BARS 500mm WHERE NECESSARY AND PROVIDE 500mm SPLICE LENGTH WITH MAIN BARS UNLESS NOTED OTHERWISE.

24. ALL DOWELS PLACED IN JOINTS IN CONCRETE SLABS SHALL BE PLACED WITHIN THE FOLLOWING TOLERANCES:
    LEVEL +/- 1 DEGREE
    LINE +/- 1 DEGREE
    POSITION +/- 5 mm

25. SLIDING BEARING STRIPS SUPPORTING CONCRETE SLABS SHALL BE COMPOSED OF TWO LAYERS OF 0.4mm THICK GALVANISED STEEL PLATE WITH AN INTERMEDIATE LAYER OF GREASE (UNLESS NOTED OTHERWISE). THE STRIPS SHALL BE THE SAME WIDTH AS THE BEARING SURFACE.

CHEMICAL AND MASONRY ANCHORS

1. ALL ANCHORS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND CONFORM TO THE REQUIREMENTS OF AS/NZS 5131.

2. CHEMICAL ANCHORS SHALL CONSIST OF A THREADED MILD STEEL ROD OF THE SIZE NOMINATED ON THE DRAWINGS EMBEDDED IN AND CHEMICALLY BONDED TO THE CONCRETE. THE CHEMICALS USED SHALL BE SUCH THAT THEY DO NOT DETRIMENTALLY AFFECT THE SURROUNDING CONCRETE. THE ROD SHALL BE HOT DIP GALVANISED UNLESS NOTED OTHERWISE.

3. MASONRY ANCHOR SIZES GIVEN ON THE STRUCTURAL DRAWINGS REFER TO THE BOLT DIAMETER REQUIRED.

4. ALL ANCHORS SHALL BE CAPABLE OF DEVELOPING A WORKING LOAD CAPACITY IN SHEAR AND TENSION AT LEAST 80% OF THE MAXIMUM PERMISSIBLE VALUES FOR THE THREADED ROD OR BOLT SIZE NOMINATED.

5. ALL ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

6. HOLES DRILLED FOR ANCHORS SHALL NOT PENETRATE REINFORCEMENT IN SUSPENDED CONCRETE SLABS, BEAMS, COLUMNS AND WALLS. ANY HOLES WHICH ARE FOUND TO CLASH WITH SUCH REINFORCEMENT SHALL BE RELOCATED AS NECESSARY AND THE INITIAL HOLE SHALL BE PATCHED TO THE APPROVAL OF THE SUPERINTENDENT.

7. CHEMICAL ANCHORS DRILLED INTO CONCRETE SHALL USE MINIMUM M16 BOLTS (GALVANISED) WITH "HILTI HIT-RE 500 V3" OR "HILTI HIT-HY 200 V3" EPOXY MORTAR (OR APPROVED EQUIVALENT) UNLESS NOTED OTHERWISE.

   THE MINIMUM EDGE DISTANCE AND EMBEDMENT DEPTH AS SHOWN IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

BOLT DIAMETER	EDGE DISTANCE (MIN.)	EMBEDMENT DEPTH (MIN.)
M12	60	110
M16	80	125
M20	100	170
M24	120	210

8. CHEMICAL ANCHORS DRILLED INTO SOLID MASONRY SHALL USE MINIMUM M16 BOLTS WITH "HILTI HIT-HY 270" EPOXY MORTAR (OR APPROVED EQUIVALENT) UNLESS NOTED OTHERWISE. FOR CHEMICAL ANCHORS DRILLED INTO EXTRUDED/HOLLOW MASONRY, "HILTI HIT-SC" SLEEVE SHALL BE USED IN CONJUNCTION WITH THE EPOXY MORTAR.

   THE MINIMUM EDGE DISTANCE AND EMBEDMENT DEPTH AS SHOWN IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

BOLT DIAMETER	EDGE DISTANCE (MIN.)	EMBEDMENT DEPTH (MIN.)
M12	200	80
M16	200	80
M20	200	80

9. SITE TESTING SHALL BE PERFORMED ON CHEMICAL AND MECHANICAL ANCHORS TO VALIDATE CORRECT INSTALLATION (PROOF TESTING). A MINIMUM TEST SAMPLE POPULATION SHALL BE 3 TEST SPECIMENS OR 2.5% OF THE TOTAL RELEVANT ANCHOR POPULATION, WHICHEVER IS GREATER. IF A SINGLE FAILURE IS RECORDED THE MINIMUM TEST SAMPLE SHALL BE INCREASED TO 6 TEST SPECIMENS OR 5% OF THE TOTAL RELEVANT ANCHOR POPULATION, WHICHEVER IS GREATER. IF 2 OR MORE FAILURES ARE RECORDED, ALL ANCHORS SHALL BE TESTED.

10. ALL TESTING SHALL BE CARRIED OUT TO THE REQUIREMENTS OF AEFAC TECHNICAL NOTE - SITE TESTING GUIDELINES VOLUME 1 TO 4.

MASONRY FLEXIBLE ANCHORS

1. ALL ANCHORS SHALL BE SUBJECT TO THE APPROVAL OF THE SUPERINTENDENT.

2. ALL ANCHORS SHALL BE MANUFACTURED FROM HOT DIP GALVANISED STEEL PLATE.

3. ALL ANCHORS SHALL PERMIT HORIZONTAL AND VERTICAL MOVEMENT IN THE PLANE OF THE WALL BUT SHALL RESIST MOVEMENT IN A PERPENDICULAR DIRECTION TO THE PLANE OF THE WALL, UNLESS NOTED OTHERWISE.

4. THE ANCHORS SHALL HAVE THE FOLLOWING MINIMUM LATERAL WORKING LOAD CAPACITIES TO RESIST FORCES IN A PERPENDICULAR DIRECTION TO THE PLANE OF THE WALL:
   AT VERTICAL CONTROL JOINTS - 0.30 kN
   ALL OTHER ANCHORS - 0.40 kN

MASONRY RETAINING WALLS

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700. MASONRY UNITS SHALL COMPLY WITH AS 4455. WALL TIES SHALL COMPLY WITH AS 2699.

2. CONCRETE MASONRY BLOCKS SHALL BE OF A MINIMUM COMPRESSIVE STRENGTH GRADE 15 IN ACCORDANCE WITH AS 2733.

3. MORTAR FOR STRUCTURAL CONCRETE MASONRY WALLS SHALL CONSIST OF A 1 PART OF CEMENT TO 0.25 PARTS OF HYDRATED LIME TO 3 PARTS WELL-GRADED SAND. ALL MORTAR SHALL CONFORM TO THE REQUIREMENTS OF AS 3700. MORTAR ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.

4. NO CHASES OR RECESSES ARE PERMITTED IN LOAD BEARING AND STRUCTURAL MASONRY WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.

5. ALL LOAD BEARING AND STRUCTURAL MASONRY SHALL BE LAID ON FULL BEDS OF MORTAR AND ALL PERPENDS SHALL BE SOLIDLY FILLED WITH MORTAR.

6. PROVIDE VERTICAL CONTROL JOINTS AT 8m MAXIMUM CENTRES, AND 5M MAXIMUM FROM CORNERS IN MASONRY WALLS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

7. CORE FILL CONCRETE FOR CONCRETE MASONRY WALLS SHALL BE IN ACCORDANCE WITH AS 3700 WITH A MINIMUM CHARACTERISTIC COMPRESSIVE STRENGTH OF MINIMUM 25 MPa UNLESS NOTED OTHERWISE ON THE DRAWINGS. THE CONCRETE CORE FILL SHALL HAVE A SLUMP OF 230mm +/- 30mm AND THE MAXIMUM SIZE OF AGGREGATE SHALL BE 10mm. CONCRETE SHALL HAVE A MINIMUM CEMENT CONTENT OF 300 kg/m^3.

8. REINFORCEMENT FOR CONCRETE MASONRY WALLS SHALL BE SECURELY TIED IN POSITION. PROVIDE 50mm COVER TO THE REINFORCEMENT FROM THE RETAINING FACE OF THE WALL UNLESS NOTED OTHERWISE.

9. CONCRETE MASONRY WALLS WHICH ARE TO BE CORE FILL CONCRETE SHALL HAVE CORES CLEANED OF ALL MORTAR PROTRUSIONS AND SHALL BE FILLED WITH CORE FILL CONCRETE IN LIFTS OF NOT MORE THAN 3000mm IN HEIGHT.
   CORE FILL CONCRETE SHALL BE THOROUGHLY COMPACTED IN PLACE BY INTERNAL VIBRATORS. ALL CORES ARE TO BE FILLED WITHOUT THE FORMATION OF VOIDS. CLEAN-OUT HOLES SHALL BE PROVIDED IN THE BACK-FILLED SIDE AT THE BASE OF RETAINING WALLS.

10. DO NOT BACKFILL RETAINING WALLS UNTIL AT LEAST 14 DAYS HAVE ELAPSED AFTER THE COMPLETION OF THE CORE CONCRETE FILLING OF THE WALLS UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.

11. DO NOT BACKFILL RETAINING WALLS (OTHER THAN CANTILEVER WALLS) UNTIL A MINIMUM OF SEVEN DAYS HAVE ELAPSED FROM THE TIME OF COMPLETION OF THE FLOOR CONSTRUCTION AT THE TOP AND BOTTOM OF THE WALL.

12. BACKFILL TO RETAINING WALLS SHALL BE A HIGHLY PERMEABLE GRANULAR MATERIAL. PROVIDE A SUBSOIL DRAIN AT THE BASE OF THE WALL CONNECTED TO THE DRAINAGE SYSTEM UNLESS NOTED OTHERWISE.

SPECIFICATION FOR CONSTRUCTION OF TRAFFICABLE PAVEMENTS

1. ALL WORK TO BE IN ACCORDANCE WITH THE SPECIFICATION.

2. EARTHWORKS SHALL BE CARRIED OUT UNDER THE LEVEL OF CONTROL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

SUBGRADE

3. CLEAR THE AREA TO BE OCCUPIED BY THE PAVEMENT AND ITS ADJUNCTS. BREAK UP AND REMOVE FOUNDATIONS, SLABS, PAVING ETC. FOUND ON THE SURFACE OR WITHIN 300mm OF THE BASECOURSE. REMOVE ALL TOPSOIL AND ORGANIC MATTER AND GRUB OUT ALL ROOTS AND STUMPS. REMOVE ALL RUBBLE REMAINING FROM EXCAVATIONS.

4. THE SUBGRADE MATERIAL (NATURAL GROUND BELOW EXCAVATIONS) SHALL BE THOROUGHLY COMPACTED BY PROOF ROLLING WITH A MINIMUM OF 8 PASSES OF A 10 TONNE DEAD WEIGHT STATIC SMOOTH DRUM ROLLER. THIS PROOF ROLLING SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEERING CONSULTANT, TO DETERMINE THE EXTENT OF REPLACEMENT OF ANY UNSUITABLE MATERIAL ENCOUNTERED. THE COST OF ALL SUCH WORK SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACTORS TENDER.

5. ANY SOFT, YIELDING, ORGANIC OR OTHER UNSUITABLE MATERIAL IN THE SUBGRADE SHALL BE REMOVED FOR A DEPTH OF AT LEAST 300mm AND HOLES SO FORMED SHALL BE FILLED WITH APPROVED FILLING COMPACTED IN 150mm LAYERS AS SPECIFIED BELOW.

6. BRING ALL FILLING ON TO THE SITE UNLESS IT CAN BE PROVIDED FROM SPOIL RECOVERED FROM THE SITE. FILLING SHALL BE SOUND CLEAN STABLE MATERIAL, FREE OF PERISHABLE MATERIAL OR ANY OTHER MATERIAL THAT WILL NOT FORM STABLE FILL. THE FILL MATERIAL SHALL BE CAPABLE OF CONSOLIDATION SO THAT IT IS FIRM AND UNYIELDING THROUGHOUT ITS DEPTH.

7. PLACE FILLING IN LAYERS NOT EXCEEDING 200mm THICK WHEN MEASURED LOOSE. BRING FILLING TO OPTIMUM MOISTURE CONTENT (+/- 2%) BY WATERING AND COMPACT EACH LAYER THOROUGHLY AND UNIFORMLY WITH A VIBRATING ROLLER.

8. CONSOLIDATE EACH LAYER OF FILLING TO OBTAIN A UNIFORM DENSITY OF NOT LESS THAN 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AS DETERMINED BY AS1289.5.1.1.

TESTING

9. THE CONTRACTOR SHALL ALLOW FOR TESTING AT THE RATE OF ONE TEST PER 200 SQUARE METRES OF SURFACE AREA FOR EACH OF THE FOLLOWING FINISHED SURFACES, WITH A MINIMUM OF THREE TESTS FOR EACH COMPACTED LAYER.
    - SUBGRADE
    - SUB-BASECOURSE
    - BASECOURSE

9. THE CONTRACTOR SHALL ALLOW FOR TESTING AT THE RATE OF ONE TEST PER 30 CUBIC METRES FOR THE FILLING, WITH A MINIMUM OF THREE TESTS FOR EACH COMPACTED LAYER.

10. THE LOCATION OF ALL TESTS SHALL BE TO THE APPROVAL OF THE SUPERINTENDENT. TESTING SHALL NOT BE LESS THAN AS SPECIFIED IN TABLE 8.1 OF AS3798.

11. THE CONTRACTOR SHALL OBTAIN FROM A REGISTERED N.A.T.A. TESTING AUTHORITY DOCUMENTED TEST EVIDENCE PROVING THAT THE COMPACTION FIGURES AS REQUIRED FOR THE MATERIALS SPECIFIED HEREIN HAVE BEEN OBTAINED. THE COST OF SUCH WORK SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACTOR'S TENDER. TEST RESULTS FOR EACH STAGE (I.E. SUBGRADE, SUBBASE, BASECOURSE AND FILL WHERE APPLICABLE) TO BE SUBMITTED TO THE SUPERINTENDENT PRIOR TO PROCEEDING TO THE NEXT STAGE OF THE WORKS.

SPECIFICATIONS FOR FLEXIBLE TRAFFICABLE PAVEMENTS

12. ASPHALTIC CONCRETE (ACXX) SHALL BE IN ACCORDANCE WITH DOCUMENTS SUCH AS "GOOD ASPHALTIC PAVING PRACTICE" AS DESCRIBED IN AS2150 AND CURRENT RMS SPECIFICATIONS.

13. TACK COATS SHALL BE APPLIED TO THE RELEVANT SUBSTRATE TO LEAVE A RESIDUAL BITUMENT CONTENT OF 0.1 TO 0.2 LITRES PER SQUARE METER, BRUSH AWAY POOL BITUMEN MIX. JOINTS SHALL BE KEPT TO A MINIMUM AND THE DENSITY AND SURFACE FINISH AT JOINTS SHALL BE SIMILAR TO THAT OF THE LAYER. COMAPCTION SHALL BE IN ACCORDACNE WITH THE REQUIREMENTS OF AS2734 AND ALL COMPACTION SHALL BE UNDERTAKEN USING SELF-PROPELLED ROLLERS WHERE INITIAL ROLLING SHALL BE UNDERTAKEN BEFORE THE MID-DEPTH TEMPERATURE HAS DROPPED BELOW 105 DEGREES , THE SECONDARY ROLLING SHALL BE COMPLETED BEFORE THE MID-DEPTH TEMPERATURE HAS DROPPED BELOW 80 DEGREES. THE FINISHED AS WEARING SURFACE SHALL BE SMOOTH, DENSE, HAVE CORRECT FALLS, AND SHALL NOT VARY MORE THAN
    - 3mm IN VERTICAL LEVEL AS REQUIRED,
    - 3mm WHEN MEASURED USING A 3m LONG STRAIGHT EDGE LAID TRANSVERSELY
    - 5mm WHEN MEASURED USING A 3m LONG STRAIGHT EDGE LAID LONGITUDINALLY
    - MINUS 0mm TO PLUS 2mm ADJACENT TO ELEMENTS SUCH AS KERBS TO AVOID LOCALISED POOLING OF WATER
    - MINUS 0mm FROM THE SPECIFIED THICKNESS

    WE ALSO RECOMMEND MARKING PAINT IS APPLIED AFTER CURING HAS OCCURED AND NOT LESS THAN BEFORE AS REQUIRED BY THE MANUFACTURER OF THE MARKING PAINT. WE DO NOT RECOMMEND PLANT OR EQUIVALENT HEAVY MACHINERY IS STORED ON THE NEWLYA LAID FLEXIBLE PAVEMENT UNTIL PRACTICAL COMPLETION.

SUB-BASE

14. THE SUB-BASECOURSE LAYER SHALL CONSIST OF COMPACTED THICKNESS OF CRUSHED ROCK IN ACCORDANCE WITH RTA QA SPECIFICATION 3051 AND RTA QA SPECIFICATION R71. THE MATERIAL USED FOR THIS COURSE SHALL BE A CLASS 2 DGS 20 IN ACCORDANCE WITH THE AFOREMENTIONED STANDARDS.

BASE

15. THE BASECOURSE LAYER SHALL CONSIST OF COMPACTED THICKNESS OF CRUSHED ROCK IN ACCORDANCE WITH RTA QA SPECIFICATION 3051 AND RTA QA SPECIFICATION R71. THE MATERIAL USED FOR THIS COURSE SHALL BE CLASS 1 DGB 20 IN ACCORDANCE WITH THE AFOREMENTIONED STANDARDS.

WEARING SURFACE

16. THE WEARING SURFACE OF COMPACTED ASPHALTIC CONCRETE SHALL BE PROVIDED OVER A PRIME AND 7MM HOT BITUMEN TYPE SEAL IN ACCORDANCE WITH RTA QA SPECIFICATION R106.

SPECIFICATIONS FOR RIGID TRAFFICABLE PAVEMENTS

SUB-BASE

17. THE SUB-BASE COURSE LAYER SHALL CONSIST OF COMPACTED THICKNESS OF CRUSHED ROCK IN ACCORDANCE WITH RTA QA SPECIFICATION 3051 AND RTA QA SPECIFICATION R71. THE MATERIAL USED FOR THIS COURSE SHALL BE A CLASS 1 DGS 20 IN ACCORDANCE WITH THE AFOREMENTIONED STANDARDS. THE SUB-BASE SHALL BE TOPPED WITH AN APPROVED SEAL COMMENSURATE FOR THE SUBSTRATE.

BASE

18. THE SPECIFIED BASE SHALL BE IN ACCORDANCE WITH RMS SPECIFICATIONS FOR THE ELEMENT AND THE DETAIL ON THIS DRAWINGS SET FOR THIS ELEMENT.

JOINTS

19. SHALL BE IN ACCORDANCE WITH THE JOINT DETAILS FOR THIS ELEMENT ON THIS DRAWING SET

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

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PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

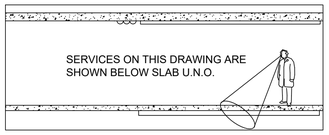
TITLE
CONSTRUCTION NOTES - SHEET 02

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

All levels and dimensions are to be checked and verified on site prior to the commencement of any work, making of shop drawings or fabrication of components. Do not scale drawings. Use figured Dimensions.

ISSUE	PROJECT No.	DRAWING No.
A	9247	C.02



MUSWELLBROOK GOLF COURSE

HATCH DENOTES FLOOD ZONE

EROSION AND SEDIMENT CONTROL FENCE TO BE INSTALLED IN ACCORDANCE WITH SD6-8 OF 'THE BLUE BOOK'

PROPOSED SEDIMENTATION BASIN SIZED AND MANAGED AND CONSTRUCTED IN ACCORDANCE WITH DETAIL SD6-4 OF THE BLUE BOOK. BASIN MANAGEMENT NOTES TO FUTURE DETAIL. DIRTY WATER SWALES THROUGH DISTURBED SOIL AREAS TO BE DIRECTED TO SEDIMENTATION BASIN.

INLET FILTER IN ACCORDANCE WITH SD6-12 OR SD6-11 OF THE BLUE BOOK

EROSION AND SEDIMENT CONTROL FENCE TO BE INSTALLED IN ACCORDANCE WITH SD6-8 OF 'THE BLUE BOOK'

EXISTING GRAVEL DRIVEWAY

DENOTES STOCKPILE INDICATIVE LOCATION. STOCKPILES SHALL BE CONSTRUCTION AND MAINTAINED IN ACCORDANCE WITH DETAIL SD4-1 OF 'THE BLUE BOOK'

INDICATIVE LOCATION OF STABILISED SITE ACCESS SITE ENTRY IN ACCORDANCE WITH SD6-14 OF 'THE BLUE BOOK'

PROPOSED SANDBAG OR GEOTEXTILE SOCK FILLED WITH GRAVEL AT INVERT OF GUTTER

INDICATIVE LOCATION OF STABILISED SITE ACCESS SITE ENTRY IN ACCORDANCE WITH SD6-14 OF 'THE BLUE BOOK'

MAITLAND STREET

THOMPSON STREET

GENERAL NOTES.

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY LATER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

EROSION & SEDIMENTATION CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING OF MATERIAL IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

SOIL EROSION AND SEDIMENT CONTROL LEGEND

- SEDIMENT CONTROL FENCE IN ACCORDANCE WITH SD6-8 OF THE BLUE BOOK
- INLET FILTER IN ACCORDANCE WITH SD6-12 OR SD6-11 OF THE BLUE BOOK
- TEMPORARY CONSTRUCTION STABILISED SITE ACCESS POINT IN ACCORDANCE WITH SD6-14 OF THE BLUE BOOK. SHAKEDOWN CATTLE GRID AT ACCESS POINT NOT SHOWN FOR CLARITY
- DENOTES STOCKPILE SHOWN INDICATIVE, MANAGED AND CONSTRUCTED IN ACCORDANCE WITH SD4-1 OF THE BLUE BOOK
- SITE BOUNDARY
- DENOTES PROPOSED BUILDING EXTENT
- EXISTING TO BE DEMOLISHED
- DENOTES DIRTY WATER SWALE 2m WIDE x 0.3m DEEP
- DENOTES CLEAN WATER SWALE 2m WIDE x 0.3m DEEP
- PROPOSED HAYBALE FILTER IN ACCORDANCE WITH SD6-7 OF THE BLUE BOOK
- PROPOSED SANDBAG OR GEOTEXTILE SOCK FILLED WITH GRAVEL AT INVERT OF GUTTER
- DENOTES CATCH DRAIN — CD — CD —
- DENOTES TEMPORARY STABALISED ROADBASE ROAD — TM — TM —

SEDIMENT AND EROSION CONTROL PLAN

SCALE 1:500

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

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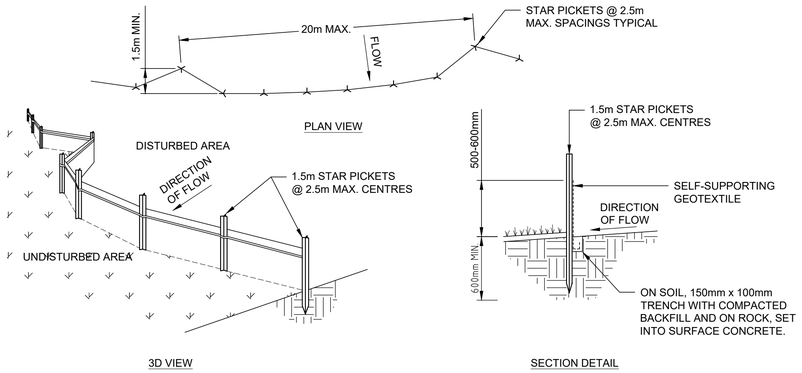
TITLE
SEDIMENT AND EROSION CONTROL PLAN

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
A	9247	C.10

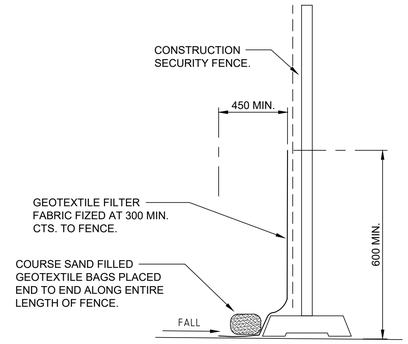


SEDIMENT FENCE DETAILS

(NOT TO SCALE)

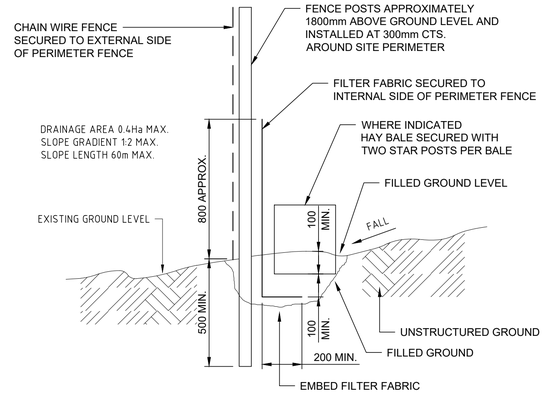
SEDIMENT FENCE CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



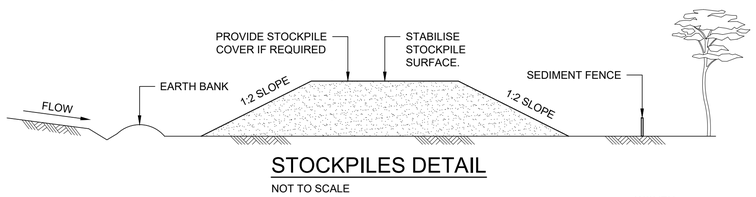
SEDIMENT FENCE ON PAVED SURFACE

NOT TO SCALE



HAY BALE BARRIER AND SILT FENCE DETAIL

NOT TO SCALE

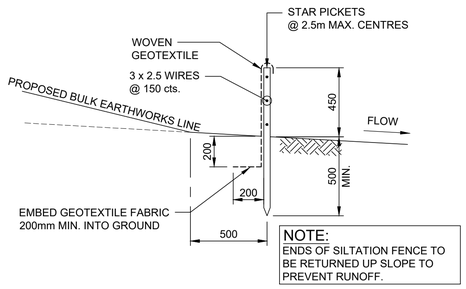


STOCKPILES DETAIL

NOT TO SCALE

STOCKPILE CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIANT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED E.S.C.P. OR S.W.M.P. TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.

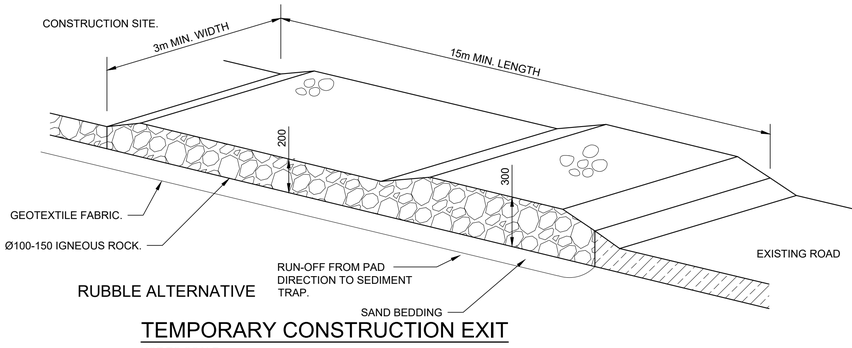


NOTE:

ENDS OF SILTATION FENCE TO BE RETURNED UP SLOPE TO PREVENT RUNOFF.

SILTATION FENCE DETAIL

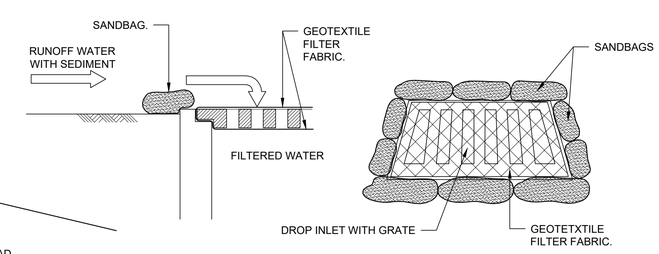
(NOT TO SCALE)



RUBBLE ALTERNATIVE

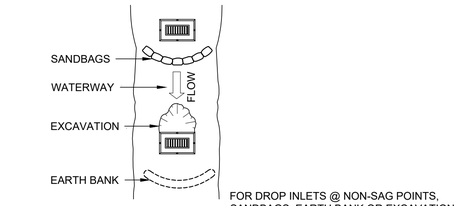
TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

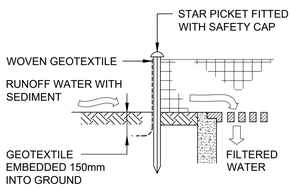


GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

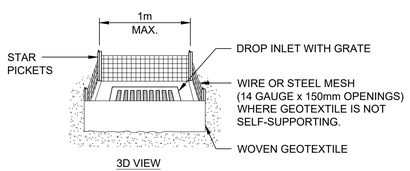
NOT TO SCALE



FOR DROP INLETS @ NON-SAG POINTS, SANDBAGS, EARTH BANK OR EXCAVATION USED TO CREATE ARTIFICIAL SAG POINT.



SECTION DETAIL

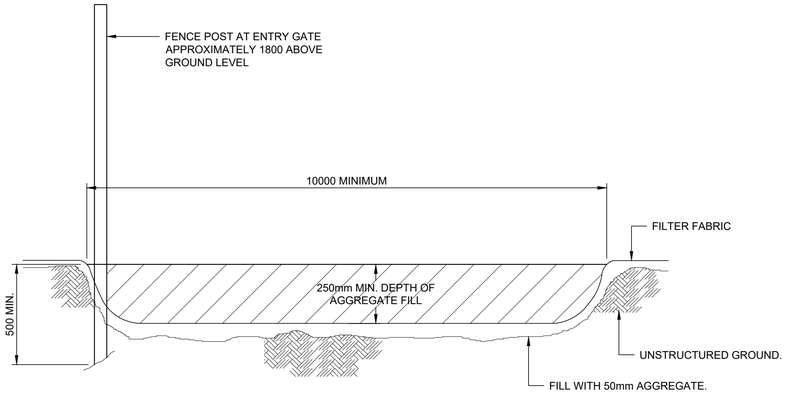


GEOTEXTILE INLET FILTER DETAILS

(NOT TO SCALE)

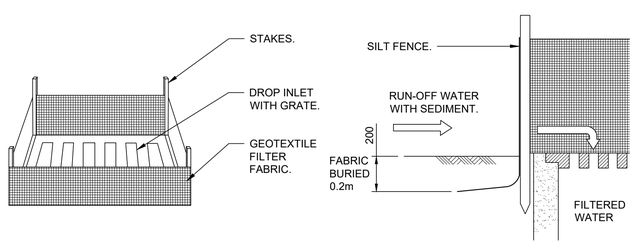
GEOTEXTILE INLET FILTER CONSTRUCTION NOTES:

01. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE.
02. PICKET SPACING TO BE MAXIMUM 1m.
03. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
04. DO NOT COVER THE INLET WITH GEOTEXTILES UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



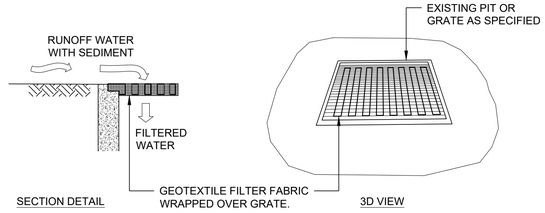
CROSS-SECTION OF CONSTRUCTION ENTRY/EXIT DETAIL

NOT TO SCALE



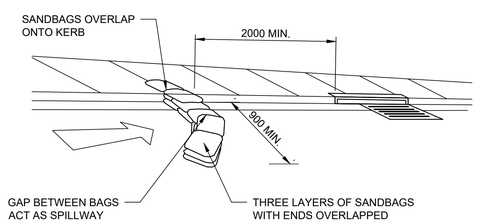
SUMP SEDIMENT TRAP DETAIL

NOT TO SCALE



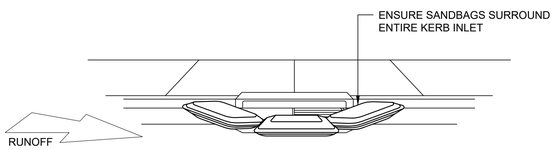
GEOTEXTILE PIT FILTER DETAILS

(NOT TO SCALE)



SANDBAG SEDIMENT TRAP FOR KERB INLET ON GRADE

NOT TO SCALE



SANDBAG KERB INLET SEDIMENT TRAP DETAIL

(NOT TO SCALE)

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

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PROJECT

Pacific Brook Christian School, Muswellbrook - STAGE 1

72 - 74 Maitland Street, Muswellbrook NSW

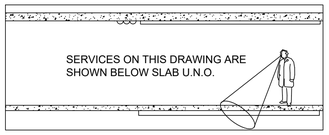
TITLE

SOIL EROSION AND SEDIMENT CONTROL DETAILS

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
A	9247	C.11



REFER TO DRAWING C.21

REFER TO DRAWING C.22

REFER TO DRAWING C.24

REFER TO DRAWING C.23

LEGEND

- AAPT LINE
- COMMS LINE
- ELECTRICAL LINE
- FIRE LINE
- GAS LINE
- WATER LINE
- NBN LINE
- OPTUS LINE
- TPG LINE
- TELECOMMUNICATION LINE
- OVERFLOW PATH
- SEWER LINE
- SEWER EXISTING LINE
- SUBSOIL DRAINAGE LINE
- SITE BOUNDARY
- DEMOLISHED
- EXISTING STORMWATER LINE
- PROPOSED CONTOUR

GRATED STORMWATER PIT

DOWN PIPE DP

EXISTING STORMWATER PIT

EXISTING DOWN PIPE Ex.DP

KERB INLET PIT

FLOOR WASTE FF

NEW GRATED DRAIN

TELEPHONE PIT

OCEAN GUARD INSTALLED (FROM OCEAN PROTECT) OG

HATCH DENOTES CONCRETE SLAB TOP
REFER TO DWG. C.40 FOR TYPICAL SLAB JOINT DETAILS.

HATCH DENOTES FLEXIBLE PAVEMENT
REFER TO DWG. C.41 FOR SPECIFICATION.

HATCH DENOTES ARTIFICIAL TURF

HATCH DENOTES PUBLIC DOMAIN FOOTPATH
REFER TO MUSWELLBROOK SHIRE COUNCIL FOR SPECIFICATION.

HATCH DENOTES EXISTING GRAVEL PAVEMENT

HATCH DENOTES FLOOD ZONE

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

STAGE 1 - OVERALL SITE PLAN

SCALE 1:500

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
B	DRAWING REVISED	-	24.05.24
A	FOR DA ISSUE	-	10.05.24

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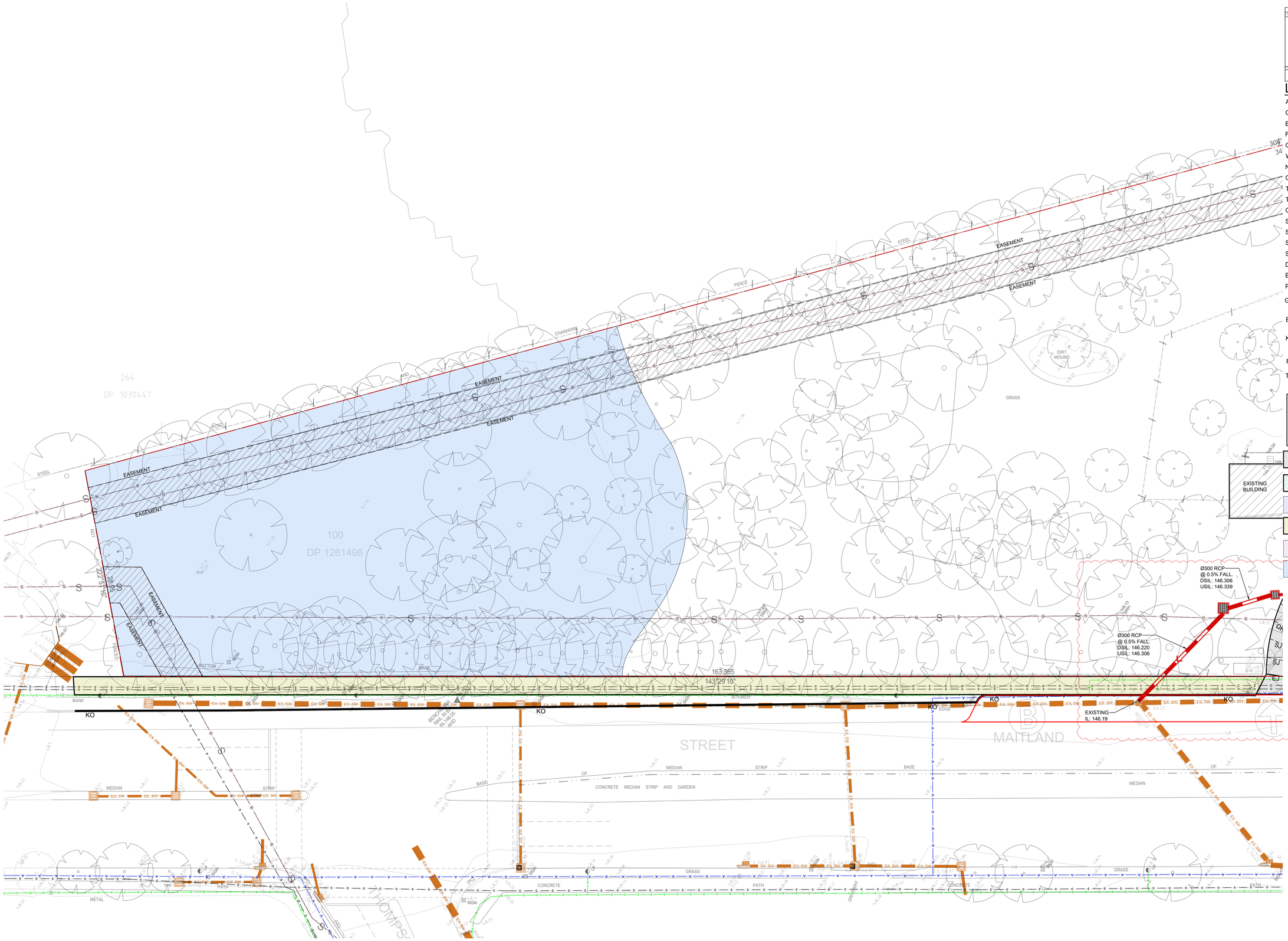
PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
STAGE 1
- OVERALL SITE PLAN

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
B	9247	C.20



SERVICES ON THIS DRAWING ARE SHOWN BELOW SLAB U.N.O.

LEGEND

- AAPT LINE
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HATCH DENOTES EXISTING GRAVEL PAVEMENT

HATCH DENOTES FLOOD ZONE

STORMWATER AND EXTERNAL WORKS - SHEET 01

SCALE 1:250

- UNLESS NOTED OTHERWISE, NON-CHARGED DOWNPIPES SHALL CONNECT TO MAIN STORMWATER DRAINAGE LINE AT 1% MIN. FALL.
- UNLESS NOTED OTHERWISE, DOWNPIPES SHALL BE Ø100mm SEALED.
- ROOF DRAINAGE BY OTHERS.
- ALL uPVC STORMWATER DRAINAGE LINES SHALL BE 'CLASS SH' SEWER GRADE. U.N.O.
- CONFIRM EXISTING DRAINAGE SYSTEM ONSITE BY PLUMBER.

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
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PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

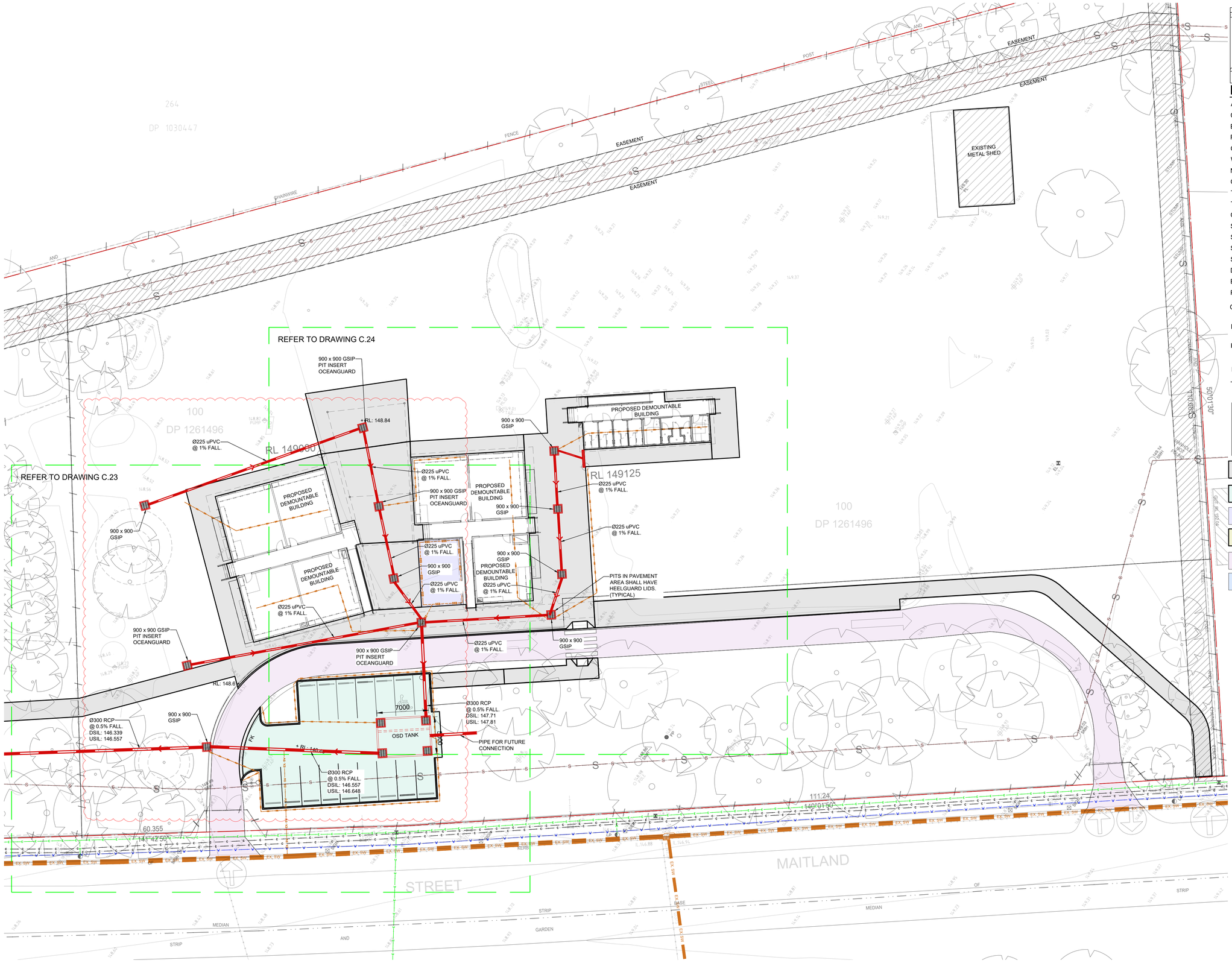
TITLE
STORMWATER AND EXTERNAL WORKS - SHEET 01

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

All levels and dimensions are to be checked and verified on site prior to the commencement of any work, making of shop drawings or fabrication of components. Do not scale drawings. Use figured Dimensions.

ISSUE	PROJECT No.	DRAWING No.
B	9247	C.21



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- EXISTING DOWN PIPE Ex.DP
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- TELEPHONE PIT
- OCEAN GUARD INSTALLED (FROM OCEAN PROTECT) OG

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HATCH DENOTES PUBLIC DOMAIN FOOTPATH
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HATCH DENOTES EXISTING GRAVEL PAVEMENT

HATCH DENOTES FLOOD ZONE

STORMWATER AND EXTERNAL WORKS - SHEET 02

SCALE 1:250

- UNLESS NOTED OTHERWISE, NON-CHARGED DOWNPIPES SHALL CONNECT TO MAIN STORMWATER DRAINAGE LINE AT 1% MIN. FALL.
- UNLESS NOTED OTHERWISE, DOWNPIPES SHALL BE Ø100mm SEALED.
- ROOF DRAINAGE BY OTHERS.
- ALL uPVC STORMWATER DRAINAGE LINES SHALL BE 'CLASS SH' SEWER GRADE. U.N.O.
- CONFIRM EXISTING DRAINAGE SYSTEM ONSITE BY PLUMBER.

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PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
STORMWATER AND EXTERNAL WORKS - SHEET 02

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
B	9247	C.22

PROPOSED DEMOUNTABLE BUILDING

PROPOSED DEMOUNTABLE BUILDING

PROPOSED DEMOUNTABLE BUILDING

OSD TANK

900 x 900 GSIP

900 x 900 GSIP PIT INSERT OCEANGUARD

900 x 900 GSIP PIT INSERT OCEANGUARD

900 x 900 GSIP

900 x 900 GSIP

RL: 148.6 +

RL: 148.84

RL: 148.88

RL: 148.85

RL: 148.6 +

RL: 148.60

RL: 148.65

+ RL: 148.40

RL: 148.45 +

+ RL: 148.7

+ RL: 149.0

RL: 149.0 +

Ø225 uPVC @ 1% FALL.

Ø225 uPVC @ 1% FALL.

Ø225 uPVC @ 1% FALL.

Ø225 uPVC @ 1% FALL.

Ø300 RCP @ 0.5% FALL. DSIL: 146.339 USIL: 146.557

Ø300 RCP @ 0.5% FALL. DSIL: 146.557 USIL: 146.648

Ø300 RCP @ 0.5% FALL. DSIL: 147.71 USIL: 147.81

PIPE FOR FUTURE CONNECTION

OSD TANK
MINIMUM VOLUME = 42m³
AREA = 35m² (7m x 5m)
DEPTH = 1.2m
ORIFICE = Ø120mm

7000

5000

60.355

141°42'50"

148.69 SMH

148.23 PUMP

EX. SW

KERB

STREET

STORMWATER AND EXTERNAL WORKS - SHEET 02 PART PLAN 1

SCALE 1:100

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SERVICES ON THIS DRAWING ARE SHOWN BELOW SLAB U.N.O.

LEGEND

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HATCH DENOTES ARTIFICIAL TURF

HATCH DENOTES PUBLIC DOMAIN FOOTPATH
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HATCH DENOTES EXISTING GRAVEL PAVEMENT

HATCH DENOTES FLOOD ZONE

NOT FOR CONSTRUCTION

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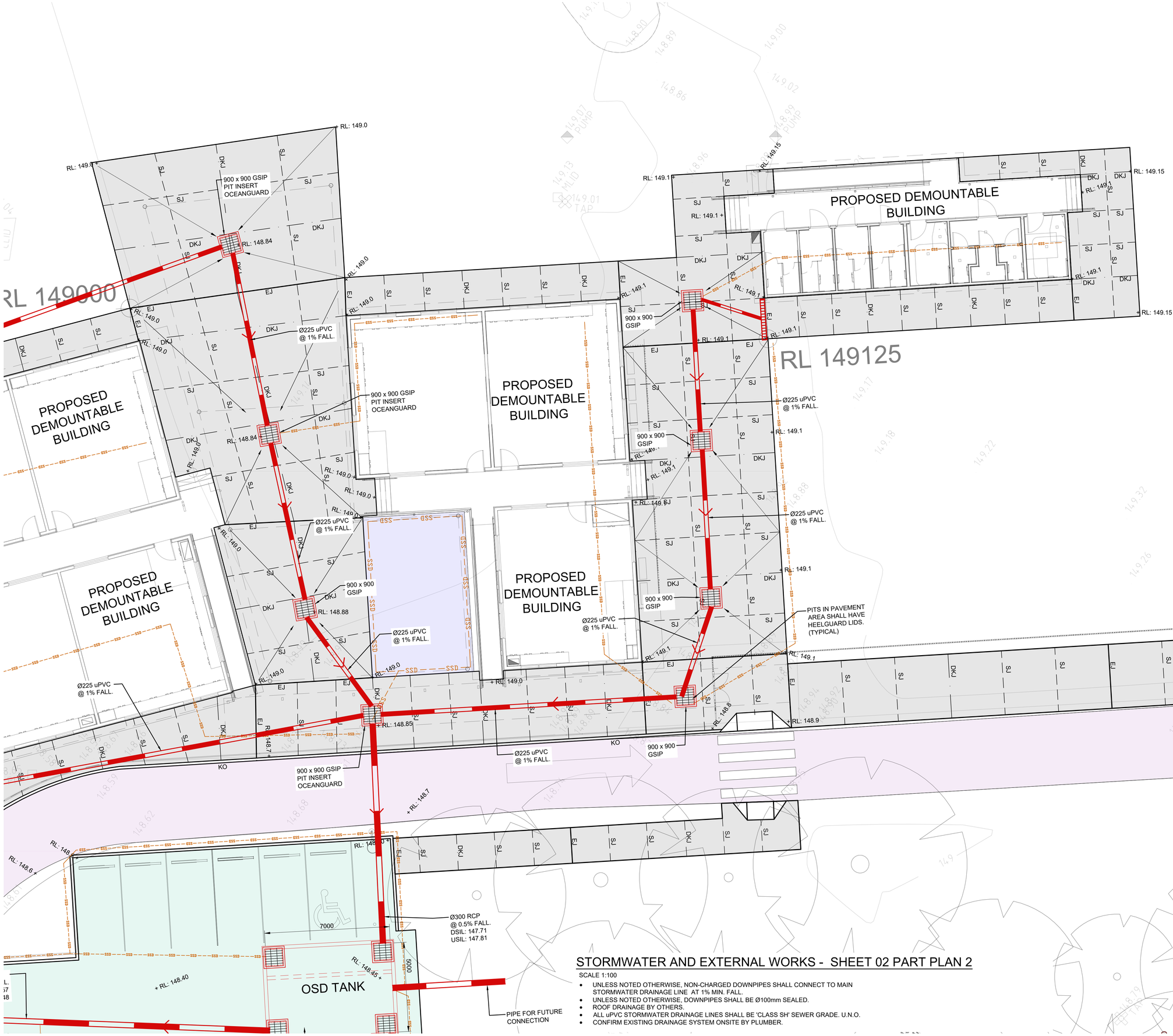
PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
STORMWATER AND EXTERNAL WORKS - SHEET 02 PART PLAN 1

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
B	9247	C.23



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- NEW GRATED DRAIN
- TELEPHONE PIT
- OCEAN GUARD INSTALLED (FROM OCEAN PROTECT) OG

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

HATCH DENOTES CONCRETE SLAB TOP
REFER TO DWG. C.40 FOR TYPICAL SLAB JOINT DETAILS.

HATCH DENOTES FLEXIBLE PAVEMENT
REFER TO DWG. C.41 FOR SPECIFICATION.

HATCH DENOTES ARTIFICIAL TURF

HATCH DENOTES PUBLIC DOMAIN FOOTPATH
REFER TO MUSWELLBROOK SHIRE COUNCIL FOR SPECIFICATION.

HATCH DENOTES EXISTING GRAVEL PAVEMENT

HATCH DENOTES FLOOD ZONE

STORMWATER AND EXTERNAL WORKS - SHEET 02 PART PLAN 2

SCALE 1:100

- UNLESS NOTED OTHERWISE, NON-CHARGED DOWNPIPES SHALL CONNECT TO MAIN STORMWATER DRAINAGE LINE AT 1% MIN. FALL.
- UNLESS NOTED OTHERWISE, DOWNPIPES SHALL BE Ø100mm SEALED.
- ROOF DRAINAGE BY OTHERS.
- ALL uPVC STORMWATER DRAINAGE LINES SHALL BE 'CLASS SH' SEWER GRADE. U.N.O.
- CONFIRM EXISTING DRAINAGE SYSTEM ONSITE BY PLUMBER.

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
B	DRAWING REVISED	-	24.05.24
A	FOR DA ISSUE	-	10.05.24

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PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

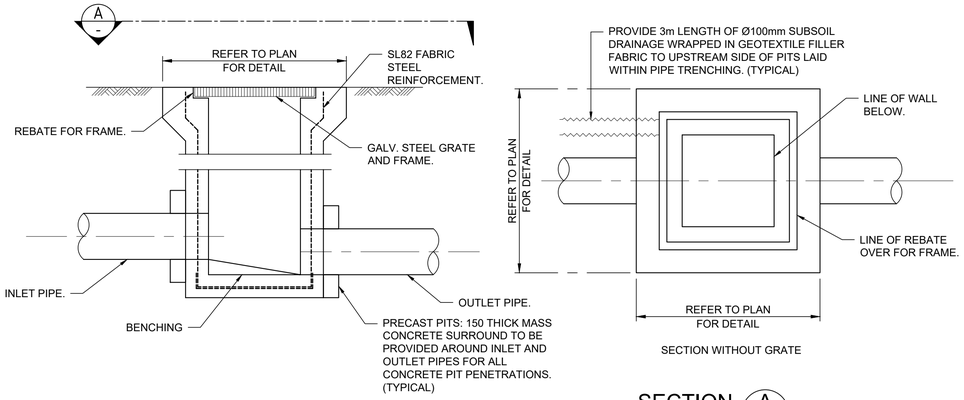
TITLE
STORMWATER AND EXTERNAL WORKS - SHEET 02 PART PLAN 2

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

All levels and dimensions are to be checked and verified on site prior to the commencement of any work, making of shop drawings or fabrication of components. Do not scale drawings. Use figured Dimensions.

ISSUE	PROJECT No.	DRAWING No.
B	9247	C.24



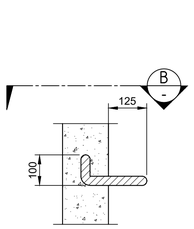
STORMWATER PIT DETAIL

SCALE 1:10

SECTION WITHOUT GRATE

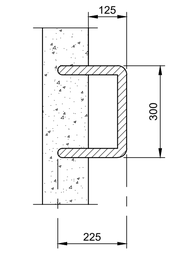
SECTION A

SCALE 1:10



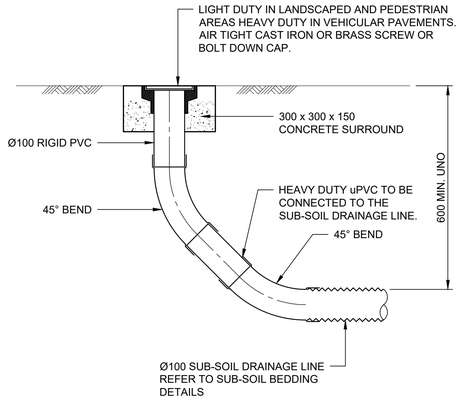
STEP IRONS DETAIL

SCALE 1:10



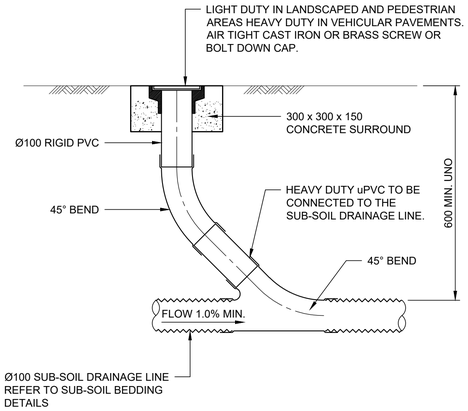
SECTION B

SCALE 1:10



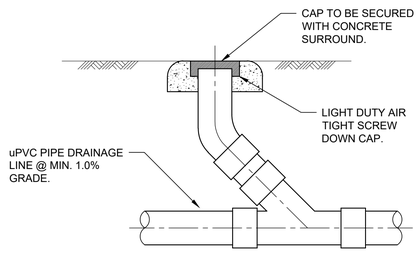
FLUSHING POINT (FP)

SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



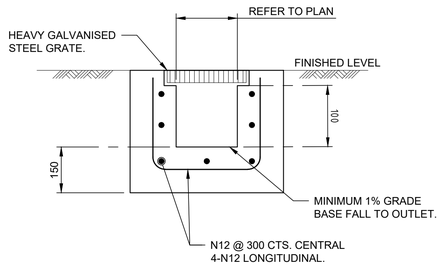
INTERMEDIATE RISER (IR)

SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



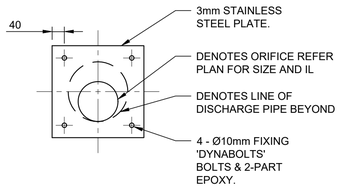
CLEANING EYE DETAIL

SCALE 1:10



TYPICAL GRATED DRAIN DETAIL

NOT TO SCALE

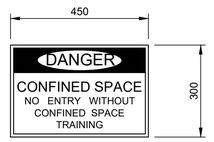


ORIFICE PLATE DETAIL

SCALE 1:10

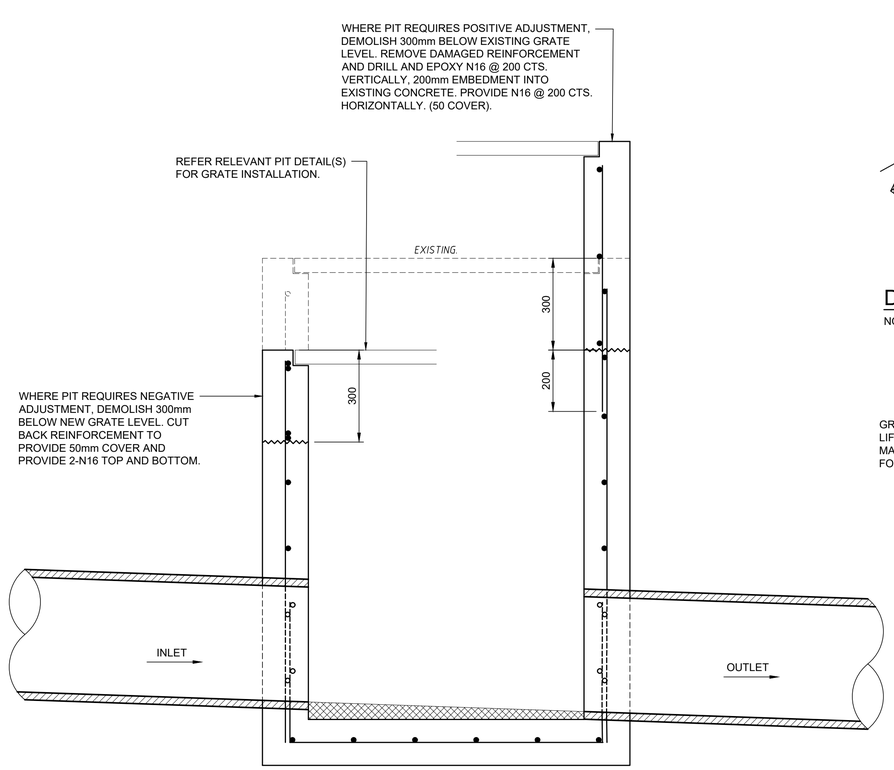
OSD SIGN DETAIL

NOT TO SCALE



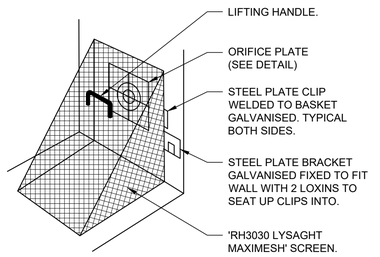
CONFINED SPACE SIGN DETAIL

SCALE 1:10



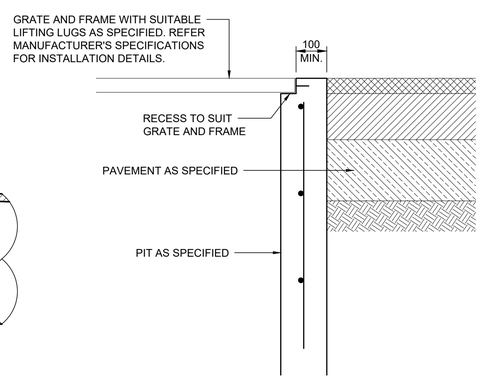
DRAINAGE PIT - LEVELS ADJUSTMENTS

ENSURE NEAT FINISH IS ACHIEVE AT INTERFACE WITH EXISTING.
REFER RELEVANT PIT DETAIL(S) FOR GRATE INSTALLATION.

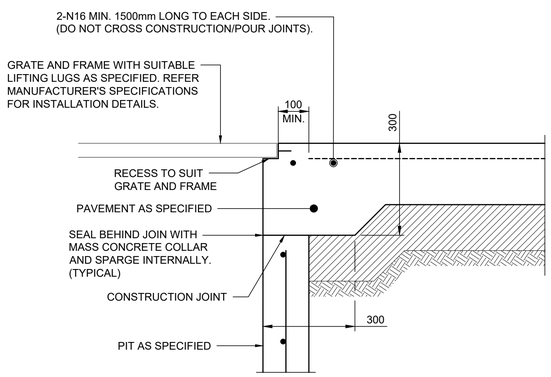


DEBRIS SCREEN DETAIL

NOT TO SCALE



PIT INTERFACE - DETAIL 'A'



PIT INTERFACE - DETAIL 'B'

NOT FOR CONSTRUCTION

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PROJECT
Pacific Brook Christian School,
Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
STORMWATER DRAINAGE
DETAILS - SHEET 01

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
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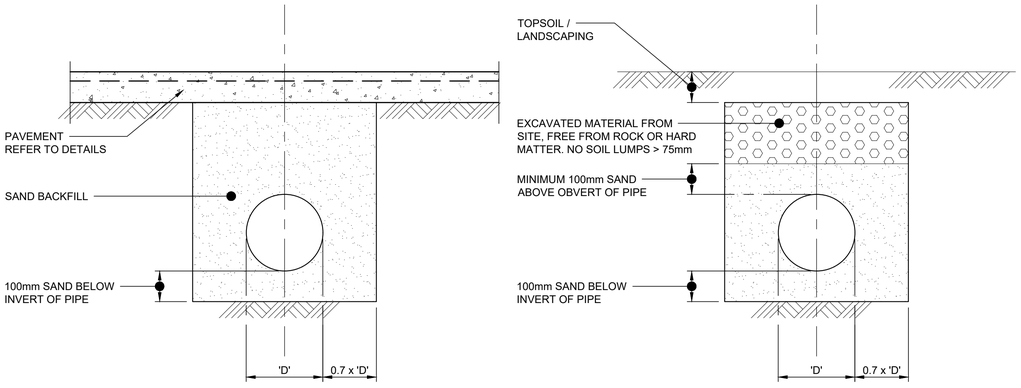
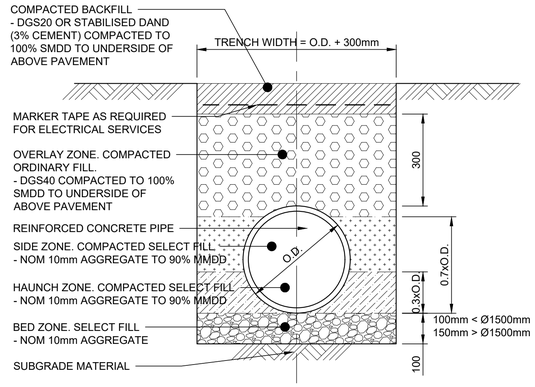


NON-TRAFFICABLE PAVED AREAS

LANDSCAPED AREAS

PIPE BACKFILLING DETAIL

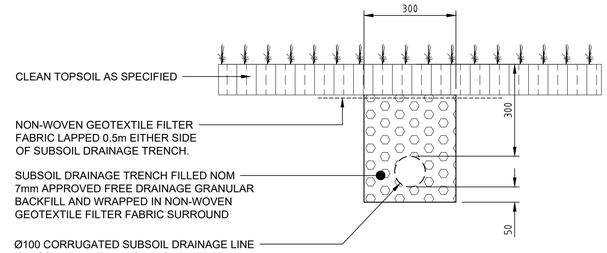
NOT TO SCALE



TYPICAL PIPE TRENCH - UNDER ROADS

NOT TO SCALE

1. TRENCH WIDTH MAY NEED TO BE INCREASED SUBJECT TO ACHIEVING COMPACTION ENSURE MINIMUM 300mm CLEARANCE BETWEEN. WHEN USING MULTIPLE PIPES TO ACHIEVE ADEQUATE COMPACTION.
2. MINIMUM PIPE COVER UNDER ROADS TO BE 600mm U.N.O. FOR CLASS '2' PIPES.
3. THE CONTRACTOR SHALL ENSURE THAT SHORING OF TRENCHES IS INSTALLED AS REQUIRED BY STATUTORY REQUIREMENTS.
4. ENSURE BACKFILLING COMPACTION MEETS THE FOLLOWING STANDARDS.
   4.1. TRENCHES UNDER PAVED AREAS / BUILDING - 100% SMDD.



SUBSOIL DRAINAGE TRENCH - LANDSCAPING 'SSD'

CLEAROUT TO BE INSTALLED @ MAX. 30m CENTRES AND
DISCHARGING TO DRAINAGE STRUCTURES @ MAX. 60m CENTRES.

uPVC STORMWATER LINE TRENCH DETAIL

SCALE 1:20
'D' - DIAMETER

NOT FOR CONSTRUCTION

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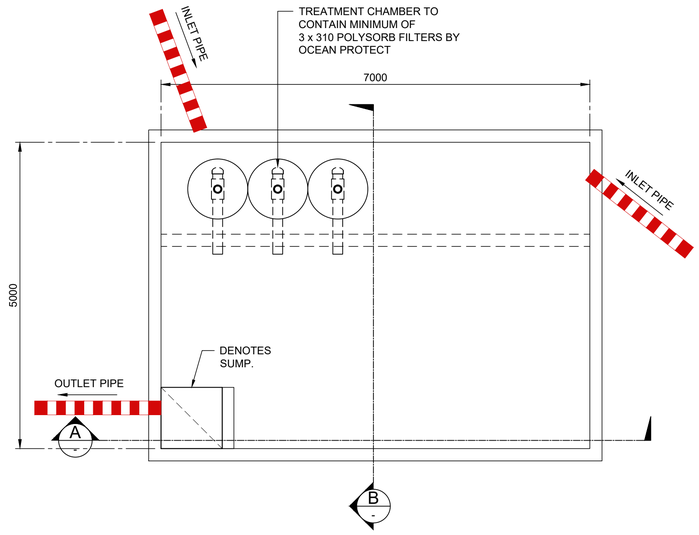
TITLE
STORMWATER DRAINAGE
DETAILS - SHEET 02

SCALES	DATE
as noted @ A1	MAY' 2024

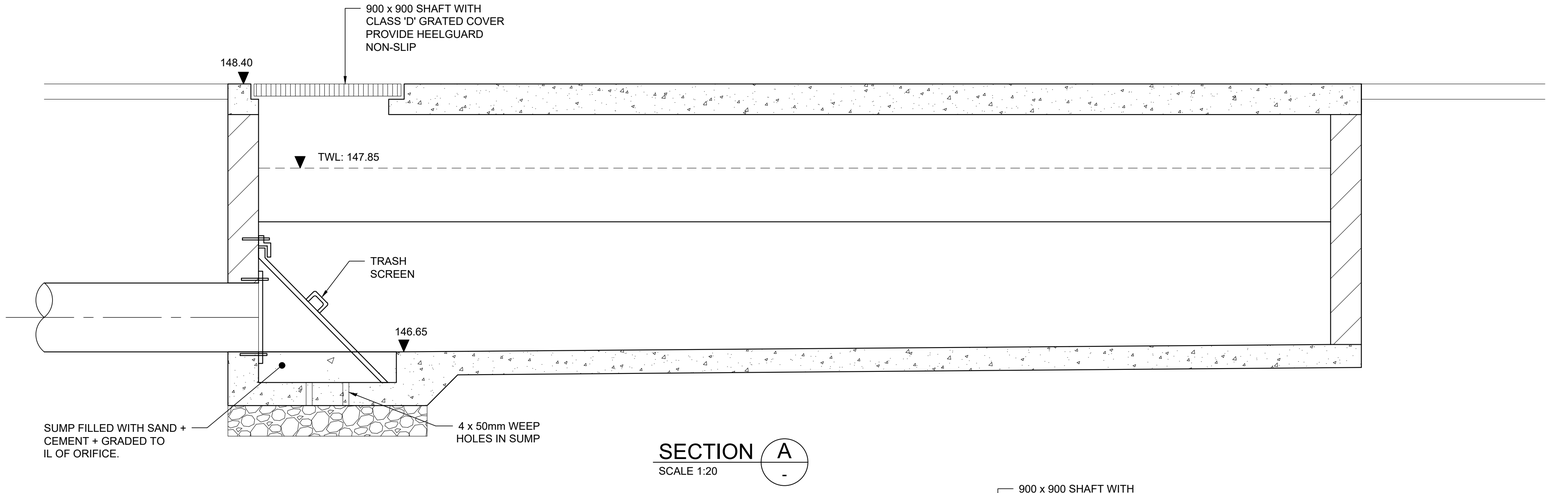
DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
A	9247	C.31



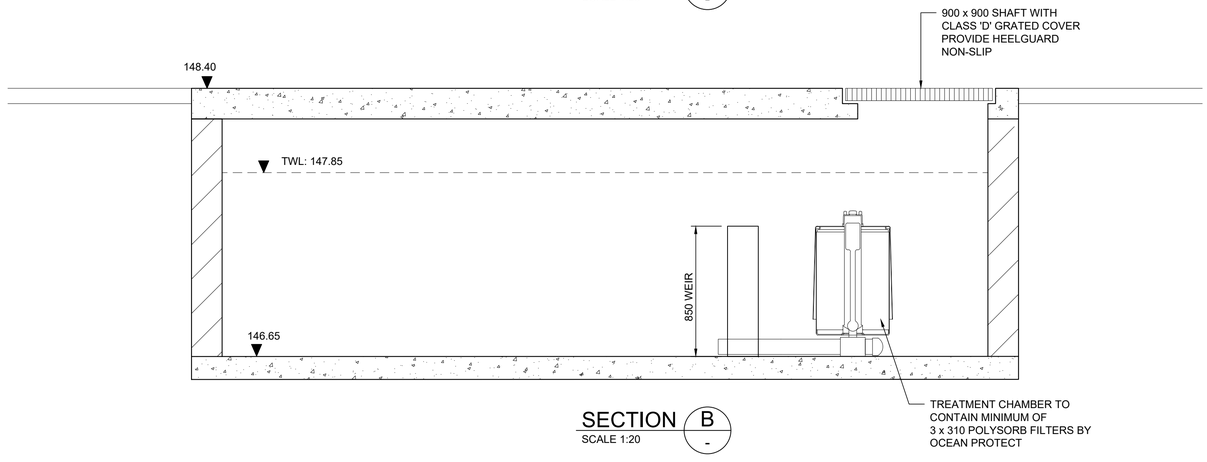
TYPICAL OSD TANK DETAIL

SCALE 1:50



SECTION A

SCALE 1:20



SECTION B

SCALE 1:20

WATER QUALITY DESIGN SUMMARY

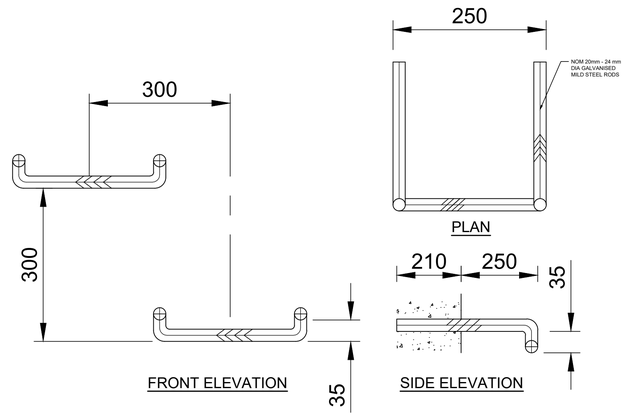
A MUSIC MODEL HAS BEEN PREPARED TO DETERMINE THE EFFECTIVENESS OF WATER QUALITY TREATMENT DEVICES FOR THE DEVELOPMENT.

TREATMENT EFFECTIVENESS SUMMARY

	SOURCES	RESIDUAL LOAD	% REDUCTION	% TARGET
TOTAL SUSPENDED SOLIDS (kg/yr)	226	38	83.2	80
TOTAL PHOSPHORUS (kg/yr)	0.402	0.158	60.6	45
TOTAL NITROGEN (kg/yr)	2.05	1.1	46.1	45
GROSS POLLUTANTS (kg/yr)	28.5	1.72	94	70

STORMWATER DRAINAGE STRATEGY

- ALL PITS & PIPES ARE DESIGNED TO ACCEPT A 20 YEAR ARI STORM EVENT
- PITS AS NOTED ON PLAN SHALL HAVE OCEANGUARD INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION
- ON-SITE DETENTION HAS BEEN PROVIDED FOR THE DEVELOPMENT IN ACCORDANCE WITH MUSWELLBROOK SHIRE COUNCIL (REFER TO OSD DESIGN SUMMARY)
- STORMWATER QUALITY MEASURES HAVE BEEN IMPLEMENTED TO MEET MUSWELLBROOK SHIRE COUNCIL REQUIREMENTS (REFER TO TREATMENT EFFECTIVENESS SUMMARY)



STEP IRON DETAILS

NOT TO SCALE

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

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PROJECT
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TITLE
STORMWATER DRAINAGE DETAILS - SHEET 03

SCALES	DATE
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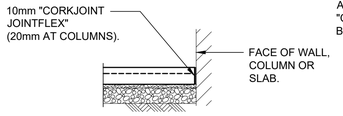
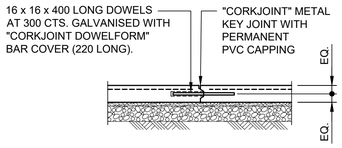
DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

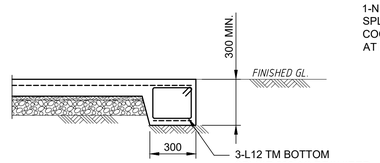
ISSUE	PROJECT No.	DRAWING No.
A	9247	C.32



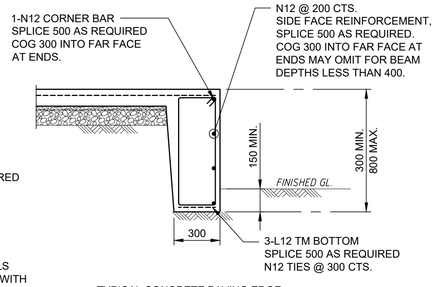
ISOLATION JOINT DETAIL
TYPICAL AT INTERFACE OF PAVEMENT SLAB AND STRUCTURAL SLAB UNO
SHOWN THUS ON PLAN IJ



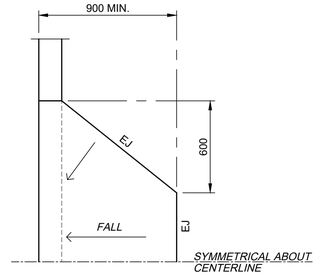
DOWELLED KEY JOINT DETAIL
TYPICAL AT MAX 6m CENTRES BETWEEN 'EJ's UNO ON PLAN
SHOWN THUS ON PLAN DKJ

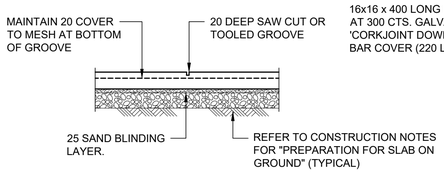


TYPICAL CONCRETE PAVING EDGE THICKENING DETAIL (ET)
TYPICAL AT EDGES OF PAVEMENT SLAB UNO
SHOWN THUS ON PLAN ET

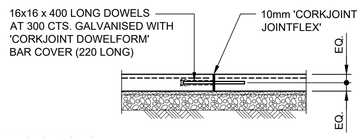


TYPICAL CONCRETE PAVING EDGE THICKENING DETAIL (ET1)
TYPICAL WHERE EDGE OF PAVEMENT SLAB IS MORE THAN 150mm ABOVE EXISTING OR PROPOSED GROUND LINE , UNO
SHOWN THUS ON PLAN ET1

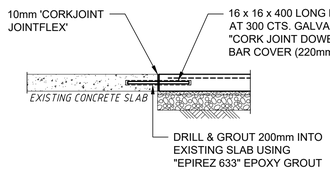




SAWN/TOOLED JOINT DETAIL
TYPICAL AT MAX 3m CENTRES BETWEEN 'DKJ's UNO ON PLAN
SHOWN THUS ON PLAN SJ



EXPANSION JOINT DETAIL
TYPICAL AT MAX 18m CENTRES AND 90 DEGREE RE-ENTRANT CORNERS OF FOOTPATH PAVEMENT SLABS UNO ON PLAN
SHOWN THUS ON PLAN EJ



TYPICAL JUNCTION WITH EXISTING PAVEMENT
UNO, TYPICAL AT ALL INTERFACES OF NEW AND EXISTING PAVEMENT SLABS
SHOWN THUS ON PLAN EJX

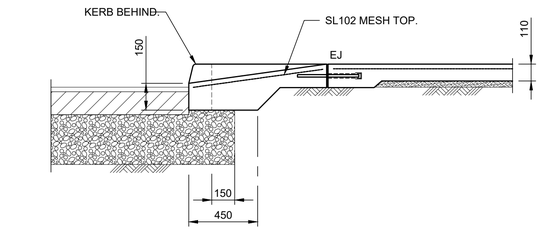
SAW CUTTING TABLE	
DAILY MAXIMUM TEMP. (°C)	LATEST TIME FOR SAWING (HOURS)
< 10	48
10 - 20	36
20 - 30	24
> 30	12

TYPICAL EXTERNAL CONCRETE FOOTPATH PAVEMENT JOINT DETAILS

SCALE 1:20

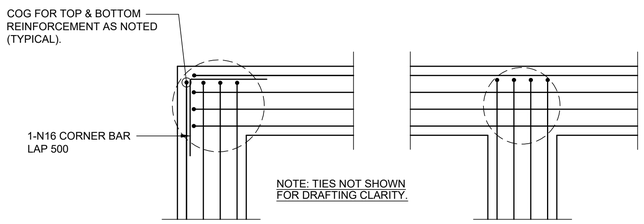
110mm THICK PAVING SLABS WITH SL102 MESH TOP THROUGHOUT U.N.O.

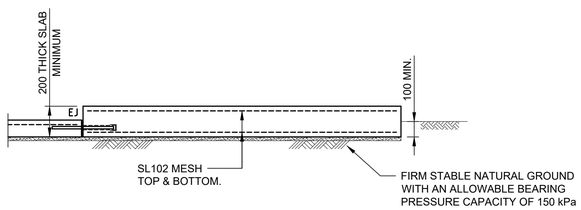
DENOTED ON PLAN



TYPICAL PEDESTRIAN ACCESS RAMP (PRAM RAMP) DETAILS

SCALE 1:20





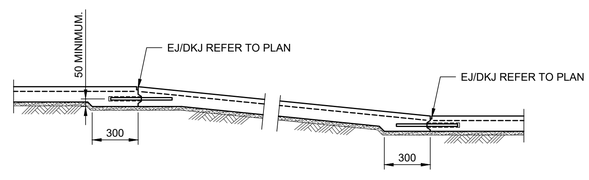
TYPICAL SECTION THROUGH SERVICES PLINTH

SCALE 1:20

SHOWN ON PLAN THUS - S1

REFER TO ARCHITECTS PLANS FOR LOCATIONS

200mm THICK SLAB ON GROUND (F'c = 32MPa)
PROVIDE SL102 MESH TOP & BOTTOM THROUGHOUT U.N.O.

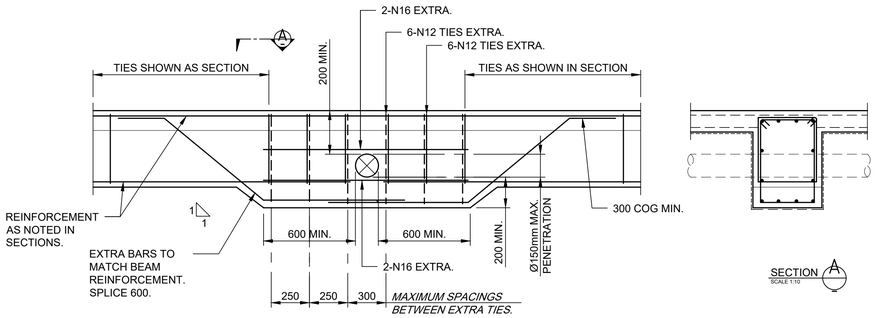


TYPICAL SECTION THROUGH RAMP

SCALE 1:20

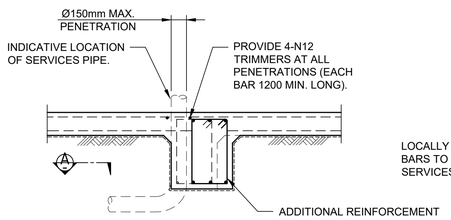
TYPICAL FOOTING BEAM INTERSECTION DETAILS

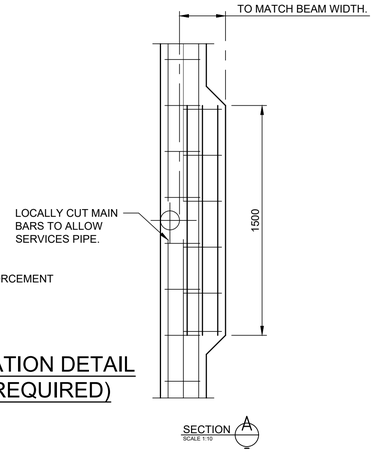
SCALE 1:20



HORIZONTAL SERVICES PIPE PENETRATION DETAIL IN EDGE AND INTERNAL BEAMS (IF REQUIRED)

SCALE 1:20





VERTICAL SERVICES PIPE PENETRATION DETAIL IN EDGE AND INTERNAL BEAMS (IF REQUIRED)

SCALE 1:20

NOT FOR CONSTRUCTION

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A	FOR DA ISSUE	-	10.05.24

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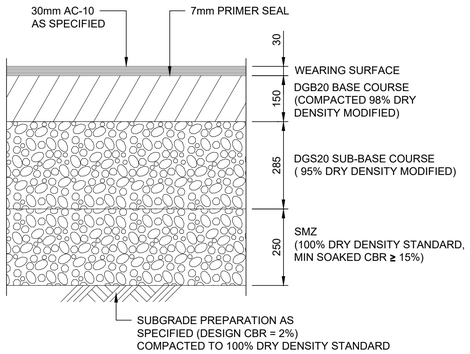
PROJECT
Pacific Brook Christian School, Muswellbrook - STAGE 1
72 - 74 Maitland Street, Muswellbrook NSW

TITLE
CIVIL EXTERNAL WORK DETAILS - SHEET 01

SCALES	DATE
as noted @ A1	MAY' 2024

DRAWN	DESIGN	VERIFIED	APPROVED
C.KE	G.K / M.G	-	-

ISSUE	PROJECT No.	DRAWING No.
A	9247	C.40

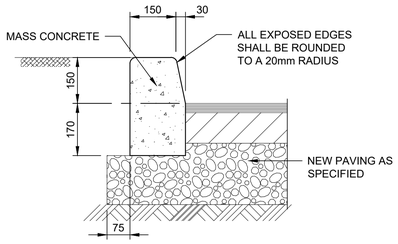


TYPICAL FLEXIBLE PAVEMENT SECTION

SCALE 1:10

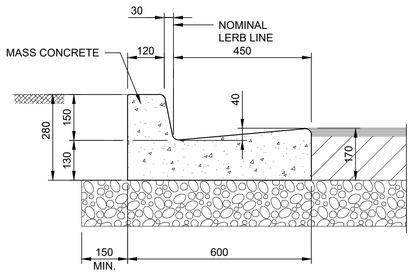
DESIGN TRAFFIC LOADING = $4x10^5$ ESA

DENOTED ON PLAN



TYPICAL 'KO' KERB ONLY DETAIL

SCALE 1:10

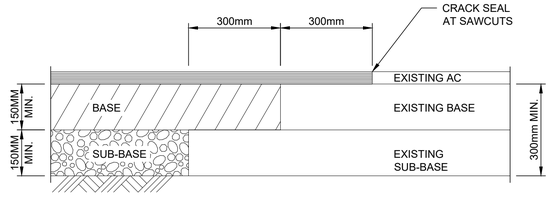


TYPICAL 'K&G' KERB & GUTTER DETAIL

SCALE 1:10

DENOTED 'K&G' ON PLAN

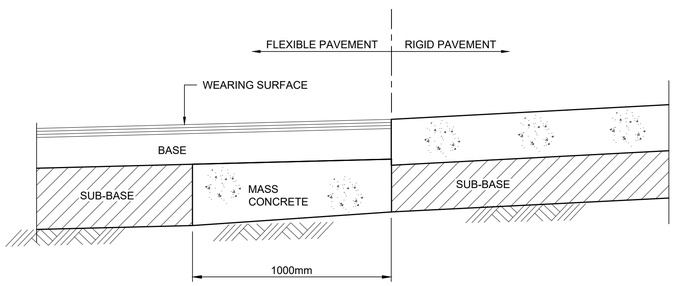
PROVIDE FULL DEPTH 12mm BITUMEN IMPREGNATED FIBREBOARD
JOINTS AT 6 METER MAXIMUM CENTERS



REMOVE A STRIP OF THE EXISTING PAVEMENT AT LEAST 300 WIDE FOR ITS FULL DEPTH
TRIM THE NEW EDGE TO AN ANGLE OF APPROXIMATELY 45° IN STEPS OF MAXIMUM HEIGHT 150mm
THEN PLACE NEW PAVEMENT MATERIAL
TRIM THE SEAL TO A NEAT EDGE USING PNEUMATIC TOOLS OR OTHER SUITABLE MEANS

DETAIL OF NEW TO EXISTING PAVEMENT

SCALE 1:10



DETAIL - FLEXIBLE TO RIGID PAVEMENT

NOT TO SCALE

NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	APPROVED	DATE
A	FOR DA ISSUE	-	10.05.24

ARCHITECT

NBRSARCHITECTURE.

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PROJECT

Pacific Brook Christian School,
Muswellbrook - STAGE 1

72 - 74 Maitland Street, Muswellbrook NSW

TITLE

CIVIL EXTERNAL WORK
DETAILS - SHEET 02

SCALES	DATE
as noted @ A1	MAY' 2024

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