

THORTON BRENTWOOD PTY LTD CRESTWOOD ROAD LOT 502 SUBDIVISION



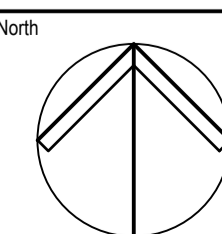
LOCALITY PLAN
NOT TO SCALE

DRAWING SCHEDULE	
DRAWING No.	DESCRIPTION
DA101.001	COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE
DA101.101	CONSTRUCTION NOTES
DA102.001	OVERALL LAYOUT PLAN
DA102.101	EXISTING SITE PLAN
DA103.001	GENERAL ARRANGEMENT PLAN
DA104.001	MD01 PLAN AND LONGSECTION
DA104.101	DRIVEWAY NOTES AND DETAILS
DA105.001	STORMWATER PLAN
DA105.101	STORMWATER CATCHMENT PAN
DA105.201	STORMWATER LONGSECTION
DA105.301	STORMWATER CALCULATIONS
DA106.001	EROSION AND SEDIMENT NOTES
DA106.101	EROSION AND SEDIMENT CONTROL PLAN
DA106.201	EROSION AND SEDIMENT CONTROL DETAILS
DA107.001	PROPOSED SERVICING PLAN

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved.
It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811



Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title
**COVER SHEET, LOCALITY PLAN
AND DRAWING SCHEDULE**

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	N.T.S.		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA101.001	A		

NOT FOR CONSTRUCTION

GENERAL NOTES

- THE DRAWING DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.
 - THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND WRITTEN INSTRUCTIONS. ANY DISCREPANCY OR VARIATION SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK.
 - ALL WORK TO BE IN ACCORDANCE WITH MAITLAND CITY COUNCIL (MCC) MANUAL OF ENGINEERING STANDARDS (MOES).
 - NO ADDITIONAL OR P.C. WORKS SHALL BE UNDERTAKEN WITHOUT THE SUPERINTENDENTS APPROVAL. CONFIRM COUNCIL INSTRUCTIONS WITH SUPERINTENDENT.
 - THE CONTRACTOR MUST ENSURE SUPERINTENDENT AND/OR COUNCIL APPROVAL OF MATERIALS, PRIOR TO DELIVERY TO SITE.
 - DIVERSION OF WATER AND THE PROTECTION OF WORKS IS THE CONTRACTORS RESPONSIBILITY.
 - THE CONTRACTOR HAS SOLE RESPONSIBILITY TO EXERCISE CARE AND TAKE PRECAUTIONS TO ENSURE CONSTRUCTION ACTIVITIES DO NOT AFFECT ADJACENT PROPERTIES, ACCESS OR STRUCTURES. MAINTAIN EMBANKMENTS AND STRUCTURES IN STABLE CONDITION DURING CONSTRUCTION ENSURING NO PART IS OVERSTRESSED. TEMPORARY STRUCTURES, FORMWORK, TEMPORARY BRACING, SHORING AND THE LIKE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 - THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FULL QA DOCUMENTATION OF THE PROJECT TO ENSURE WORKS MEET THE RELEVANT SECTIONS OF MOES FOR ROADS, DRAINAGE, WATER AND SEWER. A COMPLETE ITP PLAN SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO WORKS COMMENCING ON SITE.
 - CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE REPAIRED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY.
 - UNDERTAKE WORKS TO PRINCIPLES OF AS 9001. SUBMIT WORK METHOD STATEMENT TO SUPERINTENDENT.
- HOLD POINTS SHALL APPLY TO:
- APPROVAL OF WORK METHOD STATEMENT
 - APPROVAL OF TRAFFIC CONTROL PLAN
 - LOCATION OF INGROUND SERVICES
 - SETOUT OF EACH AREA OF WORKS
 - CERTIFICATION OF SUBGRADE
 - STORMWATER PIPEWORK PRIOR TO BACKFILL
 - CONDUITS PRIOR TO BACKFILL
 - WORK AS EXECUTED SURVEY
 - GEOTECHNICAL CERTIFICATION.
- CONTRACTOR TO PROVIDE ALL SURVEY SETOUT, AND WAE FROM DATA. REFER SURVEY INFORMATION BY AB REGISTERED SURVEYORS
REF No: AB1042
DATED: 25.02.2020
 - ALL WORKS ARE TO BE SETOUT BY A REGISTERED SURVEYOR.
 - ALL LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCH MARKS ONLY. STANDARD DATUM FOR ALL DRAWINGS IS AUSTRALIAN HEIGHT DATUM (A.H.D.).
 - A TRAFFIC CONTROL PLAN TO AS 1742.3 IS TO BE SUBMITTED TO COUNCIL FOR APPROVAL PRIOR TO WORKS COMMENCING.
 - SERVICE CONDUITS SHALL BE PLACED AS DIRECTED BY AUSGRID, NBN, AND AS REQUIRED BY COUNCIL.
 - PROPOSED SERVICES CROSSING EXISTING SEALED ROADS SHALL BE THRUST BORED UNDER THE ROAD SO AS NOT TO DAMAGE EXISTING SURFACES.
 - SCOUR PROTECTION, SUB SOIL DRAINAGE AND UNSUITABLE SUB-GRADE REPLACEMENT SHALL BE AT THE DIRECTION OF THE SUPERINTENDENT.
 - NO TREES ARE TO BE REMOVED OR LOPPED OTHER THAN THOSE SHOWN AND THOSE IN ROAD RESERVES AND AREAS WITHIN LOTS SUBJECT TO CUT & FILL, WITHOUT COUNCILS WRITTEN PERMISSION. A TREE INSPECTION WITH COUNCIL SHALL BE ARRANGED ONCE LOTS HAVE BEEN PEGGED.
 - ALL NEW WORKS ARE TO MAKE SMOOTH JUNCTIONS WITH ALL EXISTING CONDITIONS. AC JOINTS TO BE SAW CUT AT CONNECTION TO EXISTING PAVEMENT. THE CONTRACTOR IS TO MAKE ALL DUE ALLOWANCES FOR WORKS DURING CONSTRUCTION.
 - SUBSOIL DRAINAGE TO BE PROVIDED AS PER APPROVED PLANS.

STORMWATER NOTES

- PVC-U PIPEWORK INSTALLATION TO AS 2566 AND MANUFACTURER'S STANDARDS AND SPECIFICATIONS.
- PVC-U PIPE BEDDING SHALL BE IN ACCORDANCE WITH AS 2566 AND MANUFACTURER'S STANDARDS AND SPECIFICATIONS.
- MINIMUM GRADE TO STORMWATER LINES TO BE 1% (U.N.O.).
- CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
- ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
- PRECAST PITS SHALL NOT BE USED UNLESS WRITTEN APPROVAL IS OBTAINED FROM MCC.
- SUBSOIL DRAINAGE TO BE PROVIDED IN ALL ROAD RESERVES IN ACCORDANCE WITH MOES.
- PROVIDE 3.0m LENGTH OF 100 DIA. SUBSOIL DRAINAGE PIPE WRAPPED IN FILTER SOCK, AT UPSTREAM END OF EACH INTERALOTMENT PIT.
- ENSURE ADEQUATE TRENCH FOUNDATION AND BEDDING COMPACTION SPECIFICALLY ADJACENT TO DRAINAGE STRUCTURES AND PROTECTION TO PIPES FROM CONSTRUCTION TRAFFIC. CRACKED STORMWATER PIPES WILL NOT BE ACCEPTED.
- ALL INLET PIT GRATINGS AND PRECAST INLETS SHALL BE CONSTRUCTED TO COUNCILS STANDARD DRAWINGS.
- ALL PITS DEEPER THAN 0.9m BUT LESS THAN 1.2m TO BE MINIMUM INTERNAL WIDTH 600 x 900 UNO. ALL PITS DEEPER THAN 1.2m TO BE MINIMUM INTERNAL WIDTH 900SQ UNO AND ARE TO BE CONSTRUCTED WITH STEP IRONS IN ACCORDANCE WITH AS 1657 AND DETAILS.
- CARE TO BE TAKEN BY CONTRACTOR WHEN COMPACTING OVER BURIED PIPES.

EXISTING SERVICES AND FEATURES

- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION, REMOVAL AND DISPOSAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA AS DIRECTED OTHERWISE BY THE SUPERINTENDENT.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
- EXISTING BUILDINGS, EXTERNAL STRUCTURES, AND TREES SHOWN ON THESE DRAWINGS ARE FEATURES EXISTING PRIOR TO ANY DEMOLITION WORKS.
- CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF SUPERINTENDENT FOR TIME OF INTERRUPTION.

EARTHWORKS AND PAVEMENT NOTES

- ALL DISTURBED AREAS SHALL BE TOPSOILED WITH UP TO 100mm, GRASS SEEDED OR TURFED AND MULCHED AS SOON AS PRACTICABLE, AND BATTERS AND BERMS TREATED IMMEDIATELY AFTER CONSTRUCTION OF SEWERAGE AND STORMWATER. AREAS OF DISTURBANCE SHALL BE APPROVED BY THE SUPERINTENDENT. REFER EROSION AND SEDIMENT CONTROL PLAN.
 - GRASS TO BE IN ACCORDANCE WITH REQUIREMENTS. GRASS/TURF TO BE MAINTAINED BY CONTRACTOR AT ALL TIMES INCLUDING PERIODS OF INSUFFICIENT RAIN AND REPLACED AS REQUIRED.
 - MAINTENANCE ON THE SEEDED AND TURFED AREAS SHALL BE OVER A 3 MONTH PERIOD. TURF THE FULL WIDTH OF ALL EARTH DISH DRAINS. LAY 600mm WIDE TURF STRIPS TO EACH SIDE OF CONCRETE ACCESSWAYS, PATHWAYS, AT THE REAR OF ALL KERB AND GUTTERING (U.N.O) AND AT THE TOP OF CUT BATTERS. MULCH (IF AVAILABLE FROM SITE CLEARING) AND SEED ALL OTHER DISTURBED AREAS, INCLUDING TRENCHES. KAY TURF FOR THE FULL LENGTH AND WIDTH OF THE VERGE EXCLUDING THE VERGE WITHIN BOUNDARY ROAD.
 - REMOVE TOPSOIL, SLOPEWASH & DELETERIOUS MATERIAL. GEOTECHNICAL ENGINEER TO CONFIRM SPOIL & UNSUITABLE.
 - EXCAVATED MATERIAL SHALL BE SELECTED TO PLACE BETTER QUALITY AT FILL SUBGRADES. REPLACEMENT OF CUT SUB-GRADES MAY BE INSTRUCTED BY THE SUPERINTENDENT AS EARTHWORKS OPERATION.
 - IN-SITU DENSITY TESTS ARE TO BE CARRIED OUT ON ALL SIGNIFICANT FILLS, ROAD SUB-GRADES AND PAVEMENT COURSES AS DIRECTED BY THE SUPERINTENDENT. BENKELMAN BEAM TEST PAVEMENT BASECOURSE. ALL TESTS ARE TO BE CARRIED OUT BY A REGISTERED N.A.T.A. GEOTECHNICAL LABORATORY.
 - LOTS REQUIRING FILL SHALL BE CONSTRUCTED TO LEVEL 1 SUPERVISION WITH TESTING AND DOCUMENTATION SUITABLE TO DETERMINE FUTURE LOT CLASSIFICATION.
 - THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AS 3798. WHERE IT IS PROPOSED TO USE TEST METHOD AS 1289 EB.1 OR AS 1289 EB.2 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS AS DIRECTED.
 - EARTHWORKS, PREPARATIONS, SUB-GRADE CBR AND PAVEMENT THICKNESSES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. SUBMIT GEOTECHNICAL ENGINEER'S CERTIFICATE OF WORKS ON COMPLETION.
- REFER GEOTECHNICAL REPORT BY: QUALTEST
REF No: NEW19P-0018E-AF Rev 2
DATED: 22 MARCH 2021
- WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS ONE IN FOUR (1V:4H) BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE GEOTECHNICAL ENGINEER TO STANDARD PRACTICE.
 - ALL BATTERS ARE TO BE SCARIFIED TO ASSIST WITH ADHESION OF TOP SOIL TO BATTER FACE.
 - NO MATERIALS TO BE STOCKPILED ON FUTURE ALLOTMENTS WITHOUT APPROVAL IN WRITING FROM THE SUPERINTENDENT.
 - REMOVE EXCESS SPOIL AND DEMOLISHED MATERIAL FROM SITE TO LOCATION AND DETAIL DETERMINED BY THE CONTRACTOR. AT CONTRACTORS COST.
 - PAVEMENT BASE COURSE SUBJECT TO BENKELMAN BEAM TEST AS REQUIRED.
 - SUB-GRADE DEFLECTION SHALL BE CONFIRMED BY THE SUPERINTENDENT BY PROOF ROLL WITH A 10 TONNE OR HEAVIER DEAD WEIGHT ROLLER. SUB-GRADE REPLACEMENT MAY BE INSTRUCTED. RIP ROCK SUB-GRADE TO 300mm.
 - PAVEMENT MATERIAL REQUIREMENTS:
 - A.C. IN ACCORDANCE WITH MCC MOES.
 - BASE COURSE - FLEXIBLE CRUSHED ROCK OR GRAVEL IN ACCORDANCE WITH MCC MOES INFRASTRUCTURE SPECIFICATION.
SOAKED CBR (4 DAYS) 80% MIN, PI 2% MIN, 6% MAX.
 - BASE COURSE - RIGID, 32MPa REINFORCED CONCRETE MIN 50 COVER.
 - SUB-BASE - FLEXIBLE CRUSHED ROCK OR GRAVEL IN ACCORDANCE WITH MCC MOES.
SOAKED CBR (4 DAYS) 30% MIN, PI 12% MAX.
 - SUB-BASE - RIGID, MIN. UCS 5MPa HEAVILY BOUND BASE OR LEAN MIX CONCRETE IN ACCORDANCE WITH MCC MOES.
 - SELECT FILL - DEPENDANT ON SUBGRADE MOISTURE CONDITIONS. REFER TO GEOTECHNICAL REPORT.

EARTHWORKS AND PAVEMENT NOTES CONT:

- CBR REQUIREMENTS:
 - SUB-GRADE MIN CBR 3% (U.N.O).
 - SELECT SUB-GRADE/SUB-BASE REPLACEMENT MIN CBR 30%
 - GEOTECHNICAL ENGINEER TO CONFIRM AT BOX OUT.
 - COMPACTION REQUIREMENTS:
 - A.C. IN ACCORDANCE WITH MCC INFRASTRUCTURE SPECIFICATION.
 - BASE COURSE MIN 98% MODIFIED (AS 1289 - 5.2.1)
 - SUB-BASE MIN 95% MODIFIED (AS 1289 - 5.2.1)
 - SUB-GRADE MIN 100% STD (AS 1289 - 5.1.1).
- SELECT SUB-GRADE/SUB-GRADE REPLACEMENT MIN 100% STD (AS 1289 - 5.1.1).
- FILL UP TO 0.3m BELOW SUB-GRADE MIN 95% STD (AS 1289 - 5.1.1).
- MOISTURE CONTENT SUB-GRADE 60-90% STD OMC.

PAVEMENT MARKING AND SIGNAGE NOTES

- THE WORK SHALL INCLUDE ALL PAVEMENT MARKING TO ROADS, HARDSTANDS, PATHS, CARPARKS AND THE TRAFFICABLE AREAS.
- PAVEMENT MARKING AND PAINT SHALL BE IN ACCORDANCE WITH AS 1742.2 AND THE RELEVANT LOCAL AND STATE AUTHORITY GUIDELINES AND SPECIFICATIONS.
- PAVEMENT MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO SPRAYING.
- PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm TO 0.40mm.
- EXISTING PAVEMENT MARKING IN CONFLICT WITH NEW WORKS SHALL BE REMOVED IN ACCORDANCE WITH AS 1742.2. REDUNDANT PAVEMENT PARKING MUST BE REMOVED BY GRINDING, BLASTING OR RESURFACING. PAINTING OVER WITH BLACK BITUMINOUS PAINT IS NOT ACCEPTABLE.
- RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH AS 1742.2 AND AS DIRECTED BY SUPERINTENDENT.
- SIGNAGE SHALL BE IN ACCORDANCE WITH AS 1742.1, AS 1742.2, AS 2890.1 AND THE RELEVANT LOCAL AND STATE AUTHORITY GUIDELINES AND SPECIFICATIONS.
- EXISTING SIGNAGE IN CONFLICT WITH NEW WORKS SHALL BE REMOVED OR RELOCATED AS DIRECTED BY THE SUPERINTENDENT.
- PAVEMENT MARKING NOTATION IS AS FOLLOWS:

DOUBLE TWO-WAY	BB
STOP LINE	TF
GIVEWAY LINE	TB1

SAFETY IN DESIGN

- THE DESIGN SAFETY ASSESSMENT HAS BEEN CARRIED OUT WITH REFERENCE TO CURRENT WHS REGULATIONS FOR DESIGN TO BE SAFE SO FAR AS REASONABLY PRACTICABLE. HAZARD AND RISK IDENTIFICATION IS BASED ON INFORMATION AVAILABLE TO THE DESIGNER AT THE TIME OF THE DESIGN.
- ASSESSMENT IS LIMITED TO THE SCOPE OF ACOR'S COMMISSION INCLUDING:
 - DRIVEWAY
 - EARTHWORKS
 - STORMWATER DRAINAGE
- IDENTIFIED HAZARDS ARE THOSE WHICH ARE AFFECTED BY THE DESIGN, AND ARE WITHIN THE CONTROL OF THE DESIGNER.
- HAZARDS AND RISK RELATING TO CONSTRUCTION, OPERATION, MAINTENANCE AND DEMOLITION MUST BE CONSIDERED BY THE OWNER, MANAGER, BUILDER, USER, MAINTAINER AND DEMOLISHER. ALL SUCH ENTITIES ARE ASSUMED TO BE QUALIFIED, COMPETENT AND EXPERIENCED.
- SEEK ADVICE WHERE ACTIVITIES ARE OUTSIDE THE FIELD OF EXPERIENCE OF THE OPERATOR/BUILDER/MAINTAINER, INCLUDING BUT NOT LIMITED TO QUALIFIED STRUCTURAL AND GEOTECHNICAL ENGINEERS.
- NO ATYPICAL HAZARDS HAVE BEEN IDENTIFIED IN THE DESIGN PROCESS.
- WHERE STATE OR TERRITORY LEGISLATION EXISTS, OR OTHERWISE AS MAY BE REQUIRED, A DESIGN VERIFICATION STATEMENT WILL BE PROVIDED BY THE CONSULTING ENGINEER.

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd. ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG
Issue	Description	Date	Drawn	Approved

Client
LANDLINK PROPERTY

30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811



Project
BRENTWOOD LOT 502 SUBDIVISION

**CRESTWOOD ROAD
THORNTON, NSW 2322**

Drawing Title
CONSTRUCTION NOTES

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	N.T.S.		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA101.101	A		

NOT FOR CONSTRUCTION

P:\2022\220090\DWG\CD\220090-CD-011-01.dwg 18.02.22 - 11:21 AM

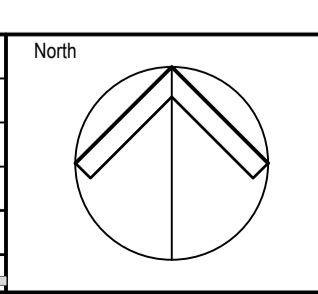


LEGEND	
	LIMIT OF WORKS
	PROPOSED SUBDIVISION STAGE
	EXISTING SUBDIVISION STAGE
	FUTURE SUBDIVISION STAGE

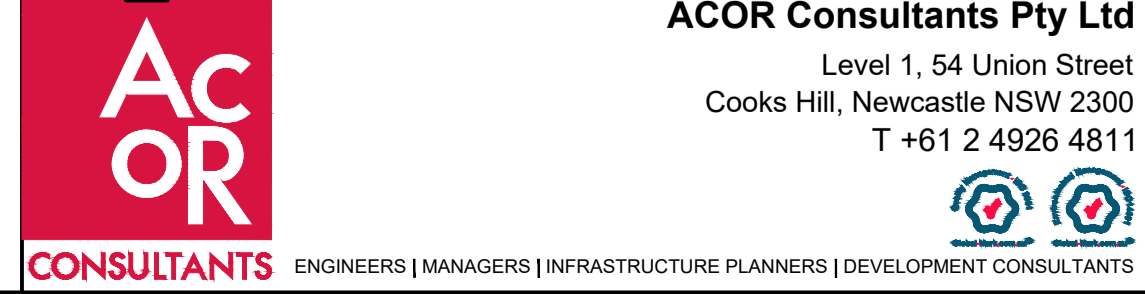
SCALE 1:1000(A1) / 1:2000(A3)

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300







ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title OVERALL LAYOUT PLAN					
Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	1:1000		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA102.001	A		

NOT FOR CONSTRUCTION

LEGEND

-  - EXISTING SURFACE CONTOURS
-  - EXISTING STORMWATER
-  - EXISTING SEWER
-  - EXISTING WATER



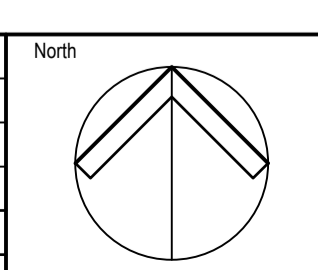
DP 1251
2.0/2.

0 2 4 8 12 16 20 metres
SCALE 1:200(A1) 1:400(A3)

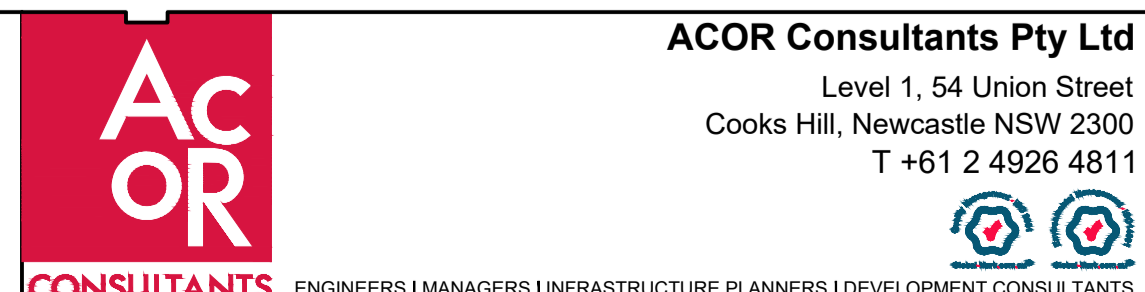
NOT FOR CONSTRUCTION

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300



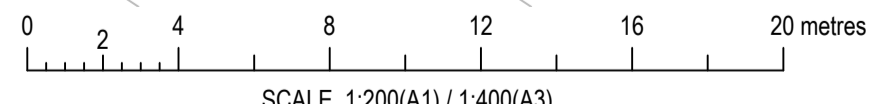
ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title		Project No.		Scale		A1		G.A. Check		Date	
EXISTING SITE PLAN		NSW220090		1:200				BG		18.02.22	
Drawn	Date	Scale	A1	G.A. Check	Date	Designed	Project No.	Dwg. No.	Issue		
MM	Feb-22	1:200		BG	18.02.22	CD	NSW220090	DA102.101	A		

P:\2022\NSW220090\DWG\DA102.101.dwg

LEGEND	
	- EXISTING SURFACE CONTOURS
	- DESIGN SURFACE MAJOR CONTOUR
	- DESIGN SURFACE MINOR CONTOUR
	- PROPOSED DESIGN
	- PROPOSED DRIVEWAY
	- EXISTING STORMWATER
	- PROPOSED STORMWATER
	- EXISTING SEWER
	- EXISTING WATER
	- PROPOSED SEWER
	- PROPOSED WATER
	- DRIVEWAY CONTROL

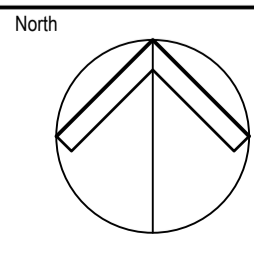


SCALE 1:200(A1) / 1:400(A3)

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

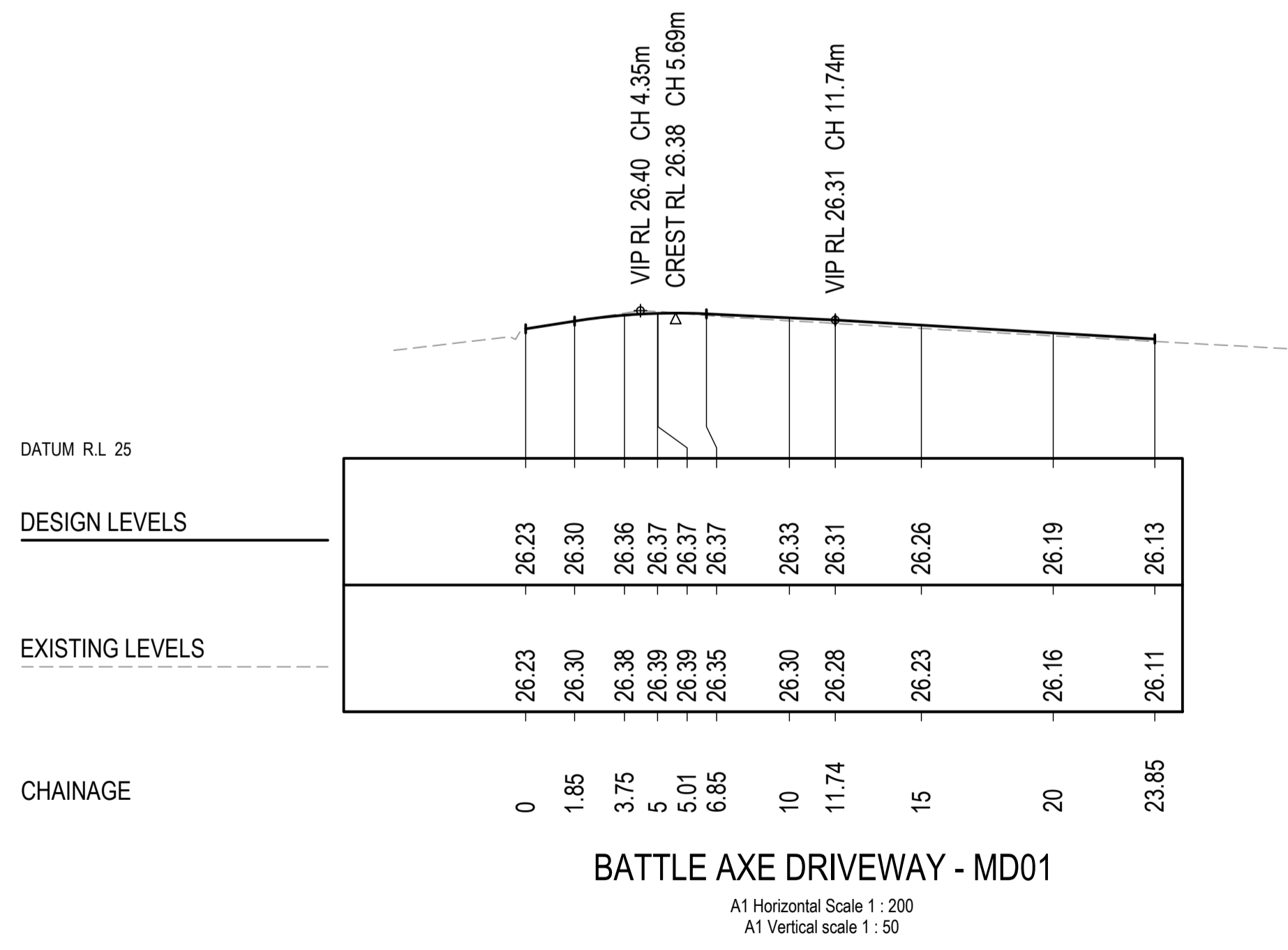
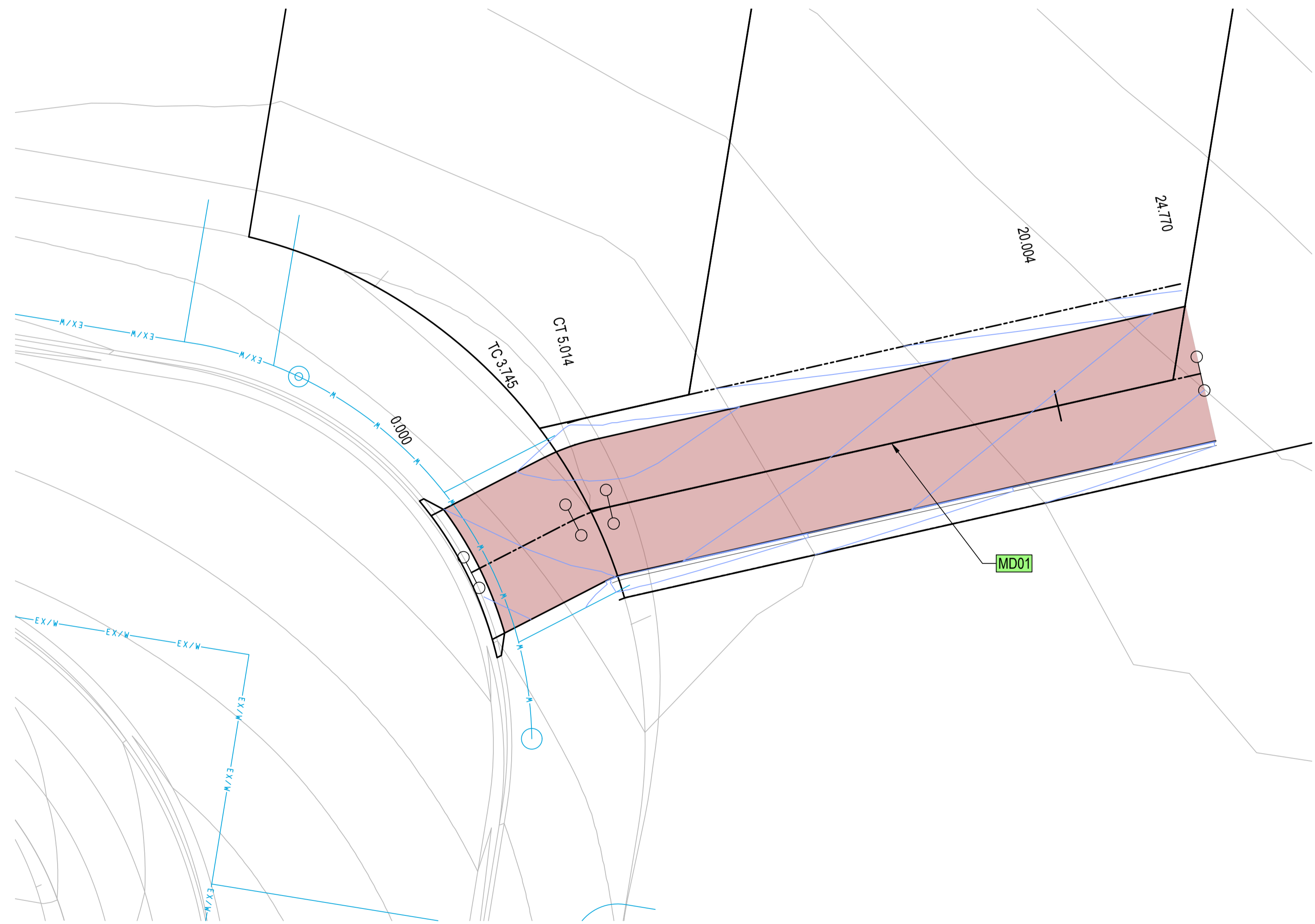
Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title GENERAL ARRANGEMENT PLAN					
Drawn MM	Date Feb-22	Scale 1:200	A1	G.A. Check BG	Date 18.02.22
Designed CD	Project No. NSW220090	Dwg. No. DA103.001	Issue A		

NOT FOR CONSTRUCTION

LEGEND	
	- DESIGN SURFACE
	- EXISTING SURFACE
	- PROPOSED STORMWATER MAIN
	- PROPOSED SEWER MAIN
	- PROPOSED WATER MAIN

LEGEND	
	- EXISTING SURFACE CONTOURS
	- DESIGN SURFACE MAJOR CONTOUR
	- DESIGN SURFACE MINOR CONTOUR
	- PROPOSED DESIGN
	- PROPOSED DRIVEWAY
	- EXISTING STORMWATER
	- PROPOSED STORMWATER
	- EXISTING SEWER
	- EXISTING WATER
	- PROPOSED SEWER
	- PROPOSED WATER
	- DRIVEWAY CONTROL

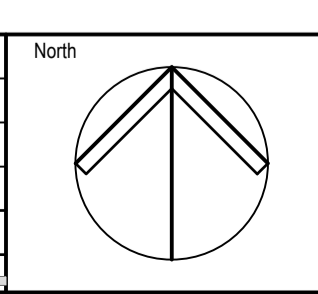


BATTLEAXE DRIVEWAY - MD01
SCALE 1:100



© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300

ACOR CONSULTANTS
ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	AS SHOWN	BG	BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA104.001	A		

NOT FOR CONSTRUCTION

CONCRETE NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS 3600, CURRENT EDITIONS WITH AMENDMENTS EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- CONCRETE TO COMPLY WITH THE FOLLOWING:
28 DAY COMPRESSIVE STRENGTH - $F'c = 32\text{MPa}$
28 DAY FLEXURAL STRENGTH $F'_{ef} = 4.5\text{MPa}$
MAX 28 DAY SHRINKAGE - 600 MICROSTRAIN
- READYMIX CONCRETE SUPPLY SHALL COMPLY WITH AS1379.
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS10120.
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- 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.
- CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESSES OF APPLIED FINISHES.
- 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.
- CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SERVICES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT. APPROVED SPRAYED ON CURING COMPOUNDS THAT COMPLY WITH AS3799 MAY BE USED WHERE FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURER'S SPECIFICATION). POLYHTENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE NOT PROTECTED FROM WIND AND TRAFFIC.
- THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL OBTAINED.
- REINFORCEMENT SYMBOLS:

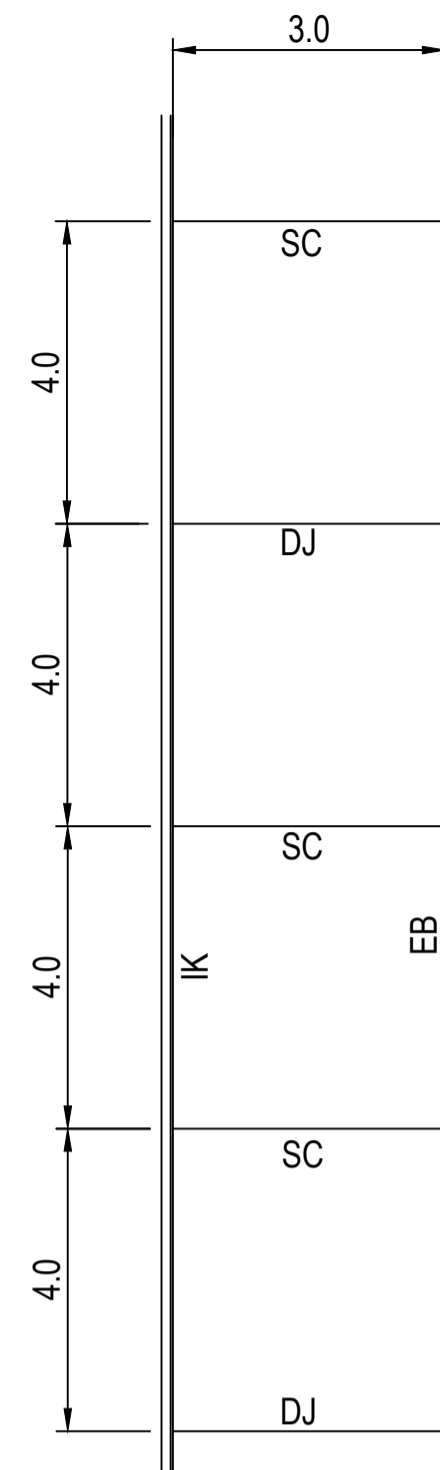
'R' DENOTES ROUND BAR, 250MPa GRADE, NORMAL DUCTILITY
'SL' DENOTES SQUARE MESH, DEFORMED BAR, 500MPa GRADE, LOW DUCTILITY
'RL' DENOTES RECTANGULAR MESH, DEFORMED BAR, 500MPa GRADE, LOW DUCTILITY

NUMBER OF BARS IN GROUP } BAR GRADE AND TYPE
17 N20 - 250 }
NOMINAL BAR SIZE IN mm } SPACING IN mm

- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
- FABRIC SHALL BE LAPPED 2 TRANSVERSE WIRES PLUS 50mm. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH 3 WRAPS OF THE WIRE.

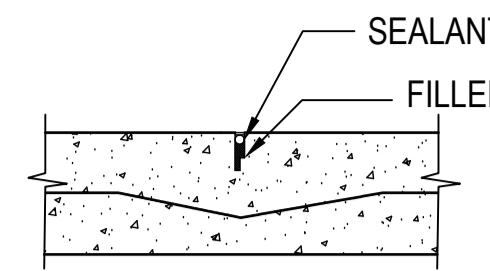
JOINTING NOTES

- ALL WORK IN ACCORDANCE WITH "GUIDE TO RESIDENTIAL STREETS AND PATHS" BY CEMENT & CONCRETE ASSOC. OF AUST.
- SURFACE FINISH SHALL BE LIGHT BROOM OR HESSIAN BAG U.N.O. ISOLATION JOINTS AROUND S.W. PITS.
- ISOLATION JOINTS AND N12 TRIMMER BARS AROUND S.W. PITS.
- KERB AND PAVEMENT JOINTING TO ALIGN.
- CONCRETE JOINTING AS SHOWN ON PLAN OR AT 5m MAX. CENTRES - TYPICAL ALL CONCRETE ROADS.
- EXPANSION JOINTS (EJ) AS SHOWN ON PLAN OR AT 30m INTERVALS MAX.
- SEALANT TO BE POLYSULPHIDE OR EQUIVALENT INSTALLED TO MANUFACTURER'S SPECIFICATION.
- FILLER TO BE ABLEFLEX OR EQUIVALENT INSTALLED TO MANUFACTURER'S SPECIFICATION.
- SAWCUTS TO BE CARRIED OUT WITHIN 24hrs OF POUR. UNLESS OTHERWISE APPROVED BY THE ENGINEER.



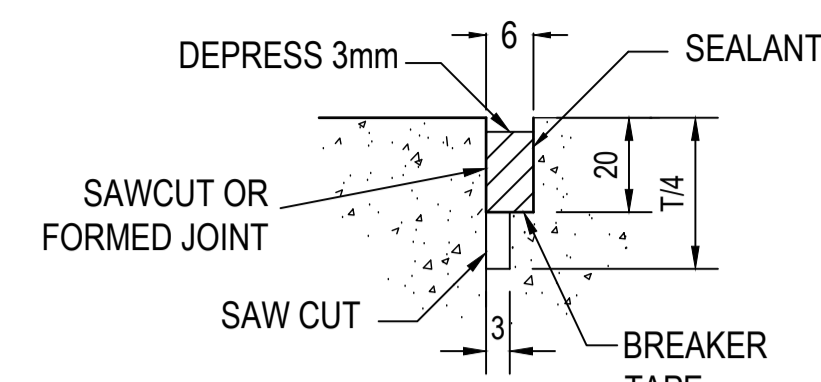
TYPICAL BATTLEAXE JOINTING PLAN

N.T.S

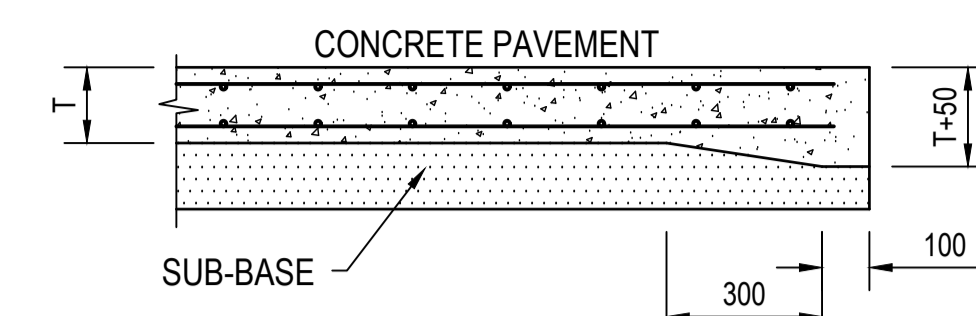


DEPRESS FABRIC MESH (CUT EVERY 2nd. BAR) UNDER SAW CUT (TOP FABRIC IF TWO LAYERS)

SAWCUT (SC)
NOT TO SCALE

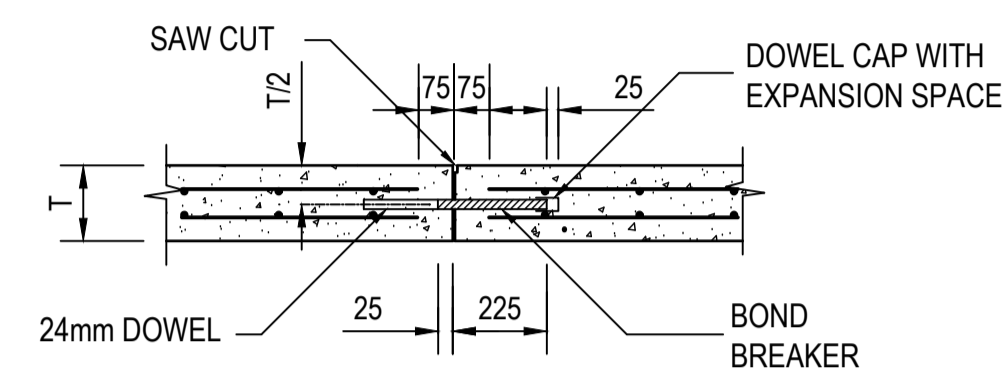


SEALANT DETAIL
NOT TO SCALE



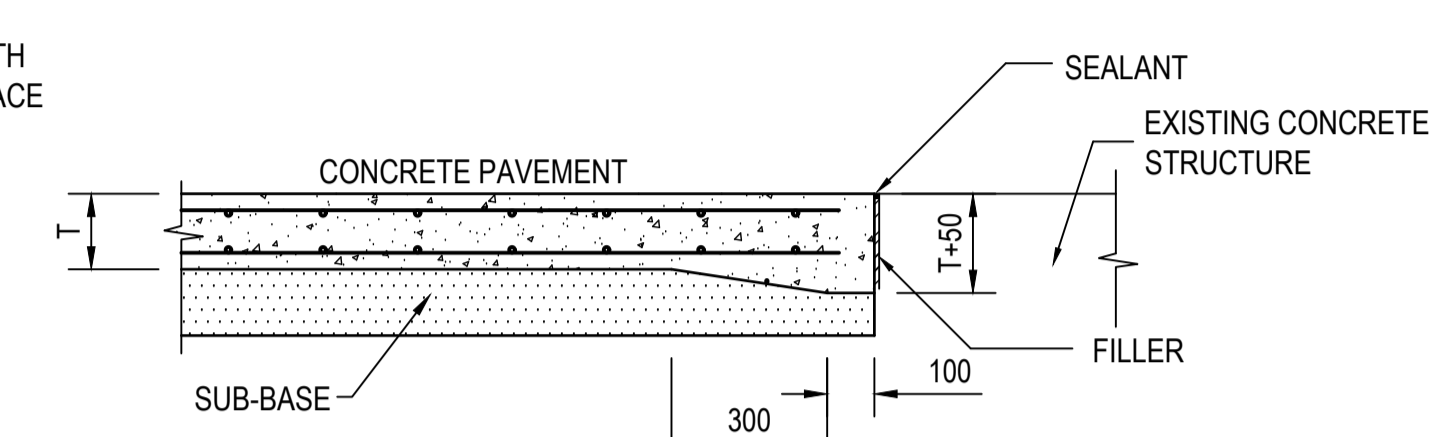
EDGE BEAM (EB)
NOT TO SCALE

TYPICAL JOINTING DETAILS

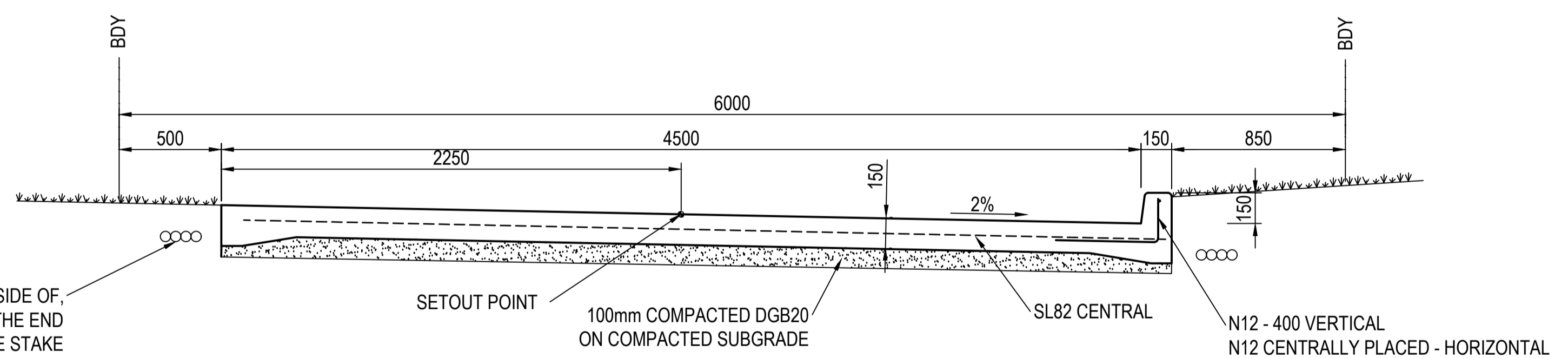


DOWELLED JOINT (DJ)

MAX. SPACING 15m
NOT TO SCALE



ISOLATION JOINT (IJ)
NOT TO SCALE

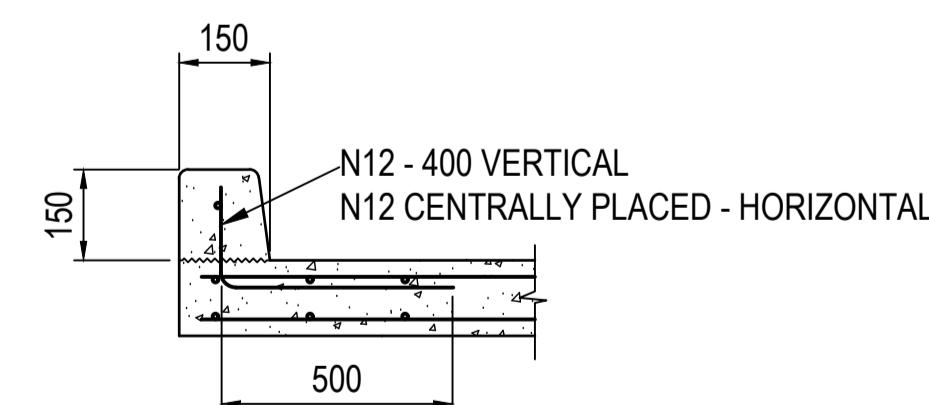


SERVICE CONDUITS TO BE INSTALLED ON EACH SIDE OF, AND TO THE END OF THE BATTLEAXE DRIVEWAY. THE END OF EACH CONDUIT TO BE LOCATED BY A WHITE STAKE AND CLEARLY MARKED WITH WITH APPROPRIATE LOT NUMBER AND SERVICE TYPE. CONTRACTOR TO CONFIRM REQUIRED SERVICES AND CONDUIT REQUIREMENTS.

NOTE: MIN 40 COVER TO ALL REINFORCEMENT

TYPICAL BATTLEAXE DRIVEWAY WITH KERB DETAIL - 1

N.T.S



INTEGRAL KERB DETAIL (IK)

NOT TO SCALE

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG

North

Client
LANDLINK PROPERTY

30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811



ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title
DRIVEWAY NOTES AND DETAILS

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	N.T.S.		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA104.101	A		

NOT FOR CONSTRUCTION

LEGEND	
	- PROPOSED STORMWATER PIPE
	- PROPOSED STORMWATER PIT
	- EXISTING WATER MAIN
	- EXISTING SEWER MAIN
	- EXISTING STORMWATER PIPE



DP 1251
2.0/2.

BREAK INTO EXISTING PIT,
CONNECT PIPE AND MAKE GOOD.

A-1

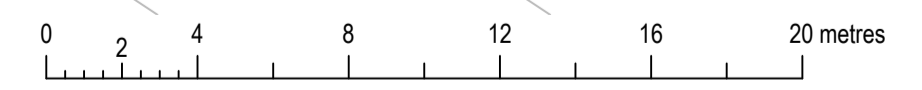
A-2

G-2

5021
556m²

5022
597m²

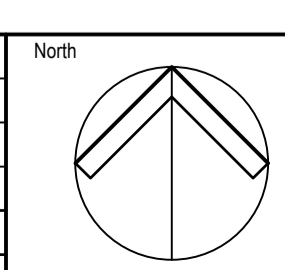
5023
672m²



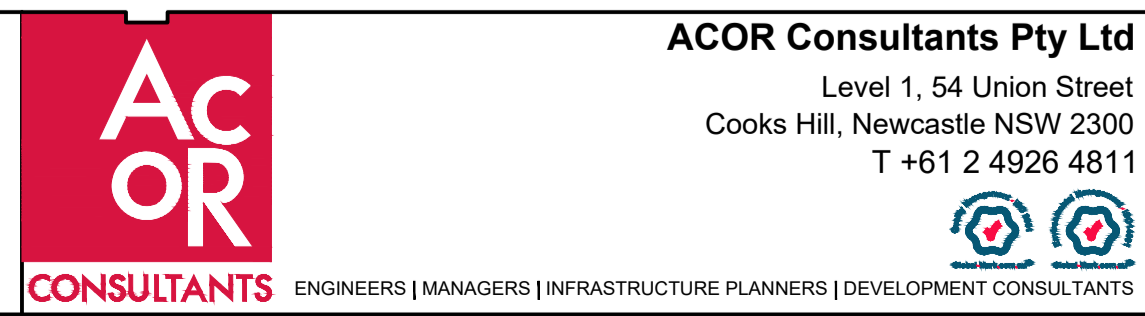
SCALE 1:200(A1) 1:400(A3)

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:				
Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300





ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title STORMWATER PLAN				
Drawn	Date	Scale	A1	G.A. Check
MM	Feb-22	1:200		BG
Designed	Project No.	Dwg. No.	Issue	Date
CD	NSW220090	DA105.001	A	18.02.22

NOT FOR CONSTRUCTION

LEGEND

-  - PROPOSED STORMWATER CATCHMENT
-  - PROPOSED STORMWATER

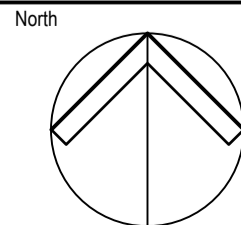


SCALE 1:200(A1) / 1:400(A3)

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR CONSULTANTS
ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

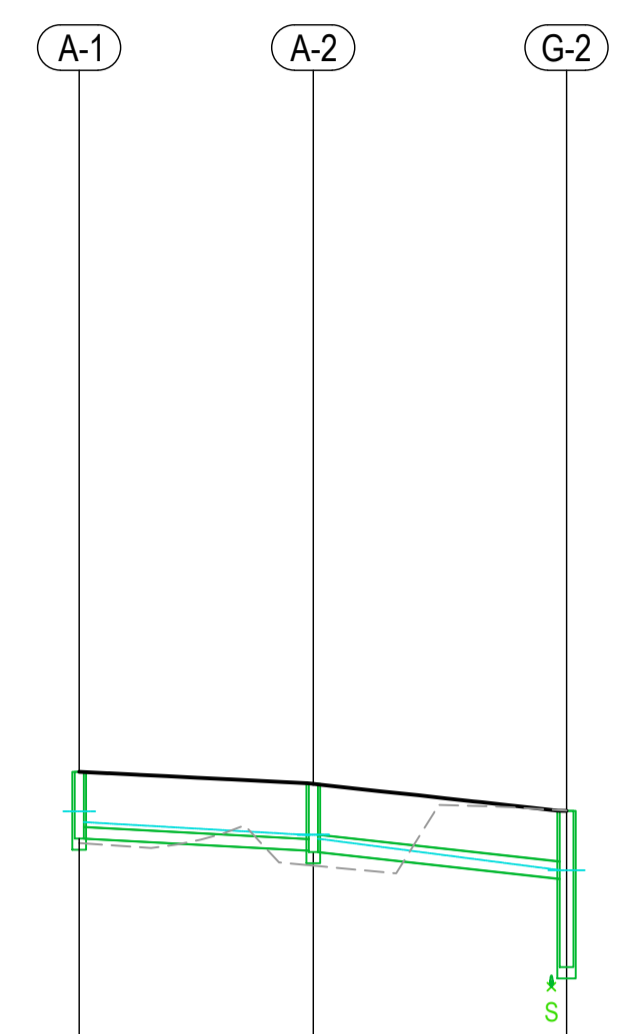
Drawing Title
STORMWATER CATCHMENT PAN

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	1:200		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA105.101	A		

NOT FOR CONSTRUCTION

P:\2022\220090\DWG\DA105.101.dwg

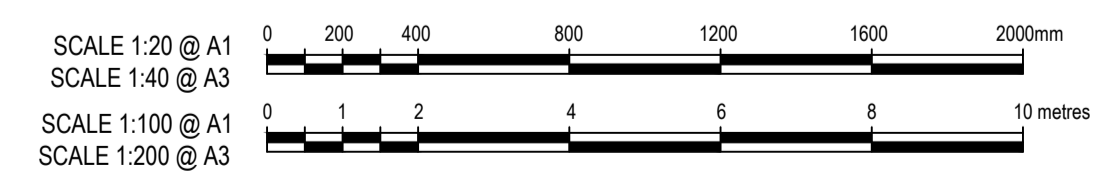
LEGEND	
	- DESIGN SURFACE
	- EXISTING SURFACE
	- PROPOSED STORMWATER MAIN
	- PROPOSED SEWER MAIN
	- PROPOSED WATER MAIN



VELOCITY (m/s)	1.20	2.18	
PIPE FLOW (m3/s)	0.02	0.05	
PIPE GRADE (%)	1.03	2.14	
PIPE SIZE (mm)	Ø150	Ø225	
PIPE CLASS	PVC-U	PVC-U	
LENGTH (m)	15.48	16.75	
DATUM R.L.	8.00		
HYDRAULIC GRADE LINE	25.06	24.89	24.42
DEPTH TO INVERT FROM DESIGN SURFACE	0.88	0.88	0.90
INVERT LEVEL	24.84	24.68	24.30
DESIGN SURFACE LEVEL	25.72	25.56	25.20
EXISTING SURFACE LEVEL	24.78	24.48	25.21
CHAINAGE	0.00	15.48	32.23

LINE A

HORIZONTAL SCALE 1:20
VERTICAL SCALE 1:100



© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

NOT FOR CONSTRUCTION

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG

North

Client
LANDLINK PROPERTY

30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811



Project
BRENTWOOD LOT 502 SUBDIVISION

CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title STORMWATER LONGSECTION					
Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	AS SHOWN	BG	BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA105.201	A		

P:\2022\220090\DWG\CD105\DWG\CD105.201.dwg

LOCATION AND LAND-USE					TIME AND RUNOFF			INLET DESIGN					PIPE SYSTEM DESIGN										PIT RESULTS							
Design AEP	Pit Name	Sub-Catchment Area (ha)	Land-Use	Percentage	Constant Flow Time (minutes)	Total Time tc (minutes)	Peak Sub-Catchment Flowrate (m3/s)	Origin of Approach Flows	Overflows Approaching Pit			Inlet Family	Inlet Size	Total Approach Flow (m³/s)	Overflow Leaving Pit		Peak Flow in Pipe (m³/s)	Reach Length (m)	Pipe Slope (m)	Pipe Diameter (mm)	U/S Pipe Invert Level (m)	D/S Pipe Invert Level (m)	U/S HGL in Pipe (m)	D/S HGL in Pipe (m)	Pipe Flow Velocity (m/s)	Pressure Change Coeff. Ku.	Water Surface Elevation (m)	Surface Level (m)	Freeboard (m)	Pit Name
									Flowrate (m3/s)	Flow Width (m)	Depth x Velocity (m2/s)				Bypass Flow (m³/s)															
10%	A-1	0.0557	Paved	70	5	5	0.022				IAD Pit 100% Capture	IAD Pit 100% Capture	0.022	0	0.022	15.482	1.03	150	24.84	24.68	25.057	24.886	1.2	2	25.2	25.722	0.52	A-1		
			Supp.	0	0																									
			Grassed	30	10	10																								
10%	A-2	0.0597	Paved	70	5	5	0.024	A-1	0	0	0	IAD Pit 100% Capture	IAD Pit 100% Capture	0.024	0	0.046	16.748	2.11	225	24.662	24.308	24.838	24.422	2.18	2	24.89	25.562	0.68	A-2	
			Supp.	0	0																									
			Grassed	30	10	10																								

MINOR 10% AEP STORMWATER CALCULATIONS

LOCATION AND LAND-USE					TIME AND RUNOFF			INLET DESIGN					PIPE SYSTEM DESIGN										PIT RESULTS							
Design AEP	Pit Name	Sub-Catchment Area (ha)	Land-Use	Percentage	Constant Flow Time (minutes)	Total Time tc (minutes)	Peak Sub-Catchment Flowrate (m3/s)	Origin of Approach Flows	Overflows Approaching Pit			Inlet Family	Inlet Size	Total Approach Flow (m³/s)	Overflow Leaving Pit		Peak Flow in Pipe (m³/s)	Reach Length (m)	Pipe Slope (m)	Pipe Diameter (mm)	U/S Pipe Invert Level (m)	D/S Pipe Invert Level (m)	U/S HGL in Pipe (m)	D/S HGL in Pipe (m)	Pipe Flow Velocity (m/s)	Pressure Change Coeff. Ku.	Water Surface Elevation (m)	Surface Level (m)	Freeboard (m)	Pit Name
									Flowrate (m3/s)	Flow Width (m)	Depth x Velocity (m2/s)				Bypass Flow (m³/s)															
1%	A-1	0.0557	Paved	70	5	5	0.039				IAD Pit 100% Capture	IAD Pit 100% Capture	0.039	0.005	0.035	15.482	1.03	150	24.84	24.68	25.372	24.985	1.87	2	25.7	25.722	0.02	A-1		
			Supp.	0	0	10																								
			Grassed	30	10																									
1%	A-2	0.0597	Paved	70	5	5	0.042	A-1	0.005	1.82	0.01	IAD Pit 100% Capture	IAD Pit 100% Capture	0.047	0	0.079	16.748	2.11	225	24.662	24.308	24.879	24.467	2.47	2	24.99	25.562	0.58	A-2	
			Supp.	0	0	10																								
			Grassed	30	10																									

MAJOR 1% AEP STORMWATER CALCULATIONS

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Drawn	MM	Date	18.02.22	Scale	A1	G.A. Check	BG	Date	18.02.22
Designed	CD	Project No.	NSW220090	Dwg. No.	DA105.301	Issue	A		

Client
LANDLINK PROPERTY

30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811



Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title
STORMWATER CALCULATIONS

NOT FOR CONSTRUCTION

P:\2022\220090\DWG\220090-DA105.301.dwg

EROSION AND SEDIMENT CONTROL NOTES

EROSION AND SEDIMENT CONTROL NOTES

EROSION AND SEDIMENT CONTROL NOTES

1. PROVIDE EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION TO COUNCIL STANDARDS AND CONFORMING TO LANDCOM SOILS & CONSTRUCTION Vol 1, 4th EDITION, MARCH 2004.
2. PREPARE EROSION AND SEDIMENT CONTROL PLAN AND OBTAIN COUNCIL APPROVAL PRIOR TO WORKS.
3. ALL PERIMETER CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO WORK COMMENCING AND BE MAINTAINED DURING CONSTRUCTION. LOCATE SEDIMENT FENCE WITHIN WORKS BOUNDARY.
4. CONTRACTOR TO DEFINE ACCESS, STOCKPILE AND OTHER AREAS PRIOR TO WORK COMMENCING.
5. PROVIDE A SINGLE POINT OF ACCESS TO THE SITE.
6. MINIMISE SITE DISTURBANCE AND REDUCE STOCKPILING TO A LEVEL NECESSARY TO CONSTRUCT THE WORKS. STOCKPILE AREAS, CONSTRUCTION ACCESSES AND NO GO AREAS TO BE DEFINED AND CONFIRMED PRIOR TO COMMENCEMENT OF WORK. FENCE NO GO AREAS.
7. PROVIDE MEASURES AT STOCKPILES TO DIVERT CLEAN WATER AND COLLECT SEDIMENT DOWNSTREAM, LOCATE STOCKPILES AWAY FROM STORMWATER FLOWS.
8. PROVIDE AND MAINTAIN PERMANENT GRASSING AS SOON AS POSSIBLE AFTER CONSTRUCTION. STAGE WORKS AS NECESSARY. GRASS SPECIES SHALL BE TO COUNCIL REQUIREMENTS. GRASS TURF TABLEDRAINS AND SWALES. MULCH (IF AVAILABLE FROM SITE CLEARING) AND SEED ALL OTHER DISTURBED AREAS INCLUDING TRENCHES, WHICH HAVE NOT BEEN TURFED. ON COMPLETION OF WORKS PROVIDE STRIP TURFING. SEE GENERAL NOTES.
9. CONTROL DUST BY WINDBREAKS, WATERING ETC.
10. EROSION AND SILT PROTECTION MEASURES ARE TO BE MAINTAINED AT ALL TIMES. ADJUST TO SUIT STAGING AND PROGRESS.
11. HIGH EROSION AREAS, INCLUDING BATTERS TO BE STABILISED WITHIN 7 DAYS OF COMPLETING OF WORKS AND EARLIER IF DIRECTED BY SUPERINTENDENT.
12. CONSTRUCT THE BASIN PRIOR TO ANY SITE WORKS INCLUDING CLEARING AND SOIL DISTURBANCE FOR USE AS A SEDIMENT BASIN DURING CONSTRUCTION.
13. NO DISTURBED AREAS SHALL REMAIN DENUDE FOR A PERIOD LONGER THAN 20 DAYS.
14. AN AREA OF NO MORE THAN 2Ha IS TO BE DISTURBED AT ANY TIME
15. THE ESCP/SWMP AND IT ASSOCIATED EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTANTLY MONITORED, REVIEWED AND MODIFIED AS REQUIRED TO CORRECT DEFICIENCIES. COUNCIL HAS THE RIGHT TO REQUEST CHANGES IF, IN ITS OPINION, THE MEASURES THAT ARE PROPOSED OR HAVE BEEN INSTALLED ARE INADEQUATE TO PREVENT POLLUTION.
16. ALL ESC MEASURES MUST BE APPROPRIATE FOR THE SEDIMENT TYPE(S) OF THE SOILS ONSITE. IN ACCORDANCE WITH THE BLUE BOOK (MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION LANDCOM, 2004), OR OTHER CURRENT RECOGNISED INDUSTRY STANDARD FOR EROSION AND SEDIMENT CONTROL FOR AUSTRALIAN CONDITIONS.
17. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO ENSURE STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/ EXIT SYSTEMS, DRAINS TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
18. SEDIMENT DEPOSITED OFF SITE AS A RESULT OF ONSITE ACTIVITIES MUST BE COLLECTED AND THE AREA CLEANED/ REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE.
19. NEWLY SEALED HARD-STAND AREA (E.G. ROADS, DRIVEWAYS AND CAR PARKS) MUST BE SWEEPED THOROUGHLY AS SOON AS PRACTICABLE AFTER SEALING/ SURFACING TO MINIMISE THE RISK OF COMPONENTS OF THE SURFACING COMPOUND ENTERING STORMWATER DRAINS.
20. STOCKPILES OF ERODIBLE MATERIAL MUST BE PROVEN WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC OR ORGANIC) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS.
21. STOCKPILES, TEMPORARY OR PERMANENT, SHALL NOT BE LOCATED IN AREAS IDENTIFIED AS NO-GO ZONES ON THE ESCP/SWMP.

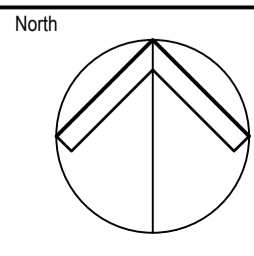
22. PRIOR TO THE CONTROLLED DISCHARGE (E.G. - WATERING ACTIVITIES FROM EXCAVATIONS AND SEDIMENT BASINS) OF ANY WATER FROM THE SITE DURING CONSTRUCTION. THE FOLLOWING WATER QUALITY OBJECTIVES MUST BE ACHIEVED:
 - TSS - MAXIMUM 50mg/L
 - TURBIDITY MAXIMUM 50NTU
 - pH BETWEEN 6 AND 8
 - < 80% AND > 20% SATURATED DISSOLVED OXYGEN
 - HAVE NO VISIBLE LITTLE OR WASTE MATTER
23. PRIOR TO ANY FORECAST WEATHER EVENT LIKELY TO RESULT IN SEDIMENT LADEN RUNOFF ON THE SITE. ANY EXISTING DETENTION BASINS/ TRAPS SHALL BE DE-WATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN WATER FROM SITE PRIOR TO THE WEATHER EVENT.
24. ANY SEDIMENT LADEN WATER CAPTURED ONSITE MUST BE TREATED TO ENSURE IT WILL ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES SPECIFIED IN THESE CONDITIONS. PRIOR TO ITS RELEASE FROM SITE. A SAMPLE OF THE RELEASED TREATED WATER MUST BE KEPT ONSITE IN A CLEAR CONTAINER WITH SAMPLE DATE RECORDED ON IT.
25. NO ALUMINUM BASED FLOCCULATING/COAGULANTS MAY BE USED ONSITE WITH THE PRIOR WRITTEN PERMISSION FROM AN APPROPRIATE COUNCIL OFFICER. THE APPLICANT MUST HAVE A DEMONSTRATED ABILITY TO USE SUCH PRODUCTS CORRECTLY AND WITHOUT ENVIRONMENTAL HARM PRIOR TO ANY APPROVAL.
26. THE CHEMICAL/ AGENT (FLOCCULATING/ COAGULANTS) USED IN TYPE D AND TYPE F BASINS TO TREAT TURBID WATER CAPTURED IN THE BASIN MUST BE APPLIED IN CONCENTRATIONS SUFFICIENT TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES. SPECIFIED IN THESE CONDITIONS WITHIN THE 5-DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
27. ALL MANUFACTURES INSTRUCTIONS MUST BE FOLLOWED FOR THE USE OF ANY CHEMICALS/ AGENTS ONSITE. EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROPRIATE COUNCIL OFFICER.
28. SUFFICIENT QUANTITIES OF CHEMICALS/ AGENTS TO TREAT TURBID WATER (FLOCCULATING/ COAGULANTS) MUST BE PLACED SUCH THAT WATER ENTERING THE BASIN/ SEDIMENT TRAP MIXES THE CHEMICAL/ AGENTS AND IS CARRIED INTO THE BASIN/ TRAP.
29. ANY BASIN MUST BE DE-WATERED AS SOON AS PRACTICAL. ONCE WATER CAPTURED IN THE BASIN ACHIEVES COUNCIL'S WATER QUALITY OBJECTIVES, SPECIFIED IN THESE CONDITIONS.
30. SUFFICIENT QUANTITIES OF CHEMICALS/ AGENTS TO TREAT TURBID WATER (FLOCCULATING/ COAGULANTS) MUST BE SECURELY STORED ON-SITE TO PROVIDE FOR AT LEAST THREE COMPLETE TREATMENTS OF ALL BASINS REQUIRING CHEMICALLY TREATMENT ONSITE.
31. THE APPLICANT MUST ENSURE THAT ON EACH OCCASION A TYPE F OR TYPE D BASIN WAS NOT DE-WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT. A REPORT IS PRESENTED TO AN APPROPRIATE COUNCIL OFFICER WITHIN 5 DAYS IDENTIFYING THE CIRCUMSTANCES AND PROPOSED AMENDMENTS, IF ANY, TO THE BASIN'S OPERATING PROCEDURES.
32. ALL SEDIMENT BASINS MUST REMAIN FULLY OPERATIONAL AT ALL TIMES UNTIL THE BASINS DESIGN CATCHMENTS ACHIEVES 70% GROUND COVERAGE, OR SURFACE STABILISATION ACCEPTABLE TO COUNCIL.
33. SETTLED SEDIMENT MUST BE REMOVED AS SOON AS REASONABLE AND PRACTICABLE FROM ANY SEDIMENT BASIN
 - IT IS ANTICIPATED THAT THE NEXT STORM EVENT IS LIKELY TO CAUSE SEDIMENT TO SETTLE ABOVE THE BASIN'S SEDIMENT STORAGE ZONE; OR
 - THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE TOP OF THE BASIN'S SEDIMENT STORAGE ZONE; OR
 - THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE BASIN'S SEDIMENT MARKER LINE.
34. SCOUR PROTECTION MEASURES PLACES ON SEDIMENT BASIN EMERGENCY SPILLWAYS MUST APPROPRIATELY PROJECT THE SPILLWAY CHUTE AND ITS SIDE BATTERS FROM SCOUR, AND MUST EXTEND A MINIMUM OF 3m BEYOND THE DOWNSTREAM TOE OF THE BASIN'S EMBANKMENT.
35. ALL ESC MEASURES MUST BE INSPECTED:
 - AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE); AND
 - AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE); AND
 - WITHIN 24HRS OF EXPECTED RAINFALL; AND
 - WITHIN 18HRS OF A RAINFALL EVENT THAT CAUSES RUNOFF ON THE SITE)

36. WRITTEN RECORDS MUST BE KEPT ONSITE OF ESC MONITORING AND MAINTENANCE ACTIVITIES CONDUCTED DURING THE CONSTRUCTION AND MAINTENANCE PERIODS, AND BE AVAILABLE TO THE PCA ON REQUEST.
37. ALL SITE MONITORING DATA INCLUDING RAINFALL RECORDS, DATES OF WATER QUALITY TESTING, TESTING RESULTS AND RECORDS OF CONTROLLED WATER RELEASES FROM THE SITE. MUST BE KEPT IN AN ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY COUNCIL OFFICERS ON REQUEST.

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG
Issue	Description	Date	Drawn	Approved



Client
LANDLINK PROPERTY

30 BOLTON STREET
NEWCASTLE NSW, 2300

ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

LANDLINK **ACOR** **CONSULTANTS** ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Project
BRENTWOOD LOT 502 SUBDIVISION

CRESTWOOD ROAD
THORNTON, NSW 2322


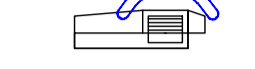

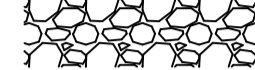



Drawing Title
EROSION AND SEDIMENT NOTES

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	N.T.S.		BG	18.02.22
Designed	Project No.	Dwg. No.		Issue	
CD	NSW220090	DA106.001		A	

NOT FOR CONSTRUCTION

P:\2022\NSW220090\Drawings\CD\220090-CD-01-01.dwg 18/02/22 10:35:06

LEGEND
REFER TO LANDCOM: SOILS AND CONSTRUCTION VOL 1, 4TH EDITION, MARCH 2004

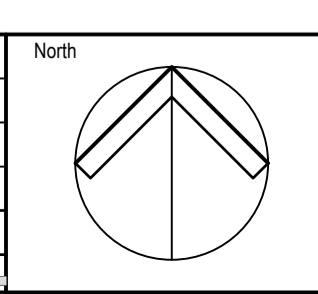
-  - SEDIMENT FENCE TO SD 6-8
-  - MESH AND GRAVEL INLET FILTER TO SD 6-11
-  - GEOTEXTILE INLET FILTER TO SD 6-12
-  - STABILISED SITE ACCESS TO SD 6-14
-  - EXISTING WATER MAIN
-  - EXISTING SEWER MAIN
-  - PROPOSED STORMWATER



SCALE 1:200(A1) / 1:400(A3)
 COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved.
 It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

NOT FOR CONSTRUCTION

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
 30 BOLTON STREET
 NEWCASTLE NSW, 2300



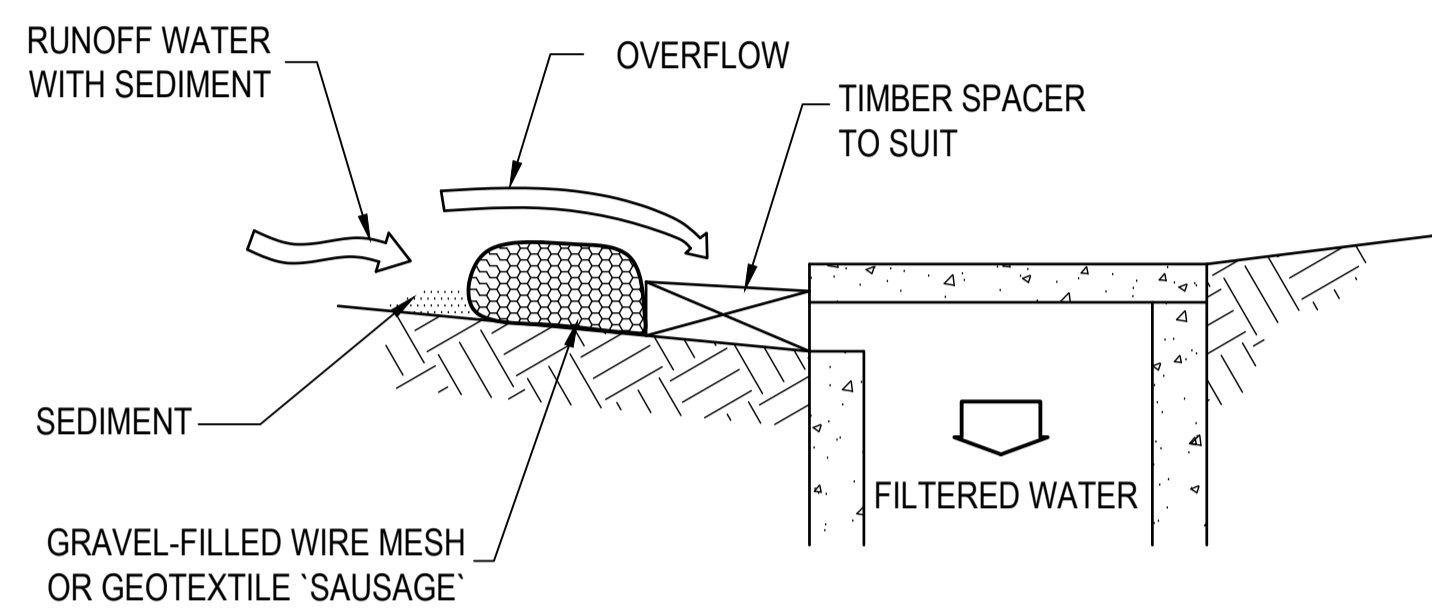
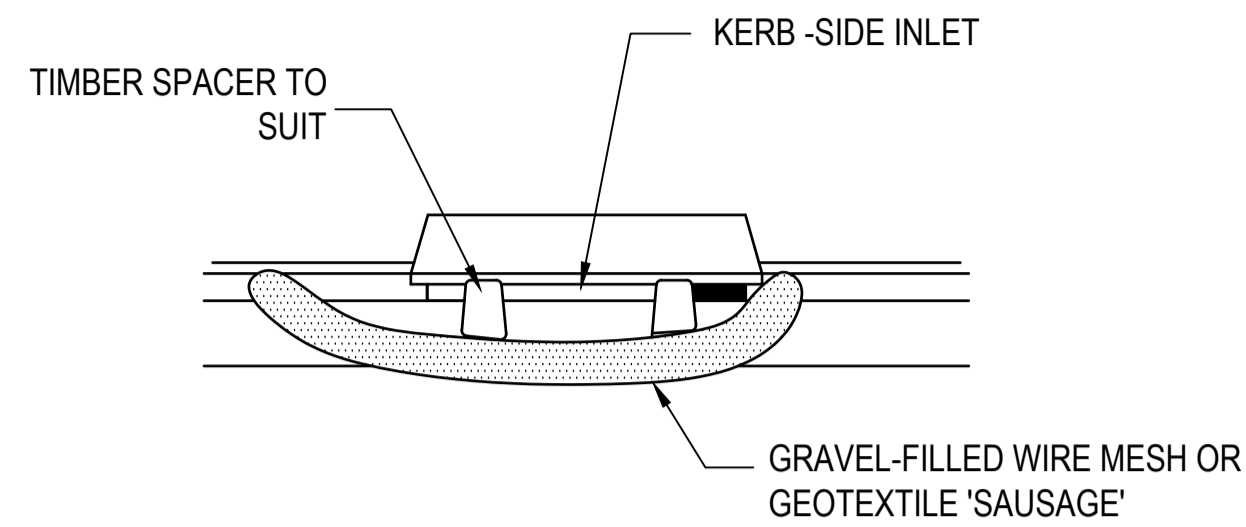
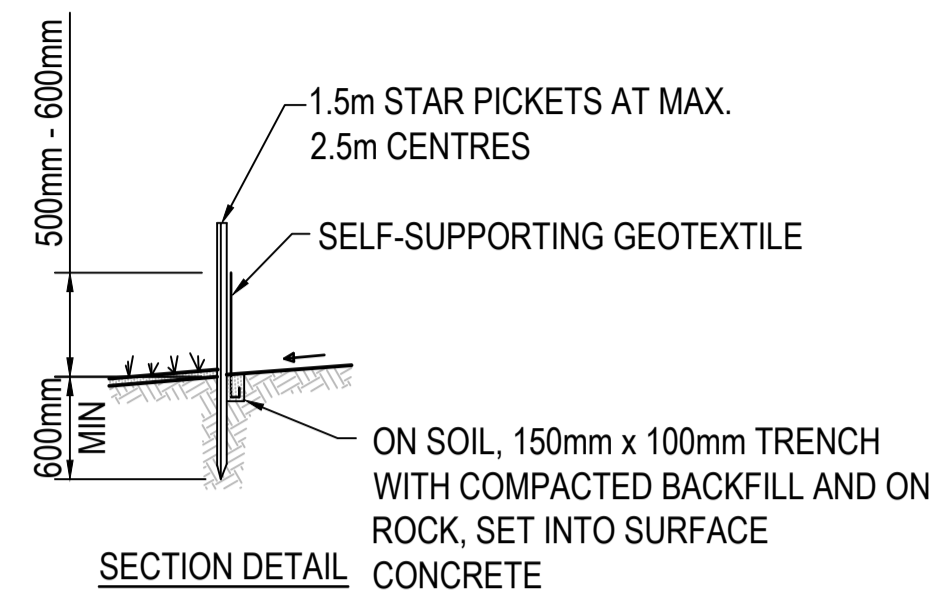
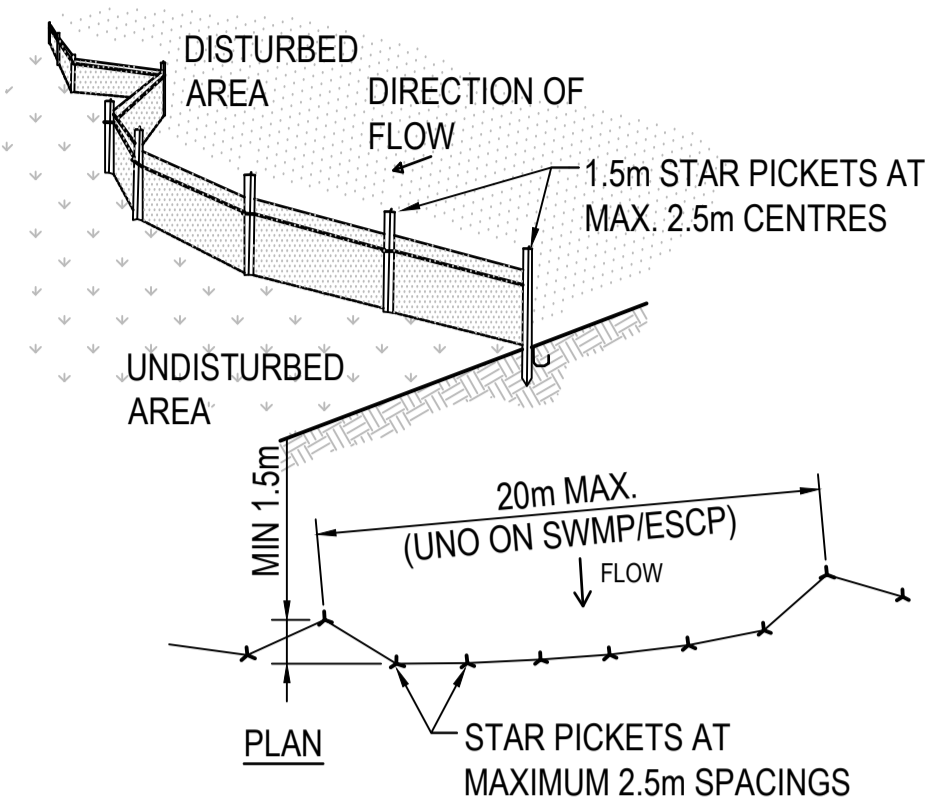
ACOR CONSULTANTS
 ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

ACOR Consultants Pty Ltd
 Level 1, 54 Union Street
 Cooks Hill, Newcastle NSW 2300
 T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
 CRESTWOOD ROAD
 THORNTON, NSW 2322

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	1:200		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA106.101	A		

P:\2022\220090\DWG\DA106.101.dwg



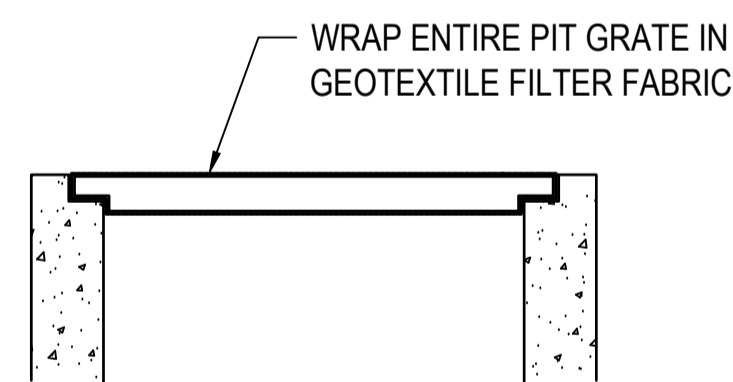
NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES:

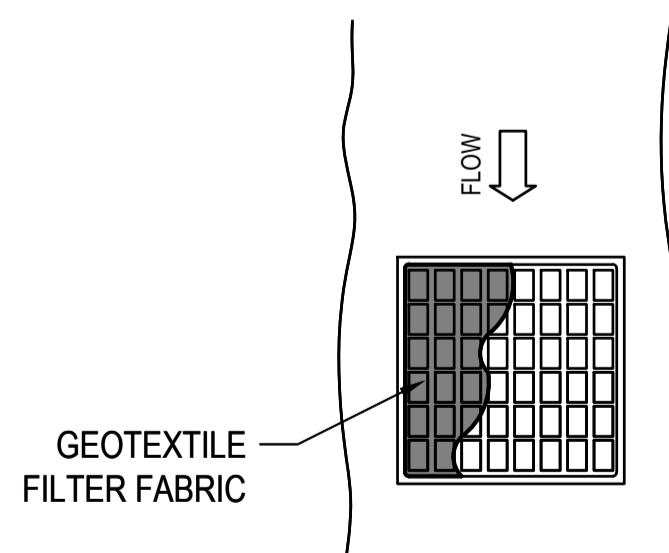
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 20mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150MM HIGH X 400MM WIDE.
4. PLACE THE FILTER AT THE OPENING, LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL INLET FILTER - SD6-11

NOT TO SCALE



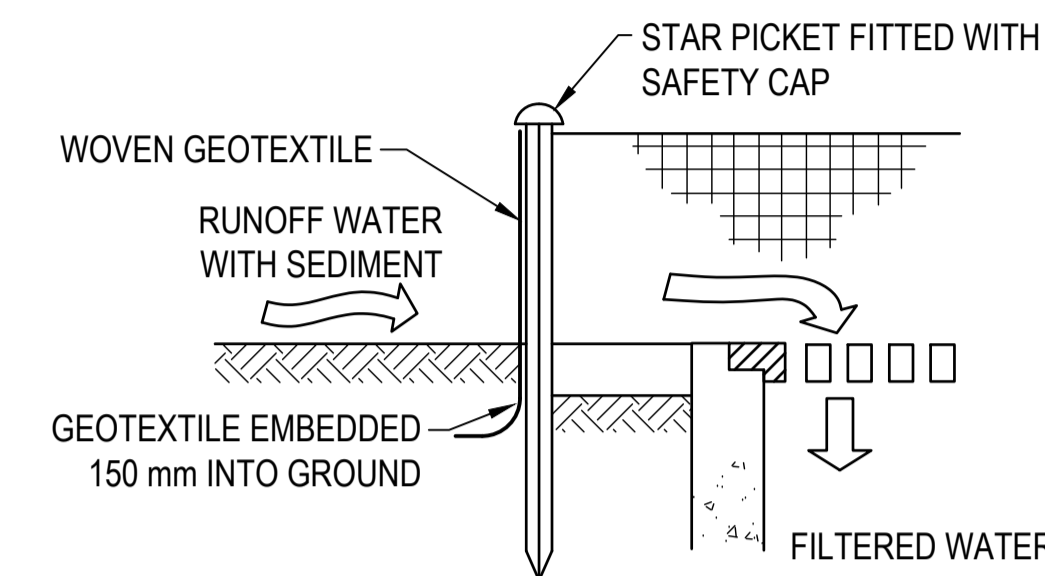
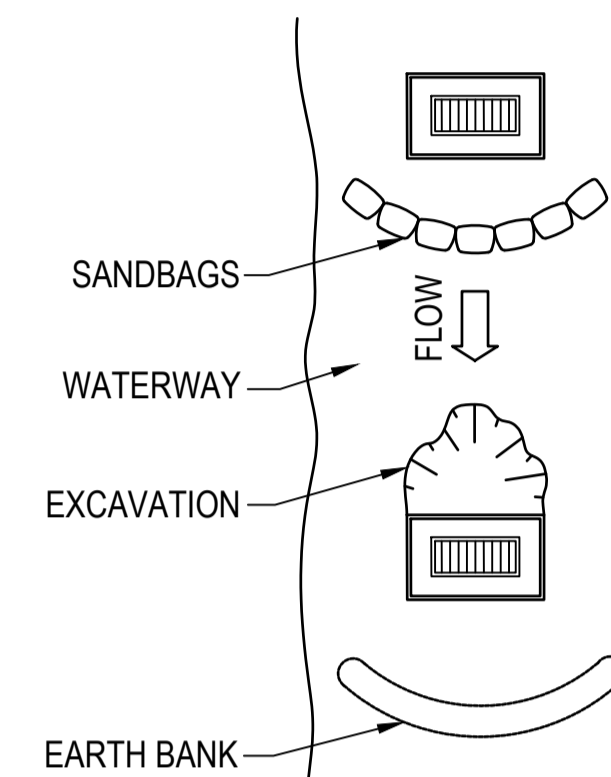
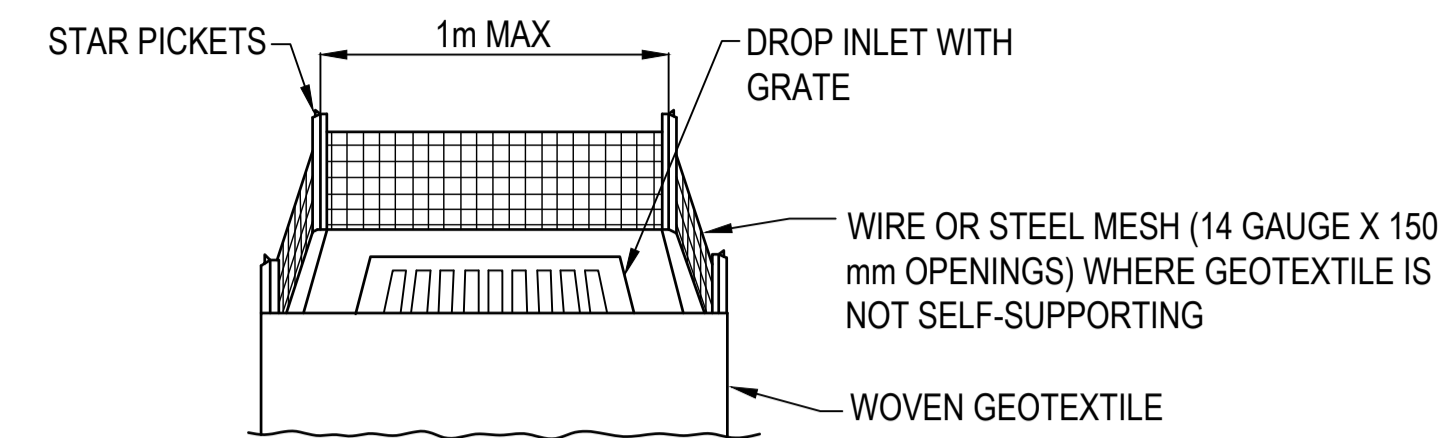
SECTION DETAIL



PLAN DETAIL

GEOTEXTILE WRAPPED GRATE

NTS



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

CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOTEXTILE. REDUCE THE PICKET SPACING TO 1m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER SD6-12

NOT TO SCALE

CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO 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 50L PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10 YR 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 AT 2.5m INTERVALS (MAX) AT THE DOWN SLOPE 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 CONTROL FENCE SD6-8

NOT TO SCALE

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG

North

Client
LANDLINK PROPERTY

30 BOLTON STREET
NEWCASTLE NSW, 2300



ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Drawing Title
EROSION AND SEDIMENT CONTROL DETAILS

Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	N.T.S.		BG	18.02.22
Designed	Project No.	Dwg. No.	Issue		
CD	NSW220090	DA106.201	A		

NOT FOR CONSTRUCTION

LEGEND	
	- EXISTING SURFACE CONTOURS
	- DESIGN SURFACE MAJOR CONTOUR
	- DESIGN SURFACE MINOR CONTOUR
	- PROPOSED DESIGN
	- PROPOSED DRIVEWAY
	- EXISTING STORMWATER
	- PROPOSED STORMWATER
	- EXISTING SEWER
	- EXISTING WATER
	- PROPOSED SEWER
	- PROPOSED WATER
	- DRIVEWAY CONTROL

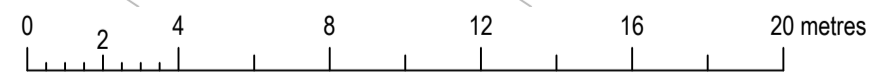


EXISTING WATER CONNECTION
TO BE USED BY LOT 5021

PROPOSED HUNTER WATER SEWER MAIN.
DETAIL DESIGN AND SUBMISSION TO
HUNTER WATER TO BE COMPLETED AT SWC.

EXISTING SEWER CONNECTION
TO BE USED BY LOT 5023

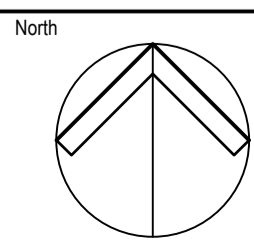
EXTEND EXISTING HUNTER WATER MAIN.
DETAIL DESIGN AND SUBMISSION TO
HUNTER WATER TO BE COMPLETED AT SWC.



NOT FOR CONSTRUCTION

© COPYRIGHT of this design and plan is the property of ACOR Consultants Pty Ltd, ACN 079 306 246 ABN 40 079 306 246, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants Pty Ltd.

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPLICATION	18.02.22	MM	BG



Client
LANDLINK PROPERTY
30 BOLTON STREET
NEWCASTLE NSW, 2300

ACOR CONSULTANTS
ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

ACOR Consultants Pty Ltd
Level 1, 54 Union Street
Cooks Hill, Newcastle NSW 2300
T +61 2 4926 4811

Project
BRENTWOOD LOT 502 SUBDIVISION
CRESTWOOD ROAD
THORNTON, NSW 2322

Drawing Title PROPOSED SERVICING PLAN					
Drawn	Date	Scale	A1	G.A. Check	Date
MM	Feb-22	1:200		BG	18.02.22
Designed	Project No.	Dwg. No.		Issue	
CD	NSW220090	DA107.001		A	