

PROPOSED ANIMAL SHELTER & SES BUILDING

1 Bowman Road, Moss Vale NSW 2577

Job No. N0211564

No	DATE	DESCRIPTION	BY
B	17.11.22	TENDER ISSUE	LTR
C	28.11.22	TENDER ISSUE	LTR
D	08.12.22	TENDER ISSUE	LTR
E	03.04.23	ISSUED FOR \$4.55	ER
F	02.06.23	REISSUED FOR \$4.55	ER

STORMWATER SERVICES

	STORMWATER PIPE
	STORMWATER RISING MAIN PIPE
	EXISTING STORMWATER PIPE
	RAINWATER PIPE
	SUB-SOIL DRAINAGE LINE
	CAST IN SLAB PIPE

STORMWATER LEGEND

	PROPOSED SEALED JUNCTION PIT
	PROPOSED GRATED SURFACE INLET PIT
	EXISTING PIT
	PIT TO BE REMOVED
	PROPOSED KERB INLET PIT
	PROPOSED GRATED DRAIN
	PROPOSED RAINWATER TANK
	DOWNPIPE, RISER OR VERTICAL DROP
	RWO - RAINWATER OUTLET FOR BALCONIES, ROOF, CARPARK ETC
	GS1 - DOWNPIPE WITH RAIN HEAD OVERFLOW
	GS2 - DOWNPIPE WITH SUMP SIDE OVERFLOW
	GS3 - DOWNPIPE WITH SUMP HIGH CAPACITY OVERFLOW
	SWALE DRAIN
	OVERLAND FLOW PATH
	ROOF FALL DIRECTION
	PROPOSED PAVEMENT SURFACE LEVEL
	PROPOSED PIT SURFACE LEVEL
	PROPOSED PIT INVERT LEVEL
	PROPOSED FINISHED FLOOR LEVEL
	EXISTING SURFACE LEVEL
	EXISTING SURVEY CONTOUR

GENERAL PIPEWORK LEGEND

	FLOW DIRECTION
	PIPE FROM ABOVE
	PIPE TO BELOW
	FALL DIRECTION
	PIPE TYPE, SIZE AND GRADE
	CONNECTION
	CONTINUATION
	END CAP
	KEYNOTE TAG

PAVEMENT LEGEND

	EXTENT OF CONCRETE PAVEMENT
	DOWELED JOINT
	KEYED JOINT
	SAW CUT JOINT
	BUTT JOINT
	2N12 TRIMMERS x 1200 LONG (TIED UNDER TOP MESH)
	150 K&G
	150 KO
	EXTENT OF BITUMEN PAVEMENT
	PAVEMENT TYPE 1 - CONCRETE
	PAVEMENT TYPE 2 - BITUMEN

PROJECT INFORMATION TABLE

THE TABLES BELOW ARE TO BE READ IN CONJUNCTION WITH THE ADJACENT NOTES

SURVEY INFORMATION

THE SURVEY INFORMATION ON THESE DRAWINGS HAS BEEN PROVIDED BY

COMPANY	DATED
RICHARD COX SURVEYORS PTY. LTD.	02.2022

SAFETY IN DESIGN

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

- JN DO NOT CONSIDER THAT THERE ARE ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN OF THIS PROJECT.

INSITU BORED CONCRETE PILES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS2159 PILING DESIGN & INSTALLATION CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- ALL DESIGN AND INSTALLATION SHALL BE COMPLETED BY AN EXPERIENCED CONTRACTOR SPECIALISING IN FOUNDATION ENGINEERING AND SHALL BE IN ACCORDANCE WITH AS2159 SUBMIT DETAILS OF PROPOSED DRILLING METHODS, EQUIPMENT AND SEQUENCE. GIVE NOTICE SO THAT INSPECTION MAY BE MADE OF THE FOLLOWING AS APPLICABLE:
 - AT COMPLETION OF EXCAVATION OF PIERS
 - REINFORCEMENT OF PIER
- SETTING OUT - PEG THE POSITION OF EACH PILE AND ESTABLISH A GRID OF RECOVERY PEGS TO ENABLE THE SETTING OUT TO BE CHECKED AT ANY TIME. PILES AND/OR PIERS SHALL BE LOCATED WITHIN 75mm OF THE PLAN LOCATIONS AS SHOWN ON THE ENGINEERING DRAWINGS.
- PIERS SHALL BE POURED WITHIN 24 HOURS OF EXCAVATION UNLESS OTHERWISE AGREED.
- PIER WALL SHALL BE MAINTAINED STABLE PRIOR TO POURING CONCRETE.
- PIER BASES SHALL BE LEVEL AND FREE OF ALL LOOSE MATERIAL.
- REMOVE ALL FREE WATER FROM PIERS BEFORE POURING.
- CONFIRM BEARING PRESSURE AT BASE OF ALL PIERS BY GEOTECHNICAL TESTING/INSPECTIONS.
- CONCRETE SHALL BE PLACED IN SUCH A MANNER SO AS TO AVOID SEGREGATION.
- REFER ALSO TO CONCRETE NOTES.
- THE PILE DEPTHS SHOWN ON THE ENGINEERS DRAWINGS ARE PROVISIONAL. ACTUAL PILE LENGTHS ARE TO BE MEASURED BY THE CONTRACTOR AND APPROVED BY THE SUPERINTENDENT.
- OBSERVE SAFE WORKING PRACTICES, INCLUDING THE RELEVANT PRACTICES RECOMMENDED IN AS2159 APPENDIX B.
- PROVIDE & INSTALL FACILITIES NECESSARY FOR INSPECTION OF PILING INCLUDING SAFE ACCESS, LIGHTING, VENTILATION AND THE LIKE.
- REFER TO DRAWINGS FOR ALL OTHER PIER INFORMATION.
- RECORD THE RELEVANT INFORMATION AS LISTED IN AS2159, AND FORWARD TO ENGINEER/SUPERINTENDENT COPIES OF EACH RECORD TO THE SUPERINTENDENT.
- PROVIDE A SURVEY OF ALL PILES/PIERS AFTER INSTALLATION INCLUDING THE LENGTH FROM THE UNDERSIDE OF THE PILE CAP OR FOUNDATION, BEAM TO THE TOE OF THE PILE/PIER AND THE LEVEL OF THE SURROUNDING GROUND AT THE TIME WHEN THE PILE IS INSTALLED.

REINFORCEMENT

- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH THE LAP TABLE.
- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- FABRIC SHALL BE LAPPED 2 TRANSVERSE WIRES PLUS 50mm, WHERE FABRIC LAPS SHEETS TO HAVE MAXIMUM 2 LAYERS AT ANY POINT, CUT BACK FABRIC AT CORNERS AS REQUIRED.
- BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTERS WITH 3 WRAPS OF THE WIRE.
- FIRE RATING MESH F41 SHALL BE GALVANISED, HAVE 20mm COVER AND BE TIED USING GALVANISED TIE WIRE.
- WHERE TRANSVERSE TIE BARS ARE NOT SHOWN PROVIDE N12-400 LAPPED AS REQUIRED.
- JOGGLES TO BARS SHALL COMPRISE A LENGTH OF 12 BAR DIAMETERS BETWEEN BEGINNING AND END OF AN OFFSET OF 1 BAR DIAMETER.
- 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, AND 800 EACH WAY FOR FABRIC, WHEN POURED ON GROUND PROVIDE PLATES UNDER ALL BAR CHAIRS, PLASTIC TIPPED STEEL CHAIRS SHALL NOT BE USED ON EXPOSED FACES.
- REINFORCEMENT WITHIN FLOOR OR WALL ELEMENT OF A WET AREA SHALL BE BONDED TO THE EARTHING SYSTEM IF CONDUCTIVE PIPING EXISTS WITHIN THE ELEMENT, IT SHALL BE BONDED IN ACCORDANCE WITH AS 3000.
- REINFORCEMENT SYMBOLS:
 - R-GRADE 250 R HOT ROLLED PLAIN BARS TO AS 4671
 - S-GRADE 250 S HOT ROLLED DEFORMED BARS TO AS 4671
 - N-DEFORMED BAR NORMAL DUCTILITY TO AS/NZS 4671 GRADE 500N
 - L-DEFORMED BAR LOW DUCTILITY TO AS/NZS 4671 GRADE D500L
 - RN-RECTANGULAR WIRE MESH NORMAL DUCTILITY TO AS/NZS 4671
 - RL-RECTANGULAR WIRE MESH LOW DUCTILITY TO AS 4671
 - SN-SQUARE WIRE MESH NORMAL DUCTILITY TO AS 4671
 - SL-SQUARE WIRE MESH LOW DUCTILITY TO AS/NZS 4671
- THE LAP TABLES ARE BASED ON 32MPa CONCRETE WITH 25mm MINIMUM COVER GENERALLY & 30mm COVER FOR BEAMS & COLUMNS.
- SLABS WITH VARYING THICKNESS OR SLOPING SURFACES - UNLESS NOTED OTHERWISE ON SECTIONS OR DETAILS, THE TOP LAYERS OF REINFORCEMENT MUST BE LAID PARALLEL TO THE TOP SURFACE OF THE CONCRETE MAINTAINING THE SPECIFIED COVER TO REINFORCEMENT.

TENSION LAP LENGTH FOR DEFORMED BARS IN WALLS, COLUMNS, PILES & SLABS/BEAMS LESS THAN 300mm THICK						
N12	N16	N20	N24	N28	N32	N36
500	750	1000	1200	1500	1800	2100

TENSION LAP LENGTH FOR DEFORMED BARS IN SLABS & BEAMS WHERE 300mm OR MORE CONCRETE BELOW BAR						
N12	N16	N20	N24	N28	N32	N36
650	950	1300	1600	1950	2300	2700

- INCREASE TABULATED VALUES BY NOMINATED % IN THE FOLLOWING CASES:
 - 25MPa CONCRETE 15%
 - SLIP FORM CONSTRUCTION INCREASE BY 30%
 - LIGHTWEIGHT CONCRETE 30%
 - 3 BUNDLE BARS 20%
 - 4 BUNDLE BARS 33%
 - WHERE LAPPING DIFFERENT SIZED BARS, USE LAP LENGTH APPLICABLE TO LARGER SIZED BARS
- DO NOT BEND BARS WITHOUT PRIOR APPROVAL FROM ENGINEER. FOLLOW AS 3600 FOR PROCEDURES OF BENDING BARS. DO NOT USE HEAT TO BEND BARS AND BENDING OF GALVANISED BARS IS NOT PERMITTED.

GENERAL

- ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORK.
- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION, WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES.
- THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS.
- THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
- THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED COMPLETE NOR CORRECT.
- CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
- SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
- ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
- ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
- THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
- PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS. FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS.

SURVEY

- JONES NICHOLSON IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY 3RD PARTY INFORMATION PROVIDED ON THIS DRAWING.
- ALL LEVELS ARE IN A.H.D.
- ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES.
- SET OUT COORDINATES ARE BASED ON SURVEY DRAWINGS PROVIDED FOR THE PURPOSE OF CARRYING OUT THE ENGINEERING DESIGN.
- CONTRACTOR SHALL VERIFY ALL SET OUT COORDINATES SHOWN ON THE PLANS BY A REGISTERED SURVEYOR
- CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR
- ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK FOR CONFIRMATION OF THE SURVEY.

EARTHWORKS

- PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
- OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH, SLABS ETC. AND STRIP TOP SOIL, AVERAGE 200mm THICK, REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
- CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
- PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE PREPARED SURFACE, REFER TO PROJECT INFORMATION TABLES FOR MINIMUM ROLLER WEIGHT AND THE MINIMUM NUMBER OF PASSES.
- EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS, THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$.
- FOR ON-SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
- FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASECOURSE USING THE EXCAVATED MATERIAL AND COMPACTED TO 98% STANDARD (AS 1289 5.1.1), MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS, IMPORT AS NECESSARY CLEAN GRANULAR FILL TO THE DESIGN ENGINEERS APPROVAL.
- COMPACTION TESTING TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT INFORMATION TABLE. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER.
- BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ. ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
- ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

STORMWATER DRAINAGE INSTALLATION

- SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
- BEDDING OF THE PIPELINES IS TO BE TYPE 'H2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:
 - COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

- AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726.
- BEDDING DEPTH UNDER THE PIPE TO BE 100mm.
- BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HAUNCH ZONE'.
- THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% ELSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.
- COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT.
- BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO ITS SELF COMPACTING ABILITY.
- A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE FRENCH WALL FOR PIPES < 400 DIA. 200mm CLEARANCE FOR PIPES 400 TO 1200 DIA AND D/6 CLEARANCE FOR PIPES > 1200 DIA.

STORMWATER DRAINAGE

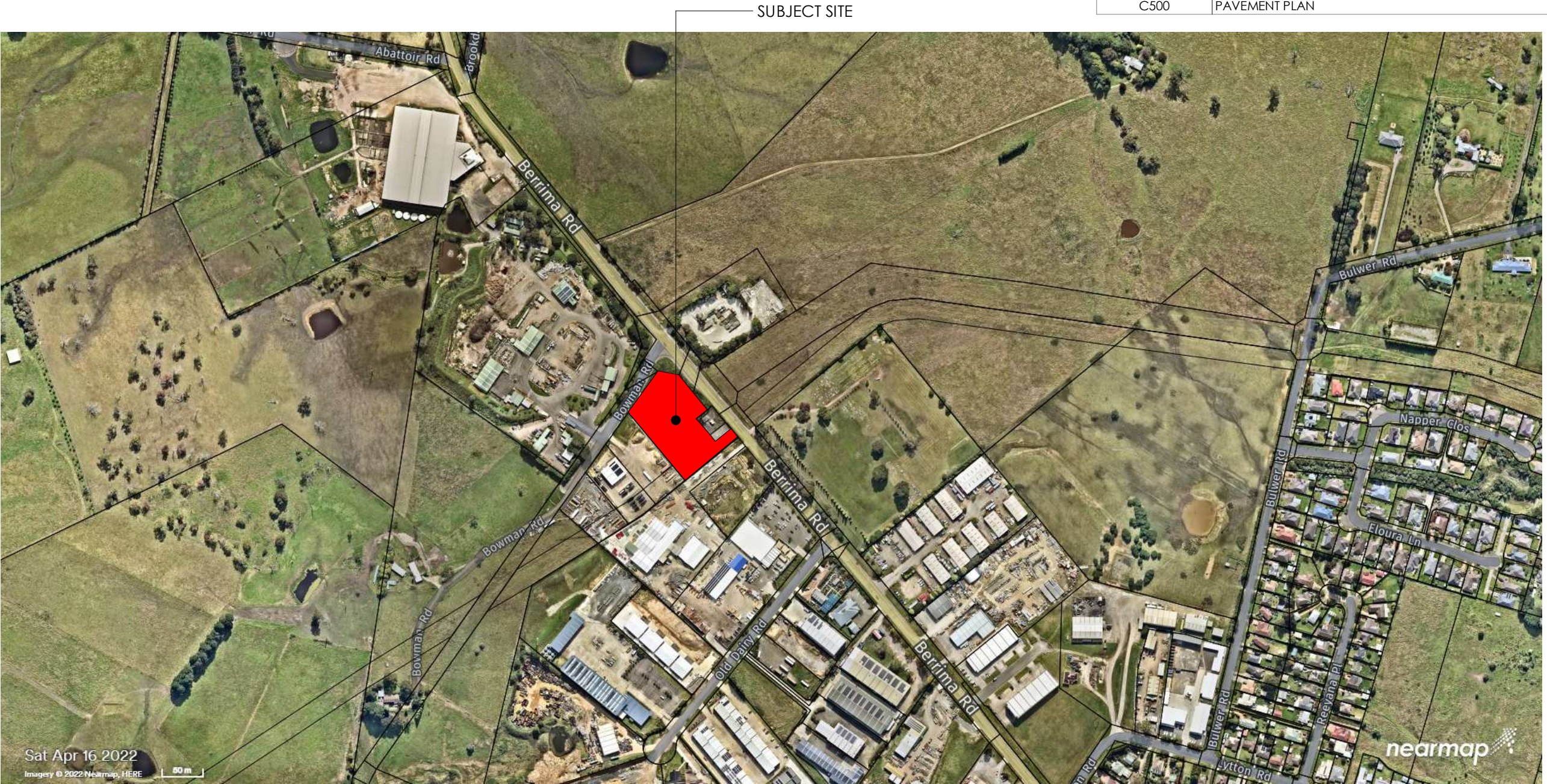
- STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S SPECIFICATION.
- PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC.
- PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
- ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O.
- MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 400mm IN CARPARK & ROADWAY AREAS UNO.
- PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
- PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O.
- PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
- BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
- ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS.
- PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1200mm TO HAVE CLIMB IRONS.
- BUILD UP UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
- ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE LOAD CLASS A UNLESS NOTED OTHERWISE.
- ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE LOAD CLASS D UNLESS NOTED OTHERWISE.
- PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING THE ENGINEER.
- DOWNPIPES SHOWN ARE INDICATIVE ONLY. ALL ROOF DRAINAGE AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
- ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE SYSTEM.
- HAND EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
- FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
- GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.
- ALL BASES OF PITS TO BE BENCH TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
- SUBSOIL LINE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL.
- SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
 - SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
 - ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
 - LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

PAVEMENT - RIGID

- THE PAVEMENT DESIGN AS DETAILED ASSUMES A PROPERLY PREPARED UNIFORM AND STABLE SUBGRADE. CONFIRMATION OF DESIGN CBR RATIO IS REQUIRED BY A GEOTECHNICAL ENGINEER PRIOR TO WORKS COMMENCING.
- PREPARATION FOR PAVEMENT: CLEAR SITE, STRIP TOPSOIL, CUT AND FILL AND PREPARATION OF SUBGRADE SHALL BE AS DESCRIBED IN 'EARTHWORKS' NOTES.
- SUBGRADE SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ IN ACCORDANCE WITH AS 1289 5.1.1, U.N.O.
- BASE COURSE SHALL BE CONSTRUCTED FROM FINE CRUSHED ROCK DGB20 COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ IN ACCORDANCE WITH AS 1289 5.1.1.
- CONCRETE PAVEMENT SLABS SHALL BE AS DETAILED ON THE DRAWINGS.
- ALL WORKMANSHIP AND MATERIALS FOR CONCRETE WORK SHALL BE IN ACCORDANCE WITH AS 3600 AND AS 3610 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- CONCRETE QUALITY ALL CEMENT SHALL BE TYPE SL SHRINKAGE LIMITED CEMENT IN ACCORDANCE WITH AS3972.
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 3600.
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- THE FINISHED CONCRETE SHALL BE MECHANICALLY VIBRATED TO ACHIEVE A DENSE HOMOGENEOUS MASS. COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. CONCRETE SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF THREE DAYS, AND THE PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT. CURING COMPOUNDS MAY BE USED BUT MUST BE COMPATIBLE WITH THE PROPOSED FLOOR FINISHED & BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED IF PROTECTED FROM WIND AND TRAFFIC.
- REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION OF THE ENGINEER.

CONCRETE

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 AND AS 3610 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 3600.
- CONCRETE TO BE PROPORTIONED TO LIMIT DRYING SHRINKAGE TO SATISFY PROJECT INFORMATION TABLE.
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- CLEAR CONCRETE COVER TO ALL REINFORCEMENT SHALL BE AS NOTED IN THE PROJECT INFORMATION TABLE UNLESS SHOWN OTHERWISE.
- WHERE CONCRETE IS POURED ON A VAPOUR PROOF MEMBRANE 0.2mm MINIMUM THICKNESS, THE COVER TO CONCRETE CAST AGAINST GROUND MAY BE REDUCED BY 10mm.
- CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESS OF APPLIED FINISHES. NO FINISH WHICH DECREASES COVER IS ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
- DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
- FOR CHAMFERS DRIP GROOVES, REGLETTS, ETC. REFER TO ARCHITECT'S DETAILS. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
- NO HOLES, CHASES, BLOCKOUTS, DUCTS OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- ALL CONCRETE COLUMNS GREATER THAN 1.2 METRES IN HEIGHT SHALL BE POURED A MINIMUM OF 4 HOURS PRIOR TO SLAB OR BEAM OVER.
- CONCRETE SHALL BE MECHANICALLY VIBRATED TO ACHIEVE A DENSE HOMOGENEOUS MASS COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS OR VOIDS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET AS PER AS 3600. INTERNAL SLABS SHOULD BE CURED FOR A MINIMUM OF 3 DAYS AND EXTERNAL SLABS FOR A MINIMUM OF 7 DAYS. CURING COMPOUNDS MAY BE USED BUT MUST BE COMPATIBLE WITH THE PROPOSED FLOOR FINISHED & BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED IF PROTECTED FROM WIND AND TRAFFIC.
- CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. NO BRICKWORK OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL SEVEN DAYS AFTER PROPPING HAS BEEN REMOVED AND THE SLAB PRE-LOADED WITH THE BRICKS OR UNITS TO BE USED IN THE WALL.
- REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION OF THE ENGINEER.
- CAST-IN FIXINGS, BOLTS ETC. SHALL NOT BE ALTERED WITHOUT THE PERMISSION OF THE ENGINEER.
- THE CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO AVOID SEGREGATION OR LOSS OF MATERIALS. MAXIMUM FALL OF CONCRETE = 1500mm OR USE ENCLOSED CHUTES OR SIMILAR.
- SULPHATE RESISTANT CONCRETE TO BE USED IN ALL FOOTINGS, PILES AND PILE CAPS IF REQUIRED BY THE PROJECT DESIGN INFORMATION.
- IF AMBIENT TEMPERATURES ARE LESS THAN 5°C OR GREATER THAN 35°C DO NOT MIX CONCRETE WITHOUT TAKING PROVISIONS TO ENSURE THE CONCRETE IS DELIVERED WITHIN THIS TEMPERATURE RANGE.



LOCALITY PLAN

NTS



CLIENT
Figgis + Jefferson Tepa

STATUS
PRELIMINARY

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DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
NOTES & LEGEND

PROJECT
PROPOSED ANIMAL SHELTER & SES BUILDING

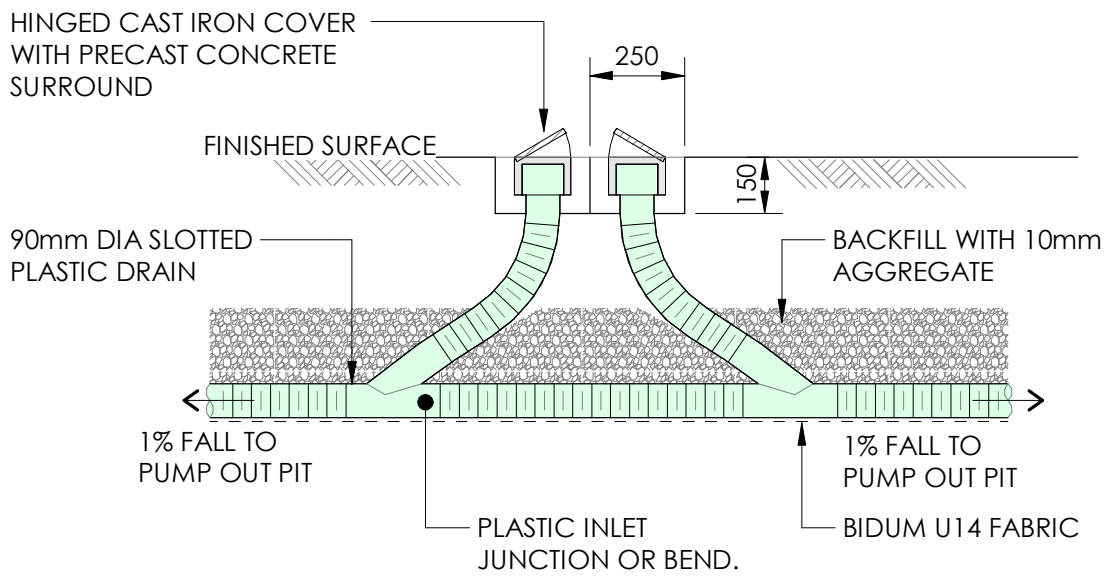
ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS

DESIGN	DY	N0211564
DRAWN	LTR	
DATE	MAY 22	
DRG SIZE	A1	
SCALE	As indicated	
PROJECT MGR	DY	C001 F
WWW.JN.COM.AU		

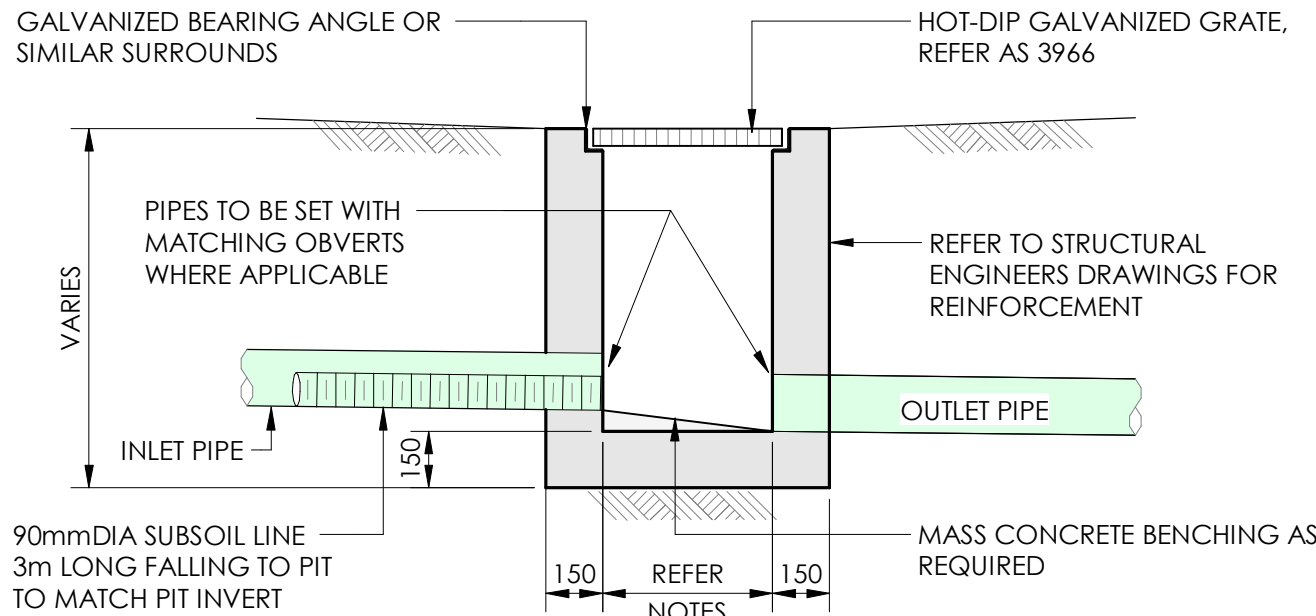
ELEMENT	STRENGTH GRADE (MPa)	SLUMP	MAXIMUM AGGREG. SIZE (mm)	MINIMUM COVER (mm)
PAVEMENT ON-GRADE	32	80	20	40
SUSPENDED SLAB	40	80	20	40
PILES	32	80	20	40

No	DATE	DESCRIPTION	BY
B	17.11.22	TENDER ISSUE	LTR
C	28.11.22	TENDER ISSUE	LTR
D	08.12.22	TENDER ISSUE	LTR
E	03.04.23	ISSUED FOR \$4.55	ER
F	02.06.23	REISSUED FOR \$4.55	ER



- NOTES :**
- MINIMUM GRADE OF SUBSOIL DRAINAGE PIPES IS TO BE 1.0%. JOINTS IN FILTER FABRIC TO BE LAPPED A MINIMUM 300mm.

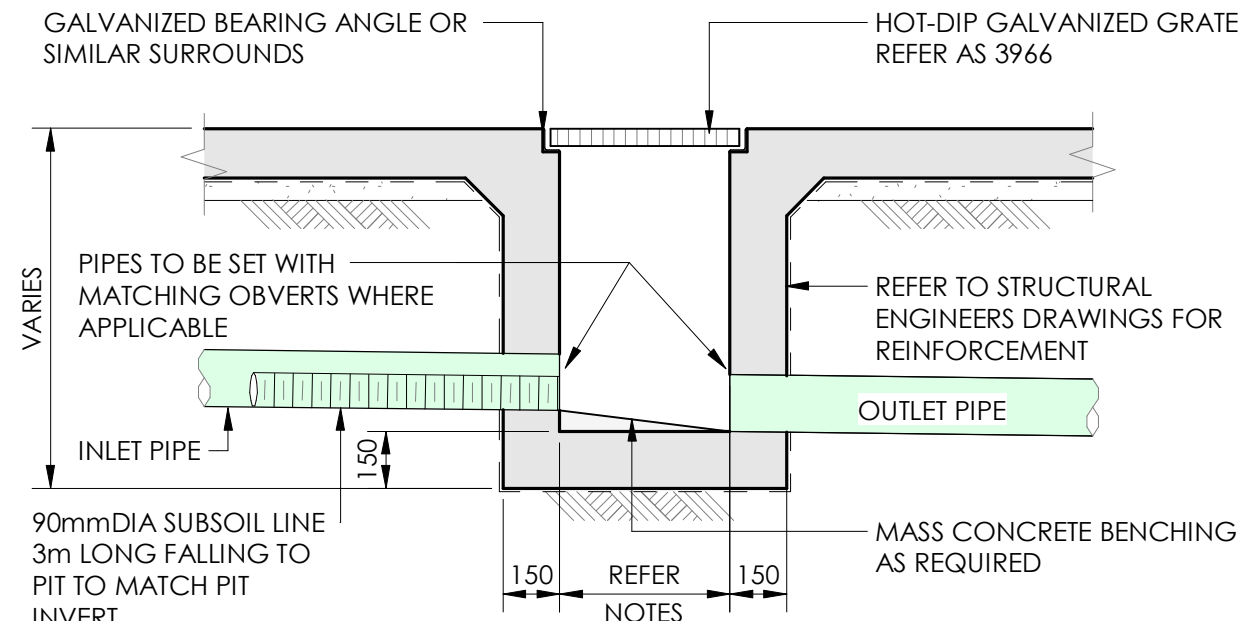
SUBSOIL PIPE FLUSHING POINT
SCALE 1 : 20



MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS			
DEPTH OF INVERT OF OUTLET	DEPTH OF INVERT OF OUTLET	DEPTH OF INVERT OF OUTLET	
		WIDTH	LENGTH
< 600	< 600	450	450
> 600	> 600	600	600
> 900	> 900	600	900
> 1200	> 1200	900	900

- NOTE:
- CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
 - PROVIDE 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC. (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE.
 - ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
 - CONCRETE STRENGTH $F_c = 32 \text{ MPa}$

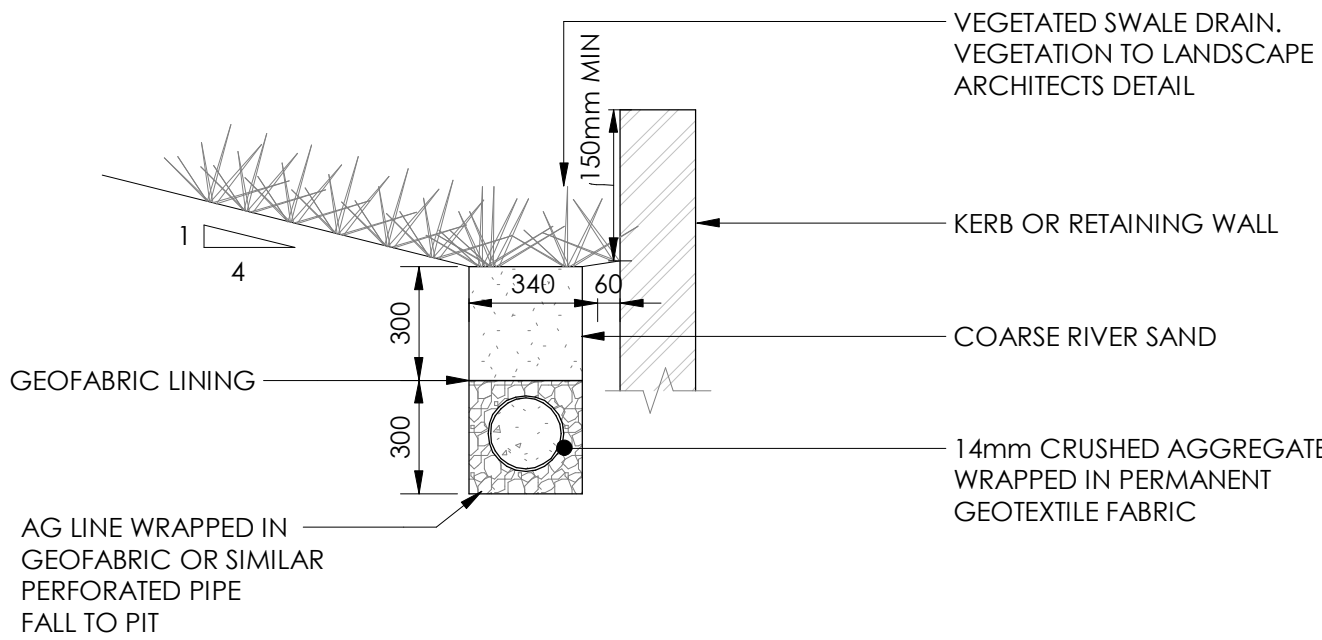
TYPICAL CONCRETE INLET PIT - NATURAL SURFACE
SCALE 1 : 20



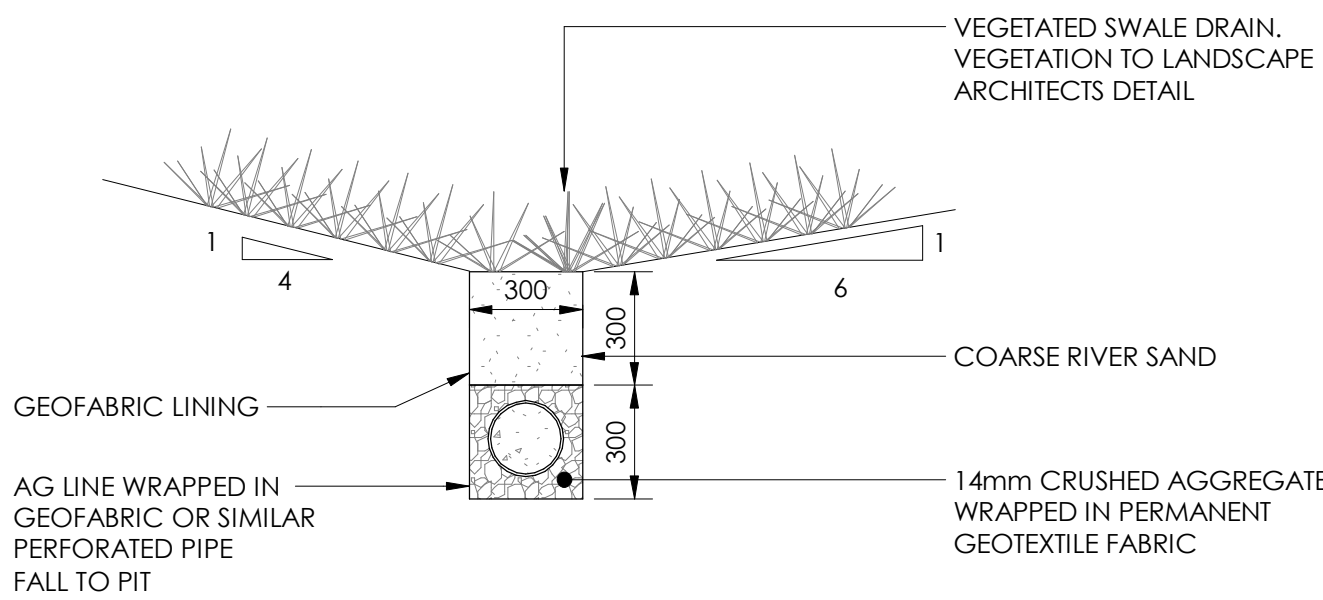
MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS			
DEPTH OF INVERT OF OUTLET	DEPTH OF INVERT OF OUTLET	DEPTH OF INVERT OF OUTLET	
		WIDTH	LENGTH
< 600	< 600	450	450
> 600	> 600	600	600
> 900	> 900	600	900
> 1200	> 1200	900	900

- NOTE:
- CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
 - PROVIDE 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC. (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE.
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 - CONCRETE STRENGTH $F_c = 32 \text{ MPa}$

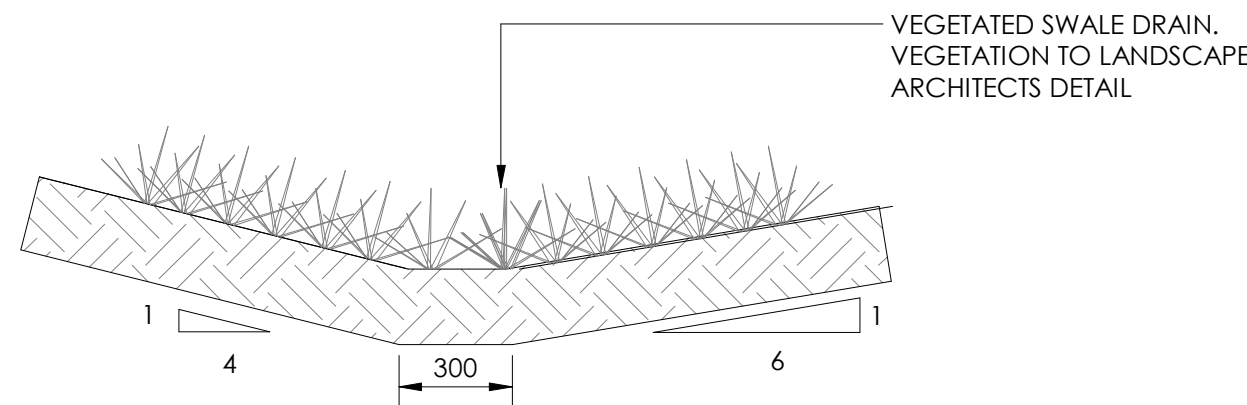
TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE
SCALE 1 : 20



TYPICAL SWALE DETAIL TYPE 1
SCALE 1 : 20



TYPICAL SWALE DETAIL TYPE 2
SCALE 1 : 20



TYPICAL SWALE DETAIL TYPE 3
SCALE 1 : 20



CLIENT
Figgis + Jefferson Tepa

STATUS
PRELIMINARY

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DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
TYPICAL DETAILS - SHEET 1

PROJECT
PROPOSED ANIMAL SHELTER & SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN DY
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE 1 : 20
PROJECT DY
MGR
WWW.JN.COM.AU
N0211564
C050 F

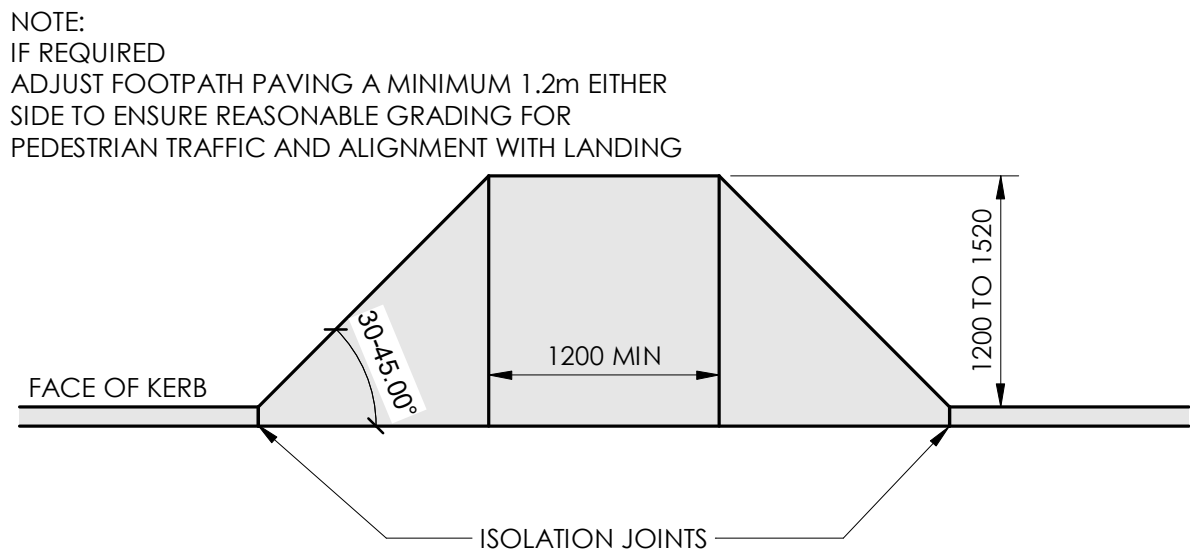
PROJECT DETAILS

DESIGN	DY
DRAWN	LTR
DATE	MAY 22
DRG SIZE	A1
SCALE	As indicated
PROJECT	DY
MGR	

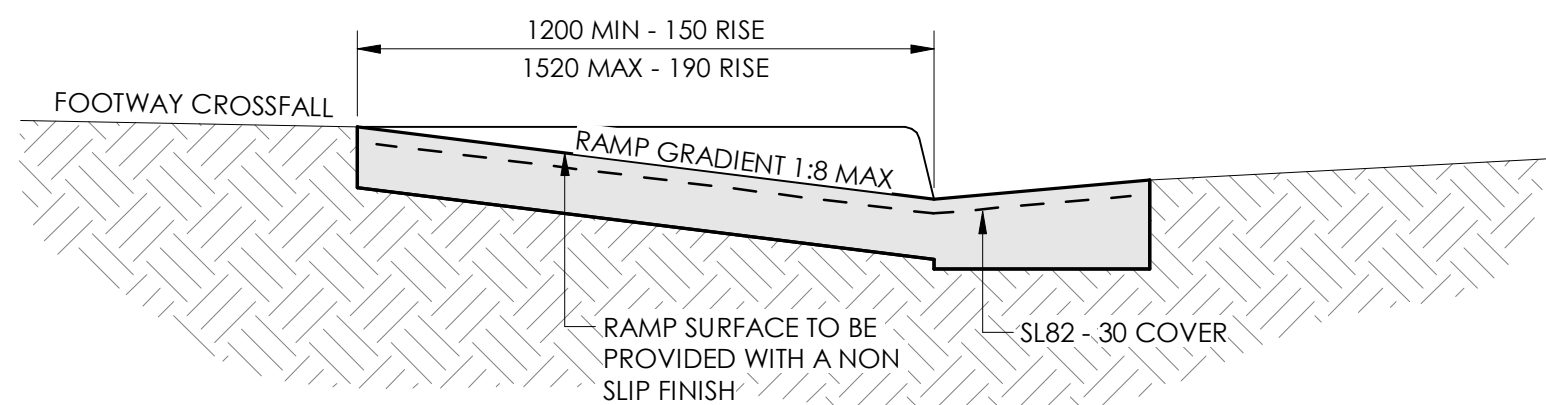
WWW.JN.COM.AU

N0211564

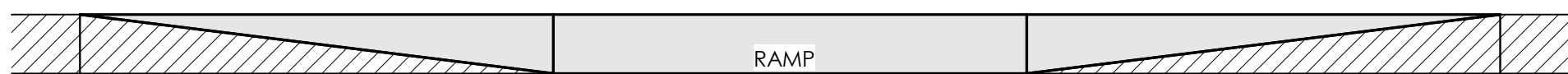
C051 H



TYPICAL PRAM RAMP DETAIL
SCALE 1:50



TYPICAL ORIFICE PLATE DETAIL
SCALE 1 : 10



PIT 7 DETAIL
SCALE 1 : 20



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PROJECT PROPOSED ANIMAL SHELTER & SES BUILDING

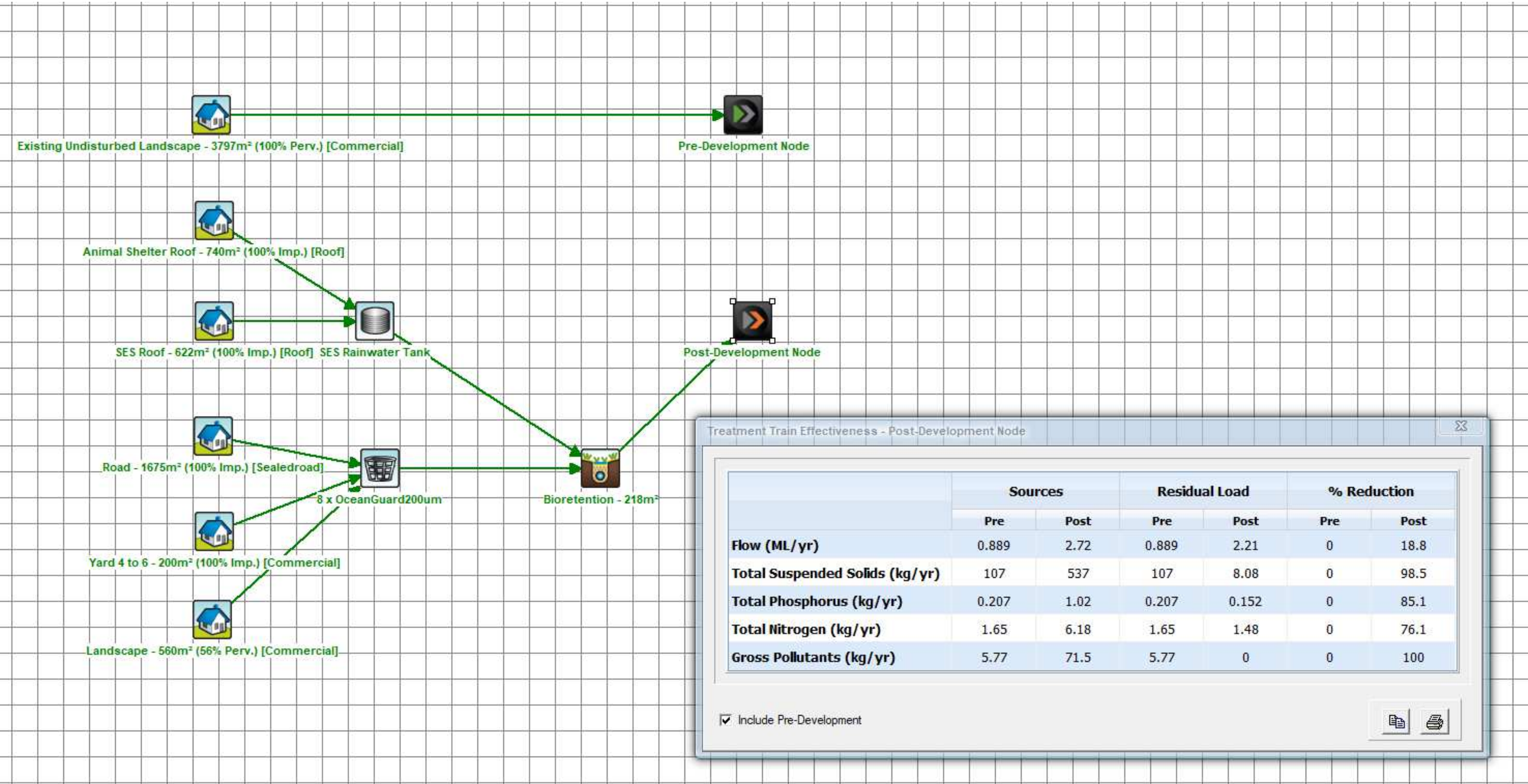
ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN
DRAWN L
DATE MAY
DRG SIZE
SCALE As indica
PROJECT
MGR
WWW.JN.COM.AU

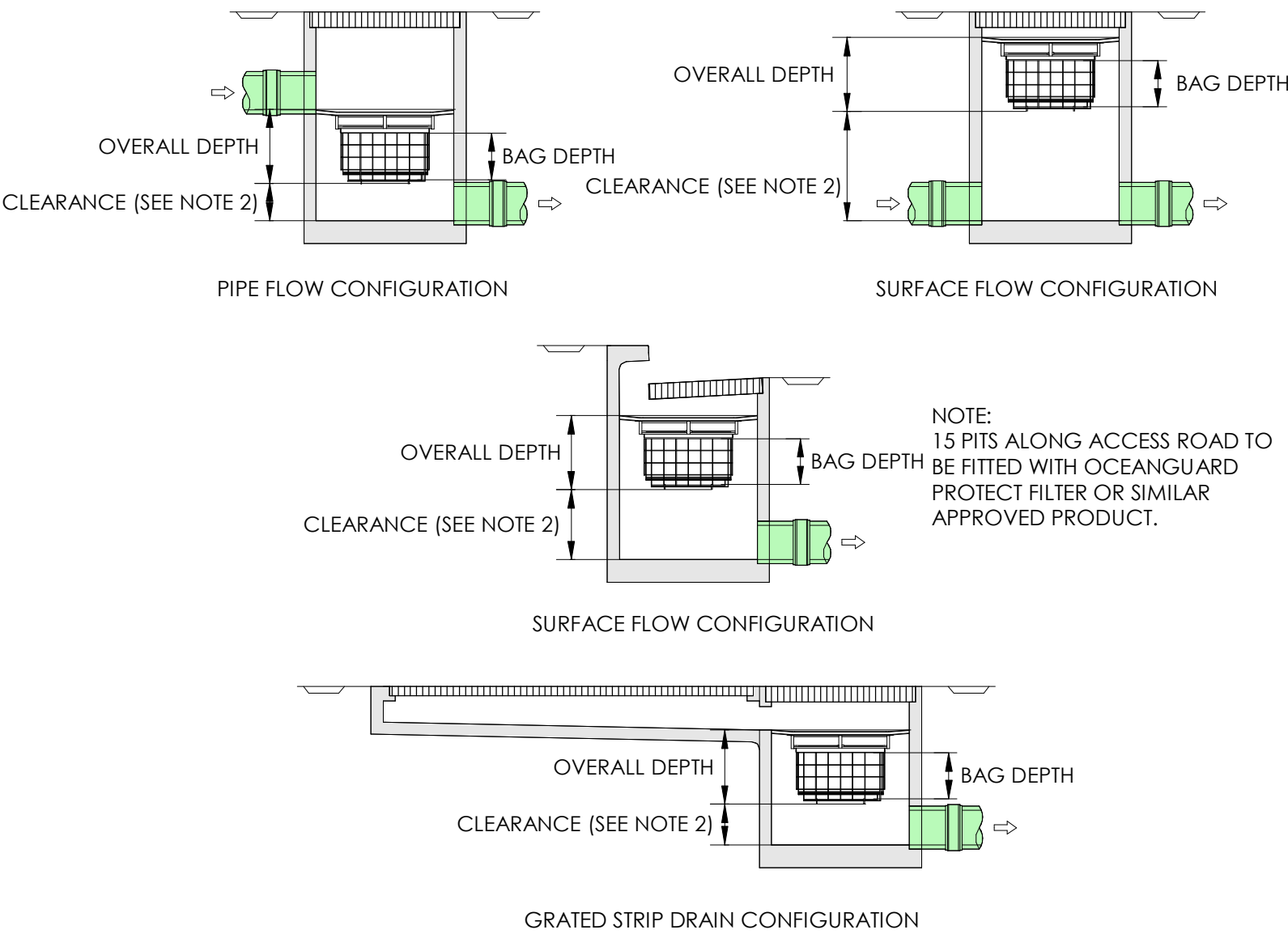
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C051 H

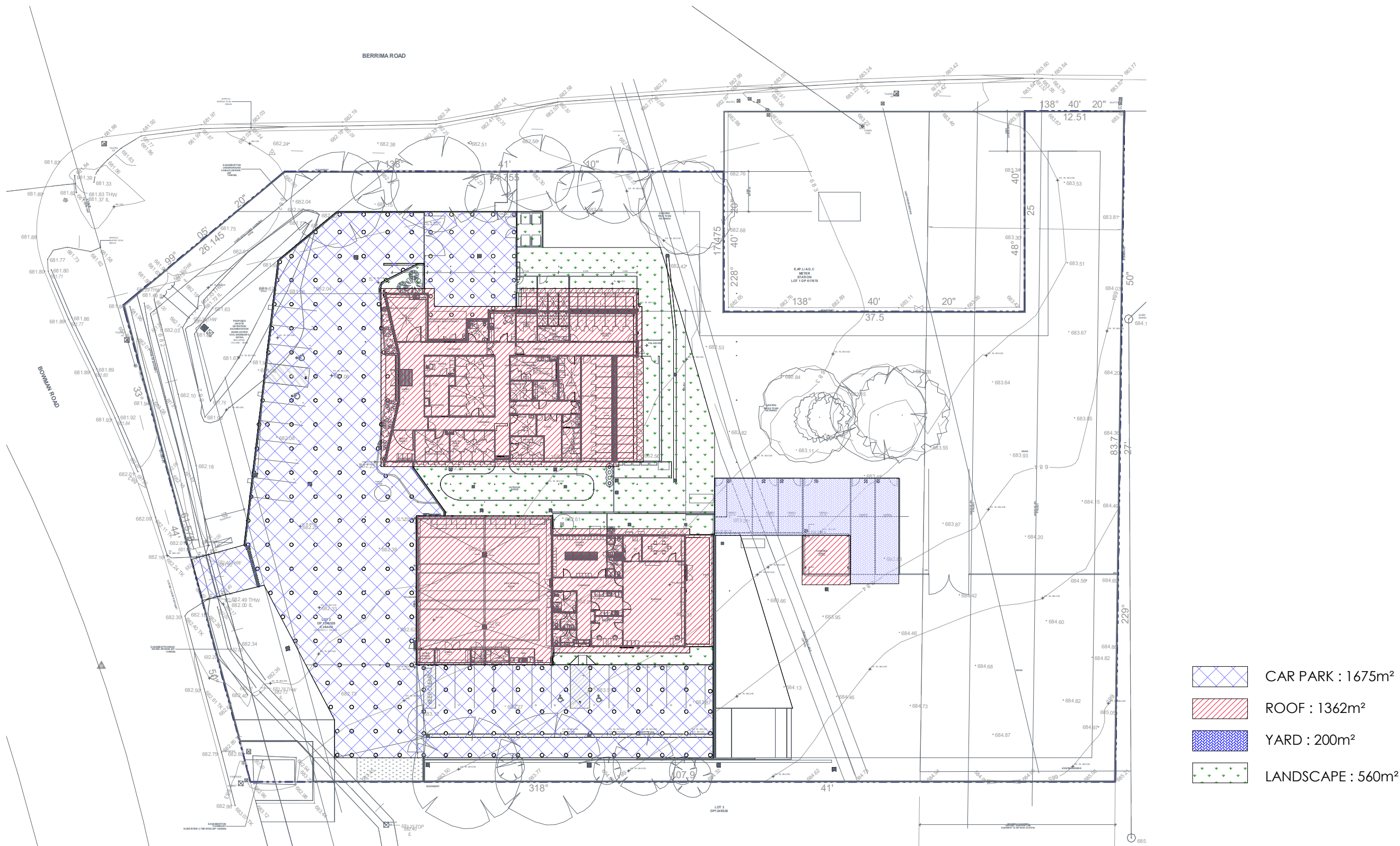
No	DATE	DESCRIPTION	BY
B	17.11.22	TENDER ISSUE	LTR
C	28.11.22	TENDER ISSUE	LTR
D	08.12.22	TENDER ISSUE	LTR
E	03.04.23	ISSUED FOR \$4.55	ER
F	02.06.23	REISSUED FOR \$4.55	ER



MUSIC MODEL - TREATMENT TRAIN EFFECTIVENESS



OCEANGUARD PROTECT FILTER
SCALE 1 : 20



SITE CATCHMENT AREA BREAK-DOWN
SCALE 1 : 500

PIT SCHEDULE

ID	PIT DIMENSIONS	GRATE LEVEL	INVERT LEVEL	DEPTH	LID CLASS	COMMENTS
1						Refer OSD detail
2	600x600	682.99	682.4	0.59	C	OceanGuard Litter Basket or equivalent to be installed
3	600x600	683.05	682.49	0.56	C	OceanGuard Litter Basket or equivalent to be installed
4	600x600	683.1	682.6	0.5	B	
5	450x450	683.13	682.67	0.46	B	
6	600x600	682.36	681.8	0.56	C	Surcharge Inlet Pit with Scour Protection
7	600x600	682.99	681.85	1.14	C	Splitter pit with min 2.2m wide weir at RL 682.60
8	600x600	683.03	682.04	0.99	B	
9	600x600	683.03	682.16	0.87	B	
10	450x450	683.12	682.22	0.9	B	
11	450x450	683.15	682.29	0.86	B	
12	450x450	683.16	682.38	0.78	B	
13	450x450	683.1	682.4	0.7	B	
14	450x450	683.1	682.4	0.7	B	
15	450x450	683.1	682.4	0.7	B	
16	450x450	683.1	682.4	0.7	B	
17	600x600	682.98	681.98	1	C	OceanGuard Litter Basket or equivalent to be installed
18	600x600	683.03	681.9	1.13	C	OceanGuard Litter Basket or equivalent to be installed
19	600x600	683.01	681.99	1.02	C	OceanGuard Litter Basket or equivalent to be installed
20	600x600	682.93	682.09	0.84	C	OceanGuard Litter Basket or equivalent to be installed
21	600x600	682.93	682.18	0.75	C	OceanGuard Litter Basket or equivalent to be installed
22	600x600	683.65	682.45	1.2	B	
23	600x600	684.25	683.35	0.9	B	
24	600x600	684.75	683.85	0.9	B	



CLIENT
Figgis + Jefferson Tepa

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DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
TYPICAL DETAILS - SHEET 3

PROJECT
PROPOSED ANIMAL SHELTER & SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN BY N0211564
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE As indicated
PROJECT DY
MGR C052 F
WWW.JN.COM.AU

No	DATE	DESCRIPTION	BY
F	03.04.23	ISSUED FOR \$4.55	ER
G	02.06.23	REISSUED FOR \$4.55	ER
H	09.06.23	REISSUED FOR \$4.55	ER
J	16.06.23	REISSUED FOR \$4.55	ER

PROVIDE GUARD RAIL AROUND
TOP OF OSD/WSUD BASIN

IL: 682.36

EX. PIPE TO BE
REMOVED

PROVIDE MINIMUM 218m²
BIO-FILTRATION AREA

EXISTING PIPE TO BE
SHORTENED. DISCHARGE
CONTROL PIT TO BE
CONSTRUCTED OVER
EXISTING STORMWATER LINE

ON-SITE STORMWATER
DETENTION BASIN. REFER TO
SHEET C51 FOR TYPICAL DETAIL

PROVIDE SUBSOIL DRAINAGE
LINES AT 3m CENTRES
CONNECTING TO OUTLET PIT

LOW FLOW SURCHARGE
PIT TO WSUD BASIN

SLOTTED KERB WITH 150mm WIDE
GAP EVERY 1.5m

PROVIDE SPLITTER PIT WITH 2.2m
LONG WEIR AT RL 682.60. REFER
TYPICAL DETAIL ON SHEET C051

RETAINING WALL TO STRUCTURAL
ENGINEER'S DETAIL

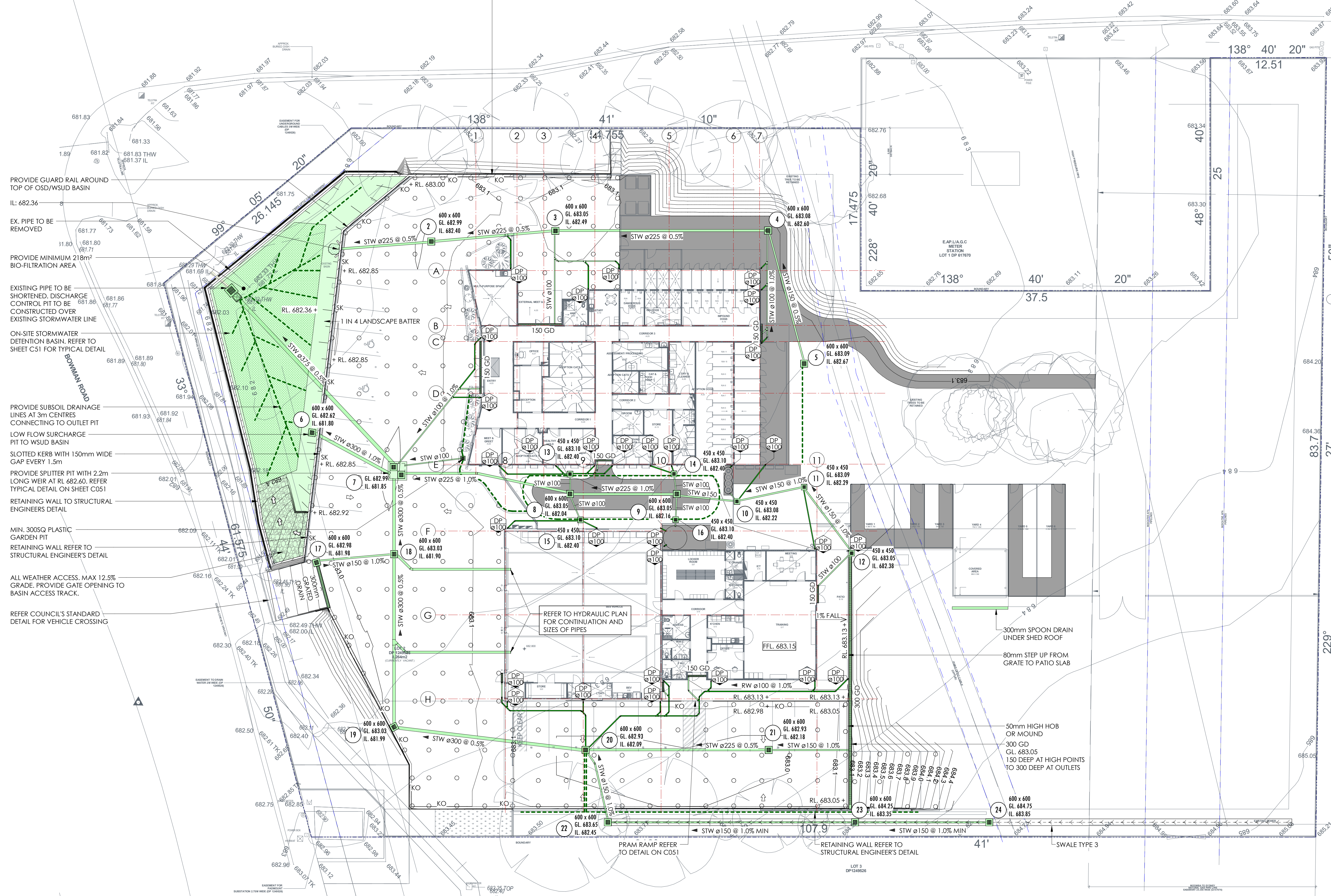
MIN. 300SQ PLASTIC
GARDEN PIT
RETAINING WALL REFER TO
STRUCTURAL ENGINEER'S DETAIL

ALL WEATHER ACCESS. MAX 12.5%
GRADE. PROVIDE GATE OPENING TO
BASIN ACCESS TRACK.

REFER COUNCIL'S STANDARD
DETAIL FOR VEHICLE CROSSING

RETAINING WALL REFER TO
STRUCTURAL ENGINEER'S DETAIL

BERRIMA ROAD



SITE INFORMATION:

SITE AREA: 8826m²
PRE-DEV IMPERVIOUS AREA: 0m²
POST-DEV IMPERVIOUS AREA: 3166m²

1% AEP PRE-DEV SITE DISCHARGE: 267L/s
1% OSD DESIGN DISCHARGE: 267L/s

20% AEP PRE-DEV SITE DISCHARGE: 88L/s
20% AEP OSD DESIGN DISCHARGE: 86L/s

OSD REQUIRED: 64m³
OSD PROVIDED: 64m³

WATER SENSITIVE URBAN DESIGN:

REFER TO WSUD SUMMARY REPORT FOR
POLLUTION REDUCTIONS ACHIEVED

REFER TO MUSIC MODEL ON C052



CLIENT
Figgis + Jefferson Tepa

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DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
SITE STORMWATER PLAN

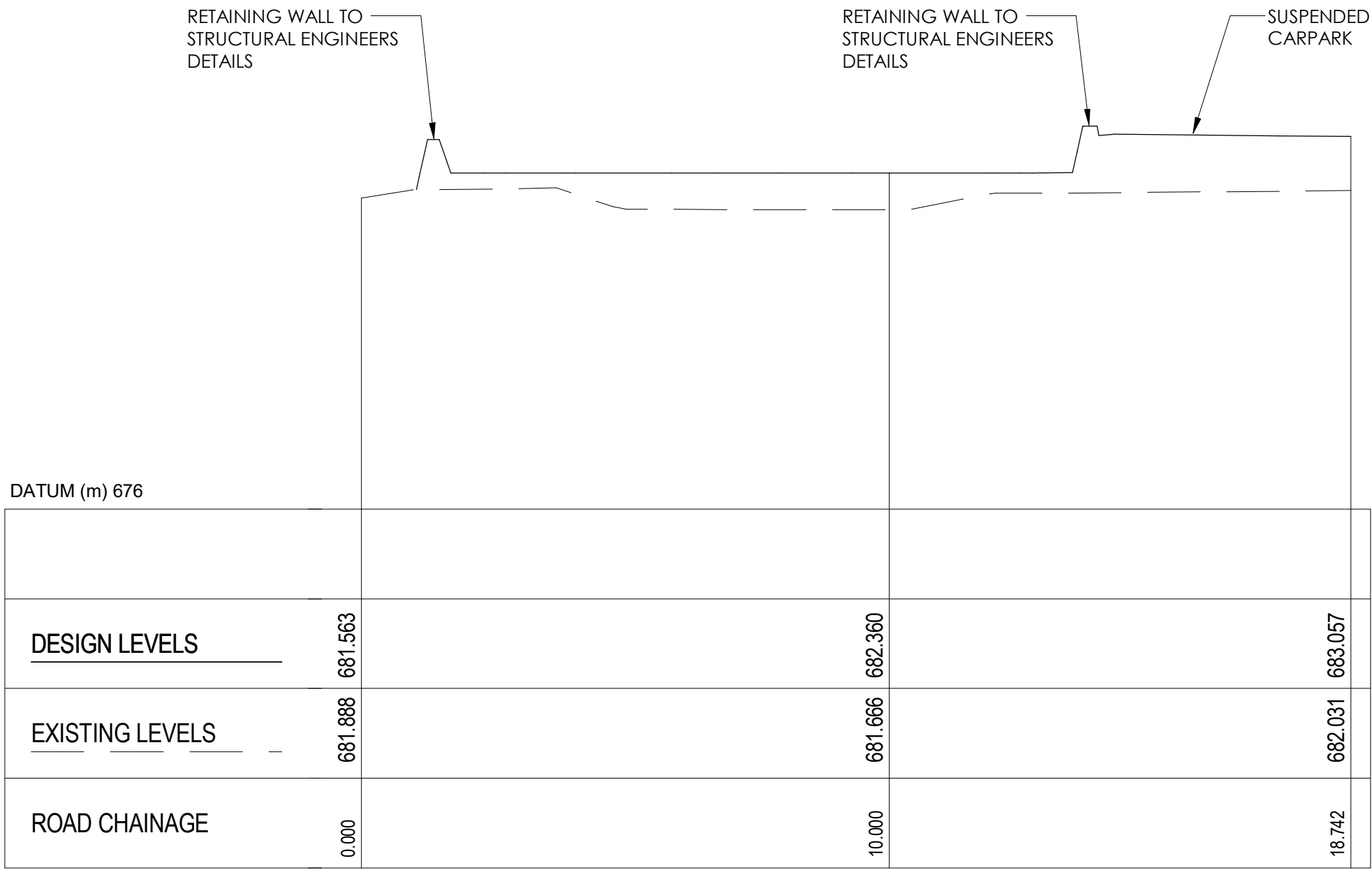
PROJECT
PROPOSED ANIMAL SHELTER &
SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN BY N0211564
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE 1 : 200
PROJECT DY
MGR C200 J
WWW.JN.COM.AU

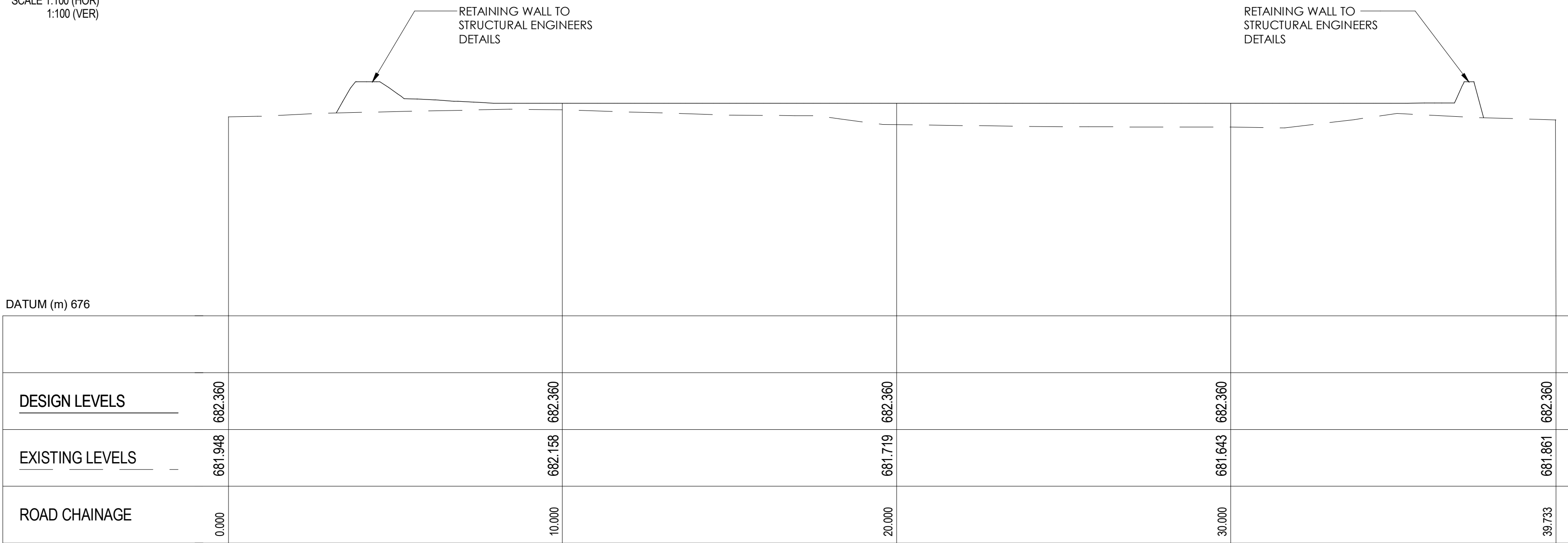
SITE STORMWATER
SCALE 1 : 200

No	DATE	DESCRIPTION	BY
A	17.11.22	TENDER ISSUE	LTR
B	28.11.22	TENDER ISSUE	LTR
C	08.12.22	TENDER ISSUE	LTR
D	03.04.23	ISSUED FOR \$4.55	ER
E	02.06.23	REISSUED FOR \$4.55	ER



LONGITUDINAL SECTION SECTION 1

SCALE 1:100 (HOR)
1:100 (VER)



LONGITUDINAL SECTION SECTION 2

SCALE 1:100 (HOR)
1:100 (VER)



CLIENT
Figgis + Jefferson Tepa

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DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
GRADING SECTIONS

PROJECT
PROPOSED ANIMAL SHELTER & SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS

DESIGN
DRAWN
DATE
DRG SIZE
SCALE
PROJECT
MGR

DY
LTR
MAY 22
A1
1 : 1000
DY

N0211564
C401 E
WWW.JN.COM.AU

No	DATE	DESCRIPTION	BY
A	17.11.22	TENDER ISSUE	LTR
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VOLUMES:
CUT VOLUME: -305m³
FILL VOLUME: 2,356m³
BALANCE: 2,051m³ (FILL)

NOTE:
1. BULK EARTHWORKS PLAN IS BASED ON ARCHITECT DESIGN LEVELS AND IS SUBJECT TO CHANGE.
2. NO ALLOWANCE FOR TOP SOIL STRIPPING OR BOXING

STANDARD SYMBOLS & NOTATIONS	
SYMBOL	DESCRIPTION
[Color swatch]	1.2m TO 300m CUT
[Color swatch]	1.1m TO 1.2m CUT
[Color swatch]	1.0m TO 1.1m CUT
[Color swatch]	0.9m TO 1.0m CUT
[Color swatch]	0.8m TO 0.9m CUT
[Color swatch]	0.7m TO 0.8m CUT
[Color swatch]	0.6m TO 0.7m CUT
[Color swatch]	0.5m TO 0.6m CUT
[Color swatch]	0.4m TO 0.5m CUT
[Color swatch]	0.3m TO 0.4m CUT
[Color swatch]	0.2m TO 0.3m CUT
[Color swatch]	0.1m TO 0.2m CUT
[Color swatch]	0.0m TO 0.1m CUT
[Color swatch]	0.0m TO 0.1m FILL
[Color swatch]	0.1m TO 0.2m FILL
[Color swatch]	0.2m TO 0.3m FILL
[Color swatch]	0.3m TO 0.4m FILL
[Color swatch]	0.4m TO 0.5m FILL
[Color swatch]	0.5m TO 0.6m FILL
[Color swatch]	0.6m TO 0.7m FILL
[Color swatch]	0.7m TO 0.8m FILL
[Color swatch]	0.8m TO 0.9m FILL
[Color swatch]	0.9m TO 1.0m FILL
[Color swatch]	1.0m TO 300m FILL



CLIENT
Figgis + Jefferson Tepa

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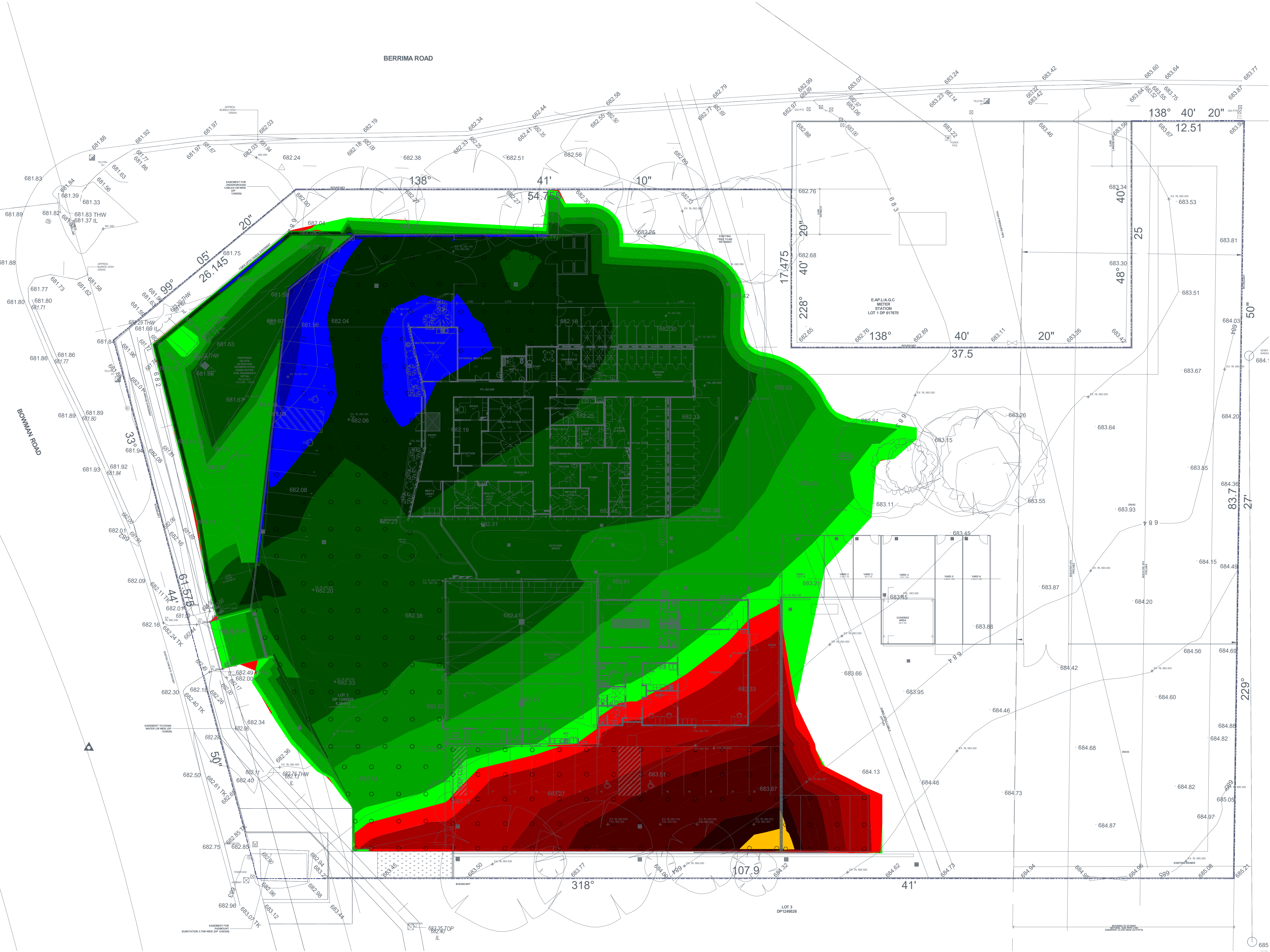
DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
CUT AND FILL PLAN

PROJECT
PROPOSED ANIMAL SHELTER & SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN DY
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE As indicated
PROJECT DY
MGR
WWW.JN.COM.AU
N0211564
C450 E



CUT AND FILL PLAN
SCALE 1 : 200

No	DATE	DESCRIPTION	BY
B	17.11.22	TENDER ISSUE	LTR
C	28.11.22	TENDER ISSUE	LTR
D	08.12.22	TENDER ISSUE	LTR
E	03.04.23	ISSUED FOR \$4.55	ER
F	02.06.23	REISSUED FOR \$4.55	ER

- CONCRETE PAVEMENT TYPE 1:
110mm SLAB ON GROUND
- CONCRETE PAVEMENT TYPE 2:
200mm SUSPENDED SLAB
- DJ
- SC

DIAMOND DOWELS ARE TO BE USED WITHIN 1500mm IN EACH DIRECTION OF A JUNCTION IN DOWEL JOINTS
DDJ = DIAMOND DOWEL JOINT REFER TO STRUCTURAL DRAWINGS FOR PAVEMENT DETAILS



CLIENT
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DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
PAVEMENT PLAN

PROJECT
PROPOSED ANIMAL SHELTER &
SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN DY
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE As indicated
PROJECT DY
MGR
WWW.JN.COM.AU
N0211564
C500 F

SITE PAVEMENT PLAN
SCALE 1 : 200

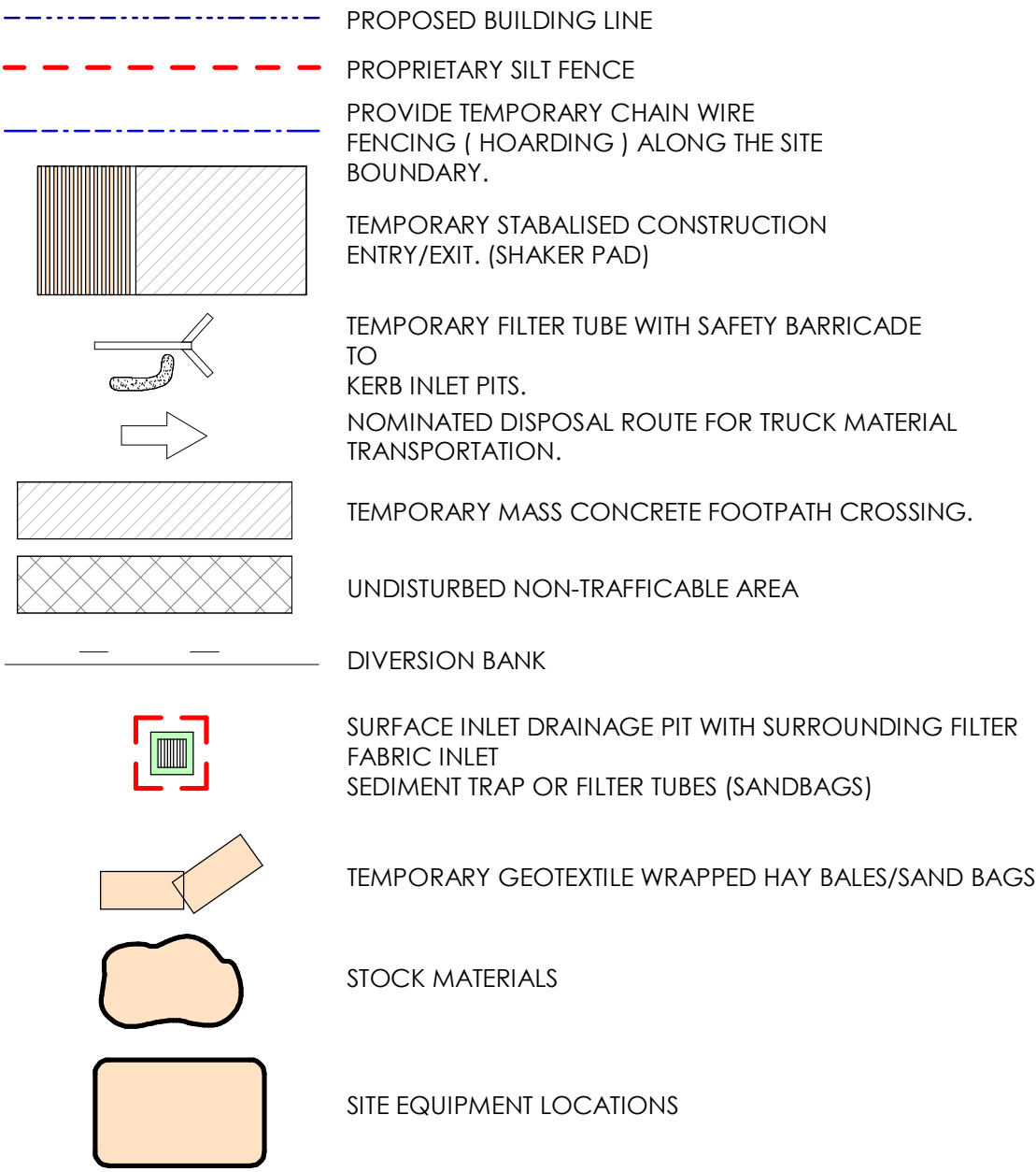
PROPOSED ANIMAL SHELTER & SES BUILDING

1 Bowman Road, Moss Vale NSW 2577

Job No. N0211564

No	DATE	DESCRIPTION	BY
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ENVIRONMENTAL SITE MANAGEMENT LEGEND



SAFETY IN DESIGN

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

- JN DO NOT CONSIDER THAT THERE ARE ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN OF THIS PROJECT.

ENVIRONMENTAL SITE MANAGEMENT

- EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH COUNCIL'S SPECIFICATION & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK" - SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER, 2004. REFER TO THE BLUE BOOK FOR STANDARD DRAWINGS 'SD'
- SEDIMENT & EROSION CONTROLS MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS OR DEMOLITION ACTIVITY. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE DETERMINED ON SITE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MEASURES ARE TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM. SUPERVISING ENGINEER SHOULD BE CONTACTED IF IN DOUBT. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.
- RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED AT THE NOMINATED SITE. A SEDIMENT FENCE TO BE PLACED DOWNHILL OF STOCKPILE.
- AREAS OF SITE REGRADING ARE TO BE COMPLETED PROGRESSIVELY DURING THE WORKS AND STABILISED AS EARLY AS POSSIBLE. THE SUPERVISING ENGINEER MAY DIRECT THE CONTRACTOR TO HAVE AREAS OF DISTURBANCE COMPLETED AND STABILISED DURING THE COURSE OF THE WORKS.
- ALL DISTURBED AREAS ARE TO BE SEEDED & FERTILISED WITHIN 14 DAYS OF EXPOSURE.
- ALL EXISTING TREES TO BE RETAINED UNLESS SHOWN OTHERWISE ON APPROVED DRAWINGS. TREES RETAINED ARE TO BE PROTECTED WITH A HIGH VISIBILITY FENCE, PLUS FLAGGING TO INDIVIDUAL TREES AS NECESSARY.
- INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER, UNTIL SURROUNDING AREAS ARE PAVED OR REGRASSED. GRAVEL OR GEOTEXTILE INLET FILTERS TO SD6-11 & SD6-12.
- ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARLY DESILTED DURING THE CONSTRUCTION PERIOD. SILT FENCES TO SD6-8 OR SD6-9.
- STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, GRAVEL MUST BE COVERED WITH GEOTEXTILE SILT FENCE MATERIAL. PLASTIC SHEETING OR MEMBRANE MUST NOT BE USED. SAFETY BARRICADING SHOULD BE USED TO ISOLATE STOCKPILES OF SOLID MATERIALS SUCH AS STEEL REINFORCING, FORMWORK AND SCAFFOLDING.
- WASTE MATERIALS ARE TO BE STOCKPILED OR LOADED INTO SKIP-BINS LOCATED ON SITE AS SHOWN ON PLAN.
- NO MORE THAN 150m OF TRENCHING TO BE OPEN AT ANY ONE TIME. IMMEDIATELY AFTER TRENCH BACKFILLING, PROVIDE SANDBAGS OR SAUSAGE FILTERS ACROSS EACH TRENCH AT MAXIMUM 20m SPACINGS. FILTERS TO REMAIN IN PLACE UNTIL REVEGETATION HAS OCCURRED.
- ALL VEHICLES LEAVING THE SITE MUST PASS OVER THE STABILISED SITE ACCESS BALLAST AREA (SIMILAR TO SD6-14) TO SHAKE OFF SITE CLAY AND SOIL. IF NECESSARY WHEELS AND AXLES ARE TO BE HOSED DOWN. BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY DURING THE CONSTRUCTION PERIOD.
- THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.
- ANY SEDIMENT DEPOSITED ON THE PUBLIC WAY, INCLUDING FOOTPATH RESERVE AND ROAD SURFACE, IS TO BE REMOVED IMMEDIATELY.
- PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.
- CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE BALLAST ENTRY DRIVEWAY AREA AND ARE NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.
- TRUCKS REMOVING EXCAVATED / DEMOLISHED MATERIAL SHOULD TRAVEL ON STABILISED CONSTRUCTION PATHS. MATERIAL TO BE TAKEN TO THE TRUCK TO REDUCE TRUCK MOVEMENT ON SITE. TRUCKS TO BE LIMITED TO SINGLE UNIT HEAVY RIGID VEHICLES.
- ANY EXCAVATION WORK ADJACENT TO ADJOINING PROPERTIES OR THE PUBLIC ROADWAY IS NOT TO BE COMMENCED UNTIL THE STRUCTURAL ENGINEER IS CONSULTED AND SPECIFIC INSTRUCTIONS RECEIVED FROM THE ENGINEER.
- TOILET FACILITIES MUST BE EITHER A FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED & SERVICED ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.
- DURING TRENCH EXCAVATION ALL SPOIL SHALL BE MOUNDED ON THE UPHILL SIDE OF TRENCHES AND PLACEMENT IS TO COMPLY WITH THE SUPERINTENDENTS REQUIREMENT.
- DIVERSION BANKS SHOULD BE CONSTRUCTED BY MOUNDING STRIPPED TOPSOIL (MIN HEIGHT 600mm) WHERE DIRECTED. MATERIAL TO BE RESPREAD ON FOOTWAYS AFTER FINAL TRIMMING.
- UNDISTURBED BUFFER ZONE AREAS ARE CLOSED TO ALL TRAFFIC MOVEMENTS UNLESS OTHERWISE NOTED BY THE SUPERINTENDENT AND ACCESS TO THE SEWER OR C.D.L. TRENCHING WILL BE AS SHOWN. OR HEAVY PENALTIES MAY BE IMPOSED.
- TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION. IN ACCORDANCE WITH 'R.T.A. TRAFFIC CONTROL AT WORK SITES - CURRENT EDITION' AND AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.'
- PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION. IN ACCORDANCE WITH AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.'

ESM DRAWING LIST

No.	SHEET NAME
ESM1	NOTES & LEGEND
ESM2	EROSION AND SEDIMENT CONTROL DETAILS
ESM3	EROSION AND SEDIMENT CONTROL PLAN



CLIENT
Figgis + Jefferson Tepa

STATUS
PRELIMINARY

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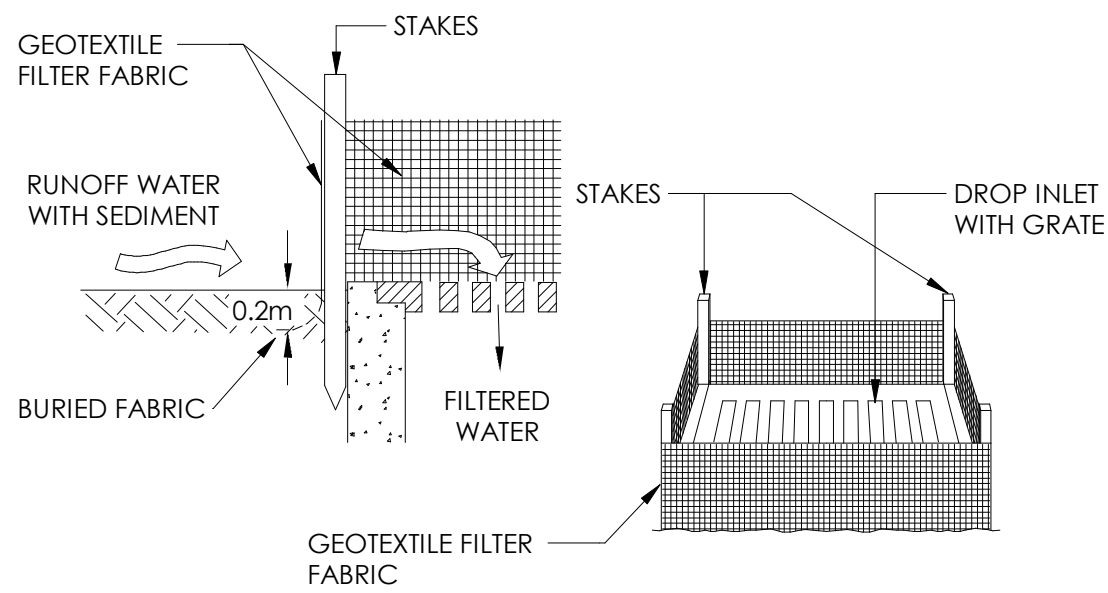
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NOTES & LEGEND

PROJECT
PROPOSED ANIMAL SHELTER & SES BUILDING

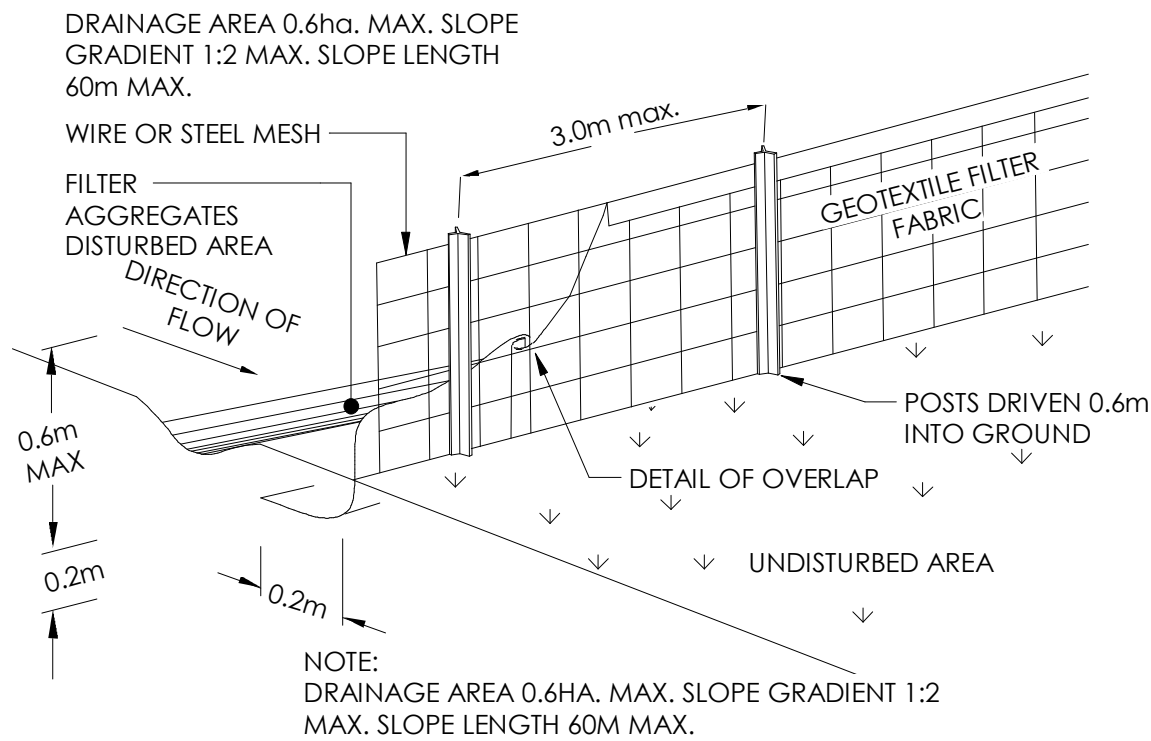
ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN DY
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE As indicated
PROJECT DY
MGR
WWW.JN.COM.AU
N0211564
ESM1 E

No	DATE	DESCRIPTION	BY
A	17.11.22	TENDER ISSUE	LTR
B	28.11.22	TENDER ISSUE	LTR
C	08.12.22	TENDER ISSUE	LTR
D	03.04.23	ISSUED FOR \$4.55	ER
E	02.06.23	REISSUED FOR \$4.55	ER

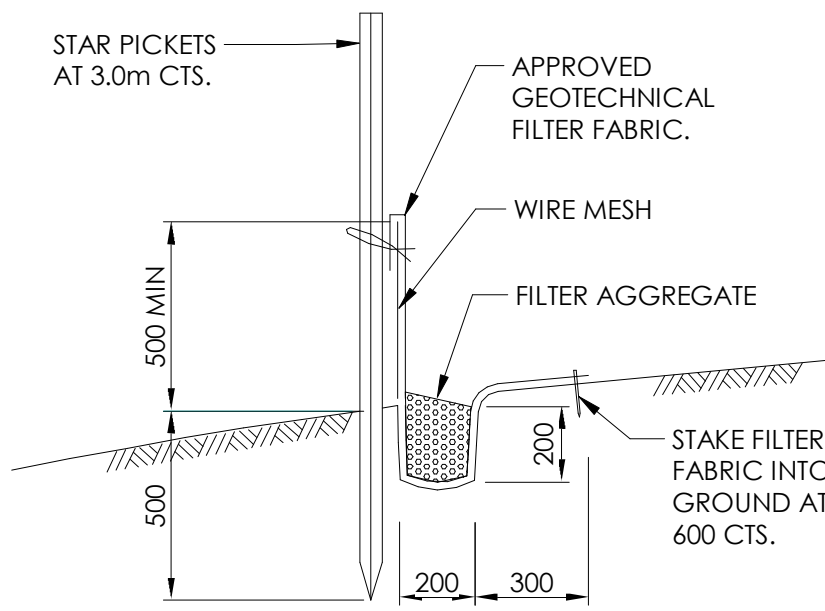


GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP
SCALE 1 : 20



SEDIMENT FENCE

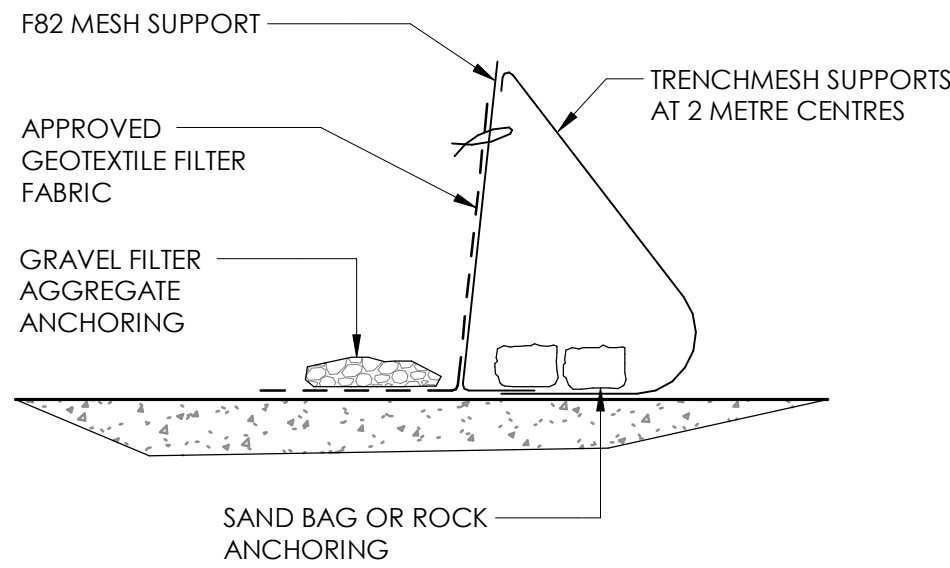
- GENERAL CONSTRUCTION NOTES**
1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
 2. DRIVE 1.5m LONG STAR PICKETS IN GROUND 3m APART.
 3. DIG A 200mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE FABRIC TO BE ENTRENCHED.
 4. BACKFILL TRENCH OVER BASE OF FABRIC
 5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
 6. JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150m OVERLAP.



SILT FENCE DETAIL

SEDIMENT SILT FENCE DETAIL

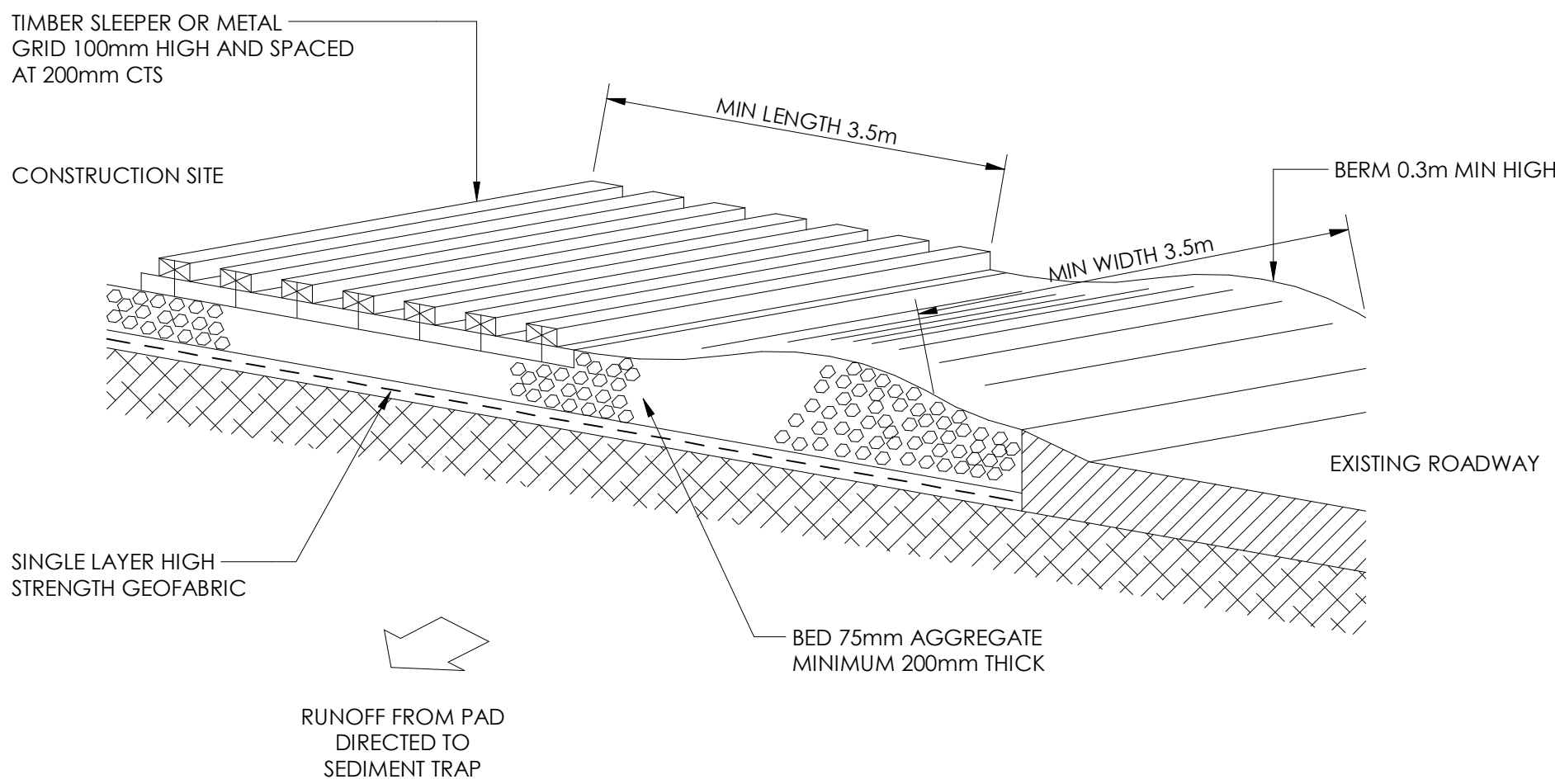
SCALE 1 : 20



- GENERAL CONSTRUCTION NOTES:**
1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
 2. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
 3. JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150mm OVERLAP.
 4. REFER TO DETAIL SD 6-9 "BLUE BOOK"

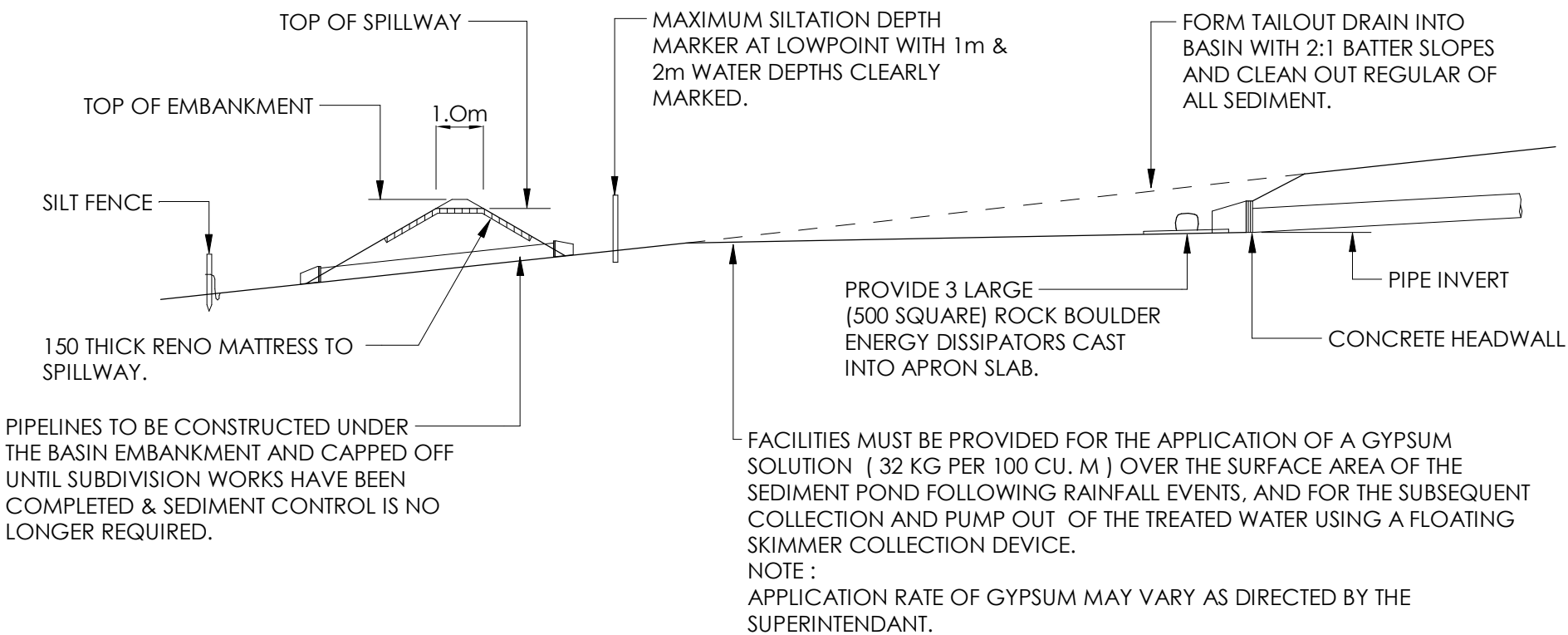
SEDIMENT FENCE - ALTERNATIVE

SCALE 1 : 20



TEMPORARY CONSTRUCTION EXIT DETAIL - SHAKER

SCALE 1 : 20



SEDIMENTATION BASIN DETAIL

SCALE 1 : 20



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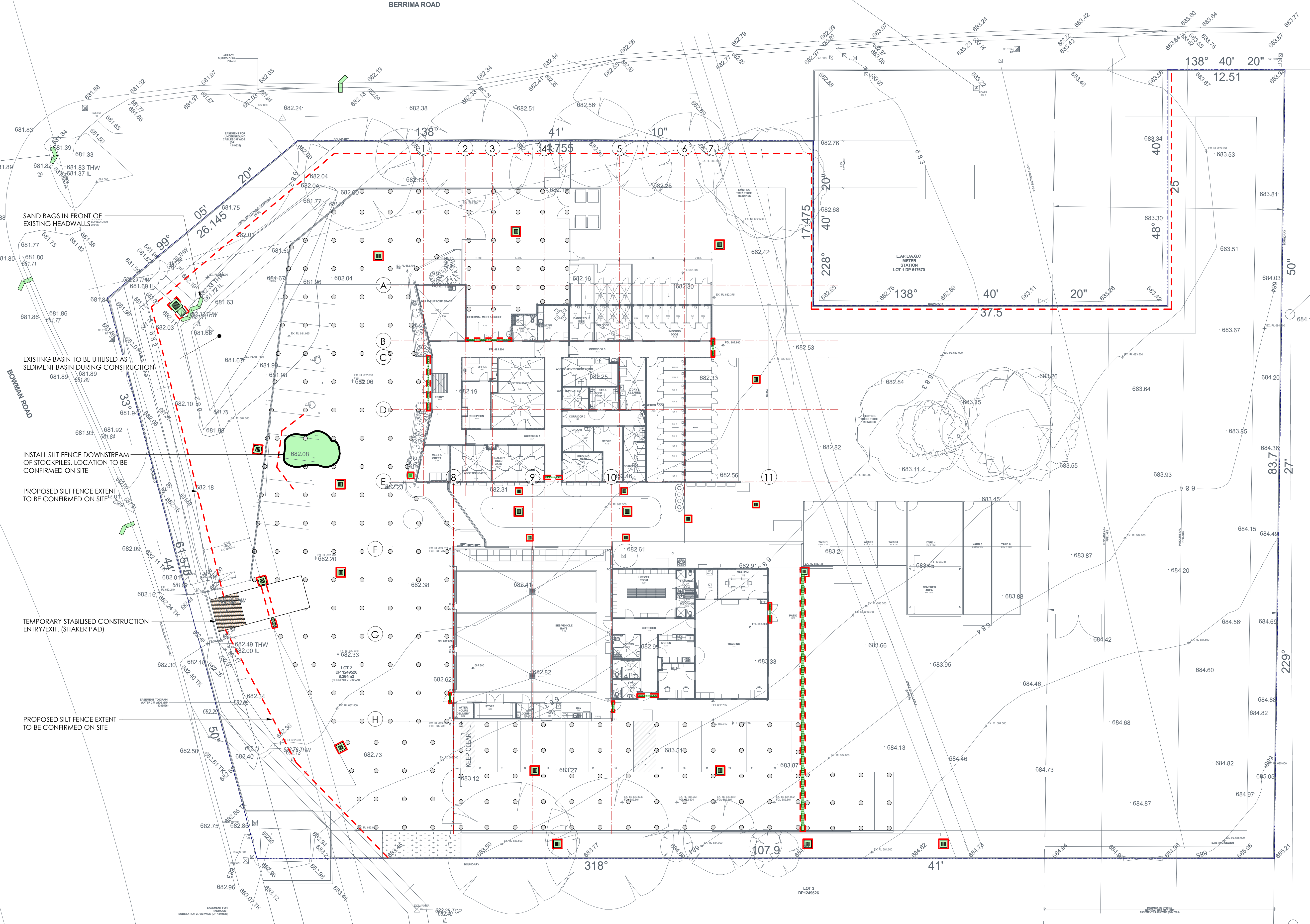
DRAWING TITLE
EROSION AND SEDIMENT
CONTROL DETAILS

PROJECT
PROPOSED ANIMAL SHELTER &
SES BUILDING

ADDRESS
1 Bowman Road, Moss Vale NSW 2577

PROJECT DETAILS
DESIGN DY
DRAWN LTR
DATE MAY 22
DRG SIZE A1
SCALE 1 : 20
PROJECT DY
MGR
WWW.JN.COM.AU
N0211564
ESM2 E

No	DATE	DESCRIPTION	BY
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ENVIRONMENTAL SITE MANAGEMENT PLAN
SCALE 1 : 200



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