STORMWATER NOTES

- CONFIRM LOCATION, SIZE, CONDITION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK.
- 2. ALL WORK TO BE IN ACCORDANCE WITH LOCAL AUTHORITIES REQUIREMENTS, BCA AND RELEVANT AUSTRALIAN STANDARDS (IN PARTICULARLY AS 3500)
- 3. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DOCUMENTS. ALL DISCREPANCIES SHALL BE REFERRED TO THE PROJECT MANAGER BEFORE PROCEEDING WITH THE WORK.
- 4. LOCATION OF ALL DOWNPIPES, PITS AND PIPEWORK IS DIGRAMMATIC ONLY FINAL LOCATION TO BE CO-ORDINATED DURING CONSTRUCTION CERTIFICATE DOCUMENTATION.
- 5. ALL MATERIALS USED IN THE WORK SHALL BE NEW AND OF THE BEST QUALITY AND TYPE AVAILABLE TO CONFORM WITH THE RELEVANT AUSTRALIAN STANDARDS AND BEAR THE REQUIRED STANDARDS MARK AND WATERMARK.
- 6. MAKE ALL APPLICATIONS TO LOCAL COUNCIL. PAY ALL FEES AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS AS REQUIRED BY THE AUTHORITIES.
- PIPEWORK UP TO 225mm DIAMETER SHALL BE UPVC DRAINAGE WASTE GRADE WITH SOLVENT WELDED JOINTS.
- 8. PIPEWORK SHALL BE LAID AT 1:100 MINIMUM GRADE UNLESS NOTED OTHERWISE. PIPEWORK MAY BE LAID AT STEEPER GRADES AS REQUIRED TO MEET COVER REQUIREMENTS OR AS NOMINATED BY PIPEWORK INVERT LEVELS.
- . SUBSOIL PIPEWORK SHALL BE INSTALLED AS REQUIRED, INCLUDING BEHIND ALL RETAINING STRUCTURES, PLANTERS AND WHERE GROUND WATER IS ENCOUNTED. SHALL BE 90mm SLOTTED UPVC PIPE WRAPPED IN CLOTH SOCK AND SURROUNDED WITH 150mm THICKNESS OF 20mm DIAMETER BLUE METAL AND SURROUNDED IN GEOTEXTILE FABRIC.
- 10. ALL EXTERNAL LEVELS TO FALL AWAY FROM BUILDING. BUILDER TO ENSURE THRESHOLD REQUIREMENTS. OVERLAND FLOW PATHS TO BE MAINTAINED AROUND BUILDING TO PREVENT WATER INGRESS.
- 11. ALL LANDSCAPED AREAS LOCATED ABOVE CONCRETE SLABS TO BE EQUIPPED WITH DEDICATED OUTLET, WATERPROOFING MEMBRANE, DRAINAGE CELL AND GEOFABRIC.
- 12. SUBSOIL, UPLIFT PRESSURE, VERTICAL WALL DRAINAGE AND PIT CONSTRUCTION DETAILS TO BE CONFIRMED / CO-ORDINATED WITH STRUCTURAL AND GEOTECHNICAL ENGINEERS DURING CONSTRUCTION STAGE OF THE PROPOSED DEVELOPMENT.
- 13. ALL BALCONIES TO BE PROVIDED WITH SAFETY OVERFLOWS (FINAL LOCATION OF OVERFLOWS TO BE CONFIRMED BY ARCHITECT).

DRAWING SCHEDULE

DWG No	DESCRIPTION
STW-00	LEGEND, DETAILS & CALCULATIONS
STW-01	EROSION SEDIMENT CONTROL PLAN
STW-02	STORMWATER DRAINAGE- GROUND FLOOR

STORMWATER PIT SIZES

MINIMUM INTERNAL MEASUREMENTS:					
DEPTH TO BASE OF CHAMBER	RECTANO	RECTANGULAR WIDTH LENGTH		LADDER / STEP IRON	
LESS THAN 600	450	450	600	NO	
601 TO 900	600	600	900	NO	
901 TO 1200	600	900	1050	NO	
GREATER THAN 1200	900	900	1050	YES	

OSD & RAINWATER TANK CALCULATIONS

ALL IN ACCORDANCE WITH RANDWICK COUNCIL STORMWATER REQUIREMENTS.

OSD NOT REQUIRED WHERE ABSORPTION / INFILTRATION PROPOSED.

RAINWATER TANK MINIMUM EFFECTIVE VOLUME 10,000L WITH AN ASSOCIATED ROOF CATCHMENT OF 498mSQ AS PER BASIX REQUIREMENTS.

ABSORPTION TRENCH SIZING

GEOTECHNICAL REPORT DATED 08.11.2021 PREPARED BY STS GEOTECHNICS PTY LTD CONFIRMED INFILTRATION RATE OF 0.7L/SEC/M² AT 1M DEEP AND 0.4L/SEC/M² AT 2M DEEP. AN AVERAGE OF 0.55L/SEC/M² HAS BEEN ADOPTED FOR THE PROPOSED DESIGN.

IMPERVIOUS CATCHMENT AREA:

INFILTRATION RATE:

AREA AVAILABLE FOR INFILTRATION:

ABSORPTION RATE:

ARI:

STORAGE REQUIRED:

801m²

0.55 L/sec/m²

28.5m²

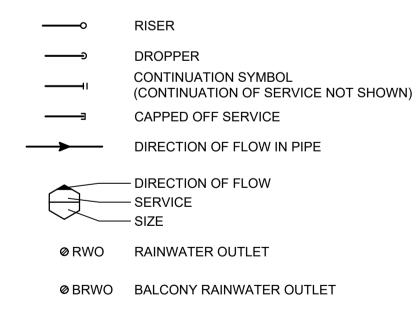
15.675 L/sec

1:100 YEARS

LINETYPES

STORMWATER DRAINAGE
SUBSOIL DRAINAGE
EXISTING SERVICE
EXISTING SERVICE TO BE REDUNDANT

SYMBOLS



CTODMWATED DDAINACE

Ø PRWO PLANTER RAINWATER OUTLET

Ø SRWO SPOON DRAIN RAINWATER OUTLET

STORMWATER PIT (WITH COVER)

STORMWATER PIT (WITH GRATE)

KERB INLET PIT

SPREADER

Amendment
ISSUED FOR REVIEW
PC 30.11.2021

ISSUED FOR DA
BP 03.12.2021

BP 03.12.2021

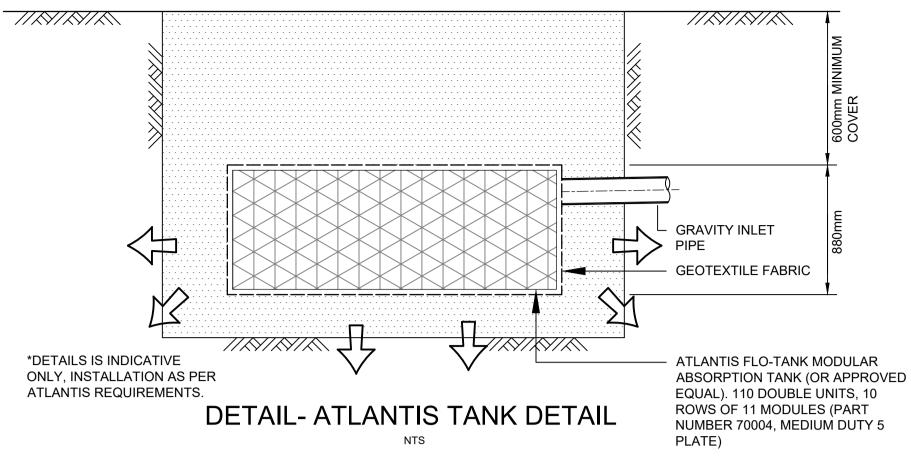
ISSUED FOR DA
BP

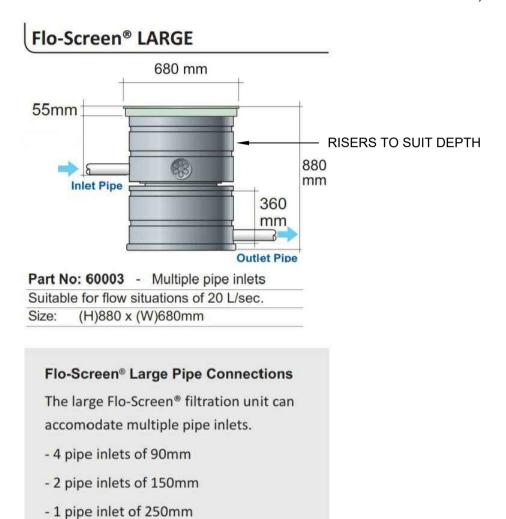
limensions, unless specifically shown, are to be read electronically from this drawing



eiaustralia

Practical Solutions for Built Environments





ATLANTIS FLO-TANK® MODULE SPECIFICATIONS

VOID RATIO: 95% Void

HEIGHT

WIDTH

LENGTH

FOOTPRINT

WATER STORAGE

MATERIAL: 85% Recycled Polypropylene, 15% Propriety Materials

SERVICE TEMPERATURE: -30°C to 120°C (-22°F to 248°F)

MINI

240 mm

408 mm

685 mm

0.2795 SQM

64.58 L

LAHC MATRAVILLE

CHEMICAL & BIOLOGICAL RESISTANCE: Unaffected by moulds & algae soil-bourne chemicals, bacteria ad bitumen

H 450mm (17.72")

H 240mm (9.45")

Mini Single P/N 70003

SINGLE

450 mm

408 mm

685 mm

119.47 L

289 - 293 BEAUCHAMP RD. MATRAVILLE NSW

LEGEND, DETAILS & CALCULATIONS

0.2795 SQM

STORMWATER SERVICES

Triple P/N 70005

TRIPLE

1310 mm

408 mm

685 mm

0.2795 SQM

347.80 L

(2.88ft)

Double

P/N 70004

DOUBLE

880 mm

408 mm

685 mm

233.64 L

0.2795 SQM

Quad P/N 70006

0.2795 SQM

461.93 L

H 1740mm

 Quad P/N 70006
 Penta P/N 70007

 QUAD
 PENTA

 1740 mm
 2170 mm

 408 mm
 408 mm

 685 mm
 685 mm

H 2170mm

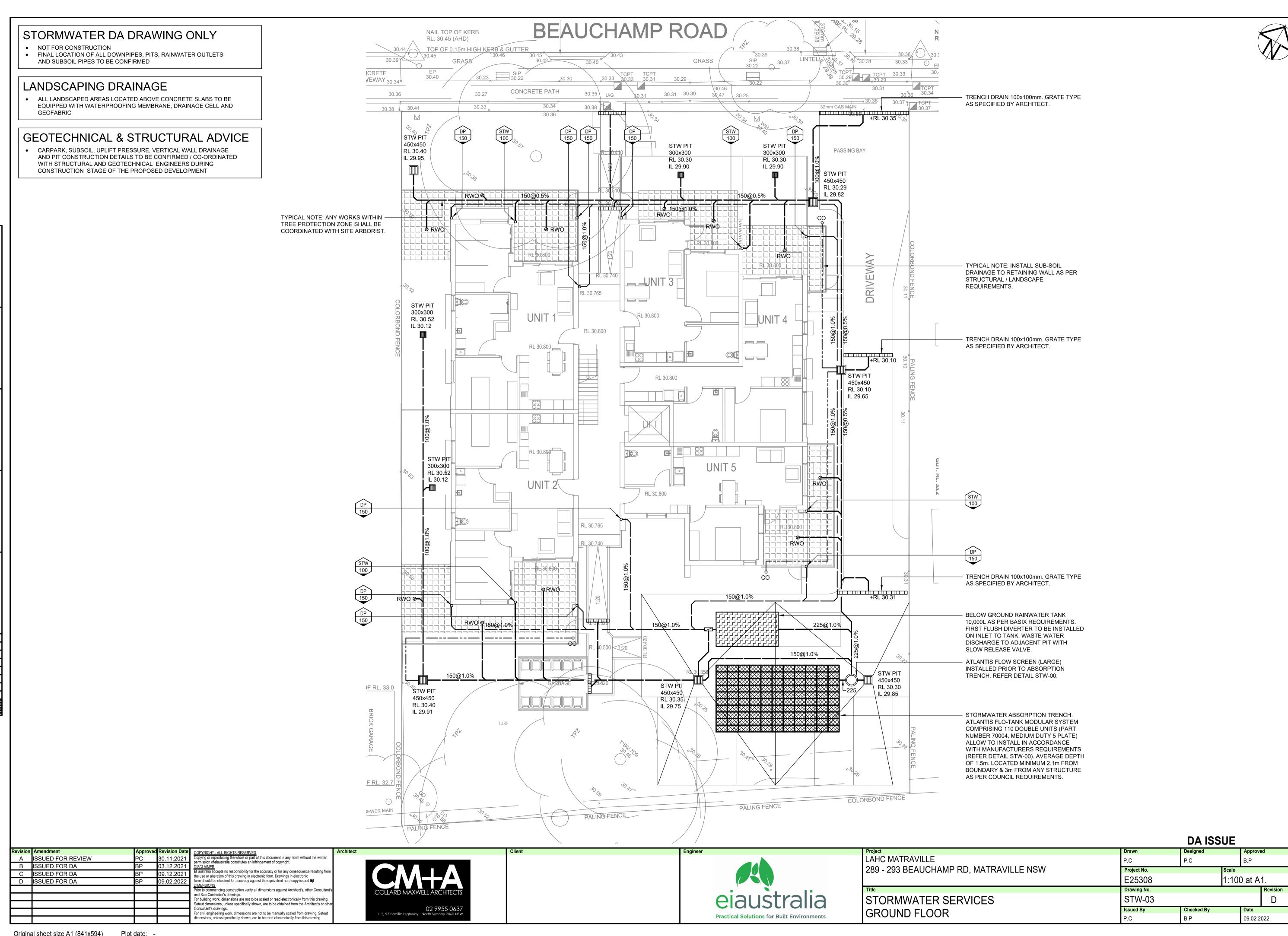
(7.12ft)

DA ISSUE					
Drawn	Designed Approve			ed	
P.C	P.C		B.P		
Project No.		Scale			
E25308	NTS at A1.			-	
Drawing No.				Revision	
STW-00				В	

03.12.2021

0.2795 SQM

576.10 L



PROVIDE ON SITE CONTROLS THROUGHOUT THE ENTIRE WORKS TO ENSURE MINIMUM EROSION AND SEDIMENT LOSS.

ENSURE LEAST DISTURBANCE TO SITE

AS EACH AREA IS COMPLETED, THAT AREA IS TO BE IMMEDIATELY/PROGRESSIVELY SEEDED AND FERTILISED. SILT FENCES, STRAW BALES OR OTHER CONTROLS NEED TO BE PROVIDED UNTIL THE SITE IS STABLE. SHOULD THIS APPROACH NOT BE PRACTICAL THE PROGRESSIVE REVEGETATION OF INDIVIDUAL AREAS WILL BE REQUIRED.

WHERE THERE IS GRADE ON OTHER AREAS OF THE SITE THAT MAY LEAD TO EROSION, FURTHER APPROPRIATE TREATMENT IS TO BE LOCATED TO CONTROL EROSION i.e. STRAW BALES

THE PROVISION AND MAINTENANCE OF (SEDIMENT) SILT FENCES WILL BE NECESSARY DURING THE CONSTRUCTION PHASE. WHEN INSTRUCTED BY THE COUNCIL PROGRESSIVELY REMOVE INDIVIDUAL SECTIONS OF SILT FENCES FOR CLEANING. CLEANING OF FENCES TO BE CARRIED OUT DURING PERIODS OF DRY WEATHER.

RUN-OFF AND SEDIMENT LOSS FROM THE AREAS OF FILL MUST BE CONTROLLED DURING AND AFTER CONSTRUCTION, BEFORE REVEGETATION TAKES PLACE USING SILT FENCES AND OR STRAW BALES AS INSTRUCTED BY THE PROJECT MANAGER/COUNCIL TO DIRECT WATER FROM THE DISTURBED AREA. OTHER MEASURES SHALL BE CARRIED OUT AS DIRECTED BY THE COUNCIL AND/OR AS SHOWN ON THE PLANS.

THE STOCK PILE LOCATION SHOWN ON THE PLAN IS PRELIMINARY. SHOULD THE BUILDER WISH TO RELOCATE THE STOCKPILE, HE SHALL OBTAIN APPROVAL FROM COUNCIL PRIOR TO COMMENCEMENT OF WORKS. THE BUILDER SHALL PRODUCE DRAWINGS INDICATING THE LOCATION OF STOCK PILES.

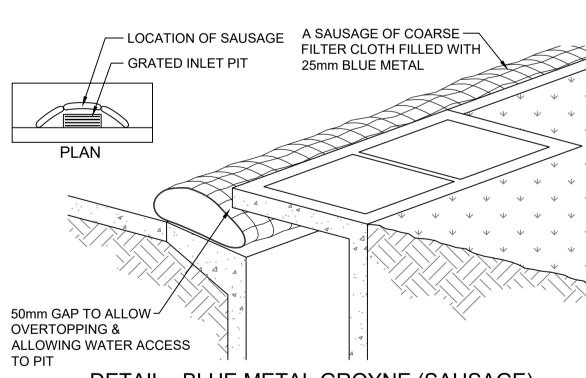
STOCK PILE SITES SHALL BE LOCATED AWAY FROM EXISTING OR PROPOSED DRAINAGE LINES OR AREAS LIKELY TO BE DISTURBED DURING CONSTRUCTION. STOCK PILE SITES SHALL NOT BE LOCATED WITHIN THE DRIP ZONE OF TREES.

STOCK PILE SITES MUST BE PROTECTED FROM EROSION AND SEDIMENT LOSS BY THE INSTALLATION OF SILT FENCES/STRAW BALES OR OTHER CONTROLS APPROVED BY COUNCIL.

TO MINIMISE WIND EROSION DURING CONSTRUCTION, THE GROUND SURFACE SHOULD BE KEPT DAMP (NOT WET). THE SURFACE SHOULD BE LEFT IN A ROUGH CLODDY CONDITION TO INCREASE ROUGHNESS AND SLOW SURFACE WIND SPEED.

LOCATION OF SEDIMENT CONTROL METHODS ie. SILT FENCES ARE SHOWN DIAGRAMMATICALLY ONLY ON DRAWING. FINAL LOCATION, EXTENT AND TYPE OF SEDIMENT CONTROL METHODS SHALL BE TO THE SATISFACTION OF COUNCIL.

THE CONTRACTOR, UNDER SECTION 16 OF THE CLEAN WATERS ACT, IS LIABLE FOR THE DEPOSITION OF ANY CONTAMINANTS DEPOSITED ON ROADWAYS AFTER LEAVING THE CONSTRUCTION SITE



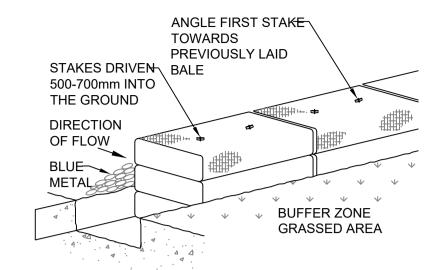
DETAIL - BLUE METAL GROYNE (SAUSAGE)

BLUE METAL GROYNE (SAUSAGE)

THE GROYNE COMPRISES A SAUSAGE OF SHADE CLOTH OR OTHER PREVIOUS FABRIC, SOME 200mm DIAMETER, FILLED WITH 25mm BLUE METAL AND CLOSED BOTH ENDS.

THE SAUSAGE IS LAID ON THE GROUND ON THE CONTOUR SIMILAR TO A SILT FENCE. GENERALLY THE SAUSAGE SHOULD BE LAID TWO HIGH TO OBTAIN ENOUGH FILTER AREA.

THE GROYNES SHOULD BE LOCATED ACROSS THE ENTRY DRIVEWAY TO THE SITE AND AROUND THE NEAREST DOWNSTREAM KERB ENTRY PITS.



DETAIL - STRAW BALE BARRIERS

STRAW BALE BARRIERS

A TEMPORARY BARRIER OF STRAW BALES PLACED AROUND THE

PERIMETER OF A DISTURBED AREA.

STRAW BALE BARRIERS ARE USED TO DESILT CONTAMINATED WATER

STRAW BALES ARE ONLY EFFECTIVE ON SITES OF LESS THAN HALF A HECTARE. THE BALES SHOULD BE PLACED LENGTHWISE IN 100mm DEEP TRENCHES WITH THEIR BINDING ROPE HORIZONTAL TO THE GROUND.

THE BALES SHOULD BE CONNECTED AND ANCHORED TO THE GROUND BY DRIVING TWO STAR PICKETS OR POSTS THROUGH EACH BALE. THE FIRST STAKE MUST BE DRIVEN TOWARDS THE ADJOINING BALE AT A 45° ANGLE TO FORCE THE BALES TOGETHER.

AFTER RAINFALL STRAW BALE BARRIERS SHOULD BE INSPECTED AND SEDIMENT REMOVED. DAMAGED BALES SHOULD BE REPAIRED OR REPLACED BALES HAVE A LIFE EXPECTANCY OF THREE TO SIX MONTHS.

DIRECTION OF

THE LOCATION OF STRAW BALES ON THE ABOVE SITE PLAN IS DIAGRAMMATIC ONLY. THE REQUIREMENT FOR THE USAGE OF STRAW BALES IS TO BE AS A SUPPLEMENTARY MEASURE TO ASSIST THE SILT FENCES. FINAL LOCATIONS AND EXTENT OF STRAW BALES TO BE DETERMINED BY THE COUNCIL.

DETAIL: STORM INLET SEDIMENT TRAP

SUCH SEDIMENT TRAPS ARE USED AT STORMWATER INLETS AND OUTLETS, CULVERT

ENTRIES AND POINTS WHERE RUN-OFF FROM DISTURBED CATCHMENTS SUCH AS

SEDIMENT TRAPS ARE BUILT FROM STRAW BALES, WASHED GRAVEL, GABIONS OR

SANDBAGS (OR SARLON TYPE MATERIALS) FILLED WITH BLUE METAL. THE CHOICE OF

MATERIAL OR TYPE OF STRUCTURE DEPENDS ON THE SIZE OF THE DRAINAGE AREA

SEDIMENT TRAPS SHOULD BE REGULARLY MAINTAINED AND RESTORED TO THEIR

ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE

ENSURE EROSION DOES NOT OCCUR. MAINTENANCE PROGRAM SHALL BE AS

DESIGNED CAPACITY. THE OUTLET SHOULD BE CONSTRUCTED AND MAINTAINED TO

AND THE PHYSICAL STRUCTURE SURROUNDING THE SEDIMENT TRAP.

CONSTRUCTION MATERIALS TO BE CONFIRMED BY COUNCIL.

STORM INLET SEDIMENT TRAP

CONSTRUCTION SITES IS DISCHARGED.

GENERAL REQUIREMENTS

REQUESTED BY COUNCIL.

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or civil engineering work, dimensions are not to be manually scaled from drawing. Setout

limensions, unless specifically shown, are to be read electronically from this drawing.

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nd Sub-Contractor's drawings.

onsultant's drawings.

THESE ARE TEMPORARY DE-SILTING STRUCTURES.

- STAKES DRIVEN

GROUND

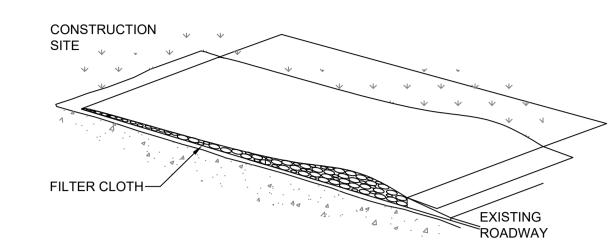
500 - 700mm INTO

___ 25mm BLUE

DIRECTION OF

METAL TO MIN

200mm DEEP



DETAIL - SHAKE DOWN AREA/ACCESS STABILISATION

SHAKE DOWN AREAS/ACCESS STABILISATION

SHALL BE SWEPT AND REMOVED FROM THE ROADWAY.

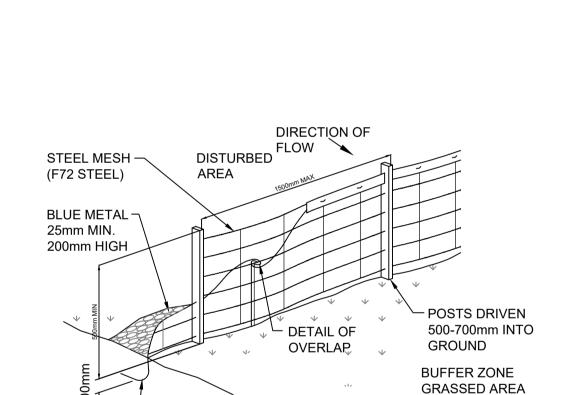
STABILISED ACCESS SHALL BE A BED OF AGGREGATE ON FILTER CLOTH. GRADE THE ENTRANCE SO THAT IT IS AT LEAST 15 METRES LONG WITH A MINIMUM WIDTH OF 3 METRES FOR A ONE WAY ENTRANCE AND 6 METRES FOR A TWO WAY ENTRANCE. PLACE FILTER CLOTH OVER THE ENTIRE AREA AND COVER IT WITH 150mm MINIMUM THICKNESS OF 50mm AGGREGATE RIVER GRAVEL OR A RECYCLED OR RECLAIMED CONCRETE EQUIVALENT.

SUCH STRUCTURES SHALL BE USED AT ALL POINTS WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE THE SITE AND EXISTING ROADWAYS.

TREATMENT/MAINTENANCE

SURFACE WATER FLOWING TO THE ENTRANCE MUST BE PIPED UNDER THE ENTRANCE, OR A BERM CONSTRUCTED TO DIRECT SURFACE FLOW AWAY FROM

ALL DEPOSITS ARE TO BE REGULARLY CLEARED FROM SITE ACCESS. THE DRAWBAR, TAILGATE ETC OF ANY VEHICLE INVOLVED IN THE TRANSPORT OF GRAVEL ETC TO A CONSTRUCTION SITE MUST BE MANUALLY CLEANED OF MATERIAL BEFORE THE VEHICLE LEAVES THE SITE. SHOULD THE MATERIAL BE DEPOSITED ON THE ROADWAY ETC, SUCH MATERIAL



GEOTEXTILE-EMBEDDED 200mm INTO **DETAIL - SILT FENCES** GROUND.

SILT FENCES

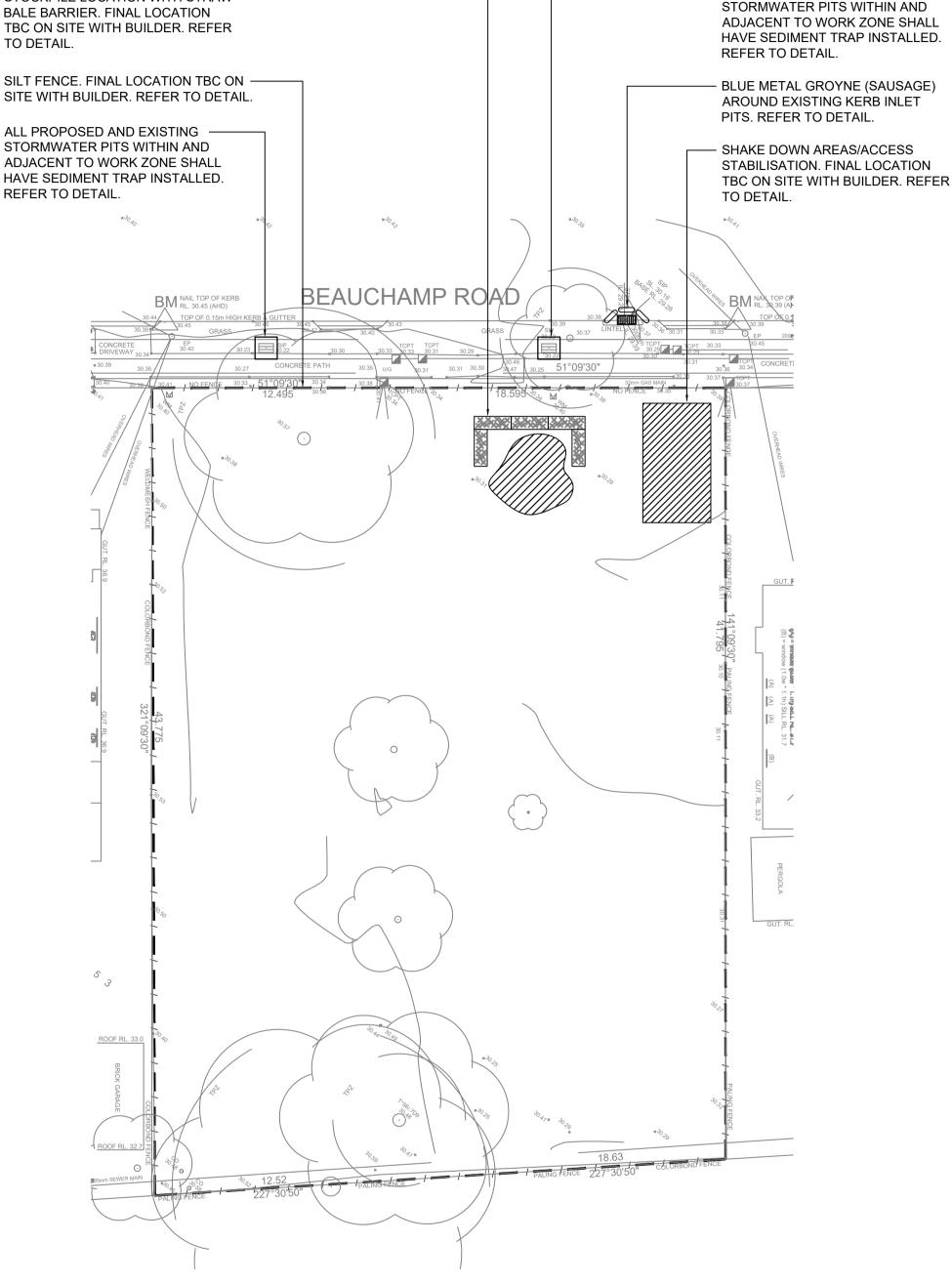
SILT FENCES ARE TEMPORARY BARRIERS MADE FROM A COMBINATION OF FILTER CLOTH AND BLUE METAL

SILT FENCES FILTER RUN-OFF LEAVING THE SITE TRAPPING THE SEDIMENT AND ALLOWING CLEAN FILTERED WATER TO PASS. SILT FENCES ARE TO BE PLACED ON THE CONTOUR OR SLIGHTLY CONVEX TO THE CONTOUR. IF ON THE CONTOUR, EACH END OF THE FENCE SHOULD BE TURNED UP TO CREATE A 'STILLING POND' UP SLOPE OF THE FENCE. WHERE POSSIBLE, A SILT FENCE SYSTEM SHOULD BE NO LONGER THAN ABOUT 20 METRES. THEY SHOULD NOT INTERCEPT LARGE CONCENTRATED OR CHANNELISED

THE AREA BELOW A SILT FENCE MUST BE UNDISTURBED ON STABLISED GROUND.

SILT FENCES REQUIRE REGULAR MAINTENANCE. TRAPPED SEDIMENTS SHOULD BE REMOVED, PICKETS STRAIGHTENED, FILTER CLOTH RESECURED AND TIGHTENED AND BLUE METAL REPLACED WHEN HEAVILY CONTAMINATED WITH SILT.

FILTER FABRIC SHALL BE EQUIVALENT TO 'GEOLAB' AND BE CAPABLE OF



STOCKPILE LOCATION WITH STRAW -

ALL PROPOSED AND EXISTING

EROSION SEDIMENT CONTROL PLAN

INTERCEPTING SILT PARTICLES DOWN TO 2 MICRON IN SIZE.

Revision	Amendment	Appr PC	rove
	ISSUED FOR REVIEW	PC	
В	ISSUED FOR DA	BP	





	DA ISSUE				
Project	Drawn	Designed	Approv	ed	
LAHC MATRAVILLE	P.C	P.C		B.P	
289 - 293 BEAUCHAMP RD, MATRAVILLE NSW	Project No.	Scale			
	E25308	1:20		00 @ A1.	
Title	Drawing No.			Revision	
STORMWATER SERVICES	STW-01		В		
EROSION SEDIMENT CONTROL PLAN	Issued By	Checked By		Date	
LINUSION SEDIMENT CONTINUE PLAIN	P.C	B.P	03.12.2	2021	