





STORMWATER SERVICES
193 WHALE BEACH RD, WHALE BEACH NSW

LINETYPES

 PROPOSED STORMWATER DRAINAGE
 EXISTING STORMWATER DRAINAGE
 PROPOSED SUB-SOIL DRAINAGE
 EXISTING SUB-SOIL DRAINAGE

DRAWING SCHEDULE

DWG No	DESCRIPTION
SW01	COVER SHEET / SITE PLAN
SW02	EROSION / SEDIMENT CONTROL PLAN
SW03	STORMWATER- LEVELS 0, 1, 2 & ROOF PLANS

SYMBOLS

	DOWNPIPE
	CLEAR OUT POINT
	RAIN WATER OUTLET
	PLANTER OUTLET
	OVERFLOW
	OVERLAND FLOW PATH
	PROPOSED TRENCH DRAIN
	PROPOSED STW PIT WITH GRATE
	PROPOSED STW PIT WITH COVER
	EXISTING KERB INLET PIT

OSD & RAINWATER TANK CALCULATIONS

ALL IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL'S
STORMWATER REQUIREMENTS.

SITE AREA 835.m²

SITE IS LOCATED WITHIN REGION 1 NORTHERN CATCHMENT.

PROPOSED ADDITIONAL HARD IMPERVIOUS AREA UNDER 50m²
THEREFORE OSD NOT REQUIRED.

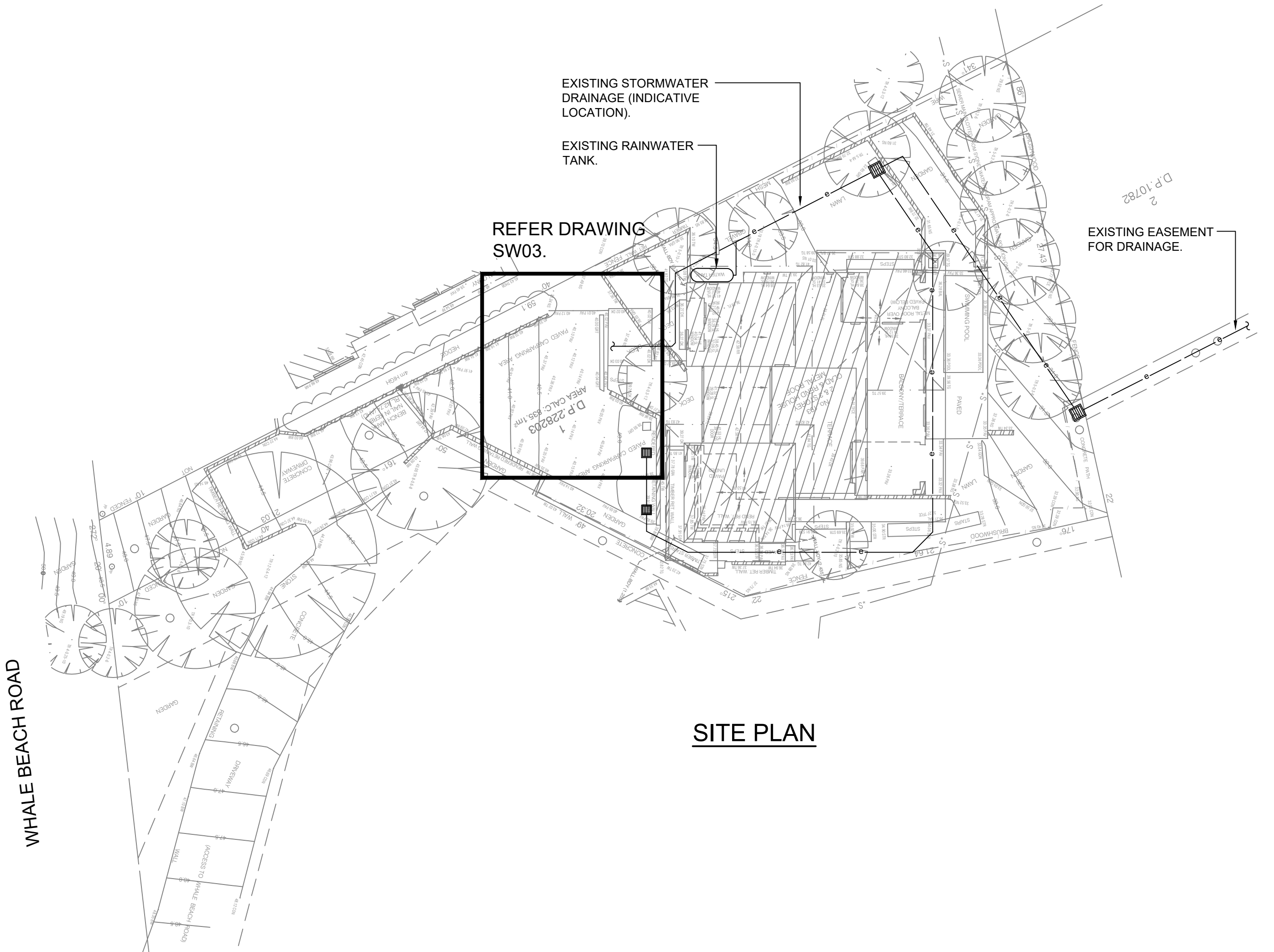
RAINWATER TANK NOT REQUIRED FOR BASIX.


STORMWATER PIT SIZES

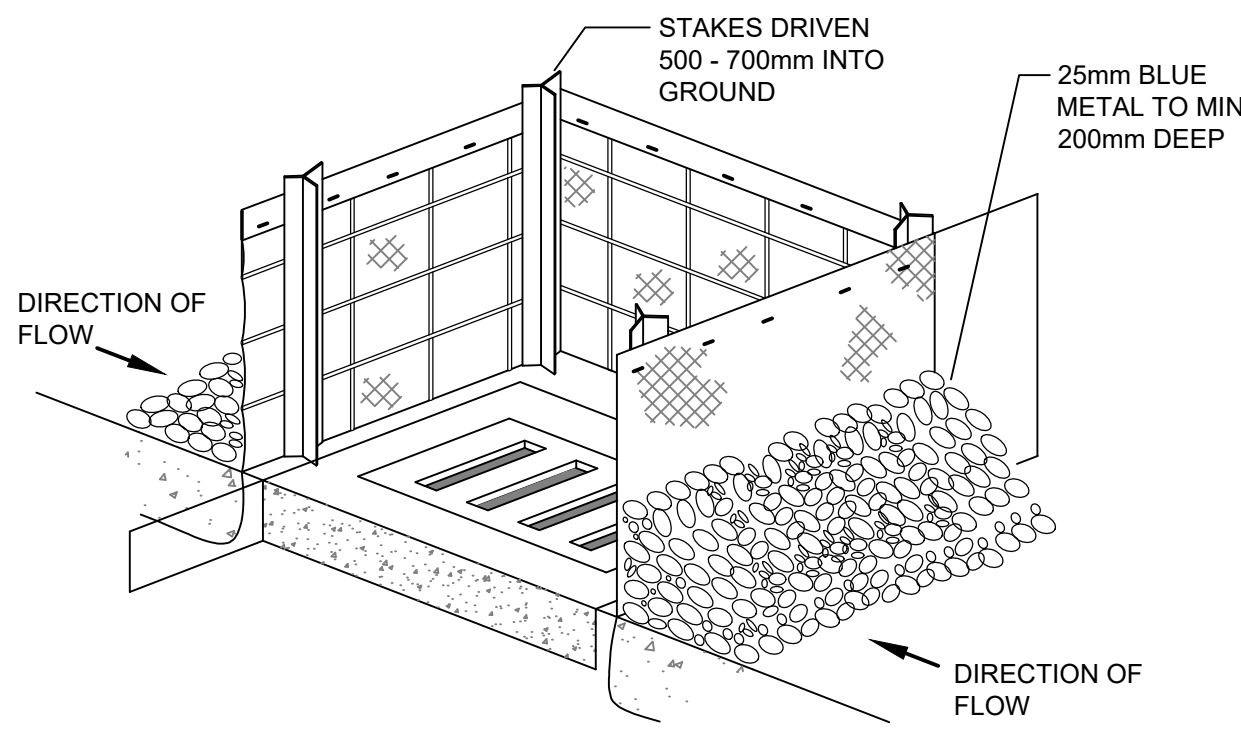
MINIMUM INTERNAL MEASUREMENTS:				
DEPTH TO BASE OF CHAMBER	RECTANGULAR		CIRCULAR	LADDER / STEP IRON
	WIDTH	LENGTH		
SMALLER THAN 600	450	450	600	NO
601 TO 900	600	600	900	NO
901 TO 1200	600	900	1050	NO
GREATER THAN 1200	900	900	1050	YES

STORMWATER NOTES

1. 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.
7. 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.
9. SUBSOIL PIPEWORK SHALL BE INSTALLED AS REQUIRED, INCLUDING BEHIND ALL RETAINING STRUCTURES, PLANTERS AND WHERE GROUND WATER IS ENCOUNTERED. 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).



<p>The contractor is responsible for checking all dimensions and site conditions prior to commencing any work. Do not scale drawings refer to figured dimensions only. Any discrepancies shall immediately be referred to ADCAR Consulting pty ltd for clarification.</p> <p>All drawings, plans and specifications are the property of ADCAR Consulting pty ltd and must not be used, reproduced or copied wholly or in part without the written permission of ADCAR Consulting pty ltd.</p>		ARCHITECT	CLIENT	HYDRAULIC CONSULTANT	PROJECT	DRAWING TITLE	STATUS																
		CAMPBELL ARCHITECTURE	BRADFORD	 ADCAR CONSULTING	ADCAR CONSULTING PO Box 204 Avoca Beach NSW 2251 Tel 0404 498 695 Email info@adcar.com.au Web www.adcar.com.au Hydraulic & Fire Consultants ABN 12 152 581 587	193 WHALE BEACH ROAD WHALE BEACH NSW	STORMWATER SERVICES COVER SHEET / SITE PLAN	DA ISSUE															
								<table><tr><td></td><td>DRAWN PB</td><td>ENGINEER PC</td><td>CHECKED MA</td><td>SCALE 1:200@A1 1:400@A3</td></tr><tr><td colspan="2">PROJECT No.</td><td colspan="2">DRAWING No.</td><td>REVISION</td></tr><tr><td colspan="2">P2025-113</td><td colspan="2">SW01</td><td>A</td></tr></table>		DRAWN PB	ENGINEER PC	CHECKED MA	SCALE 1:200@A1 1:400@A3	PROJECT No.		DRAWING No.		REVISION	P2025-113		SW01		A
		DRAWN PB	ENGINEER PC	CHECKED MA	SCALE 1:200@A1 1:400@A3																		
	PROJECT No.		DRAWING No.		REVISION																		
P2025-113		SW01		A																			
A	29.05.2025	DA ISSUE																					
REV	DATE	DESCRIPTION																					



DETAIL: STORM INLET SEDIMENT TRAP

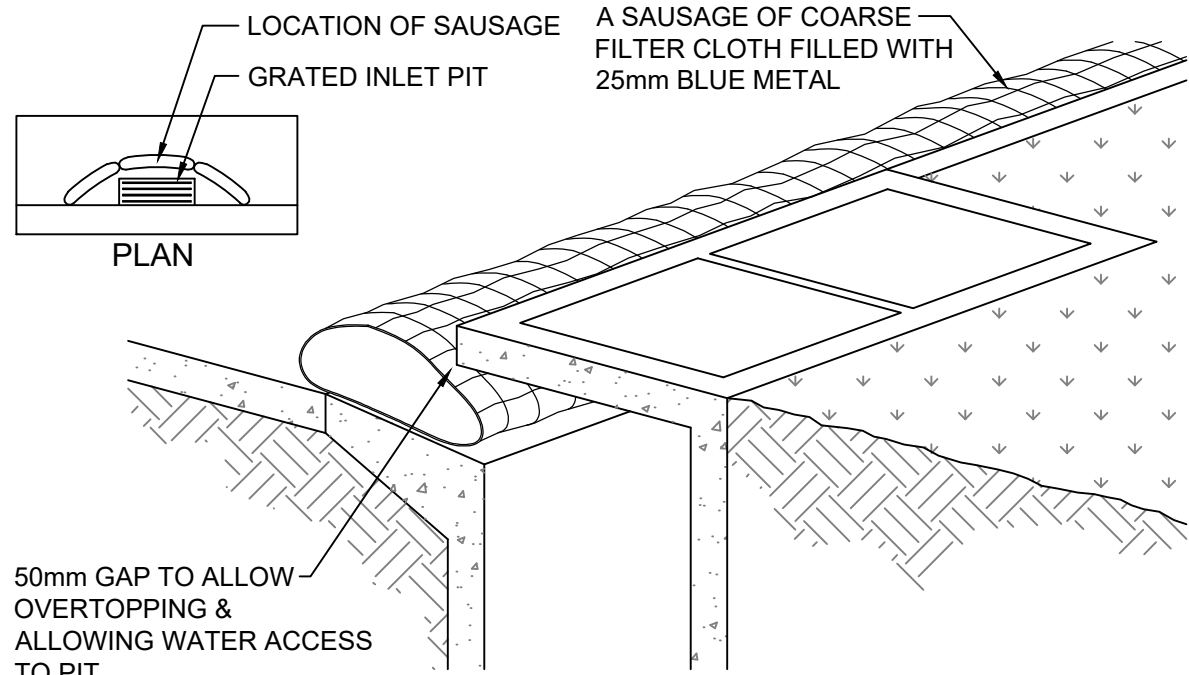
STORM INLET SEDIMENT TRAP

DESCRIPTION
THESE ARE TEMPORARY DE-SILTING STRUCTURES.

USAGE
SUCH SEDIMENT TRAPS ARE USED AT STORMWATER INLETS AND OUTLETS, CULVERT ENTRIES AND POINTS WHERE RUN-OFF FROM DISTURBED CATCHMENTS SUCH AS CONSTRUCTION SITES IS DISCHARGED.

GENERAL REQUIREMENTS
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 AND THE PHYSICAL STRUCTURE SURROUNDING THE SEDIMENT TRAP. CONSTRUCTION MATERIALS TO BE CONFIRMED BY COUNCIL.

MAINTENANCE
SEDIMENT TRAPS SHOULD BE REGULARLY MAINTAINED AND RESTORED TO THEIR ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGNED CAPACITY. THE OUTLET SHOULD BE CONSTRUCTED AND MAINTAINED TO ENSURE EROSION DOES NOT OCCUR. MAINTENANCE PROGRAM SHALL BE AS REQUESTED BY COUNCIL.



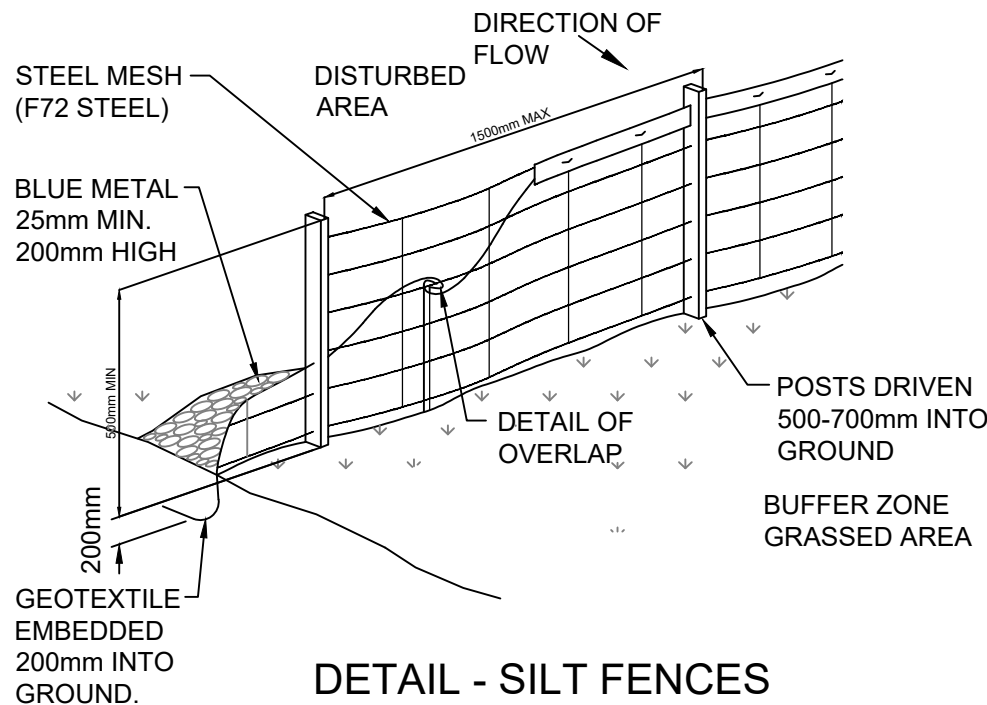
DETAIL - BLUE METAL GROYPNE (SAUSAGE)

BLUE METAL GROYPNE (SAUSAGE)

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

INSTALLATION
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.

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



DETAIL - SILT FENCES

SILT FENCES

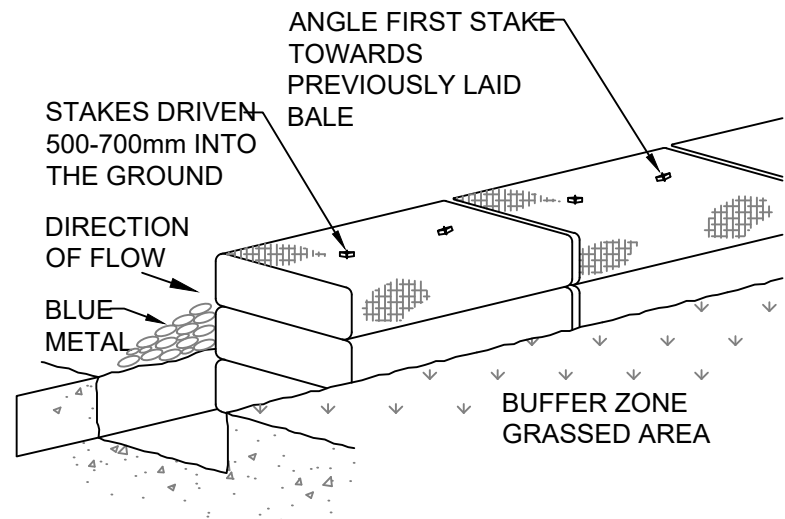
DESCRIPTION
SILT FENCES ARE TEMPORARY BARRIERS MADE FROM A COMBINATION OF FILTER CLOTH AND BLUE METAL

USAGE
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 FLOWS.

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

MAINTENANCE
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.

NOTE
FILTER FABRIC SHALL BE EQUIVALENT TO 'GEOLAB' AND BE CAPABLE OF INTERCEPTING SILT PARTICLES DOWN TO 2 MICRON IN SIZE.



DETAIL - STRAW BALE BARRIERS

STRAW BALE BARRIERS

DESCRIPTION
A TEMPORARY BARRIER OF STRAW BALES PLACED AROUND THE PERIMETER OF A DISTURBED AREA.

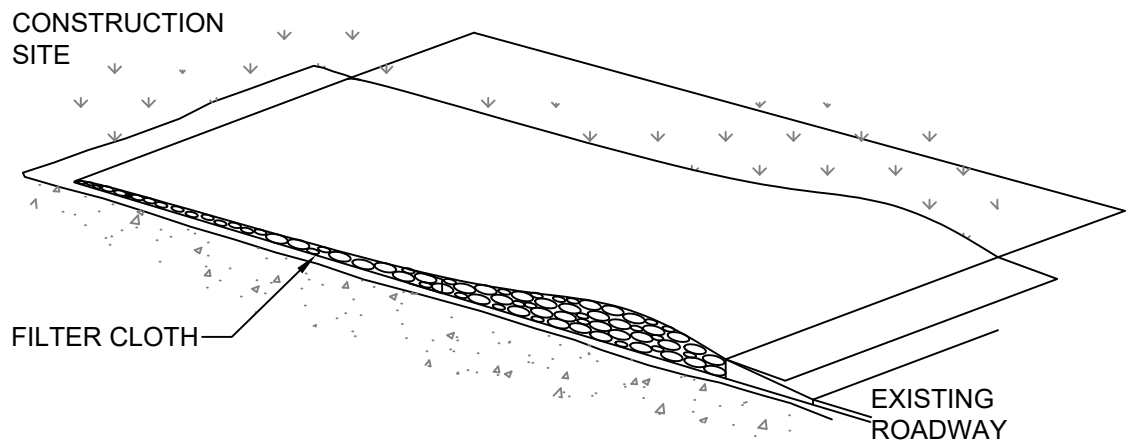
USAGE
STRAW BALE BARRIERS ARE USED TO DESILT CONTAMINATED WATER

INSTALLATION
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.

MAINTENANCE
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.

NOTE
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 - SHAKE DOWN AREA/ACCESS STABILISATION

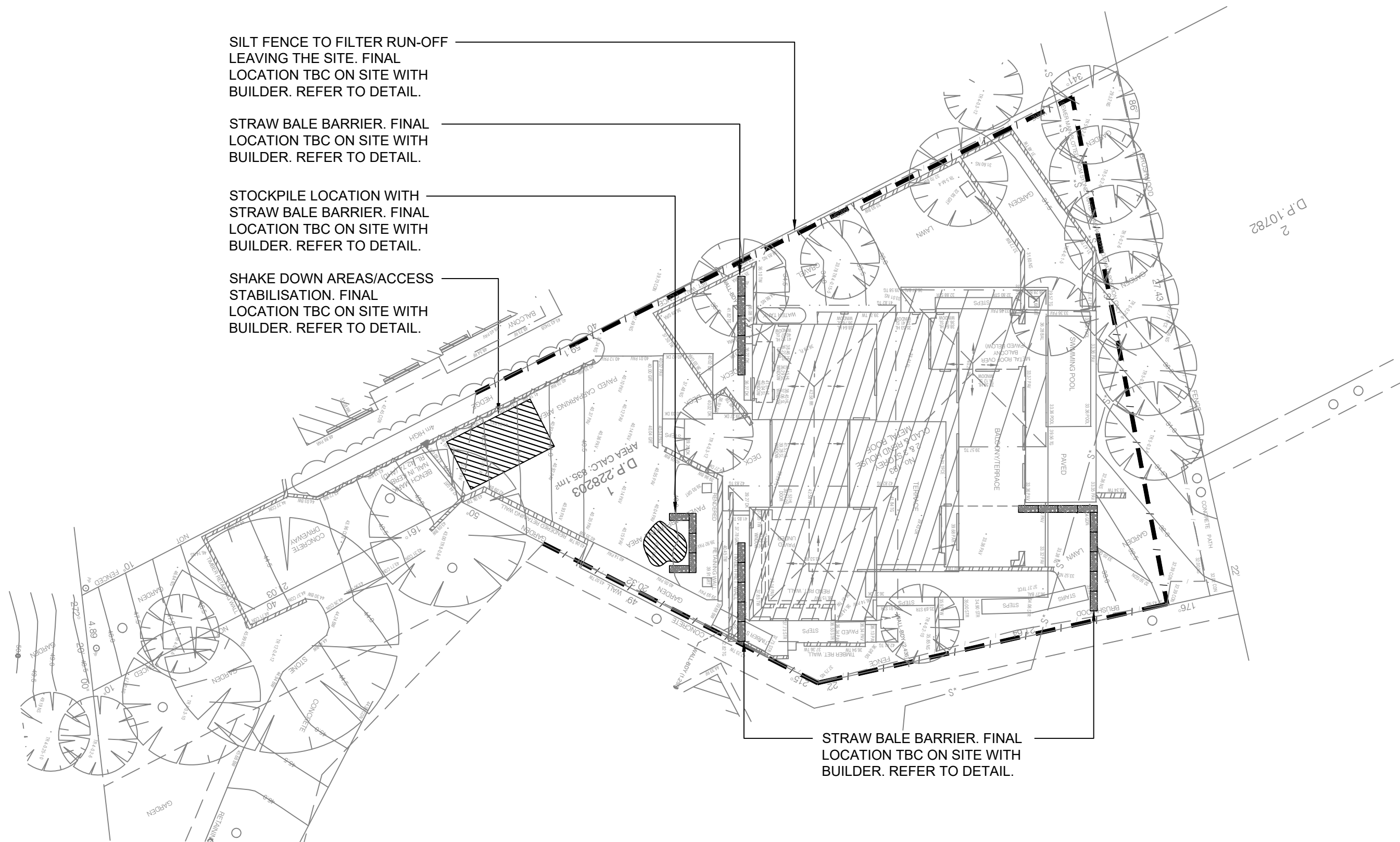
SHAKE DOWN AREAS/ACCESS STABILISATION

DESCRIPTION
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.

USAGE
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 THE ROAD.
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 SHALL BE SWPT AND REMOVED FROM THE ROADWAY.



SEDIMENT & EROSION CONTROL PLAN

SCALE 1:200

EROSION & SEDIMENT CONTROL NOTES

MINIMUM REQUIREMENTS

GENERAL
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.

FILL AREAS
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.

STOCK PILES
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.

WIND EROSION
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
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.

The contractor is responsible for checking all dimensions and site conditions prior to commencing any work. Do not scale drawings, refer to figured dimensions only. Any discrepancies shall immediately be referred to ADCAR Consulting pty ltd for clarification.

All drawings, plans and specifications are the property of ADCAR Consulting pty ltd and must not be used, reproduced or copied wholly or in part without the written permission of ADCAR Consulting pty ltd.

A 29.05.2025 DA ISSUE
REV DATE DESCRIPTION

ARCHITECT

CAMPBELL
ARCHITECTURE

CLIENT

BRADFORD

HYDRAULIC CONSULTANT



ADCAR CONSULTING
PO Box 204 Avoca Beach NSW 2251
Tel 0404 498 695
Email info@adcar.com.au
Web www.adcar.com.au
Hydraulic & Fire Consultants
ABN 12 152 581 587

PROJECT

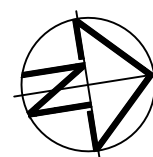
193 WHALE BEACH ROAD
WHALE BEACH NSW

DRAWING TITLE

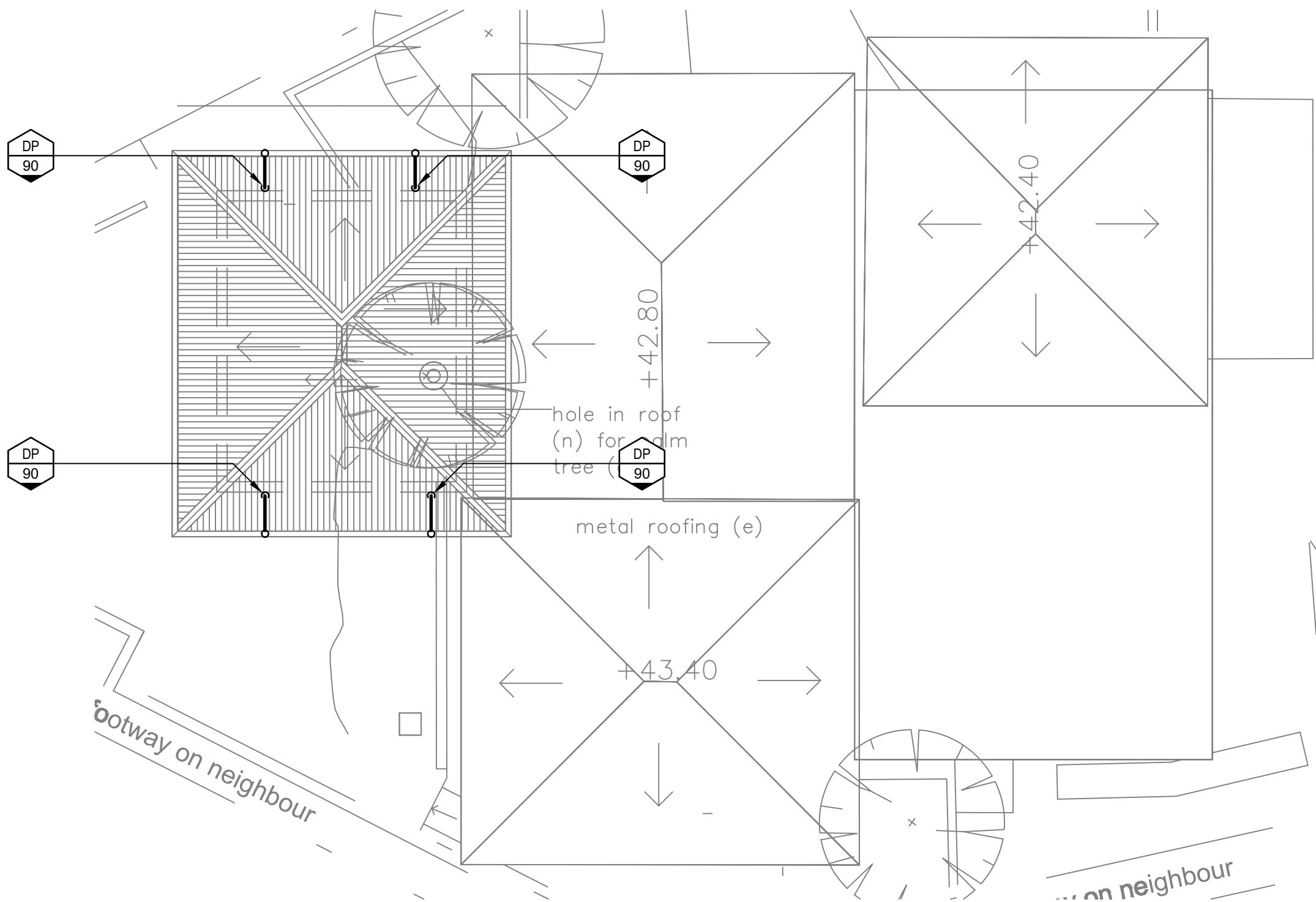
STORMWATER SERVICES
EROSION / SEDIMENT
CONTROL PLAN

STATUS

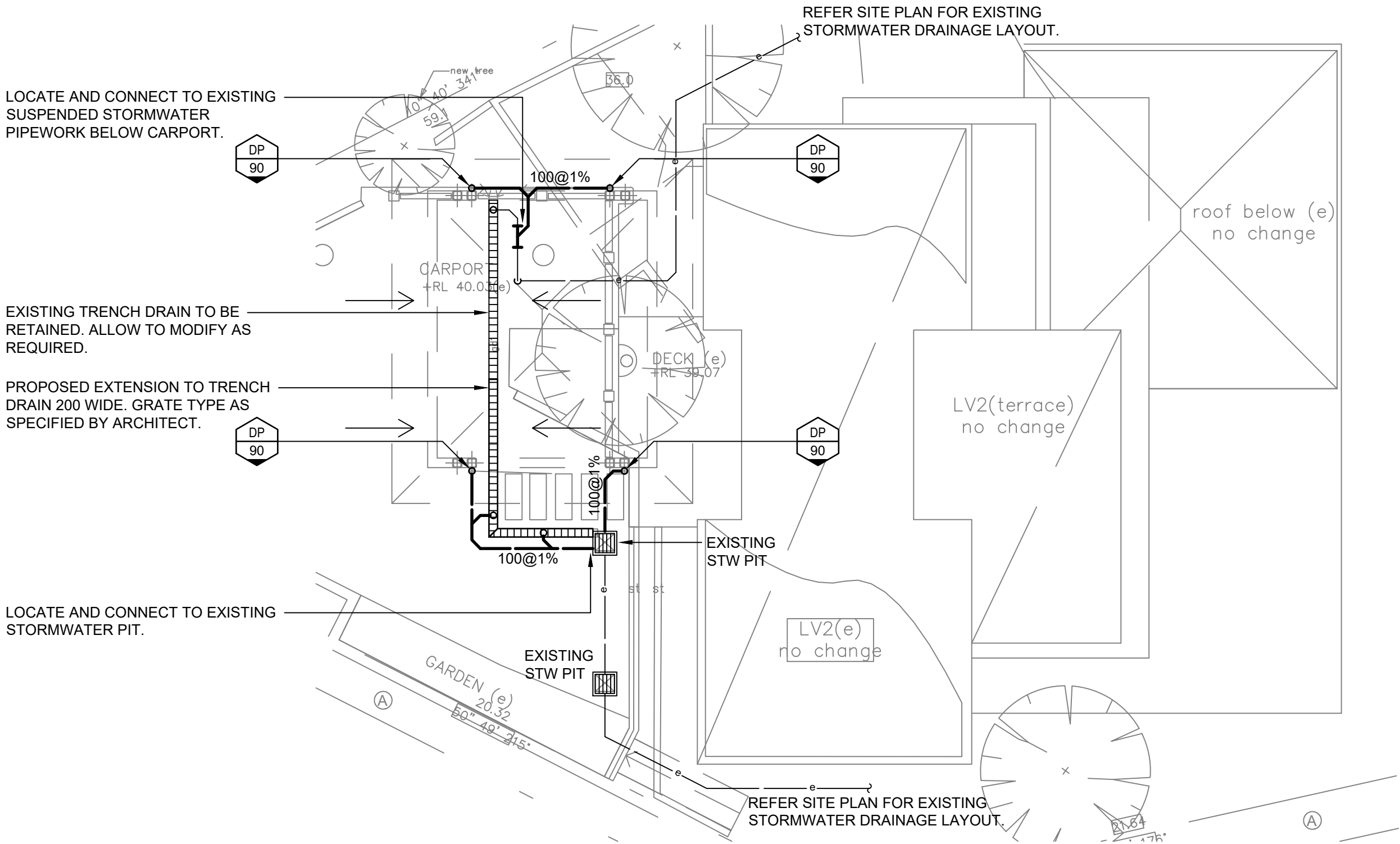
DA ISSUE



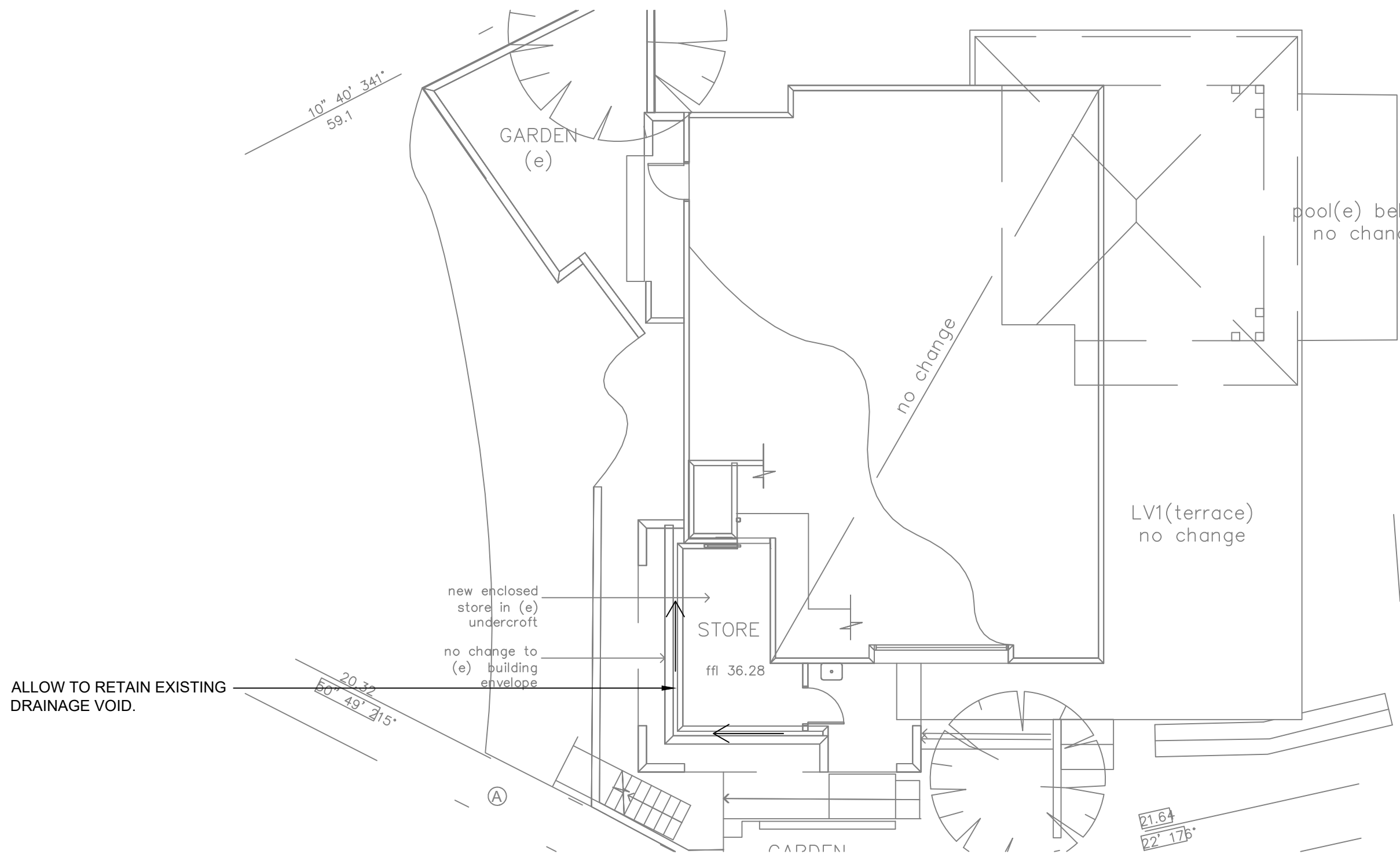
DRAWN PB	ENGINEER PC	CHECKED MA	SCALE 1:200@A1 1:400@A3
PROJECT No. P2025-113		DRAWING No. SW02	REVISION A



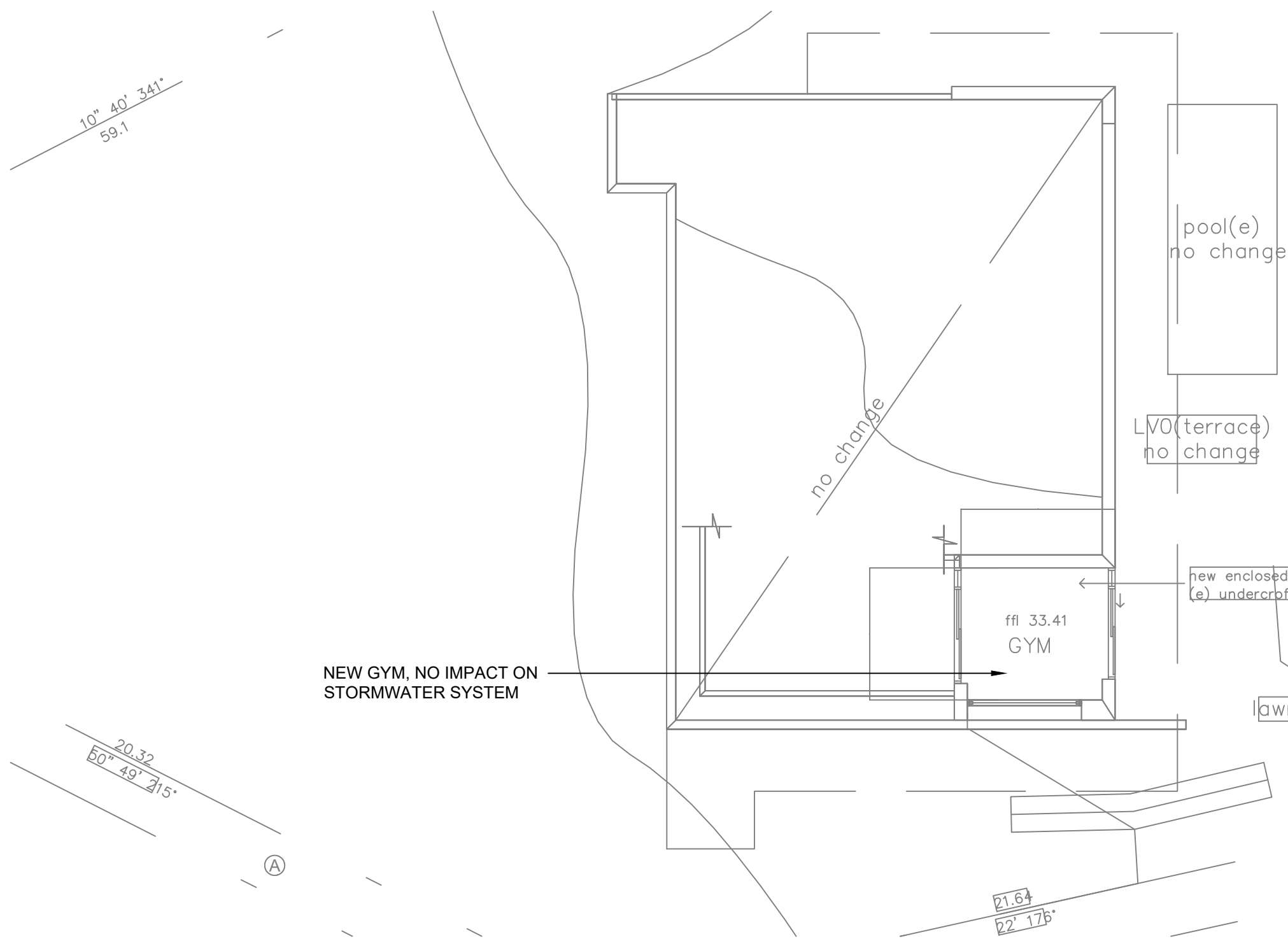
ROOF PLAN



LEVEL 2



LEVEL 1



LEVEL 0

STORMWATER DA DRAWING ONLY

- NOT FOR CONSTRUCTION
- FINAL LOCATION OF ALL DOWNPIPES, PITS, RAINWATER OUTLETS AND SUBSOIL PIPES TO BE CONFIRMED

LANDSCAPING DRAINAGE

- ALL LANDSCAPED AREAS LOCATED ABOVE CONCRETE SLABS TO BE EQUIPPED WITH WATERPROOFING MEMBRANE, DRAINAGE CELL AND GEOTEXTILE
- FINAL LOCATION OF ALL DRAINAGE PITS, OUTLETS AND PIPEWORK IN LANDSCAPE AREAS SHALL BE CO-ORDINATED WITH THE LANDSCAPE ARCHITECT DURING CONSTRUCTION STAGE.

GEOTECHNICAL & STRUCTURAL ADVICE

- SUBSOIL, UPLIFT PRESSURE, VERTICAL WALL DRAINAGE AND PIT CONSTRUCTION DETAILS TO BE CO-ORDINATED WITH STRUCTURAL AND GEOTECHNICAL ENGINEERS DURING CONSTRUCTION STAGE.

EXTERNAL LEVELS

- EXTERNAL SURFACE LEVELS SHALL HAVE STEP DOWN AND ADEQUATE SLOPE AS PER NCC / BCA REQUIREMENTS.
- THE EXTERNAL FINISHED SURFACE MUST BE DRAINED TO MOVE SURFACE WATER AWAY FROM THE BUILDING.

INSPECTION OPENINGS

- INSPECTION OPENINGS MUST BE PROVIDED AT ALL JUNCTIONS, CHANGE IN GRADIENT, CHANGE IN DIRECTION AND CHANGE IN DIAMETER FOR ACCESS AND MAINTENANCE PURPOSES (NOT SHOWN ON PLAN FOR CLARITY).

The contractor is responsible for checking all dimensions and site conditions prior to commencing any work. Do not scale drawings, refer to figured dimensions only. Any discrepancies shall immediately be referred to ADCAR Consulting Pty Ltd for clarification.

All drawings, plans and specifications are the property of ADCAR Consulting Pty Ltd and must not be used, reproduced or copied wholly or in part without the written permission of ADCAR Consulting Pty Ltd.

REV	DATE	DESCRIPTION
A	29.05.2025	DA ISSUE

ARCHITECT

CAMPBELL
ARCHITECTURE

CLIENT

BRADFORD

HYDRAULIC CONSULTANT



ADCAR CONSULTING
PO Box 204 Avoca Beach NSW 2251
Tel 0404 498 695
Email info@adcar.com.au
Web www.adcar.com.au
Hydraulic & Fire Consultants
ABN 12 152 581 587

PROJECT

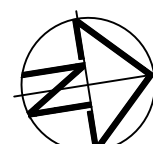
193 WHALE BEACH ROAD
WHALE BEACH NSW

DRAWING TITLE

STORMWATER SERVICES
LEVELS 0, 1, 2 & ROOF

STATUS

DA ISSUE



DRAWN	ENGINEER	CHECKED	SCALE
PB	PC	MA	1:100@A1 1:200@A3
PROJECT No.	DRAWING No.	REVISION	
P2025-113	SW03	A	