# STORMWATER DRAINAGE

## PROPOSED ALTERATIONS & ADDITIONS

### 9 BLANDFORD STREET, COLLAROY PLATEAU NSW 2097

| DRAWING REGISTER | |
|---|---|
| DRAWING NO. | DRAWING TITLE |
| V24921 - SW000 | COVER SHEET |
| V24921 - SW001 | GENERAL NOTES |
| V24921 - SW101 | GROUND FLOOR DRAINAGE PLAN |
| V24921 - SW102 | FIRST FLOOR DRAINAGE PLAN |
| V24921 - SW103 | ROOF DRAINAGE PLAN |
| V24921 - SW200 | STORMWATER DETAILS - SHEET 1 |
| V24921 - SW300 | SEDIMENT & EROSION CONTROL PLAN |
| V24921 - SW310 | SEDIMENT & EROSION CONTROL DETAILS |

| REVISION | REVISION DETAILS | DATE | DRAWN | DESIGN | CHECK | APPROVED |
|---|---|---|---|---|---|---|
| A | ISSUED FOR CDC | 26.07.2024 | D.D. | M.N. | D.S. | D.S. |
| B | ISSUED FOR CDC | 23.08.2024 | D.D. | M.N. | D.S. | D.S. |
| C | ISSUED FOR CDC | 15.11.2024 | D.D. | M.N. | D.S. | D.S. |
| D | ISSUED FOR DA | 03.02.2025 | D.D. | M.N. | D.S. | D.S. |
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**ARCHITECT**

**CLIENT**

**SCALE**

NOT TO SCALE

**GRID**

**HEIGHT DATUM** AHD

**DRAWING TITLE**

COVER SHEET

**STATUS** FOR APPROVAL

NOT TO BE USED FOR CONSTRUCTION PURPOSES

**PROJECT**

PROPOSED ALTERATIONS & ADDITIONS

9 BLANDFORD STREET, COLLAROY PLATEAU NSW 2097

| DRAWING NUMBER | REFERENCE NUMBER | REVISION |
|---|---|---|
| V24921 - SW000 | V24921 | D |

## SITEWORKS NOTES

1. ORIGIN OF LEVELS:- REFER SURVEY NOTES
2. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL GOVERNMENT AUTHORITIES ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS.
3. PRIOR TO THE COMMENCEMENT OF THE WORKS THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO VANGUARD.
4. PRIOR TO THE COMMENCEMENT OF THE WORKS, THE CONTRACTOR IS TO VERIFY THE ALIGNMENT AND LEVELS OF ALL EXISTING SERVICES AT ALL LOCATIONS WHERE THE PROPOSED SERVICES ARE TO CROSS, CONNECT TO OR ARE LOCATED IN CLOSE PROXIMITY TO THE EXISTING SERVICES. ANY DISCREPANCIES TO BE REPORTED TO VANGUARD.
5. CONTRACTOR MUST MAKE SMOOTH CONNECTION WITH ALL EXISTING WORKS.
6. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
7. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL, REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289.5.2.1 (OR A DENSITY INDEX OF NOT LESS THAN 75).
8. PROVIDE 10mm WIDE ISOLATION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
9. ASPHALTIC CONCRETE SHALL CONFORM TO THE CURRENT TFNSW SPECIFICATION TS 03283.1 (R116) HEAVY DUTY DENSE GRADED ASPHALT.
10. ALL BASECOURSE AND SUB-BASE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH THE CURRENT TFNSW SPECIFICATION TS 03315.1 (3051) GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289 5.2.1.
    FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m$^2$ OF SUB-BASE COURSE MATERIAL PLACED UNLESS OTHERWISED APPROVED BY VANGUARD.
11. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL (IN NOTE 10) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH THE CURRENT TFNSW SPECIFICATION TS 03315.1 (3051) GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS WILL BE CONSIDERED, SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF VANGUARD.
12. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THE CONTRACTOR IS TO SEEK ACCEPTANCE OF THE PRODUCT FROM VANGUARD. THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
13. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (EG. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.
14. ALL WORKS CARRIED OUT ADJACENT TO AND WITHIN SERVICE EASEMENTS ARE TO COMPLY WITH THE RELEVANT SERVICE AUTHORITIES GUIDELINES AND REQUIREMENTS.

## EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. AT & L CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.

CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.

CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

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BEFORE YOU DIG AUSTRALIA SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE

TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

## STORMWATER DRAINAGE NOTES

GENERAL NOTES

1. STORMWATER DESIGN CRITERIA:
   ANNUAL EXCEEDANCE PROBABILITY:
   MINOR STORM: 5% AEP
   MAJOR STORM: 1% AEP
2. PIPES LESS THAN 300 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
3. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN DN300.
4. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT AS 3500 3.1 AND AS/NZS 3500 3.2.
5. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
6. ALL DRAINAGE LINES TO PROVIDE A 3.0M LENGTH OF DN100 SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, ON THE UPSTREAM SIDE OF EACH PIT. ALLOW FOR SECONDARY SUBSOIL FOR PIPES FOR PIPE GRATER THAN DN825.
7. SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK SHALL BE PROVIDED BENEATH ALL KERBLINES WHERE NO DRAINAGE LINES ARE SHOWN ON THE DRAWINGS AND SHALL DISCHARGE INTO DOWNSTREAM PITS.
8. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPES ARE TO BE USED.
9. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL FROM VANGUARD.
10. GRATES AND COVERS SHALL CONFORM TO THE CURRENT AS 3996. CLASS D COVER (MINIMUM) SHALL BE PROVIDED IN TRAFFICKED PAVEMENTS WITH CLASS B (MINIMUM) BEING PROVIDED IN NON-TRAFFICKED AREAS.
11. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, THE CONTRACTOR SHALL PROVIDE ADEQUATE SAFETY PROCEDURES TO PREVENT THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
12. ALL PITS AND PIPES TO BE FOUNDED ON SUITABLE MATERIAL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPa UP TO 3.0m DEPTH TO INVERT AND 150KPa FROM 3.0m TO 6.0m DEPTH TO INVERT ONCE EXCAVATED. A CONCRETE BLINDING LAYER (MINIMUM 100mm THICK 25MPa OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED) MAY BE PROVIDED. CONTRACTOR TO ENGAGE GEOTECHNICAL ENGINEER TO PROVIDE WRITTEN CONFIRMATION.
13. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.
14. ALL STORMWATER PITS ARE TO BE CAST IN-SITU IN ACCORDANCE WITH THE STORMWATER DETAILS AND SPECIFICATIONS.
15. ALL PITS MUST BE BENCHED AND STREAMLINED TO DIRECT WATER FROM THE INLET PIPE TO THE OUTLET PIPE.
16. PITS DEEPER THAN 600mm MUST BE FITTED WITH DOUBLE STEP-IRONS IN ACCORDANCE WITH THE CURRENT AS1657. PLASTIC ENCAPSULATED MAY BE USED. STEP-IRONS TO BE PROVIDED ON A SINGLE FACE WHERE POSSIBLE. SHOULD STEP-IRONS REQUIRE TO CHANGE FACE THEN 3 OVERLAPPING STEP IRONS ARE TO BE LOCATED ON EACH FACE.
17. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN 1 TEST PER 2 LAYERS PER 40 LINEAR METERS.

RIGID & SEMI-RIGID PIPE NOTES

18. PIPES 300 DIA. AND LARGER TO BE STEEL REINFORCED CONCRETE CLASS '3' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O. ALL ROAD CROSSINGS TO BE CLASS '4' U.N.O. EQUIVALENT STRENGTH FIBRE REINFORCED CONCRETE PIPES MAY BE USED SUBJECT TO APPROVAL BY VANGUARD OR THE LOCAL GOVERNMENT AUTHORITY.
19. REINFORCED CONCRETE PIPES TO COMPLY WITH THE CURRENT AS/NZS 4058.
    FIBRE REINFORCED CONCRETE PIPES TO COMPLY WITH THE CURRENT AS 4139.
    PIPES TO BE INSTALLED WITH TYPE HS3 (ROAD) AND HS2 (LOTS) SUPPORT IN ACCORDANCE WITH THE CURRENT AS/NZS 3725. N ALL CASES BACKFILL EMBEDMENT ZONE WITH SELECT FILL (MINIMUM CBR 15%) TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289.5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75).

FLEXIBLE PIPE NOTES

20. FLEXIBLE PIPES TO COMPLY WITH THE CURRENT AS/NZS 2566.1.
    PIPES TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT AS/NZS 2566.2. IN ALL CASES BACKFILL EMBEDMENT ZONE WITH GRAVEL OR SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289.5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)

PRECAST CONCRETE PIT NOTES

21. PRECAST PIT MAY BE USED WITH THE APPROVAL OF VANGUARD THE SUPERINTENDENT AND THE LOCAL GOVERNMENT AUTHORITY AND SHALL BE INSTALLED TO THE MANUFACTURERS RECOMENDATIONS.
22. ALL PRE-CAST PITS ARE TO BE STRUCTURALLY CERTIFIED TO MEET RELEVANT REQUIREMENTS OF THE CURRENT AS3600 AND AS3996 (2019).
23. PRE-CAST STORMWATER PITS ARE TO BE APPROVED FOR TFNSW CONSTRUCTION (R11) AND ARE TO ARE TO BE DESIGNED AND CUSTOM MADE WITH OPENINGS UP TO A MAXIMUM +50mm OD OF THE STORMWATER PIPES. PITS ARE ALSO TO INCLUDE PENETRATIONS FOR SUBSOIL CONNECTIONS AND DOUBLE STEP-IRONS INSTALLED FOR PITS >0.6m DEEP. DEMOLITION SAWS MAY BE USED PROVIDING A NEAT FULL DEPTH CUT IS APPLIED AND ANY ADDITIONAL PENETRATIONS REQUIRED ARE TO BE CORE DRILLED.
24. SHOP DRAWINGS ARE TO BE PROVIDED FOR REVIEW AND ACCEPTANCE. IT SHOULD BE NOTED THAT THE CONTRACTOR IS TO ENSURE THAT THE STRUCTURAL COMPONENTS OF THE PITS ARE NOT COMPROMISED AND ONLY THE PIPE KNOCKOUTS ARE TO BE REMOVED FOR THE PIPE PENETRATIONS.

## STORMWATER DRAINAGE NOTES (CONTINUED)

1. ALL PRECAST PITS TO BE FOUNDED ON CONCRETE BLINDING LAYER (100mm ON AN EARTH FOUNDATION OR 150mm ON A ROCK FORMATION) WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPa UP TO 3.0m DEPTH TO INVERT AND 150KPa FROM 3.0m TO 6.0m DEPTH TO INVERT (MINIMUM 100mm THICK 25MPa OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED). CONTRACTOR TO ENGAGE GEOTECHNICAL ENGINEER TO PROVIDE WRITTEN CONFIRMATION.
2. ALL PRE-CAST PIT PENETRATIONS SHALL BE CUT SO THAT IT IS FLUSH WITH THE INTERNAL WALL.
3. ALL PIPE JOINTING, SPARGING, RENDERING, FILLING OF GAPS TO BE FILLED WITH A HIGH STRENGTH NON-SHRINK GROUT WITH A MINIMUM 40MPa COMPRESSIVE STRENGTH AT 28 DAYS. (LANKO DURABED 702 OR SIMILAR).
4. SINGLE UNITS PREFERRED BUT IF REQUIRED MINIMUM RISER DEPTH 600mm PIT INSTALLATION AND JOINTING BETWEEN UNITS SHALL BE UNDERTAKEN IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
5. ANY DAMAGE TO THE STRUCTURAL INTEGRITY OF THE PRE-CAST PIT WILL BE REPAIRED AND STRUCTURALLY CERTIFIED AT THE CONTRACTORS EXPENCE TO THE SATISFACTION OF THE VANGUARD, SUPERINTENDENT / LOCAL GOVERNMENT AUTHORITY.

## AS3500.3 MINIMUM GRADIENT OF SITE STORMWATER DRAINS

| NOMINAL SIZE | MINIMUM GRADIENT | | NOMINAL SIZE | MINIMUM GRADIENT | |
|---|---|---|---|---|---|
| DN | AU | NZ | DN | AU | NZ |
| 90 | 1:100 | 1:90 | 225 | 1:200 | 1:350 |
| 100 | 1:100 | 1:120 | 300 | 1:250 | 1:350 |
| 150 | 1:100 | 1:200 | 375 | 1:300 | 1:350 |

## AS3500.3 TABLE 7.1: MINIMUM PIPE COVER

(FROM FINISHED SURFACE TO TOP OF PIPE)

| LOCATION | CAST IRON, DUCTILE IRON, GALVANIZED STEEL | OTHER AUTHORIZED(*) PRODUCTS |
|---|---|---|
| | MINIMUM COVER (millimeters) | |
| 1 NOT SUBJECT TO VEHICULAR LOADING | | |
| (A) WITHOUT PAVEMENT - | | |
| (i) FOR SINGLE DWELLINGS | NIL | 100 |
| (ii) FOR OTHER THAN ITEM (i) | NIL | 300 |
| (B) WITH PAVEMENT OF BRICK OR UNREINFORCED CONCRETE | NIL (†) | 50 (†) |
| 2 SUBJECT TO VEHICULAR LOADING | | |
| (A) OTHER THAN ROADS - | | |
| (i) WITHOUT PAVEMENT | 300 | 450 |
| (ii) WITH PAVEMENT OF - | | |
| (A) REINFORCED CONCRETE FOR HEAVY VEHICULAR LOADING | NIL (†‡) | 100 (†‡) |
| (B) BRICK OR UNREINFORCED CONCRETE FOR LIGHT VEHICULAR LOADING | NIL (†‡) | 75 (†‡) |
| (B) ROADS - | | |
| (i) SEALED | 300 | 500 (†‡) |
| (ii) UNSEALED | 300 | 500 (†‡) |
| 3 SUBJECT TO CONSTRUCTION EQUIPMENT LOADING OR IN EMBANKMENT CONDITIONS | 300 | 500 (†‡) |

(*) INCLUDE OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK.
(†) BELOW THE UNDERSIDE OF THE PAVEMENT.
(‡) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS4060.

## SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. VANGUARD CONSULTING ENGINEERS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT VANGUARD CONSULTING ENGINEERS.

## AS3500.3 MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS

| DEPTH TO INVERT OF OUTLET | | MINIMUM INTERNAL DIMENSIONS mm | | |
|---|---|---|---|---|
| | | RECTANGULAR | | CIRCULAR |
| | | WIDTH | LENGTH | DIAMETER |
| | ≤ 600 | 450 | 450 | 600 |
| > 600 | ≤ 900 | 600 | 600 | 900 |
| > 900 | ≤ 1200 | 600 | 900 | 1000 |
| > 1200 | | 900 | 900 | 1000 |

## LEGEND

| | |
|---|---|
| DP● | DOWNPIPE |
| SW > | STORMWATER LINE |
| RW > | ROOF WATER LINE |
| SSD | SUBSOIL DRAINAGE LINE |
| OF > | OVERFLOW LINE |
| SWRM SWRM | STORMWATER RISING MAIN |
| e | EXISTING STORMWATER LINE |
| SW SW | AUTHORITY STORMWATER LINE |
| HL HL | HIGH LEVEL STORMWATER LINE |
| S | AUTHORITY SEWER LINE |
| W | AUTHORITY WATER LINE |
| G G | AUTHORITY GAS LINE |
| E | AUTHORITY ELECTRICITY LINE |
| FO FO FO | AUTHORITY FIBRE OPTIC LINE |
| TEL | AUTHORITY COMMS LINE |
| OH(E) | AUTHORITY OVERHEAD ELECTRICAL LINE |
| / / | FENCE LINE |
| | GRATED SURFACE INLET PIT |
| | GRATED SURFACE INLET PIT WITH ENVIROPOD INSERT |
| | JUNCTION PIT |
| | KERB INLET PIT |
| | EXISTING GRATED SURFACE INLET PIT |
| | GRATED TRENCH DRAIN |
| | EXISTING JUNCTION PIT |
| | EXISTING KERB INLET PIT |
| eTEL | EXISTING TELSTRA PIT |
| eHYD | EXISTING HYDRANT |
| eSV | EXISTING STOP VALVE |
| eGAS | EXISTING GAS VALVE |
| ePP | EXISTING POWER POLE |
| eBT | EXISTING BOUNDARY TRAP |
| eSMH | EXISTING SEWER MANHOLE |
| OFP | OVERLAND FLOW PATH |
| RWO | RAINWATER OUTLET |
| CO | CLEAR OUT POINT |
| DDO | DISH DRAIN OUTLET |
| PD | PLANTER DRAIN |
| | CAPPING |
| A.05 | PIT TAG/NUMBER |

## LEGEND

| | |
|---|---|
| FF | FIRST FLUSH |
| RH | RAINHEAD |
| | DOWNPIPE DROP |
| | NON RETURN VALVE |
| | WALL PENETRATION |
| DP | DOWNPIPE SPREADER |
| | WARNING LIGHT |
| 80.00 | SPOT LEVELS |
| | BENCHMARK |

## ABBREVIATIONS:

| | |
|---|---|
| Ø or DIA | DIAMETER |
| CBR | CALIFORNIA BEARING RATIO |
| CH | CHAINAGE |
| CL | CENTER LINE |
| CO | CLEAR OUT |
| DD | DISH DRAIN |
| DDO | DISH DRAIN OUTLET |
| DEJ | DOWELLED EXPANSION JOINT |
| DGB | DENSE GRADED BASECOURSE |
| DGS | DENSE GRADED SUB-BASE |
| DP | DOWNPIPE |
| e | EXISTING |
| FFL | FINISHED FLOOR LEVEL |
| GTD | GRATED TRENCH DRAIN |
| GSIP | GRATED SURFACE INLET PIT |
| HYD | HYDRANT |
| IJ | ISOLATING JOINT |
| IK | INTEGRAL KERB |
| IL | INVERT LEVEL |
| IP | INTERSECTION POINT |
| KIP | KERB INLET PIT |
| KO | KERB ONLY |
| K&G | KERB & GUTTER |
| KR | KERB RETURN |
| LS | LONGITUDINAL SECTION |
| NGL | NATURAL GROUND LEVEL |
| OFP | OVERLAND FLOW PATH |
| OSD | ON-SITE DETENTION |
| R | RADIUS |
| RCP | REINFORCED CONCRETE PIPE |
| RK | ROLL KERB & GUTTER |
| RL | REDUCED LEVEL |
| RW | RETAINING WALL |
| RWT | RAINWATER TANK |
| SJ | SAWN CONTROL JOINT |
| SMH | SEWER MAN HOLE |
| SW | STORMWATER |
| SWP | STORMWATER PIT |
| SWRM | STORMWATER RISING MAIN |
| SWS | STORMWATER SUMP |
| SV | STOP VALVE |
| TOK | TOP OF KERB |
| TOW | TOP OF WALL |
| TWL | TOP WATER LEVEL |
| TP | TANGENT POINT |
| UPVC | UNPLASTICISED POLYVINYL CHLORIDE |
| UNO | UNLESS NOTED OTHERWISE |
| WPJ | WEAKENED PLANE JOINT |
| FF | FIRST FLUSH DEVICE |
| TYP | TYPICAL |
| BM | BENCH MARK |

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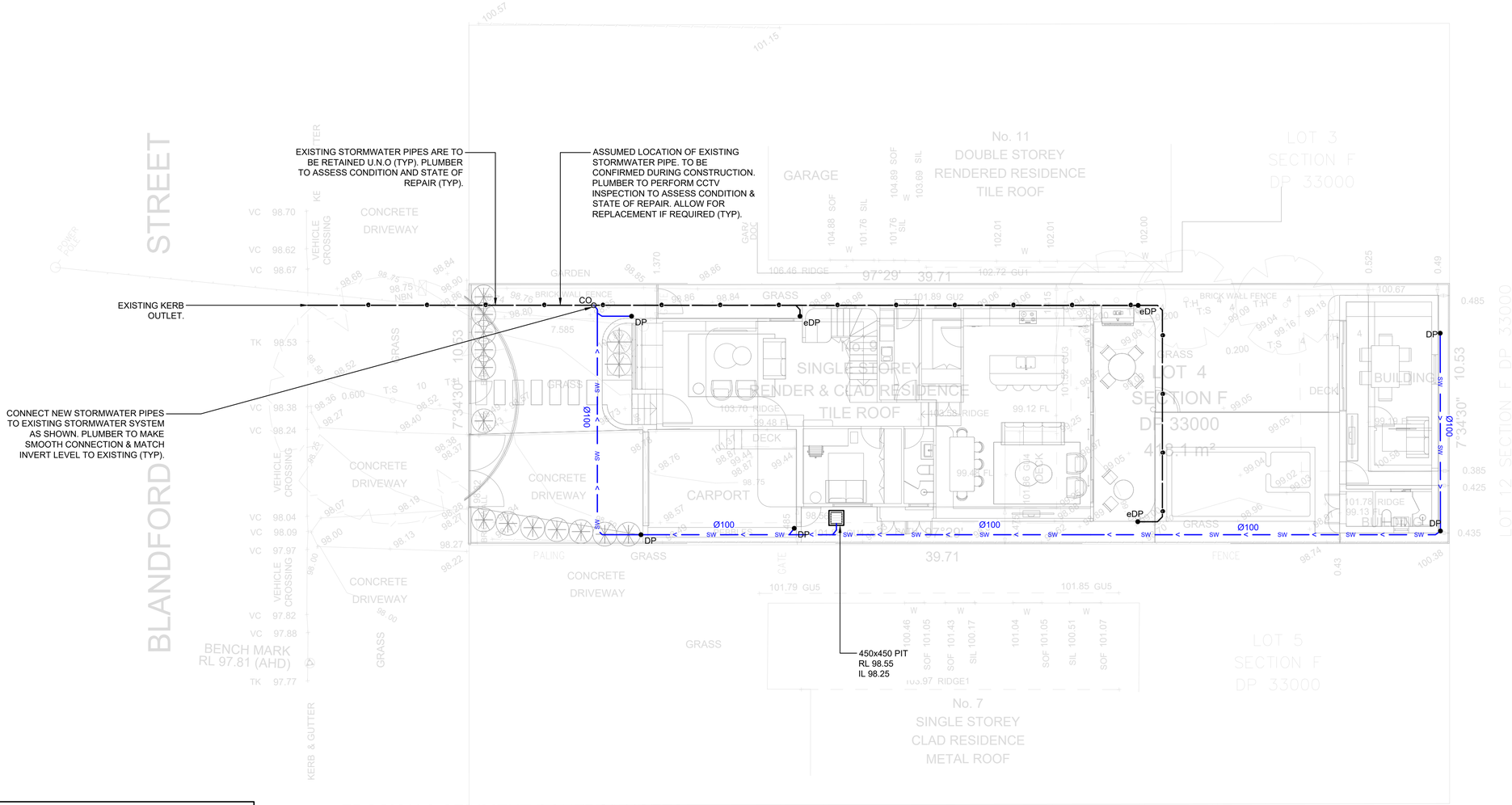


## DESIGN NOTES:

THE SITE IS LOCATED IN NORTHERN BEACHES COUNCIL.

SITE AREA = 418.1m²

IN ACCORDANCE TO COUNCIL GUIDELINES, OSD IS NOT REQUIRED FOR SUBJECT DEVELOPMENT. THIS IS DUE TO THE DEVELOPMENT HAVING A TOTAL SITE AREA BELOW 450m² AND NATURALLY FALLING TO THE PUBLIC ROAD.

CONTRACTOR TO INSTALL ABOVE GROUND RAINWATER TANK TO COLLECT REQUIRED ROOF AREA IN ACCORDANCE WITH BASIX CERTIFICATE.

RAINWATER TANK TO BE EQUIPPED WITH FIRST FLUSH AND MOSQUITO PROTECTION DEVICES.

ALL NEW STORMWATER PIPES TO HAVE A MINIMUM OF 100mm CONCRETE OR 300mm TOPSOIL COVER U.N.O.

ALL DOWNPIPES SHOWN ON PLAN ARE ⌀100mm uPVC U.N.O.

## EROSION & SEDIMENT CONTROL NOTES:

CONTRACTOR TO PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYP).

ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.

DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

## SURVEY

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN.

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0 1 2 3 4m

**GRID**

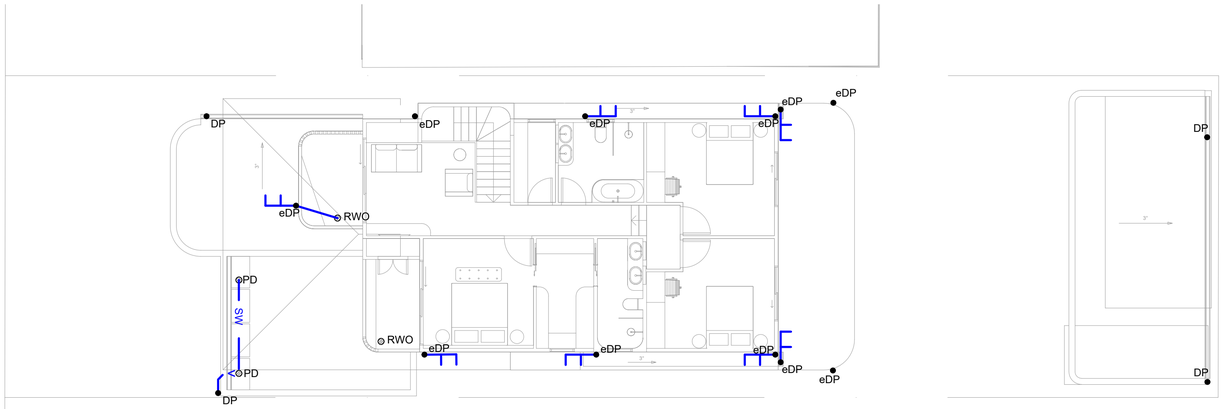
**HEIGHT DATUM** AHD

**DRAWING TITLE**
GROUND FLOOR DRAINAGE PLAN

**STATUS**
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

**PROJECT**
PROPOSED ALTERATIONS & ADDITIONS
9 BLANDFORD STREET, COLLAROY PLATEAU
NSW 2097

| DRAWING NUMBER | REFERENCE NUMBER | REVISION |
|---|---|---|
| V24921 - SW101 | V24921 | D |







| REVISION | REVISION DETAILS | DATE | DRAWN | DESIGN | CHECK | APPROVED |
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| A | ISSUED FOR CDC | 26.07.2024 | D.D. | M.N. | D.S. | D.S. |
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| C | ISSUED FOR CDC | 15.11.2024 | D.D. | M.N. | D.S. | D.S. |
| D | ISSUED FOR DA | 03.02.2025 | D.D. | M.N. | D.S. | D.S. |
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LEXINGTON DRIVE, BELLA VISTA, 2154

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**ARCHITECT**

**CLIENT**

**SCALE**
1:100 / 1:200
A1 / A3
0 1 2 3 4m

**GRID**

**HEIGHT DATUM** AHD

**DRAWING TITLE**
FIRST FLOOR DRAINAGE PLAN

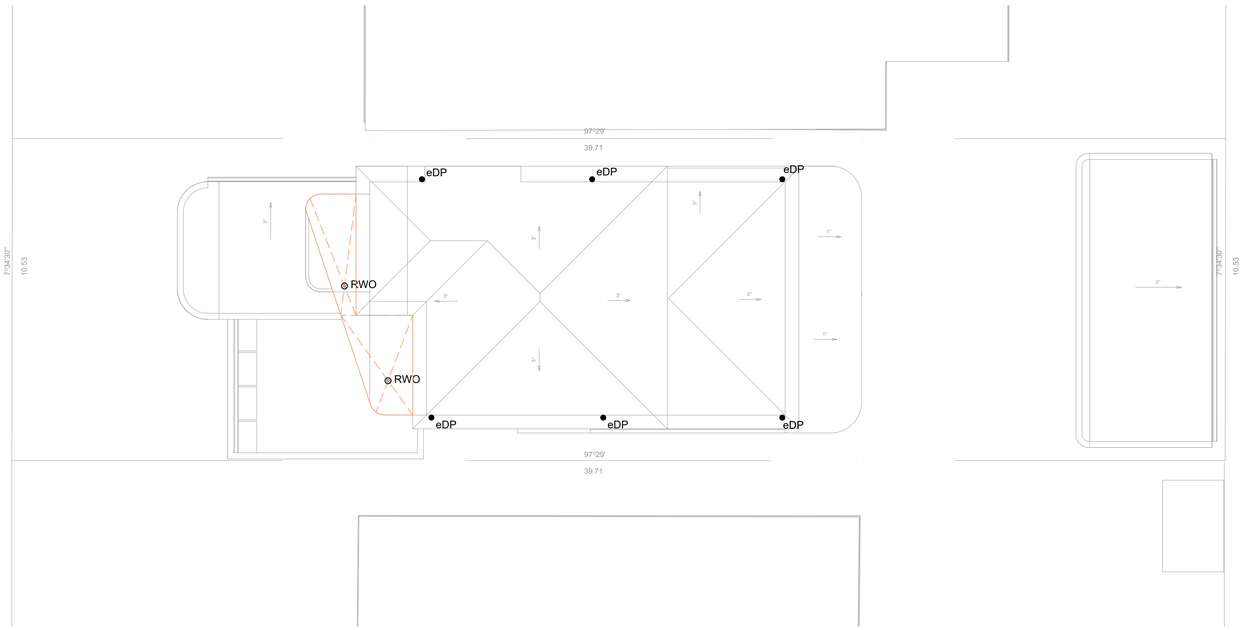
**STATUS** FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

**PROJECT**
PROPOSED ALTERATIONS & ADDITIONS
9 BLANDFORD STREET, COLLAROY PLATEAU
NSW 2097

**DRAWING NUMBER** V24921 - SW102

**REFERENCE NUMBER** V24921

**REVISION** D

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**ARCHITECT**

**CLIENT**

**SCALE**
1:100 / 1:200
A1 / A3
0 1 2 3 4m

**GRID**

**HEIGHT DATUM** AHD

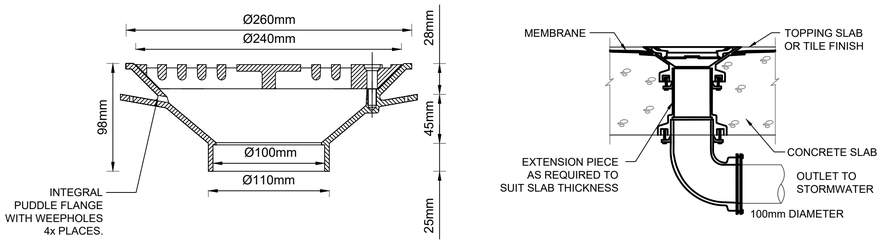
**DRAWING TITLE**

ROOF DRAINAGE PLAN

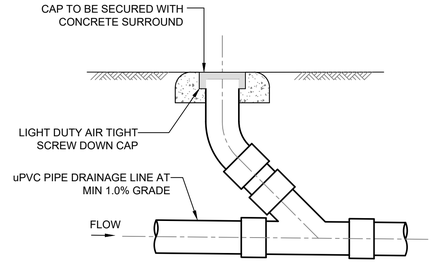
**STATUS**
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

**PROJECT**
PROPOSED ALTERATIONS & ADDITIONS
9 BLANDFORD STREET, COLLAROY PLATEAU
NSW 2097

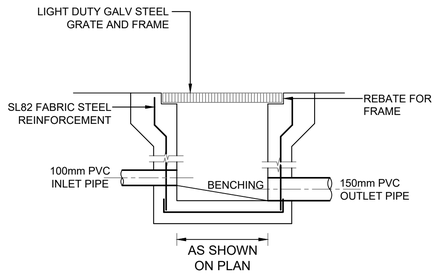
| DRAWING NUMBER | REFERENCE NUMBER | REVISION |
|---|---|---|
| V24921 - SW103 | V24921 | D |



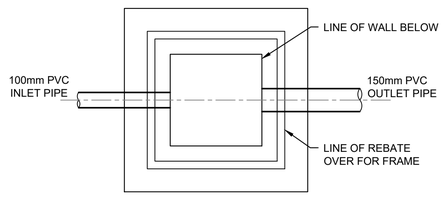

## DETAIL 1
TYPE SPS
RAINWATER OUTLET
NOT TO SCALE




## DETAIL 2
CLEANING EYE
SCALE 1:20




SECTION




PLAN WITHOUT GRATE

## DETAIL 3
STORMWATER PIT
SCALE 1:20

| REVISION | REVISION DETAILS | DATE | DRAWN | DESIGN | CHECK | APPROVED |
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**ARCHITECT**

**CLIENT**

**SCALE**
AS SHOWN

**GRID**

**HEIGHT DATUM** AHD

**DRAWING TITLE**
STORMWATER DETAILS - SHEET 1

**STATUS** FOR APPROVAL
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**PROJECT**
PROPOSED ALTERATIONS & ADDITIONS
9 BLANDFORD STREET, COLLAROY PLATEAU
NSW 2097

| DRAWING NUMBER | REFERENCE NUMBER | REVISION |
|---|---|---|
| V24921 - SW200 | V24921 | D |

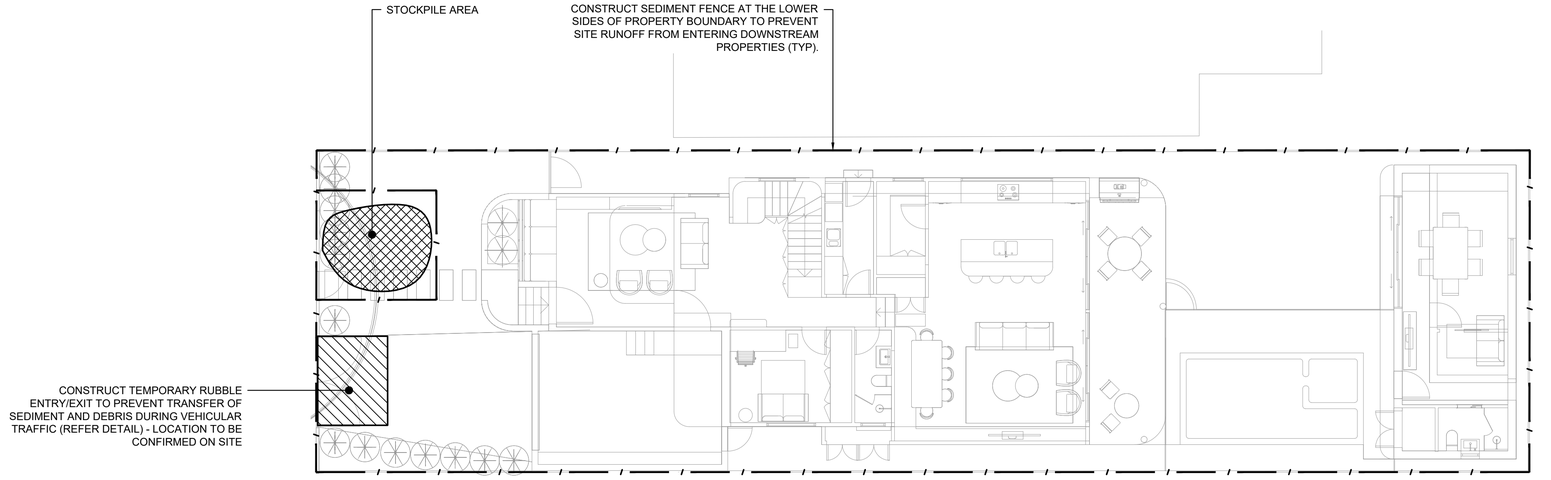
## LEGEND

FENCE LINE

STOCK-PILE AREA

RUBBLE ENTRY/EXIT

TREE TO BE REMOVED

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**CLIENT**

**SCALE**
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**GRID**

**HEIGHT DATUM** AHD

**DRAWING TITLE**
SEDIMENT & EROSION CONTROL PLAN

**STATUS** FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

**PROJECT**
PROPOSED ALTERATIONS & ADDITIONS
9 BLANDFORD STREET, COLLAROY PLATEAU
NSW 2097

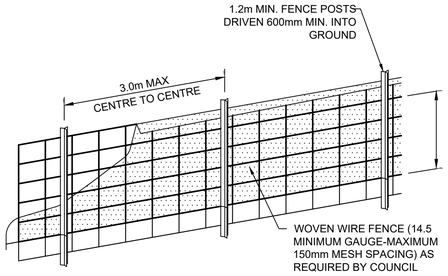
| DRAWING NUMBER | REFERENCE NUMBER | REVISION |
|---|---|---|
| V24921 - SW300 | V24921 | D |

# EROSION & SEDIMENT CONTROL PLAN

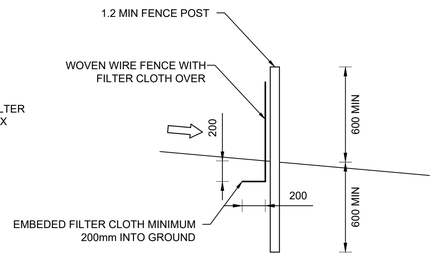
SCALE: 1:100

## NOTES:

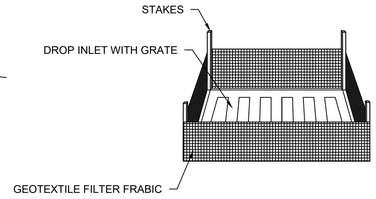
1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED AND RELATING TO THE DEVELOPMENT AT THE SUBJECT SITE.
2. THE CONTRACTOR MUST ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS INSTRUCTED IN THIS SPECIFICATION.
3. ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMIZING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE LANDS AND WATERWAYS.
4. DURING WINDY CONDITIONS, LARGE, UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
5. FINAL SITE LANDSCAPING SHALL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
6. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE BY FILTERING THROUGH AN APPROVED STRUCTURE.
7. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING HAVE BEEN REHABILITATED.
8. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THEY HAVE OPERATED EFFECTIVELY AND REMAIN IN WORKING CONDITION.
9. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITHIN ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
10. PROVIDE SILT FENCE/HAY BALE BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYPICAL).
11. ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.
12. DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

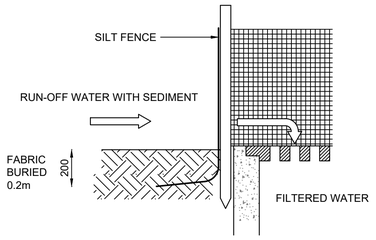



DIAGRAMMATIC VIEW



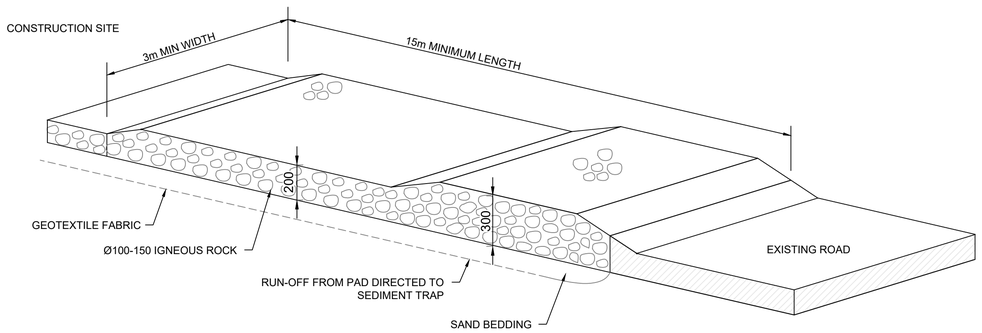

TYPICAL SECTION



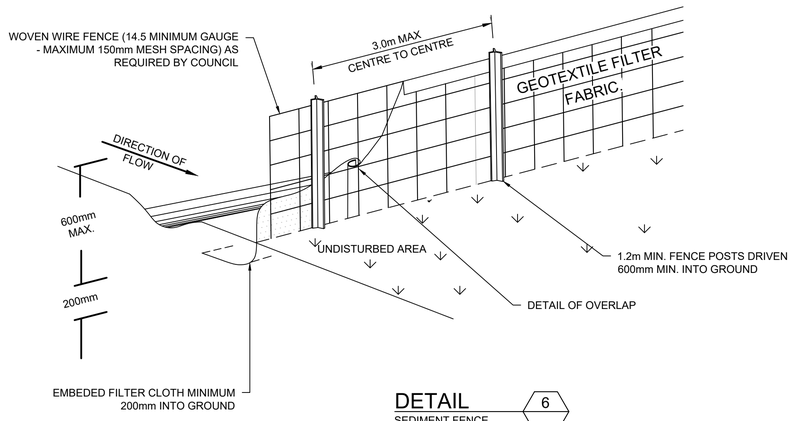




**DETAIL** 3 / - — SEDIMENT FENCE DETAIL, NOT TO SCALE

**DETAIL** 4 / - — SUMP SEDIMENT TRAP DETAIL, NOT TO SCALE




**DETAIL** 5 / - — TEMPORARY CONSTRUCTION EXIT, NOT TO SCALE




**DETAIL** 6 / - — SEDIMENT FENCE, NOT TO SCALE

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**ARCHITECT**

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**GRID**

**HEIGHT DATUM** AHD

**DRAWING TITLE**

SEDIMENT & EROSION CONTROL DETAILS

**STATUS** FOR APPROVAL

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**PROJECT**

PROPOSED ALTERATIONS & ADDITIONS

9 BLANDFORD STREET, COLLAROY PLATEAU NSW 2097

| DRAWING NUMBER | REFERENCE NUMBER | REVISION |
|---|---|---|
| V24921 - SW310 | V24921 | D |