

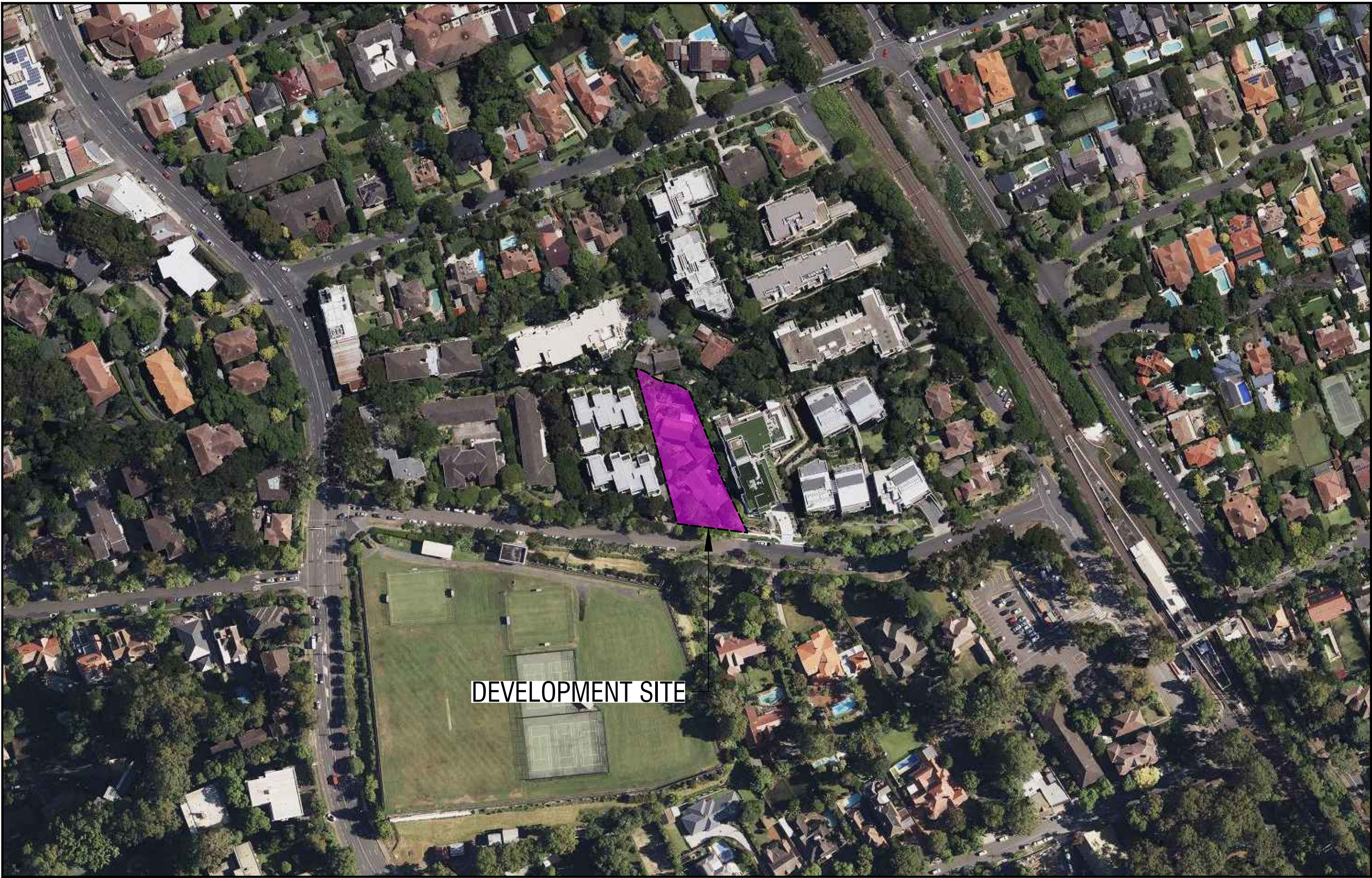
# CONCEPT STORMWATER DRAWINGS FOR PROPOSED MULTI-UNIT RESIDENTIAL DEVELOPMENT



SUIT 2.04, L2, BLDG 3,  
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CLIENT  
BWSLD KILLARA

ARCHITECT  
BKA ARCHITECTURE



AS 3500.3- TABLE 8.2  
SIZE OF MINIMUM INTERNAL DIMENSIONS FOR  
STORMWATER AND INLET PITS

| DEPTH OF<br>INVERT OF<br>OUTLET | MINIMUM INTERNAL DIMENSIONS (mm) |        |                      |
|---------------------------------|----------------------------------|--------|----------------------|
|                                 | RECTANGULAR<br>WIDTH             | LENGTH | CIRCULAR<br>DIAMETER |
| ≤450                            | 350                              | 350    |                      |
| ≤600                            | 450                              | 450    | 600                  |
| >600 ≤900                       | 600                              | 600    | 900                  |
| >900 ≤1200                      | 600                              | 900    | 1000                 |
| >1200                           | 900                              | 900    | 1000                 |



IMPORTANT:  
CONTRACTOR TO OBTAIN CURRENT SET OF  
"DIAL BEFORE YOU DIG" PLANS ON SITE ALL  
TIMES AND PRIOR TO CONSTRUCTION WORKS

## SYMBOLS

|       |                                   |
|-------|-----------------------------------|
| RL    | PIT SURFACE LEVEL                 |
| IL    | INVERT LEVEL                      |
| TK    | TOP OF KERB                       |
| B.O.W | BOTTOM OF WALL                    |
| T.O.W | TOP OF WALL                       |
| SV    | STORMWATER DRAINAGE PIPE          |
| RVT   | DOWNPIPE TO RAINWATER TANK        |
| SV    | OVERFLOW PIPE FROM RAINWATER TANK |
| S     | Ø100 SUBSOIL PIPE                 |
| S     | Ø100 SUBSOIL PIPE                 |
| FW    | FLOOR WASTE 150X150               |
| FW    | FLOOR WASTE 1500                  |
| RWO   | RAINWATER OUTLET 3000             |

|    |                             |
|----|-----------------------------|
| PG | PLANTER GRATE               |
| DP | DOWN PIPE                   |
| CO | CLEAN OUT                   |
| IO | INSPECTION OPENING          |
| VD | VERTICAL DROP               |
| VR | VERTICAL RISER              |
| OF | OVERFLOW (DOME TYPE)        |
| X  | CONCRETE COVER JUNCTION PIT |
| G  | GRATED INLET PIT            |
| W  | WIDE GRATED DRAIN           |
| F  | OVERLAND FLOW PATH          |
| S  | CAST IN SLAB PIPE           |

| DRAWING LIST   |                                                             |
|----------------|-------------------------------------------------------------|
| DRAWING NUMBER | DRAWING NAME                                                |
| D00            | COVER SHEET, LEGEND & DRAWING SCHEDULE                      |
| D01            | BASEMENT 3 STORMWATER DRAINAGE PLAN                         |
| D02            | BASEMENT 2 STORMWATER DRAINAGE PLAN                         |
| D03            | BASEMENT 1 STORMWATER DRAINAGE PLAN                         |
| D04            | LOWER GROUND FLOOR STORMWATER DRAINAGE PLAN                 |
| D05            | GROUND FLOOR STORMWATER DRAINAGE PLAN                       |
| D06            | LEVEL 1 STORMWATER DRAINAGE PLAN                            |
| D15            | POST DEVELOPMENT CATCHMENT ANALYSIS AND MUSIC MODEL RESULTS |
| D20            | STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 1            |
| D21            | STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 2            |
| D24            | UPSTREAM CATCHMENT ANALYSIS                                 |
| D25            | OSD DESIGN COMPUTATION AND DETAILS SHEET 1                  |
| D26            | OSD DESIGN COMPUTATION AND DETAILS SHEET 2                  |
| D30            | EROSION AND SEDIMENT CONTROL PLAN                           |
| D31            | EROSION AND SEDIMENT CONTROL DETAILS                        |

## NOTES

- ALL LINES ARE TO BE MIN. 1000 UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
- ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
- ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
- ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3 (CURRENT EDITION), COUNCIL SPECIFICATIONS, RELEVANT VOLUME OF NCC (NATIONAL CONSTRUCTION CODE)
- LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
- ALL STORMWATER LINES' JOINTS BE FULLY SEALED AND WATERTIGHT IN ACCORDANCE WITH AS3500.3.2021
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL AND ALL OTHER RELEVANT CONSULTANT'S PLANS.
- ALL RAINWATER TANKS TO BE FITTED WITH A FIRST FLUSH DEVICE TO PREVENT POTENTIAL CONTAMINANTS FROM ENTERING THE TANKS.
- ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
- ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
- ALL LIFT PITS ARE TO BE FULLY TANKED UNLESS NOTED OTHERWISE.
- CHILD -PROOF LOCKING SYSTEM MUST BE EMPLOYED FOR ALL GRATES AND LIDS IN COMMON AREAS
- ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES
- PROVIDE EMERGENCY OVERFLOW TO ALL PLANTER BOX AND BALCONIES.
- ALL PITS WITH DEPTH MORE THAN 900mm MUST HAVE IRON STEPS AND TO BE BENCHED AND STREAMLINED
- PROVIDE STORMWATER GRATE 200Wx200D AT THE BASE OF ALL MECHANICAL SHAFTS AND UNCOVERED STAIRS OR OPENINGS.
- PRESSURIZED PIPES / RISING MAINS FROM PUMP OUT TANK TO BE CONNECTED DIRECTLY AND INDEPENDENTLY TO EITHER OSD TANK OR BOUNDARY PIT AS PER DESIGN PLANS.
- ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS
- SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATION AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT AND CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION.
- ALL VARIATIONS TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY SMART STRUCTURES AUSTRALIA PRIOR TO COMMENCEMENT OF WORKS.
- THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY
- ALL STORMWATER DRAINAGE PITS IN GARDEN OR TURFED AREAS TO BE FITTED WITH PERFORATED GALVANISED STEEL MESH UNDER THE LIDS TO PREVENT DEBRIS ENTERING STORMWATER NETWORK.
- PIPE INSTALLATION TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT AS3500.3 AND RELEVANT VOLUME OF NCC (NATIONAL CONSTRUCTION CODE). THIS IS CONTRACTOR'S RESPONSIBILITY TO CHECK IMPACT OF PIPE TRENCHING TO SURROUNDING STRUCTURAL AND NON STRUCTURAL ELEMENTS.

Project Number  
240660

Address  
23-25 LORNE AVENUE,  
KILLARA NSW 2071

Revision  
B

Sheet Number  
D00

Address  
23-25 LORNE AVENUE,  
KILLARA NSW 2071

Start Date: JANUARY 2025  
Project No. 240660

Client: **BWSLD KILLARA**

Architect:  
BKA ARCHITECTURE

Approved by: **K.E**

| Rev. # | Drafter | Engineer | Date     |
|--------|---------|----------|----------|
| A      | N.E.    | K.E.     | 24.01.25 |
| B      | N.E.    | K.E.     | 03.03.25 |
| C      | N.E.    | K.E.     | 14.03.25 |

## Notes

1. Drawings to be read in conjunction with architectural drawings.
2. Refer to architectural drawings for all setout, levels.
3. Do not scale any dimensions
4. Drawings to be read & printed in colour.

**PRELIMINARY  
NOT FOR CONSTRUCTION**

## Project North



Scale @ A1: AS SHOWN

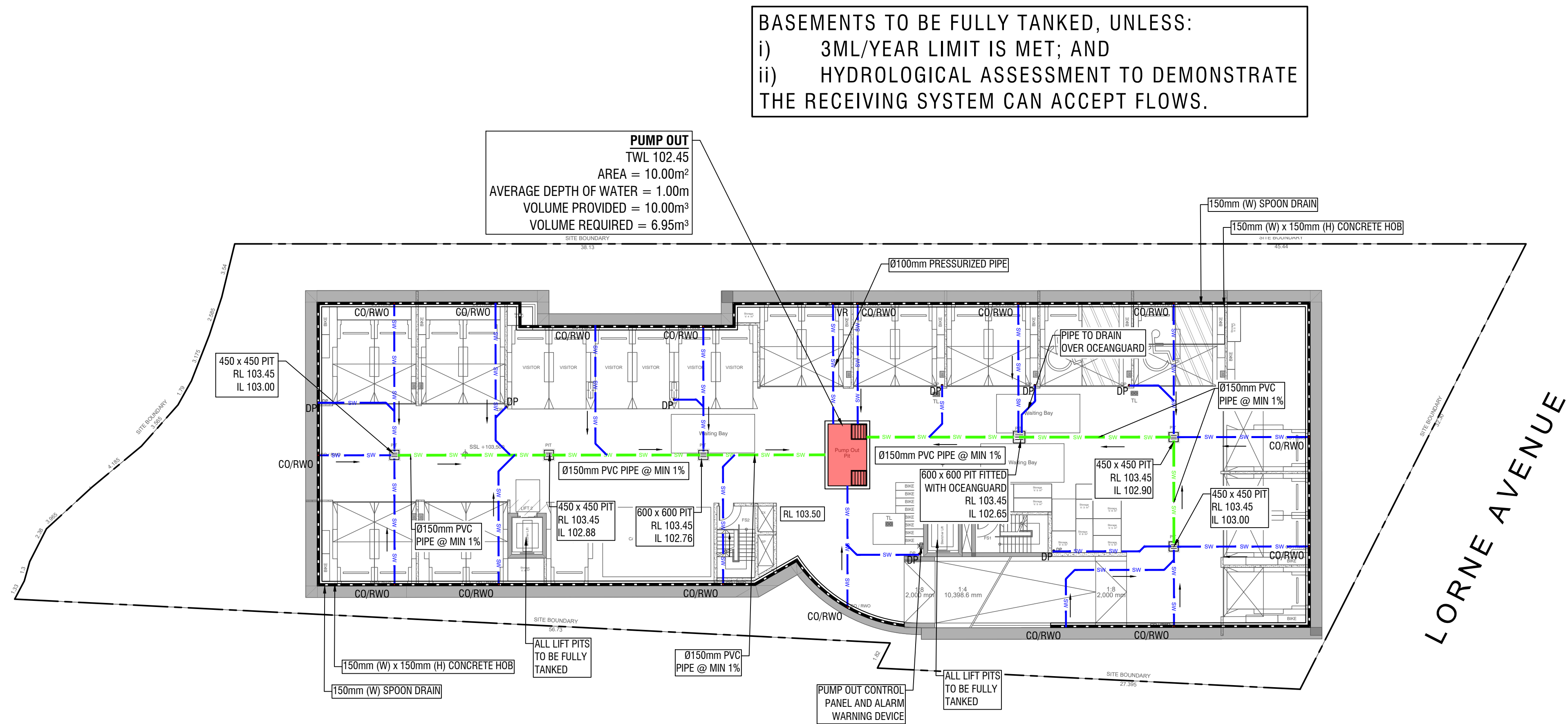
Sheet Name:

## BASEMENT 3 STORMWATER DRAINAGE PLAN

Sheet Number:

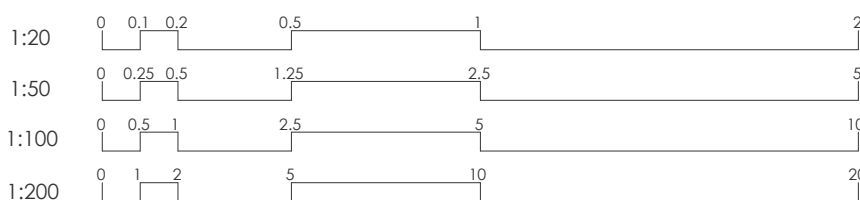
D01

**Revision:**



## BASEMENT 3 STORMWATER DRAINAGE PLAN

SCALE 1: 200



Address

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| C      | N.E.    | K.E.<br>ISSUE FOR D.A.           | 14.03.25 |

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Sheet Name:

BASEMENT 2  
STORMWATER  
DRAINAGE PLAN

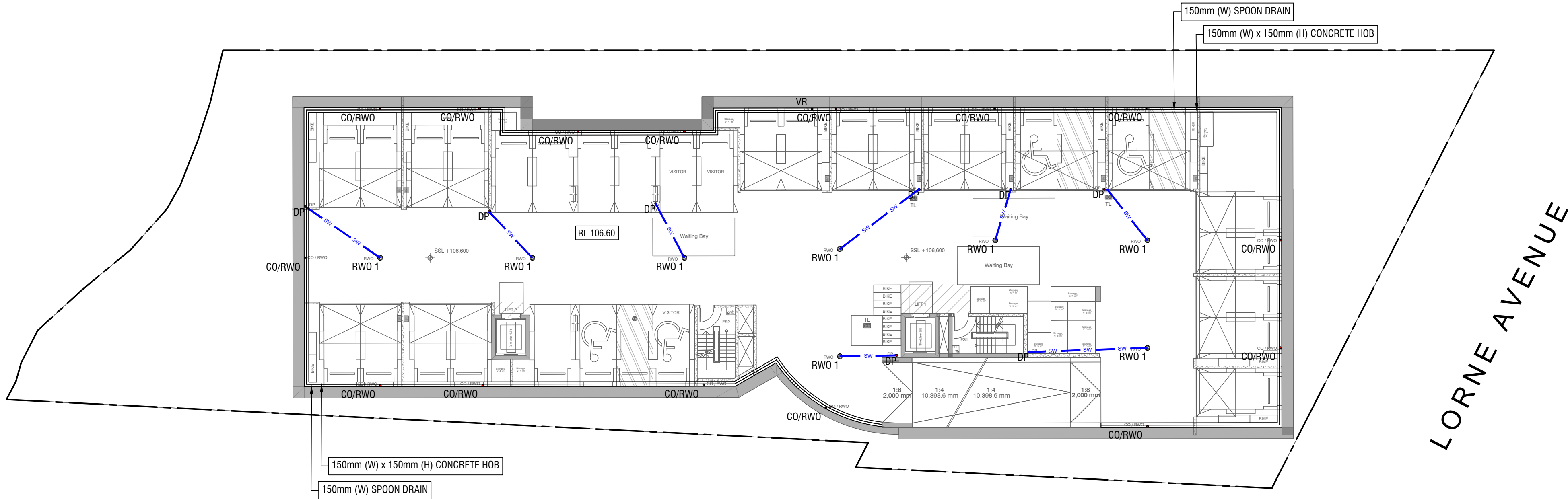
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Revision:

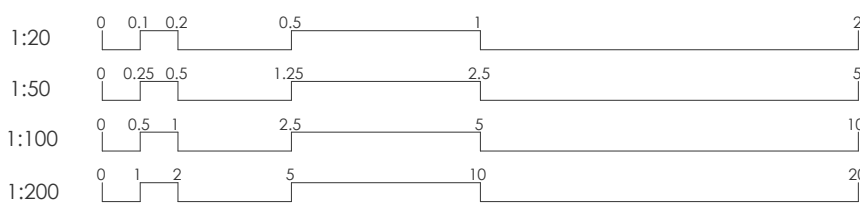
C

BASEMENTS TO BE FULLY TANKED, UNLESS:  
i) 3ML/YEAR LIMIT IS MET; AND  
ii) HYDROLOGICAL ASSESSMENT TO DEMONSTRATE  
THE RECEIVING SYSTEM CAN ACCEPT FLOWS.



BASEMENT 2 STORMWATER DRAINAGE PLAN

SCALE 1: 200



Address

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KILLARA NSW 2071

Start Date: JANUARY 2025

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Client: BWSLD KILLARA

Architect: BKA ARCHITECTURE

Approved by: K.E.

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| C      | N.E.    | K.E.     | ISSUE FOR D.A.       | 14.03.25 |

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3. Do not scale any dimensions

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PRELIMINARY  
NOT FOR CONSTRUCTION

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Scale @ A1: AS SHOWN

Sheet Name:

BASEMENT 1  
STORMWATER  
DRAINAGE PLAN

Sheet Number:

Revision:

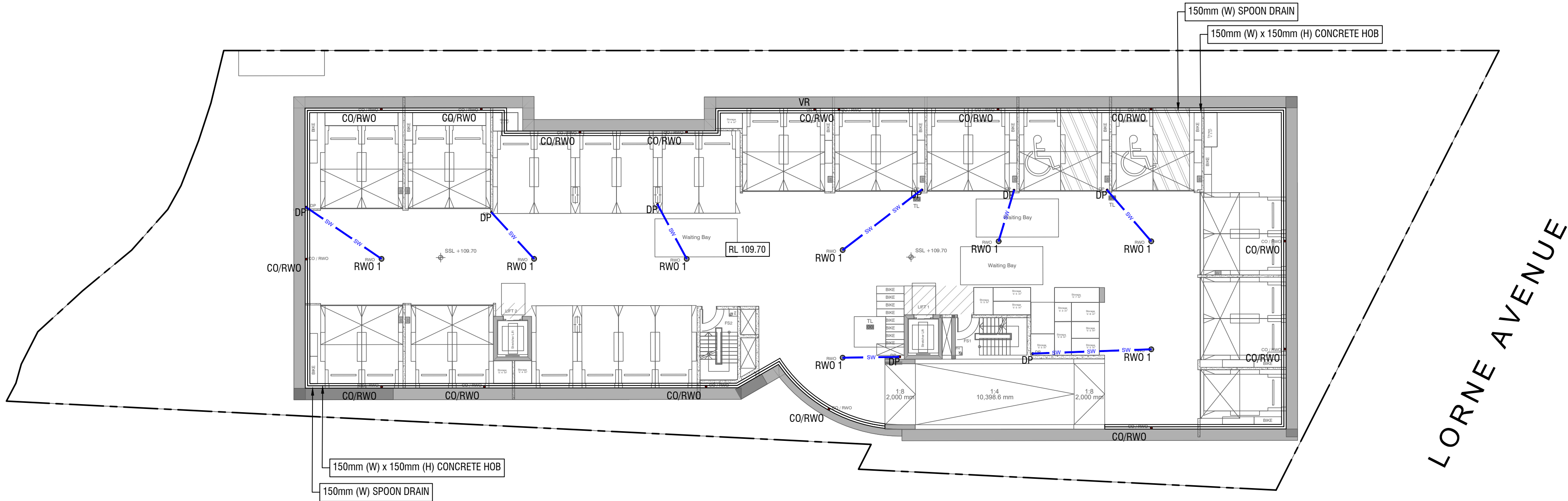
D03

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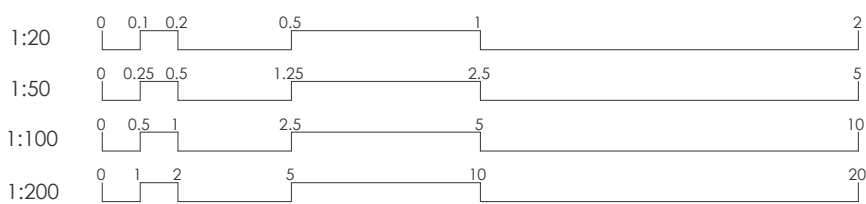
i) 3ML/YEAR LIMIT IS MET; AND

ii) HYDROLOGICAL ASSESSMENT TO DEMONSTRATE THE RECEIVING SYSTEM CAN ACCEPT FLOWS.



BASEMENT 1 STORMWATER DRAINAGE PLAN

SCALE 1: 200



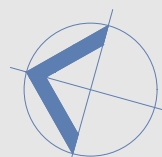
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Project North



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Sheet Name:

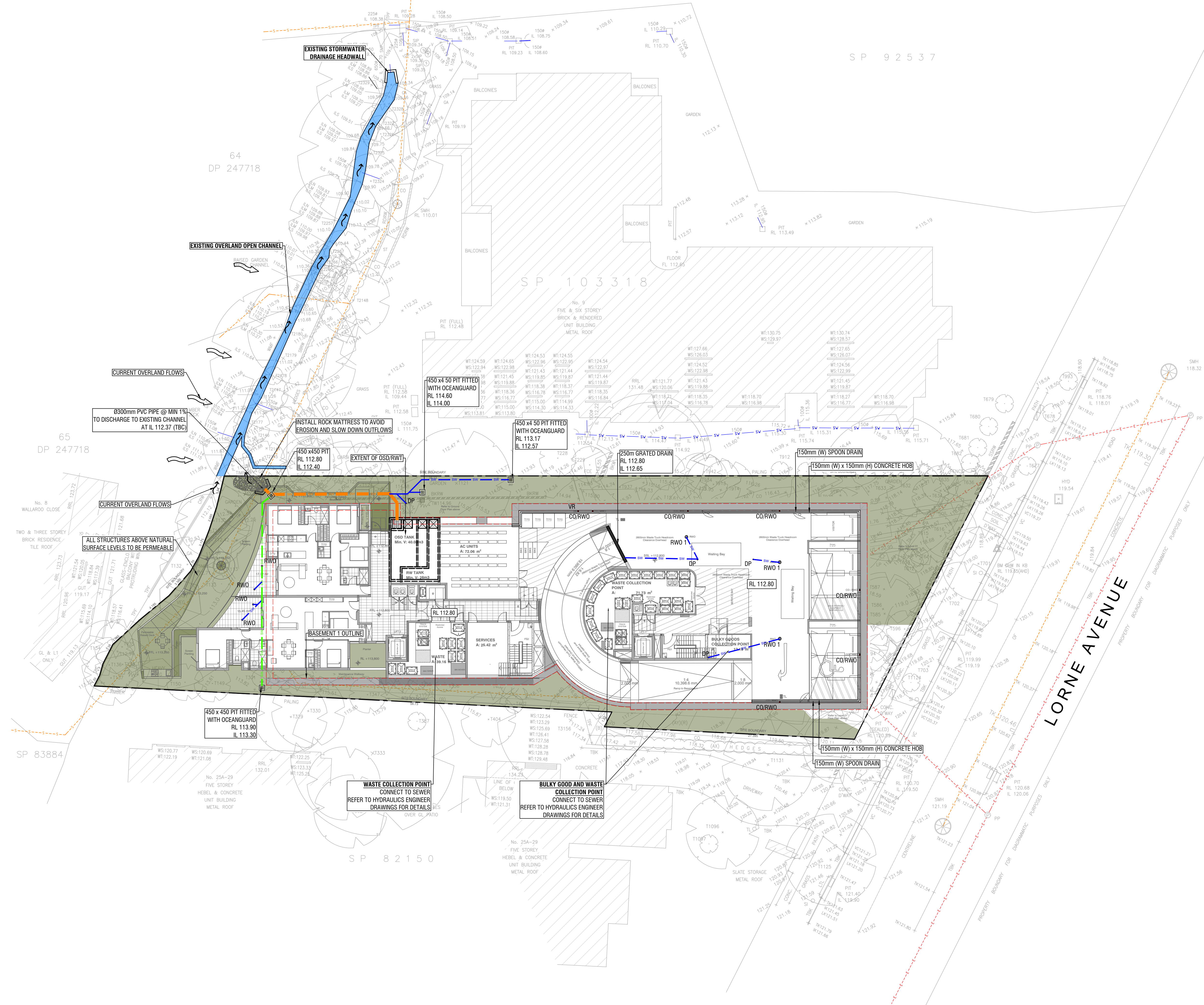
**LOWER GROUND  
FLOOR STORMWATER  
DRAINAGE PLAN**

Sheet Number:

**D04**

Revision:

C



| Rev. # | Drafter | Engineer | Revision Description | Date     |
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Project North



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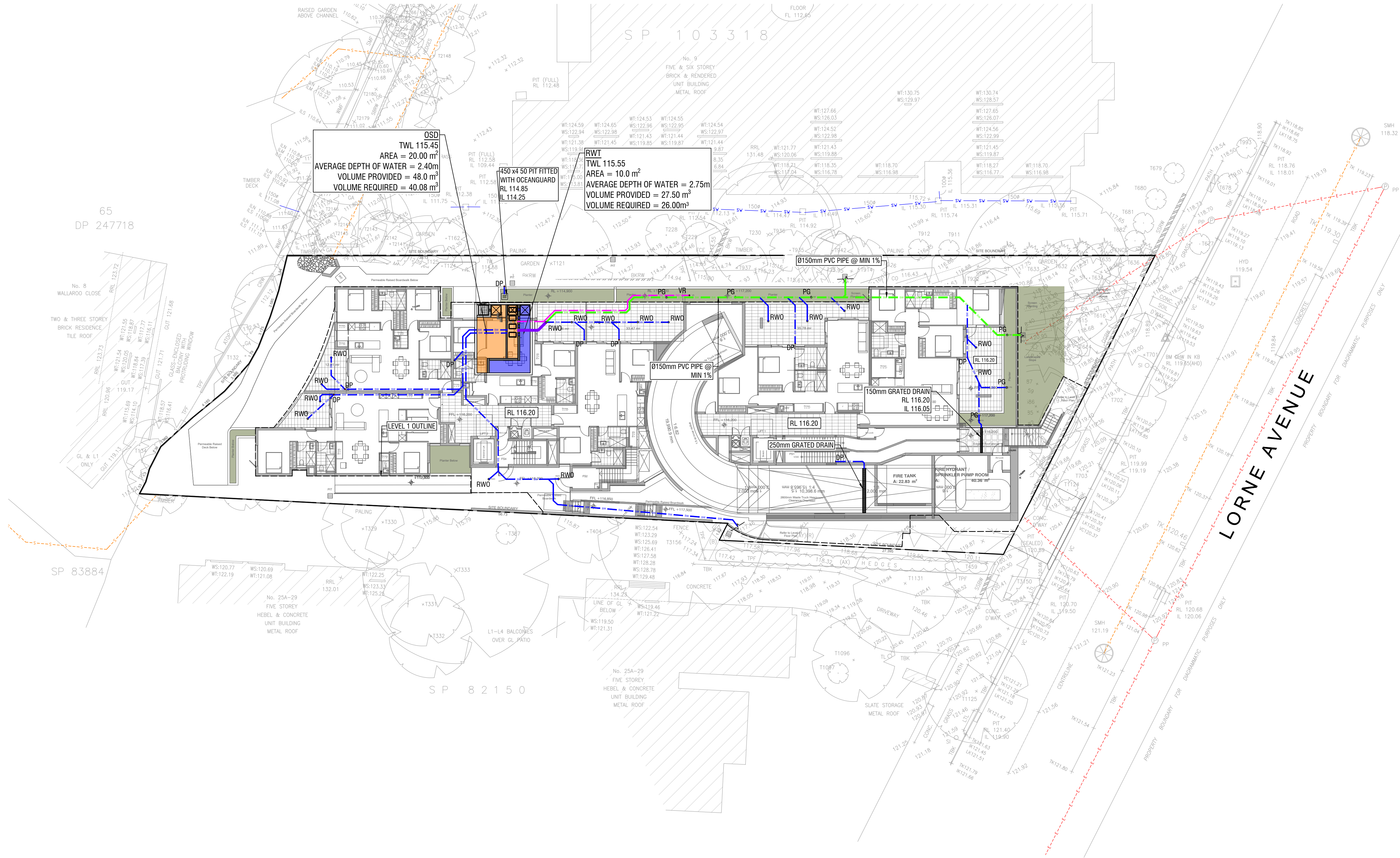
**GROUND FLOOR  
STORMWATER  
DRAINAGE PLAN**

Sheet Number:

**D05**

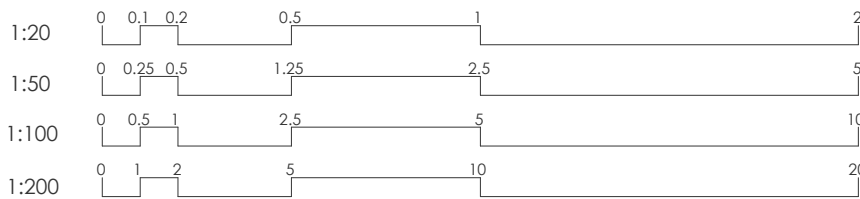
Revision:

**C**



**GROUND FLOOR STORMWATER DRAINAGE PLAN**

SCALE 1: 200



Address  
**23-25 LORNE AVENUE,  
KILLARA NSW 2071**

Start Date: JANUARY 2025  
Project No. 240660

Client:  
BWSLD KILLARA

Architect:  
BKA ARCHITECTURE

Approved by: K.E.

Internal Revisions:

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Project North



Scale @ A1: AS SHOWN

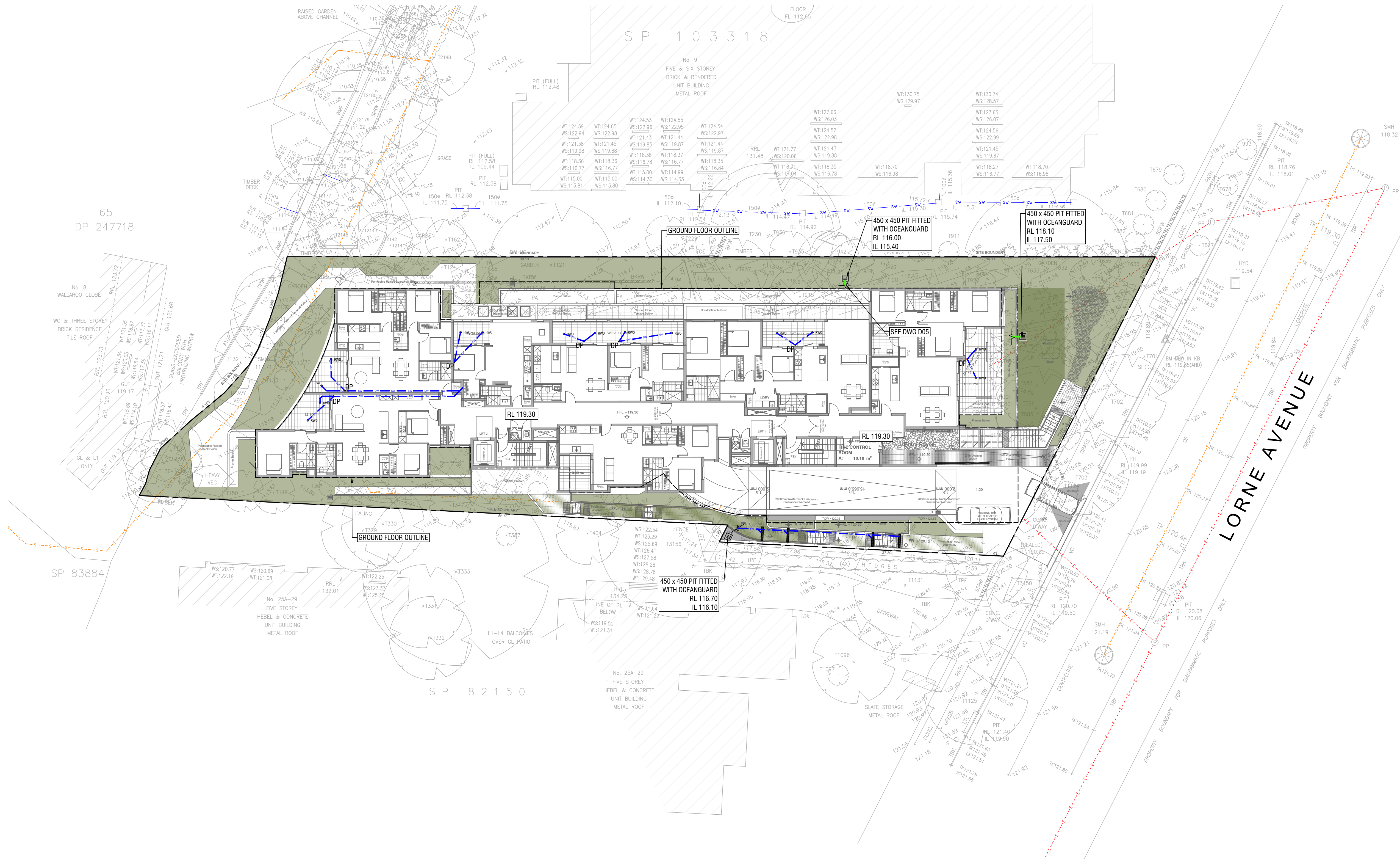
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**LEVEL 1 STORMWATER  
DRAINAGE PLAN**

Sheet Number:

**D06**

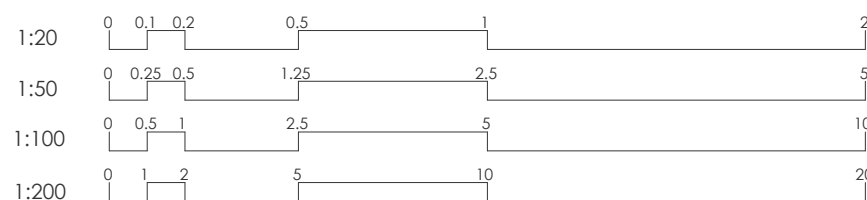
Revision:

**B**

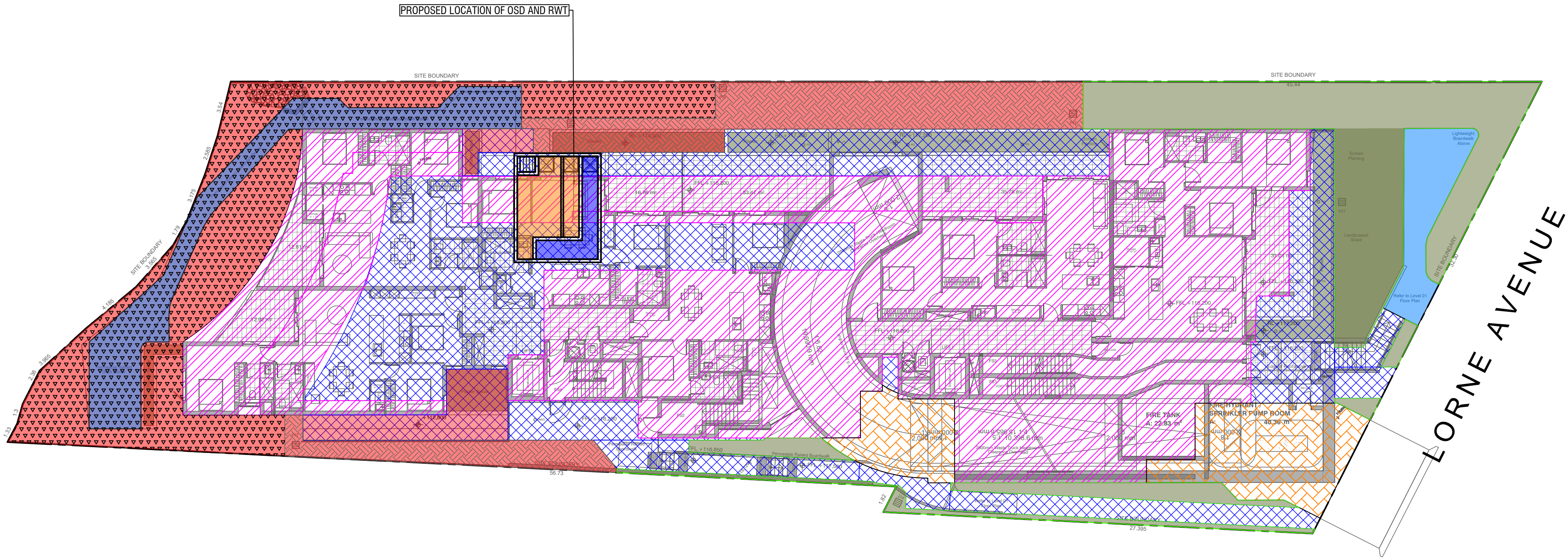


**GROUND FLOOR STORMWATER DRAINAGE PLAN**

SCALE 1: 200

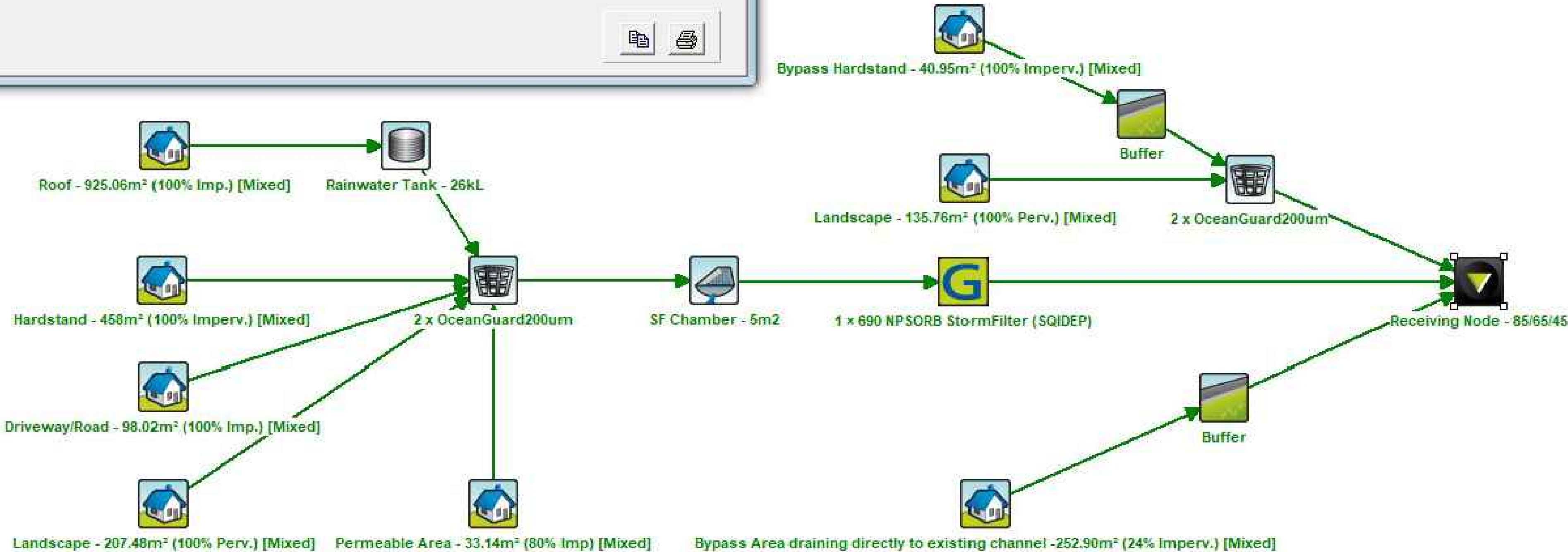


|                                                                                                                       |             |  |
|-----------------------------------------------------------------------------------------------------------------------|-------------|--|
| POST DEVELOPMENT CATCHMENT ANALYSIS:                                                                                  |             |  |
| TOTAL SITE AREA:                                                                                                      | 2,151.31 m² |  |
| TOTAL AREA DRAINING TO OSD:                                                                                           | 1721.70 m²  |  |
| ROOF                                                                                                                  | 925.06 m²   |  |
| HARDSTAND                                                                                                             | 458.00 m²   |  |
| PERMEABLE AREA:                                                                                                       | 33.14 m²    |  |
| LANDSCAPE                                                                                                             | 207.48 m²   |  |
| DRIVEWAY                                                                                                              | 98.02 m²    |  |
| TOTAL AREA BYPASSING OSD:                                                                                             | 429.61 m²   |  |
| HARDSTAND                                                                                                             | 40.95 m²    |  |
| LANDSCAPE (DRAINING TO OCEANGUARD)                                                                                    | 135.76 m²   |  |
| AREA DRAINING DIRECTLY TO EXISTING CHANNEL WITHOUT GOING THRU THE PIPELINE APPROX. 252.90m² (PERMEABLE AREA: 74.70m²) |             |  |

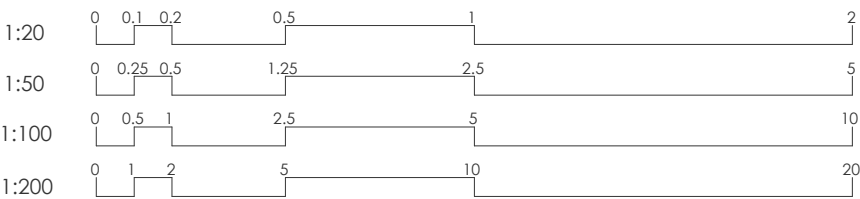


POST DEVELOPMENT CATCHMENT PLAN  
SCALE 1: 100

| Treatment Train Effectiveness - Receiving Node - 85/65/45 |         |               |             |
|-----------------------------------------------------------|---------|---------------|-------------|
|                                                           | Sources | Residual Load | % Reduction |
| Flow (ML/yr)                                              | 1.9     | 1.73          | 9.1         |
| Total Suspended Solids (kg/yr)                            | 234     | 23.6          | 89.9        |
| Total Phosphorus (kg/yr)                                  | 0.502   | 0.173         | 65.5        |
| Total Nitrogen (kg/yr)                                    | 5.44    | 2.19          | 59.7        |
| Gross Pollutants (kg/yr)                                  | 43.9    | 2.87          | 93.5        |



MUSIC MODEL RESULTS



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PRELIMINARY  
NOT FOR CONSTRUCTION

Project North  
Scale @ A1: AS SHOWN

Sheet Name:  
POST DEVELOPMENT  
CATCHMENT ANALYSIS  
AND MUSIC MODEL  
RESULTS  
Sheet Number:

D15  
Revision:  
B

PUMP SPECIFICATIONS
STANDARD PUMP-OUT NOTES

THE PUMP-OUT SYSTEM IS DESIGNED TO WORK IN THE FOLLOWING MANNER -

- 1. A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD LOW LEVEL FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMP AND TO SET 100mm ABOVE BOTTOM OF TANK TO ALLOW 100mm DEPTH OF WATER MAINTAINED AT ALL TIMES.
- 2. A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL (I.E. 300mm ABOVE LOWER LEVEL FLOAT), WHEREBY THE PUMP WILL OPERATE & DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.
- 3. A THIRD FLOAT SHALL BE SET NOT HIGHER THAN 100mm ABOVE THE INVERT OF THE INLET PIPE. THIS FLOAT SHOULD ACTIVATE THE ALARM.
- 4. AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT ALARM AND AN AUDIBLE ALARM WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.
- 5. THE PUMP CONTROLS SHALL BE SET UP TO ENABLE ALTERNATE PUMP OPERATION AT EACH START. IN THE EVENT A PUMP FAILS TO OPERATE WHEN THE WATER LEVEL IN THE WET WELL REACHES THE PUMP START, THE OTHER PUMP SHALL BE ACTIVATED, AND A FLASHING STROBE LIGHT ALARM INITIATED. IN THE EVENT THAT BOTH PUMPS FAIL TO OPERATE, AN AUDIBLE ALARM SHALL BE INITIATED.
- 6. PUMPS SHALL BE FITTED WITH A GATE VALVE AND NON-RETURN VALVE ON THE DELIVERY SIDE OF EACH PUMP. THE VALVES SHOULD BE ACCESSIBLE WITHOUT HAVING TO ENTER THE WELL.

PUMP WELL DETAILS

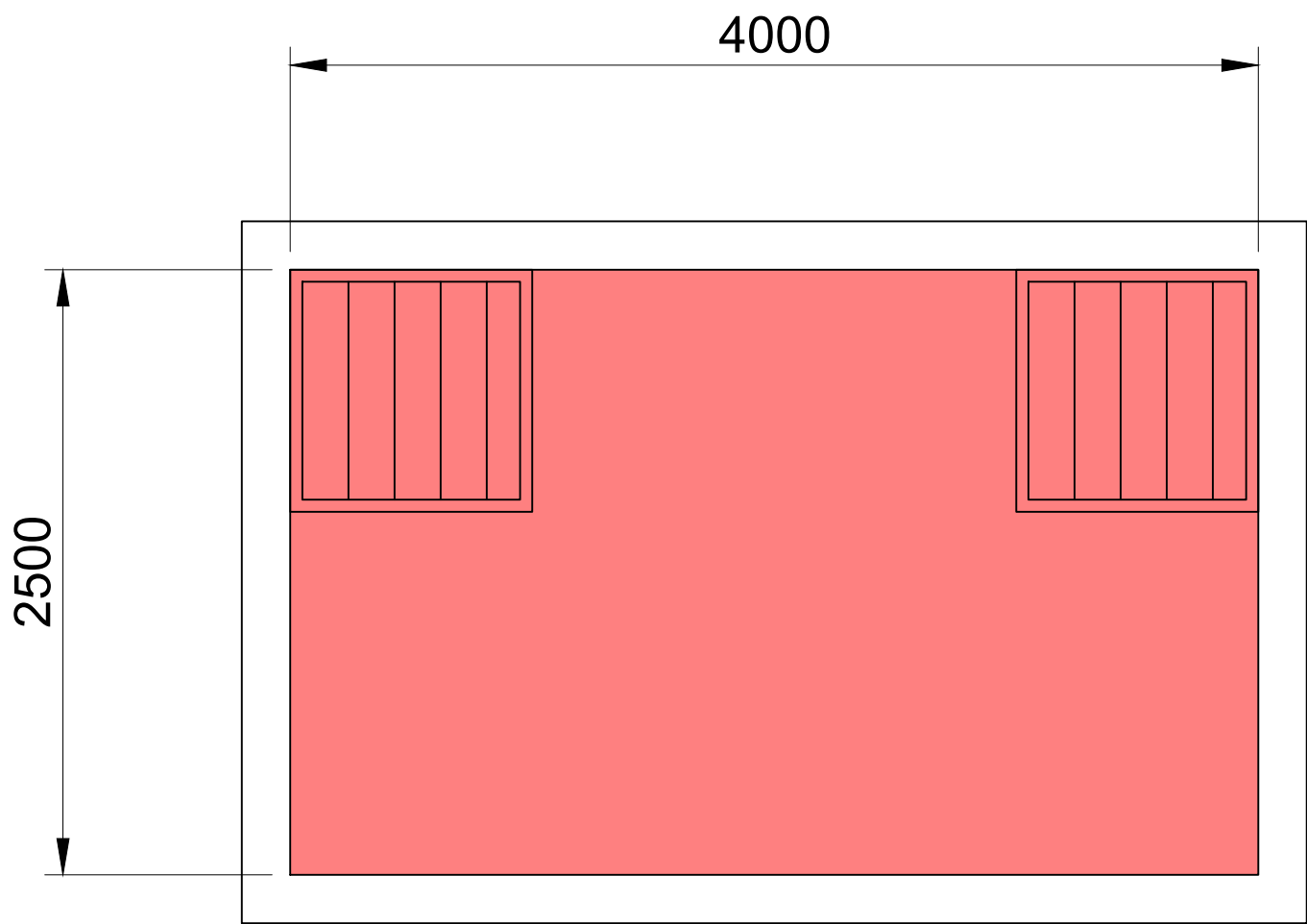
AREA DRAINING TO SUMP = 98.02m²  
VOLUME BASED ON 100 YEAR ARI 2 HOUR INTENSITY  
INTENSITY = 49.60mm/hr  
Q = 1 x 49.60mm/hr x 98.02m² / 3600 = 1.35L/s  
VOLUME REQUIRED = 1.35 x (60x60x2) = 9.72m³

STORAGE PROVIDED 4.0x2.50x1.0m= 10.00 m³

PUMP OUT RATE BASED ON 100 YEAR ARI 5 MIN  
INTENSITY = 267mm/hr  
Q = 1 x 267mm/hr x 98.02m² / 3600 = 7.27L/s

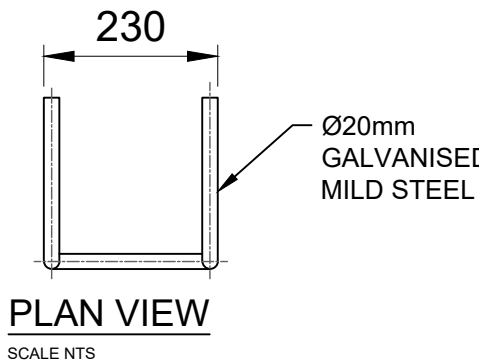
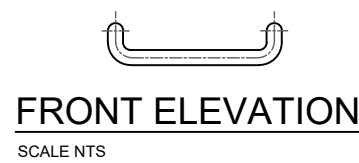
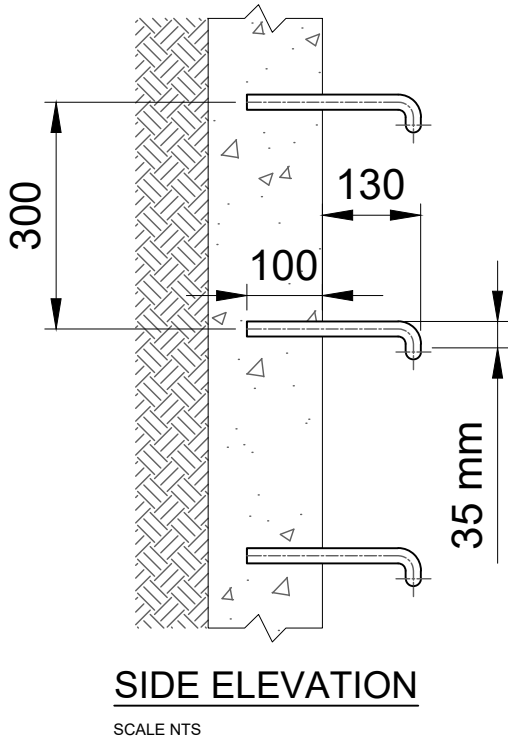
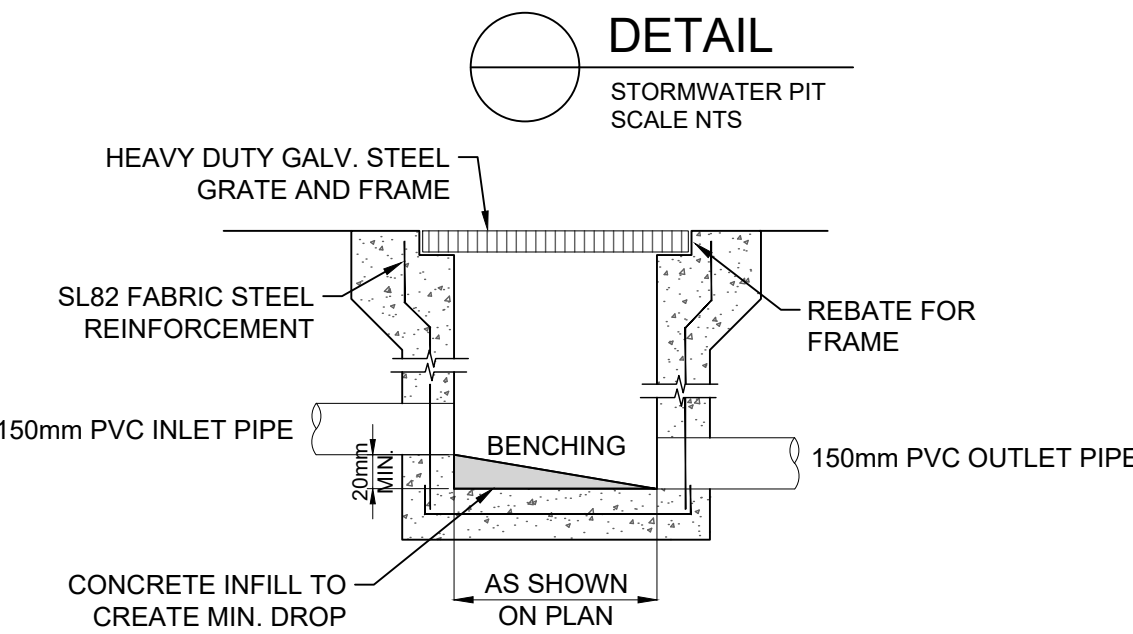
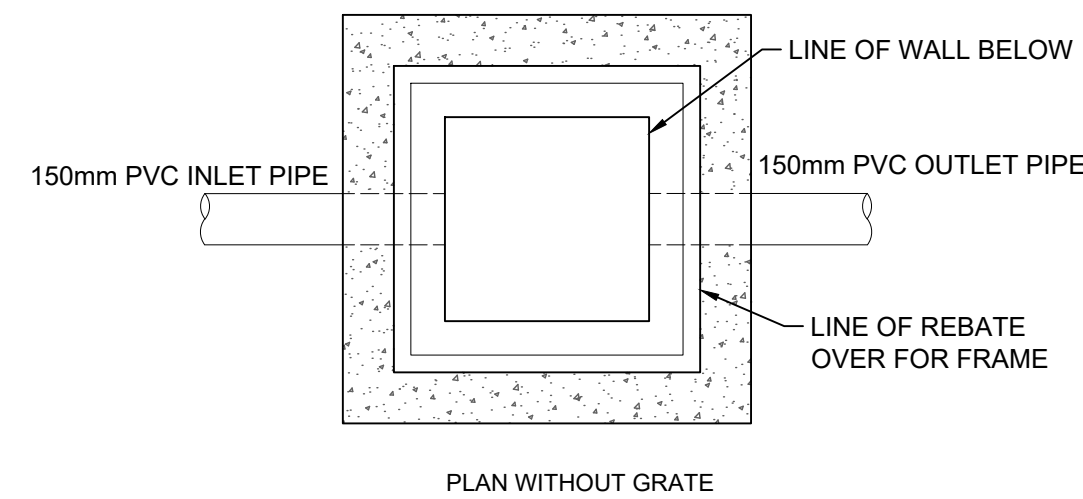
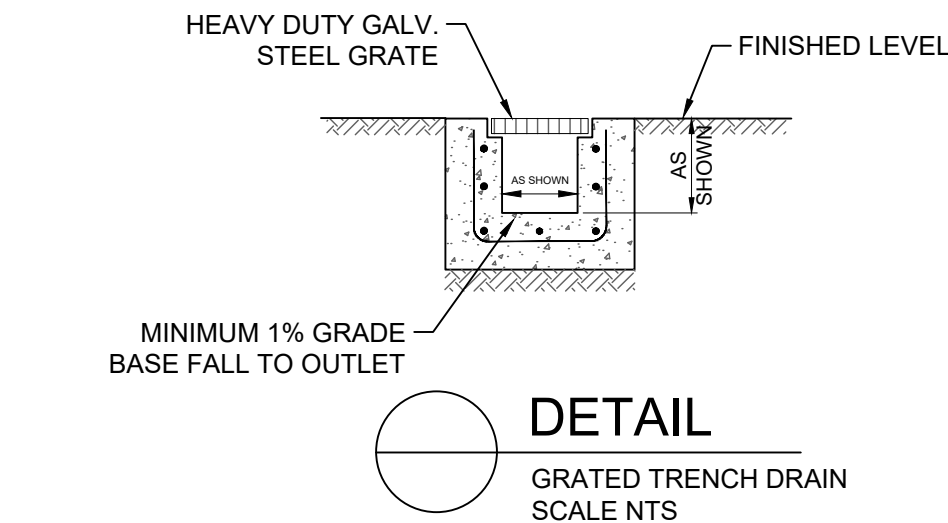
MIN PUMP CAPACITY BY AS 3500 = 10.0 L/s

DUAL ZSS-370 PUMP OR EQUIVALENT TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMPS TO OPERATE SIMULTANEOUSLY ON HIGH LEVEL ALARMS AT 5.0L/sec (PER PUMP) AT 8.00m HEAD



PUMP OUT PIT PLAN VIEW

SCALE NTS



STEP IRON DETAIL

SCALE NTS

NOTE: INSTALL WHERE PITS ARE DEEPER THAN 900

- Heavy duty submersible drainage pumps for pumping drainage and stormwater
- High efficiency pump design
- Suited to industrial and municipal applications
- Ideal for stormwater pump stations and contractor dewatering

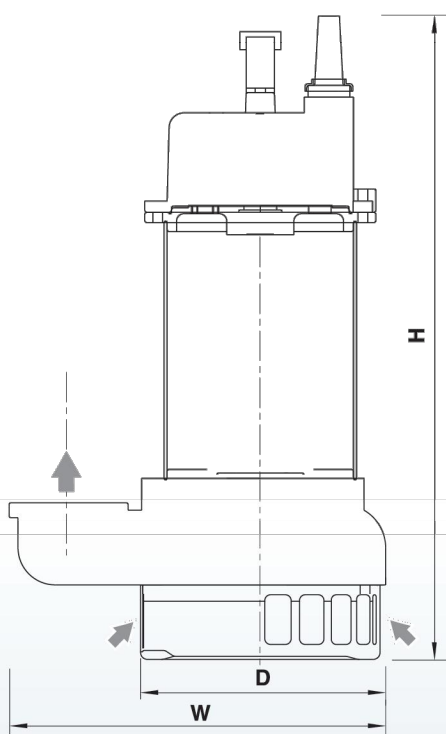
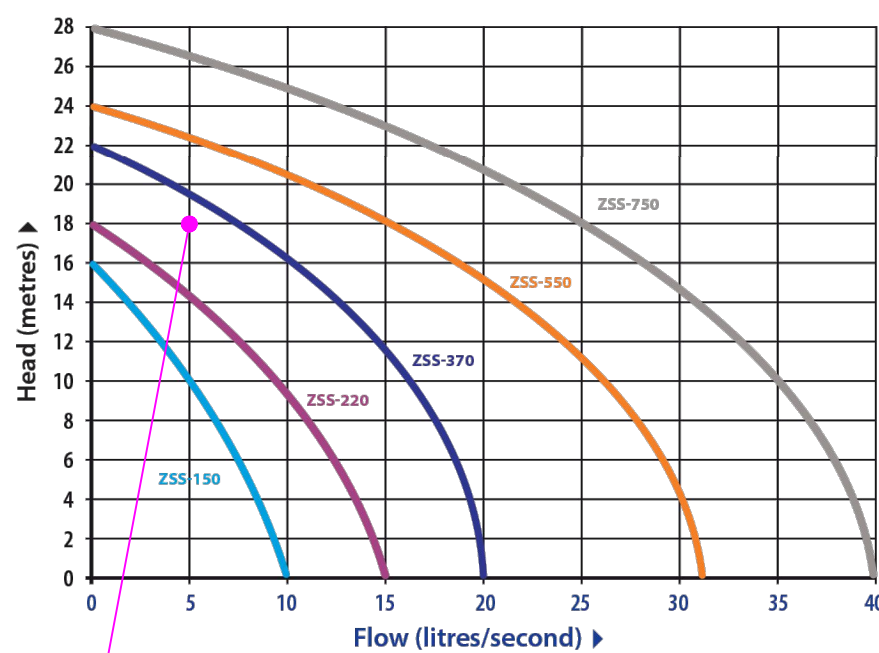
Four Models Available:

- ZSS-150-3** 415 volt, 1.5 kW, Manual
- ZSS-220-3** 415 volt, 2.2 kW, Manual
- ZSS-370-3** 415 volt, 3.7 kW, Manual
- ZSS-550-3** 415 volt, 5.5 kW, Manual
- ZSS-750-3** 415 volt, 7.5 kW, Manual

FEATURES:

- Stainless steel, cast iron industrial construction
- Stainless steel motor shaft
- Double mechanical shaft seal
- ZSS-150 suits Guide Rail Kit ZGRK-80
- ZSS-220 and ZSS-370 suit Guide Rail Kit ZGRK-80/100
- ZSS-550 and ZSS-750 suit Guide Rail Kit ZGRK-100

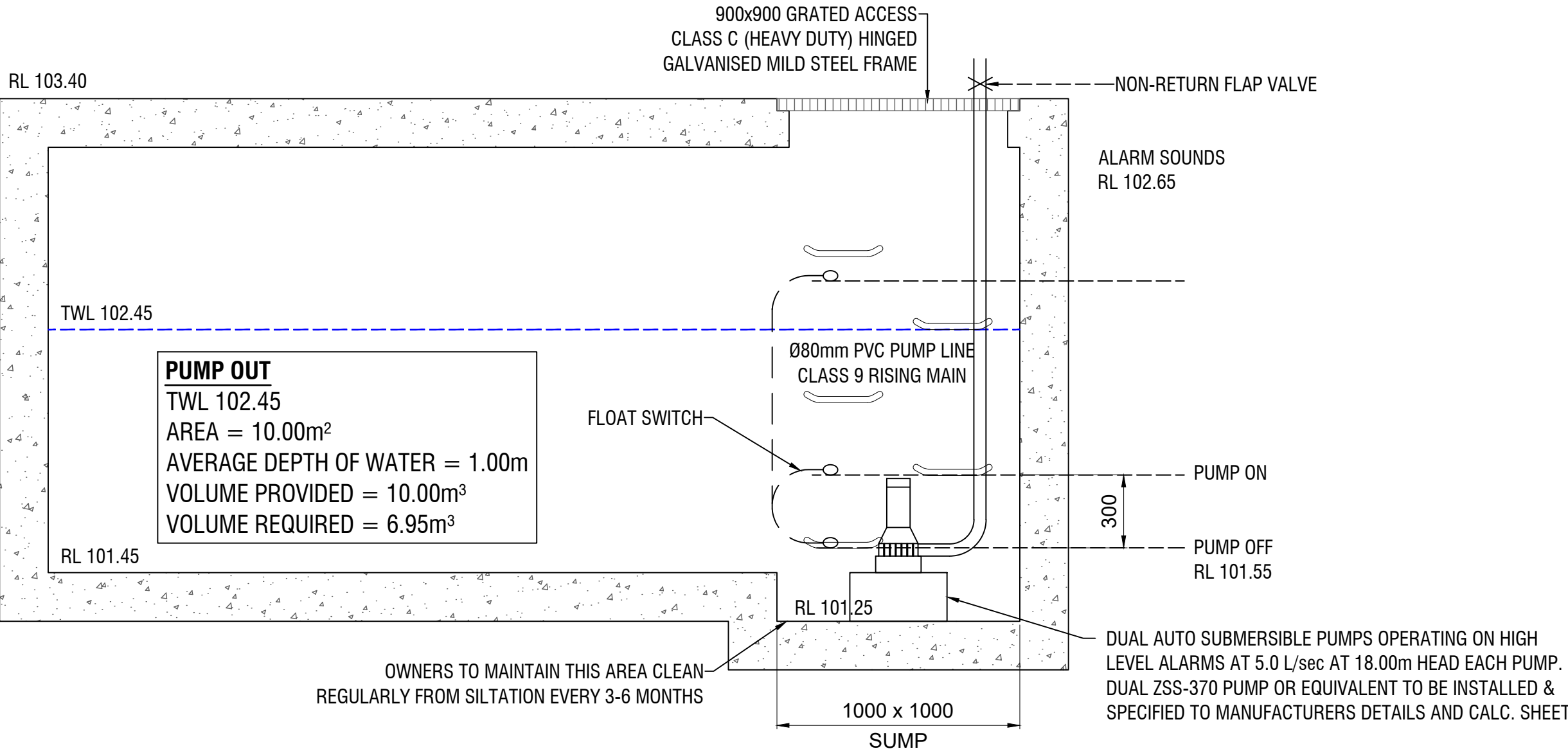
PUMP PERFORMANCE:



DUTY POINT FOR BASEMENT PUMP-OUT

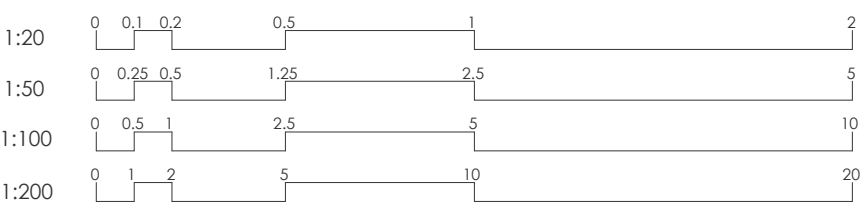
SPECIFICATION:

| Model Name | Outlet Size | Maximum Flow rate | Maximum Head | Motor Size | Weight | Dimensions W x D x H |
|------------|-------------|-------------------|--------------|------------|--------|----------------------|
| ZSS-150    | 80 mm       | 10 L/sec          | 16 m         | 1.5 kW     | 31 kg  | 278 x 182 x 475 mm   |
| ZSS-220    | 80 mm       | 15 L/sec          | 18 m         | 2.2 kW     | 42 kg  | 390 x 250 x 450 mm   |
| ZSS-370    | 100 mm      | 20 L/sec          | 22 m         | 3.7 kW     | 48 kg  | 450 x 240 x 530 mm   |
| ZSS-550    | 100 mm      | 31 L/sec          | 24 m         | 5.5 kW     | 60 kg  | 550 x 310 x 590 mm   |
| ZSS-750    | 100 mm      | 40 L/sec          | 28 m         | 7.5 kW     | 70 kg  | 550 x 310 x 610 mm   |



SECTION THROUGH PUMP OUT PIT

SCALE: NTS



SUIT 2.04, L2, BLDG 3,  
35-41 WATERLOO RD., MACQUARIE PARK, NSW 2113  
info@smartstructs.com.au | T: (02) 9052 6467

Address  
23-25 LORNE AVENUE,  
KILLARA NSW 2071

Start Date: JANUARY 2025  
Project No. 240660

Client:  
BWSLD KILLARA

Architect:  
BKA ARCHITECTURE

Approved by: K.E.

Internal Revisions:

| Rev. # | Drafter | Engineer Revision Description | Date     |
|--------|---------|-------------------------------|----------|
| A      | N.E.    | K.E. ISSUE FOR D.A.           | 24.01.25 |
| B      | N.E.    | K.E. ISSUE FOR D.A.           | 03.03.25 |

Notes

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- 2. Refer to architectural drawings for all setout, levels.
- 3. Do not scale any dimensions
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PRELIMINARY  
NOT FOR CONSTRUCTION

Project North

Scale @ A1: AS SHOWN

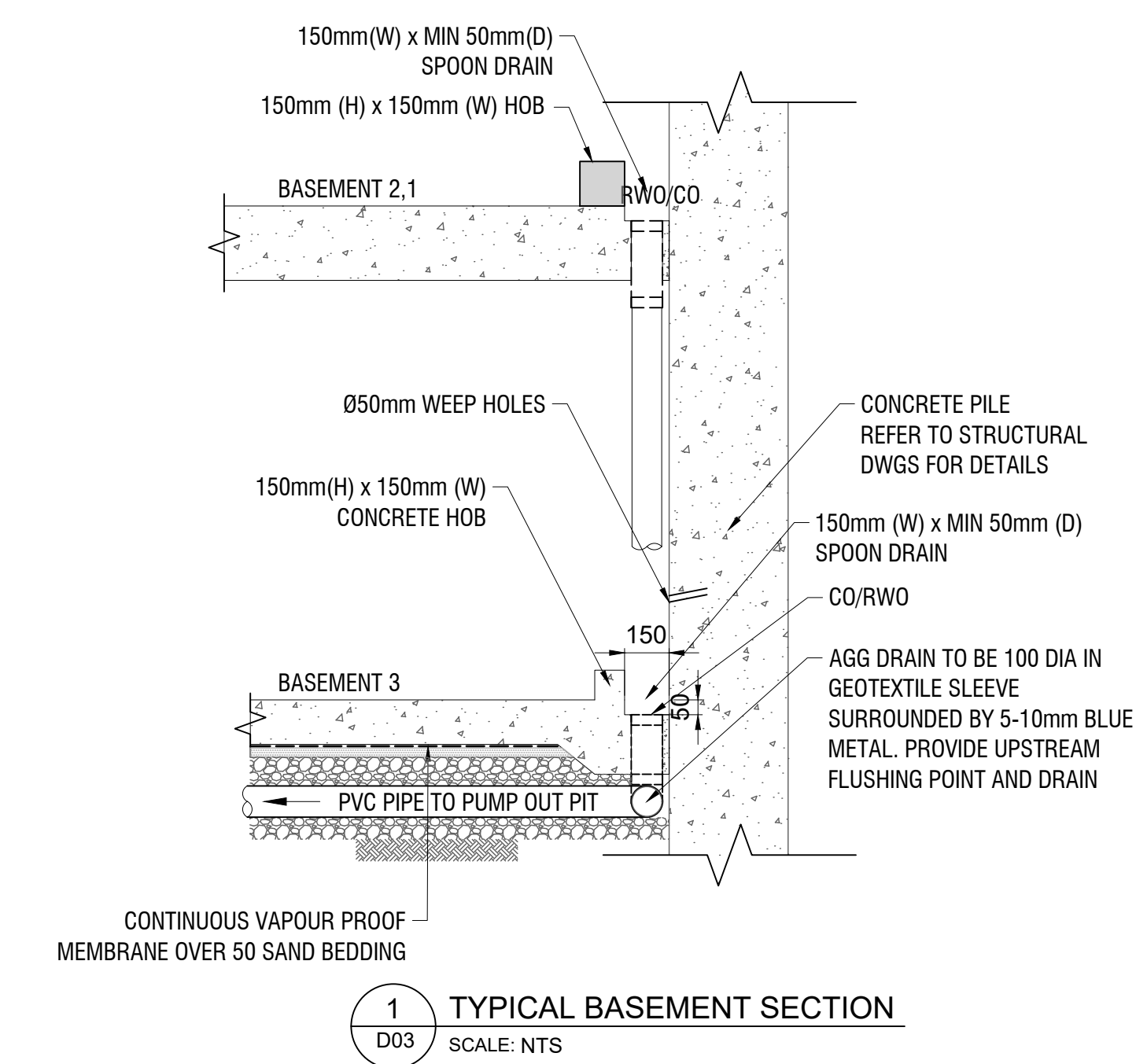
Sheet Name:  
STORMWATER  
DRAINAGE SECTIONS  
AND DETAILS SHEET 1

Sheet Number:

Revision:

D20

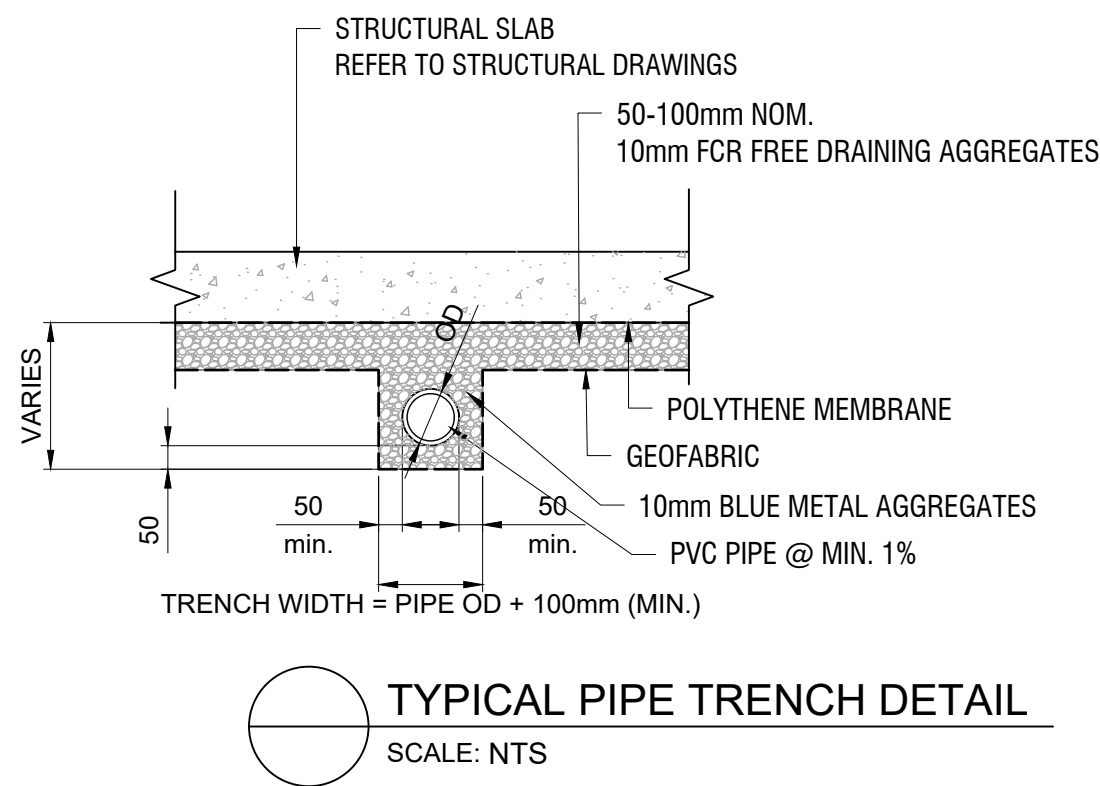
B



1  
D03

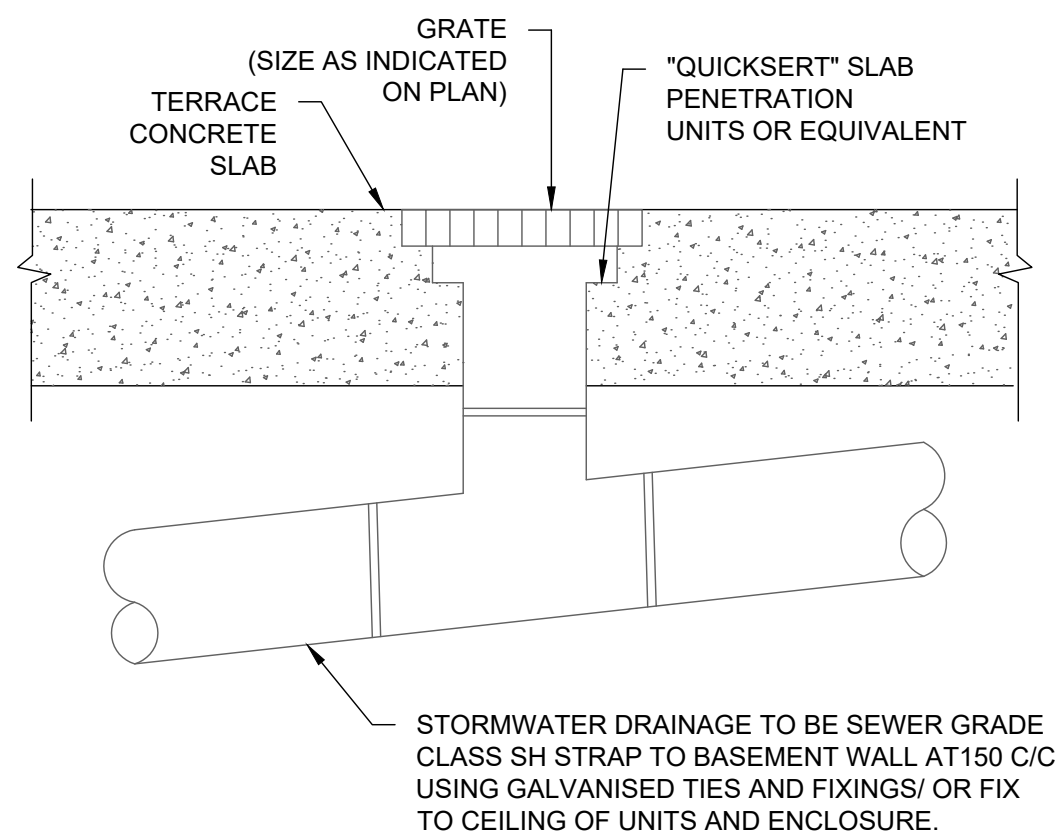
TYPICAL BASEMENT SECTION

SCALE: NTS



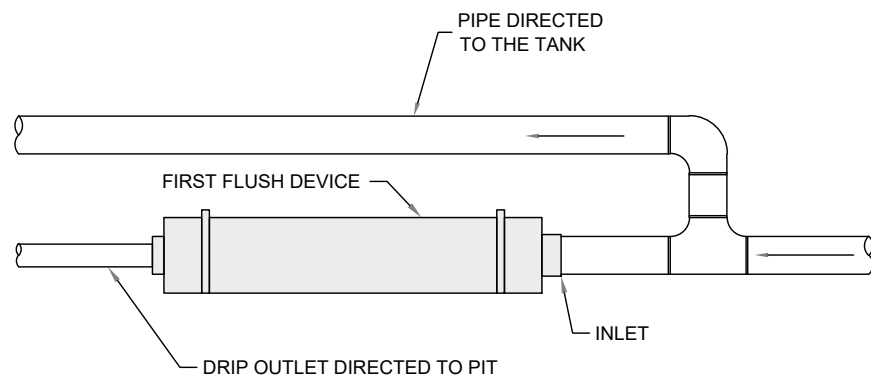
TYPICAL PIPE TRENCH DETAIL

SCALE: NTS



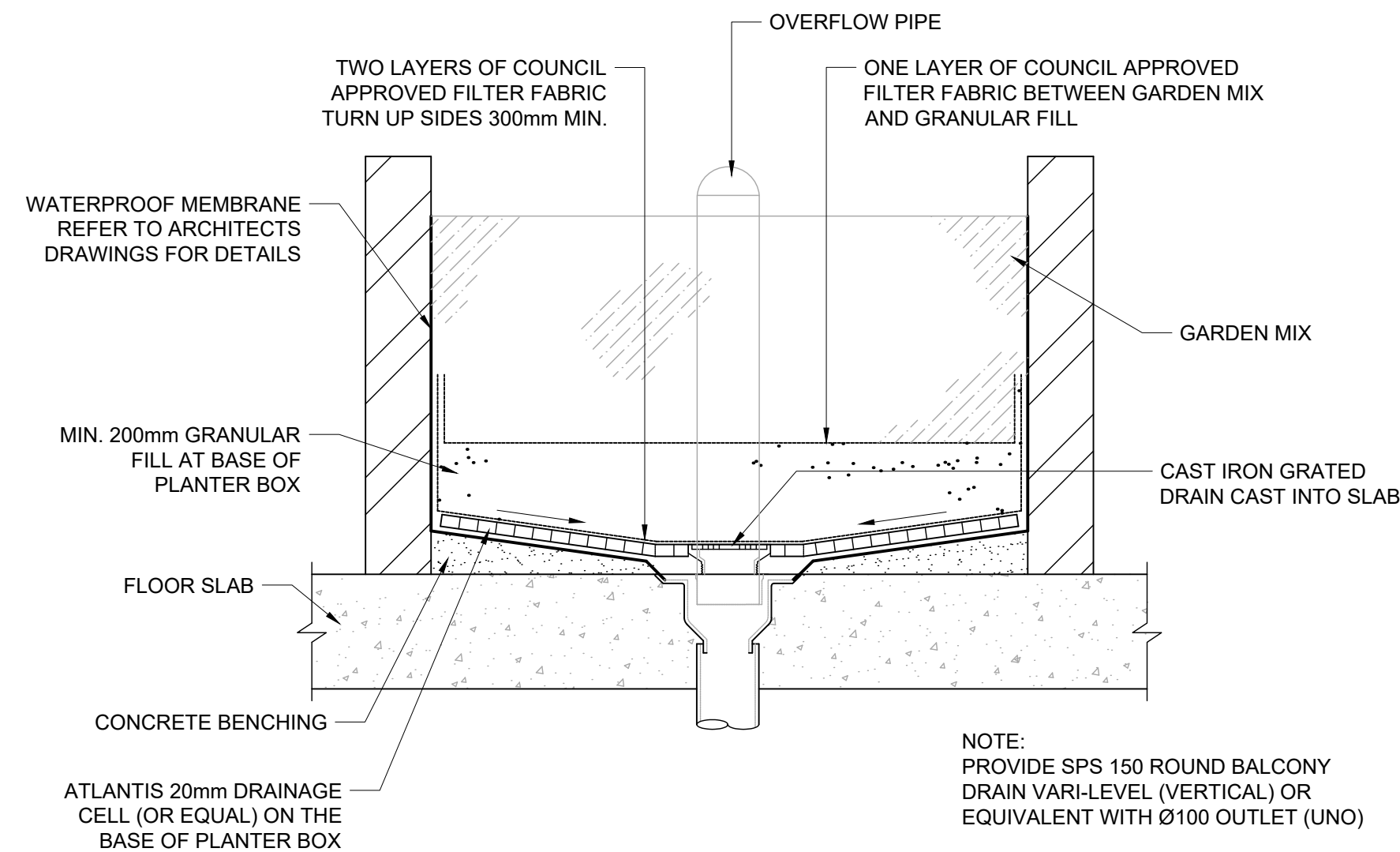
RAINWATER OUTLET DETAIL

SCALE N.T.S.



TYPICAL FIRST FLUSH DETAIL

N.T.S.



TYPICAL PLANTER BOX DETAIL

SCALE NTS

Start Date: JANUARY 2025

Project No. 240660

Client:  
BWSLD KILLARA

Architect:  
BKA ARCHITECTURE

Approved by: K.E.

Internal Revisions:

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Project North

Scale @ A1: AS SHOWN

Sheet Name:

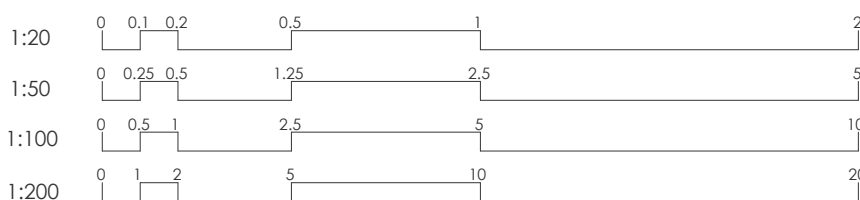
**STORMWATER  
DRAINAGE SECTIONS  
AND DETAILS SHEET 2**

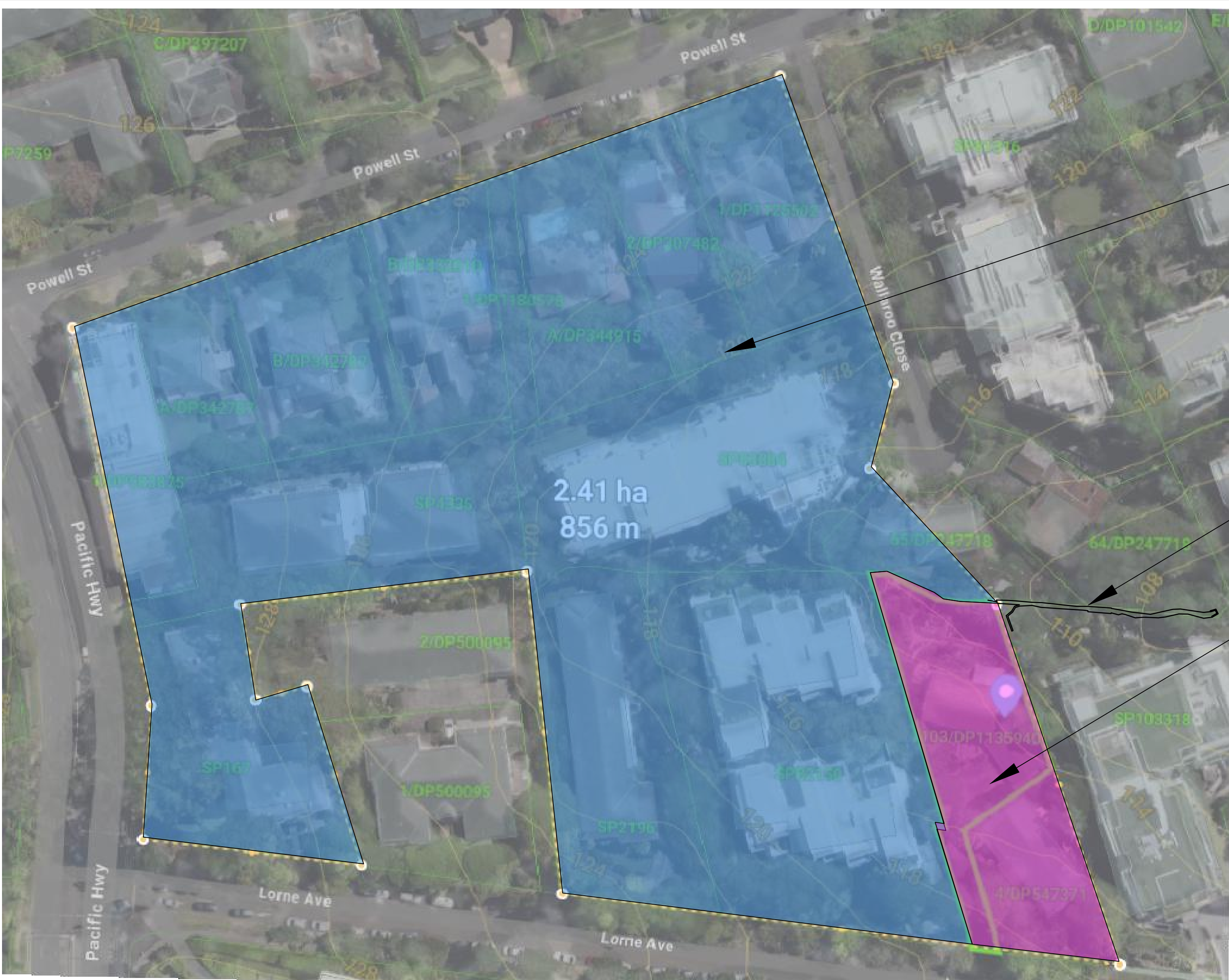
Sheet Number:

Revision:

**D21**

**B**



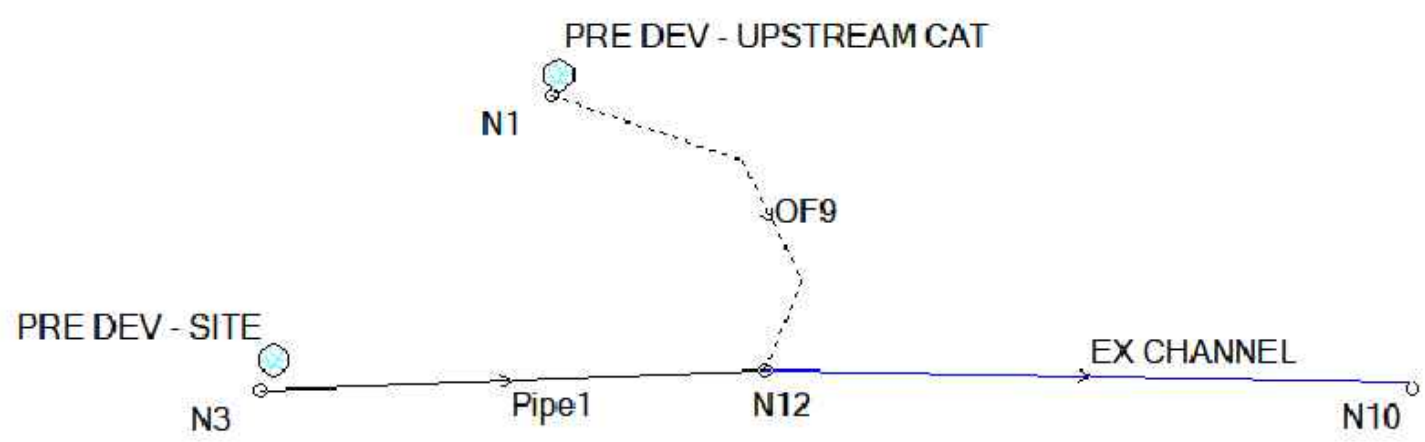


**UPSTREAM CATCHMENT DRAINING TOWARD  
EXISTING OPEN CHANNEL**  
APPROXIMATE AREA: 2.41Ha

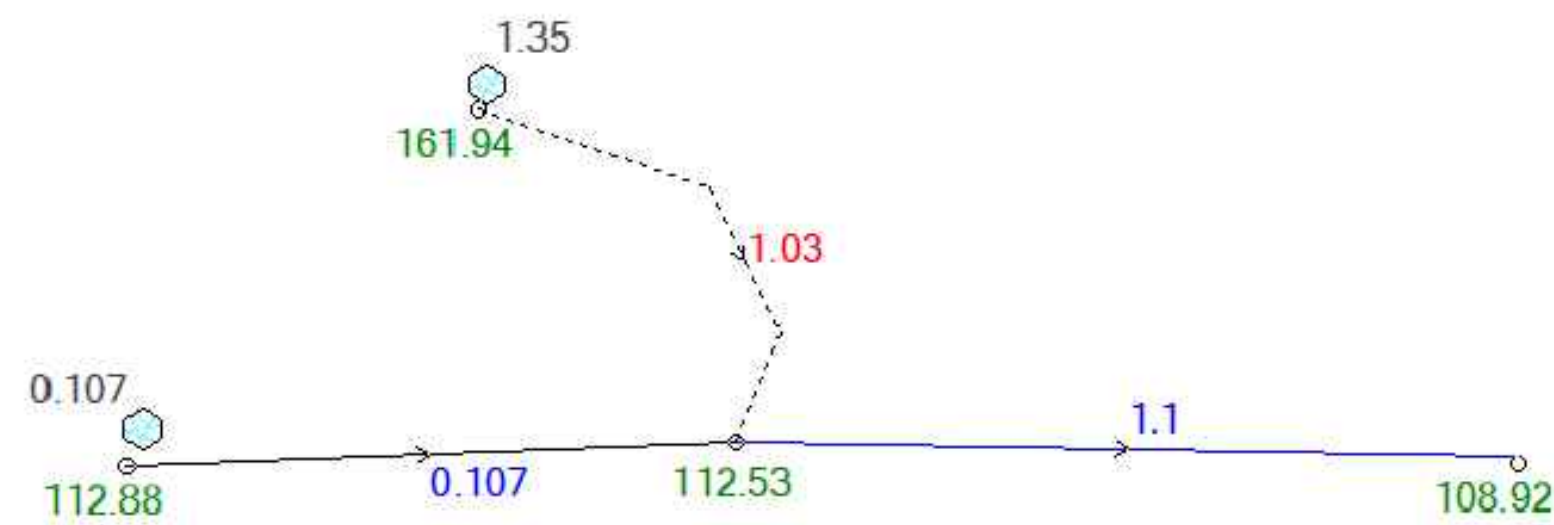
**EXISTING OPEN CHANNEL**

**DEVELOPMENT SITE**  
TOTAL SITE AREA: 2151.31  
23-25 LORNE AVENUE

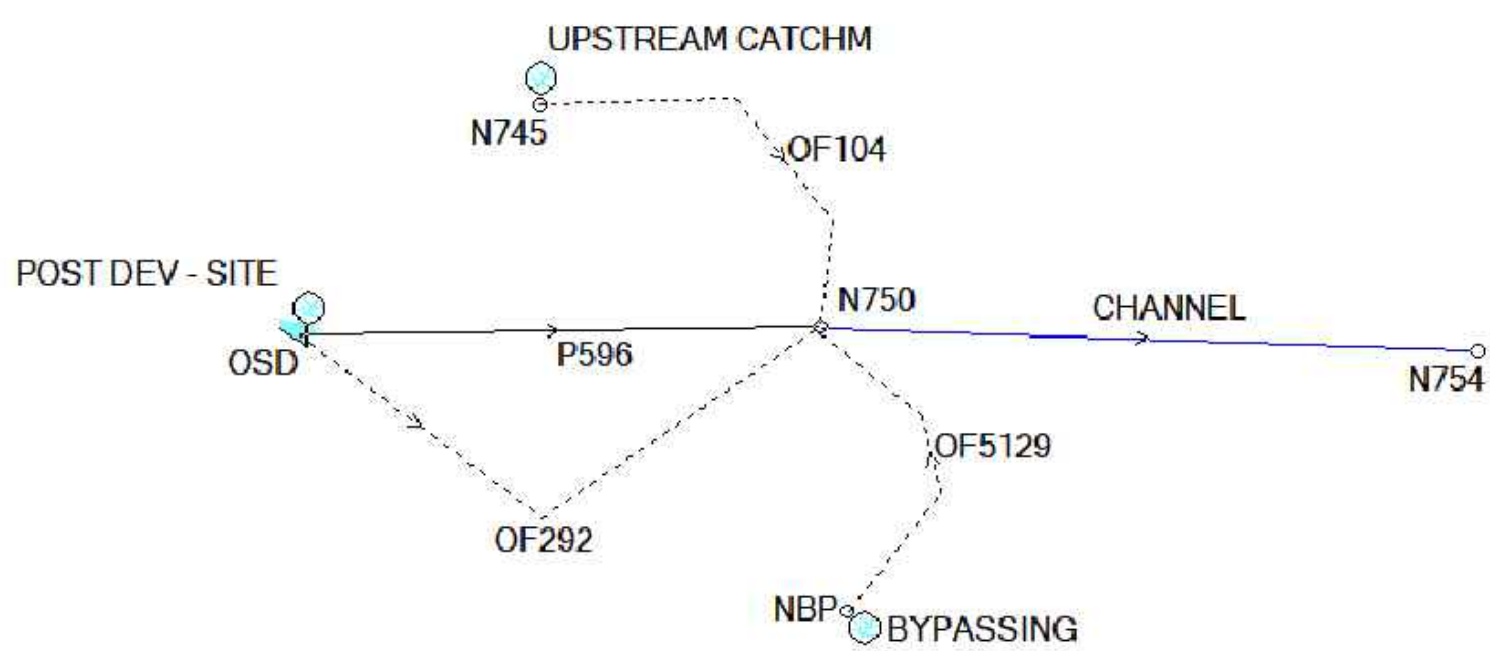
UPSTREAM CATCHMENT



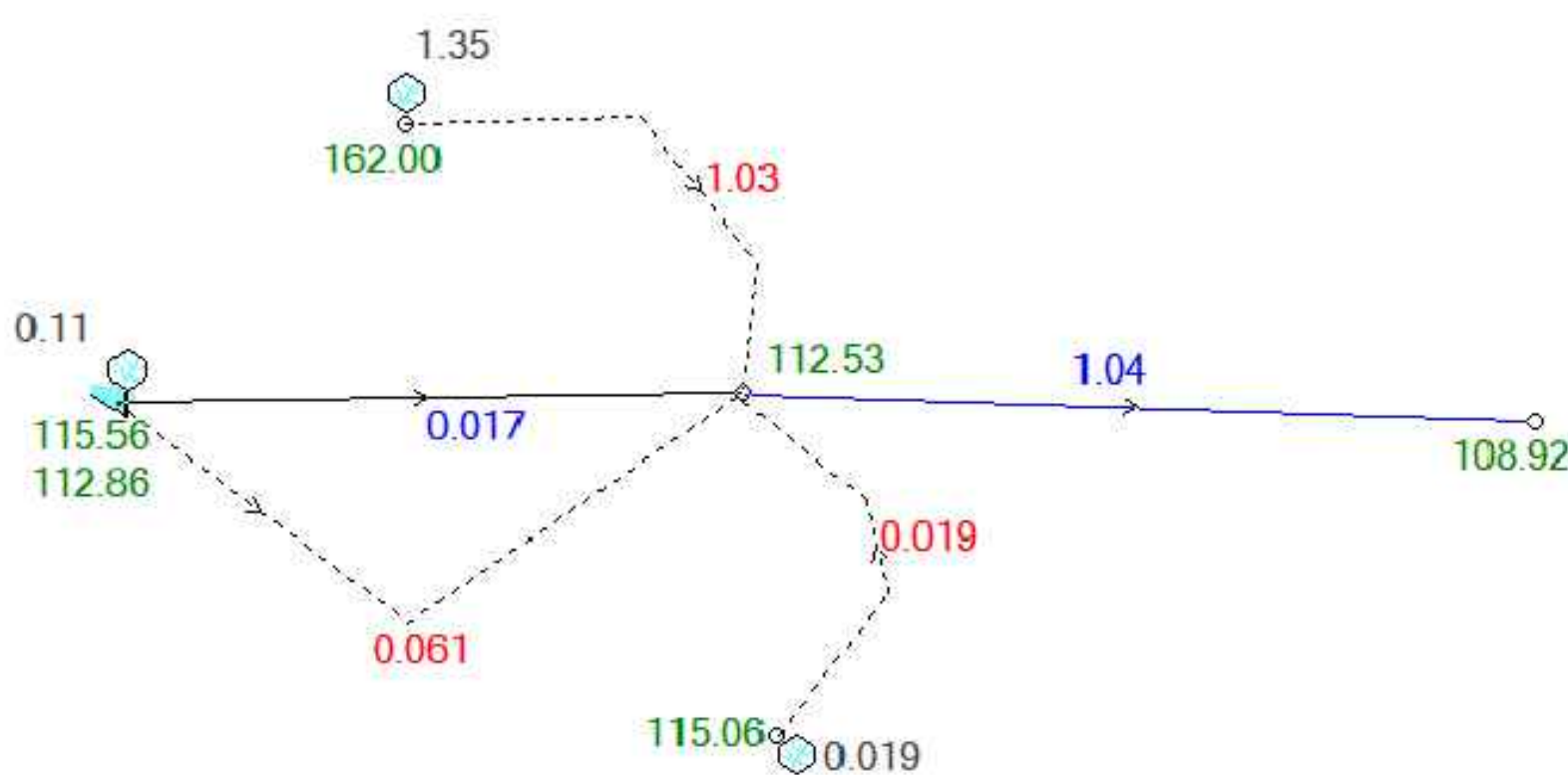
PRE-DEVELOPMENT SCENARIO - DRAINS MODEL



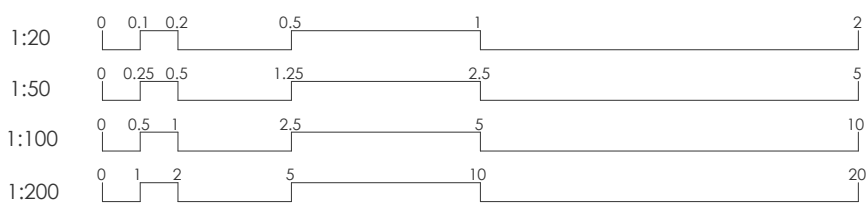
PRE-DEVELOPMENT SCENARIO - DRAINS MODEL RESULT (1% AEP)



POST-DEVELOPMENT SCENARIO - DRAINS MODEL



POST-DEVELOPMENT SCENARIO - DRAINS MODEL RESULT (1% AEP)



OSD SIZING COMPUTATION:

| ON SITE DETENTION CALCULATION SHEET FOR KU-RING GAI COUNCIL |                                                                             |                                                                                     |
|-------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| PROJECT                                                     | RESIDENTIAL DEVELOPMENT                                                     |  |
| SITE ADDRESS                                                | 23-25 LORNE AVE KILLARA NSW 2071                                            |                                                                                     |
| JOB NUMBER                                                  | 240660                                                                      |                                                                                     |
| DESIGNER                                                    | KAMYAR EIVAZZADEH                                                           |                                                                                     |
| TELEPHONE                                                   | 02 9052 6466                                                                |                                                                                     |
| CATCHMENT DETAILS                                           |                                                                             |                                                                                     |
|                                                             | CATCHMENT NAME                                                              | ROCKY CREEK (RC1)                                                                   |
| A                                                           | CATCHMENT DISCHARGE RATE                                                    | 124 L/sec/ha                                                                        |
| B                                                           | CATCHMENT STORAGE RATE                                                      | 345 m3/ha                                                                           |
| SITE DETAILS                                                |                                                                             |                                                                                     |
|                                                             | SITE AREA                                                                   | 2151.31 m2                                                                          |
| C                                                           | 60% OF SITE AREA                                                            | 1290.786 m2                                                                         |
|                                                             | AREA(S) NOT DRAINING TO DETENTION SYSTEM                                    | 429.61 m2                                                                           |
| D                                                           | TOTAL IMPERVIOUS AREA (ROOF, DRIVEWAYS, PAVING, ETC)                        | 1555.17 m2                                                                          |
| E                                                           | IMPERVIOUS AREA BYPASSING DETENTION SYSTEM                                  | 40.95 m2                                                                            |
| PERMITTED SITE DISCHARGE                                    |                                                                             |                                                                                     |
| FLOW 1                                                      | A X C                                                                       | 16.01 L/sec                                                                         |
| F                                                           | ADJUSTMENT FOR ANY UNCONTROLLED IMPERVIOUS FLOW E/D                         | 0.026                                                                               |
| FLOW 2                                                      | FLOW 1 X F                                                                  | 0.42 L/sec                                                                          |
|                                                             | PSD = FLOW 1 - FLOW 2                                                       | 15.58 L/sec                                                                         |
| SITE STORAGE REQUIREMENT                                    |                                                                             |                                                                                     |
| SSR1                                                        | C x B                                                                       | 44.53 m3                                                                            |
| SSR2                                                        | IF THE STORAGE IS IN A LANDSCAPED BASIN SSR1 x 1.2                          | 53.44 m3                                                                            |
| RWT                                                         | RWT STORAGE                                                                 | 25 m3                                                                               |
| ADJ SSR                                                     | 10% DEDUCTION FOR RAINWATER TANK                                            | 40.08 m3                                                                            |
| OUTLET CONTROL                                              |                                                                             |                                                                                     |
| G                                                           | HEIGHT DIFFERENCE BETWEEN TOP WATER SURFACE LEVEL AND THE CENTRE OF ORIFICE | 2.45 m                                                                              |
| OD                                                          | ORIFICE DIAMETER                                                            | 69.04 mm                                                                            |

Address

23-25 LORNE AVENUE,  
KILLARA NSW 2071

Start Date: JANUARY 2025

Project No. 240660

Client:

BWSLD KILLARA

Architect:

BKA ARCHITECTURE

Approved by: K.E.

Internal Revisions:

| Rev. # | Drafter  | Engineer               | Date     |
|--------|----------|------------------------|----------|
|        | Revision | Description            |          |
| A      | N.E.     | K.E.<br>ISSUE FOR D.A. | 24.01.25 |
| B      | N.E.     | K.E.<br>ISSUE FOR D.A. | 03.03.25 |

- Notes
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2. Refer to architectural drawings for all setout, levels.

3. Do not scale any dimensions

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PRELIMINARY  
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Project North

Scale @ A1:

AS SHOWN

Sheet Name:

OSD DESIGN  
COMPUATION AND  
DETAILS SHEET 1

Sheet Number:

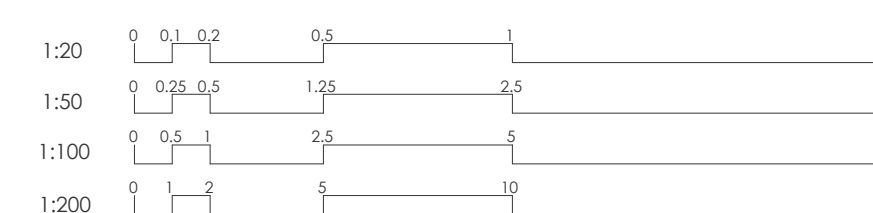
Revision:

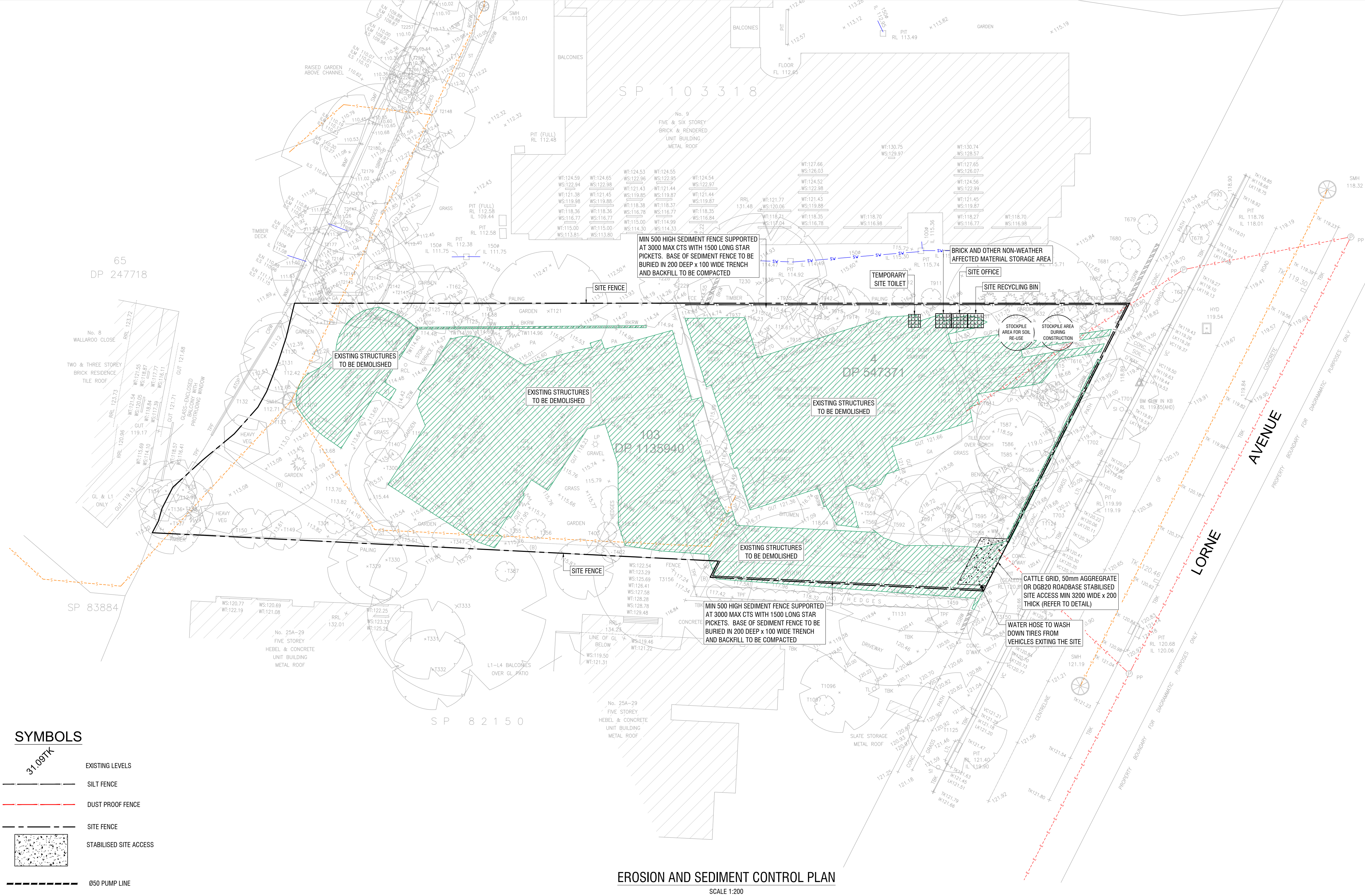
D25

B

RWT SIZING COMPUTATION:

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| 23-25 Lorne Ave Killara NSW 2071 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**EROSION AND SEDIMENT CONTROL PLAN**

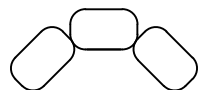
SCALE 1:200

**SYMBOLS**

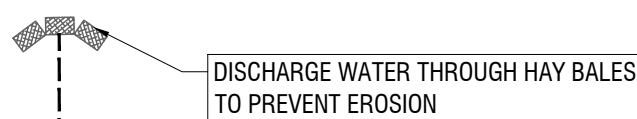
- 31.09TK EXISTING LEVELS
- SILT FENCE
- DUST PROOF FENCE
- SITE FENCE
- STABILISED SITE ACCESS
- Ø50 PUMP LINE



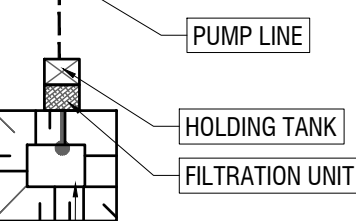
EXISTING STRUCTURE TO BE  
DEMOLISHED



SANDBAG SEDIMENT TRAP



DISCHARGE WATER THROUGH HAY BALES  
TO PREVENT EROSION

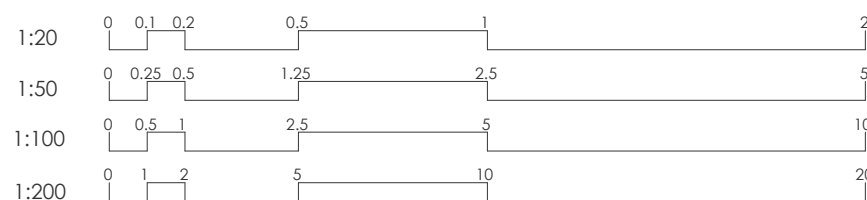


PUMP LINE  
HOLDING TANK  
FILTRATION UNIT

MANUALLY ACTIVATED SUBMERSIBLE PUMP TO BE PLACED ON PLINTH  
AT MIN 600mm FROM INVERT OF STILLING POND. CONTRACTOR IS TO  
ENSURE SEDIMENT HAS SETTLED PRIOR TO PUMP OPERATION.  
SEDIMENT MATERIAL IS TO BE CLEARED REGULARLY AND SHALL NOT  
AT ANY TIME REACH THE LEVEL OF THE PUMP INTAKE.

**EROSION CONTROL NOTES**

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 3RD EDITION' PRODUCED BY THE NSW DEPARTMENT OF HOUSING.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND REMOVED REGULARLY DURING CONSTRUCTION
3. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC- CONTRACTOR TO MINIMISE DISTURBED AREAS.
4. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER
5. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
6. ALL DISTURBED AREAS AND STOCKPILES TO BE STABILISED WITHIN 14 DAYS. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
7. TOPSOIL TO BE STRIPPED, STOCKPILED AND RE-SPREAD ON COMPLETION OF EARTHWORKS. NONE TO BE REMOVED.
8. NO DISTURBANCE OF SITE PERMITTED OTHER THAN IMMEDIATE AREA OF THE WORKS.
9. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE. NON-COMPLIANCE MAY RESULT IN A \$1500 FINE



GENERAL INSTRUCTIONS:

SWM01  
THESE PLANS PRESENT A CONCEPTUAL SOIL AND WATER MANAGEMENT PLAN (SWMP) ONLY AND SHOWS A POSSIBLE WAY OF MANAGING SOIL AND EROSION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT AND MANAGEMENT OF THE SITE AND PREPARING A DETAILED PLAN AND OBTAINING APPROVAL FROM THE RELEVANT AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY WORKS.

SWM02  
THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND ANY OTHER PLANS, WRITTEN INSTRUCTIONS, SPECIFICATION OR DOCUMENTATION THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT OF THE SUBJECT SITE.

SWM03  
THE CONTRACTOR WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE CONSISTENT WITH 'MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION' - ALSO KNOWN AS 'THE BLUE BOOK'.

SWM04  
ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

EROSION CONTROL:

SWM05  
WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNTIL SEDIMENT CONCENTRATION IS LESS THEN OR EQUAL TO 50MG/L, IE THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/ OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AND APPROVED STRUCTURE.

SWM06  
ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD THE SURFACE WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.

SWM07  
ACCEPTABLE RECEPTORS WILL BE CONSTRUCTED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

SWM08  
'SEDIMENT' FENCING WILL BE INSTALLED AS INDICATED ON THE PLANS AND AT THE DIRECTION OF SITE SUPERINTENDENT TO ENSURE CONTAINMENT OF SEDIMENT. THE SEDIMENT FENCING WILL OUTLET OR OVERFLOW UNDER STABILISED CONDITIONS INTO THE SEDIMENT BASIN, TO SAFELY CONVEY WATER INTO A SUITABLE FILTERING SYSTEM SHOULD THE PORES IN THE FABRIC BLOCK.

SWM09  
THE SEDIMENT BASINS WILL BE CONSTRUCTED WITH THE MINIMUM WET SEDIMENT CAPACITY OF CUM CUBIC METERS AND DESIGNED TO REMAIN STABLE IN AT LEAST THE 1 IN CDSE YEAR CRITICAL DURATION STORM EVENT. ARTIFICIAL FLOCCULATION OF THE FINER PARTICLES MAY NOT BE NECESSARY IN THIS INSTANCE.

SWM10  
STOCKPILES SHOULD NOT BE LOCATED WITHIN 5M OF TREES AND HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, DRAINAGE LINES, PAVED AREAS AND DRIVEWAYS. WHERE THEY ARE WITHIN 5M FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSTREAM WATERS. MEASURE SHOULD ALSO BE APPLIED TO PREVENT THE EROSION OF THE STOCKPILE.

SWM11  
ALL CUT AND FILL BATTERS ARE TO BE SEEDED AND MULCHED WITHIN 14 DAYS OF COMPLETION OF FORMATION.

SWM12  
ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY -  
A. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE,  
B. ENSURING THAT NOTHING IS NAILED TO THEM,  
C. PROHIBITING PAVING GRADING SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS :  
1. ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER,  
2. A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH,  
3. CARE IS TAKEN.

SWM13  
DURING WINDY WEATHER, LARGE DISTURBED UNPROTECTED AREAS SHOULD BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.

SWM14  
TEMPORARY PROTECTION FROM EROSIIVE FORCES WILL BE UNDERTAKEN ON LANDS WHERE FINAL SHAPING HAS NOT BEEN COMPLETED BUT WORKS ARE UNLIKELY TO PROCEED FOR PERIODS OF TWO MONTHS OR MORE (EG. ON TOP SOIL STOCKPILES). THIS MAY BE ACHIEVED WITH A VEGETATIVE COVER. A RECOMMENDED LISTING OF PLANT SPECIES FOR SOIL AND WATER MANAGEMENT NOTES:  
TEMPORARY COVER IS -  
I) AUTUMN/WINTER SOWING -OATS/RYECORN AT 20KG/HA -JAPANESE MILLET AT 10KG/HA  
II) SPRING/SUMMER SOWING -JAPANESE MILLET AT 20KG/HA -OATS/RYECORN AT 10 KG/HA

SWM15  
DIVERSION BANKS/ CHANNELS WILL BE REHABILITATED AS SOON AS POSSIBLE AND WITHIN 5 WORKING DAYS FROM THEIR FINAL SHAPING. OTHER THAN IN THE WINTER MONTHS, SUITABLE MATERIALS INCLUDE TURF GRASSES SUCH S COUCH OR KIKUYU. DURING WINTER, OR AT OTHER TIMES WHEN TEMPORARY REHABILITATION (MORE THAN 3 MONTHS) IS REQUIRED, IT IS SUGGESTED THAT HESSIAN CLOTH IS USED BUT ONLY IF TACKED WITH APPROPRIATE PEGS AND AN ANIONIC BITUMEN EMULSION. FOOT AND VEHICULAR TRAFFIC SHOULD BE KEPT AWAY FROM THESE AREAS.

SWM16  
UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

CONSTRUCTION SEQUENCE

SWM17  
WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHOULD BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE -  
I) INSTALL INLET SEDIMENT TRAPS TO ALL GULLY PITS FRONTING THE SITE,  
II) INSTALL A 1.8M CHAIN WIRE FENCE AROUND THE BOUNDARIES AND ATTACH HESSIAN CLOTH OR SIMILAR TO IT ON THE WINDWARD SIDE (TIES AT THE TOP, CENTRE AND BOTTOM AND AT 1M INTERVALS OR AS INSTRUCTED BY THE SUPERINTENDENT),  
III) INSTALL GEOFABRIC SEDIMENT FENCE AND SEDIMENT TRAPS AROUND ALL PERMANENT STORMWATER RETICULATION STRUCTURES AS SHOWN ON THE PLAN,  
IV) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN OR TO LOCATION AS DETERMINED BY SUPERINTENDENT,  
V) INSTALL DIVERSION BANKS ALONG THE BOUNDARY WHERE REQUIRED, REHABILITATE DISTURBED LANDS DOWNSLOPE FROM THE BASINS WITHIN 20 WORKING DAYS,  
VI) ENSURE THAT THE SEDIMENT BASIN IS DIRECTED ONTO A TURFED AREA AND DRAINS TO A SUITABLE LOCATION. A TEMPORARY STORMWATER LINE MAY BE NECESSARY TO CONVEY THE FLOWS TO THIS LOCATION. CONSTRUCT DIVERSION CHANNELS AT THE BOUNDARY TO DRAIN INTO THE SEDIMENT BASIN AS SHOWN ON PLANS.  
VII) AT COMPLETION STABILISE SITE AND DECOMMISSION SEDIMENT BASIN AND ALL EROSION CONTROL DEVICES.

SWM18  
TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

SWM19  
FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

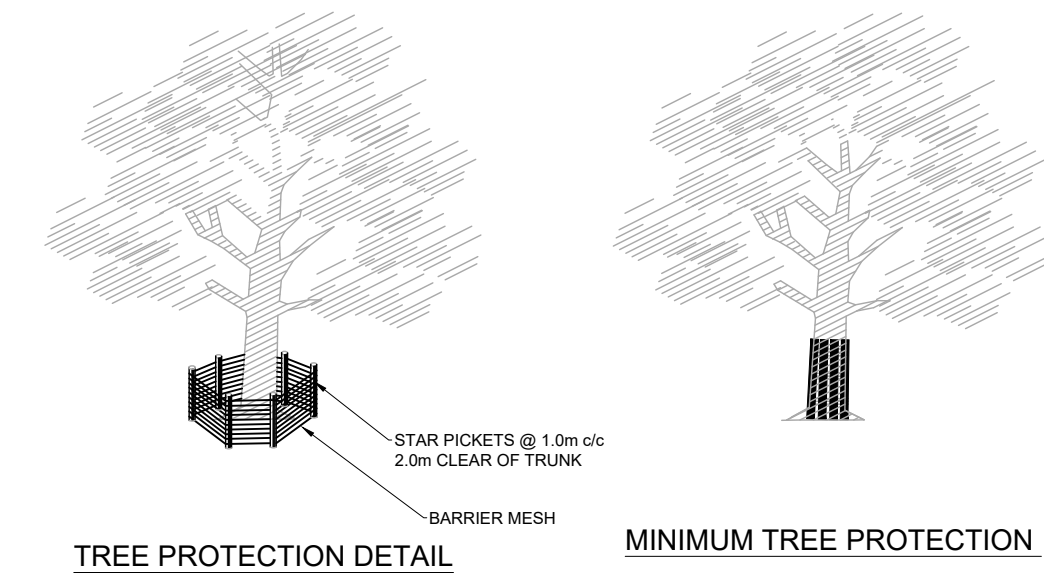
SITE INSPECTION AND MAINTENANCE

SWM 20  
AT LEAST WEEKLY AND AFTER EVERY RAIN FALL EVENT, THE CONTRACTOR WILL INSPECT THE SITE AND ENSURE THAT -  
I) DRAINS AND ALL SEDIMENT CONTROL DEVICES OPERATE EFFECTIVELY AND INITIATE REPAIR OR MAINTENANCE AS REQUIRED,  
II) RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANOR APPROVED BY THE SUPERINTENDENT,  
III) SPILL SAND (OR OTHER MATERIALS) IS REMOVED FROM HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, GUTTERS, PAVED AREAS AND DRIVEWAYS,  
IV) SEDIMENT IS REMOVED FROM BASINS AND / OR TRAPS WHEN LESS THAN 20M³ OF TRAPPING CAPACITY REMAIN PER 1000M² OF DISTRIBUTED LANDS, AND OR LESS THAN 500 DEPTH REMAINS IN THE SETTLING ZONE. ANY COLLECTED SEDIMENT WILL BE DISPOSED IN AREAS WHERE FURTHER POLLUTION TO DOWN SLOPE LANDS AND WATERWAYS IS UNLIKELY,  
V) REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND INITIATE UPGRADING OR REPAIR AS APPROPRIATE.

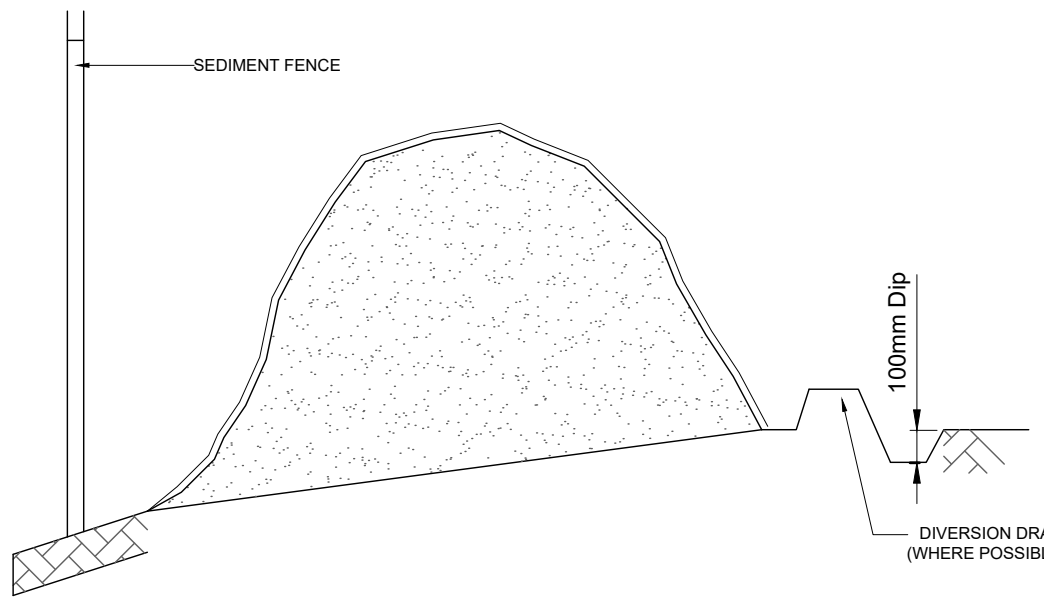
SWM 21  
THE CONTRACTOR SHALL PROVIDE ALL MONITORING CONTROL AND TESTING.

NOTES THIS DRAWING

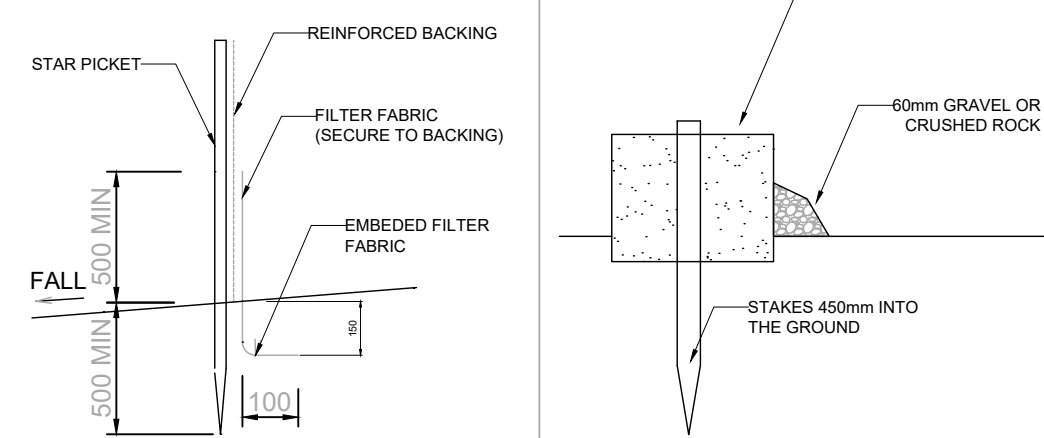
1. ALL DOCUMENTS WILL BE SUBMITTED TO COUNCIL FOR APPROVAL.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE IN PLACE.
3. INSTALLATION OF SILT FENCING, SEDIMENTATION BARRIERS AROUND DRAINS.
4. FENCING IS TO BE 1.8m(min) HEIGHT, PLACED AROUND THE SITE UNTIL THE WORK COMPLETE.
5. THE SITE GATES WILL BE LOCATED AT LORNE AVENUE.
6. THE HARDSTAND AREAS OR CATTLE GRIDS WILL BE PLACED AT THE SITE ENTRANCES AND EXITS. TO REMOVE THE BULK OF DIRT AND MUD THAT MAY ACCUMULATE ON TRUCK TYRES.
7. CONTRACTOR WILL CONDUCT REGULAR STREET SWEEPS ALONG THE ACCESS ROUTE TO ENSURE THE ROADS ADJACENT TO THE SITE ENTRANCES ARE KEPT CLEAN OF ANY DIRT AND DEBRIS.
8. REGULAR ENVIRONMENTAL INSPECTIONS WILL BE CARRIED OUT BY CONTRACTOR'S PERSONNEL TO ENSURE COMPLIANCE WITH THIS PLAN.



TREE PROTECTION DETAIL

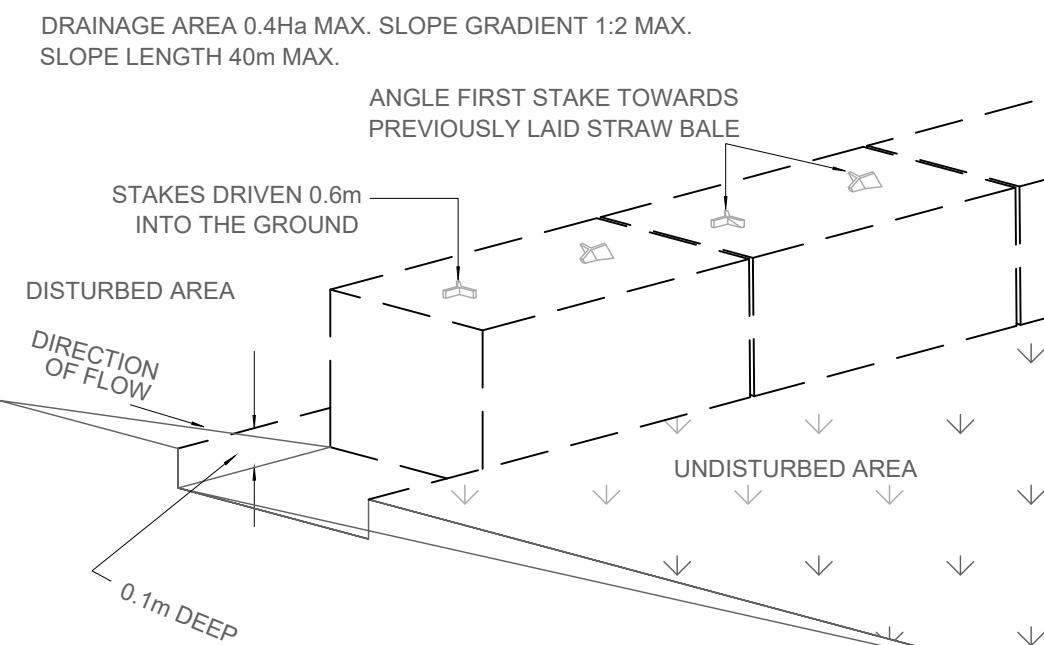


SOIL STOCK PILE

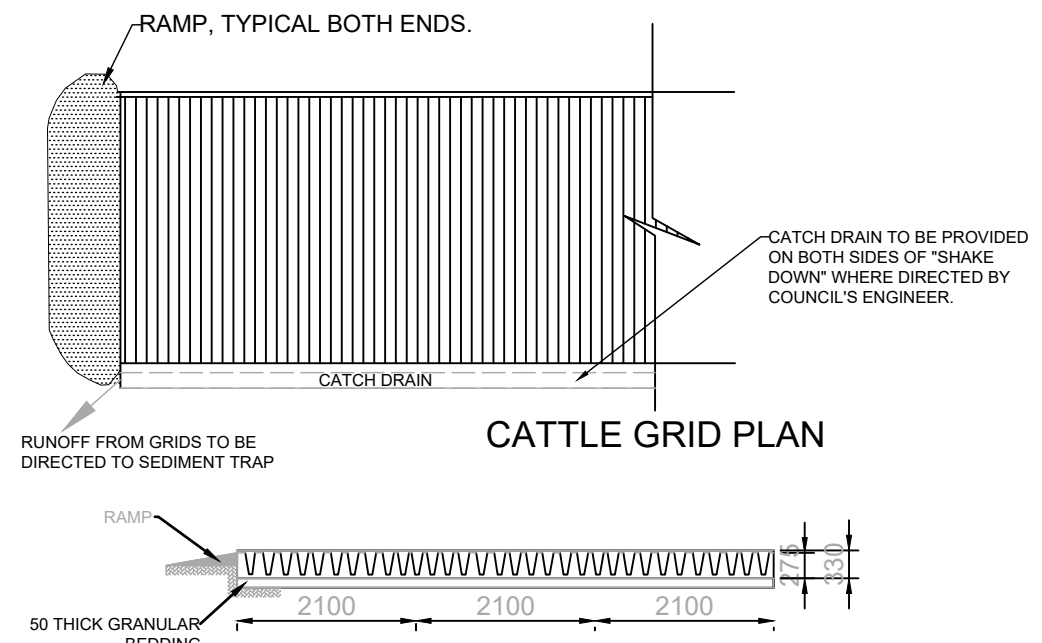


SILT FENCE DETAIL

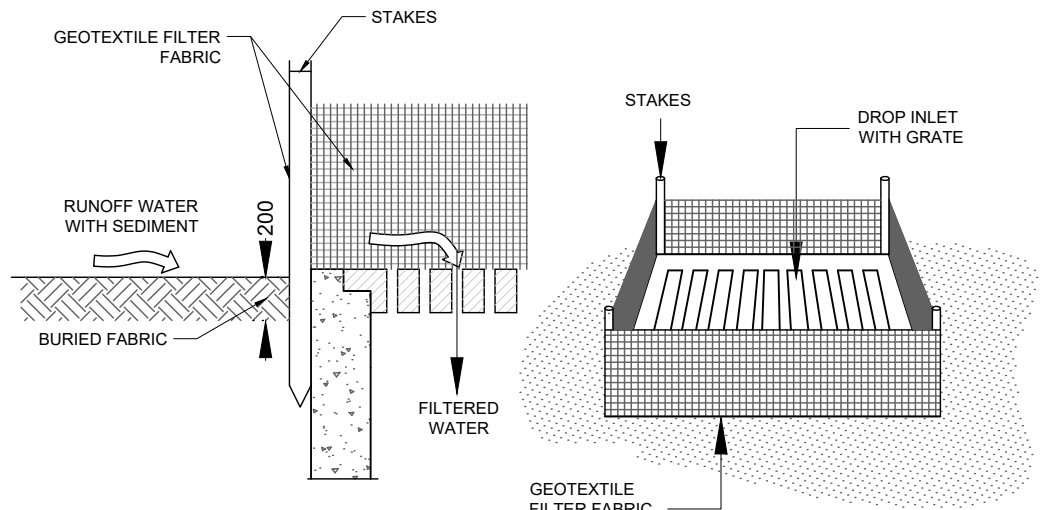
HAY BALE DETAIL



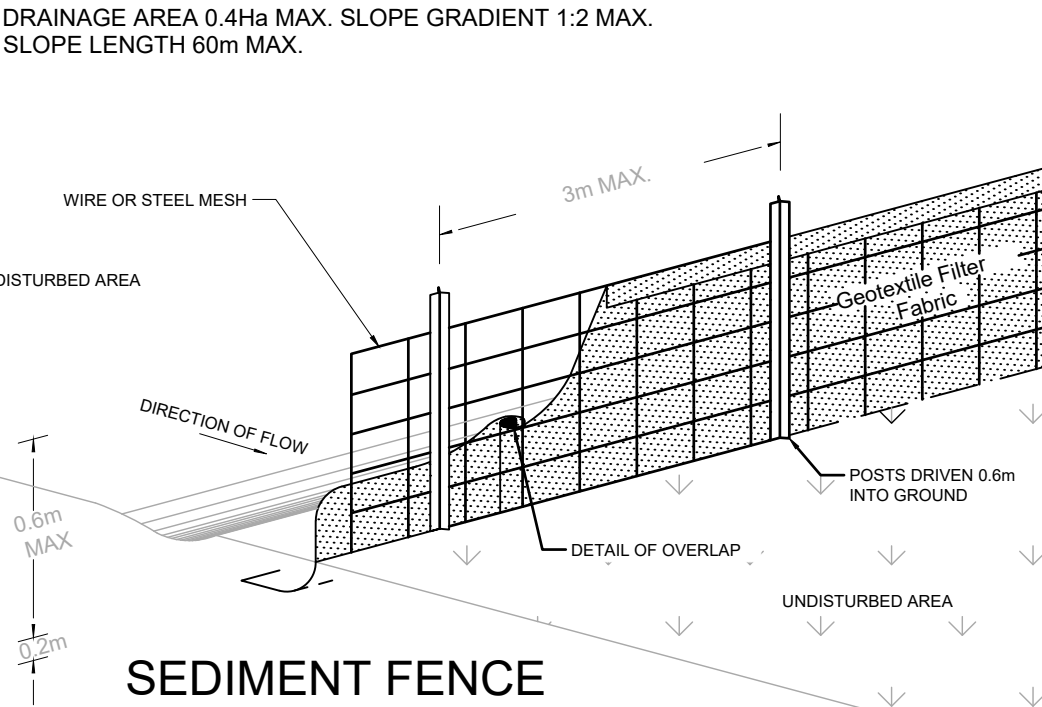
STRAW BALE SEDIMENT FILTER



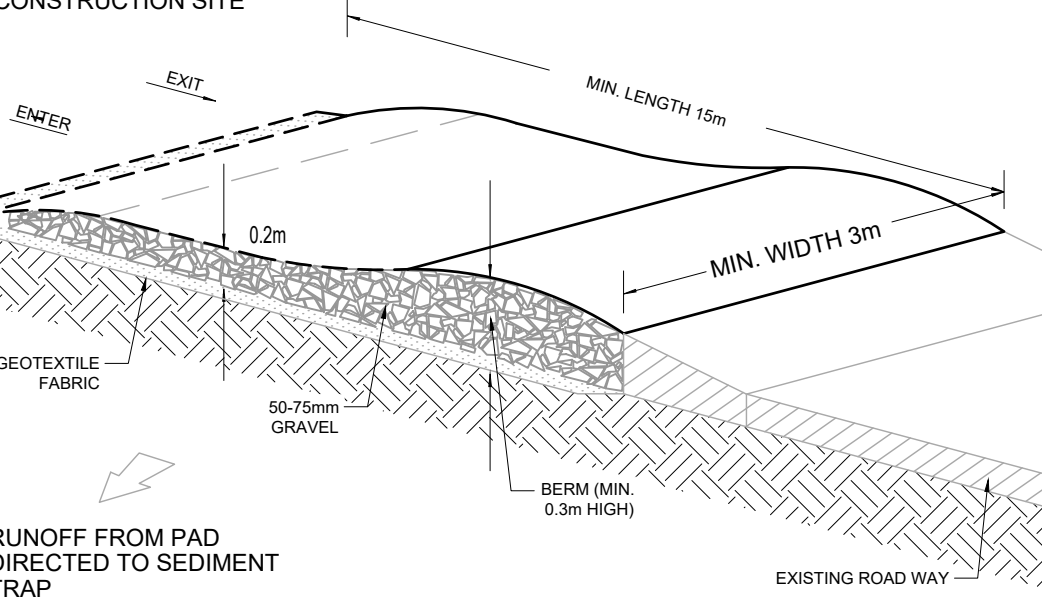
CATTLE GRID ALTERNATIVE



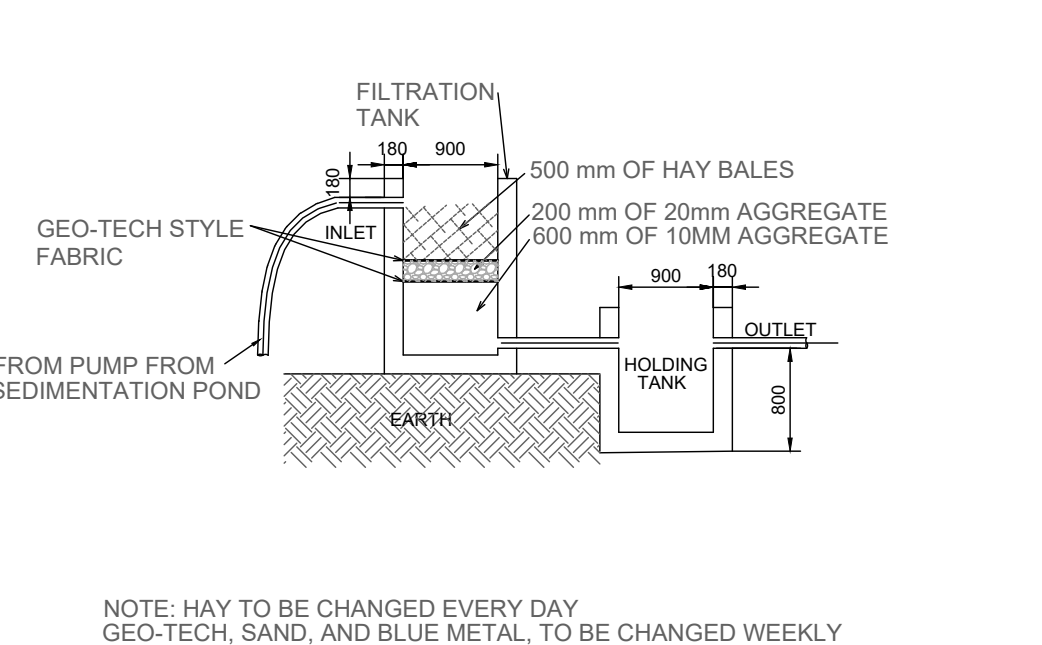
GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP



SEDIMENT FENCE



TEMPORARY CONSTRUCTION EXIT



NOTE: HAY TO BE CHANGED EVERY DAY  
GEO-TECH, SAND, AND BLUE METAL, TO BE CHANGED WEEKLY

TYPICAL DETAIL OF FILTRATION UNIT



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Address  
**23-25 LORNE AVENUE,  
KILLARA NSW 2071**

Start Date: **JANUARY 2025**  
Project No. **240660**

Client:  
**BWSLD KILLARA**

Architect:  
**BJA ARCHITECTURE**

Approved by: **K.E.**

Internal Revisions:

| Rev. # | Drafter | Engineer             | Date     |
|--------|---------|----------------------|----------|
|        |         | Revision Description |          |
| A      | N.E.    | K.E. ISSUE FOR D.A.  | 24.01.25 |

Notes

1. Drawings to be read in conjunction with architectural drawings.
2. Refer to architectural drawings for all setout, levels.
3. Do not scale any dimensions
4. Drawings to be read & printed in colour.

**PRELIMINARY  
NOT FOR CONSTRUCTION**

Project North

Scale @ A1: **AS SHOWN**

Sheet Name:

**EROSION AND SEDIMENT  
CONTROL DETAILS**

Sheet Number:

Revision:

**D31**  
**A**

