

# PROPOSED DUAL OCCUPANCY AT 64 RICHMOND STREET, EARLWOOD NSW 2206



Dial Before You Dig should be contacted prior to any excavation on site. Trade Mark of the Association of Dial Before You Dig Services Ltd. Used under license.

## CONCEPT STORMWATER DESIGN PLANS

| LEGEND |                                                |
|--------|------------------------------------------------|
|        | STORMWATER LINE                                |
|        | SSD                                            |
|        | STORMWATER RISING MAIN                         |
|        | EXISTING STORMWATER LINE                       |
|        | AUTHORITY STORMWATER LINE                      |
|        | AUTHORITY SEWER LINE                           |
|        | AUTHORITY WATER LINE                           |
|        | AUTHORITY GAS LINE                             |
|        | AUTHORITY ELECTRICITY LINE                     |
|        | AUTHORITY UNDERGROUND ELECTRICITY LINE         |
|        | AUTHORITY FIBRE OPTIC LINE                     |
|        | AUTHORITY COMMS 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                        |
|        | EXISTING TELSTRA PIT                           |
|        | EXISTING HYDRANT                               |
|        | EXISTING STOP VALVE                            |
|        | EXISTING GAS VALVE                             |
|        | EXISTING POWER POLE                            |
|        | EXISTING BOUNDARY TRAP                         |

| LEGEND |                        |
|--------|------------------------|
|        | EXISTING SEWER MANHOLE |
|        | OVERLAND FLOW PATH     |
|        | RAINWATER OUTLET       |
|        | CLEAR OUT POINT        |
|        | DISH DRAIN OUTLET      |
|        | PLANTER DRAIN          |
|        | CAPPING                |
|        | PIT TAG/NUMBER         |
|        | RAINHEAD               |
|        | DOWNPIPE DROP          |
|        | NON RETURN VALVE       |
|        | WALL PENETRATION       |
|        | DOWNPIPE               |
|        | DOWNPIPE + SPREADER    |
|        | WARNING LIGHT          |
|        | 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             |
| OFF            | 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                          |

| DRAINAGE NOTES:                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------|--|
| ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED                                                |  |
| 100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE                                                         |  |
| MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm                                         |  |
| ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS                           |  |
| BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL                                                  |  |
| ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)                                                               |  |
| SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS                                                                  |  |
| HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS                                                  |  |
| PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT                                                                   |  |
| ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP                                                                        |  |
| ALL PITS SHALL BE MAINTAINED REGULARLY                                                                                |  |
| TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER                                                      |  |
| MAXIMUM FRONT ENTRY PIPE:-<br>STRAIGHT ENTRY - Ø750<br>SKEW ENTRY 45° - Ø525                                          |  |
| Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES                  |  |
| COMPRESSIVE STRENGTH f <sub>c</sub> FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS                     |  |
| PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS                                                 |  |
| ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS                                                |  |
| ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm                                                  |  |
| STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL |  |

| STORMWATER PIPE BEDDING/PAVING NOTES:                                                                                                                                                                                                                                 |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| WHERE TRENCH BASE IS ROCK A MINIMUM OF 75mm BEDDING TO BE PROVIDED UNDER PIPE COLLARS.                                                                                                                                                                                |  |
| STORMWATER PIPE BEDDING DETAIL TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS. BEDDING DETAILS TO BE CONFIRMED UPON EXCAVATION & PRIOR TO INSTALLATION OF PIPEWORK.                                                                                              |  |
| FOOTPATH REINSTATEMENT NOTES:                                                                                                                                                                                                                                         |  |
| REMOVE ALL SAND FILL WITHIN THE FOOTPATH AREA TO THE EXISTING SUBGRADE.                                                                                                                                                                                               |  |
| SUPPORT ALL AUTHORITY SERVICES TO STRUCTURAL ENGINEERS DETAILS DURING EXCAVATION.                                                                                                                                                                                     |  |
| REINSTATE FOOTPATH SUBGRADE.                                                                                                                                                                                                                                          |  |
| THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS:<br>SELECT FILL 95% MODIFIED<br>SELECT FILL (LESS THAN 300mm BELOW BASE COURSE) 98% MODIFIED<br>BASE COURSE 100% MODIFIED |  |
| EROSION & SEDIMENT CONTROL NOTES:                                                                                                                                                                                                                                     |  |
| PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYPICAL).                                                                                                                                                                      |  |
| ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.                                                                                                                                                                                         |  |
| DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.                                                                                                                                                                                                                 |  |

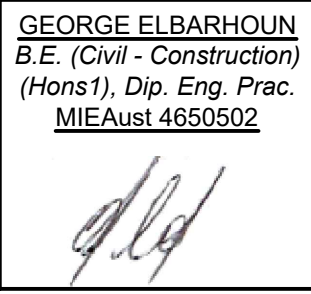
| SURVEY                                                                                                                             |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|
| THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY OTHERS.                                     |  |
| THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN.                                                                            |  |
| GEBa CONSULTING DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION. |  |
| SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT GEBa CONSULTING.    |  |
| ADOPT LEVELS AS PER ORIGINAL SURVEY PLAN.                                                                                          |  |

| DRAWING REGISTER |                                 |          |
|------------------|---------------------------------|----------|
| NUMBER           | NAME                            | REVISION |
| SW01             | COVER SHEET & SPECIFICATIONS    | B        |
| SW02             | EROSION & SEDIMENT CONTROL PLAN | B        |
| SW03             | SITE STORMWATER PLAN            | B        |
| SW04             | DETAIL SHEET                    | B        |

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

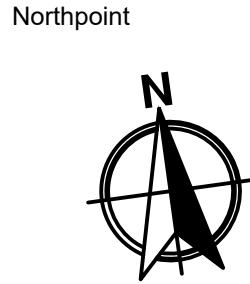


GEBa CONSULTING PTY LTD  
Level 7, Suite 704, 99 Bathurst Street,  
Sydney NSW 2000  
ABN 84 687 755 488  
  
W : [www.gebaconsulting.com.au](http://www.gebaconsulting.com.au)  
E : [info@gebaconsulting.com.au](mailto:info@gebaconsulting.com.au)  
P : 02 9062 8400



Client  
WAJIH ZEYNOUN  
Architect  
DALGLIESH WARD ARCHITECTS  
Project  
PROPOSED DUAL OCCUPANCY  
Address  
64 RICHMOND STREET, EARLWOOD NSW 2206

Scale  
  
0m 1 2 3 4 5  
SCALE 1:100 ON ORIGINAL SIZE



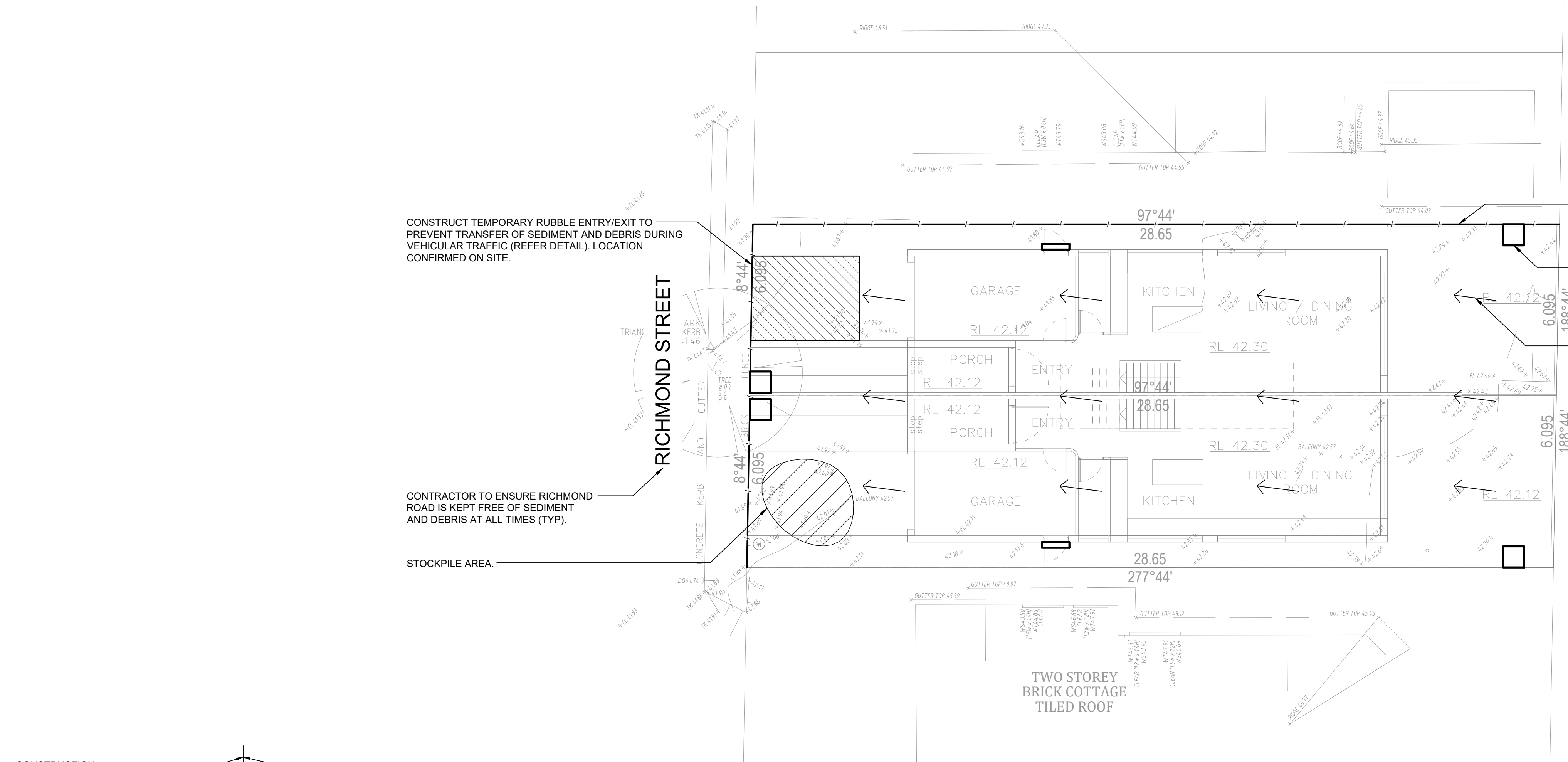
| Description  | Des. | Chk. | App. | Rev. | Date     |
|--------------|------|------|------|------|----------|
| FOR APPROVAL | A.M. | E.Z. | E.Z. | A    | 09.03.26 |
| FOR APPROVAL | E.Z. | E.Z. | E.Z. | B    | 17.06.26 |
|              |      |      |      |      |          |
|              |      |      |      |      |          |
|              |      |      |      |      |          |

### DEVELOPMENT APPLICATION (DA)

This drawing remains the property of GEBa Consulting and must not be written or reproduced without consent

### COVER SHEET & SPECIFICATIONS

| Project number | Drawing number | Original Size | Scale |
|----------------|----------------|---------------|-------|
| GC26055        | SW01           | A1            | 1:100 |



CONSTRUCT TEMPORARY RUBBLE ENTRY/EXIT TO PREVENT TRANSFER OF SEDIMENT AND DEBRIS DURING VEHICULAR TRAFFIC (REFER DETAIL). LOCATION CONFIRMED ON SITE.

CONSTRUCT SEDIMENT FENCE AT THE LOWER SIDES OF PROPERTY BOUNDARY TO PREVENT SITE RUNOFF FROM ENTERING DOWNSTREAM PROPERTIES.

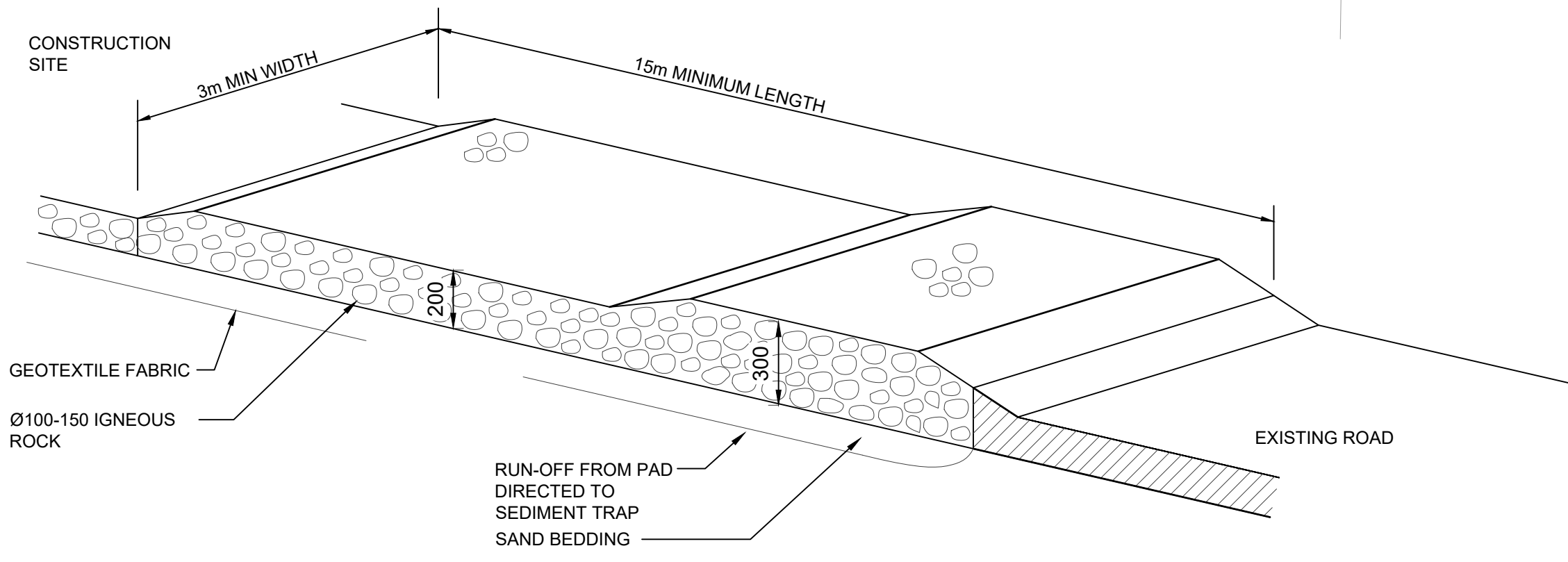
CONSTRUCT TEMPORARY SILT FENCE AROUND PITS AS SHOWN (TYP). REFER DETAIL.

ARROW DENOTES SLOPE OF EXISTING SURFACE LEVEL (TYP).

CONTRACTOR TO ENSURE RICHMOND ROAD IS KEPT FREE OF SEDIMENT AND DEBRIS AT ALL TIMES (TYP).

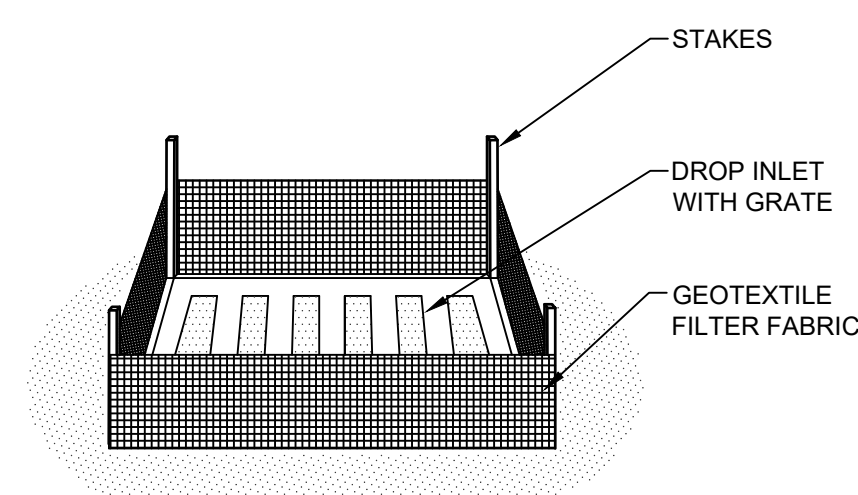
STOCKPILE AREA.

TWO STOREY BRICK COTTAGE  
TILED ROOF

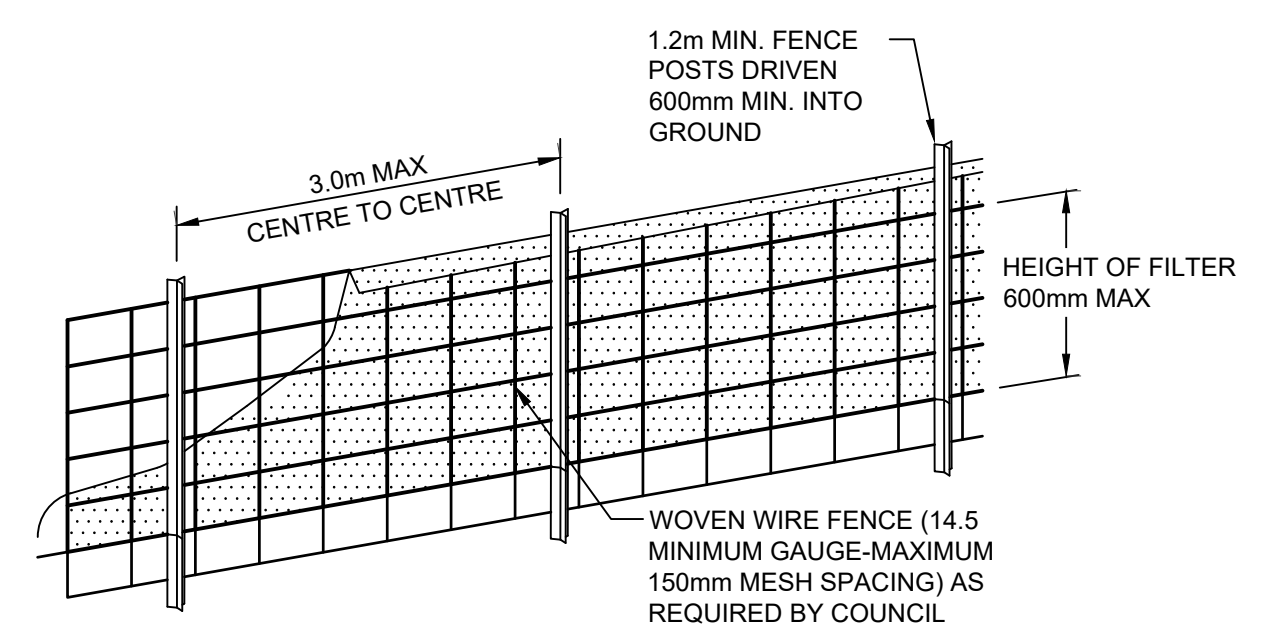
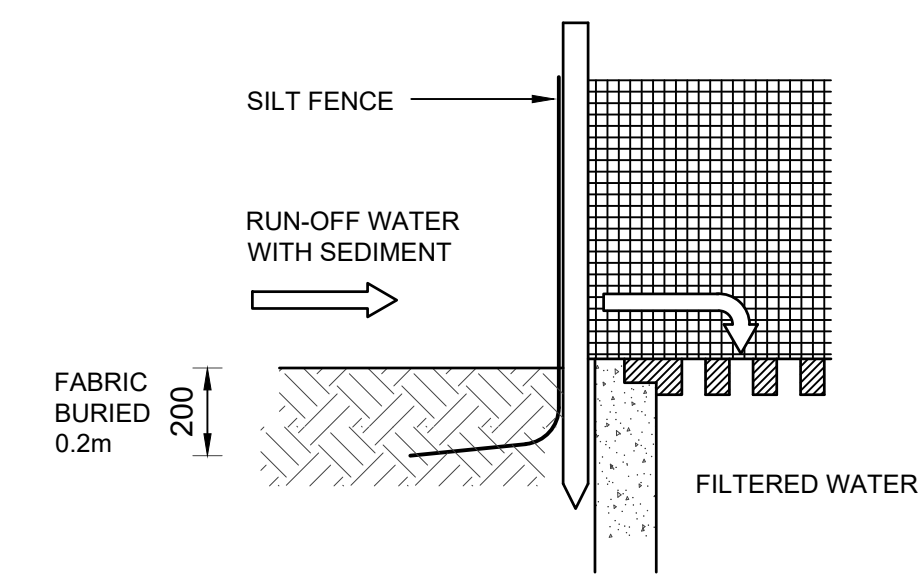


**RUBBLE ALTERNATIVE**

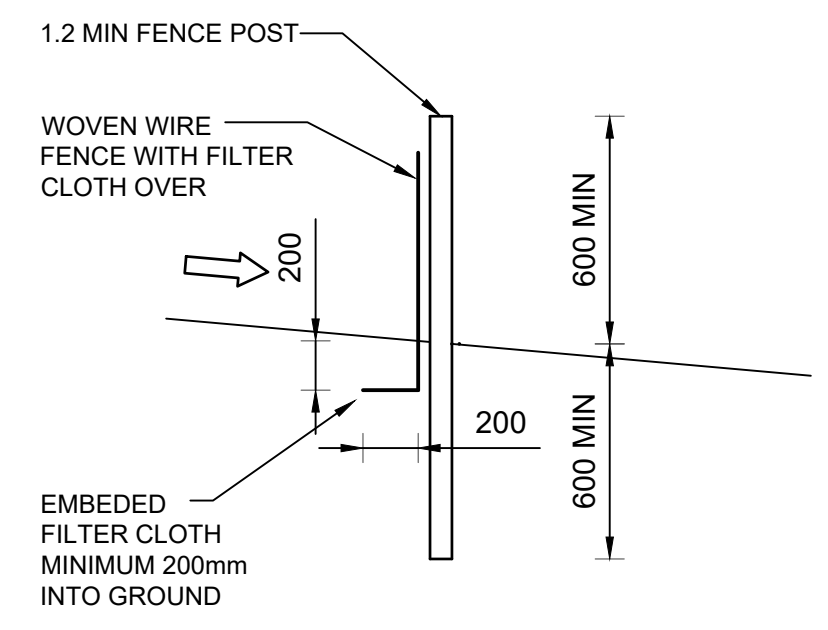
**DETAIL 1**  
TEMPORARY  
CONSTRUCTION EXIT  
NOT TO SCALE



**DETAIL 2**  
SUMP SEDIMENT TRAP  
NOT TO SCALE

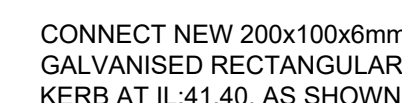


**DIAGRAMMATIC VIEW**



**TYPICAL SECTION**

**DETAIL 3**  
SEDIMENT FENCE  
NOT TO SCALE



CONNECT NEW 200x100x6mm HOT DIPPED GALVANISED RECTANGULAR SECTION TO KERR AT II :41:40 AS SHOWN

STORMWATER TO DRAIN BY GRAVITY TO KERB (TYP)

— ARROWS DENOTES SLOPE OF FINISHED SURFACE  
AWAY FROM INTERNAL AREAS (TYP).

— INSTALL RAINWATER TANK TO COLLECT MINIMUM ROOF AREA AS PER BASIX. RAINWATER TANK TO BE FITTED WITH FIRST FLUSH AND MOSQUITO PREVENTION DEVICES.

— PROVIDE Ø100mm AG SUBSOIL DRAINAGE PIPE BEHIND ALL RETAINING WALLS AND CONNECT TO NEAREST DRAINAGE PIT, WHERE REQUIRED (TYP).

THE SITE IS LOCATED IN CANTERBURY-BANKSTOWN COUNCIL

THE DEVELOPMENT PROPOSAL IS FOR A DUAL OCCUPANCY.

SITE AREA = 349.15m<sup>2</sup>

UNIT B AREA =  $174.57\text{m}^2$

|                                  |                        |
|----------------------------------|------------------------|
| PRE-DEVELOPMENT IMPERVIOUS AREA  | = 228.13m <sup>2</sup> |
| POST-DEVELOPMENT IMPERVIOUS AREA | = 255.86m <sup>2</sup> |
| IMPERVIOUS INCREASE              | = 27.73m <sup>2</sup>  |

OSD NOT IS REQUIRED AS PER SECTION 4.1 CLAUSE 4 OF CANTERBURY BANKSTOWN COUNCIL DCP 2023 "CHAPTER 3.1 - DEVELOPMENT ENGINEERING STANDARDS". SINCE THE PROPOSED DEVELOPMENT DOES NOT SIGNIFICANTLY INCREASE THE POST DEVELOPMENT STORMWATER RUNOFF FROM THE SITE. REFER TO DRAINS MODEL RESULTS ON DETAILS SHEET.

ALL STORMWATER PIPES SHOWN ON PLAN ARE Ø100mm uPVC AND SLOPING AT 1.0% U.N.O.

EXISTING SERVICES SHOWN ON PLAN ARE INDICATIVE ONLY. CONTRACTOR TO  
CONFIRM EXACT SIZE, LOCATION AND DEPTH PRIOR TO COMMENCING ANY  
WORKS

CONTACT STORMWATER ENGINEER IF ANY CLASHES WITH EXISTING SERVICES ARE FOUND DURING CONSTRUCTION.



W : [www.gebaconsulting.com.au](http://www.gebaconsulting.com.au)  
E : [info@gebaconsulting.com.au](mailto:info@gebaconsulting.com.au)  
P : 02 9062 8400

*[Signature]*

Client  
**WAJIH ZEYNOUN**

**Scale**



| Description  | Des. | Chk. | App. | Rev. | Date     |
|--------------|------|------|------|------|----------|
| FOR APPROVAL | A.M. | E.Z. | E.Z. | A    | 09.03.26 |
| FOR APPROVAL | E.Z. | E.Z. | E.Z. | B    | 17.06.26 |
|              |      |      |      |      |          |
|              |      |      |      |      |          |
|              |      |      |      |      |          |

## OSD MODEL

PRE-DEV  
KO1

POST-DEV  
KO2

## 100 YR STORM

0.023

0.023

## 20 YR STORM

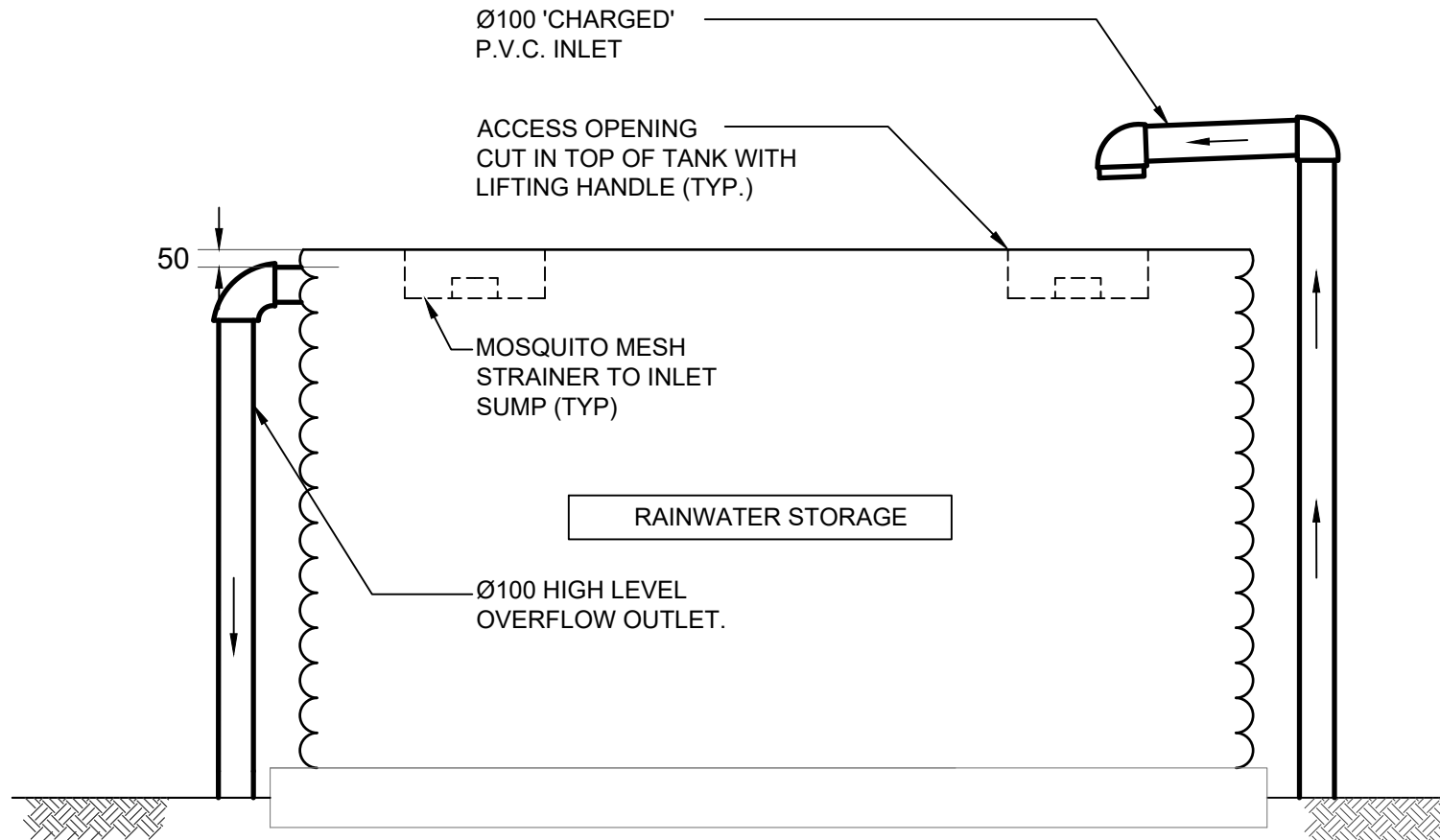
0.019

0.019

## 5 YR STORM

0.015

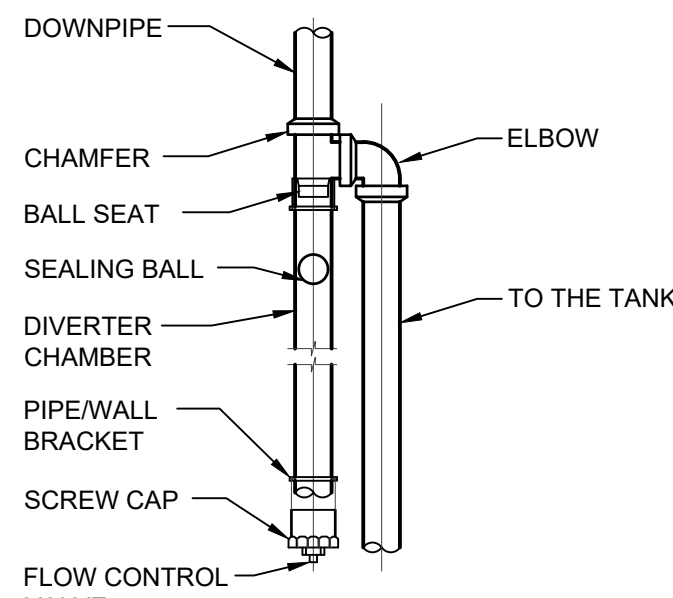
0.015



### DETAIL

TYPICAL ABOVE GROUND  
RAINWATER TANK  
NOT TO SCALE

4



### DETAIL

FIRST FLUSH DIVERTER  
SCALE 1:20

5

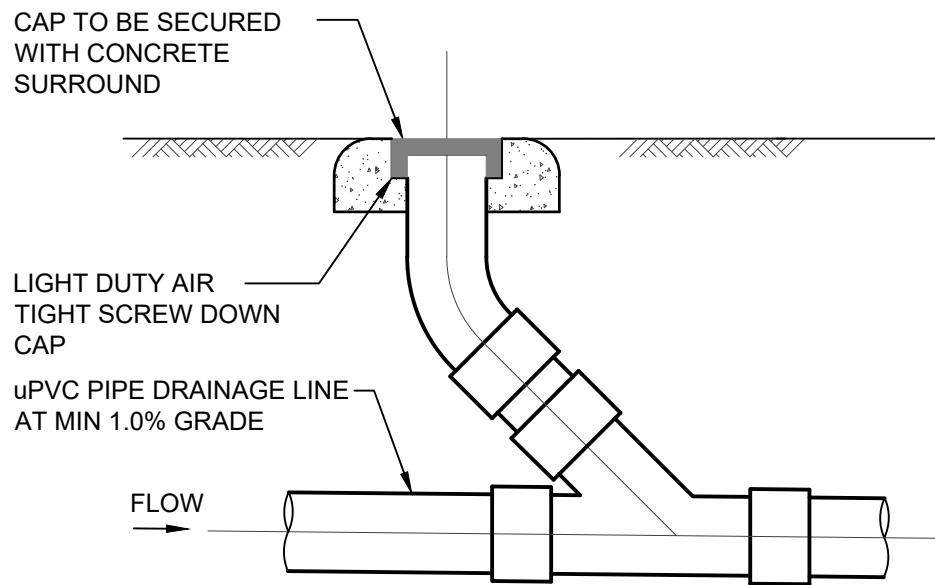


LEGEND:  
BACKGROUND IS YELLOW  
TEXT IS WHITE ON BLACK  
BACKGROUND

### DETAIL

RAINWATER SIGN  
SCALE 1:10

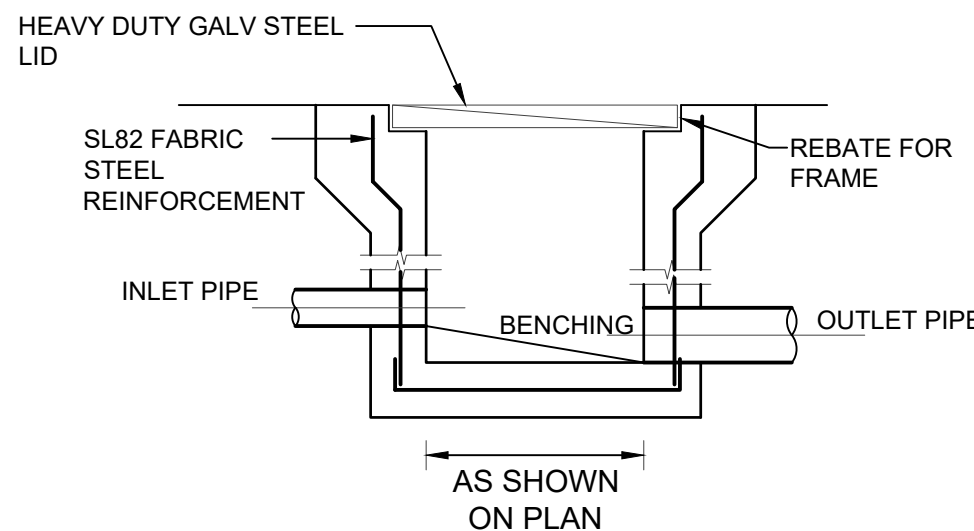
6



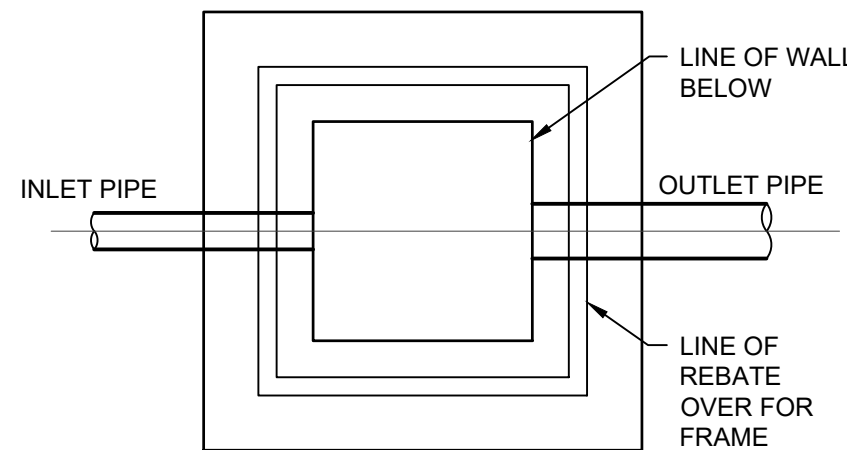
### DETAIL

CLEANING EYE  
SCALE 1:20

7



### SECTION

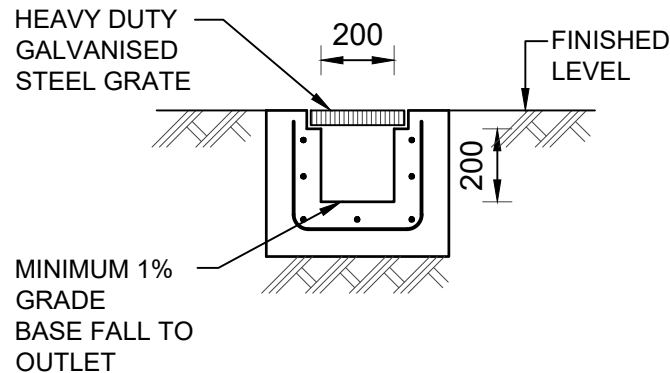


### PLAN WITHOUT GRATE

### DETAIL

STORMWATER PIT  
SCALE 1:20

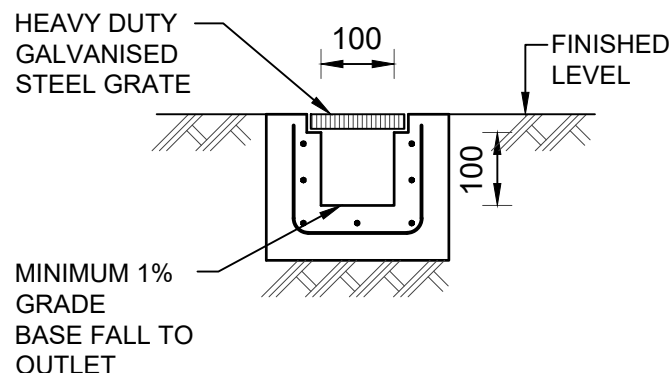
8



### DETAIL

GRADED TRENCH DRAIN  
NOT TO SCALE

9



### DETAIL

GRADED TRENCH DRAIN  
NOT TO SCALE

10

### DRAINS DESIGN PARAMETERS:

1. THE PRE/POST-DEVELOPMENT IMPERVIOUS AREA WAS MEASURED THROUGH AUTOCAD.
2. THE POST-DEVELOPMENT IMPERVIOUS AREA WAS DESIGNATED A VALUE OF 73.28% FOR A MORE CONSERVATIVE VALUE AND TO REPLICATE THE PROPOSED IMPERVIOUS AREA TO DEMONSTRATE THERE IS NO SIGNIFICANT INCREASE IN THE POST DEVELOPMENT STORMWATER RUNOFF FROM THE SITE .
3. THE RAINFALL DATA WAS CALCULATED AND OBTAINED BY THE BUREAU OF METEOROLOGY, AUSTRALIA FOR THE RESPECTIVE LOCATION OF THE SITE.  
- LATITUDE: -33.92183045541237  
- LONGITUDE: 151.12040454002144