

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: SOI.

NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE

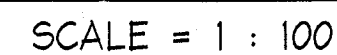
DEVELOPERS & EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

CARELESS DIGGING CAN:

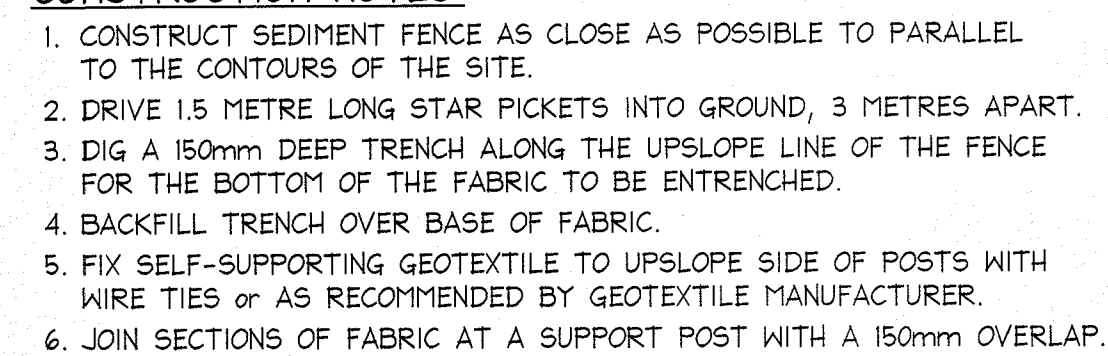
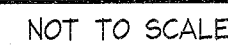
- CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLIC
- INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS
- LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS
- CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS
- CUT OFF EMERGENCY SERVICES
- DELAY PROJECT COMPLETION TIMES

WHILE THE DAMAGE IS REPAIRED

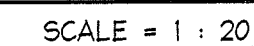
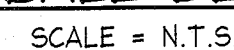
MINIMISE YOUR RISK AND DIAL BEFORE YOU DIG. - TEL. 1100



1. DISPERSION TRENCH TO BE LAID ON A LEVEL CONTOUR.
2. GROUND LEVEL ABOVE TRENCH MUST BE LEVEL SO AS TO EVENLY DISPERSE WATER DOWN HILL OF THE TRENCH
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION FOR DISPERSION TRENCH NOTIFY ENGINEER FOR ALTERNATE DETAIL.



1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER.
2. MINIMISE DISTURBED AREAS
3. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
4. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
5. ROADS AND FOOTPATH TO BE SWEEP DAILY.



1. SILT FENCE AND ASSOCIATED WORKS INCLUDING INTERCEPTOR DRAIN IS TO BE INSTALLED BEFORE THE COMMENCEMENT OF ANY EXCAVATION.
2. CUTS TO BE EXECUTED TO THE REQUIRED LEVEL USING CONVENTIONAL EXCAVATION MACHINERY. INITIALLY THE DEPTH OF FILL/CLAY IS TO BE ESTABLISHED TO ENSURE NEIGHBOURING PROPERTIES ARE NOT ADVERSELY AFFECTED. EARTH BATTERS TO BE A MAXIMUM SLOPE OF 1.0 m VERT. TO 1.7 m HORIZ. (AS PER GEOTECHNICAL REPORT). ANY BATTERS GREATER THAN 1.0 m VERT. TO 1.7 m HORIZ. ARE TO BE ADEQUATELY SHORED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
3. ANY PERMANENT RETAINING STRUCTURE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.

B Consulting Engineers

LEGEND

- (O) DENOTES PIPE OVER
- (U) DENOTES PIPE UNDER
- 100mm Ø DOWNPIPE TO BE DIRECTED EXISTING STORMWATER SYSTEM
- APPROXIMATE LOCATION OF EXISTING DOWNPIPE TO BE UTILISED WHERE POSSIBLE IN ACCORDANCE WITH AS9500.3. MIN 90° uPVC
- FFL AND/OR SPOT LEVEL REFER TO ARCHITECT. TO BE CONFIRMED PRIOR TO CONSTRUCTION
- STORMWATER PIPE FLOW DIRECTION
- STORMWATER PIPE FALL DIRECTION
- STORMWATER PIT
- SUSPENDED Ø100 PIPE

NOTE: ALL DRAINAGE LINES ARE INDICATIVE ONLY. LOCATION MAY VARY DUE TO CONSTRAINTS.

SUBSOIL DRAINAGE NOTE:

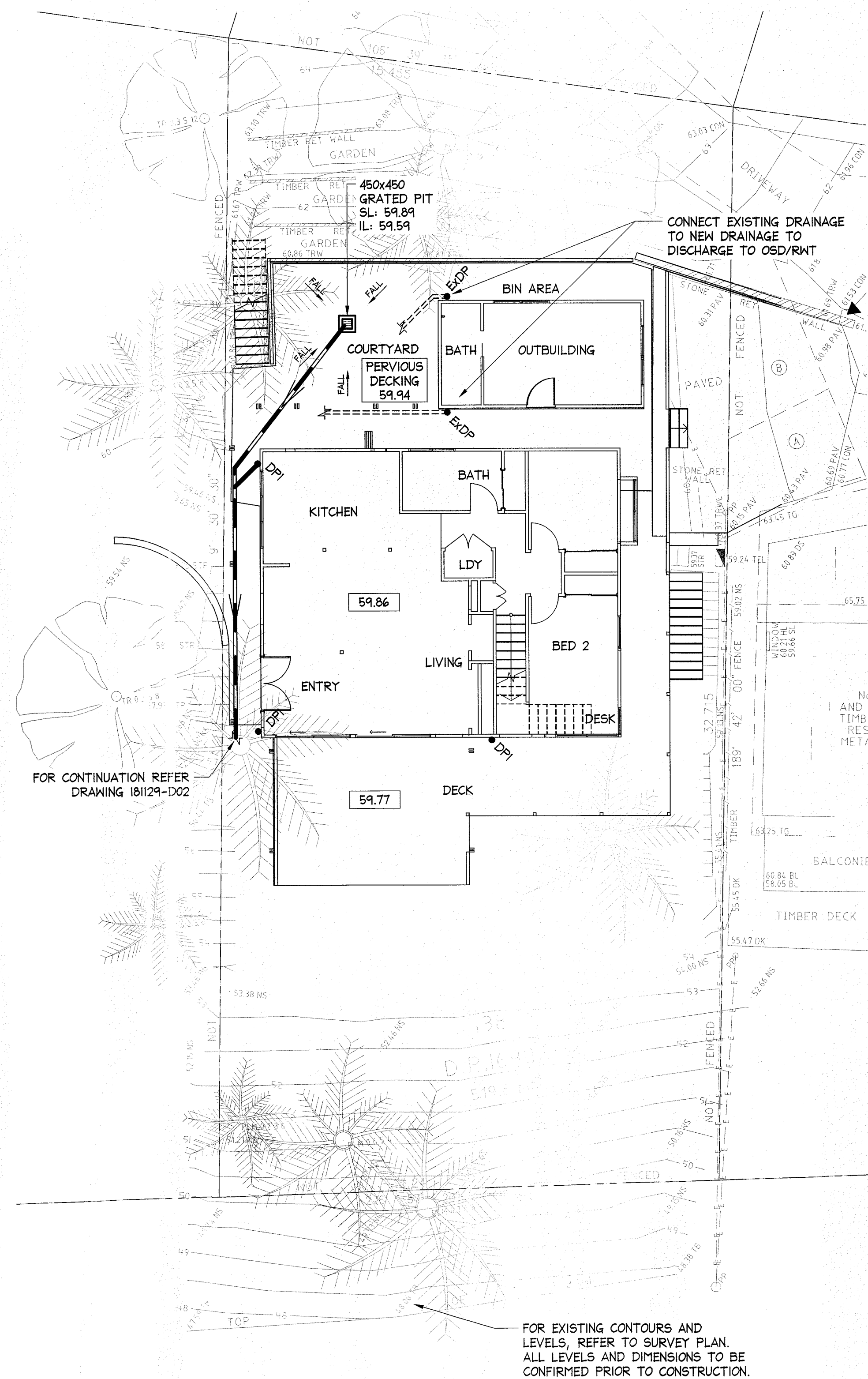
STORMWATER DRAININGS DO NOT INCLUDE SUBSOIL AGRICULTURAL DRAINAGE DETAILS FOR D.A. SUBMISSION. NORTHERN BEACHES CONSULTING ENGINEERS PTY LTD MUST BE COMMISSIONED TO INCLUDE THESE DETAILS ONLY WHEN CONSTRUCTION CERTIFICATE AND/OR CONSTRUCTION DOCUMENTATION IS COMPLETE AND PROVIDED.

NOTE: DRAINAGE LINE INDICATIVE ONLY

DRAINAGE LINE LOCATIONS ARE INDICATIVE ONLY AND MAY VARY DUE TO CONSTRAINTS. IF IN DOUBT CONTACT THE ENGINEER.

NOTE: EXISTING SERVICES

CONTRACTOR TO LOCATE ALL EXISTING SERVICES PRIOR TO EXCAVATION AND NOTIFY ENGINEER OF ANY POTENTIAL CLASHES WITH THE PROPOSED DRAINAGE



BARRENJOEY ROAD

GROUND LEVEL & SITE DRAINAGE PLAN

SCALE = 1 : 100

NOTES:

- THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
- FOR GENERAL NOTES REFER TO DRAWING NUMBER: D02.

NOTE: EXISTING STORMWATER SYSTEM

EXISTING STORMWATER SYSTEM TO BE UTILISED WHERE ADEQUATE. CHECK AND UPGRADE AS REQUIRED. BUILDER TO INSPECT PRIOR TO CONSTRUCTION AND UPGRADE IF REQUIRED IN ACCORDANCE WITH AS9500.3

NOTE: EXCAVATION AROUND TREES

CARE SHOULD BE TAKEN WHEN UNDERTAKING WORKS IN THE VICINITY OF SELECTED TREES NOT TO DISTURB THE TREE ROOT SYSTEM. HAND DIGGING OF TRENCHES ETC MAY BE NECESSARY. REFER ARBORISTS REPORT.

RETAINING STRUCTURES NOTE:

RETAINING WALLS, BATTERS AND SHORING INCLUDING DRAINAGE BY OTHERS REFER ARCHITECT FOR SPECIFICATIONS & DETAILS

www.dialbeforeyoudig.com.au



NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE

DEVELOPERS & EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

CARELESS DIGGING CAN:
 - CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLIC
 - INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS
 - LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS
 - CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS
 - CUT OFF EMERGENCY SERVICES
 - DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED

MINIMISE YOUR RISK AND DIAL BEFORE YOU DIG. - TEL. 1100

ISSUED FOR D.A. SUBMISSION ONLY
NOT FOR CONSTRUCTION

IF IN DOUBT ASK

AI

| | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------|--|--|--|-------------------|--|-----------------------------------------------------------|--|----------|---------|-------------|--|
| DOCUMENT CERTIFICATION | | | | Architect: | | Project: | | Date: | Design: | Drawn: | |
| Date: 11/6/20 Stewart McGeady B.E.(Civil), MIEAust. (Director NB Consulting Engineers) | | | | BARKER ARCHITECTS | | ALTERATIONS AND ADDITIONS 35A PLATEAU RD, AVALON BEACH | | JUL 2020 | L.G. | D.K. | |
| By: Review: | | | | Client: | | Drawing Title: | | Job No: | | Drawing No: | |
| The copyright of this drawing remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers | | | | JESSICA NOSWORTHY | | STORMWATER MANAGEMENT DRAINAGE PLAN - SHEET 2 | | 181129 | | D03 | |
| Date: Issue: Description: | | | | | | | | | | A | |

NB Consulting Engineers

LEGEND

- (O) DENOTES PIPE OVER
- (U) DENOTES PIPE UNDER
- 100mm Ø DOWNPIPE TO BE DIRECTED EXISTING STORMWATER SYSTEM
- FFL AND/OR SPOT LEVEL REFER TO ARCHITECT. TO BE CONFIRMED PRIOR TO CONSTRUCTION
- SPREADER TO SUIT DOWNPIPE
- GDI - 65 STORMTECH GRATED DRAIN OR APPROVED EQUIVALENT TO MANUFACTURERS SPECIFICATIONS
- EG1 EAVES GUTTER MINIMUM CROSS SECTION AREA 9000mm²
- RHI RAINWATER HEAD REFER DETAILS
- BG1, BG2, BG3 BOX GUTTER, REFER DETAILS

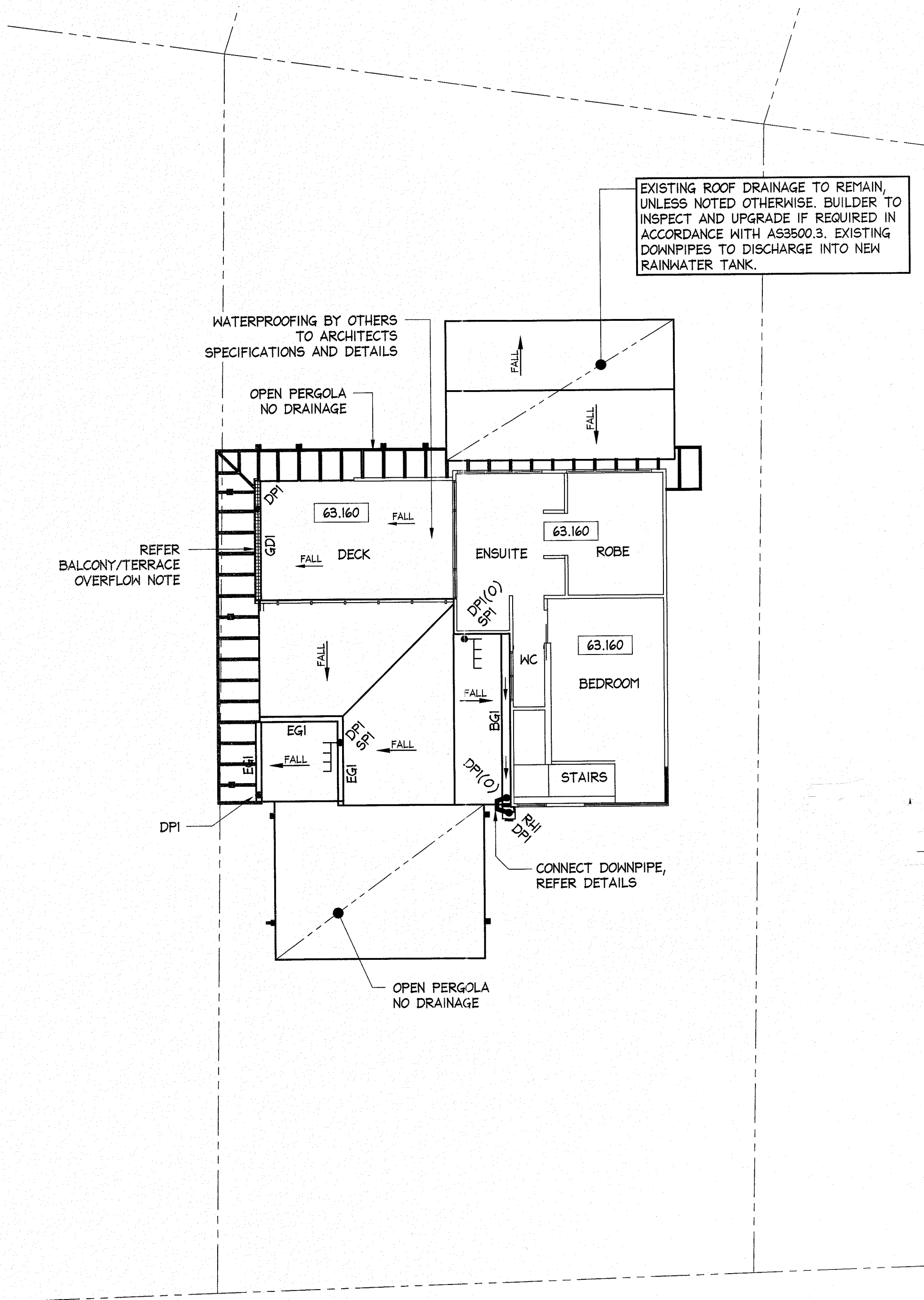
NOTE: ALL DRAINAGE LINES ARE INDICATIVE ONLY. LOCATION MAY VARY DUE TO CONSTRAINTS.

BALCONY/TERRACE OVERFLOW NOTE

BUILDER TO PROVIDE A MINIMUM 100mm WIDE x 30mm HIGH OR 50mm DIA OVERFLOW FOR EVERY 6m² OF EXPOSED TERRACE/BALCONY AREA. THE FULL OVERFLOW DEPTH MUST BE LOCATED BELOW THE ADJACENT INTERNAL FLOOR LEVEL TO PROTECT AGAINST INCIDENTAL FLOODING DUE TO A BLOCKED FLOOR OUTLET.

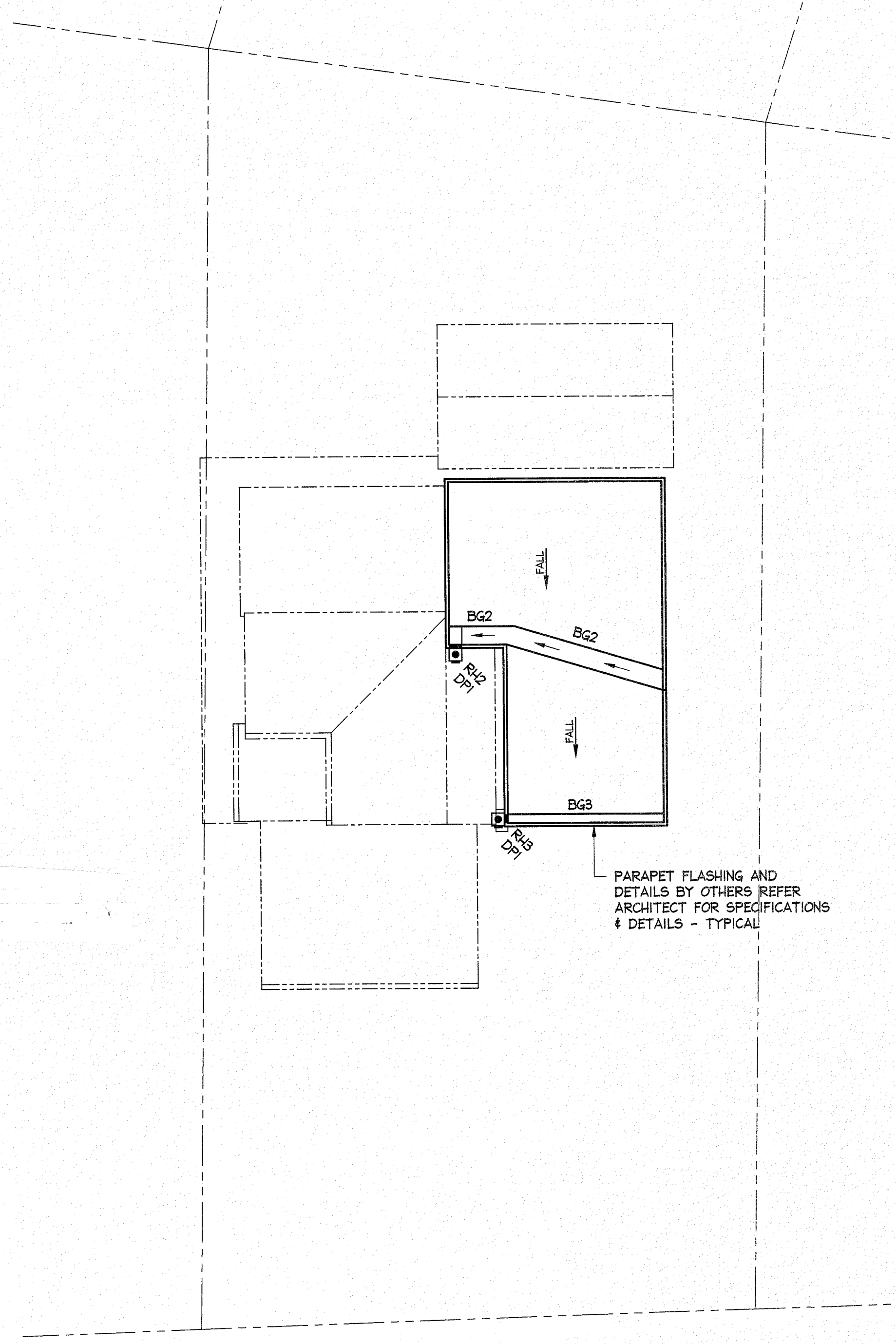
NOTE: BOX GUTTERS

ALL BOX GUTTER SYSTEMS SHOWN ON THESE PLANS ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE ASSOCIATED DETAILS. IF ANY CHANGE TO THE BOX GUTTER CONFIGURATION IS PROPOSED, NOTIFY THE ENGINEER FOR RE-DESIGN. IF THE INSTALLED BOX GUTTER DOES NOT STRICTLY COMPLY WITH OUR DESIGN, CERTIFICATION OF THE HYDRAULIC SYSTEM MAY BE REFUSED.



FIRST LEVEL DRAINAGE PLAN

SCALE = 1 : 100



UPPER ROOF LEVEL DRAINAGE PLAN

SCALE = 1 : 100

NOTES:

- THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
- FOR GENERAL NOTES REFER TO DRAWING NUMBER: D02.

www.dialbeforeyoudig.com.au



NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE.

DEVELOPERS & EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

CARELESS DIGGING CAN:

- CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLIC.
- INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS.
- LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS.
- CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS.
- CUT OFF EMERGENCY SERVICES.
- DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED.

MINIMISE YOUR RISK AND DIAL BEFORE YOU DIG. - TEL. 1100

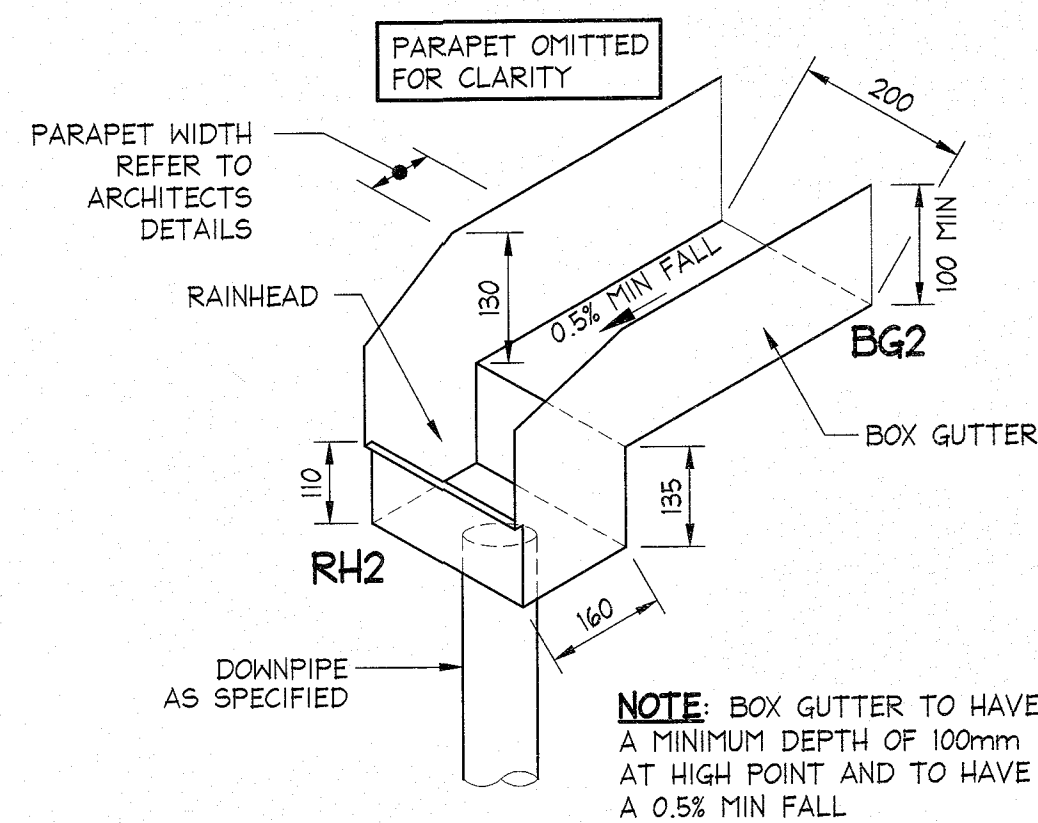
ISSUED FOR D.A. SUBMISSION ONLY NOT FOR CONSTRUCTION

IF IN DOUBT ASK

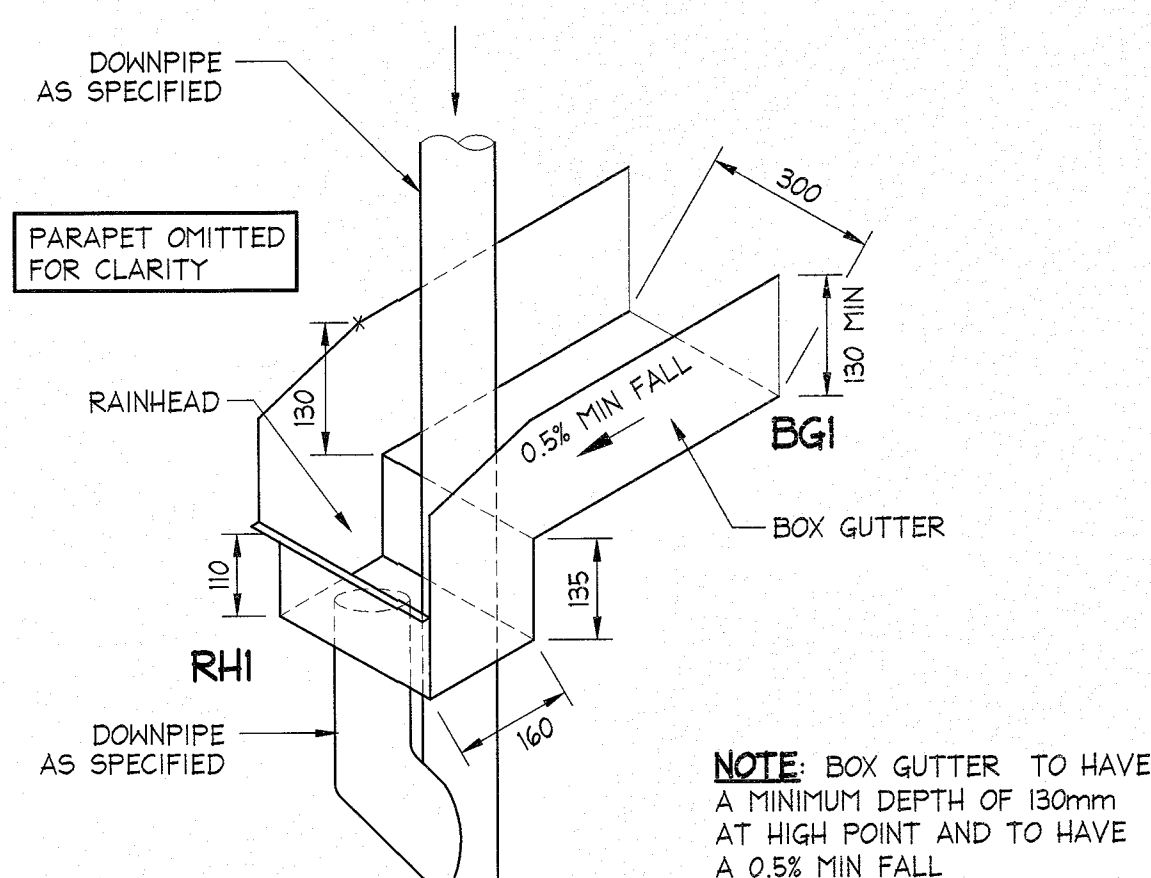
A1

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--------|--|----------------------------------------------------------------|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|--|-------------------|--|--------------------------------------------------------------------|--|----------------|--|--------------|--|-------------|--|
| AT | | | | | | | | | | | | DOCUMENT CERTIFICATION | |  NB Consulting Engineers STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616 Sydney: Ph: (02) 9984 7000 Fax: (02) 9984 7444 Suite 207, 30 Fisher Road Dee Why N.S.W. 2099 Gold Coast: Ph: (07) 5631 4744 Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220 E: nb@nbconsulting.com.au W: www.nbconsulting.com.au | | Architect: | | BARKER ARCHITECTS | | Project: ALTERATIONS AND ADDITIONS 35A PLATEAU RD, AVALON BEACH | | Date: JUL 2020 | | Design: L.G. | | Drawn: D.K. | |
| | | | | | | | | | | | | Date: 11/03/20 Stewart McGeedy  B.E.(Civil), MIEAust. (Director NB Consulting Engineers) | | | | | | | | | | | | | | | |
| 07/08/2020 | | A | | STORMWATER PLANS FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION | | | | | | | | | | D.K. | | L.G. | | | | | | | | | | | |
| Date: | | Issue: | | Description: | | | | | | | | | | By: | | Review: | | | | | | | | | | | |

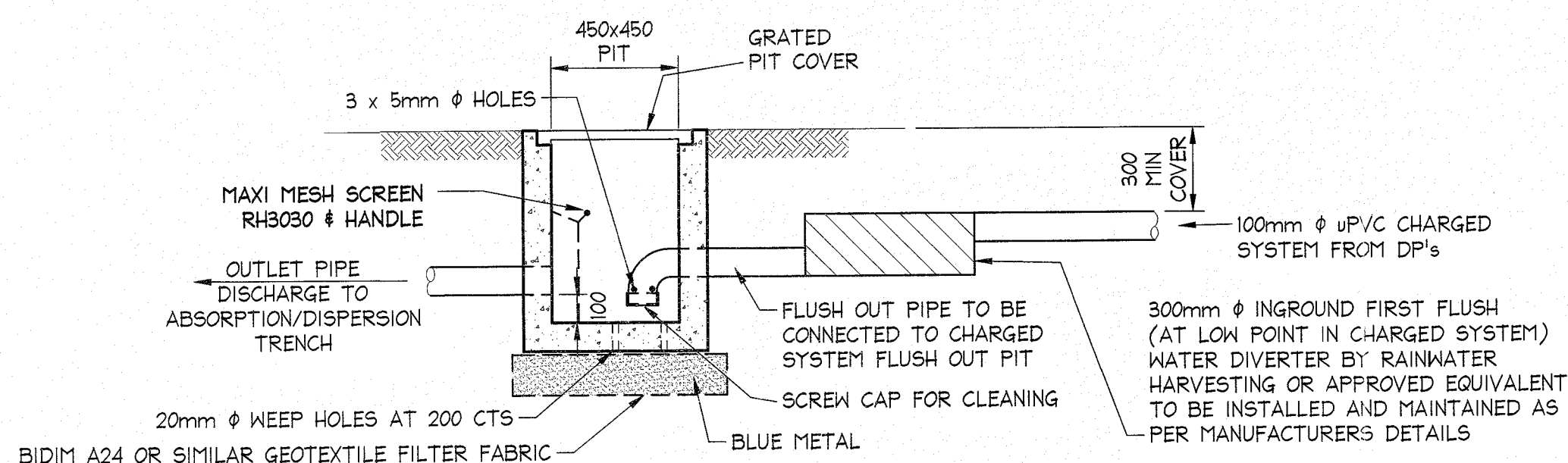
NB Consulting Engineers



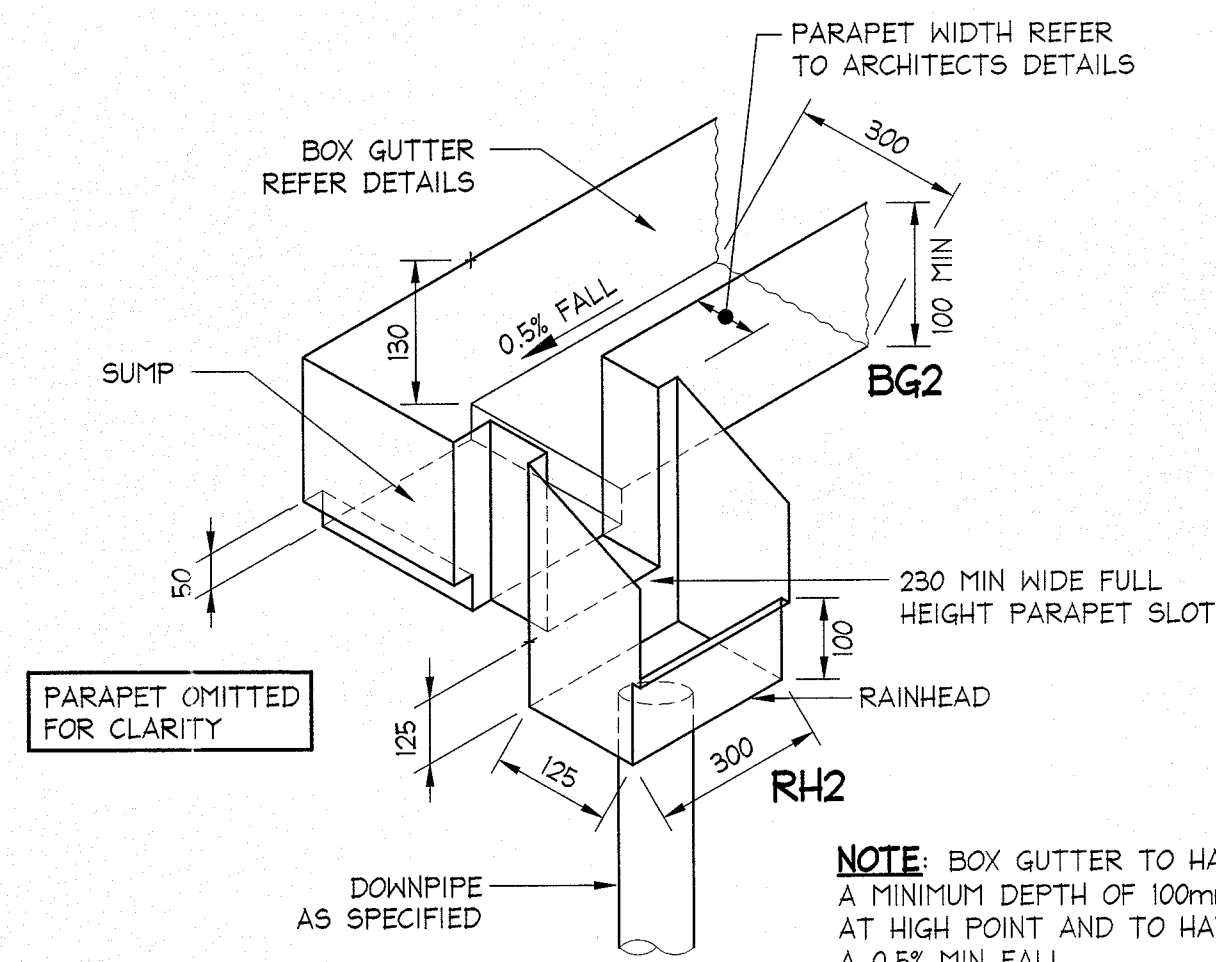
**BOX GUTTER 'BG3'
& RAINHEAD 'RH3' DETAIL**
SCALE = NTS



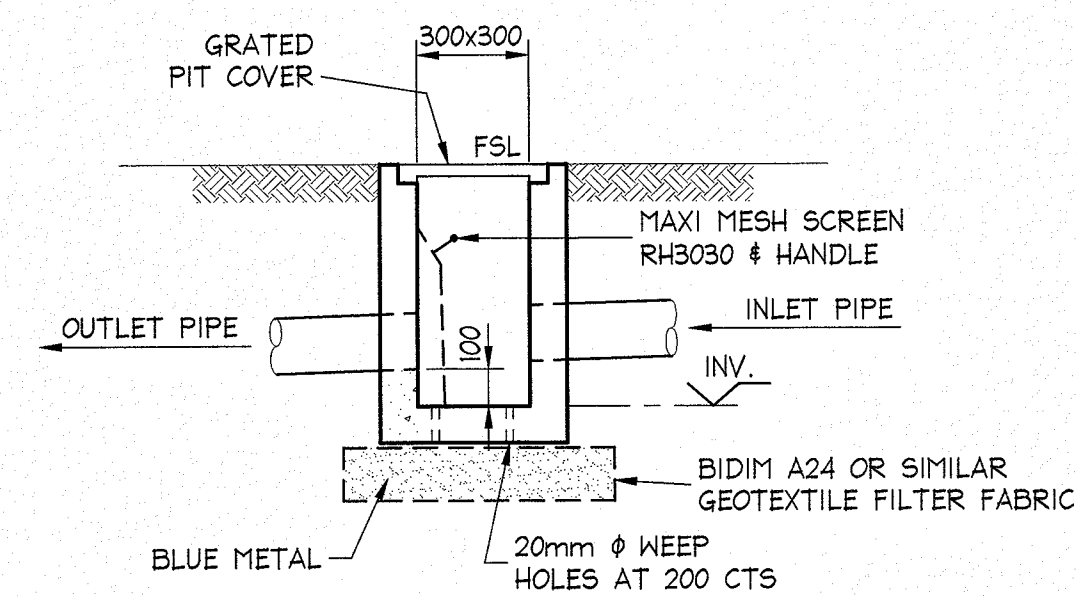
**BOX GUTTER 'BG1'
& RAINHEAD 'RH1' DETAIL**
SCALE = NTS



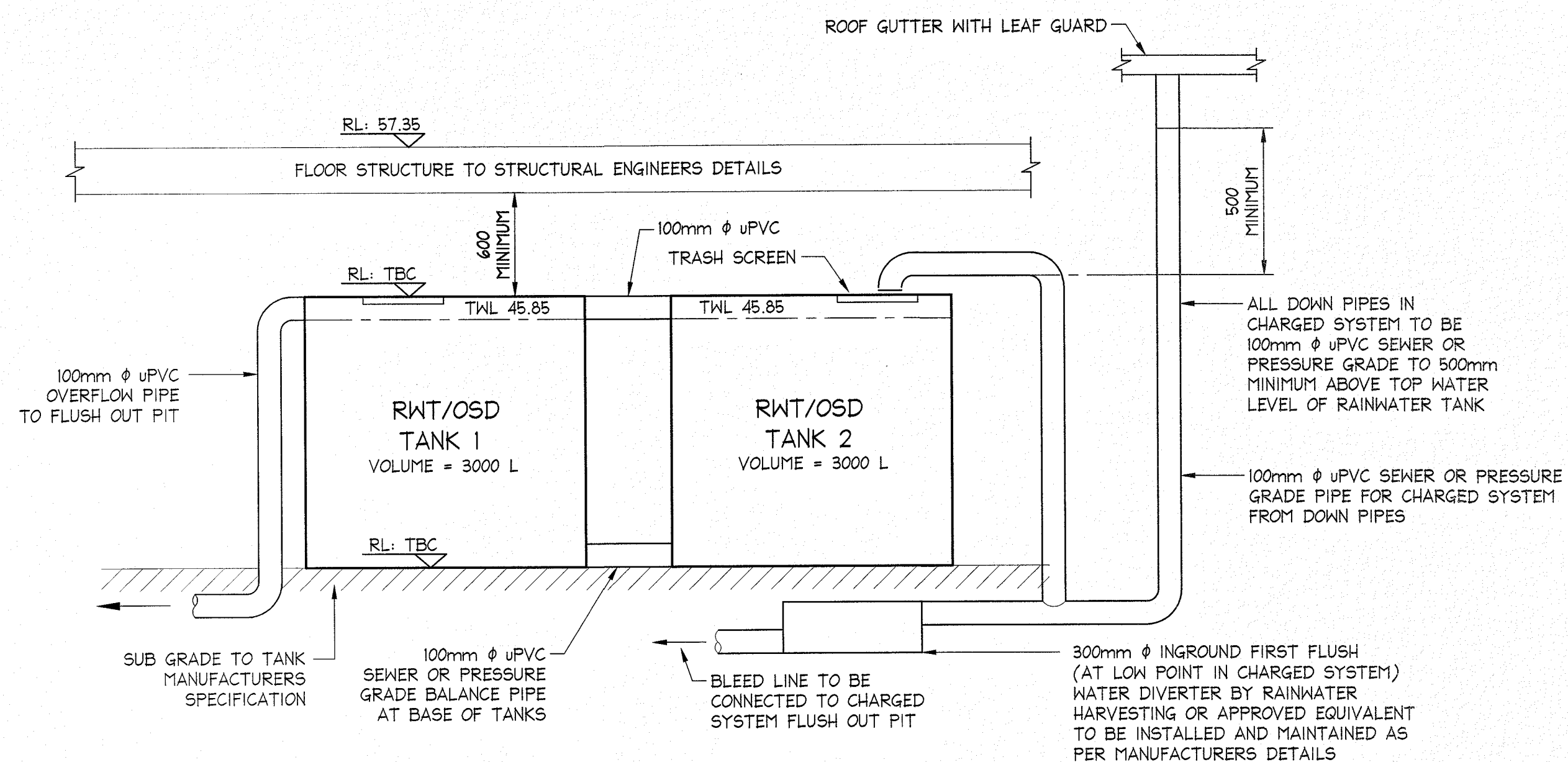
PRECAST OR CAST INSITU PIT REFER STORMWATER NOTES
450x450 CHARGED SYSTEM FLUSH OUT PIT DETAIL
SCALE = 1 : 20



**BOX GUTTER 'BG2'
& RAINHEAD 'RH2' DETAIL**
SCALE = NTS



PRECAST OR CAST INSITU PIT
REFER STORMWATER NOTES
ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER
300x300 PIT DETAIL
SCALE = 1 : 20



TANKS SPECIFIED ARE BY WATERPLEX OR APPROVED EQUIVALENT
TYPICAL SECTION RAINWATER RE-USE TANK
NOT TO SCALE

- NOTES:**
1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
 2. DO NOT SCALE FROM THIS DRAWING.
 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
 4. FOR GENERAL NOTES REFER TO DRAWING NUMBER: D02.



ISSUED FOR D.A.
SUBMISSION ONLY
NOT FOR
CONSTRUCTION

IF IN DOUBT ASK

AI

| | | | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------|--|-----------------------------------------------------------|--|----------|-------------|--------|
| DOCUMENT CERTIFICATION | | | | NB Consulting Engineers | | Architect: | | Project: | | Date: | Design: | Drawn: |
| Date: 11/3/20 Stewart McGeady B.E.(Civil), MIE Aust. (Director NB Consulting Engineers) | | | | STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616 Sydney: Ph: (02) 9984 7000 Fax: (02) 9984 7444 Suite 207, 30 Fisher Road Dee Why N.S.W. 2099 Gold Coast: Ph: (07) 5631 4744 Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220 E: nb@nbconsulting.com.au W: www.nbconsulting.com.au | | BARKER ARCHITECTS | | ALTERATIONS AND ADDITIONS 35A PLATEAU RD, AVALON BEACH | | JUL 2020 | L.G. | D.K. |
| 07/06/2020 A STORMWATER PLANS FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION | | | | By: Review: | | Client: | | Drawing Title: | | Job No: | Drawing No: | |
| Date: Issue: Description: | | | | | | JESSICA NOSWORTHY | | SECTIONS & DETAILS - SHEET 1 | | 181129 | D05 | |
| | | | | | | | | | | | A | |

NB Consulting Engineers