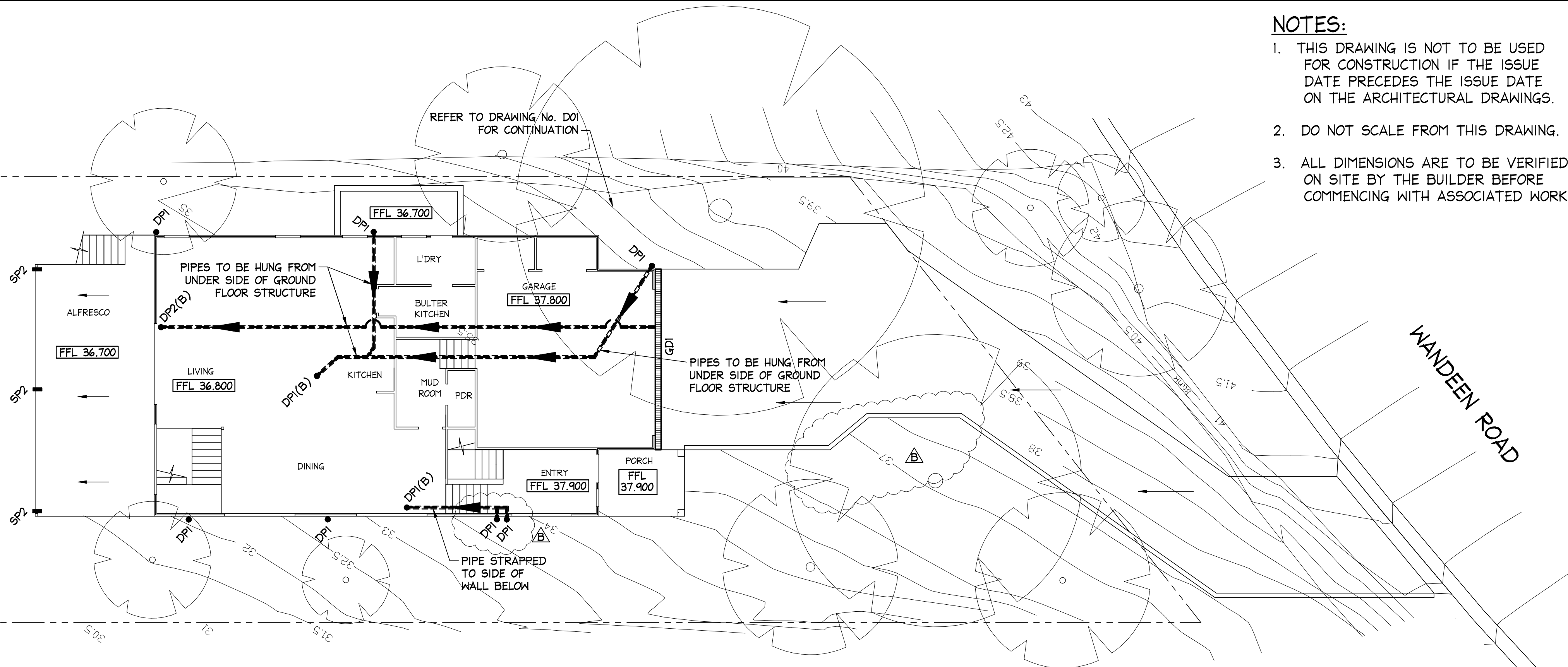


NOTES:

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2. DO NOT SCALE FROM THIS DRAWING.
3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.



ALL PIPES TO BE 100mm ϕ uPVC UNLESS NOTED OTHERWISE
ALL PIPES TO BE LAID AT 1 % MINIMUM FALL UNLESS NOTED OTHERWISE
GROUND FLOOR STORMWATER DRAINAGE PLAN
SCALE = 1 : 100

NOTE: EXISTING SERVICES

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

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.

NOTE: SURFACE DRAINAGE

SURFACE DRAINAGE TO BE PROVIDED IN ACCORDANCE WITH AS 3500.3

NOTE:

STORMWATER DRAWINGS 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: DPI DOWN PIPES

ALL DPI DOWN PIPES TO DISCHARGE INTO RAINWATER RE-USE TANK IN ACCORDANCE WITH AS 3500.3

NOTE:

ALL WATERPROOF MEMBRANES AND FLASHINGS TO BE INSTALLED AS PER ARCHITECTS DETAILS.

NOTE:

ALL STORMWATER PIPES LAID BELOW SLABS ON GROUND TO BE SEWER GRADE PIPES UNLESS NOTED OTHERWISE.

LEGEND

- DPI • 100mm ϕ DOWNPIPE TO DISCHARGE TO RWT
- DP2 • 100mm ϕ DOWNPIPE TO DISCHARGE TO OSD TANK
- SP2 - BUILDER TO PROVIDE A MINIMUM 100mm W x 30mm H OR 50mm DIA OVERFLOW FOR EVERY 6m² OF EXPOSED TERRACE 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.
- STORMWATER PIPE HUNG FROM UNDERSIDE FLOOR STRUCTURE
- STORMWATER PIPE FLOW DIRECTION
- GDI [] GRATED DRAIN
GDI - 150 MIN DEPTH x 150 WIDE GRATED DRAIN

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

RAINWATER RE-USE TANKS:

1. CONSIDERING THE ROOF CATCHMENT AREA, LOCATION OF PROPERTY, INTENDED USE OF RAINWATER AND GARDEN SIZE WE RECOMMEND PROVIDING A RAINWATER TANK FOR USE AS PER BASIX REQUIREMENTS, SYDNEY WATER AND NSW HEALTH REQUIREMENTS FOR NON DRINKING USE ONLY AS PER BASIX REPORT.
2. THE TANKS PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.
3. REFERENCES:
COOMBS P.J. & KUCZERA G. (2001), 'RAINWATER TANK DESIGN FOR WATER SUPPLY & STORMWATER MANAGEMENT.' STORMWATER INDUSTRY ASSOCIATION REGIONAL CONFERENCE.
PATRICK DUPONT & STEVE SHACKEL, 'RAINWATER'
AUSTRALIAN GOVERNMENT (2004), 'GUIDANCE ON USE OF RAINWATER TANKS'
4. ALL CONNECTIONS TO PLUMBING AND RAINWATER TANKS TO BE IN ACCORDANCE WITH SYDNEY WATERS' GUIDE 'INSTALLING A RAINWATER TANK'
AVAILABLE AT www.sydneywater.com.au
5. PROVIDE A DUAL SUPPLY SYSTEM AND BACKFLOW PREVENTION SYSTEM IN ACCORDANCE WITH 'BASIX-DESIGN GUIDE FOR SINGLE DWELLINGS' BY NSW DEPARTMENT OF INFRASTRUCTURE, PLANNING AND NATURAL RESOURCES.
6. IF NOT SPECIFIED ON PLANS, THE FIRST FLUSH SYSTEM IS TO HAVE A MINIMUM SIZE OF 20L PER 100m² OF ROOF CATCHMENT AREA PRIOR TO ENTERING THE RAINWATER TANK. INDIVIDUAL SITE ANALYSIS IS REQUIRED IN HEAVILY POLLUTED AREAS TO DETERMINE IF LARGER VOLUMES OF FIRST FLUSH RAINWATER ARE TO BE DIVERTED. IF IN DOUBT, CHECK WITH LOCAL HEALTH AUTHORITIES.
7. SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.
8. FIRST FLUSH DEVICES, OR APPROVED ALTERNATIVE, TO BE INSTALLED WITH AN AUTOMATED DIVERSION AND DRAINAGE SYSTEM, THAT IS NO MANUAL DIVERSION AND DRAINAGE VALVES. REFER TYPICAL FLUSH OUT PIT FOR DETAILS.
9. BEFORE PURCHASING MATERIALS OR PAINT TO BE USED ON ROOF CATCHMENT AREAS, THE MANUFACTURER'S RECOMMENDATIONS ON LABELS AND BROCHURES FOR RAINWATER TANK SUITABILITY TO BE READ AND ADHERED TO.
10. PRE-STORAGE PITS FOR UNDERGROUND RAINWATER STORAGE TANKS AND FLUSH OUT PITS MAY ASSIST IN LIMITING SILT, AND PREVENT VERMIN, INSECTS (INCLUDING MOSQUITOES) AND DEBRIS FROM ENTERING THE RAINWATER STORAGE AREA.
11. BUILDER/PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK - HB 230-2008. IF IN DOUBT CONTACT ENGINEER.
12. RAINWATER TANK TO BE WATER PROOFED IN ACCORDANCE WITH HB 230-2008

Scale check - 100mm when printed to scale

AI

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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
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

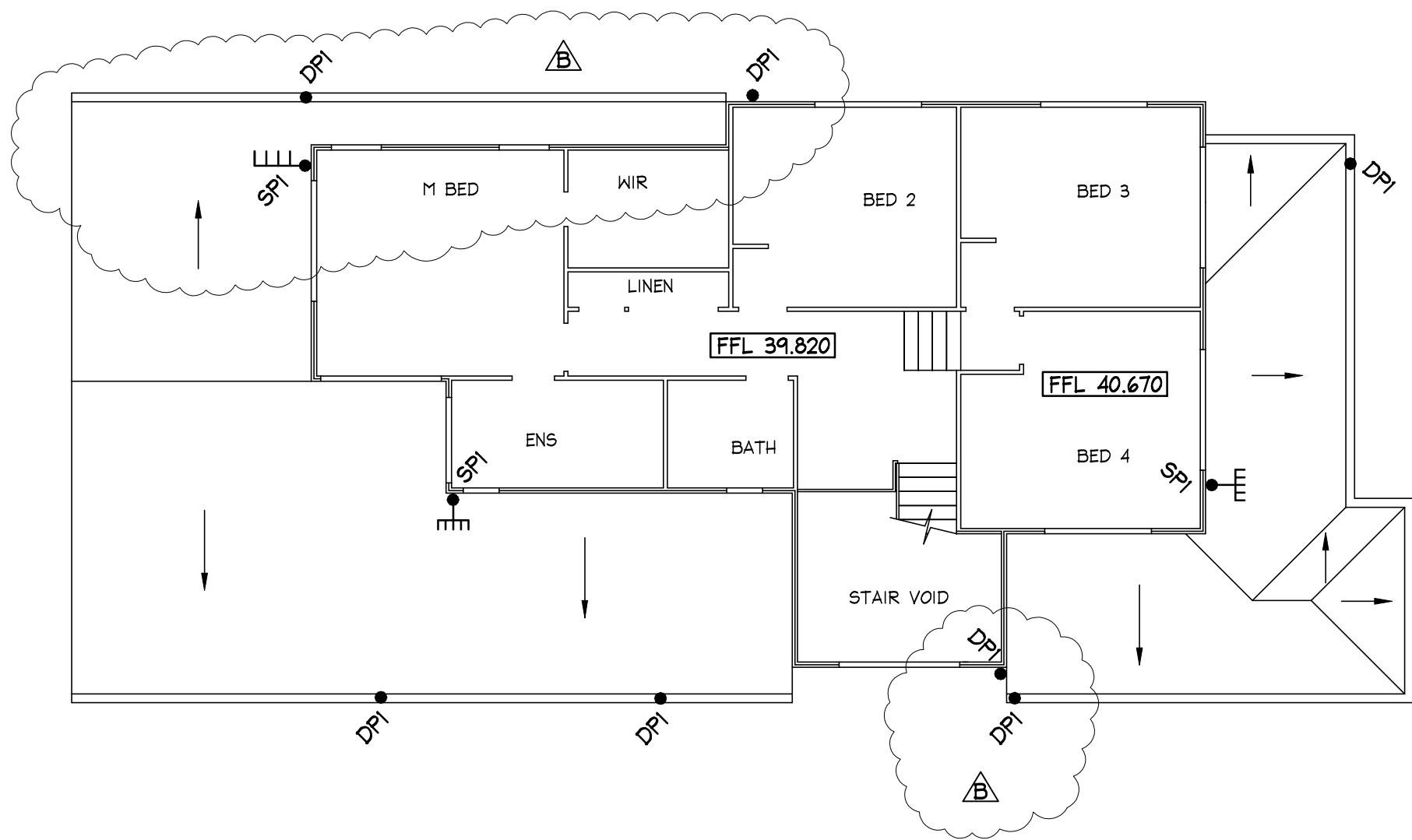


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ALL PIPES TO BE 100mm ϕ uPVC UNLESS NOTED OTHERWISE
ALL PIPES TO BE LAID AT 1 % MINIMUM FALL UNLESS NOTED OTHERWISE
FIRST FLOOR AND LOWER ROOF STORMWATER DRAINAGE PLAN

SCALE = 1 : 100

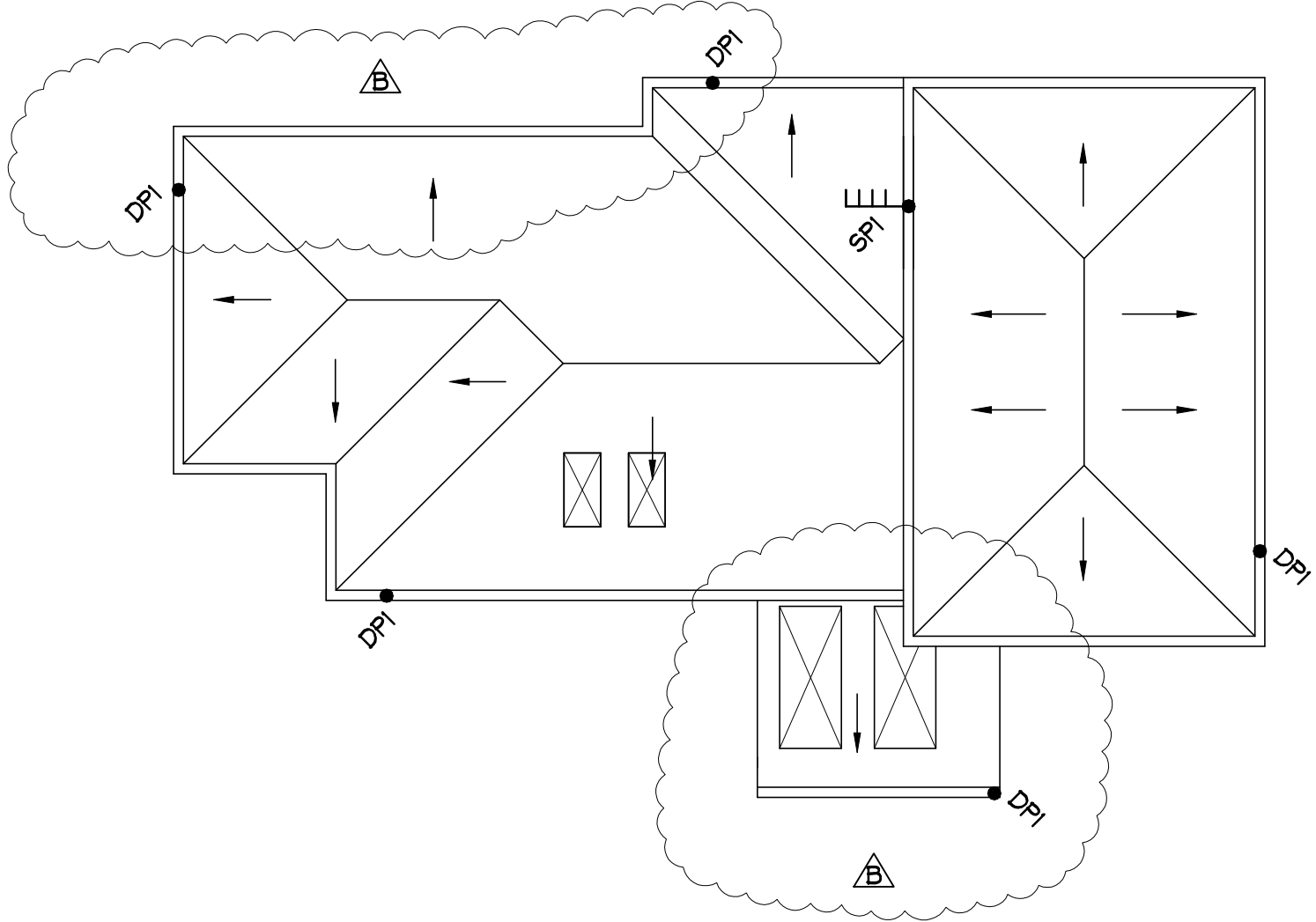
LEGEND

- DPI • 100mm ϕ DOWNPIPE TO DISCHARGE TO RWT
DPI • 100mm ϕ DOWNPIPE TO DISCHARGE TO OSD TANK
SP • 100mm ϕ DOWNPIPE WITH A SPREADER PIPE

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

NOTE:
ALL WATERPROOF MEMBRANES AND
FLASHINGS TO BE INSTALLED AS
PER ARCHITECTS DETAILS.

NOTE: DPI DOWN PIPES
ALL DPI DOWN PIPES TO DISCHARGE
INTO RAINWATER RE-USE TANK IN
ACCORDANCE WITH AS 3500.3



ALL PIPES TO BE 100mm ϕ uPVC UNLESS NOTED OTHERWISE
ALL PIPES TO BE LAID AT 1 % MINIMUM FALL UNLESS NOTED OTHERWISE
UPPER ROOF STORMWATER DRAINAGE PLAN

SCALE = 1 : 100

LEGEND

- DPI • 100mm ϕ DOWNPIPE TO DISCHARGE TO RWT
DPI • 100mm ϕ DOWNPIPE TO DISCHARGE TO OSD TANK
SP • 100mm ϕ DOWNPIPE WITH A SPREADER PIPE

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

NOTE:
ALL WATERPROOF MEMBRANES AND
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PER ARCHITECTS DETAILS.

NOTE: DPI DOWN PIPES
ALL DPI DOWN PIPES TO DISCHARGE
INTO RAINWATER RE-USE TANK IN
ACCORDANCE WITH AS 3500.3

Scale check - 100mm when printed to scale

AI

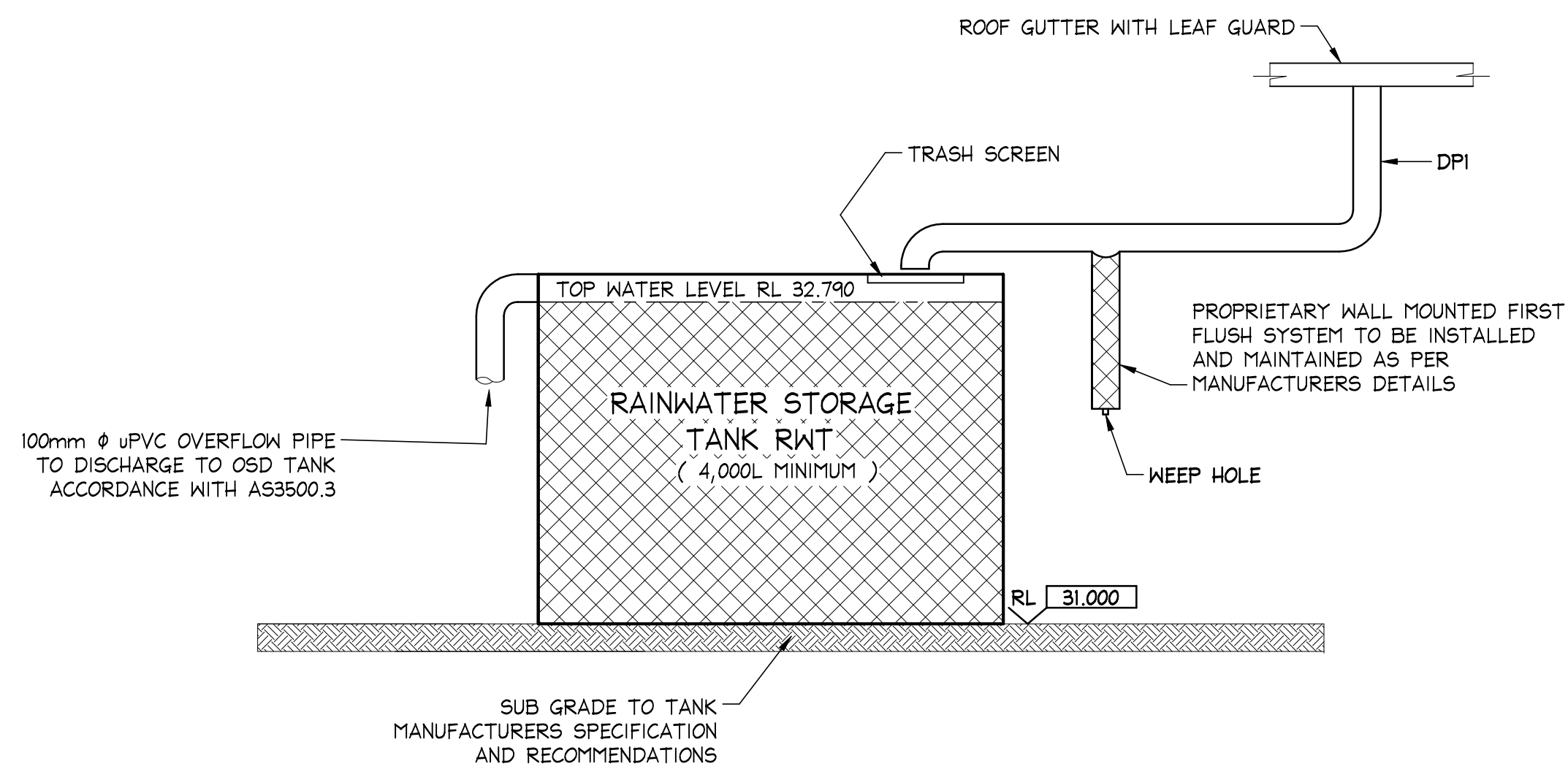
				DOCUMENT CERTIFICATION		NB Consulting Engineers STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616		Architect:	Rise Projects	Project:	PROPOSED RESIDENCE 24 Wandeen Road Clareville NSW 2107	Date:	Sept 2020	Design:	H.O. C.F.	Drawn:	Paul R Bruce AM1EAust.
15.12.2020	B	ISSUED FOR D.A. SUBMISSION ONLY - NOT FOR CONSTRUCTION - UPDATED TO SUIT ARCHITECTS CHANGES	P.R.B.	M.W.	Rick G Wray	Sydney: Ph: (02) 9984 7000 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		Client:	Rise Projects	Drawing Title:	FIRST FLOOR AND ROOF STORMWATER DRAINAGE PLANS	Job No:	200835	Drawing No:	D03	Issue:	A
14.10.2020	A	ISSUED FOR D.A. SUBMISSION ONLY - NOT FOR CONSTRUCTION	P.R.B.	M.W.	BE(Civil), CPEng, MIEAust., NER, RPEQ: 08293. (Director NB Consulting Engineers)												
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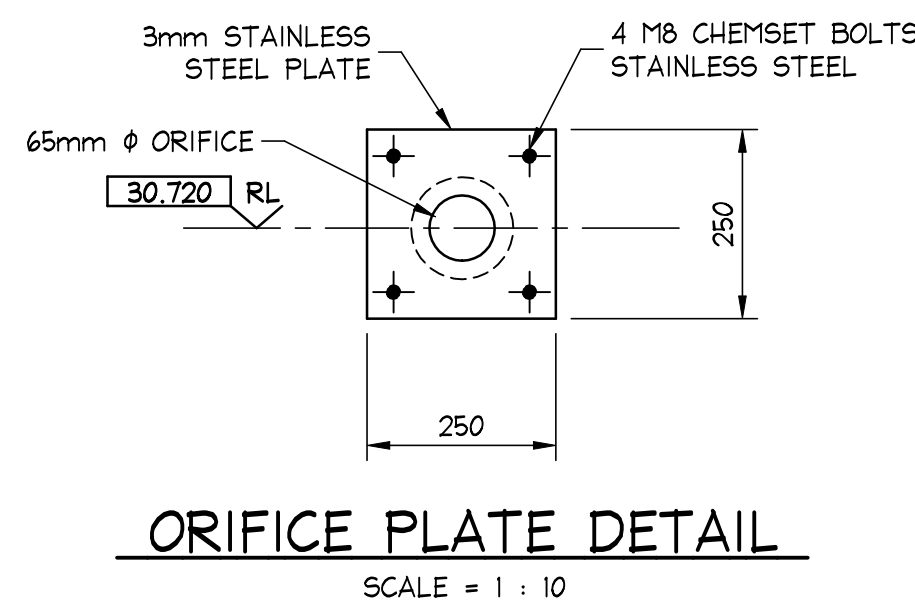
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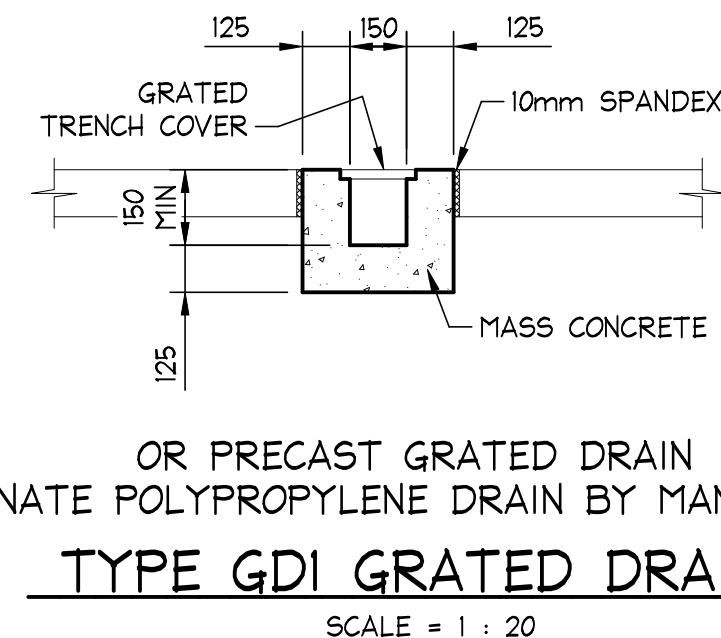
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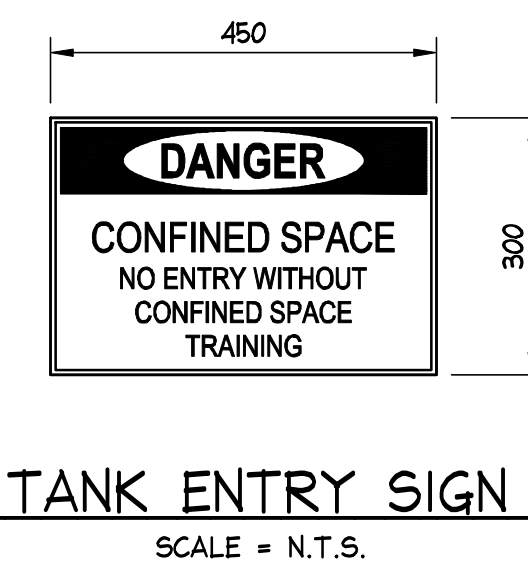
TYPICAL SECTION RAINWATER RE-USE TANK
NOT TO SCALE



ORIFICE PLATE DETAIL
SCALE = 1 : 10



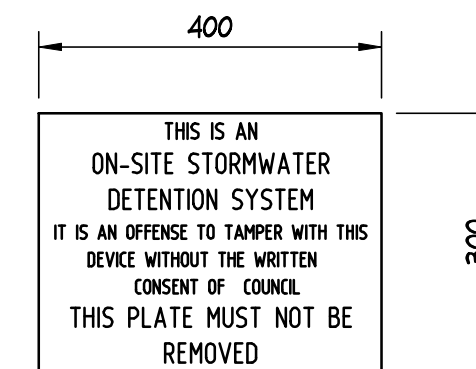
OR PRECAST GRATED DRAIN
ALTERNATE POLYPROPYLENE DRAIN BY MANUFACTURER
TYPE GDI GRATED DRAIN
SCALE = 1 : 20



TANK ENTRY SIGN
SCALE = N.T.S.



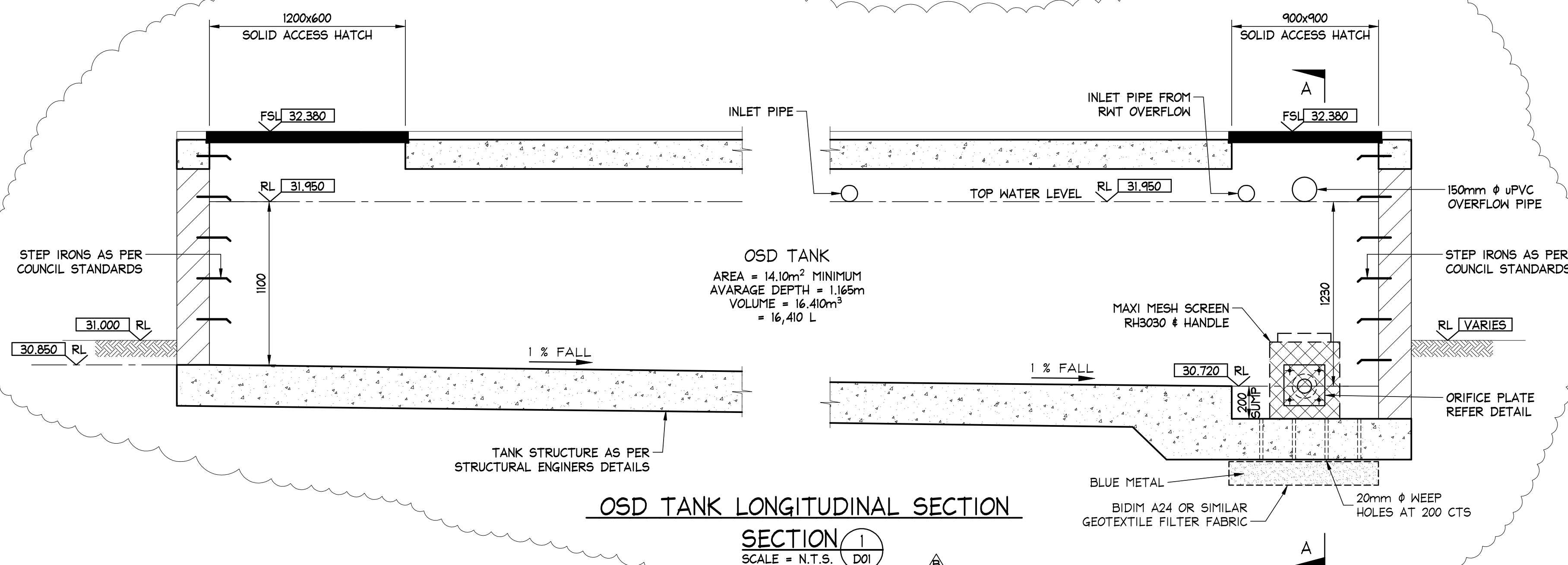
LEGEND:
BLACK ON
YELLOW
BACKGROUND



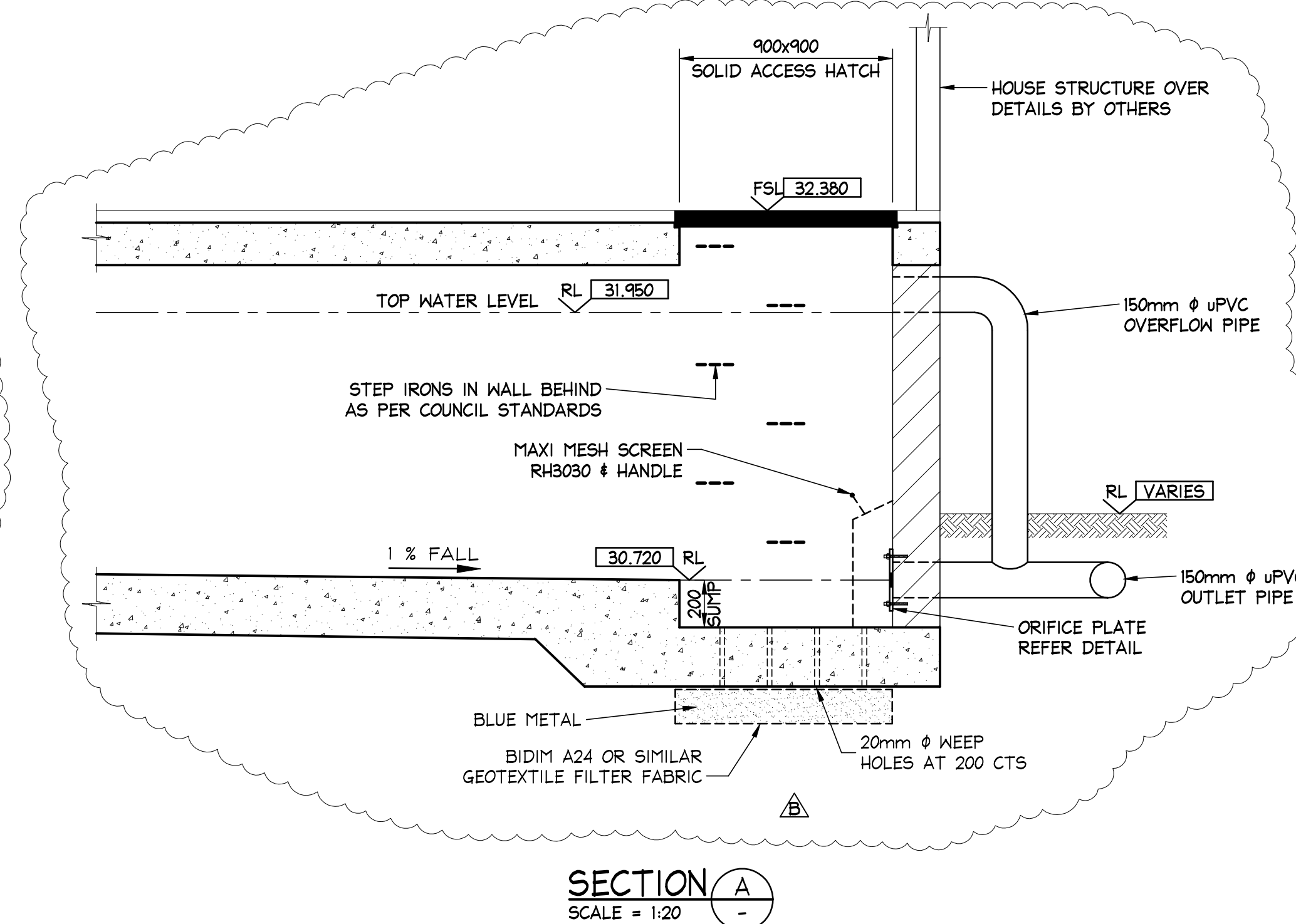
OSD TANK SIGN
SCALE = N.T.S.

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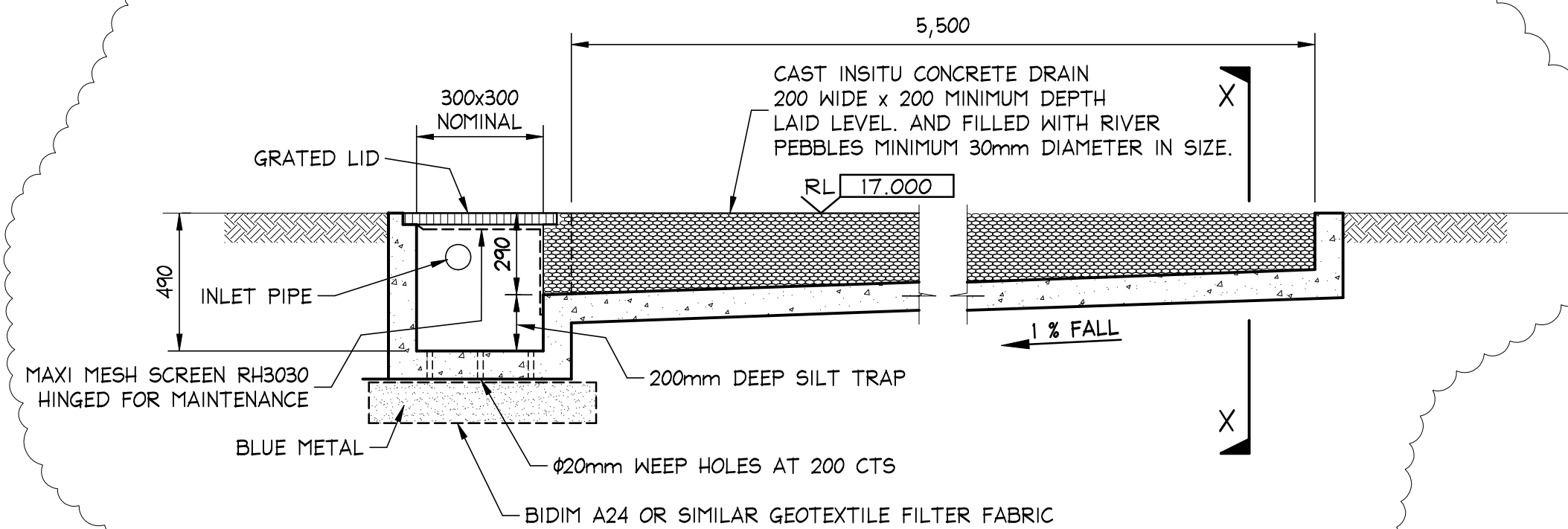
OSD TANK LONGITUDINAL SECTION
SECTION 1
SCALE = N.T.S.



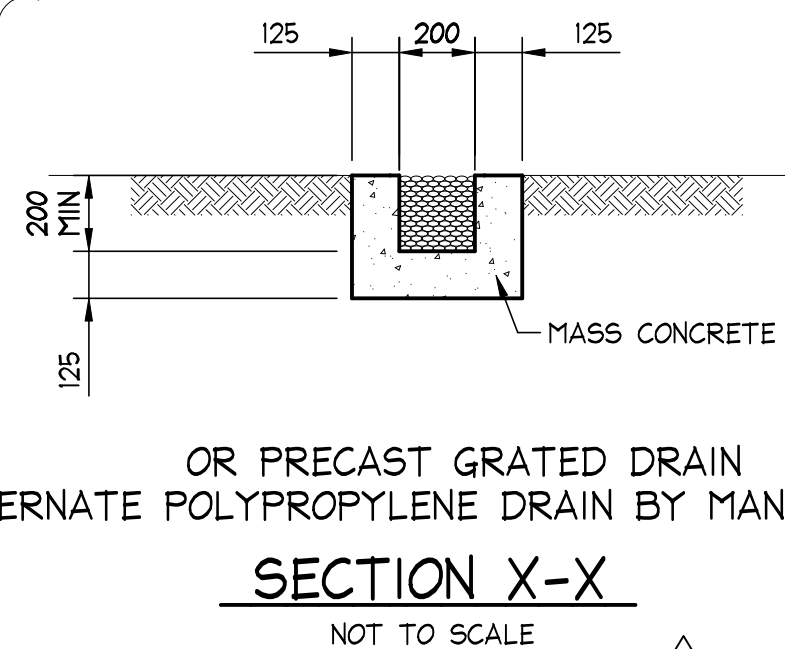
SECTION A
SCALE = 1:20

NOTE: DISPERSION TRENCH

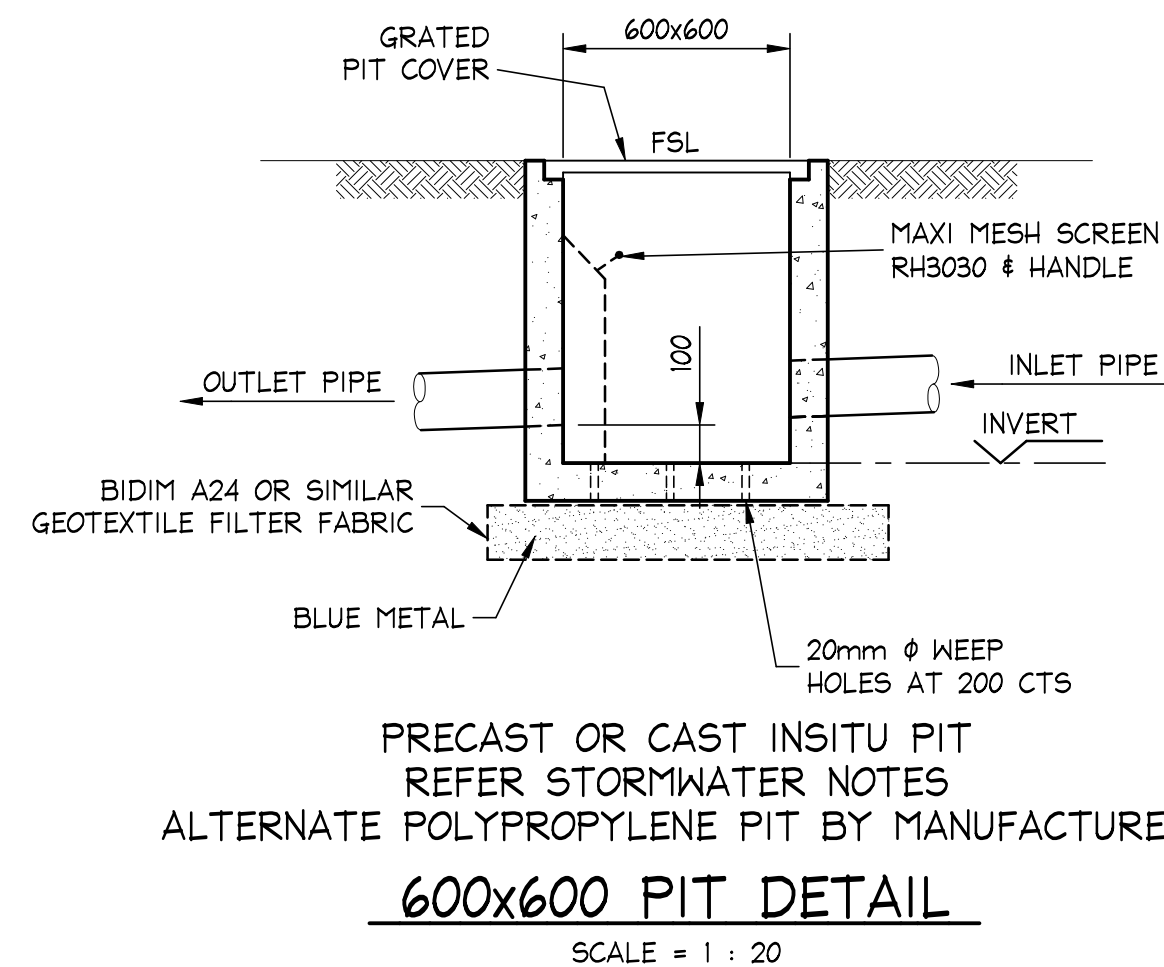
1. DISPERSION TRENCH TO BE LAID ON A LEVEL CONTOUR.
2. GROUND LEVEL ABOVE TRENCH MUST BE LEVEL SO AS TO EVENLY DISPERSE WATER DOWN HILL OF THE TRENCH
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION FOR DISPERSION TRENCH NOTIFY ENGINEER FOR ALTERNATE DETAIL.



DISPERSION TRENCH LONGITUDINAL SECTION
NOT TO SCALE



OR PRECAST GRATED DRAIN
ALTERNATE POLYPROPYLENE DRAIN BY MANUFACTURER
SECTION X-X
NOT TO SCALE



PRECAST OR CAST INSITU PIT
REFER STORMWATER NOTES
ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER
600x600 PIT DETAIL
SCALE = 1 : 20



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CONSTRUCTION

IF IN DOUBT ASK

DOCUMENT CERTIFICATION				NB Consulting Engineers		Architect:	Rise Projects		Project:	PROPOSED RESIDENCE 24 Wandeen Road Clareville NSW 2107		Date:	Design:	Drawn:
Date :				STRUCTURAL - CIVIL - STORMWATER - REMEDIAL		Suite 207, 30 Fisher Road Dee Why N.S.W. 2099		Client:		24 Wandeen Road Clareville NSW 2107		Sept 2020	H.O. C.F.	Paul R Bruce AMIEAust.
15.12.2020				Rick G Wray		Sydney: Ph: (02) 9984 7000		Rise Projects		Drawing Title:		Job No:	Drawing No:	
14.10.2020				BE(Civil), CPEng, MIEAust., NER, RPEQ: 08293.		Gold Coast: Ph: (07) 5631 4744		Rise Projects		STORMWATER DRAINAGE DETAILS SHEET 1		200835	D04	
Date:				By:		Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220		Rise Projects		STORMWATER DRAINAGE DETAILS SHEET 1		200835	D04	
Issue:				Review:		E : nb@nbconsulting.com.au W : www.nbconsulting.com.au		Rise Projects		STORMWATER DRAINAGE DETAILS SHEET 1		200835	D04	
Description:				The copyright of this drawing remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers		Rise Projects		Rise Projects		STORMWATER DRAINAGE DETAILS SHEET 1		200835	D04	