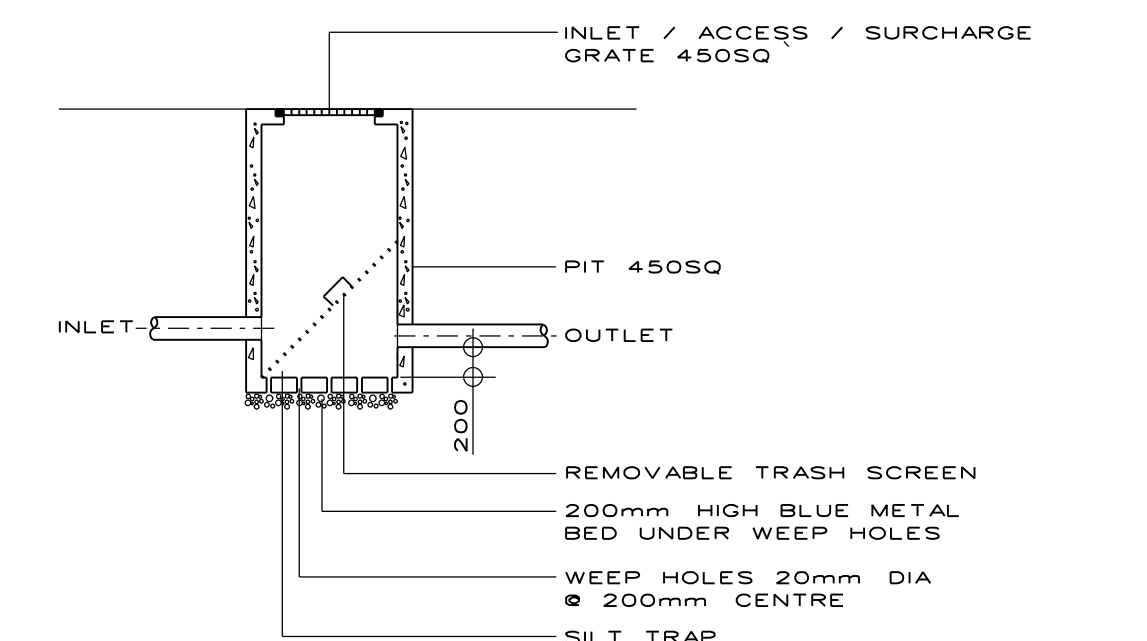


- NOT FOR CONSTRUCTION
- FINAL LOCATION OF ALL DOWNPIPES, PITS, RAINWATER OUTLETS AND SUBSOIL PIPES TO BE CONFIRMED DURING CONSTRUCTION

CERTIFICATE STAGE OF THE PROPOSED DEVELOPMENT

NOTES
FOR GENERAL NOTES AND LEGEND
REFER TO DRAWING H - DA - 00

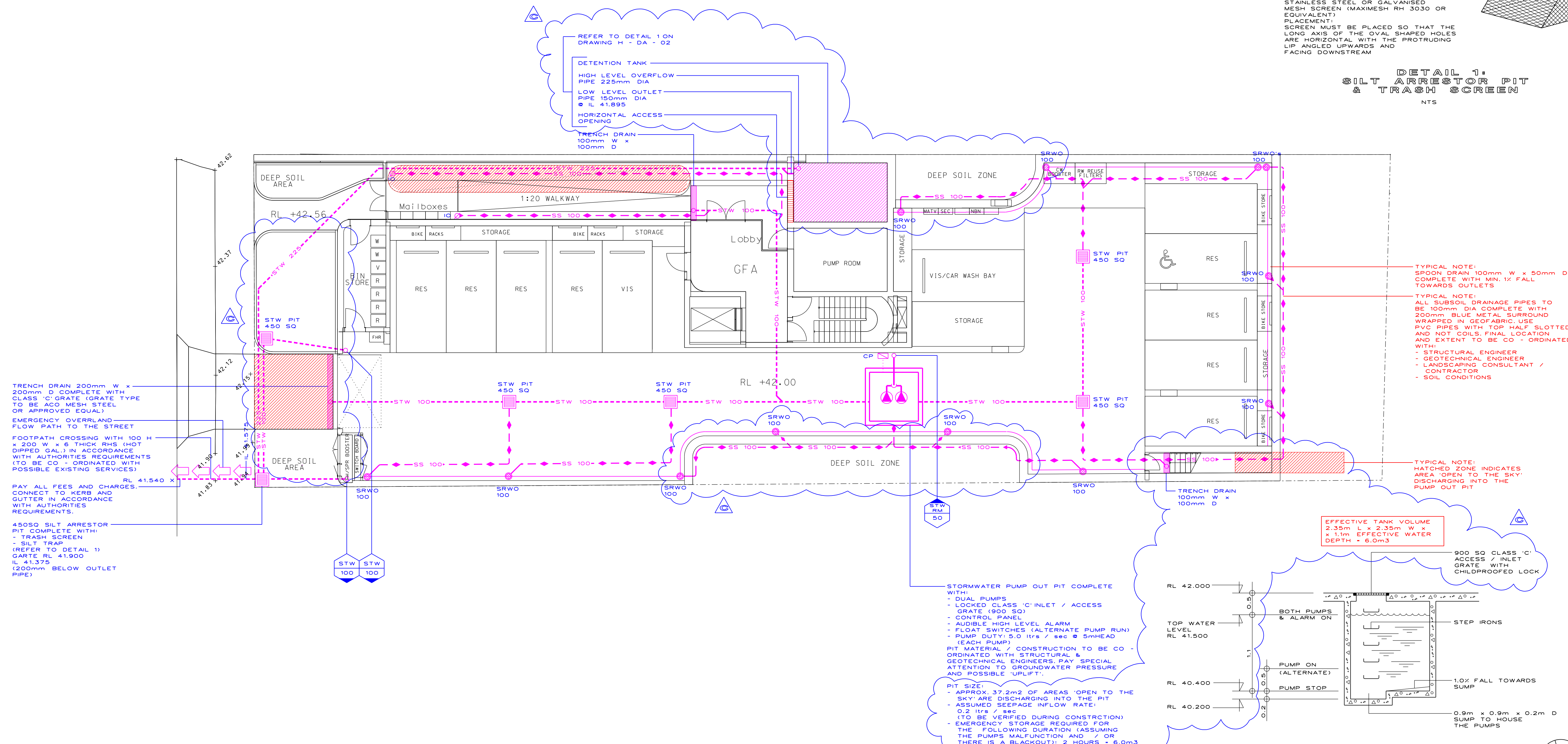


HANDLE

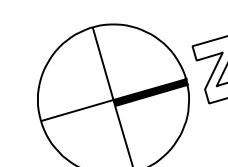
OUTLET BEHIND _____

TRASH SCREEN TO PROTECT THE OUTLET
& DOWNSTREAM DRAINAGE SYSTEM
MATERIAL:
STAINLESS STEEL OR GALVANISED
MESH SCREEN (MAXIMESH RH 3030 OR
EQUIVALENT)
PLACEMENT:
SCREEN MUST BE PLACED SO THAT THE
LONG AXIS OF THE OVAL SHAPED HOLES
HORIZONTAL WITH THE PROTRUDING
LIP ANGLED UPWARDS AND
FACING DOWNSTREAM

DETAIL 1:
SILT ARRESTOR PIT
& TRASH SCREEN
NTS



APPROVAL



C	RE - ISSUED FOR DA	04.07.22
B	RE - ISSUED FOR DA	14.10.21
A	ISSUED FOR DA	22.09.21
REV	DESCRIPTION	DATE

CLIENT
ADJANI

ARCHITECT
DKO ARCHITECTURE

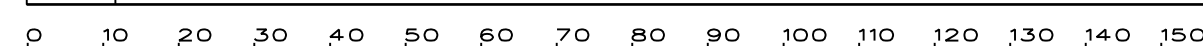
itmdesign
consulting hydraulic engineers
unit 6 / 3 apollo st, warriewood nsw 2102
po box 1438 mona vale nsw 1660
tel (02) 9997 1566 fax (02) 9997 3266
email: markus@itmdesign.com.au

PROJECT
30 FAIRLIGHT
STREET

FAIRLIGHT
NSW 2094

DRAWING TITLE
BASEMENT
STORMWATER
DRAINAGE

SCALE <div style="border: 1px solid black; padding: 2px; display: inline-block;">1:100 @ A1 / 1:200 @ A3</div>		JOB No <div style="border: 1px solid black; padding: 2px; display: inline-block;">20 / 308</div>
DISCIPLINE <div style="border: 1px solid black; padding: 2px; display: inline-block;">HYD</div>	DRAWING No <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-DA-01</div>	REVISION <div style="border: 1px solid black; padding: 2px; display: inline-block;">C</div>



- NOT FOR CONSTRUCTION
- FINAL LOCATION OF ALL DOWNPIPES, PITS, RAINWATER OUTLETS AND SUBSOIL PIPES TO BE CONFIRMED DURING CONSTRUCTION CERTIFICATE STAGE OF THE PROPOSED DEVELOPMENT

ALL LANDSCAPED AREAS LOCATED ABOVE CONCRETE SLABS
TO BE EQUIPPED WITH WATERPROOFING MEMBRANE,
DRAINAGE CELL AND GEOFABRIC

ALL ACCORDANCE WITH NORTHERN BEACHES
STORMWATER REQUIREMENTS

ACCORDING TO DESIGN GRAPHS (APPENDIX 14):

DETENTION REQUIRED = 32.0m3

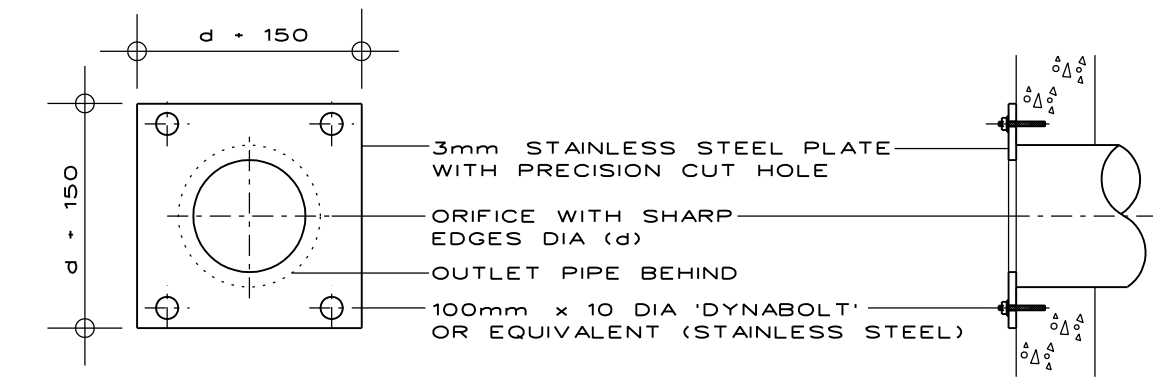
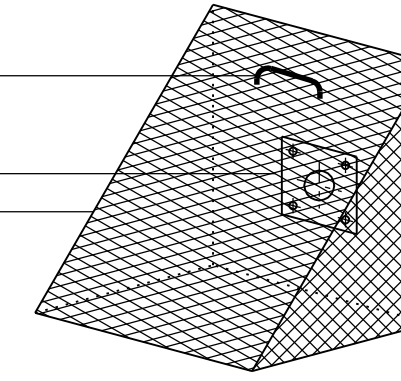
PSD = 25.0 ltrs/sec

MAX. PERMISSIBLE DISCHARGE TO KERB AND GUTTER

ITEM	DESCRIPTION	
A	TANK AREA	12.8m2
B	AVERAGE EFFECTIVE WATER DEPTH	2.5m
C	EFFECTIVE TANK VOLUME (12.8m2 x 2.5m)	32.0m3
D	NOT USED	
E	LOUVERED HORIZONTAL ACCESS OPENING (LOCKED)	0.6m H x 2.0m W
F	MAX. WATER LEVEL ABOVE $\frac{1}{2}$ OF ORIFICE PLATE	2.53m
G	OUTLET PIPE	150mm DIA
H	TRASH SCREEN	REFER TO DETAIL
I	ORIFICE PLATE	REFER TO DETAIL
J	SILT TRAP	1.0m SQUARE
K	WEEP HOLES 20mm DIA	● 200mm CENTRE
L	BLUE METAL BED (WRAPPED IN GEOFABRIC)	200mm HIGH
M	INLET PIPE	REFER TO PLAN
N	STEP IRONS	
O	FREEBOARD	0.3m
P	EMERGENCY OVERFLOW PIPE	225mm DIA
Q	DISCHARGE PIPE TO COUNCIL'S DRAINAGE SYSTEM	225mm DIA



ORIFICE PLATE BEHIND—
TRASH SCREEN TO PROTECT THE ORIFICE
& DOWNSTREAM DRAINAGE SYSTEM
MATERIAL—
STAINLESS STEEL OR GALVANIZED
MESH SCREEN (MAXIMESH RH 3030 OR
EQUIVALENT)
PLACEMENT—
SCREEN MUST BE PLACED SO THAT THE
LONG AXIS OF THE OVAL SHAPED HOLES
ARE HORIZONTAL WITH THE PROTRUDING
LIP ANGLED UPWARDS AND
FACING DOWNSTREAM



CALCULATION OF ORIFICE SIZE

```

PSD = PERMISSABLE SITE DISCHARGE IN [m3/s]
A   = CROSSSECTIONAL AREA OF ORIFICE PLATE IN [m2]
C   = DISCHARGE CO-EFFICIENT (0.6 FOR ORIFICE PLATE)
G   = ACCELERATION DUE TO GRAVITY = 9.81[m/s2]
H   = MAX. HEIGHT / HEAD OF WATER ABOVE THE
      CENTRE LINE OF THE ORIFICE PLATE IN [m]
D   = ORIFICE DIAMETER IN [mm]

```

$$A = \frac{\text{PSD}}{C \times \sqrt{2 \times G \times H}} = \frac{0.025}{0.6 \times \sqrt{2 \times 9.81 \times 2.53}} = 0.006 \text{ m}^2$$

$$D = \sqrt{\frac{A \times 4}{\pi}} = \sqrt{\frac{0.006 \times 4}{\pi}} \times 1000 \text{ mm/m} = 87 \text{ mm DIA}$$

DETAIL 3:

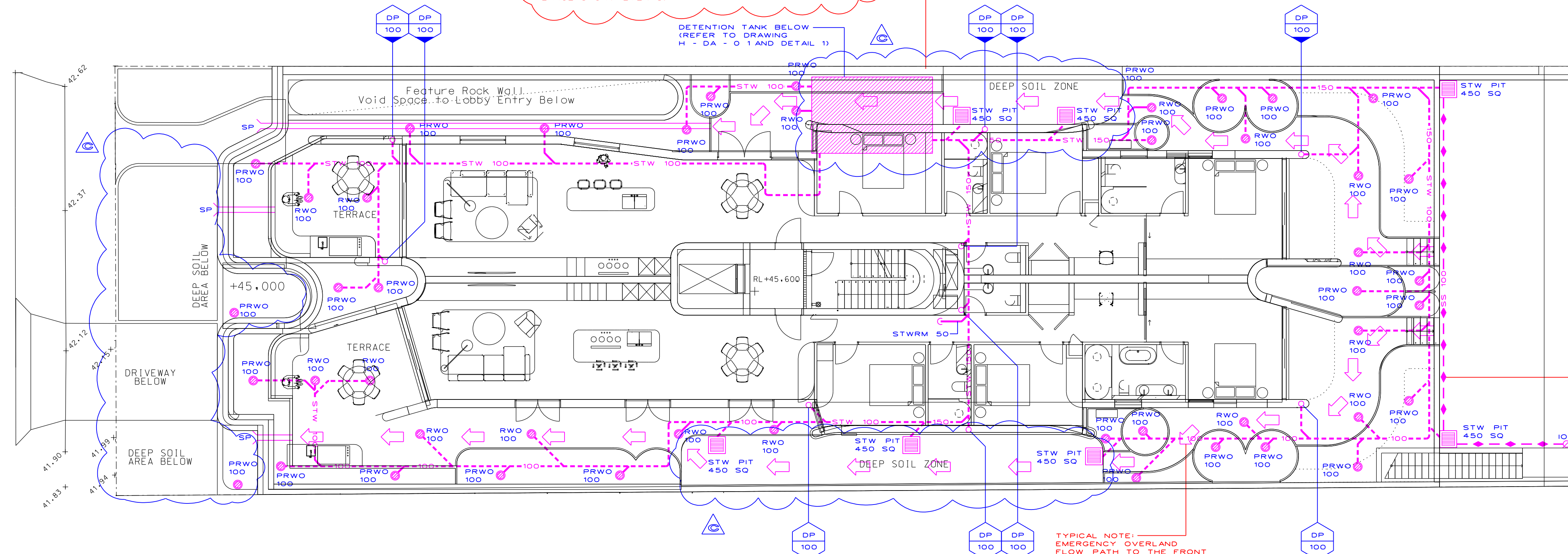
E

DETAIL 1:
DIAGRAMMATIC SECTION
THROUGH DETENTION TANK

NTS

DETAIL 2:
REMOVABLE TRASH
SCREEN

NT:



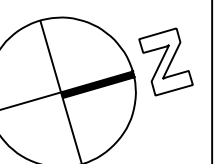
TYPICAL NOTE:
ALL SUBSOIL DRAINAGE PIPES TO
BE 100mm DIA COMPLETE WITH
200mm BLUE METAL SURROUND
WRAPPED IN GEOFABRIC, USE
PVC PIPES WITH TOP HALF SLOTTED
AND NOT COILS FINAL LOCATION
AND EXTENT TO BE CO - ORDINATED
WITH:

- STRUCTURAL ENGINEER
- GEOTECHNICAL ENGINEER
- LANDSCAPING CONSULTANT /
CONTRACTOR
- SOIL CONDITIONS

TYPICAL NOTE: _____
EMERGENCY OVERLAND
FLOW PATH TO THE FRONT

— TYPICAL NOTE:
FROM ROOF ABOVE. FINAL
LOCATION AND EXTENT
TO BE CONFIRMED DURING
THE CC STAGE.

APPROVAL



D	RE - ISSUED FOR DA	06.09.22
C	RE - ISSUED FOR DA	04.07.22
B	RE - ISSUED FOR DA	14.10.21
A	ISSUED FOR DA	22.09.21
REV	DESCRIPTION	DATE

CLIENT
ADJANI

ARCHITECT
DKO ARCHITECTURE

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email: markus@itmdesign.com.au

PROJECT
30 FAIRLIGHT
STREET

FAIRLIGHT
NSW 2094

DRAWING TITLE

GROUND FLOOR
STORMWATER
DRAINAGE

SCALE 1:100 ☒ A1 / 1:200 ☒ A3

DISCIPLINE	DRAWING No	REVISION
HYD	H-PA-Q2	B

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

WIZARD WTS