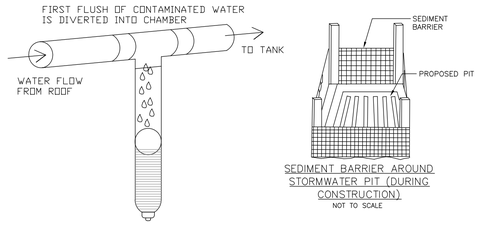
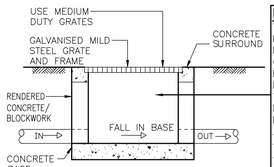
A1



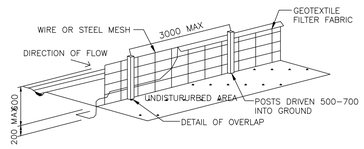
SEDIMENT BARRIER AROUND STORMWATER PIT (DURING CONSTRUCTION)
NOT TO SCALE

FIRST FLUSH WATER DIVERTER DETAIL
NOT TO SCALE

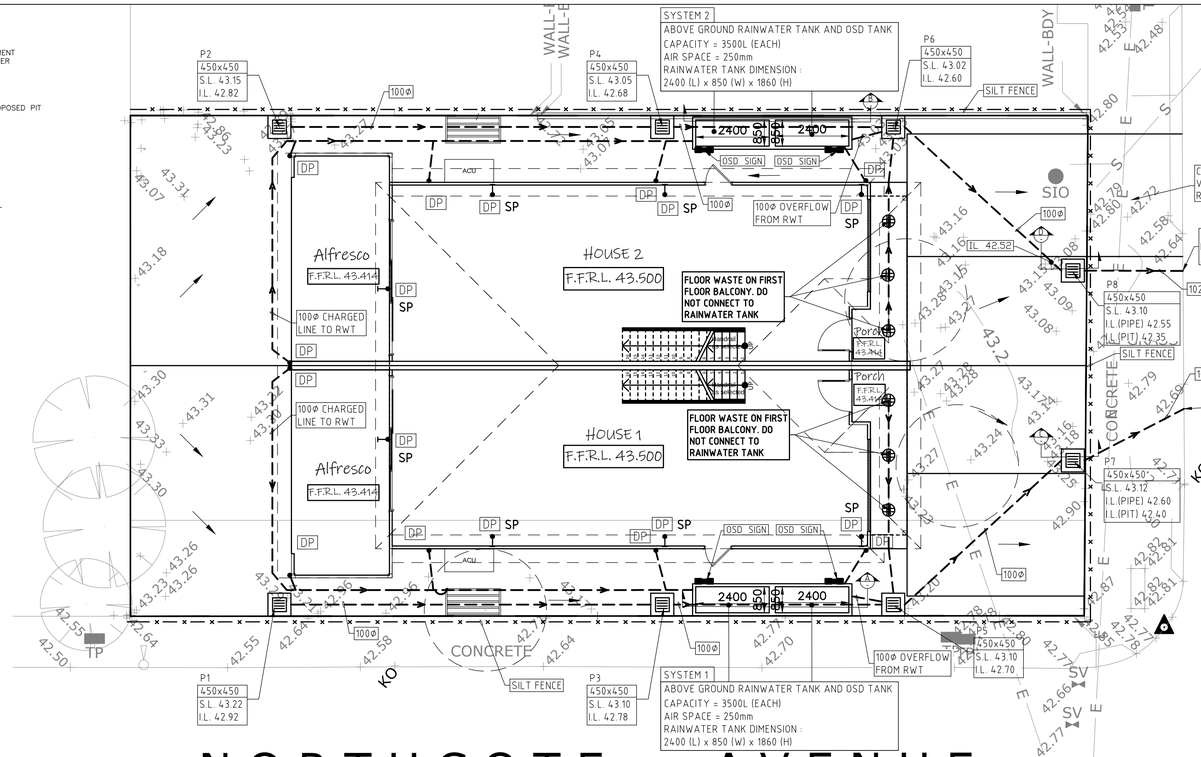


NOTE:
THE STORM WATER DRAINAGE PITS TO BE MADE WITH CONCRETE OR BRICKS. IT IS THE DECISION AND RESPONSIBILITY OF THE BUILDER TO USE HEAVY DUTY PLASTIC PITS FOR 450x450 PITS AND NOT MORE THAN 450mm DEEP AS LONG AS THEY ARE DURABLE AND STABLE AT ALL THE TIMES

STANDARD PIT DETAIL
NOT TO SCALE



SILT FENCE DETAIL (TO BE WITHIN THE PROPERTY BOUNDARY -DURING CONSTRUCTION ONLY)
NOT TO SCALE



NORTHCOTE AVENUE

HILL STREET

STORMWATER DRAINAGE LAYOUT PLAN
SCALE:- 1:100 @ A1

NOT FOR CONSTRUCTION

BENCH MARK
BM 50 NAIL IN KERB RL 42.80 (A.H.D)

RAINWATER TANKS NOTES:

CAPACITY:
RAINWATER TANKS HAVE A CAPACITY AS MARKED IN THE PLAN.

RAINWATER CONNECTION:
TANKS WATER WILL BE PLUMBED TO ALL OUTDOOR WATERING, TOILETS AND LAUNDRY AS PER BASIX REQUIREMENTS.

FIRST FLUSH:
'FIRST FLUSH' DEVICE WILL BE FITTED TO REMOVE SURFACE CONTAMINATION.

NON DRINKING:
TANKS WATER WILL NOT BE CONNECTED TO DRINKING OR BATHING WATER OUTLETS.

FULLY ENCLOSED:
TANKS WILL BE FULLY ENCLOSED AND SEALED TO PREVENT ACCESS BY MOSQUITOES.

NON REFLECTIVE FINISH:
TANKS SURFACES WILL HAVE NON REFLECTIVE FINISH.

WARNING LABELS:
A LABEL WILL BE AFFIXED TO THE TANKS WARNING THAT WATER IS NOT TO BE CONSUMED AND RAINWATER SIGNAGE WILL BE PLACED ABOVE ALL TANKS WATER OUTLETS.

ROOFING MATERIALS:
THE ROOF SURFACE FROM WHICH RAINWATER IS BEING DRAWN WILL NOT CONTAIN LEAD,TAR,

ASBESTOS OR PAINTS BASE:
TANKS WILL BE BUILT ON A SELF SUPPORTING BASE (APPLICABLE TO GROUND TANKS ONLY)

WATER PRESSURE:
TANKS WILL BE FITTED WITH SMALL MOTORISED PUMPS TO PROVIDE ACCEPTABLE WATERPRESSURE.

PUMP NOISE:
PUMP WILL BE DESIGNED AND LOCATED SO AS TO CAUSE A NOISE DISTURBANCE TO NEIGHBOURS (GENERALLY NOT 5 dBA ABOVE BACKGROUND NOISE)

INSTALLATION:
WILL BE INSTALLED BY A LICENSED PLUMBER IN ACCORDANCE WITH SYDNEY WATER REQUIREMENTS AND THE NSW CODE OF PRACTICE:PLUMBING AND DRAINAGE

BACKFLOW PREVENTION:
BACKFLOW PREVENTION DEVICE WILL BE PROVIDED AT THE MAINS WATER METER

MAIN SUPPLY:
A TIBICKLE TOP-UP SYSTEM WILL BE PROVIDED AT THE MAINS WATER.

BACK UP SUPPLY:
A BACK UP SUPPLY OF MAINS WATER WILL BE PROVIDED IN EVENT OF FALIURE OR MAINTENANCE.

ANAEROBIC ZONE:
WATER WILL BE DRAWN FROM ABOVE THE ANAEROBIC ZONE OF TANKS.

TANKS CONSTRUCTION:
TANKS WILL BE STRUCTURALLY SOUND AND CONSTRUCTED IN ACCORDANCE WITH AS/NZ3500.1.2-1998:NATIONAL PLUMBING AND DRAINAGE-WATER SUPPLY-ACCEPTABLE SOLUTIONS.

AIR GAP:
TANKS WILL BE PROVIDED WITH AN AIR GAP IN ACCORDANCE WITH AS/NZ 3500.1.2 & AS2845.2

ON GOING MAINTENANCE:
TANKS WILL BE WELL KEPT AND MAINTAINED BY THE OWNER.

NOTES:

1. ALL WORKS TO BE CONSTRUCTED TO THE REQUIREMENTS AND SATISFACTION OF THE NORTHERN BEACHES COUNCIL DCP.
2. PRIOR TO COMMENCEMENT OF ANY SITE WORKS,THE BUILDING CONTRACTOR/PLUMBER HAS TO EXPOSE ALL SERVICES IN THE FULL WIDTH OF THE FOOTPATH TO ENSURE THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPE.
3. THE DRAINAGE CONTRACTOR IS TO LOCATE AND RELOCATE AS NECESSARY ALL SERVICES ON SITE.
4. THE BUILDER IS TO VERIFY ALL LEVELS ON THE SITE PRIOR TO COMMENCING CONSTRUCTION.
5. SILT FENCE IS TO BE ERECTED PRIOR TO COMMENCING WORK. FENCE TO BE MAINTAINED IN WORKING ORDER DURING THE TIME OF CONSTRUCTION.
6. W.A.E. DRAWING BY A REGISTERED SURVEYOR IS REQUIRED PRIOR TO CERTIFIATION OF DRAINAGE.
7. U.N.O. ALL DOWN PIPES ARE TO BE 100ø.
8. U.N.O. ALL PIPES TO BE 100ø WITH 1% MIN SLOPE.
9. ALL THE RETAINING WALLS TO STRUCTURAL ENGINEERS DETAIL AND SHOULD BE WITHIN THE SITE BOUNDARY.
10. ALL THE DOWN PIPES FROM THE ROOF GUTTER TO RAINWATER TANK SHALL BE CHARGED LINES AND SOLVENT WELD JOINTED.
11. PROVIDE OSD SIGN IN THE OSD BASIN AREA.

LEGEND

DRAINAGE LINE
AG. LINE — a — a
SILT FENCE
EXISTING LEVEL x 44.10 DESIGN LEVEL x 45.61
SILT BARRIER AROUND PIT
CLEANING EYE (OR INSEPECTION EYE) CE
SURFACE LEVEL SL 45.50
INVERT LEVEL IL 45.00
REMOVED TREE

SURFACE INLET PIT
JUNCTION PIT
DOWN PIPE DP
SPREADER PIPE SP
PLANTER GRATE PG
FLOOR GRATE FG
DROPPER DR
STEP IN THE RETAINING WALL
FLUSHING POINT FP

OSD CALCULATIONS (FORMER MANLY COUNCIL AREA)

THE DRAINS MODEL HAS BEEN USED TO CALCULATE THE SITE STORAGE AND DISCHARGE REQUIREMENTS.

① SITE AREA = 510m²
② PRE DEVELOPMENT IMPERVIOUS AREA = 76%
③ THE ABOVE GROUND RAINWATER TANKS HAVE BEEN USED AS OSD FOR THIS DEVELOPMENT
④ THE FLOW RATES (L/S) FROM THE PRE DEVELOPMENT AND POST DEVELOPMENT STAGES ARE GIVEN IN THE TABLE BELOW :

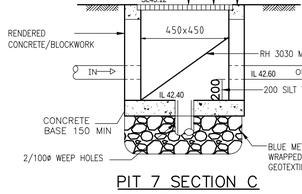
SYSTEM 1		
PRE-DEVELOPMENT STAGE	ARI (YEARS)	
	5	100
TOTAL	7.5	14

SYSTEM 2		
PRE-DEVELOPMENT STAGE	ARI (YEARS)	
	5	100
TOTAL	7.5	14

POST-DEVELOPMENT STAGE	ARI (YEARS)	
	5	100
(1) BY PASS (AREA = 117m²) (18% IMPERVIOUS AREA)	3	6
(2) OSD (AREA = 138m²) (100% IMPERVIOUS AREA)	1	2
TOTAL DISCHARGE	4	8

POST-DEVELOPMENT STAGE	ARI (YEARS)	
	5	100
(1) BY PASS (AREA = 117m²) (18% IMPERVIOUS AREA)	3	6
(2) OSD (AREA = 138m²) (100% IMPERVIOUS AREA)	1	2
TOTAL DISCHARGE	4	8

⑤ FROM THE CALCULATION THE REQUIRED OSD VOLUME IS 9m³ (TOTAL FOR BOTH HOUSE)
⑥ THE ORIFICE DIAMETER IS 30mm
⑦ RAIN WATER TANK IS 3.0m³ (FOR EACH HOUSE)
⑧ OSD PROVIDED IS 8.0m³ (TOTAL FOR BOTH HOUSE)
⑨ RAINWATER TANK PORTION IS NOT CONSIDERED FOR OSD CALCULATION



PIT 7 SECTION C
NOT TO SCALE

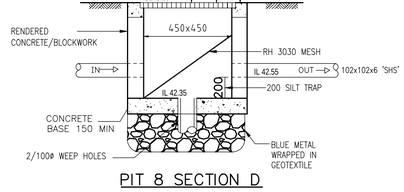
THIS IS AN
ON-SITE STORMWATER DETENTION SYSTEM
REQUIRED BY YOUR LOCAL COUNCIL

IT IS AN OFFENCE TO REDUCE THE VOLUME OF THE TANK OR BASIN OR TO INTERFERE WITH THE ORIFICE PLATE THAT CONTROLS THE OUTFLOW

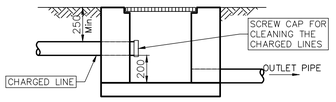
THE BASE OF THE OUTLET CONTROL PIT AND THE DEBRIS SCREEN MUST BE CLEANED OF DEBRIS AND SEDIMENT ON A REGULAR BASIS BY THE OWNER

THIS PLATE MUST NOT BE REMOVED

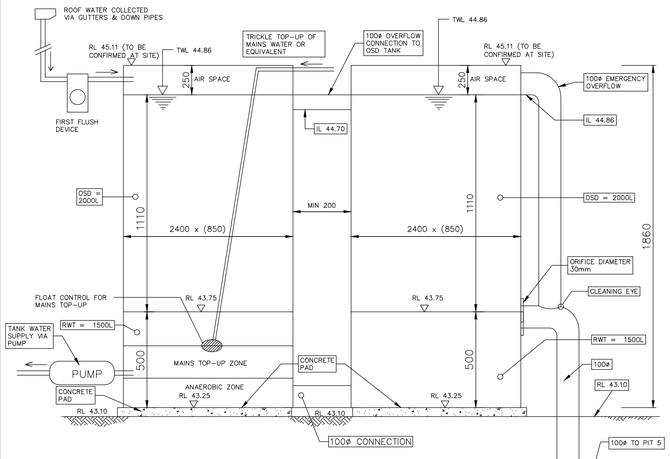
OSD SIGN
NOT TO SCALE



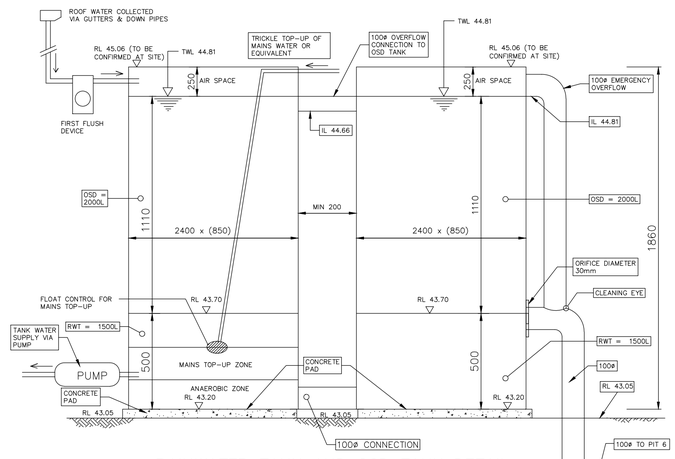
PIT 8 SECTION D
NOT TO SCALE



TYPICAL CHARGED LINE CLEAN OUT CONNECTION TO A PIT
NOT TO SCALE



RAINWATER TANK AND OSD TANK DETAIL
SECTION A
SCALE NTS -



RAINWATER TANK AND OSD TANK DETAIL
SECTION B
SCALE NTS -

CAUTION:
ALL THE LEVELS AND DIMENSIONS ARE CRITICAL. PLEASE FOLLOW THE SW PLAN FOR CONSTRUCTION TO AVOID FINAL CERTIFICATION DELAY. IF YOU SEE SOMETHING NOT CORRECT OR NOT SUITED FOR SITE PLEASE CONTACT THE STORMWATER ENGINEER FOR CLARIFICATION AND FURTHER DIRECTIONS.

NOTE:
THE SURFACE INLET PITS SHALL BE HEAVY DUTY PLASTIC PITS IF IT IS LESS THAN 400mm DEEP.

NOTE:
PRIOR TO CONSTRUCTION THE BUILDER IS TO COORDINATE ALL THE PLANS (ARCHITECTURE PLAN, LANDSCAPE PLAN, STRUCTURAL ENGINEER'S PLAN AND THE STORMWATER PLAN) TO MAKE SURE ALL THE DESIGN LEVELS, DOWNPIPE LOCATIONS AND THE FLOOR LEVELS ARE SAME IN ALL THE PLANS.

NOTE:
THE PIT SURFACE LEVELS AND THE TOP OF RETAINING WALLS SHALL BE RE-CONFIRMED AT SITE

NOTE:
CLEAN OUT LINES FROM THE CHARGED LINES TO BE CONNECTED TO THE NEAREST PITS WITH END CAP AT THE PIT END

NOTE:
PROVIDE FLOOR GRATES (100Ø) FOR THE FIRST FLOOR BALCONIES (DO NOT CONNECT TO THE RAINWATER TANK)

Issue	Date	Description	BY
A	21.04.2024	ISSUED FOR DA APPROVAL	INO

DESIGN BY: VNK CONSULTING PTY LTD
PO BOX 9118 HARRIS PARK NSW 2150
Mobile: 0401 132 386
Email: VNKCONSULTING@GMAIL.COM
PRINCIPAL ENGINEER: LOGAN N LOGESWARAN
QUALIFICATIONS: BscEng, MEng, MEngStud, M.ASCE, MIEAust, CPEng, NER

Drawing Title: STORMWATER DRAINAGE LAYOUT PLAN

DESIGNED	NL
DRAWN	INO
DATUM	AHD
DATE	21.04.2024

Project:
PROPOSED DUPLEX DEVELOPMENT
3 HILL STREET
FAIRLIGHT NSW 2094

Ref No. 210424-01
Issue: A
SHEET 1 of 1