







# CONCEPT STORMWATER MANAGEMENT PLANS

## PROPOSED NEW RESIDENTIAL DEVELOPMENT

### LOT 2, No.128 ELANORA ROAD, ELANORA HEIGHTS NSW 2101

#### LEGEND

	GRATED INLET PIT
450x450	450mm SQUARE INTERNAL
GRT 75.54	GRATE LEVEL = RL 75.54
IL 75.12	INVERT LEVEL = RL 75.12
○ IO	INSPECTION OPENING CAP
○ DP	PROPOSED DOWNPIPE 90mm dia or 100mm x 50mm RECTANGULAR UNO
	EXISTING TREE
	GRATED TRENCH DRAIN
	GRATED ROUND OUTLET 100mm DIAMETER
	PROPOSED DOWNPIPE SPREADER
	STRUCTURE No 1 (FOR HYDRAULIC CALCS)
---	STORMWATER DRAINAGE
- . - . -	100 DIA CHARGED/1% MIN - ROOF AREA ONLY

#### NORTHERN BEACHES COUNCIL-STORMWATER MANAGEMENT REQUIREMENTS.

DESIGN CODE: PITTWATER COUNCIL STORMWATER MANAGEMENT CODE

COUNCIL DESIGN CODE:

PROPOSED NEW RESIDENTIAL DEVELOPMENT WHICH FORMS PART OF A RECENT APPROVED SUBDIVISION. CONDITIONS OF CONSENT IMPOSED REQUIRE AN INTERALLOTMENT PIPED DRAINAGE EASEMENT TO BE CONSTRUCTED AND ANY FUTURE DEVELOPMENT TO CONNECT INTO THIS PIPED SYSTEM.

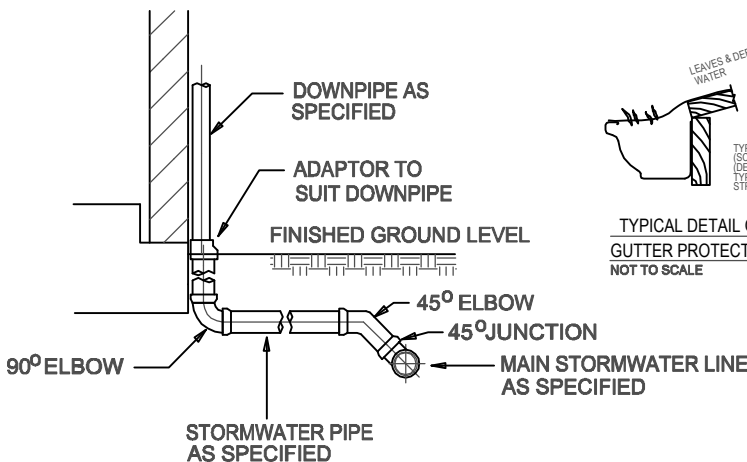
SITE AREA: 702 m2

THEREFORE COLLECT NEW ROOF AREA OF PROPOSED DWELLING AND DISCHARGE INTO THE BASIX RAINWATER TANK BEING OF 3000 LITRES CAPACITY WITH THE OVERFLOW AND DRIVEWAY RUNOFF INCLUDING ANY SURROUNDING IMPERVIOUS & PERVIOUS SURFACES ALL BEING CONNECTED INTO THE INTERALLOTMENT PIPED DRAINAGE SYSTEM IDENTIFIED AS PIT SP5.

DESIGNED BASED ON AR & R, AS 3500 & COUNCIL STORMWATER MANAGEMENT CODE.

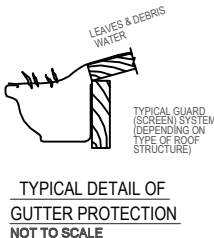
#### GENERAL NOTES

1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.
2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS. ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2003 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.
5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
6. THESE DRAWINGS DEPICT THE DESIGN OF SURFACE STORMWATER RUNOFF DRAINAGE SYSTEMS ONLY AND DO NOT DEPICT ROOF DRAINAGE OR SUBSOIL DRAINAGE SYSTEMS UNLESS NOTED OTHERWISE. THE DESIGN OF ROOF AND SUBSOIL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF OTHERS.
7. ALL STORMWATER DRAINAGE PIPES ARE TO BE 100mm DIAMETER uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
8. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.
9. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.
10. THIS PLAN IS THE PROPERTY OF EZE DRAINAGE SOLUTIONS PTY LTD AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM EZE DRAINAGE SOLUTIONS PTY LTD.

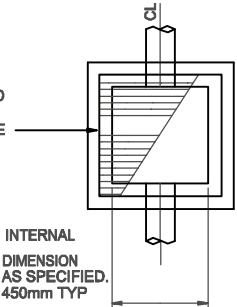


TYPICAL DETAIL - DOWNPIPE CONNECTION

NOT TO SCALE

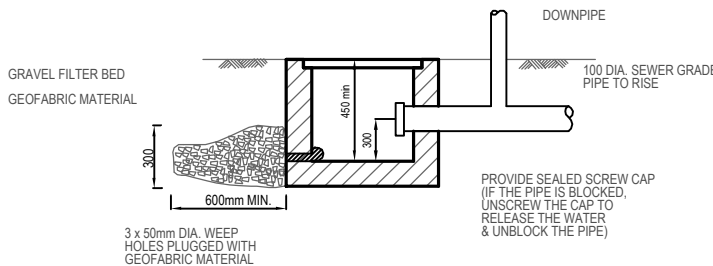


HINGED GALVANISED GRATE. HEAVY DUTY WHERE AT TRAFFICABLE LOCATION



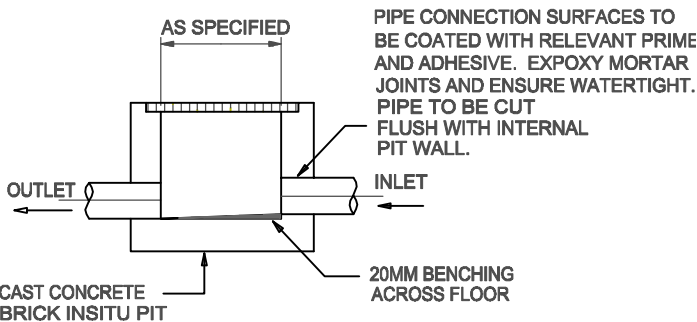
TYPICAL DETAIL - STANDARD PIT

NOT TO SCALE



TYPICAL DETAIL - CLEANING EYE PIT

NOT TO SCALE



A	26.03.18	DA ISSUE
ISS	DATE	AMENDMENT

ARCHITECT/BUILDER  
WINCREST HOMES  
CLIENT  
CBD PROJECTS

#### EZE DRAINAGE SOLUTIONS

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CIVIL & STORMWATER MANAGEMENT

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DWG TITLE  
COVER SHEET & CALCULATION TABLE

PROJECT TITLE  
PROPOSED NEW RESIDENTIAL DEVELOPMENT  
LOT 2, No.128 ELANORA ROAD, ELANORA HEIGHTS NSW 2101

DESIGNED BY :

EZ

ISSUED BY :



BE MIE Aust PENG

JOB No	DWG No	No IN SET	ISSUE
16017	D1	4	A

**NOTE**  
LOCATION OF NEW DOWNPIPES SHOWN ON THIS DRAWING ARE SUBJECT TO VERIFICATION BY BUILDER DURING CONSTRUCTION. DOWNPIPE LOCATION MAY BE VARIED PROVIDED INTENT OF THIS DESIGN IS MAINTAINED.

DISCHARGE TO CONSTRUCTED PIT 'SP5' TO COUNCIL STANDARDS/REQUIREMENTS. **USE 150 DIA uPVC AT 1% MIN OUTLET IL 100.90 AHD** TO BE CONFIRMED PRIOR TO COMMENCEMENT OF WORKS. ALL SERVICES TO BE LOCATED BY OTHERS.

**BASIX RAINWATER/RE-USE TANK**  
**3000 litre ABOVE GROUND TANK**  
DIMENSIONS : 2400 long x 1480 high x 950 wide "THE EVOLUTION SERIES MKII MODLINE TANK" OR EQUAL.FOR RE-USE IN ACCORDANCE WITH BASIX CERTIFICATE. INSTALL TO MANUFACTURERS SPECIFICATIONS, AS 3500, DEPT HEALTH AND COUNCIL'S REQUIREMENTS. REFER TYPICAL DETAIL SHEET D3. TANK INVERT = RL 103.70 nom TOP TANK = RL 105.18 CONNECT AT LEAST **150m2** OF THE ROOF AREA TO TANK AS REQUIRED BASIX CERTIFICATE

100 DIA ROOF ONLY.  
CHARGED LINE PRESSURE GRADE uPVC SOLVENT WELDED.  
NOTE CHARGED SYSTEM TO BE FULLY SEALED FROM TANK INLET TO ROOF GUTTER LEVEL.  
ROOF GUTTER RL = 106.40, 109.20  
TANK INLET RL = 105.20  
**DIFFERENTIAL HEAD = 1.20, 4.00**  
SUFFICIENT TO DRIVE SYSTEM.

**BASIX COMMITMENT**  
PROPOSED DWELLING TO HAVE A 3000 LITRE (MINIMUM) RAINWATER TANK TO BE CONNECTED TO 150m2 OF ROOF AREA IN ACCORDANCE WITH BASIX REQUIREMENTS.

**NOTE**  
THIS DRAWING IS FOR STORMWATER MANAGEMENT DESIGN AND DOES NOT COVER ANY OVERLAND FLOW DESIGN REQUIREMENTS.

**NOTE**  
LOCATION OF NEW PITS SHOWN ON THIS DRAWING ARE SUBJECT TO VERIFICATION BY BUILDER DURING CONSTRUCTION. PIT LOCATIONS MAY BE VARIED PROVIDED INTENT OF THIS DESIGN IS MAINTAINED.

**WARNING**  
LOCATION AND DEPTH OF ALL UNDERGROUND SERVICES TO BE INVESTIGATED WITH THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORKS.

EXTENSION OF MAIN CHARGED LINE CAPPED INSIDE CLEANOUT PIT FOR LINE MAINTENANCE. REFER CLEANOUT PIT DETAIL SHEET D1.

PIT P3 : 450 x 450 SQ  
GRATE RL : 103.50 nom  
INVERT RL: 103.00

PIT P2 : 450 x 450 SQ  
GRATE RL : 106.80 nom  
INVERT RL: 106.50

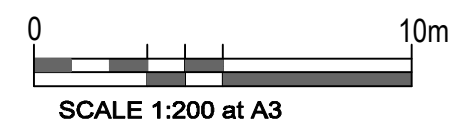
PIT P1 : 450 x 450 SQ  
GRATE RL : 106.50 nom  
INVERT RL: 106.00

HD GRATED TRENCH DRAIN  
200mm WIDE min  
110mm DEEP min  
GRATE RL : 106.84 NOM  
100 DIA 1% MIN OUTLET

TREES SHOWN DASHED TO BE REMOVED BY OWNER

TO ELANORA ROAD

**STORMWATER MANAGEMENT PLAN**  
SCALE 1: 200 A3



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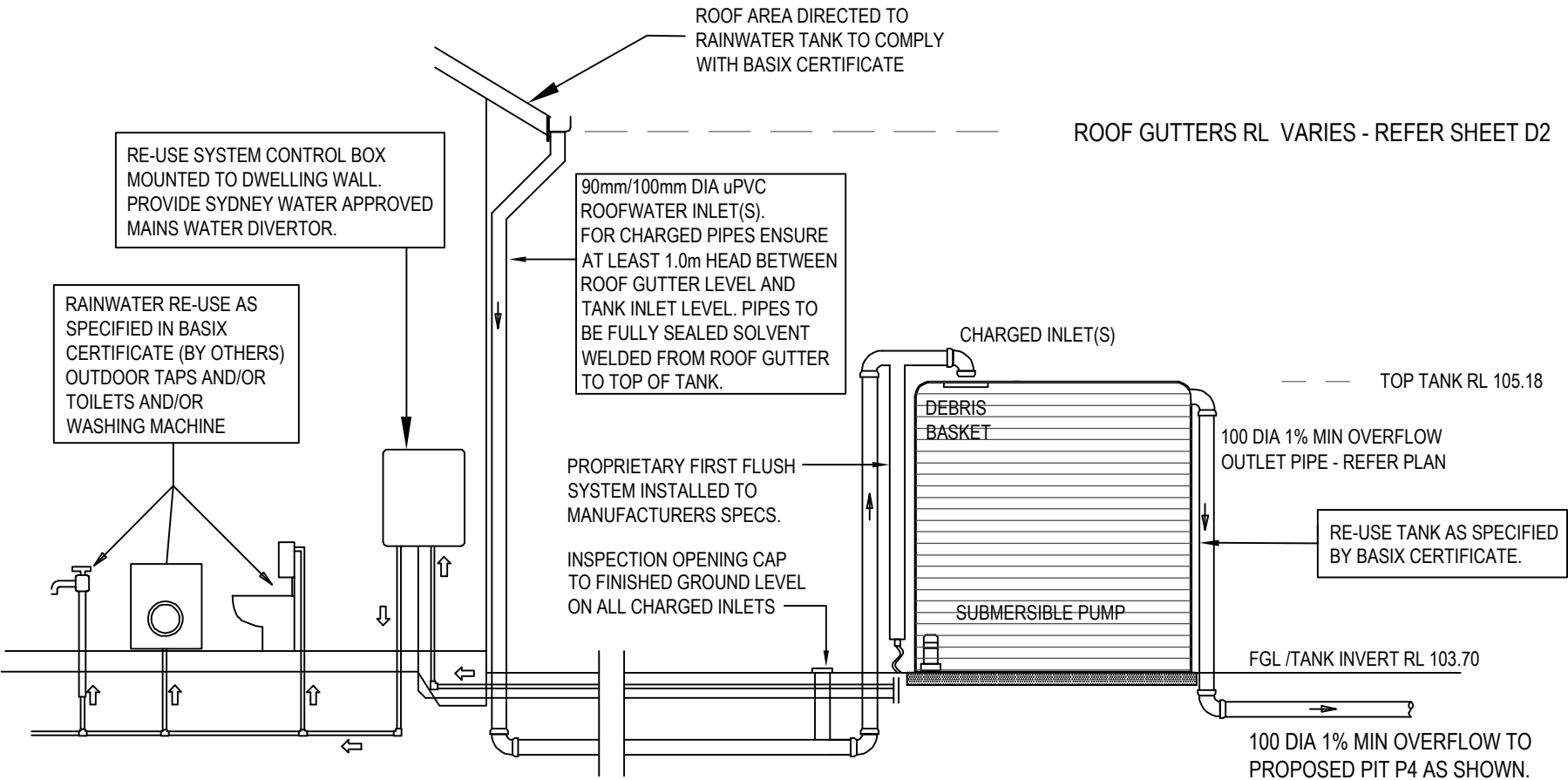
DWG TITLE	STORMWATER MANAGEMENT PLAN
PROJECT TITLE	PROPOSED NEW RESIDENTIAL DEVELOPMENT LOT 2, No.128 ELANORA ROAD, ELANORA HEIGHTS NSW 2101

DESIGNED BY :	EZ	ISSUED BY :	BE MIE Aust PENG
JOB No	16017	DWG No	D2
No IN SET	4	ISSUE	A



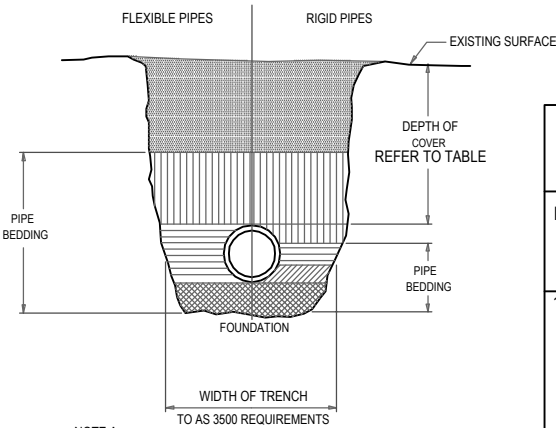
RAINWATER RE-USE SYSTEM NOTES

1. TOWNWATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF SYDNEY WATER. THIS MAY REQUIRE PROVISION OF:
- a. PERMANENT AIR GAP.
  - b. A BACKFLOW PREVENTION DEVICE.
  - c. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAIN WATER SUPPLY.
  - d. AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK.
2. PROVIDE AT LEAST ONE (1) EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING.
3. PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES
4. ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE.
5. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY LICENSED ELECTRICIAN.
6. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT TO BE CONNECTED.
7. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS 3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED "RAINWATER". THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS 2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345).
8. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELLED "RAINWATER" ON A METALLIC SIGN IN ACCORDANCE WITH AS 1319.
9. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.
10. SYSTEM TO COMPLY WITH SYDNEY WATER REQUIREMENTS AND ANY CONDITIONS OF LOCAL COUNCIL DEVELOPMENT CONSENT.



TYPICAL DETAIL - RAINWATER RE-USE TANK

NOT TO SCALE

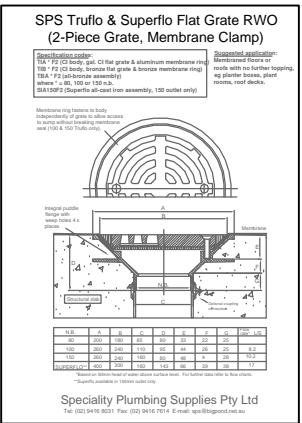
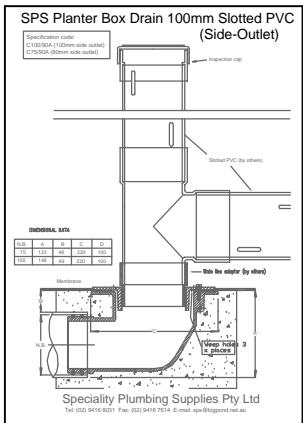
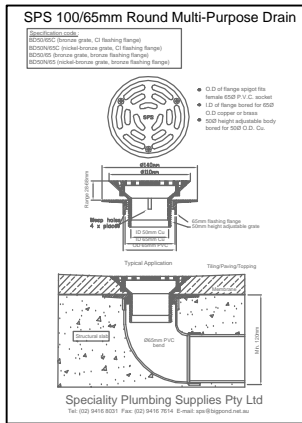


NOTE A  
STORMWATER DRAINS CONSTRUCTED OF OTHER THAN CAST IRON, DUCTILE IRON OR GALVANISED STEEL HAVING COVER LESS THAN THAT SPECIFIED IN TABLE SHALL BE COVERED WITH AT LEAST 50mm OVERLAY AND SHALL BE PAVED WITH AT LEAST—  
(a) 100mm THICKNESS OF REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICULAR LOADING

LEGEND - TRENCH BACKFILL

SYMBOL	FLEXIBLE PIPES	RIGID PIPES
	BACKFILL	
	PIPE OVERLAY	
	PIPE SIDE SUPPORT	SIDE ZONE
	—	HAUNCH ZONE
	PIPE UNDERLAY	BED ZONE

MINIMUM PIPE COVER (FROM FINISHED SURFACE TO TOP OF PIPE)		
LOCATION	MINIMUM COVER (mm)	
	CAST/DUCTILE IRON GAL STEEL	OTHER AUTHORISED PRODUCTS (*)
1. NOT SUBJECT TO VEHICULAR LOADING:		
A. WITHOUT PAVEMENT:		
i. FOR SINGLE DWELLINGS -	0	100
ii. OTHER THAN SINGLE DWELLINGS -	0	300
B. WITH PAVEMENT OF BRICK/UNREINFORCED CONCRETE -	0 (**)	50 (**)
2. SUBJECT TO VEHICULAR LOADING:		
A. OTHER THAN ROADS:		
i. WITHOUT PAVEMENT -	300	450
ii. WITH PAVEMENT OF:		
- REINF. CONC. FOR HEAVY VEHICLES -	0 (** #)	100 (** #)
- BRICK/UNREINF. CONC LIGHT VEHICLES -	0 (** #)	75 (** #)
B. ROADS		
i. SEALED	300	500 (#)
ii. UNSEALED	300	500 (#)
3. SUBJECT TO CONSTRUCTION VEHICLES OR IN EMBANKMENT CONDITIONS	300	500 (#)
(*) INCLUDES OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK		
(**) BELOW THE UNDERSIDE OF THE PAVEMENT		
#) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS 4060		



TYPICAL DETAILS- PLANTER BOX, BALCONY & TERRACE GRATE

NOT TO SCALE

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DWG TITLE  
TYPICAL DETAILS

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DESIGNED BY :

EZ

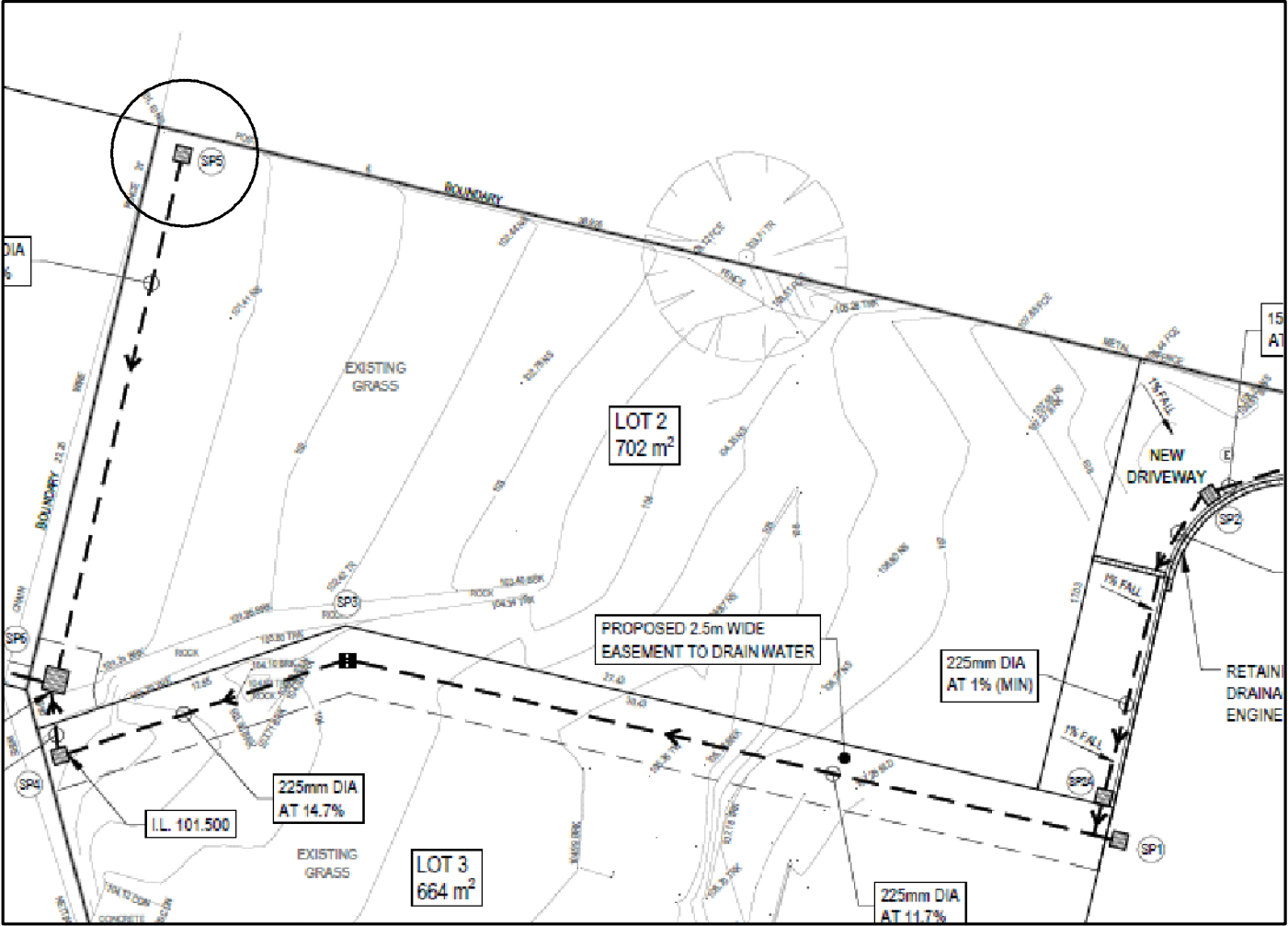
ISSUED BY :

BE MIE Aust PENG

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16017	D3	4	A

PIT SCHEDULE (U.N.O)				
PIT No.	PIT TYPE	PIT SIZE	SURFACE LEVEL	INVERT LEVEL
SP1	GRATED INLET	600 x 600	107.30	106.70
SP2	GRATED INLET	600 x 600	109.05	108.45
SP2A	GRATED INLET	600 x 600	107.20	108.60
SP3	GRATED INLET	600 x 600	104.20	103.20
SP4	GRATED INLET	600 x 600	102.00	100.95
SP5	GRATED INLET	600 x 600	101.40	100.80
SP6	GRATED INLET	900 x 900	101.30	100.20
SP7	GRATED INLET	600 x 600	93.30	92.50

**NOTE:** ALL PROPOSED GRATED DRAINS TO BE 200mm WIDE



PROPOSED PIPED EASEMENT DESIGN (BY OTHERS)  
NOT TO SCALE

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