STORMWATER MANAGEMENT PLAN (FOR DA) PROPOSED DWELLING LOT 10, No. 29 - 31 WARRIEWOOD ROAD, WARRIEWOOD

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.

- 1. ROOF DRAINAGE NOTE: AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM = 205mm/hr. FOR EAVES GUTTERS, AS 3500.3:2003 THEN HAS THE FOLLOWING REQUIREMENTS:
- i) FOR TYPICAL STANDARD QUAD GUTTER WITH Ae = 6000mm² AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE
- PER 30m² ROOF AREA. ii) DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm FOR GUTTERS SLOPE 1:500 AND STEPPER

iii) OVERFLOW METHOD TO FIGURE G1 OF AS 3500.3:2003 IT IS THE RESPONSIBILITY OF THE PLUMBER AND / OR BUILDER TO COMPLY WITH THIS. THIS DRAWING SHOWS PRELIMINARY LOCATIONS / NUMBERS OF DOWNPIPES ONLY WHICH ARE TO BE VERIFIED BY BUILDER / PLUMBER

- 6. ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE LINEESS NOTED OTHERWISE 7. 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
- 8. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL
- 9. THIS PLAN IS THE PROPERTY OF DONOVAN ASSOCIATES AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM DONOVAN ASSOCIATES.

PLAN SPECIFIC NOTES

- 2. TREE PRESERVATION: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS
- 3. ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2003 AND SECTIONS 3.5.3. 3.7.5 AND APPENDIX G OF AS 3500.3:2003
- 4. THIS DRAWING IS NOT TO BE USED FOR SET-OUT PURPOSES REFER TO ARCHITECTURAL DRAWINGS
- 5. LOCATION OF SURFACE STORMWATER GRATED INLET PITS MAY BE VARIED OR NEW PITS INSTALLED AT THE CONSTRUCTION STAGE PROVIDED DESIGN INTENT OF THIS DRAWING IS MAINTAINED

a	GRATED TRENCH DRAIN	LEGEND		SURFACE INLET PIT
	ABSORPTION TRENCH			SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)
—	PROPOSED ROOF GUTTER FALL		68	ACCESS GRATE
⊢● SP	PROPOSED DOWNPIPE SPREADER	F		(WITH ENVIROPOD 200 MICRON)
	WATER PIPE 100mm DIA. MIN. UNO	STORM	450 X 450	450 SQUARE INTERVAL
<u> </u>	SUBSOIL PIPE		SL 75.50	GRATE LEVEL = 75.50
 _ sw 	EXISTING STORMWATER PIPE		IL 75.20	INVERT LEVEL = RL 75.20
O IR	INSPECTION RISER		DP 90	PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN.
RWH	RAINWATER HEAD		× 10.00	NATURAL GROUND FINISHED DESIGN LEVEL

PIPE SIZE: THE MINIMUM PIPE SIZE SHALL BE:

- 90mm DIA WHERE THE LINE ONLY RECEIVES ROOFWATER RUNOFF; OR
- 100mm DIA WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS ON THE PROPERTY

THE MINIMUM PIPE VELOCITY SHOULD BE 0.6 m/s AND A MAXIMUM PIPE VELOCITY OF 6.0 m/s DURING THE DESIGN STORM.

PIPE GRADE:

- THE MINIMUM PIPE GRADE SHALL BE:
- 1.0% FOR PIPES LESS THAN 225mm DIA (UNO)
- 0.5% FOR ALL LARGER PIPES (UNO)

PIPES WITH A GRADIENT GREATER THAN 20% WILL REQUIRE ANCHOR BLOCKS AT THE TOP AND BOTTOM OF THE INCLINED SECTION: AND AT INTERVALS NOT EXCEEDING 3.0m

ANCHOR BLOCKS ARE DESIGNED ACCORDING TO CLAUSE 3.5.3 OF AS3500.3-1990

DEPTH OF COVER FOR PVC PIPES: MINIMUM PIPE COVER SHALL BE AS FOLLOWS:

LOCATION	MINIMUM COVER
NOT SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL
	300mm ALL OTHER DEVELOPMENTS
SUBJECT TO VEHICLE LOADING	450mm WHERE NOT IN A ROAD
UNDER A SEALED ROAD	600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-1989 LOADS ON BURIED CONCRETE PIPES, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT

- LEAST 50mm THICK OVERLAY AND SHALL THEN BE PAVED WITH AT LEAST: 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE
 - TRAFFIC • 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE
- SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
 - 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

CONNECTIONS TO STORMWATER DRAINS UNDER BUILDINGS:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 3.10 OF AS3500.3-1990

CONNECTIONS TO COUNCIL SYSTEM:

IF PROPOSED DRAINAGE SYSTEM IS DESIGNED TO CONNECT TO COUNCIL'S DRAINAGE SYSTEM, IT IS ADVISED THAT A 'WORKS PERMIT' IS OBTAINED FROM THE RESPECTIVE COUNCIL PRIOR TO COMMENCEMENT OF WORKS

ABOVE GROUND PIPEWORK

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 6 OF AS3500.3-1990

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	15 PARKES STREET PARRAMATTA NSW 2150	OF DONOVAN AND MAY NOT BE ALTERED IN ANY WAY WITHOUT DONOVAN ASSOCIATES WRITTEN CONSENT.	PROJECT	PROPOSED DWELLING		WARRIEWOOD	SCOTT SHARMA. M.I.E. Aust.	-	E308245	

DRAINAGE NOTES

PIT SIZES AND DESIGN:

DEPTH (mm)	MINIMUM PIT SIZE (mm)			
UP TO 450mm	450 x 450			
450mm TO to 600mm	600 x 600			
600mm TO 900mm	600 x 900			
900mm TO 1500mm	900 x 900 (WITH STEP IRONS)			
1500mm TO 2000mm	1200 x 1200 (WITH STEP IRONS)			

ALL PIPES SHOULD BE CUT FLUSH WITH THE WALL OF THE PIT.

- PITS GREATER THAN 600mm DEEP SHALL HAVE A MINIMUM ACCESS OPENING OF 600 x 600mm
- THE GRATED COVERS OF PITS LARGER THAN 600 x 600mm ARE TO BE HINGED TO PREVENT THE GRATE FROM FALLING INTO THE PIT.
- THE BASE OF THE DRAINAGE PITS SHOULD BE AT THE SAME LEVEL AS THE INVERT OF THE OUTLET PIPE. RAINWATER SHOULD NOT BE PERMITTED TO POND WITHIN THE STORMWATER SYSTEM

TRENCH DRAINS:

CONTINUOUS TRENCH DRAINS ARE TO BE OF WIDTH NOT LESS THAN 150mm AND DEPTH NOT LESS THAN 100mm. THE BARS OF THE GRATING ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.

STEP IRONS:

PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.

PVC PITS:

PVC PITS WILL ONLY BE PERMITTED IF THEY ARE NOT A GREATER SIZE THAN 450 x 450mm (MAXIMUM DEPTH 450mm) AND ARE HEAVY DUTY

IN-SITU PITS:

IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 4.6.3 OF AS3500.4-1990, PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.

GRATES:

GRATES ARE TO BE GALVANISED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT TO VEHICLE LOADING.

AREA CALCULATIONS					
TOTAL SITE AREA	407.3	m²			
EXISTING DEVELOPMENT					
ROOF AREA	0.0	m²			
PAVED AREA	0.0	m²			
DRIVEWAY AREA	0.0	m²			
IMPERVIOUS AREA	0.0	m²			
TOTAL IMPERVIOUS AREA PERCENTAGE	0.00%				
PROPOSED DEVELOPMENT					
PROPOSED ROOF AREA	223.0	m²			
PROPOSED PAVED AREA	14.0	m²			
PROPOSED DRIVEWAY AREA	35.6	m²			
TOTAL IMPERVIOUS AREA	272.6	m²			
TOTAL IMPERVIOUS AREA PERCENTAGE	66.93%				

NOTE: ENSURE ANY PROPOSED PAVING IS GRADED SO THAT IT IS NOT IMPACTING ADJOINING PROPERTIES.

INSPECTION RISER (IR)

PROVIDE 'SCREW CAP' INSPECTION RISER AT LOWEST POINT OF 'CHARGED LINES'

NOTE: ALL PROPOSED GRATED DRAINS TO BE 150mm WIDE

PIT SCHEDULE (U.N.O)								
PIT No.	PIT TYPE	PIT SIZE	SURFACE	INVERT				
			LEVEL	LEVEL				
SP1	GRATED INLET	450 x 450	14.27	13.82				
SP2	GRATED INLET	450 x 450	13.35	13.05				



(AS PER BASIX REQUIREMENTS)

SIZE: 3,055 LITRES (MIN) SLIMLINE TANK BY "KINGSPAN WATER" OR SIMILAR (2400L x 700W x 1940H) INSTALL TO MANUFACTURES SPECIFICATIONS, AS3500 AND COUNCIL REQUIREMENTS

FOR RE-USE AS SPECIFIED BY BASIX CERTIFICATE

- ENSURE TOP OF TANK IS MIN 0.5m BELOW ROOF GUTTERS TO
- ENSURE SUFFICIENT HEAD FOR THE SYSTEM
- TANK TO BE INSTALLED BY LICENSED PLUMBER IN
- ACCORDANCE WITH AS/NZS 3500:2003 AND NSW CODE OF PRACTICE PLUMBING AND DRAINAGE 2006
 - RETAINING WALL (INCLUDING -DRAINAGE) TO STRUCTURAL ENGINEERS DETAILS (TYPICAL) TK15.17 TOW: 14.700 WALL BOW: 14.280 100mm DIA (OVERFLOW FROM BLOCK OP RWT) BY GRAVITY 11.22 SMH BENCH MARK CUT TOP OF KERB RL15.12 GPS AHD SI 13 41 URMWATER PI CONSTRUCT NEW VEHICULAR CROSSING TO 14.280 COUNCIL SPECIFICATION BTK15.08 & REQUIREMENTS (DP 90) $\begin{pmatrix} DP\\ 90 \end{pmatrix}$ ROAD 15.150 NEW $\|$ NEW OUTDOOR (A)AS SORIVEWAY GARAGE LEISURE VC. FALL FALL FFL 14.367 1 k FFL 14.367 $\|$ SP 🖣 WARRIEWOOD X KERB PORCH FFL 14.367 PROPOSED 509PAVING DWELLING Í 11.18 5 15.03 FFL 14.452 14.280 CONCRETE COTPATH .00 EXISTING 11.10 TK14.93 PAVING wc •WC BOUNDAI 40 V 100mm DIA 'CHARGED LINE' TO RWT (TYPICAL) 100mm DIA 100mm DIA TOW: 14.700 AT 4% AT 1% (MIN) BOW: 14.280 GF FXISTING STORMWATER PSIL 13.10 Grate RL:13.10 ÍÍ

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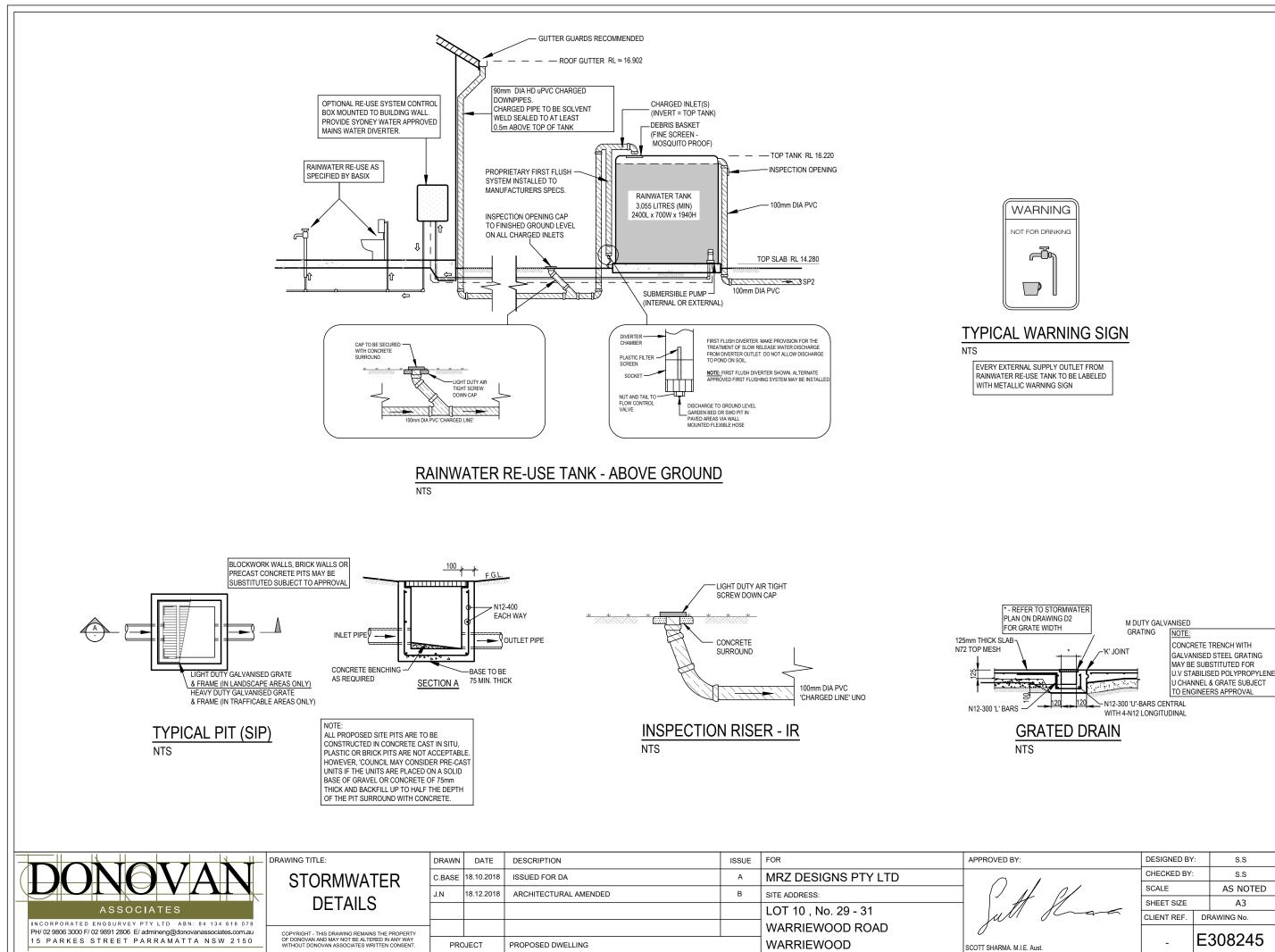
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NOTE: THESE PLANS ARE FOR CONCEPT ONLY

CONNECT 150mm DIA PVC AT 1% (MIN) TO OBVERT OF EXISTING EASEMENT STORMWATER PIPE. LICENSED PLUMBER TO CONFIRM ON SITE.

APPROXIMATE LOCATION OF EXISTING COUNCIL PIPE TO BE CONFIRMED BY LICENSED **BUILDER/PLUMBER PRIOR TO** COMMENCEMENT OF WORKS

: EXISTING 1.5M WIDE EASEMENT TO DRAIN STORMWATER



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