

STORMWATER MANAGEMENT PLAN (FOR DA)  
PROPOSED RESIDENCE  
LOT 42, No.7 BRIGHTON STREET, CURL CURL

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. ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE UNLESS 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.











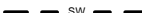



PLAN SPECIFIC NOTES

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  $A_e = 6000\text{mm}^2$  AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE PER  $30\text{m}^2$  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
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

SURFACE INLET PIT		<b>LEGEND</b>	GRATED TRENCH DRAIN	
SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)			ABSORPTION TRENCH	
ACCESS GRATE (WITH ENVIROPOD 200 MICRON)			PROPOSED ROOF GUTTER FALL	
450 SQUARE INTERVAL	450 X 450		PROPOSED DOWNPIPE SPREADER	
GRATE LEVEL = 75.50	SL 75.50		STORMWATER PIPE 100mm DIA. MIN. UNO	
INVERT LEVEL = RL 75.20	IL 75.20		SUBSOIL PIPE	
PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN.			EXISTING STORMWATER PIPE	
NATURAL GROUND FINISHED DESIGN LEVEL	$\times$ 		INSPECTION RISER	
			RAINWATER HEAD	

DRAINAGE NOTES

- 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 UNDER A SEALED ROAD	450mm WHERE NOT IN A 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*
- | 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.
- 18/04/19
- 
- DRAWING TITLE:
- DETAILS, NOTES &  
LEGEND
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- DRAWN
- DATE
- DESCRIPTION
- ISSUE
- FOR
- APPROVED BY:
- DESIGNED BY:
- S.S
- ISSUE
- R.P.
- 18.04.2019
- ISSUED FOR DA
- A
- CHAMPION HOMES PTY LTD
- SITE ADDRESS:
- LOT 42, No. 7  
BRIGHTON STREET  
CURL CURL
- PROJECT
- PROPOSED RESIDENCE
- SCOTT SHARMA, M.J.E. Aust.
- CHECKED BY:
- S.S
- SCALE
- 
- SHEET SIZE
- A3
- CLIENT REF.
- 4066N
- DRAWING No.
- E309591
- SHEET No.
- D1

AREA CALCULATIONS		
TOTAL SITE AREA	347.8	m²
EXISTING DEVELOPMENT		
ROOF AREA	84.1	m²
PAVED AREA	50.7	m²
DRIVEWAY AREA	29.0	m²
IMPERVIOUS AREA	163.8	m²
TOTAL IMPERVIOUS AREA PERCENTAGE	47.10%	
PROPOSED DEVELOPMENT		
PROPOSED ROOF AREA	148.5	m²
PROPOSED PAVED AREA	1.9	m²
PROPOSED DRIVEWAY AREA	24.4	m²
TOTAL IMPERVIOUS AREA	174.8	m²
TOTAL IMPERVIOUS AREA PERCENTAGE	50.26%	

**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 200mm WIDE

**NOTE:** ABSORPTION SYSTEM IS NOT SUITABLE DUE TO UNDERLYING SHALLOW BEDROCK. REFER TO GEOTECHNICAL INVESTIGATION REPORT BY AW GEOTECHNICS PTY. LTD.

#### COMBINED RE-USE/OSD TANK

(AS PER BASIX & COUNCIL REQUIREMENTS)

SIZE: 2 x 4,390 LITRES  
MODLINE TANK BY "KINGSPAN WATER" OR SIMILAR (2100L x 1100W x 2020H)  
INSTALL TO MANUFACTURES SPECIFICATIONS, AS3500 AND COUNCIL REQUIREMENTS

- FOR RE-USE AS PER BASIX CERTIFICATE & MUST BE RE-USED FOR TOILET, LAUNDRY, AND IRRIGATION SYSTEMS
- ENSURE TOP OF TANK IS MIN 1.00m 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

#### OSD WARRANT

LGA: - WARRINGAH COUNCIL  
RELEVANT CODE - "2.1 PLANNING AND DESIGN - APPLICATIONS"

OSD REQUIRED WHERE THE TOTAL EXISTING AND PROPOSED IMPERVIOUS AREAS EXCEED 40% OF THE SITE AREA

- SITE AREA 347.8m²
- PRE-DEV IMPERVIOUS AREA 163.8m² (47.10%)
- POST-DEV IMPERVIOUS AREA 174.8m² (50.26%)

**THEREFORE >40% POST-DEV IMPERVIOUS AREA  
OSD REQUIRED**

#### OSD CALCULATIONS

LGA: WARRINGAH COUNCIL  
RELEVANT CODE: "ON-SITE TECHNICAL SPECIFICATION 2012"

- 20% UN-DEV PSD = 13.0 L/s
- 1% POST-DEV PSD TO BY-PASS OSD = 12.0 L/s

THEREFORE, LIMIT THE DISCHARGE FROM THE OSD TO 1.0 L/s (13.0 L/s - 12.0 L/s)

"DRAINS" MODEL OSD VOLUME = 8.4m³  
RAINWATER OFFSET FROM BASIX = 3.0m³  
MAXIMUM OFFSET FOR OSD (50%) = 4.2m³

**HENCE, PROVIDE OSD VOLUME OF 5.4m³**

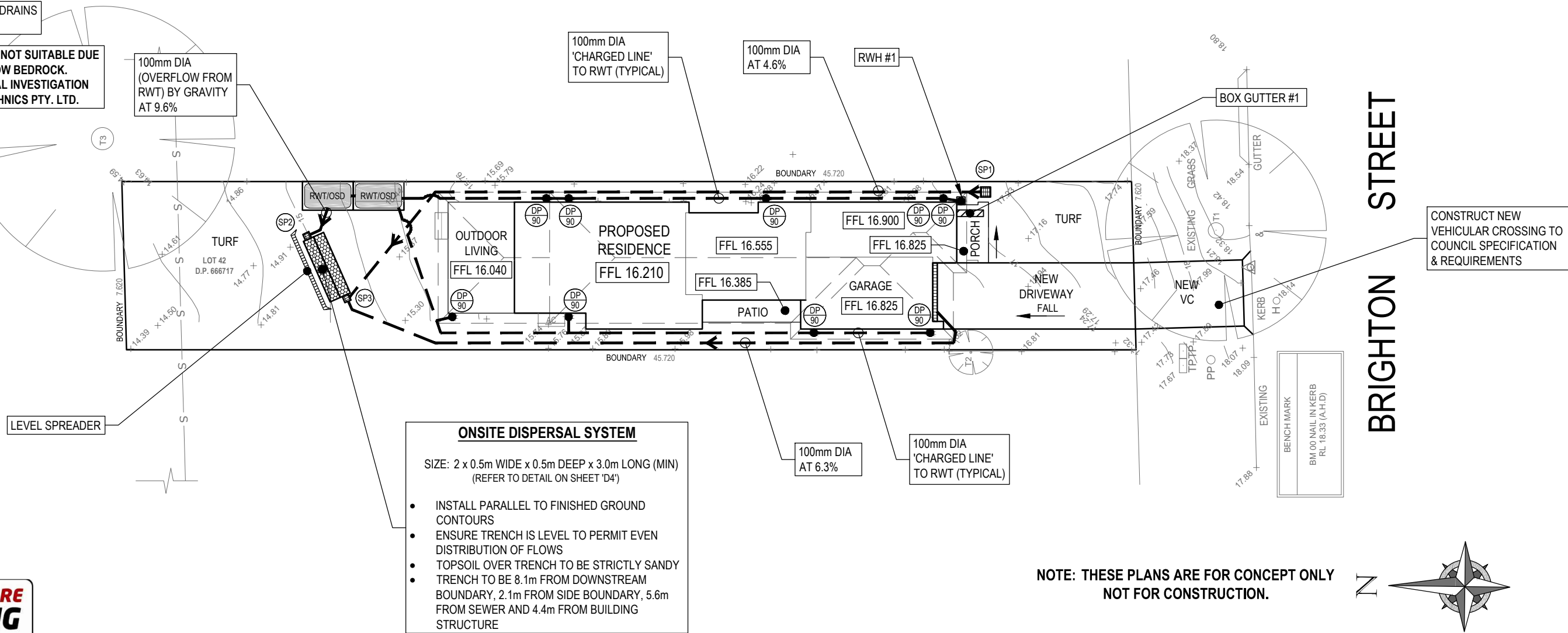
#### PIT SCHEDULE (U.N.O)

PIT No.	PIT TYPE	PIT SIZE	SURFACE LEVEL	INVERT LEVEL
SP1	GRATED INLET	450 x 450	16.67	16.22
SP2	GRATED INLET	300 x 300	15.00	14.70
SP3	GRATED INLET	300 x 300	15.08	14.78

#### BOX GUTTER DRAINAGE

- BOX GUTTER #1  - 300mm WIDE x 290mm DEPTH
- RAINWATER HEAD SUMP #1 - 250mm x 150mm x 350mm DEPTH
- RWH (EXTERNAL) - 


**NOTE:** ALL RAINHEADS TO HAVE OVERFLOW SLOT 50mm LOWER THAN TOP OF BOX GUTTER



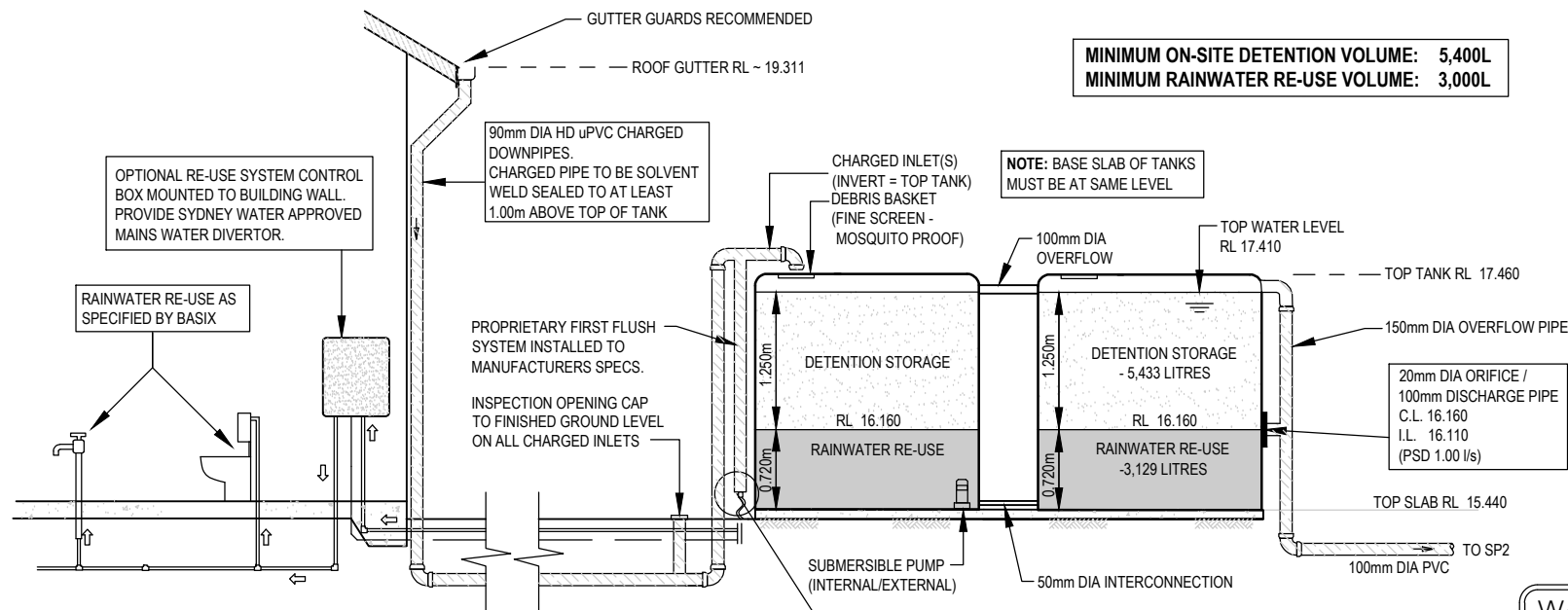
DRAWING TITLE:  
**STORMWATER  
MANAGEMENT PLAN**

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DRAWN	DATE	DESCRIPTION	ISSUE	FOR
R.P.	18.04.2019	ISSUED FOR DA	A	CHAMPION HOMES PTY LTD
				SITE ADDRESS:
				LOT 42, No. 7 BRIGHTON STREET CURL CURL
PROJECT		PROPOSED RESIDENCE		

APPROVED BY:  
  
SCOTT SHARMA, M.J.E. Aust.

DESIGNED BY:	S.S	ISSUE
CHECKED BY:	S.S	A
SCALE	1:200	
SHEET SIZE	A3	SHEET No.
CLIENT REF.	4066N	
DRAWING No.	E309591	D2



## COMBINED DETENTION / RAINWATER RE-USE TANK

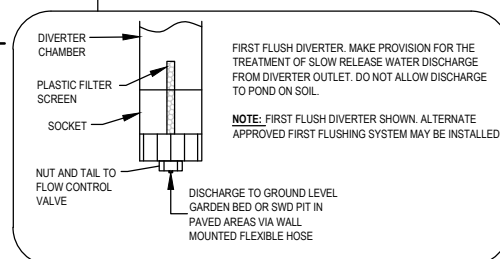
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### COMBINED OSD & RWT TANK

(AS PER BASIX & COUNCIL REQUIREMENTS)

USE POLY MODLINE TANK BY "TANKWORKS"  
2 x (2100L x 1100W x 2020H)

INSTALL TO MANUFACTURES SPECIFICATIONS, AS3500 AND  
COUNCIL REQUIREMENTS



## TYPICAL WARNING SIGN

NTS

EVERY EXTERNAL SUPPLY OUTLET FROM  
RAINWATER RE-USE TANK TO BE LABELED  
WITH METALLIC WARNING SIGN

## ORIFICE PLATE SIZE CALCULATIONS

### Discharge Orifice Design

$$Q(m^3/s) = C_d A_o (2gh)^{1/2}$$

$C_d = 0.6$  (Assumed)

$A_o$  = area of orifice

$h$  = head to centre of orifice

Head to orifice centre = 1.25 m

PSD = 1.00 L/s

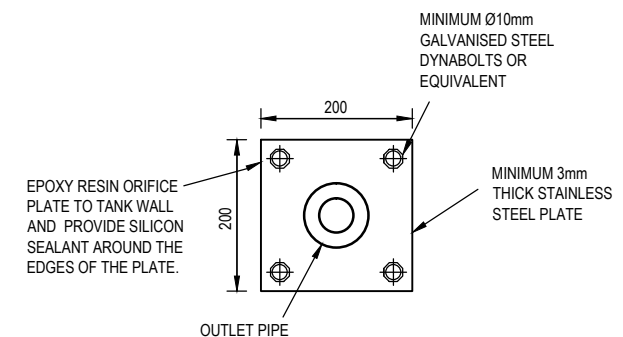
Area of orifice = 0.000 m<sup>2</sup>

Diameter of orifice = 20.7 mm diameter

Area of plate = 0.002 m<sup>2</sup> 5 times area of orifice

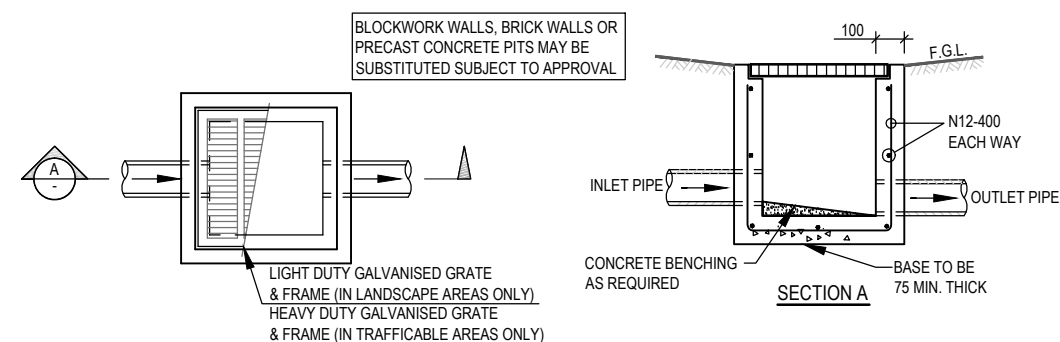
Each side (minimum) = 0.041 m

Dimension of Orifice Plate = 41 mm  
(min. Adopt 200mm x 200mm square plate)



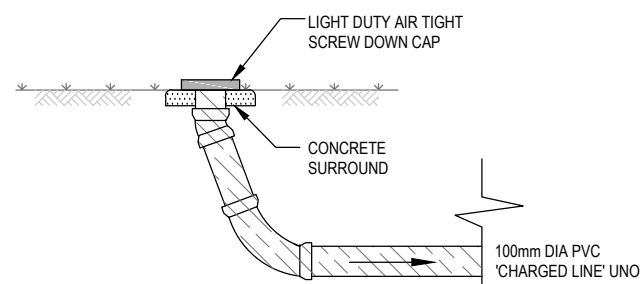
## ORIFICE PLATE DETAIL

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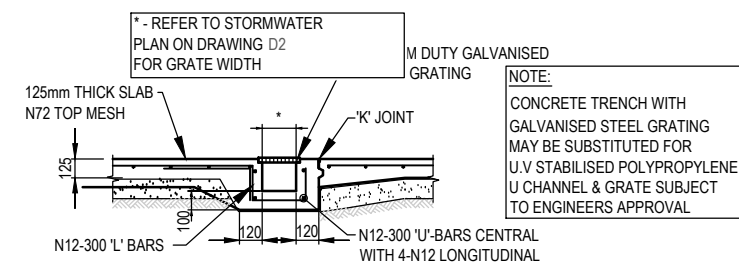
## TYPICAL PIT (SIP)

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## INSPECTION RISER - IR

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## GRATED DRAIN

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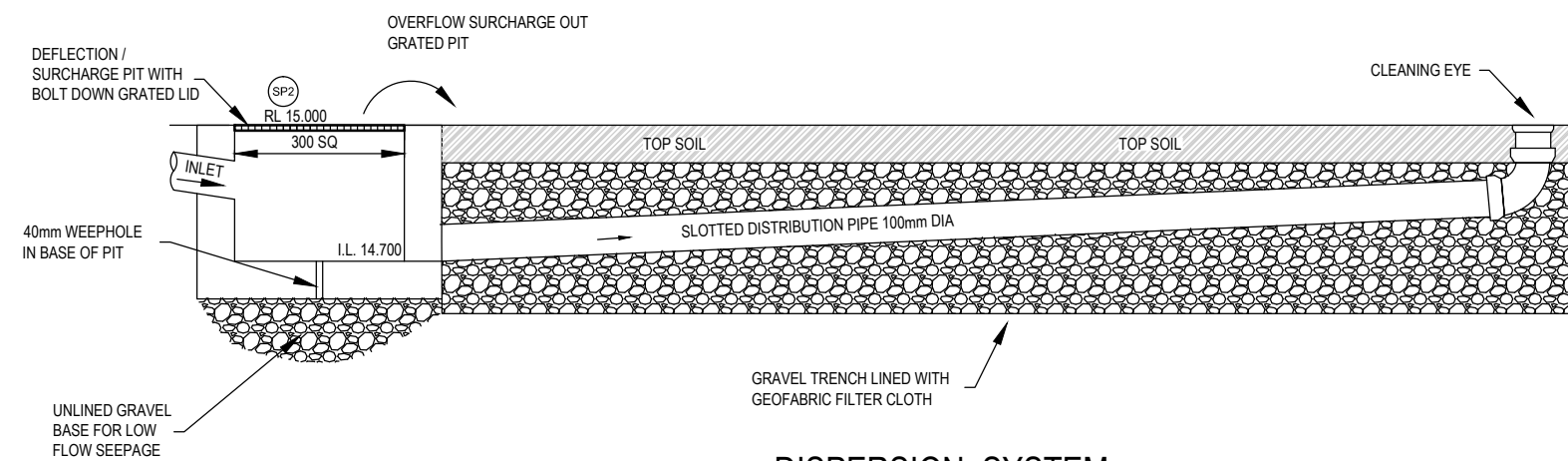
## STORMWATER DETAILS

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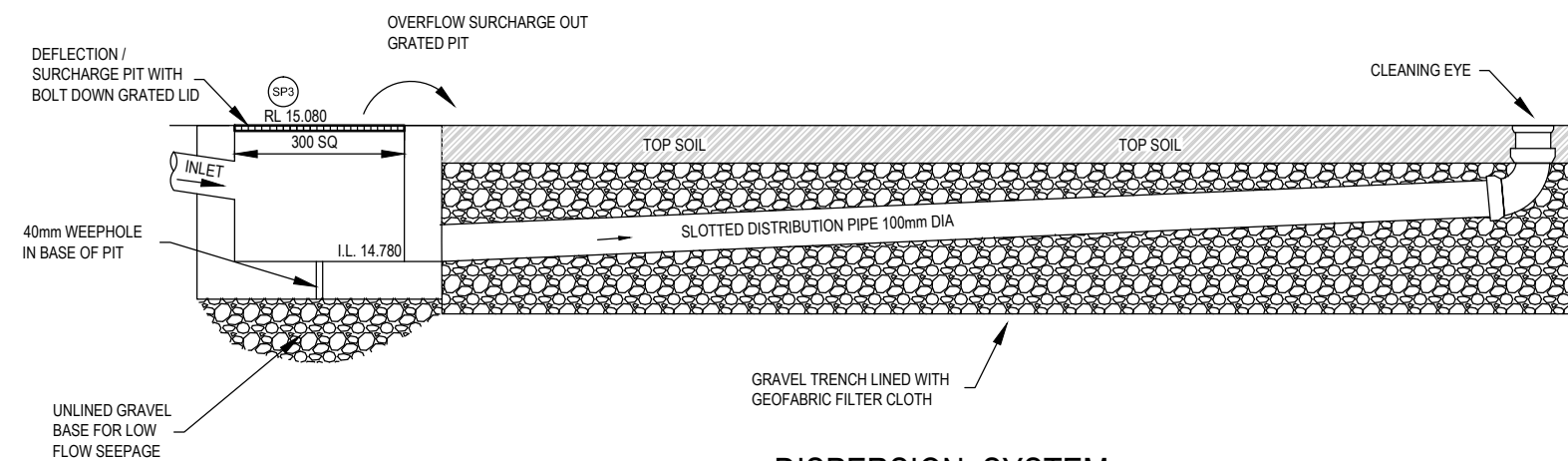
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				SITE ADDRESS:
				LOT 42, No. 7
				BRIGHTON STREET
				CURL CURL
PROJECT		PROPOSED RESIDENCE		

APPROVED BY:	DESIGNED BY:	S.S	ISSUE
	CHECKED BY:	S.S	A
	SCALE	AS NOTED	
	SHEET SIZE	A3	SHEET No.
CLIENT REF.	DRAWING No.		
4066N	E309591		D3





**DISPERSION SYSTEM**  
NTS



**DISPERSION SYSTEM**  
NTS

DRAWN	DATE	DESCRIPTION	ISSUE	FOR
R.P.	18.04.2019	ISSUED FOR DA	A	CHAMPION HOMES PTY LTD
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PROJECT		PROPOSED RESIDENCE		

DESIGNED BY:	S.S	ISSUE
CHECKED BY:	S.S	A
SCALE	AS NOTED	
SHEET SIZE	A3	
CLIENT REF.	DRAWING No.	D4
4066N	E309591	



PIT / NODE DETAILS																	
Name	Max HGL	Max Pond	Max Surface	Max Pond	Min	Overflow	Constraint										
		HGL	Flow Arriving	Volume	Freeboard	(cu.m/s)											
			(cu.m/s)	(cu.m)	(m)												
ROOF	21.09		0.011		0.91		None										
OSD Node	13.01		0														
SUB-CATCHMENT DETAILS																	
Name	Max	Paved	Grassed	Paved	Grassed	Supp.	Due to Storm										
	Flow Q	Max Q	Max Q	Tc	Tc	Tc											
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)											
PRE DEV	0.022	0.011	0.011	3	6	0	AR&R 100 year, 20 minutes storm, average 156 mm/h, Zone 1										
ROOF 1 TO OSD	0.011	0.011	0	3	0	0	AR&R 100 year, 5 minutes storm, average 261 mm/h, Zone 1										
BYPASS OSD	0.012	0.002	0.01	3	6	0	AR&R 100 year, 20 minutes storm, average 156 mm/h, Zone 1										
Outflow Volumes for Total Catchment (0.03 impervious + 0.04 pervious = 0.07 total ha)																	
Storm	Total Rainfall	Total Runoff	Impervious Runoff	Pervious Runoff													
	cu.m	cu.m (Runoff %)	cu.m (Runoff %)	cu.m (Runoff %)													
AR&R 100 year, 5 minutes storm, average 261 mm/h, Zone 1	15.1	11.59 (76.8%)	6.99 (95.4%)	4.59 (59.2%)													
AR&R 100 year, 10 minutes storm, average 205 mm/h, Zone 1	23.69	19.42 (82.0%)	11.16 (97.1%)	8.26 (67.8%)													
AR&R 100 year, 20 minutes storm, average 156 mm/h, Zone 1	36.03	30.55 (84.8%)	17.16 (98.1%)	13.39 (72.2%)													
AR&R 100 year, 30 minutes storm, average 130 mm/h, Zone 1	44.95	38.42 (85.5%)	21.49 (98.5%)	16.93 (73.2%)													
AR&R 100 year, 1 hour storm, average 90.2 mm/h, Zone 1	62.61	53.96 (86.2%)	30.06 (98.9%)	23.90 (74.2%)													
AR&R 100 year, 3 hours storm, average 46.1 mm/h, Zone 1	95.91	82.38 (85.9%)	46.23 (99.3%)	36.15 (73.3%)													
AR&R 100 year, 6 hours storm, average 29.4 mm/h, Zone 1	122.35	102.92 (84.1%)	59.07 (99.4%)	43.85 (69.7%)													
PIPE DETAILS																	
Name	Max Q	Max V	Max U/S	Max D/S	Due to Storm												
	(cu.m/s)	(m/s)	HGL (m)	HGL (m)													
Pipe4	0.011	4.15	21.031	16.876	AR&R 100 year, 5 minutes storm, average 261 mm/h, Zone 1												
Pipe9	0.001	1.45	15.014	13.015	AR&R 100 year, 3 hours storm, average 46.1 mm/h, Zone 1												
OVERFLOW ROUTE DETAILS																	
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm									
OF1	0	0	1.479	0	0	0	0										
DETENTION BASIN DETAILS																	
Name	Max WL	MaxVol	Max Q	Max Q	Max Q												
			Total	Low Level	High Level												
OSD	16.88	8.4	0.001	0.001	0												
CONTINUITY CHECK for AR&R 100 year, 20 minutes storm, average 156 mm/h, Zone 1																	
Node	Inflow	Outflow	Storage Change	Difference													
	(cu.m)	(cu.m)	(cu.m)	%													
Pre Node	15.2	15.2	0	0													
ROOF	7.54	7.54	0	0													
OSD	7.54	2.22	3.85	19.5													
OSD Node	2.22	2.22	0	0													
Bypass nod	7.81	7.81	0	0													

DRAINS RESULTS - 1% AEP STORM EVENT

DONOVAN

ASSOCIATES

INCORPORATED ENGSURVEY PTY LTD

ABN: 84 134 616 078

PH/ 02 9806 3000 F/ 02 9891 2806 E/ admineng@donovanassociates.com.au

15 PARKES STREET PARRAMATTA NSW 2150

DRAWING TITLE:


OSD CALCULATIONS

2 OF 2

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PROJECT		PROPOSED RESIDENCE		

APPROVED BY:



SCOTT SHARMA, M.J.E. Aust.

DESIGNED BY:	S.S	ISSUE
CHECKED BY:	S.S	A
SCALE	AS NOTED	
SHEET SIZE	A3	SHEET No.
CLIENT REF.	DRAWING No.	
4066N	E309591	D6