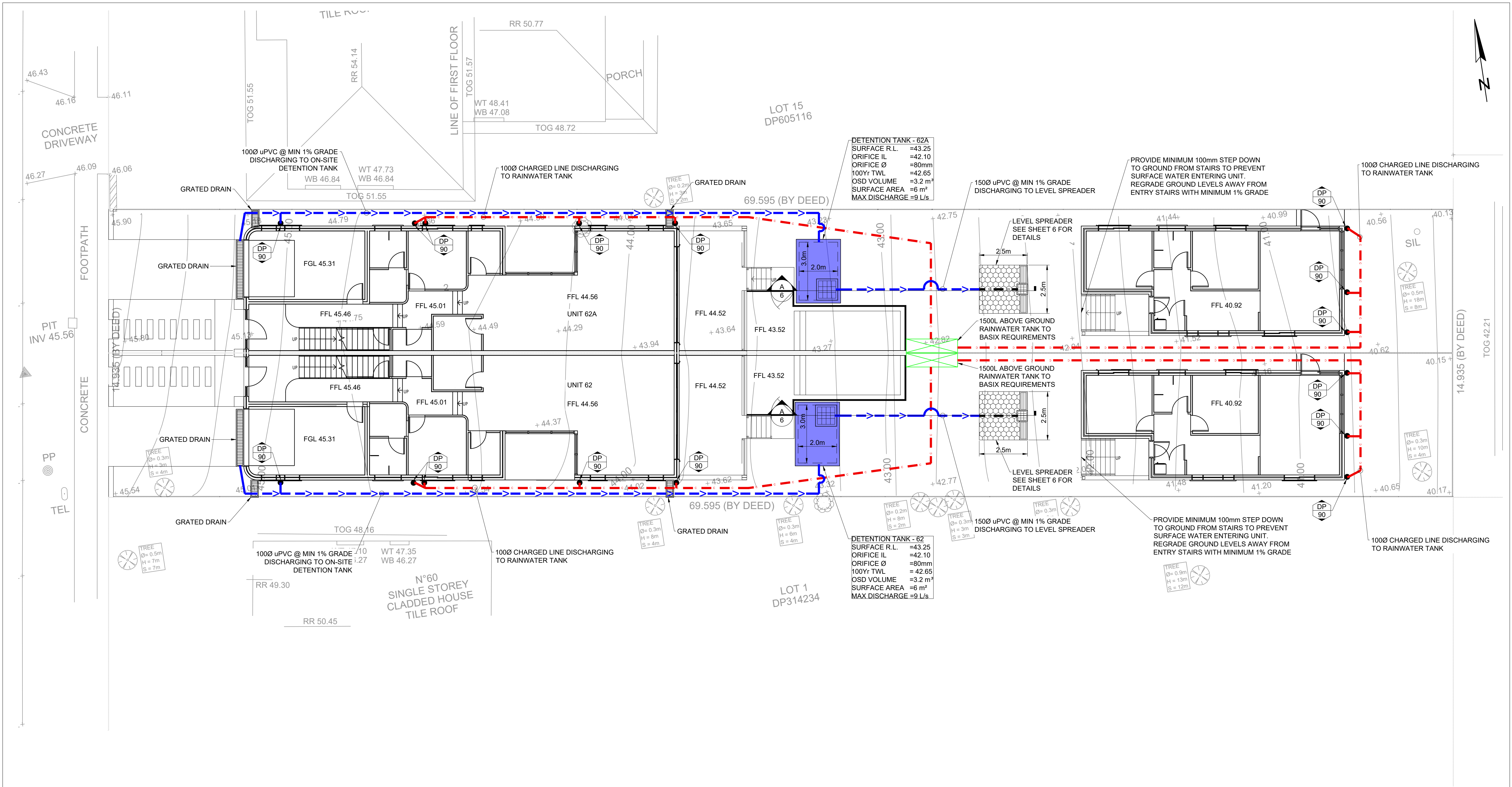




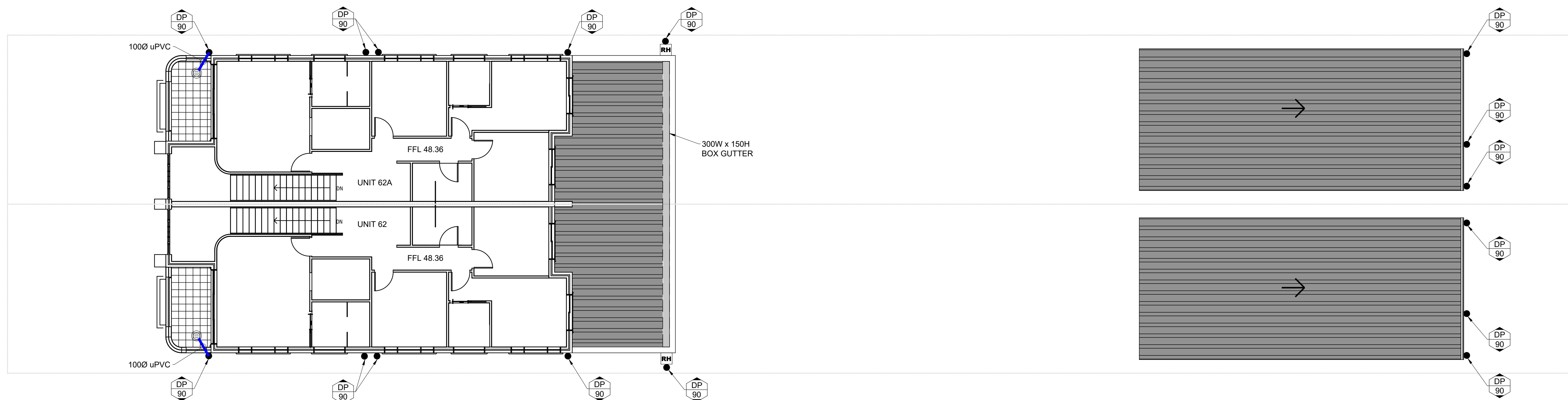
SITE PLAN
SCALE: 1:100

FOR DA APPROVAL

ALL PIPES TO BE 100Ø uPVC
UNLESS OTHERWISE SHOWN

ALL GUTTERS TO HAVE MIN.
8600mm² X-SECT AREA.

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						DESIGNED: C.K.				SCALE: AS SHOWN		
ARCHITECT BELLEVUE ARCHITECTS							PROJECT: 62 DUTTON STREET, BANKSTOWN	CHECKED: C.K.		DATUM: AHD		
CONSULTANT -	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE		JOB & DRAWING No: 252851		No. IN SET: 2 OF 7	ISSUE: 0	
					DO NOT SCALE							



Technical drawing of a box gutter assembly. The drawing shows a cross-section of the gutter with the following dimensions and labels:

- Height:** 45mm
- Width:** 36mm
- Length:** 249mm
- Inner Depth:** 200mm
- Bottom Depth:** 200mm
- Optional trim:** (add 40mm approx to overall width)
- Side wall cut away for illustration**
- 3mm more than box gutter eg 2**

ROOF - FALL

MINIMUM 300 WIDE X 150 HIGH BOX GUTTER

PARAPET WALL

RAINHEAD TO DAMBUSTER

OVERFLOW OPENING IN PARAPET WALL, 300 WIDE X 150 HIGH TO DISCHARGE TO RAINHEAD

25

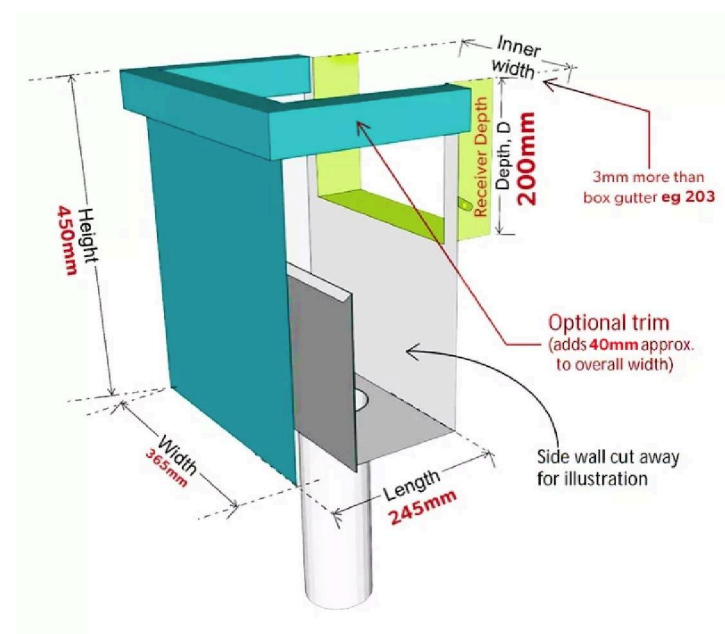
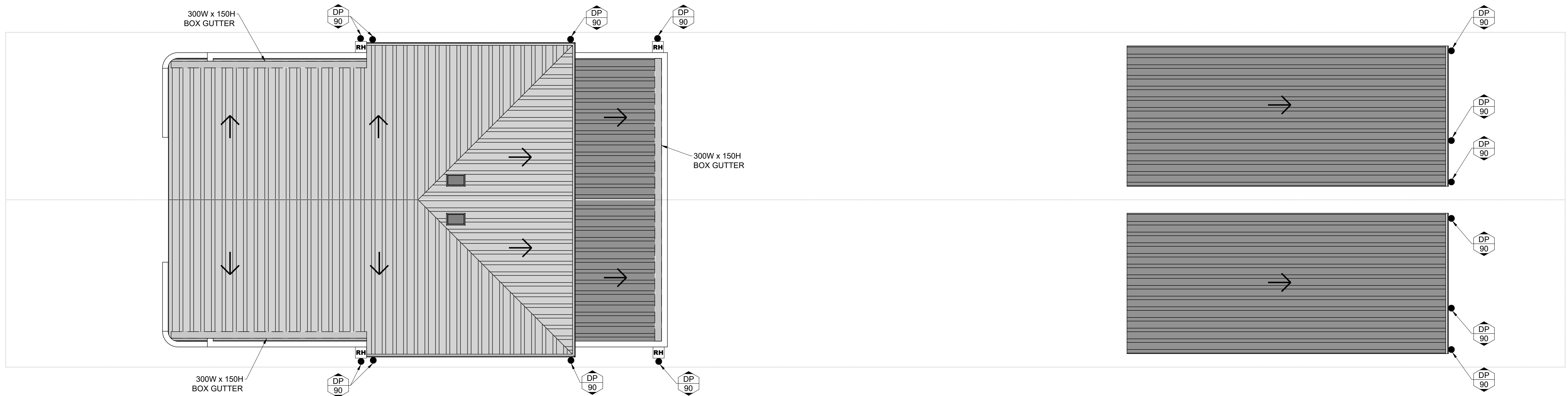
90/100mmØ DOWNSPIPE

TYPICAL INSTALLATION OF PROPRIETARY RAINHEADS TO END OF BOX GUTTER



FOR DA APPROVAL

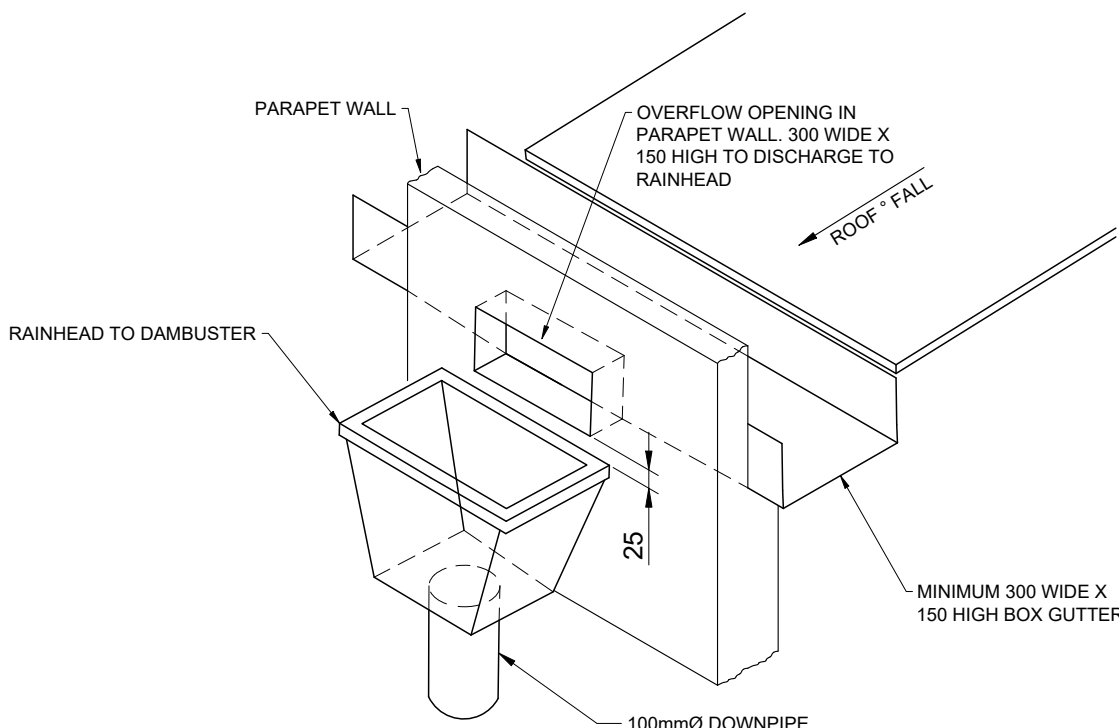
SURVEYOR AUSWIDE	0	DA ISSUE	10/08/25						C.K. ENGINEERING SERVICES ABN 67 115 216 496 49 FLORA ST ROSELANDS, NSW 2196 MOB: 0403 329 327 EMAIL: ckatsoulas@gmail.com	CLIENT: MR. RABIH EL HAWZ	DRAWING TITLE: FIRST FLOOR PLAN	DRAWN: M.P.	SIGNED: 	DATE: AUGUST 2025
ARCHITECT BELLEVUE ARCHITECTS										DESIGNED: C.K.		SCALE: AS SHOWN		
CONSULTANT	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE				CHECKED: C.K.		DATUM: AHD		
-							DO NOT SCALE						JOB & DRAWING No:	252851



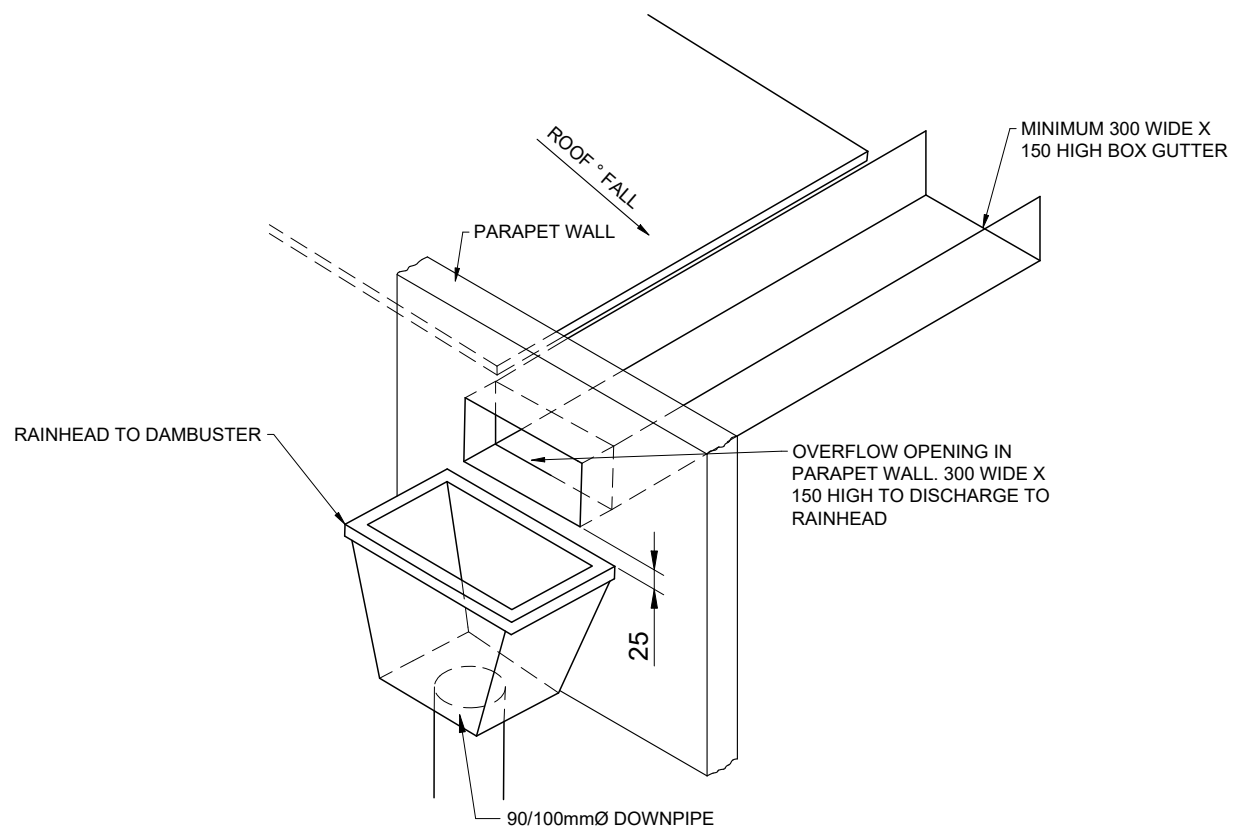
DAMBUSTER RAINHEAD

<https://roofventsaustralia.com.au/dam-buster-box-gutter-rainwater-heads/>

ROOF PLAN
SCALE: 1:100



TYPICAL INSTALLATION OF PROPRIETARY RAINHEADS TO SIDE OF BOX GUTTER



TYPICAL INSTALLATION OF PROPRIETARY RAINHEADS TO END OF BOX GUTTER

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ARCHITECT BELLEVUE ARCHITECTS								DESIGNED: C.K.		SCALE: AS SHOWN		
CONSULTANT -	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE		CHECKED: C.K.		DATUM: AHD		
					DO NOT SCALE			62 DUTTON STREET, BANKSTOWN		JOB & DRAWING No: 252851	No. IN SET: 4 OF 7	ISSUE: 0

IFD Design Rainfall Intensity (mm/h)

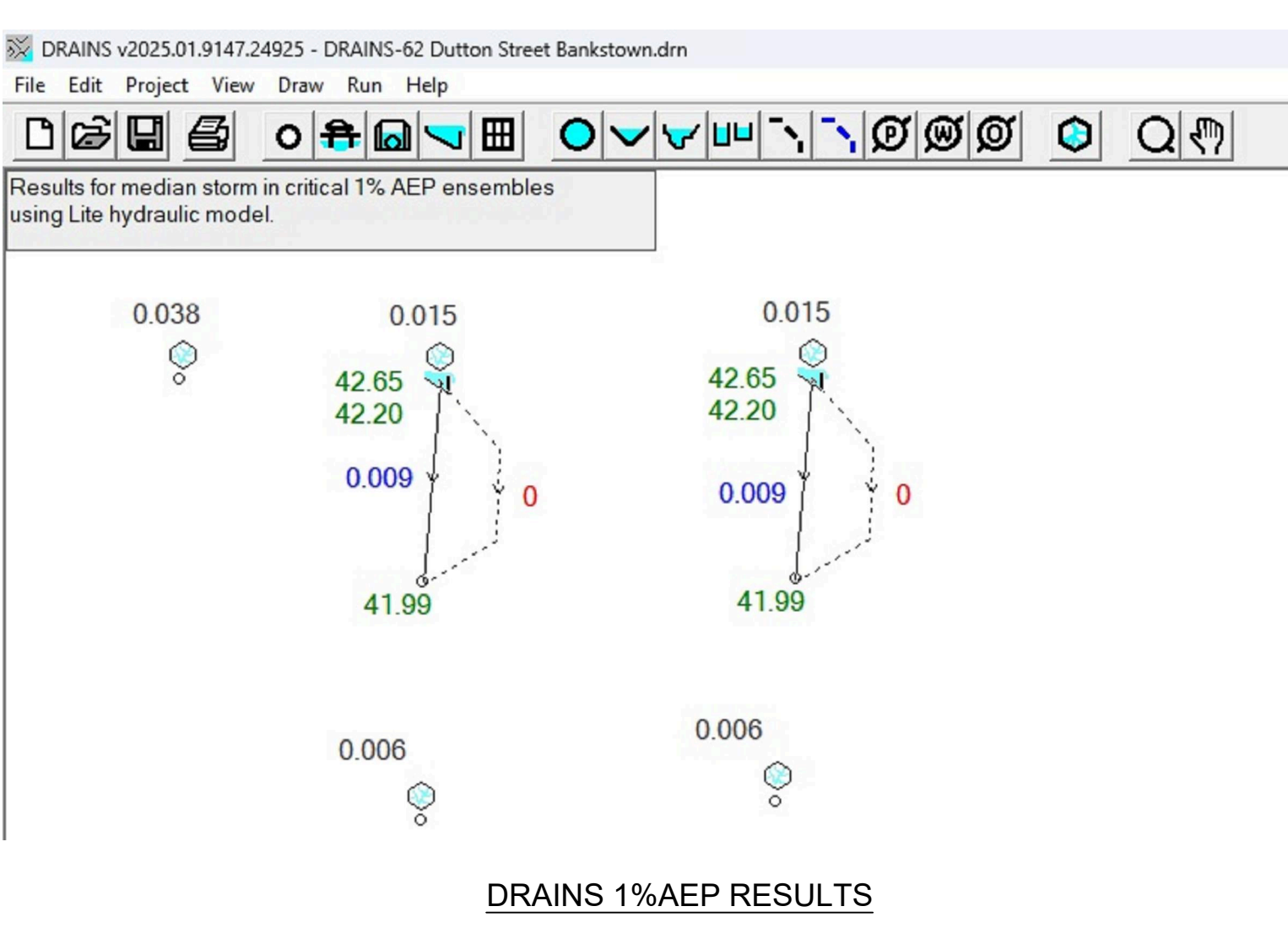
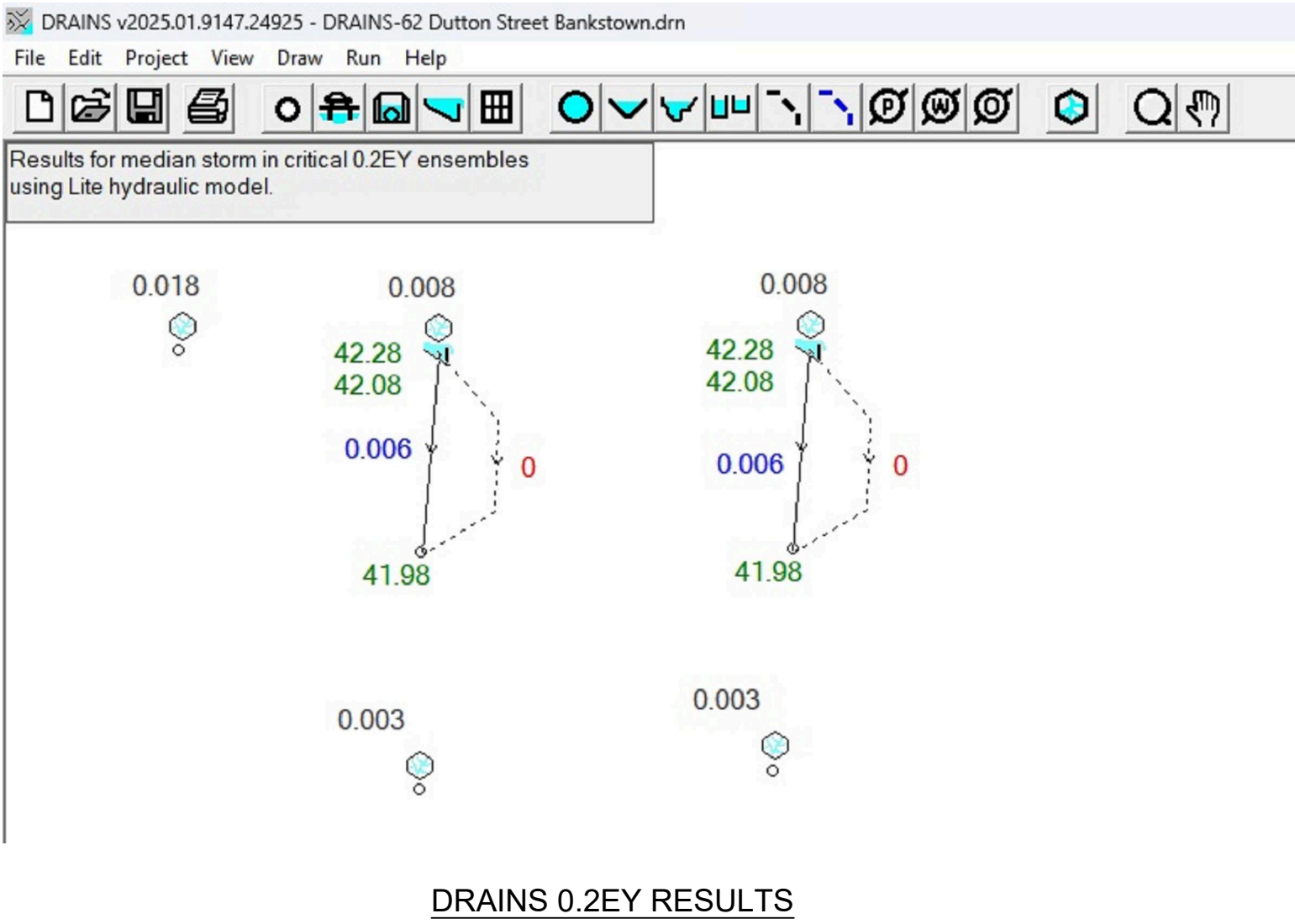
Issued: 07 August 2025

Rainfall intensity for Durations, Exceedance per Year (EY), and Annual Exceedance Probabilities (AEP).
[FAQ for New ARR probability terminology](#)

TableChart

Unit: mm/h

	Annual Exceedance Probability (AEP)						
Duration	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	131	145	187	215	243	278	305
2 min	108	117	147	167	188	215	235
3 min	100	109	138	157	177	202	221
4 min	94.4	103	131	150	169	194	212
5 min	89.4	98.2	126	144	162	186	204
10 min	70.8	78.4	102	117	132	151	166
15 min	58.8	65.2	84.8	97.7	110	126	138
20 min	50.6	56.0	72.7	83.8	94.3	108	118
25 min	44.6	49.3	63.8	73.4	82.7	94.7	104
30 min	40.0	44.2	57.0	65.6	73.8	84.5	92.6
45 min	31.1	34.1	43.7	50.2	56.5	64.8	71.1
1 hour	25.8	28.2	36.0	41.3	46.5	53.4	58.6
1.5 hour	19.8	21.6	27.4	31.4	35.4	40.7	44.9
2 hour	16.4	17.9	22.6	26.0	29.3	33.8	37.4



Australian Rainfall & Runoff Data Hub - Results

Input Data

Longitude151.034

Latitude-33.917

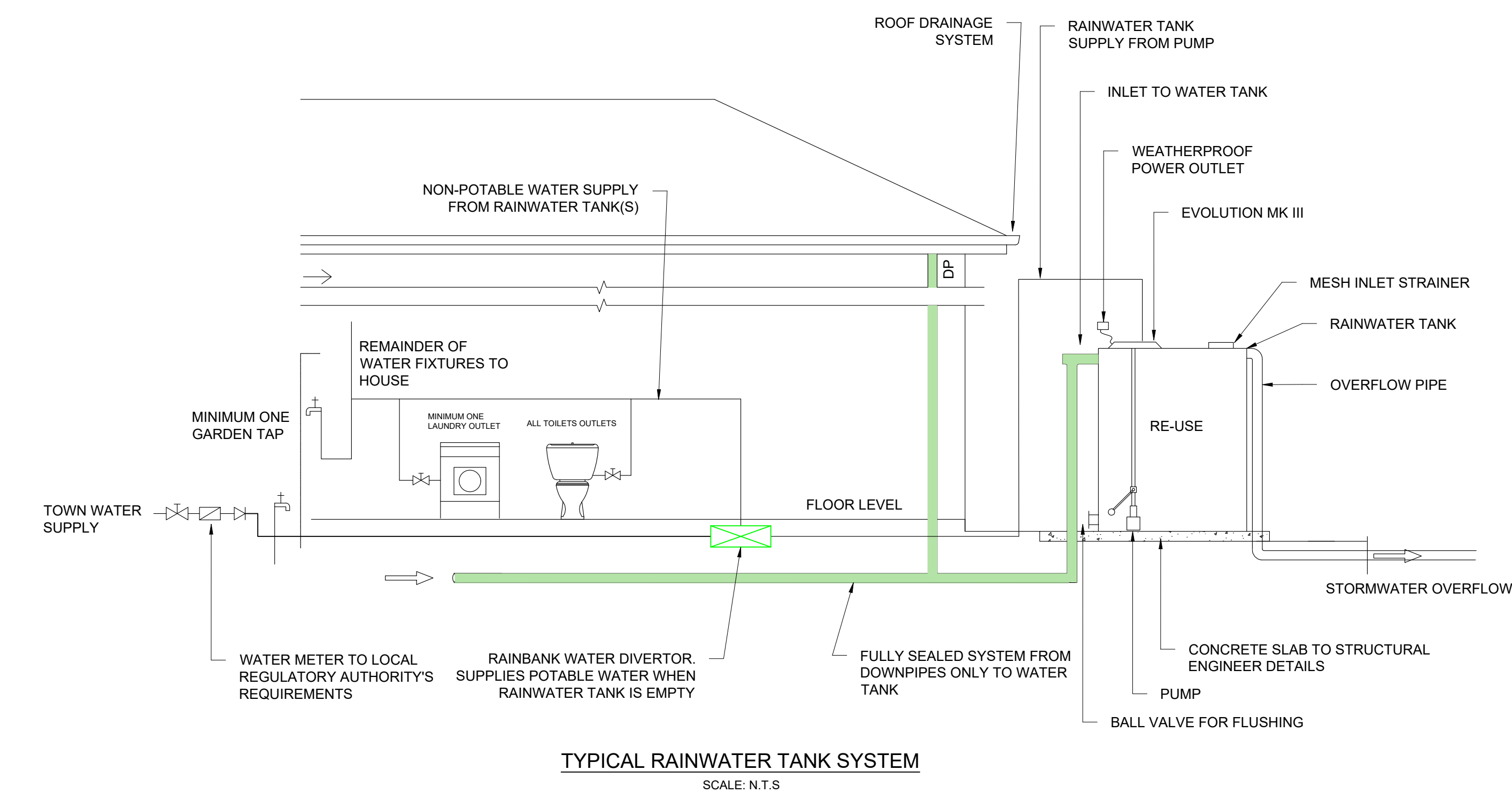
Selected Regions (clear)

Storm Lossesshow

BOM IFDsshow

Median Preburst Depths and Ratiosshow

Probability Neutral Burst Initial Lossshow



ON-SITE DETENTION RESULTS

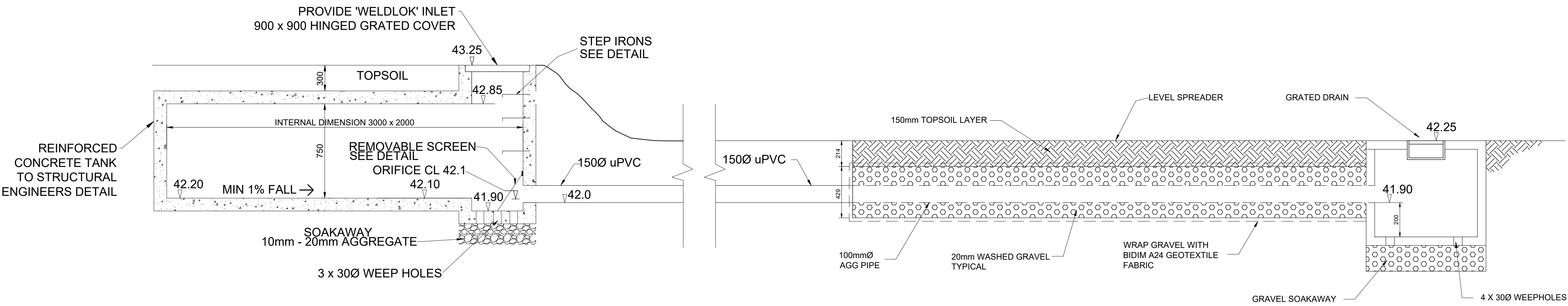
TOTAL SITE AREA	= 1039 m ²			
LOT 62 AREA	= 519.5 m ²			
LOT 62A AREA	= 519.5 m ²			
LANDUSE EXISTING	AREA	IMPERVIOUS %	0.2EY	1%AEP
	1039	0%	.018m ³ /s	.038m ³ /s
LOT 62				
PROPOSED TO OSD	347.5	61.3%	.006m ³ /s	.009m ³ /s
BYPASS	172	0%	.003m ³ /s	.006m ³ /s
PROPOSED TOTAL	519.5	58%	.009m ³ /s	.015m ³ /s
LOT 62A				
PROPOSED TO OSD	349.5	61.3%	.006m ³ /s	.009m ³ /s
BYPASS	172	0%	.003m ³ /s	.006m ³ /s
PROPOSED TOTAL	519.5	58%	.009m ³ /s	.015m ³ /s
OSD REQUIRED TO LIMIT OUTFLOW TO EXISTING STATE OF NATURE DISCHARGES				
TOTAL OSD STORAGE REQUIRED	= 3.2 m ³			
ORIFICE REQUIRED	= 80Ø			
RAINWATER TANK STORAGE REQUIRED PER UNIT = 1500L				

RAINWATER TANK NOTES

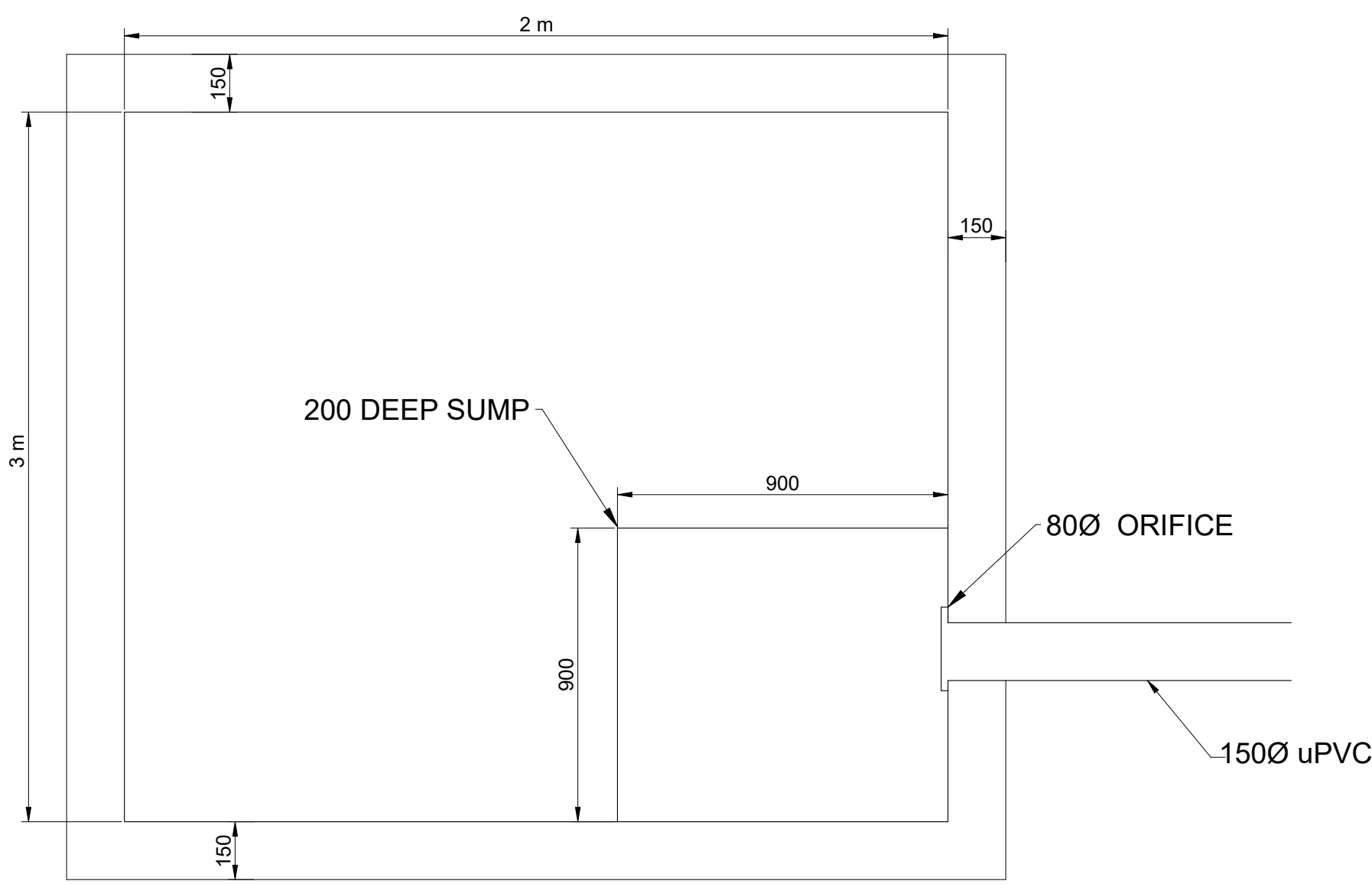
RAINWATER TANKS ARE TO BE:
ERECTED ON A SELF-SUPPORTING BASE IN THE APPROVED LOCATION ON THE PROPERTY IN ACCORDANCE WITH THE STAMPED-APPROVED SITE PLANS FOR THE DEVELOPMENT,
STRUCTURALLY SOUND AND CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500 1.2- 1998: NATIONAL PLUMBING AND DRAINAGE - WATER SUPPLY - ACCEPTABLE SOLUTIONS,
FULLY ENCLOSED AND ALL OPENINGS SEALED TO PREVENT ACCESS BY MOSQUITOES,
FITTED WITH A FIRST FLUSH DEVICE,
FITTED WITH A TRICKLE SYSTEM TO TOP UP FROM MAINS WATER, PROVIDED WITH AN AIR GAP, AND
INSTALLED BY A LICENSED PLUMBER IN ACCORDANCE WITH SYDNEY WATER'S "PLUMBING REQUIREMENTS INFORMATION FOR RAINWATER TANK SUPPLIERS AND PLUMBERS APRIL 2003" AND THE NSW CODE OF PRACTICE: PLUMBING AND DRAINAGE.

FOR DA APPROVAL

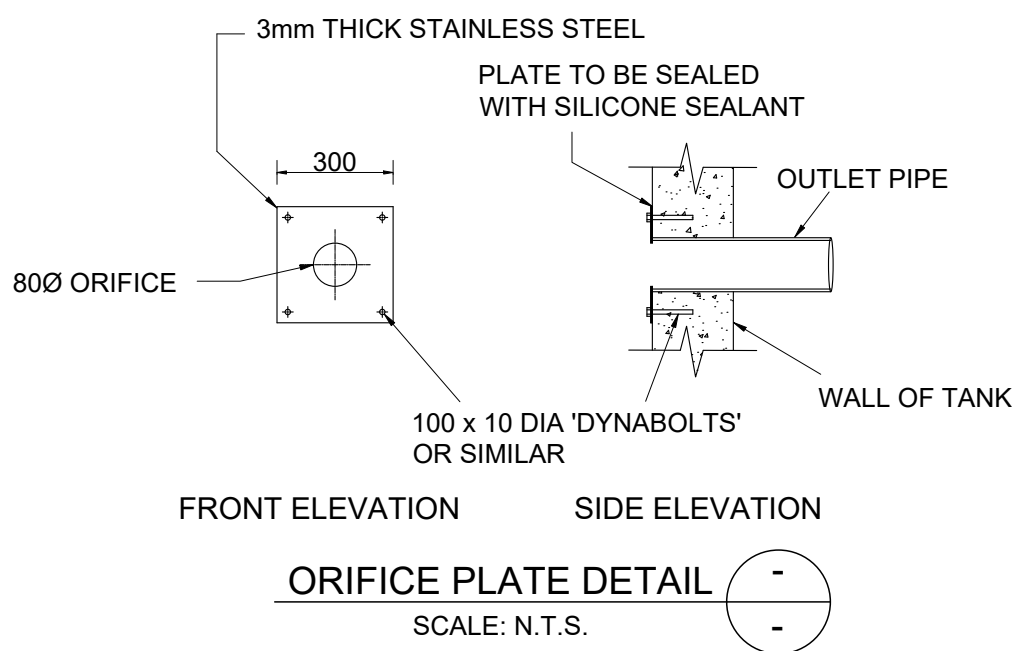
SURVEYOR AUSWIDE	0	DA ISSUE	10/08/25			C.K. ENGINEERING SERVICES ABN 67 115 216 496 49 FLORA ST ROSELANDS, NSW 2196 MOB: 0403 329 327 EMAIL: ckatsoulas@gmail.com	CLIENT: MR. RABIH EL HAWZ	DRAWING TITLE: RAINWATER TANK & ON-SITE DETENTION CALCULATIONS	DRAWN: M.P.	SIGNED:	DATE: AUGUST 2025
ARCHITECT BELLEVUE ARCHITECTS									DESIGNED: C.K.		SCALE: AS SHOWN
CONSULTANT	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE	PROJECT: 62 DUTTON STREET, BANKSTOWN		CHECKED: C.K.		DATUM: AHD
JOB & DRAWING No: 252851										No. IN SET: 5 OF 7	ISSUE: 0



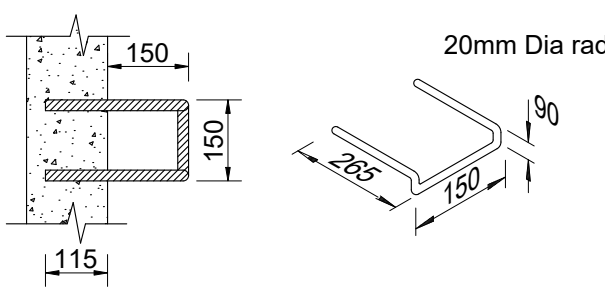
ON-SITE DETENTION + LEVEL SPREADER DETAILS
SCALE: N.T.S.



ON-SITE DETENTION PLAN VIEW
SCALE: N.T.S.

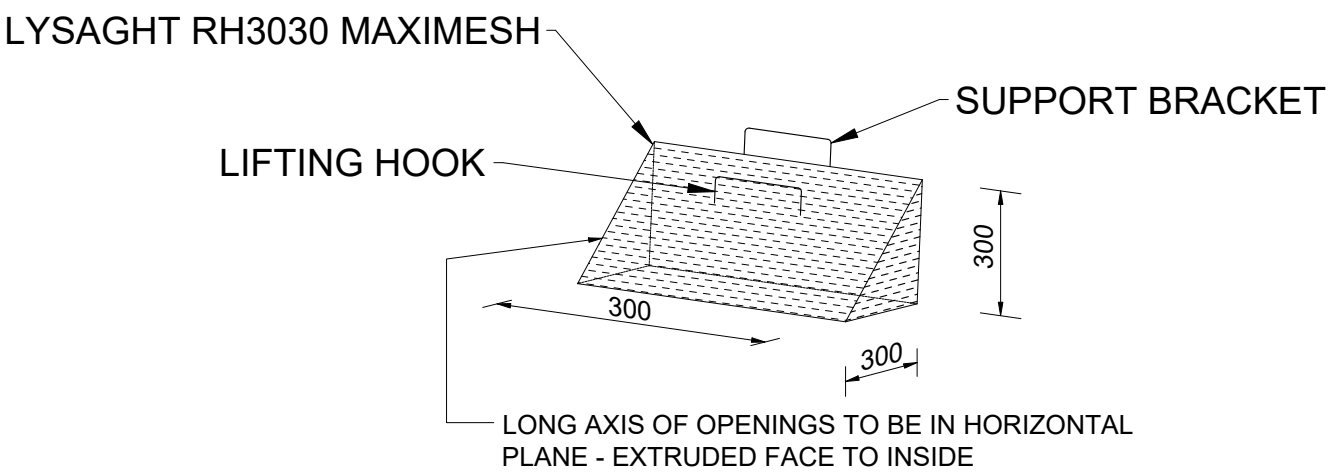


ORIFICE PLATE DETAIL
SCALE: N.T.S.



STEP IRONS OF 20mm GALVANISED STEEL
TO BE PROVIDED AT 300mm CENTRES AND
STAGGERED HORIZONTALLY

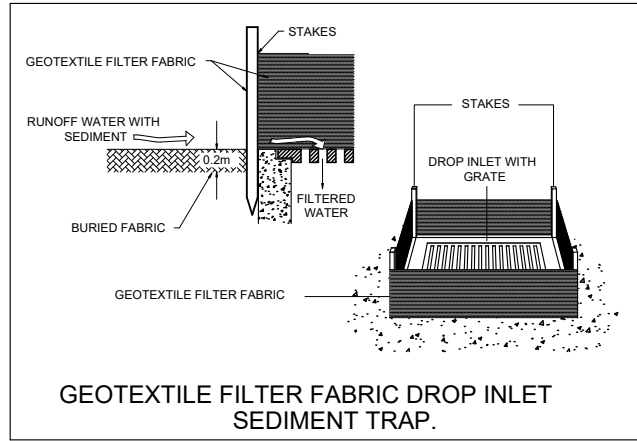
STEP IRON DETAIL
SCALE: N.T.S.



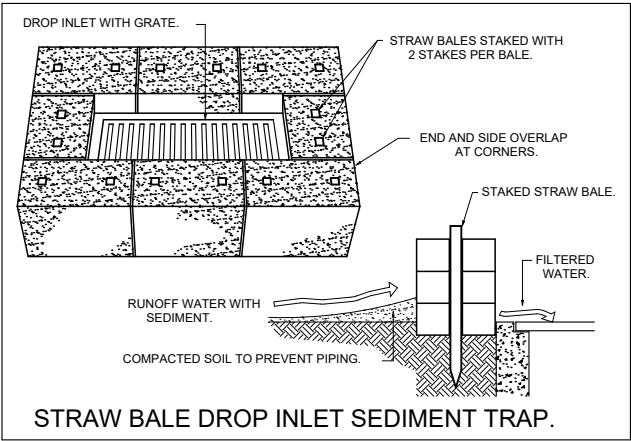
TRASH SCREEN DETAIL
SCALE: N.T.S.

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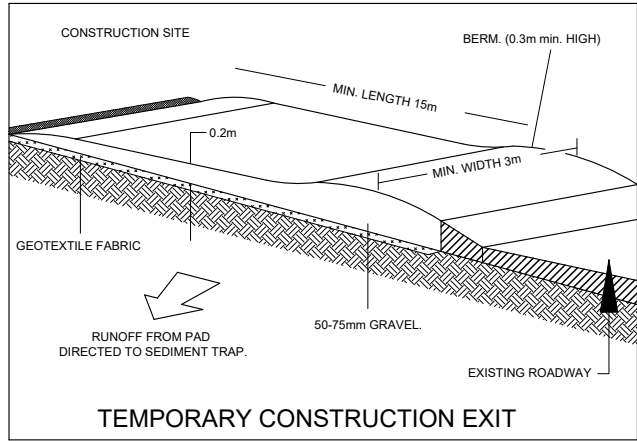
SURVEYOR AUSWIDE	0	DA ISSUE	10/08/25				C.K. ENGINEERING SERVICES ABN 67 115 216 496 49 FLORA ST ROSELANDS, NSW 2196 MOB: 0403 329 327 EMAIL: ckatsoulas@gmail.com	CLIENT: MR. RABIH EL HAWZ	DRAWING TITLE: ON-SITE DETENTION + LEVEL SPREADER DETAILS	DRAWN: M.P. DESIGNED: C.K. CHECKED: C.K.	SIGNED: 	DATE: AUGUST 2025 SCALE: AS SHOWN DATUM: AHD
ARCHITECT BELLEVUE ARCHITECTS								PROJECT: 62 DUTTON STREET, BANKSTOWN				
CONSULTANT	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE				JOB & DRAWING No:	252851	No. IN SET: 6 OF 7 ISSUE: 0
-					DO NOT SCALE							



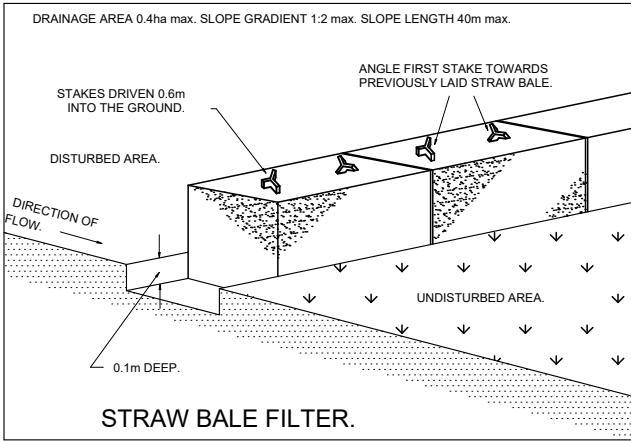
DETAIL 1



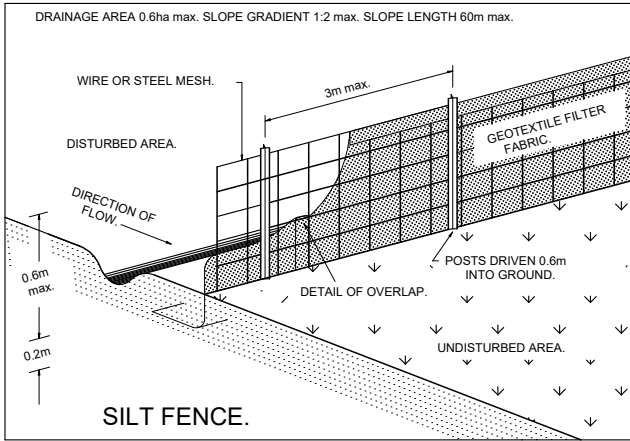
DETAIL 2



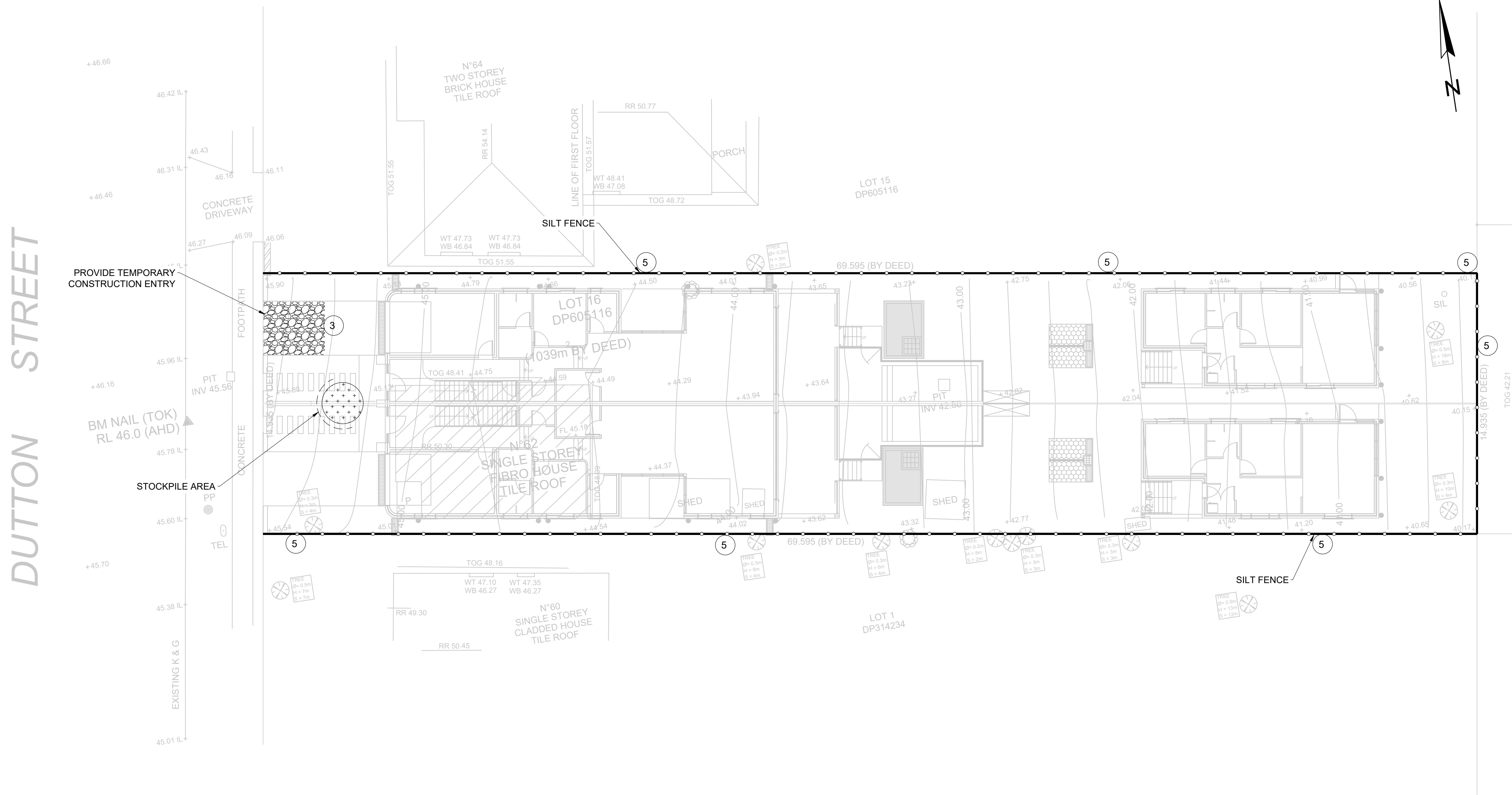
DETAIL 3



DETAIL 4



DETAIL 5



EROSION CONTROL NOTES:

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S STANDARD SPECIFICATIONS AND TO THE SATISFACTION OF COUNCIL'S ENGINEER.
2. EROSION AND SEDIMENTATION CONTROLS SHALL BE CONSTRUCTED AS SHOWN ON SHEET 2 AND 3 OF THIS PLAN AND/OR WHERE DIRECTED BY COUNCIL'S ENGINEER.
3. SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE IMPLEMENTED PRIOR TO OR IN CONJUNCTION WITH THE FIRST PHASE OF EARTHWORKS AND SHALL BE REMOVED ONLY WHEN THE AREAS ABOVE IT HAVE BEEN STABILISED. EACH SEDIMENTATION AND EROSION CONTROL DEVICE SHALL BE INSPECTED AFTER EACH STORM FOR STRUCTURAL DAMAGE OR CLOGGING BY SILT AND OTHER DEBRIS AND PROMPTLY DESILTED, REPAIRED OR REPLACED IF REQUIRED.
4. TOPSOIL STOCKPILES SHALL BE LOCATED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE DEPRESSIONS.
5. ALL AREAS NOT SUBJECT TO CONSTRUCTION WORKS SHALL BE RETAINED FREE FROM DISTURBANCE OR DAMAGE FOR THE DURATION OF THE WORKS.
6. TREES TO BE RETAINED SHALL BE PROTECTED DURING SITE WORKS AND CONSTRUCTION BY THE ERECTION OF SOLID BARRICADES AT THE DRIP LINE OR AS SPECIFIED BY COUNCIL'S ENGINEER.
7. THE DEVELOPER OR CONTRACTOR WILL TAKE ALL MEASURES TO PREVENT DAMAGE TO TREES AND ROOT SYSTEMS DURING SITE WORKS AND CONSTRUCTION ACTIVITIES INCLUDING THE PROVISION OF WATER, SEWERAGE AND STORMWATER DRAINAGE SERVICES. IN PARTICULAR, WORKS, ERECTION OF STRUCTURES, EXCAVATION OR CHANGES TO SOIL LEVELS WITHIN 4 METRES OF THE TRUNKS OF TREES TO BE RETAINED ARE NOT PERMITTED UNLESS PART OF THE DEVELOPMENT AS APPROVED, AND THE STORAGE OF SPOIL, BUILDING MATERIALS, SOILS OR THE DRIVING OR PARKING OF ANY VEHICLE OR MACHINERY WITHIN 4 METRES OF THE TRUNK OF A TREE TO BE RETAINED, IS NOT PERMITTED.
8. WETTING OF THE SITE SHOULD BE CARRIED OUT AS OFTEN AS NECESSARY AS A FORM OF DUST CONTROL.
9. SILT FENCES TO BE CONSTRUCTED WHERE EVER NATURAL SURFACE SLOPES AWAY FROM DISTURBED AREAS OR WHERE DIRECTED BY THE ENGINEER.

EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1:150

**National Engineering Register**
ENGINEERS AUSTRALIA
Con Katsoulas
BE (Civil), MIEAust, CPEng No. 449924

FOR DA APPROVAL

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ARCHITECT BELLEVUE ARCHITECTS								PROJECT:		DESIGNED: C.K.		SCALE: AS SHOWN	
CONSULTANT -	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE		62 DUTTON STREET, BANKSTOWN		CHECKED: C.K.		DATUM: AHD	
							DO NOT SCALE			JOB & DRAWING No: 252851		No. IN SET: 7 OF 7	ISSUE: 0