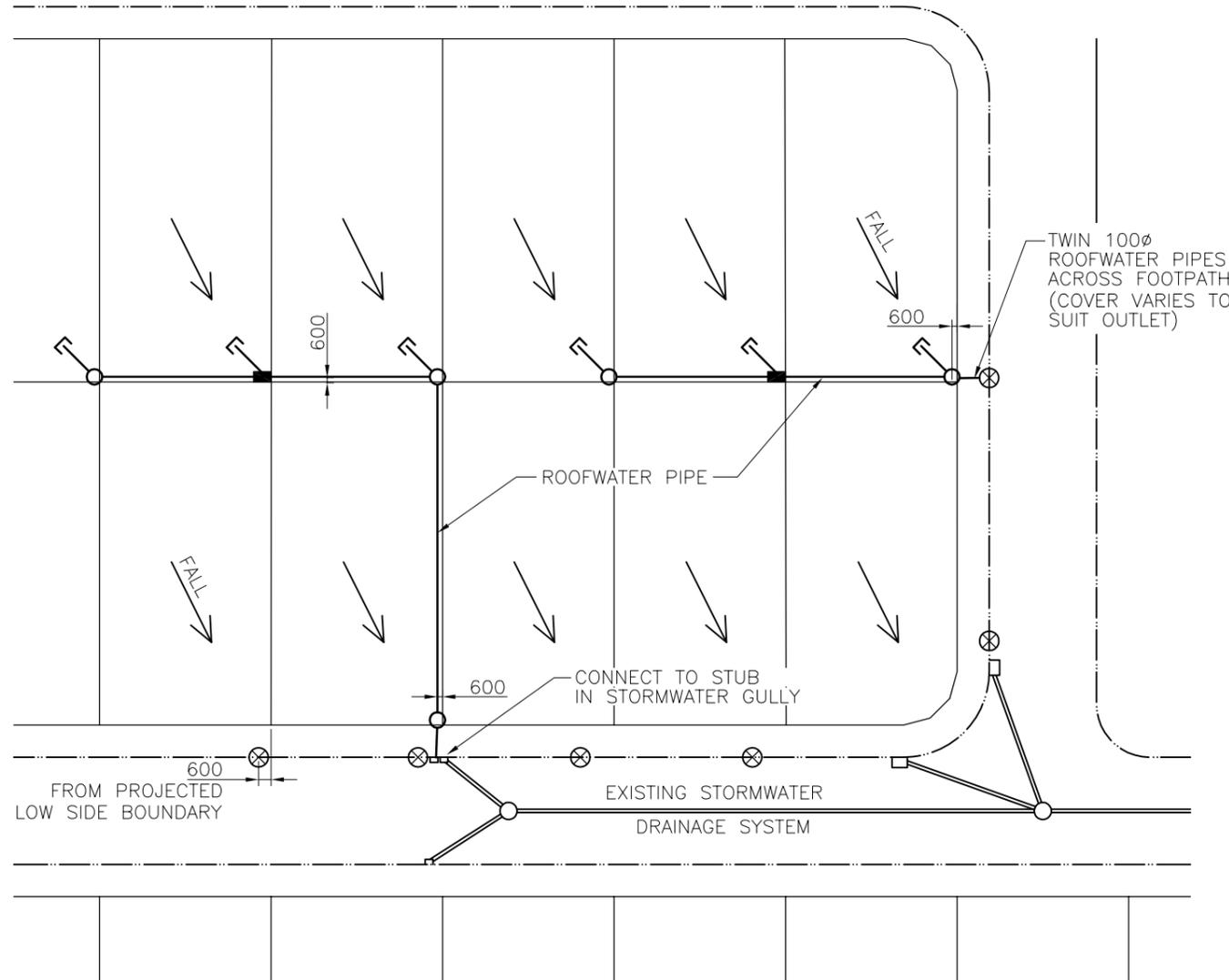


# LEGEND

-  ROOFWATER INSPECTION MANHOLE AS PER BSD-8112
-  ROOFWATER INSPECTION OPENING WITH 100mm DIA STUB AND END CAP
-  U.P.V.C. Y JUNCTION WITH 100mm DIA STUB AND END CAP
-  KERB ADAPTOR TO BSD-8114

# DESIGN CRITERIA FOR LEVEL II REAR OF ALLOTMENT DRAINAGE SYSTEM

EASEMENT WIDTH (m)	NOMINAL PIPE DIAMETER (mm)	MINIMUM PIPE SLOPE (%)	FLOW (L/s) – NOTE 5							
			PIPE GRADIENT % – NOTE 6							
			0.5	1.0	1.5	2.0	2.5	3.0	4.0	5.0
NOT REQUIRED – NOTE 3	150	1.0	N/A	18	23	26	30	33	38	42
1.5	225	0.5	38	56	67	78	87	96	110	125
1.5	300	0.5	84	120	146	170	190	210	N/A	N/A



TYPICAL PLAN ROOFWATER DRAINAGE SYSTEM

## NOTES:

- DESIGN FLOWS CALCULATED BASED ON MANNING'S 'n' OF 0.011. PIPE SIZED IN ACCORDANCE WITH QUEENSLAND URBAN DRAINAGE MANUAL ASSUMING A DISCHARGE OF 10 L/s FROM EACH ALLOTMENT BASED ON ROOF AREAS OF 180m<sup>2</sup> AND ARI OF 20 YEARS FOR S.E. QUEENSLAND. ALL PIPES SHALL HAVE A MINIMUM DIAMETER OF 150mm, EXCEPT ACROSS FOOTPATH.
- WHERE THE PIPE GRADIENT EXCEEDS 5%, UNDERTAKE A MORE DETAILED HYDRAULIC ANALYSIS INCLUDING THE ASSESMENT OF STRUCTURE LOSSES, WHERE APPROPRIATE.
- AN EASEMENT IN FAVOUR OF COUNCIL IS REQUIRED WHEN THE ROOFWATER LINE IS DESIGNED TO SERVICE MORE THAN 3 ALLOTMENTS, IRRESPECTIVE OF PIPE SIZE.
- DISCHARGE TO KERB AND CHANNEL MUST BE LIMITED TO 30L/s (ie. MAXIMUM 3 SINGLE HOUSE LOTS).
- PROVIDE MINIMUM 450 COVER TO PIPES EXCEPT WHERE REDUCED COVER IS NECESSARY TO EFFECT DISCHARGE TO KERB AND CHANNEL. PIPE TYPES AND CLASSES TO COMPLY WITH THE FOLLOWING REQUIREMENTS:
  - UPVC PIPE (MINIMUM SEWER CLASS SN6) MANUFACTURED IN ACCORDANCE WITH AS1260 – PVC PIPES AND FITTINGS FOR DRAIN, WASTE AND VENT APPLICATIONS. JOINT TYPE, SOLVENT WELDED. THE "ULTRA-RIB" PIPE AND FITTING SYSTEMS MANUFACTURED BY VINIDEX IS ACCEPTABLE.
  - STEEL REINFORCED CONCRETE PIPE MINIMUM CLASS 2, MANUFACTURED TO AS 4058. JOINT TYPE, RUBBER RING.
  - FIBRE REINFORCED CONCRETE PIPE MINIMUM CLASS 1, MANUFACTURED TO AS 4139. JOINT TYPE, RUBBER RING (SUPERTITE).
- MINIMUM PIPE GRADES TO COMPLY GENERALLY WITH AS 3500 NATIONAL PLUMBING AND DRAINAGE CODE PART 3 STORMWATER DRAINAGE:
  - 1.0% GRADE FOR PIPES ≤ 150 DIAMETER
  - 0.5% GRADE FOR PIPES > 150 BUT < 375 DIAMETER
  - 0.3% GRADE FOR PIPES ≥ 375 DIAMETER
- PROVIDE ROOFWATER INSPECTION MANHOLES:
  - AT MAXIMUM 100m SPACING.
  - AT ALL CHANGES IN PIPE SIZES.
  - AT ALL DIRECTION CHANGES EXCEEDING 15°
  - AT LINE TERMINATION.
- PROVIDE "AS CONSTRUCTED" INFORMATION FOR:
  - OFFSETS OF THE MAIN LINE TO THE PROPERTY BOUNDARY.
  - THE LOCATIONS OF INSPECTION MANHOLES AND Y JUNCTIONS MEASURED FROM THE PROPERTY BOUNDARY.
- DIMENSIONS IN MILLIMETRES (U.N.O.)

DRAWING AUTHORISED FOR PUBLICATION Publish ASSET ENGINEERING MANAGER STRATEGIC ASSET MANAGEMENT DESIGN APPROVED Publish CLIENT POSITION COUNCIL WORK AREA OR BRANCH					DESIGN	Std Dwgs WG	DATE	Mmm 'YY		<b>BRISBANE CITY COUNCIL STANDARD DRAWING</b>	
					DRAWN	CPO - P&D	DATE	Mmm 'YY		SCALE NOT TO SCALE DWG No. <b>BSD-8111</b>	
					CHECKED		DATE	Mmm 'YY		<b>ROOFWATER DRAINAGE FOR LOW DENSITY RESIDENTIAL SUBDIVISIONS</b>	
					DRAWING FILENAME	BSD-8111.dwg				ORIGINAL SIZE A3 REVISION A	
ISSUE	AMENDMENT	DRAWN DATE	CHK'D DATE	APPR'D DATE	ASSOCIATED PLANS	SUPERSEDES UMS-351					
A	ORIGINAL ISSUE	OCT '13	OCT '13	OCT '13							