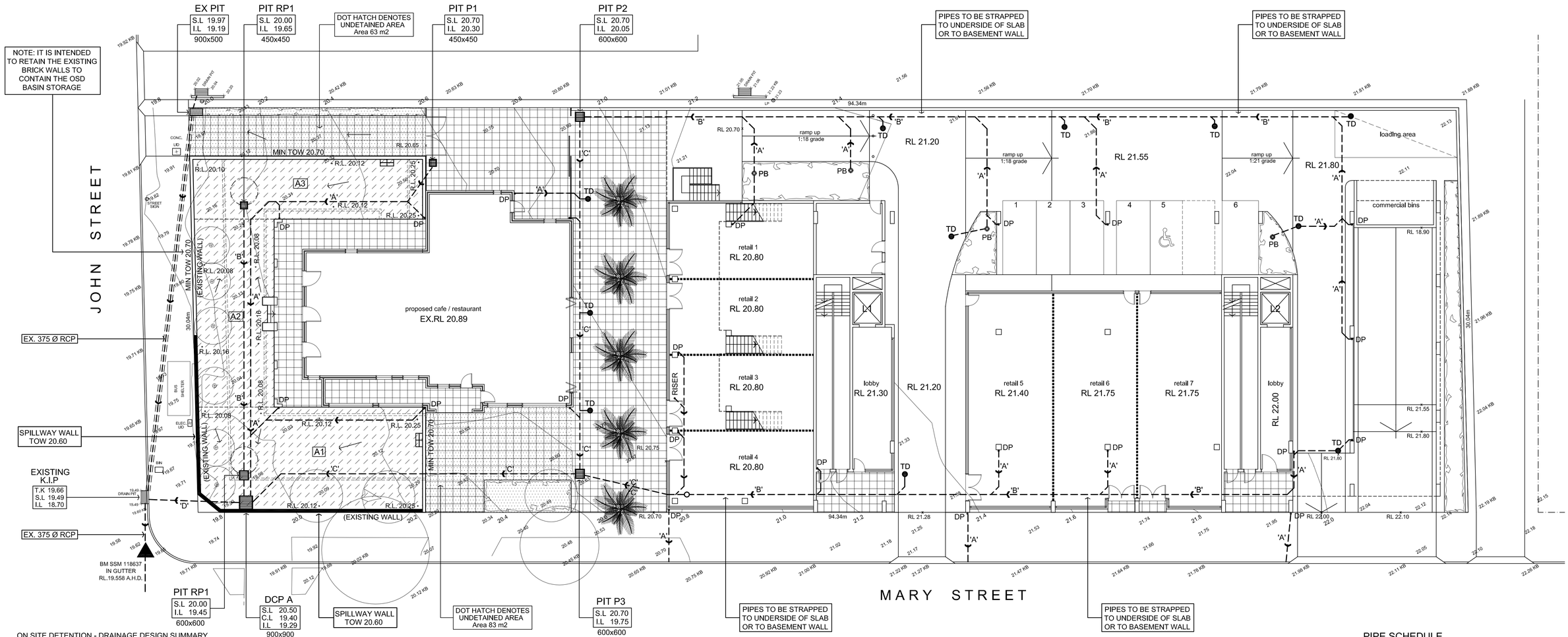


ON SITE DETENTION - DRAINAGE DESIGN SUMMARY

GROSS SITE AREA	0.2835 ha		[A]
Basic Storage Volume	325 x A	92.14 m3	[B]
Basic discharge	150 x A	0.04253 m3/s	[C]
Area of site drained to storage		0.2689 ha	[D]
(Must be as much as possible and not be less than 75% of the total site without written council approval)			
[D]/[A] x 100		94.85 %	[E]
Storage per ha of contributing area	B / D	342.65 m3/ha	[F]
Enter volume/PSD adjustment chart (Fig 5.1) using [F], and read new PSD in litres/second/ha.		123.65 l/s/ha	[G]
Determine PSD	G x D	33.22 l/s	[H]
Maximum head to orifice centre		1.2 m	[K]
Selected orifice diameter	d = (0.464 x Q/h^0.5)^0.5	0.119 m	[J]
Maximum discharge		32.173 l/s	[L]
Head for high early discharge		1.1 m	[M]
High early discharge	(L2 x (M / K)^0.5) (min 75% OF L)	30.803 l/s	[N]
Approximate mean Discharge	(L + N) / 2	31.488 l/s	[P]
Average discharge / ha	P / D	117.099 l/s/ha	[Q]
Enter volume / PSD adjustment chart (Fig 5.1) using [Q], and read off final storage volume per hectare		358 l/s/ha	[R]
Determine final SSR	R2 x D2	96.29 m3	[S]
Primary storage proportion	100 %	96.29 m3	[T]
Secondary storage proportion	0 %	0.0 m3	[U]
Tertiary storage proportion	0 %	0.0 m3	[V]
check [T] + [U] + [V]= [S]		96.29 m3	[S]

ABOVE GROUND DETENTION BASIN

SHOWN HATCHED

MAX POOL RL	= 20.60
MAX DEPTH	= 600mm
VOLUME STORED	= 128.4 m3
VOLUME REQUIRED	= 96.3 m3

END AREA - DETENTION VOLUME CALCULATIONS

TAG	AREA (m2)	AVG DEPTH (mm)	VOLUME (m3)
A1	124.7	440	54.9
A2	78.9	490	38.7
A3	75.6	460	34.8
		TOTAL VOLUME	128.4

PROVIDE A 1200mm HIGH POOL TYPE FENCE/SUITABLE BARRIER OR RAILING WHERE THE VERTICAL DROP INTO THE DETENTION BASIN EXCEEDS 500mm SHOWN AS

ENSURE ALL LANDSCAPED AREAS WITHIN THE DETENTION BASIN ARE MULCHED WITH DECORATIVE ROCK MULCH (IE NON FLOATABLE)

ALL WALLS FORMING THE DETENTION BASIN SHALL BE CONSTRUCTED WHOLLY WITHIN THE PROPERTY BOUNDARIES OF THE SITE BEING DEVELOPED.

ENSURE WATERTIGHT BRICK / MASONRY WALLS ARE CONSTRUCTED TO FORM THE DETENTION BASIN.

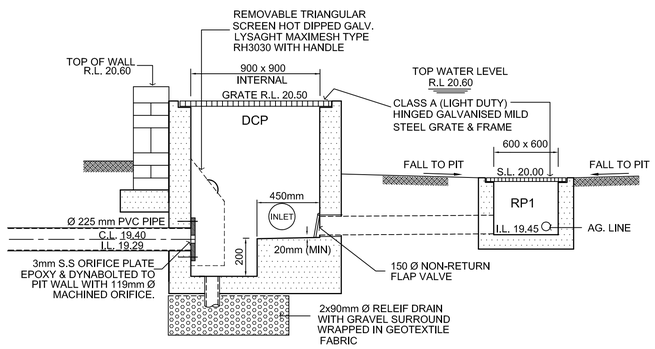
ON-SITE DETENTION AREA STORMWATER MAY RISE IN THIS AREA DURING HEAVY RAIN

PROVIDE OSD SIGNS

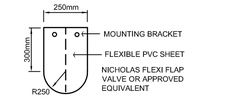
SITE STORMWATER MANAGEMENT LAYOUT

+ SEDIMENT & EROSION CONTROL LAYOUT

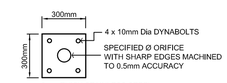
SCALE 1:150/A1, 1:300/A3



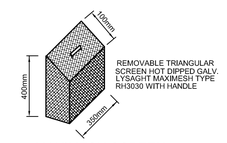
DISCHARGE CONTROL PIT (N.T.S)



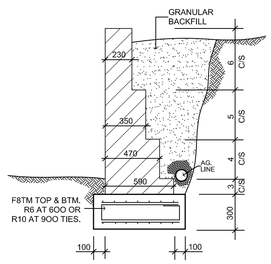
FLAP VALVE N.T.S



ORIFICE PLATE DETAIL N.T.S



MAXIMESH SCREEN N.T.S



GARDEN RETAINING WALL

(USE WHERE APPLICABLE - STRUCTURAL ENGINNER TO PROVIDE BLOCK RETAINING WALL DETAIL)

PIPE SCHEDULE

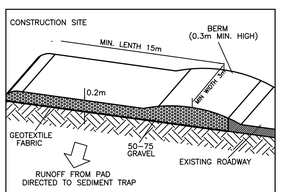
TAG	SIZE	MATERIAL	GRADE	DESCRIPTION
'A'	100 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'B'	150 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'C'	225 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'D'	300 Ø	R.C.P	1% MIN	REGULAR GRAVITY PIPE

STORMWATER LAYOUT NOTES

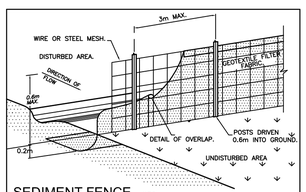
1) PITS DEEPER THAN 600mm TO BE 600 X 900 W, ELSE 450 SQ U.N.O.
2) ALL PIPES TO HAVE 1% MIN. GRADE U.N.O.
3) ALL DOWNPIPES TO BE 100 X 50 BOX.
4) PIPES TO BE U.P.V.C. OR STORMWATER PIPE TO A.S.1254.
5) PITS TO BE STANDARD PRECAST CONCRETE PITS OR BRICK RENDERED WITH CONCRETE HEAVY DUTY GRATES SIZED AS PITS PER PLAN.
6) NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS.
7) PERSONS UTILISING THIS PLAN FOR ANY PURPOSES SHALL VERIFY THE DATUM & RESPECTIVE LEVELS PRIOR TO COMMENCING ANY WORKS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
8) DRIVEWAY LEVELS PROVIDED FOR DRAINAGE DESIGN PURPOSES ONLY. LEVELS MAY BE ADJUSTED TO SUIT FINAL HOUSE CUT/FILL CONDITIONS BUT NEED TO MAINTAIN INTENT OF DRAINAGE SYSTEM. ENGINEER TO BE CONSULTED PRIOR TO CONSTRUCTION TO ENSURE INTENT MAINTAINED.
9) END OF EXISTING DRAINAGE LINE TO BE EXPOSED & LEVELS CONFIRMED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS.
10) BUILDERS TO ENSURE SERVICES CONNECTIONS TO HOUSE DO NOT CONFLICT WITH DRAINAGE DESIGN REQUIREMENTS.
11) ALL WORKS TO BE CONSTRUCTED TO GOOD BUILDING PRACTICE & MATERIALS TO MEET ACCEPTED SPECIFICATIONS.

LEGEND

P1	PIT LABEL	G.F.L.	GARAGE FLOOR LEVEL
	SUMP PIT	● 0.00	EXISTING REDUCED LEVEL
FG	300SQ/300 ø FLOOR GULLY	·R.L 157.00	PROPOSED REDUCED LEVEL
	100/150 ø GARDEN GULLY	■ DP	DOWNPIPE
	DRAINAGE PIPE	SP	SPITTER/SPREADER
	AERIAL PIPE	CE	CLEANING EYE
S.L.	SURFACE LEVEL		SEDIMENT FENCE
I.L.	INVERT LEVEL		AG LINE
F.F.L.	FINISHED FLOOR LEVEL		OVERLAND FLOW

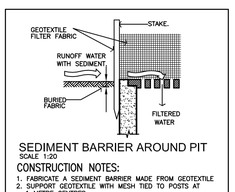


TEMPORARY CONSTRUCTION EXIT (N.T.S)



SEDIMENT FENCE (N.T.S)

DRAINAGE AREA 0.6ha MAX. SLOPE GRADIENT 1:2 MAX. SLOPE LENGTH 60m MAX.



SEDIMENT BARRIER AROUND PIT

SCALE 1:20

CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE
2. SUPPORT GEOTEXTILE WITH MESH TIED TO POSTS AT 1 METRE CENTRES.
3. DO NOT COVER INLET WITH GEOTEXTILE.

alwdesign

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JOB NUMBER: SW11160

DRAWING NUMBER: SW11160 - S1

PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT AT CORNER OF JOHN & MARY STREETS, LIDCOME NSW

DRAWING: SITE STORMWATER MANAGEMENT LAYOUT

DESIGNED	DRAWN	CHECKED:
A.W	C.W	ANDREW L WAHBE - BE (CIVIL) MIEAUST PENG

DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY DESIGNING ENGINEER

ISSUE	REVISION DESCRIPTION	APPR. DATE
A	ISSUED FOR DEVELOPMENT APPLICATION	03/06/11