PROJECT: **SHOP TOP HOUSING DEVELOPMENT**

PLANSET: **CONCEPT STORMWATER DRAINAGE PLAN**

CLIENT: **LOTUS PROJECT MANAGEMENT PTY LTD**

DRAWING LIST		
DWG NO.	REV	DWG TITLE
GENERAL		
PS03-A000	C	COVER SHEET
CONSTRUCTION MANAGEMENT WORKS		
PS03-B300	B	SEDIMENT & EROSION CONTROL PLAN
PS03-B310	A	SEDIMENT & EROSION CONTROL DETAILS
DRAINAGE		
PS03-E100	B	DRAINAGE PLAN – GROUND FLOOR
PS03-E101	A	DRAINAGE PLAN – ROOF PLAN
PS03-E200	C	DRAINAGE DETAILS
PS03-E600	B	OSD CATCHMENT PLANS & RESULTS

LOCALITY PLAN
NOT TO SCALE

LGA: NORTHERN BEACHES COUNCIL

1129-1131 PITTWATER ROAD, COLLAROY, NSW, 2097
LOT 4 DP 7445 AND LOT 1

DP: 859613

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	**MINOR AMENDMENT**	**28/10/2020**	**JS**	**SL**	**SL**	**TH**
B	MINOR AMENDMENT	31/03/2020	JS	SS	SL	TH
A	INITIAL RELEASE	26/09/2019	LL	SS	SL	AN

SCALE

GRID	DATUM	PROJECT MANAGER
---	---	TH

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PROJECT NAME/PLANSET TITLE
SHOP TOP HOUSING DEVELOPMENT
CONCEPT STORMWATER DRAINAGE PLAN
1129-1131 PITTWATER ROAD, COLLAROY, NSW, 2097
LOT 4 DP 7445 AND LOT 1 DP 859613

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DRAWING TITLE
COVERSHEET

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-A000	C

NOTE:
- TO BE READ IN CONJUNCTION WITH SEDIMENT AND EROSION CONTROL DETAILS
- ALL EXCESS MATERIAL SHALL BE REMOVED FROM SITE.
- EROSION AND SEDIMENT CONTROLS TO BE IN PLACE AT ALL TIMES. CONTROLS TO BE INSPECTED, MAINTAINED AND REPLACED AS REQUIRED BY THE CONTRACTOR UNTIL WORKS ARE COMPLETED AND PERMANENT MEASURES HAVE BEEN ESTABLISHED.

KEY:

▭	INDICATIVE STOCKPILE
—|—	SEDIMENT FENCE
☒	GEOTEXTILE INLET FILTER
▤	STABILISED SITE ACCESS

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
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A	INITIAL RELEASE	26/09/2019	LL	SS	SL	AN

SCALE
0 1 2 3 4 5 6 7 8 9 10 METRES
A1 (A3) 1:100 (1:200)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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DRAWING TITLE
SEDIMENT & EROSION CONTROL PLAN

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-B300	B

DRAWING ID: P1907336-PS03-R04-B300

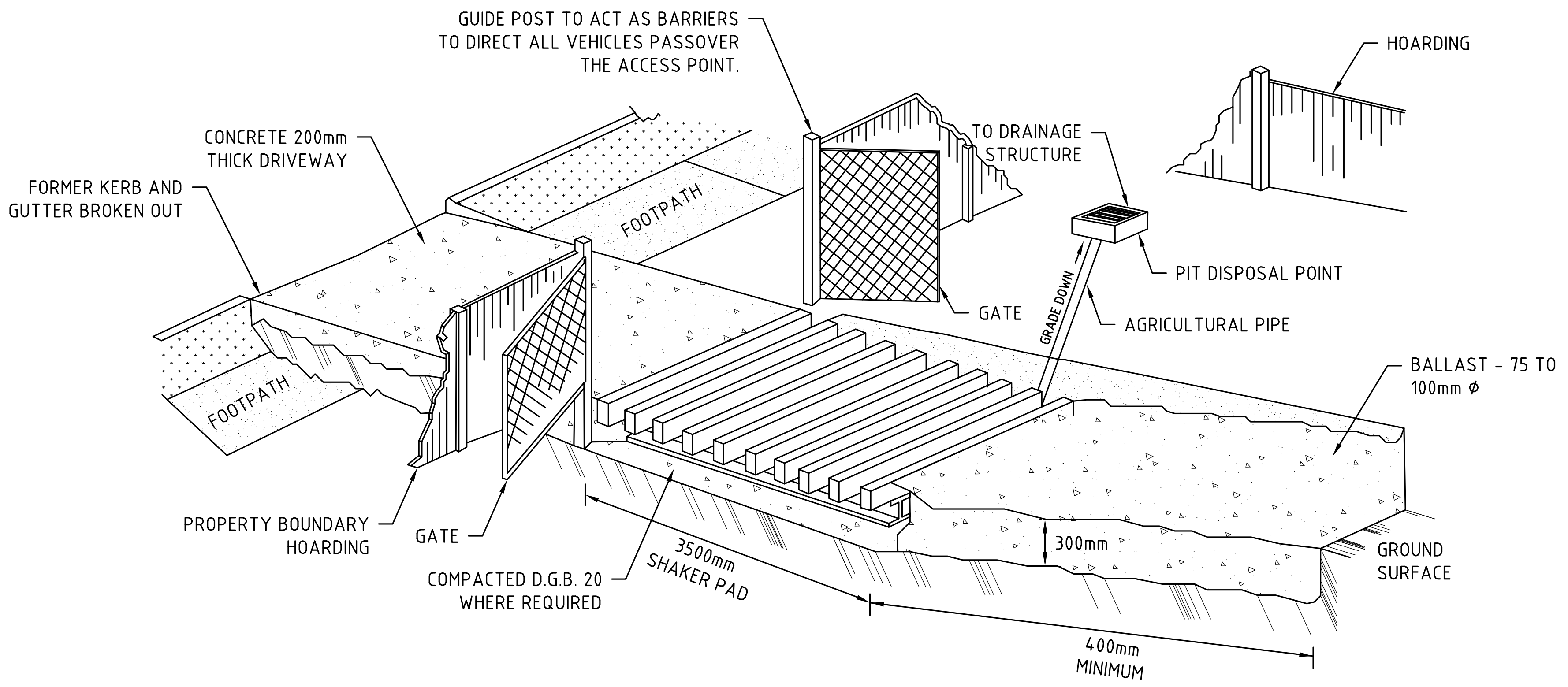
PRINTED: ---- - USER: JSUAREZ
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

STABILISED ACCESS POINT

TYPE II SAP

THE TYPE II SAP DESIGN IS MORE DEFINED IN THAT IT REQUIRES AN AREA OF BALLAST WITHIN THE SITE COMBINED WITH A SHAKER PAD; ADJACENT THE SHAKER PAD AND IN THE PUBLIC WAY IS A TEMPORARY (CONCRETE) VEHICULAR CROSSING. (SEE DIAGRAM)

STABILISED ACCESS POINT - TYPE 2



IN BOTH TYPE I AND TYPE II SAP'S, THE TEMPORARY VEHICULAR CROSSING MUST:

- CONNECT TO AN EXISTING GUTTER LAYBACK (WHERE THE KERB AND GUTTER EXIST) . IF A GUTTER LAYBACK DOES NOT EXIST THEN THE CONNECTION MUST BE MADE TO THE GUTTER BY REMOVING THE ADJCENT KERB SECTION ONLY.
- CONNECT TO A DISH CROSSING (WHERE KERB AND GUTTER DOES NOT EXIST). IF A DISH CROSSING DOES NOT EXIST, THEN IT MUST BE CONSTRUCTED IN ACCORDANCE WITH DETAILS CONTAINED IN COUNCIL'S ISSUED FOOTPATH CROSSING LEVELS.

IT SHOULD BE NOTED THAT THESE TYPES OF SAPS ARE CONSIDERED TO BE APPLICABLE FOR THE MAJORITY OF ACTIVITIES HOWEVER SOME SITES MAY REQUIRE SPECIAL CONSIDERATION.

SHAKER PAD (CATTLE GRID)

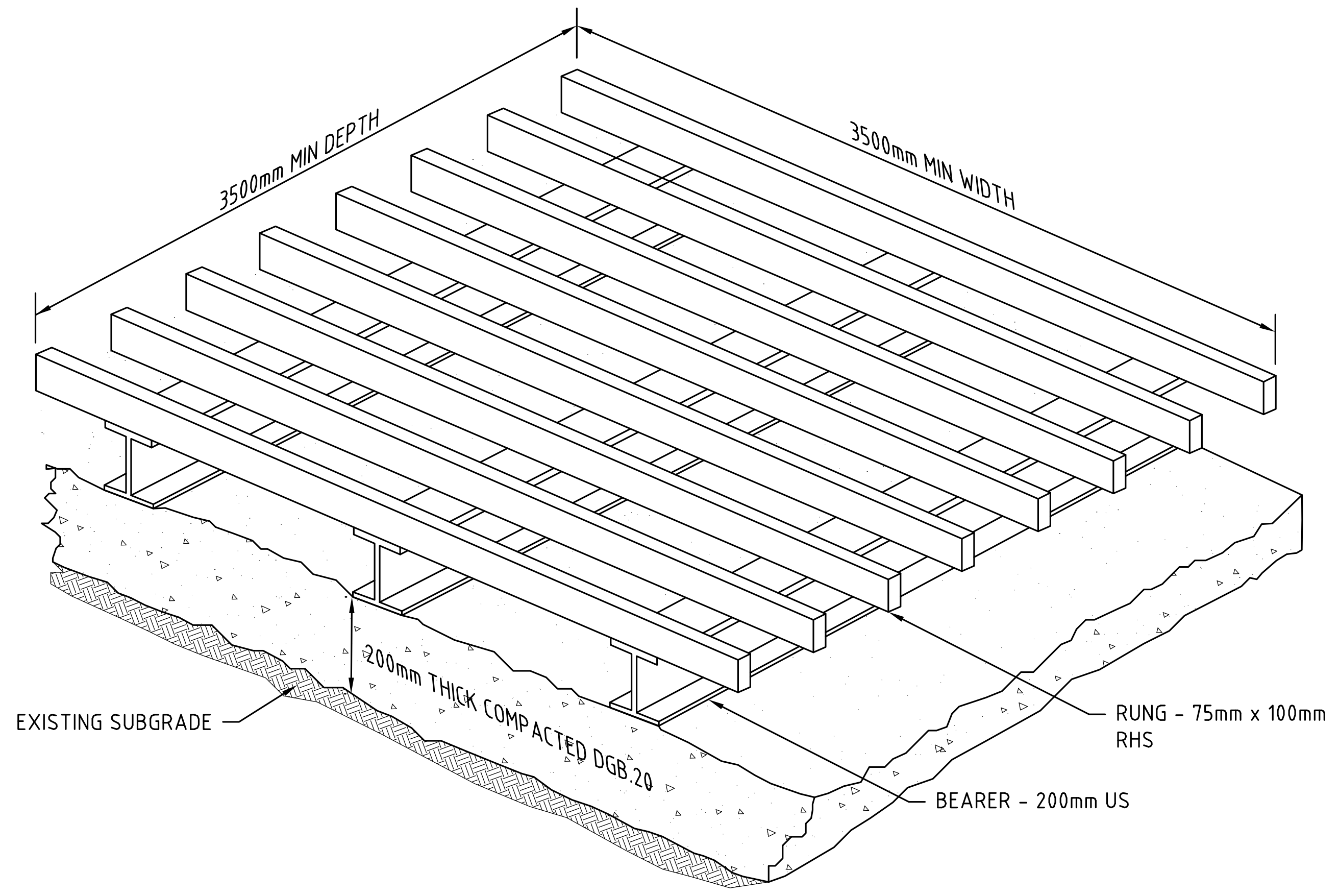
A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFERE FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

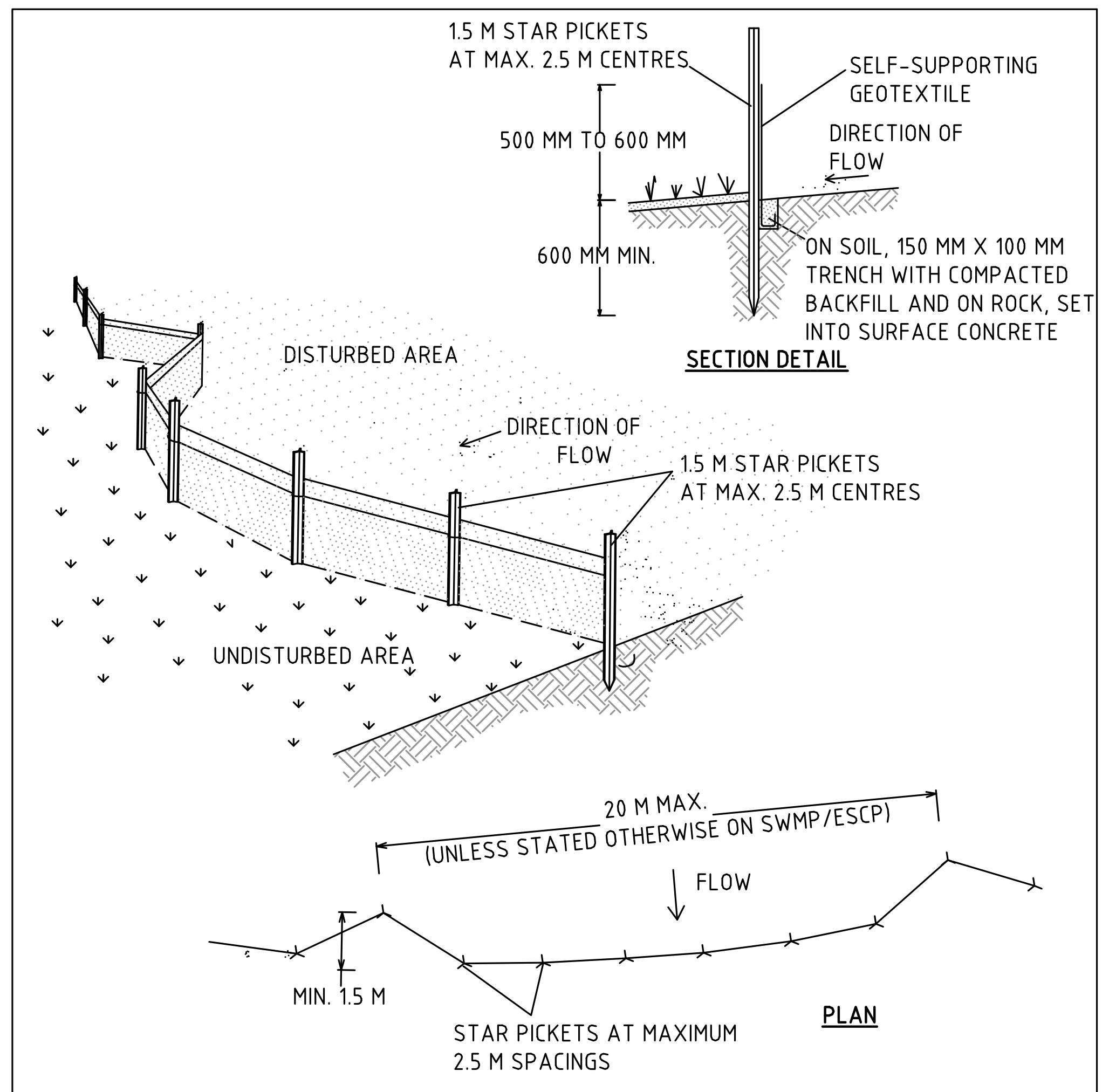
SHAKER PADS CAN BE DESIGNED AND CONSTRUCTED TO ENABLE RE-USE ON FUTURE PROJECTS.

THE SHAKER PAD:

- MUST BE DESIGNED AND CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER. THE CERTIFIED DESIGN SHOULD BE SUBMITTED WITH THE RELEVENT APPLICATION.
- CAN BE CONSTRUCTED FROM ANY SUITABLE MATERIAL.
- MUST BE LOCATED ON A SUITABLY PREPARED AND COMPACTED SUB-GRADE/BASE MATERIAL.
- MUST BE SITUATED SUCH THAT THE RUNGS OF THE SHAKER PAD ARE LEVEL WITH THE ADJOINING NATURAL SURFACE.
- MUST BE A MINIMUM OF 3.5m IN LENGTH.
- MUST BE A MINIMUN OF 3.5m IN WIDTH.
- MUST HAVE CLEAR SPACING BETWEEN RUNGS OF 200 - 250mm.
- RUNGS MUST HAVE A MAXIMUM WIDTH (BEARING AREA) OF 75mm.
- MUST HAVE A MINIMUM CLEAR DEPTH OF 300mm IE FORM THE ROP OF THE RUNG TO THE FINISHED SUB-GRADE/BASE LEVEL.

THE SHAKER PAD MUST BE PROVIDED WITH SUITABLE BARRIERS AT THE SIDES TO ENSURE THAT ALL TYERS OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.

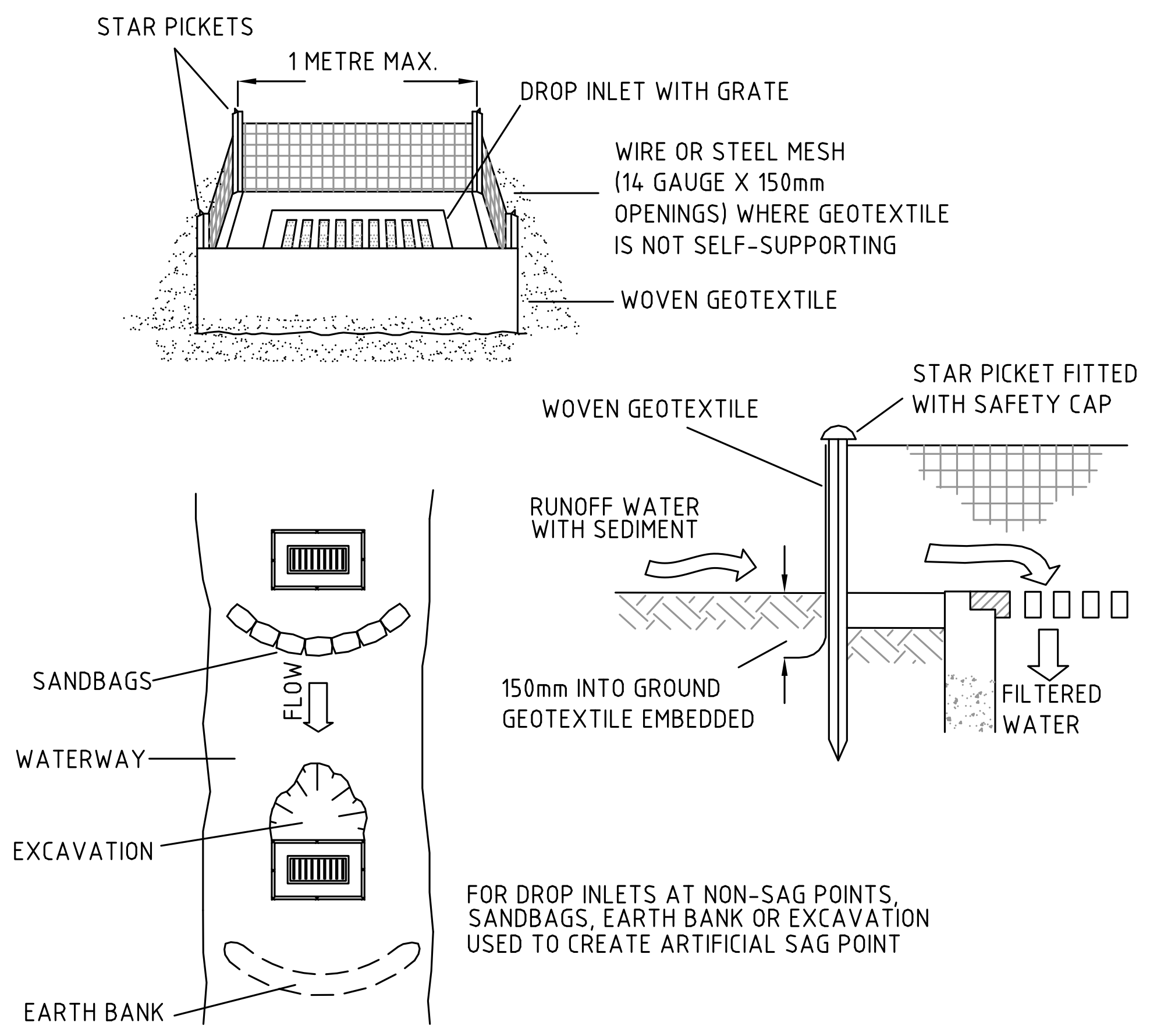




CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150-MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOP EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-MM OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

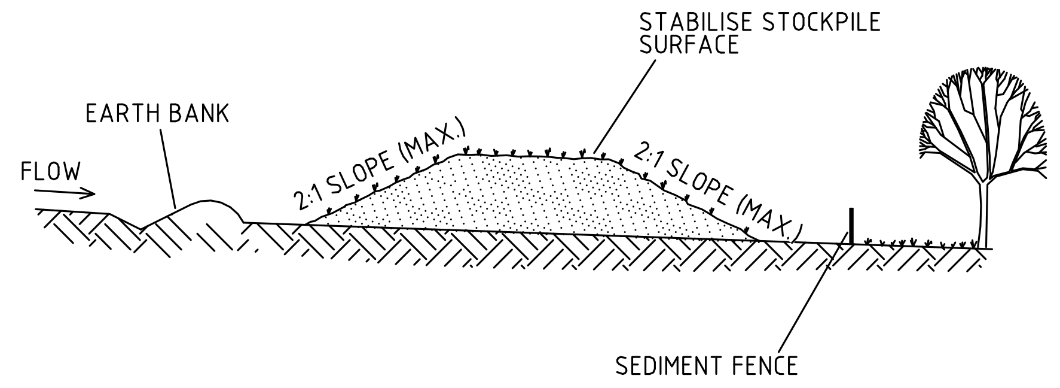
SEDIMENT FENCE SD 6-8



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER ☒ SD 6-12



CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

STOCKPILES SD 4-1

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

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A	INITIAL RELEASE	26/09/2019	LL	SS	SL	AN

SCALE

GRID

DATUM

PROJECT MANAGER
AN

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PROJECT NAME/PLANSET TITLE
SHOP TOP HOUSING DEVELOPMENT
CONCEPT STORMWATER DRAINAGE PLAN
1129-1131 PITTWATER ROAD, COLLAROY, NSW, 2097
LOT 4 DP 7445 AND LOT 1 DP 859613

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DRAWING TITLE
SEDIMENT & EROSION CONTROL DETAILS

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-B310	A

KEY

FLOOR WASTE	⊗
STORMWATER PIPE	▬
PROPOSED TRENCH GRATE	▥
900×900mm GRATED SURFACE INLET PIT	▣
EXISTING PIT	▣
PIPE FLOW DIRECTION	→
SURFACE FLOW DIRECTION	→
SITE BOUNDARY	—

NOTES:
1. ALL PIT AND PIPE LOCATIONS AND SIZES ARE INDICATIVE ONLY AND SUBJECT TO CHANGE AT CC STAGE.
2. ALL SURFACE AND INVERT LEVELS ARE TO BE CONFIRMED AT CC STAGE.
3. ALL ROOF GUTTERS, DOWNPIPES AND SUBSOIL DRAINAGE AND BASEMENT DRAINAGE SYSTEM TO BE DESIGNED IN ACCORDANCE WITH AS3500 AND PROVIDED AT CC STAGE.
4. ROOF AREA OF THE MANAGER BUILDING TO BE CONNECTED TO PROPOSED OSD TANK ON THIRD LEVEL AND TO BE DESIGNED BY APPROPRIATELY QUALIFIED DESIGNER AT CC STAGE.
5. RAINWATER FROM ALL ROOF AREAS WILL BE TREATED BY A FIRST FLUSH DEVICE.

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	**MINOR AMENDMENT**	**31/03/2020**	**JS**	**SS**	**SL**	**TH**
A	INITIAL RELEASE	26/09/2019	LL	SS	SL	AN

SCALE
0 1 2 3 4 5 6 7 8 9 10 METRES
A1 (A3) 1:100 (1:200)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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DRAWING TITLE
DRAINAGE PLAN
GROUND FLOOR

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-E100	B

DRAWING ID: P1907336-PS03-R04-E100

PRINTED: ---- - USER: JSUAREZ

A1 / A3 LANDSCAPE (A1LC_v02.0.01)

KEY

FLOOR WASTE	⊗
STORMWATER PIPE	━
PROPOSED TRENCH GRATE	▥
900×900mm GRATED SURFACE INLET PIT	▣
EXISTING PIT	▨
PIPE FLOW DIRECTION	→
SURFACE FLOW DIRECTION	→
SITE BOUNDARY	―

NOTES:

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2. ALL SURFACE AND INVERT LEVELS ARE TO BE CONFIRMED AT CC STAGE.
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4. ROOF AREA OF THE MANAGER BUILDING TO BE CONNECTED TO PROPOSED OSD TANK ON THIRD LEVEL AND TO BE DESIGNED BY APPROPRIATELY QUALIFIED DESIGNER AT CC STAGE.
5. RAINWATER FROM ALL ROOF AREAS WILL BE TREATED BY A FIRST FLUSH DEVICE.

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
A	INITIAL RELEASE	30/03/2020	JS	SS	SL	TH

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A1 / A3 LANDSCAPE (A1LC_v02.0.01)

SCALE
0 1 2 3 4 5 6 7 8 9 10 METRES
A1 (A3) 1:100 (1:200)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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PROJECT NAME/PLANSET TITLE
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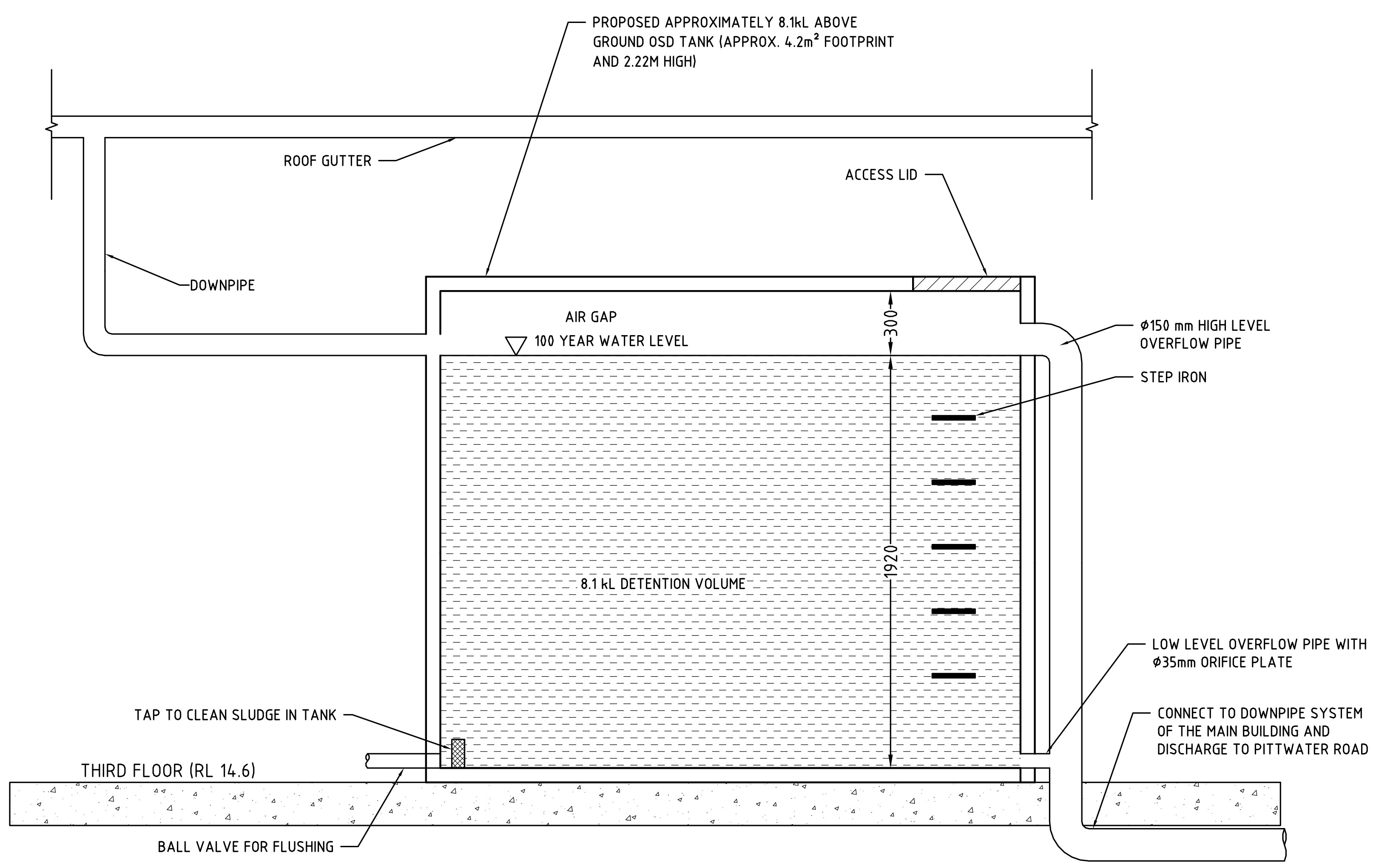
DRAWING TITLE
DRAINAGE PLAN
ROOF PLAN

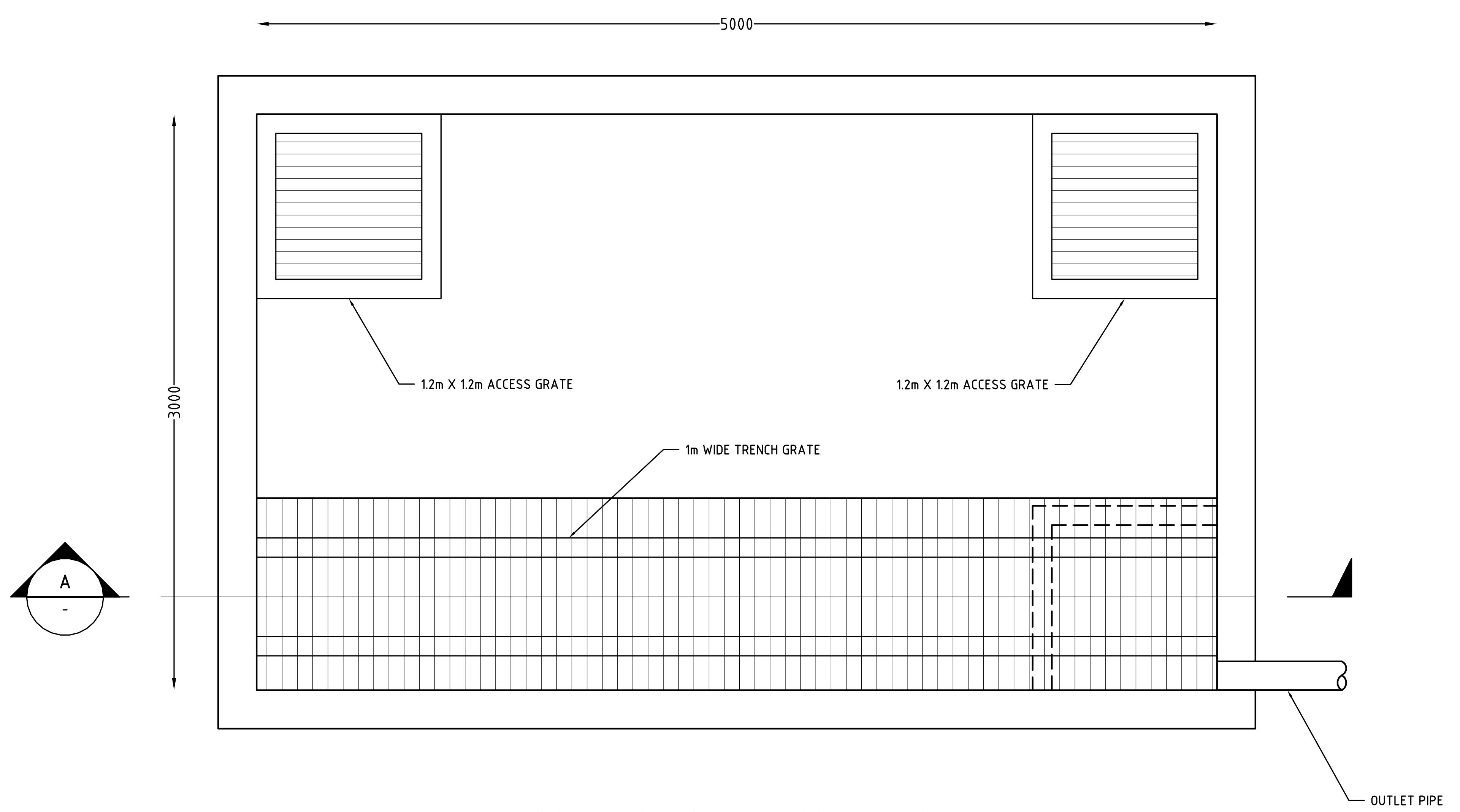
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-E101	A

DRAWING ID: P1907336-PS03-R04-E101



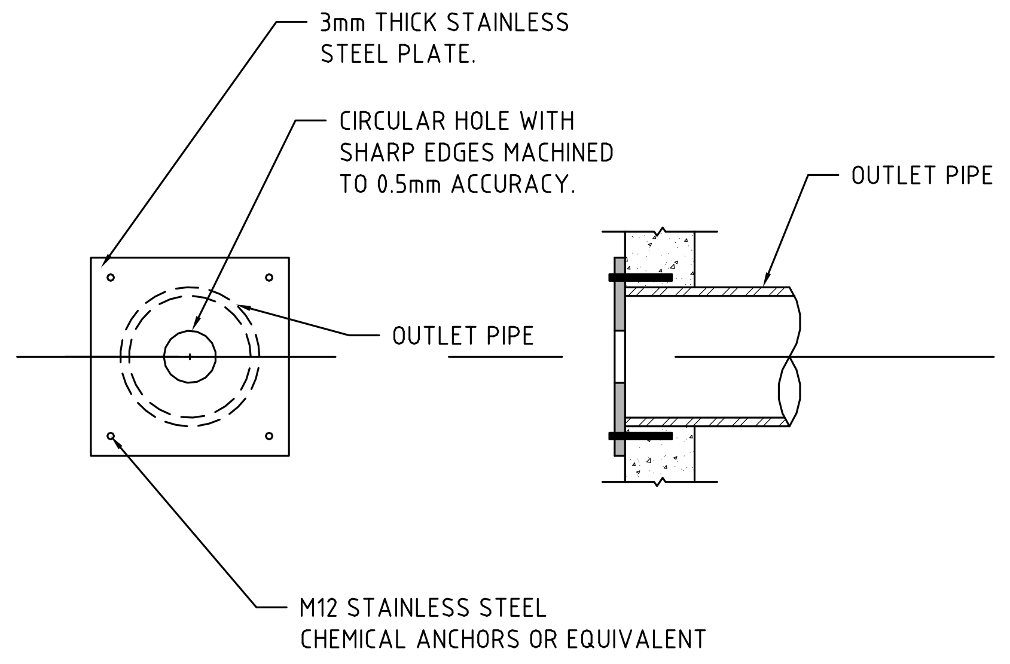
ABOVE GROUND OSD CONFIGURATION
(SCHEMATIC DIAGRAM ONLY)

NOT TO SCALE



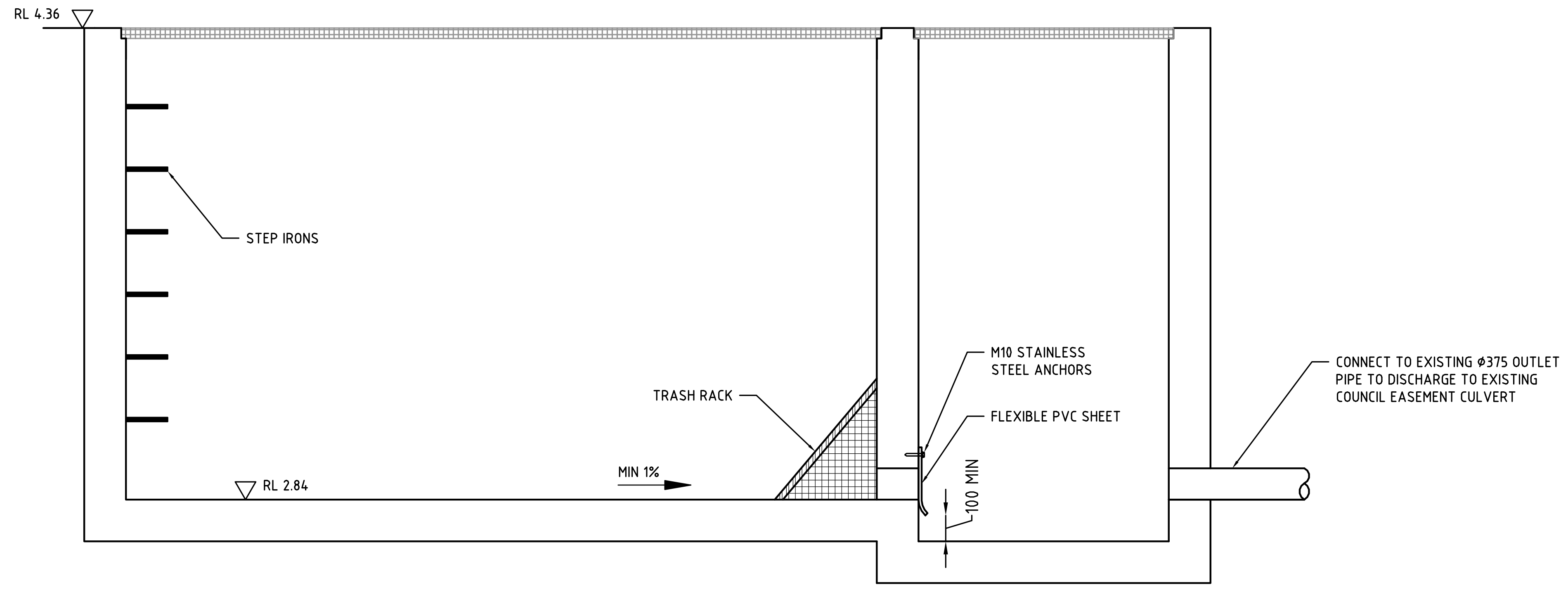
FLOOD MITIGATION TANK (SCHEMATIC) PLAN

NOT TO SCALE



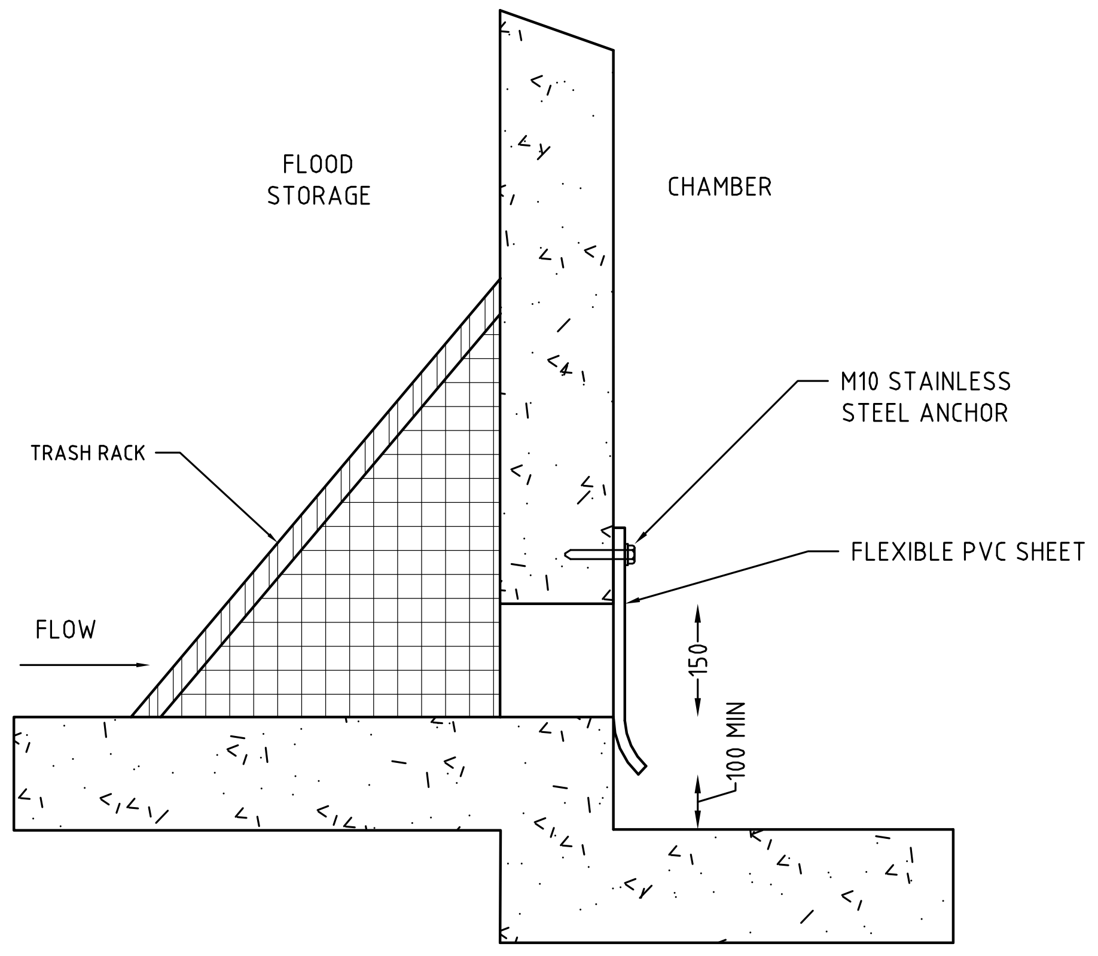
ORIFICE PLATE DETAIL

NOT TO SCALE



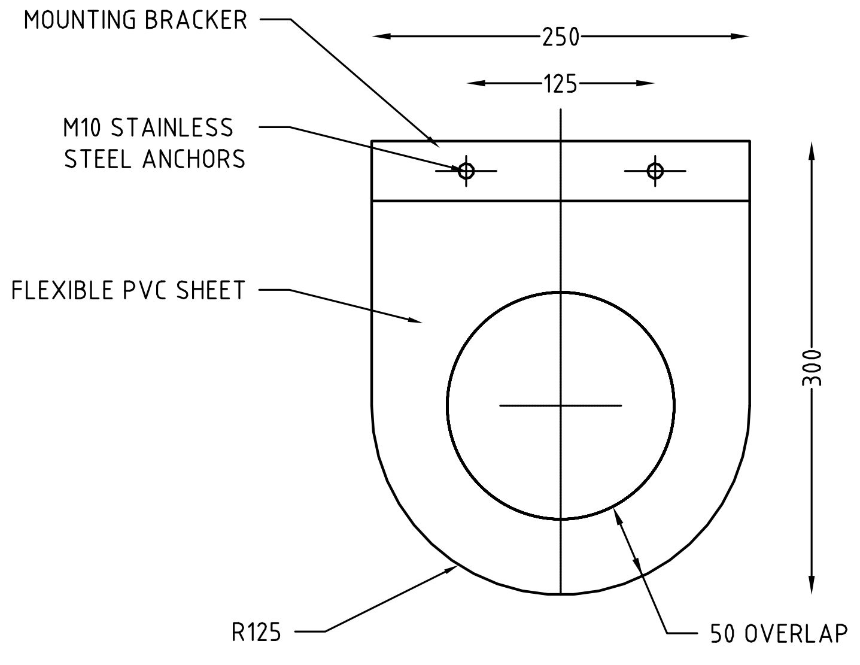
FLOOD MITIGATION TANK (SECTION A-A)

NOT TO SCALE



NON-RETURN FLAP MOUNTING

NOT TO SCALE



NON-RETURN FLAP MIN DIMENSIONS

NOT TO SCALE

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SCALE

GRID

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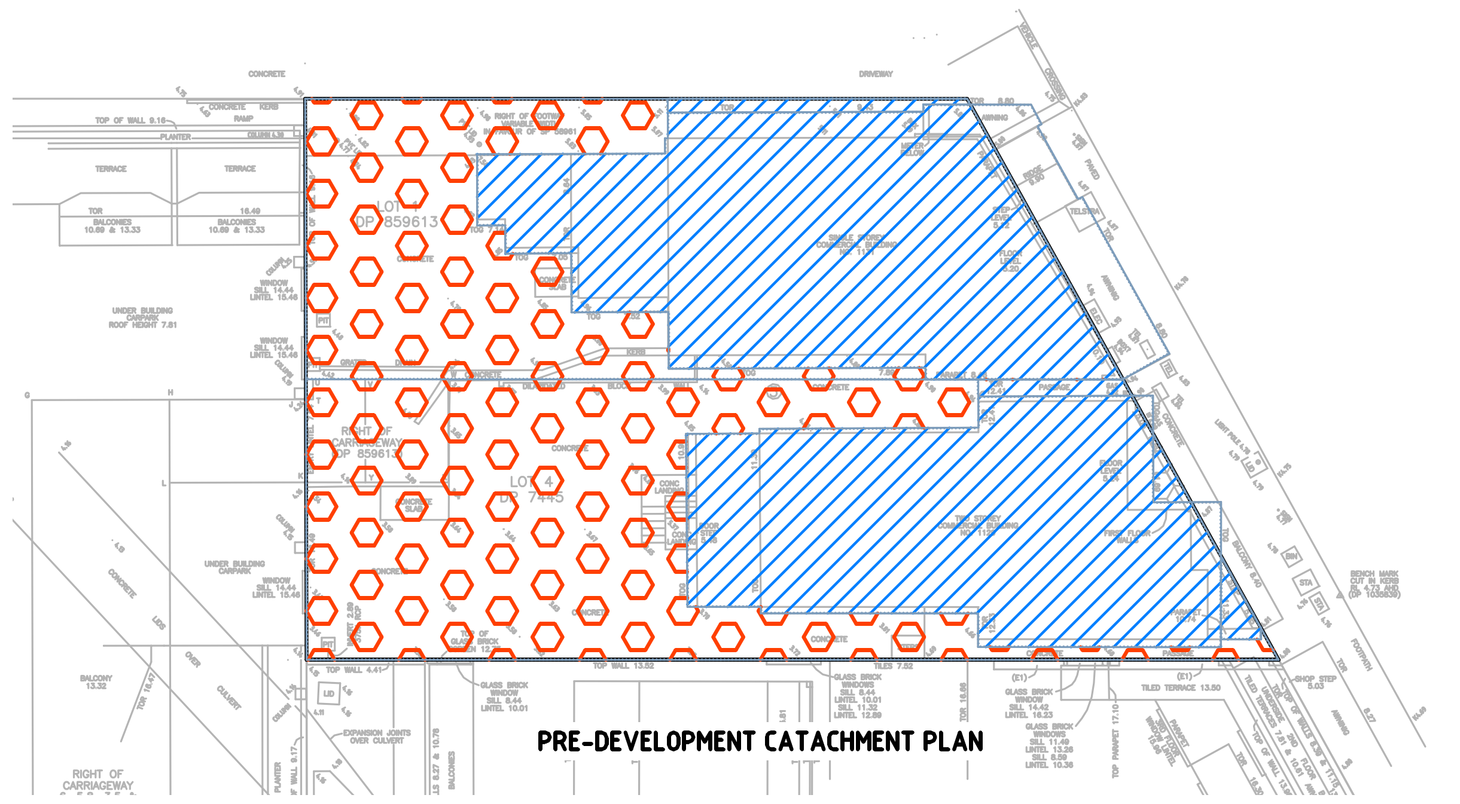
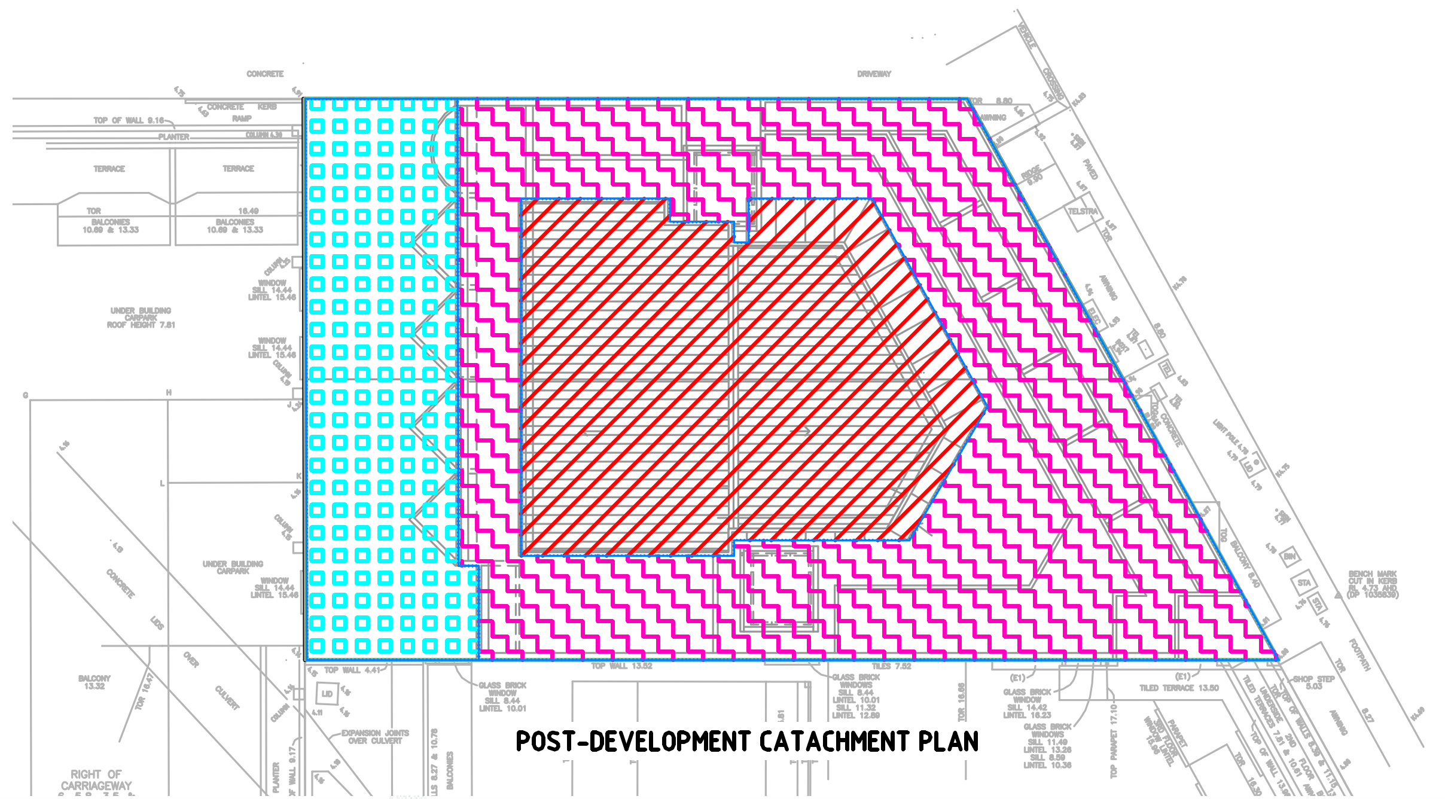
DRAWING TITLE
OSD/RAINWATER TANK DETAILS

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-E200	C

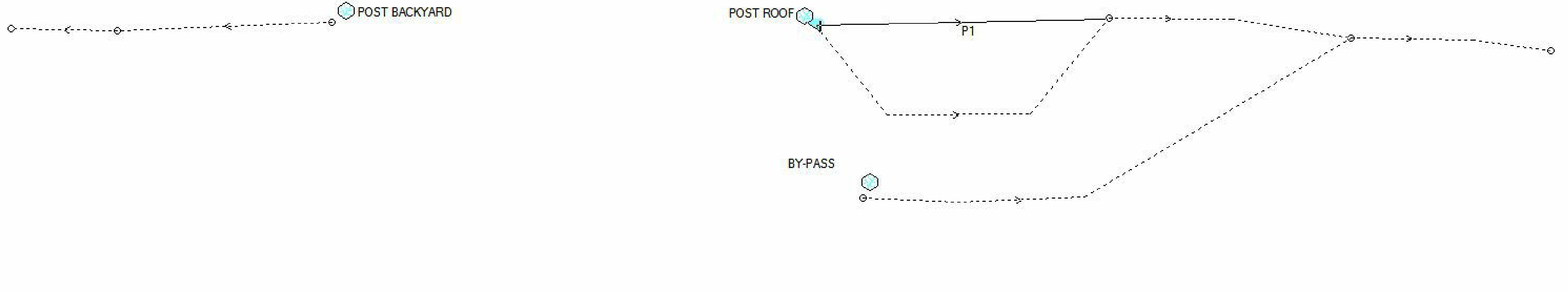
DRAWING ID: P1907336-PS03-R04-E200



PRE-DEVELOPMENT CATACHMENT PLAN



POST-DEVELOPMENT CATACHMENT PLAN



EXISTING CATCHMENTS (P1907336DRN02V07)

KEY		DRAINS NODE	AREA (ha)	% PAVED
▨	ROOF	PRE ROOF	0.0423	100%
		IMPERVIOUS AREA	0.0423	= 100% OF TOTAL AREA
		PERVIOUS AREA	0.0000	= 0% OF TOTAL AREA
⬡	BACKYARD	PRE BACKYARD	0.0391	100%
		IMPERVIOUS AREA	0.0391	= 100% OF TOTAL AREA
		PERVIOUS AREA	0.0000	= 0% OF TOTAL AREA
		TOTAL AREA	0.0814	

PROPOSED CATCHMENTS (P1907336DRN02V07)

KEY		DRAINS NODE	AREA (ha)	% PAVED
▨	ROOF	POST ROOF	0.0255	100
▦		POST ROOF BYPASS	0.0398	
		TOTAL ROOF AREA	0.0653	= 100% OF TOTAL AREA
		IMPERVIOUS AREA	0.0653	=100% OF TOTAL AREA
		PERVIOUS AREA	0	= 0% OF TOTAL AREA
□	BACKYARD	POST BACKYARD	0.0161	100
		TOTAL PYPASS AREA	0.0161	= 100% OF TOTAL AREA
		IMPERVIOUS AREA	0.0161	= 100% OF TOTAL AREA
		PERVIOUS AREA	0.0000	= 0% OF TOTAL AREA
		TOTAL AREA	0.0814	

DRAINS OSD MODELLING RESULTS

MODEL NAME: P1907336DRN02V07

BACKYARD DRAINING TO THE COUNCIL DRAINAGE EASEMENT

STORM EVENT×	Pre	Post	Difference
0.2 EY	0.016	0.007	-0.009
10% AEP	0.019	0.008	-0.011
5% AEP	0.021	0.005	-0.016
2% AEP	0.025	0.010	-0.015
1% AEP	0.028	0.012	-0.016

× based on crtitical storm duration of 5 minutes.

ROOF DRAINING TO PITTWATER ROAD

STORM EVENT×	Pre	Post	Difference
0.2 EY	0.018	0.018	0.000
10% AEP	0.020	0.020	0.000
5% AEP	0.023	0.023	0.000
2% AEP	0.027	0.027	0.000
1% AEP	0.030	0.030	0.000

× based on crtitical storm duration of 5 minutes.

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

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A	INITIAL RELEASE	26/09/2019	LL	SS	SL	AN

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SCALE
0 10 20 30 40 50 60 70 80 90 100 METRES
A1 (A3) 1:1,000 (1:2,000)

GRID: MGA
DATUM: mAHD
PROJECT MANAGER: TH

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PROJECT NAME/PLANSET TITLE
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DRAWING TITLE
OSD CATCHMENT PLANS & RESULTS

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907336	PS03	R04	PS03-E600	B