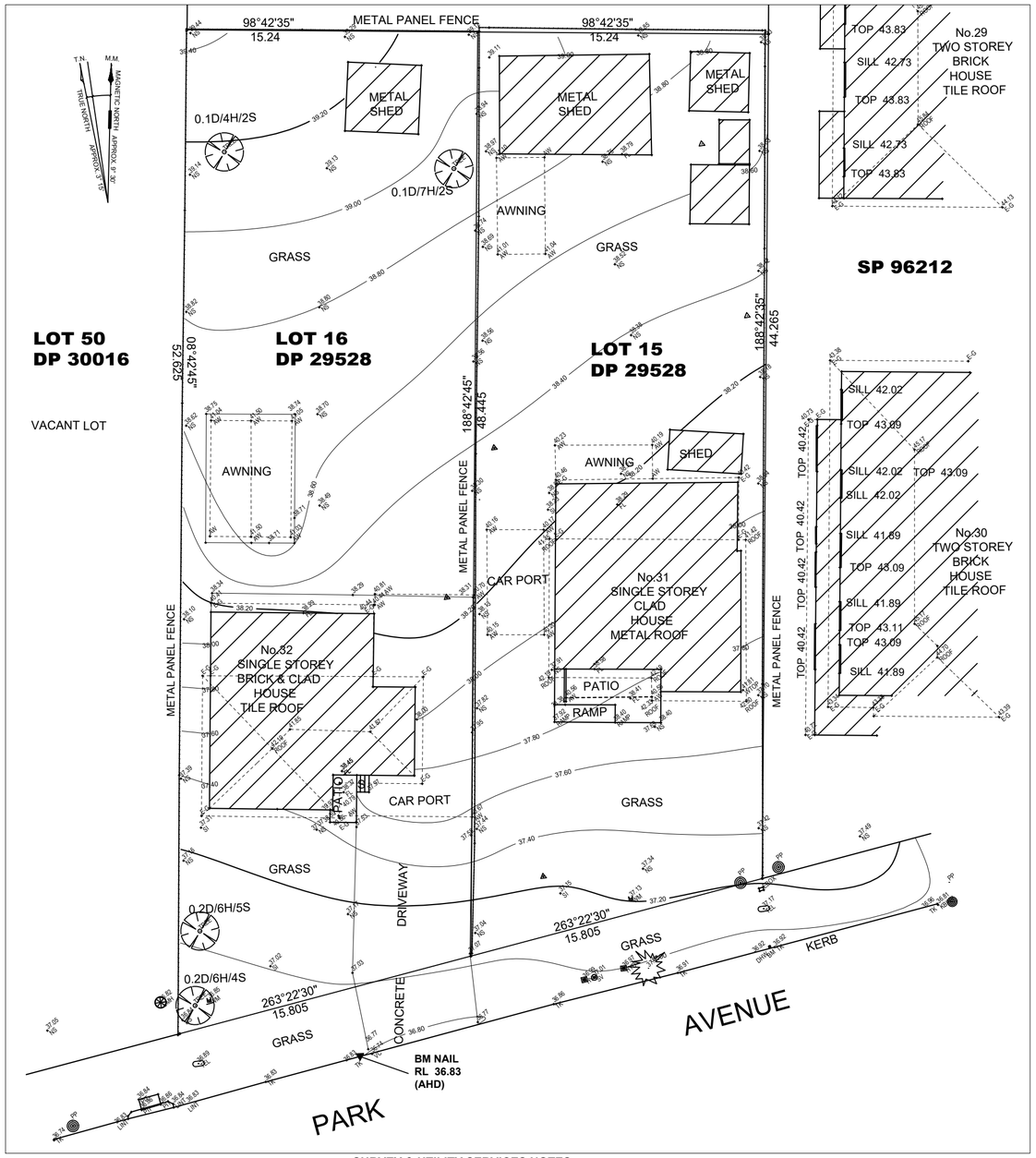
A2

STORMWATER MANAGEMENT PLAN

SITE - LOTS 15-16 DP 29528 - 31-32 PARK AVENUE, KINGSWOOD



LOCALITY PLAN

GOOGLE MAP - NOT TO SCALE

STORMWATER DRAWING SCHEDULE		
SHEET No.	**DRAWING NUMBER**	**TITLE**
01	SW-2011A-DA-01	SURVEY, LOCALITY PLAN & DRAWING SCHEDULE
02	SW-2011A-DA-02	CONCEPT STORMWATER DRAINAGE PLAN
03	SW-2011A-DA-03	STORMWATER CATCHMENT PLAN
04	SW-2011A-DA-04	OSD DETAILS & CALCULATIONS
05	SW-2011A-DA-05	RAINWATER TANK AND DRAINAGE DETAILS
06	SW-2011A-DA-06	EROSION AND SEDIMENT CONTROL PLAN

SURVEY PLAN

SCALE 1:150 [SURVEY BY OTHERS]

SCALES

1 0.5 0 1 2 3 4 5m 1 : 100 @ A2

2 1 0 2 4 6 8 10m 1 : 200 @ A3

SURVEY & UTILITY SERVICES NOTES:

1. SURVEY DATA PROVIDED BY OTHERS. MPC TAKES NO RESPONSIBILITY ON THE ACCURACY OF THE LEVELS & DETAILS SHOWN.
2. ALL SERVICES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY BY SURVEY. EXACT LOCATION SHALL BE ACCURATELY LOCATED BY CONTACTING DIAL BEFORE YOU DIG OR THE RELEVANT UTILITY PROVIDER BEFORE COMMENCING ANY EXCAVATION OR BUILDING WORKS.
3. ALL WORKS UNDERTAKEN WITHIN THE ROAD RESERVE / CARRIAGEWAY SHALL HAVE PRIOR APPROVAL FROM THE RELEVANT ROAD AUTHORITY, PRIOR TO COMMENCING WORKS.
4. ALL SURVEY LEVELS TO AUSTRALIAN HEIGHT DATUM - mAHD

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PENRITH CITY COUNCIL

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APPROVED BY:
ZULFIQAR KHAN
MIEAust, NER (# 2500471)
Accredited Certifier
(Civil & Structural) (BPB2925)

SIGNED:

PROJECT: 31-32 PARK AVENUE, KINGSWOOD
TITLE: SURVEY, LOCALITY PLAN & DRAWING SCHEDULE

DESIGN BY: MPC | SCALE: 1:100 or As Shown | FILE: JOB 20-165
CHECKED BY: Z KHAN | SHEET: 1 OF 6 | DATE: 30 OCTOBER 2020

APPLICANT/CLIENT: ARCHIDROME
ARCHITECT: ARCHIDROME

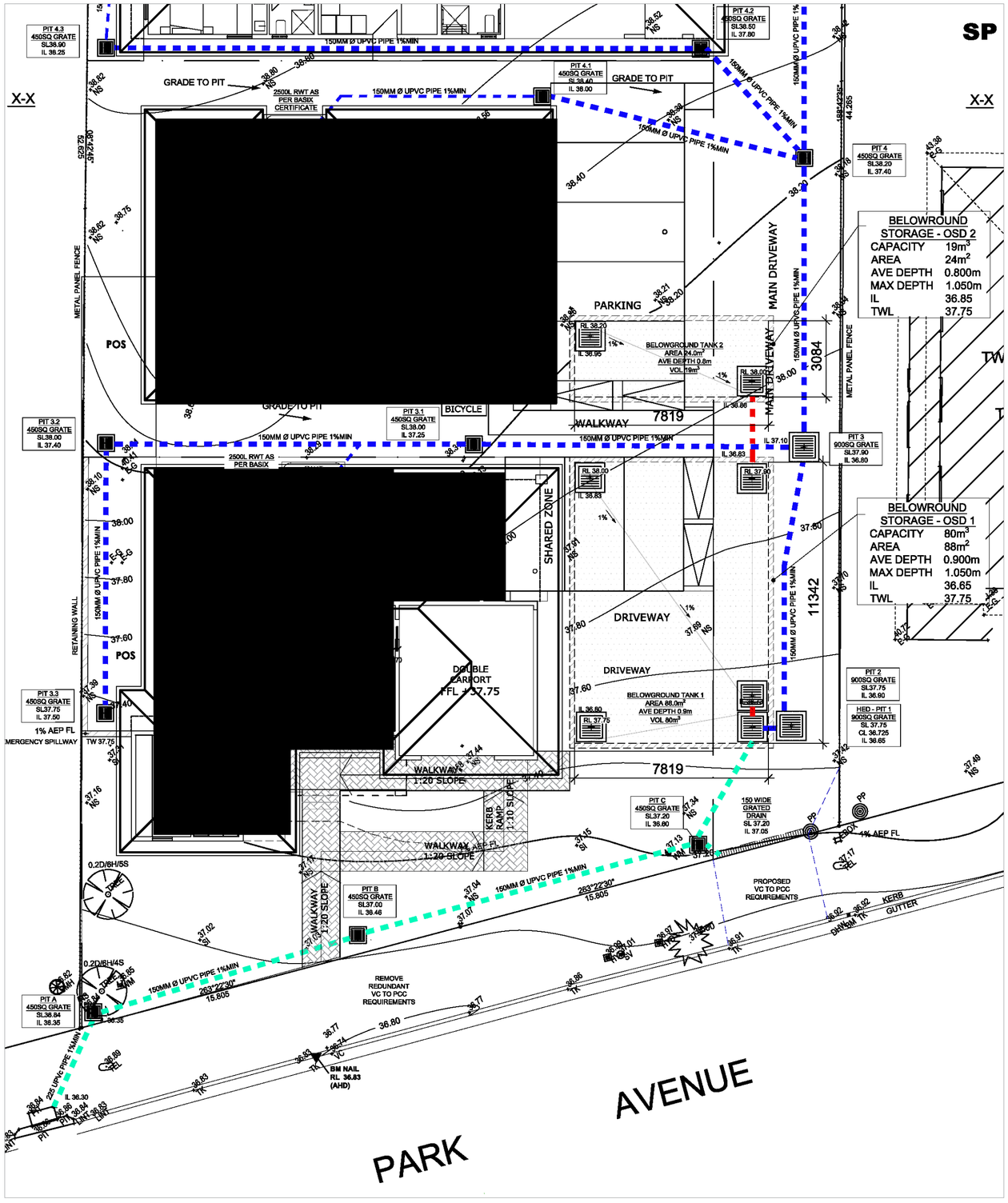
DATE	ISSUE	AMENDMENTS	DESIGNER
		NOT FOR CONSTRUCTION	
30/10/20	A	FOR COUNCIL APPROVAL - DEVELOPMENT APPLICATION	MPC01

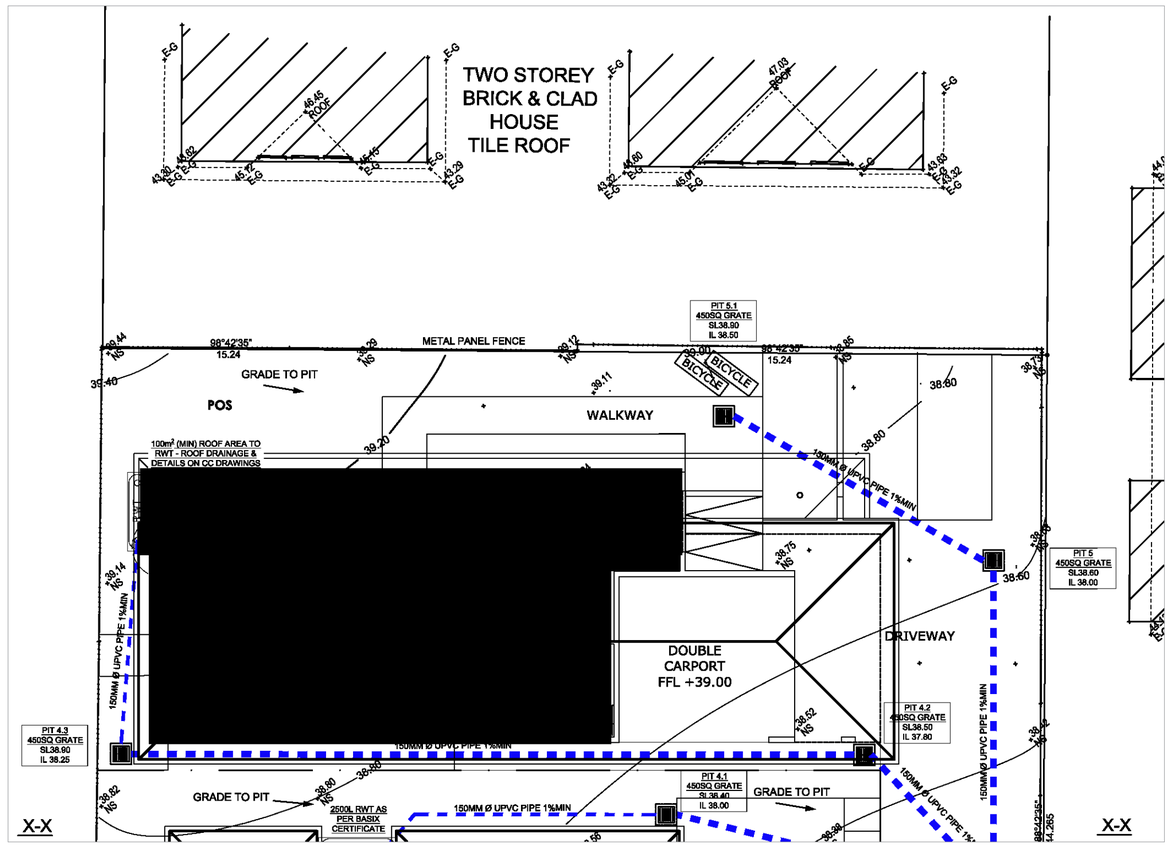
DRAWING NUMBER: SW-2011A-DA-01
SHEET SIZE: A2

Document Set ID: 9366225
Version: 1, Version Date: 06/11/2020

A2

SITE PLAN CONTINUATION AT X-X





SITE PLAN CONTINUATION AT X-X

SCALES
1 0.5 0 1 2 3 4 5m 1 : 100 @ A2
2 1 0 2 4 6 8 10m 1 : 200 @ A3

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Accredited Certifier
(Civil & Structural) (BPB2925)
SIGNED:

PROJECT: 31-32 PARK AVENUE, KINGSWOOD
TITLE: CONCEPT STORMWATER DRAINAGE PLAN
DESIGN BY: MPC
CHECKED BY: Z KHAN
SCALE: 1:100 or As Shown
SHEET: 2 OF 6
FILE: JOB 20-165
DATE: 30 OCTOBER 2020

APPLICANT/CLIENT: ARCHIDROME
ARCHITECT: ARCHIDROME

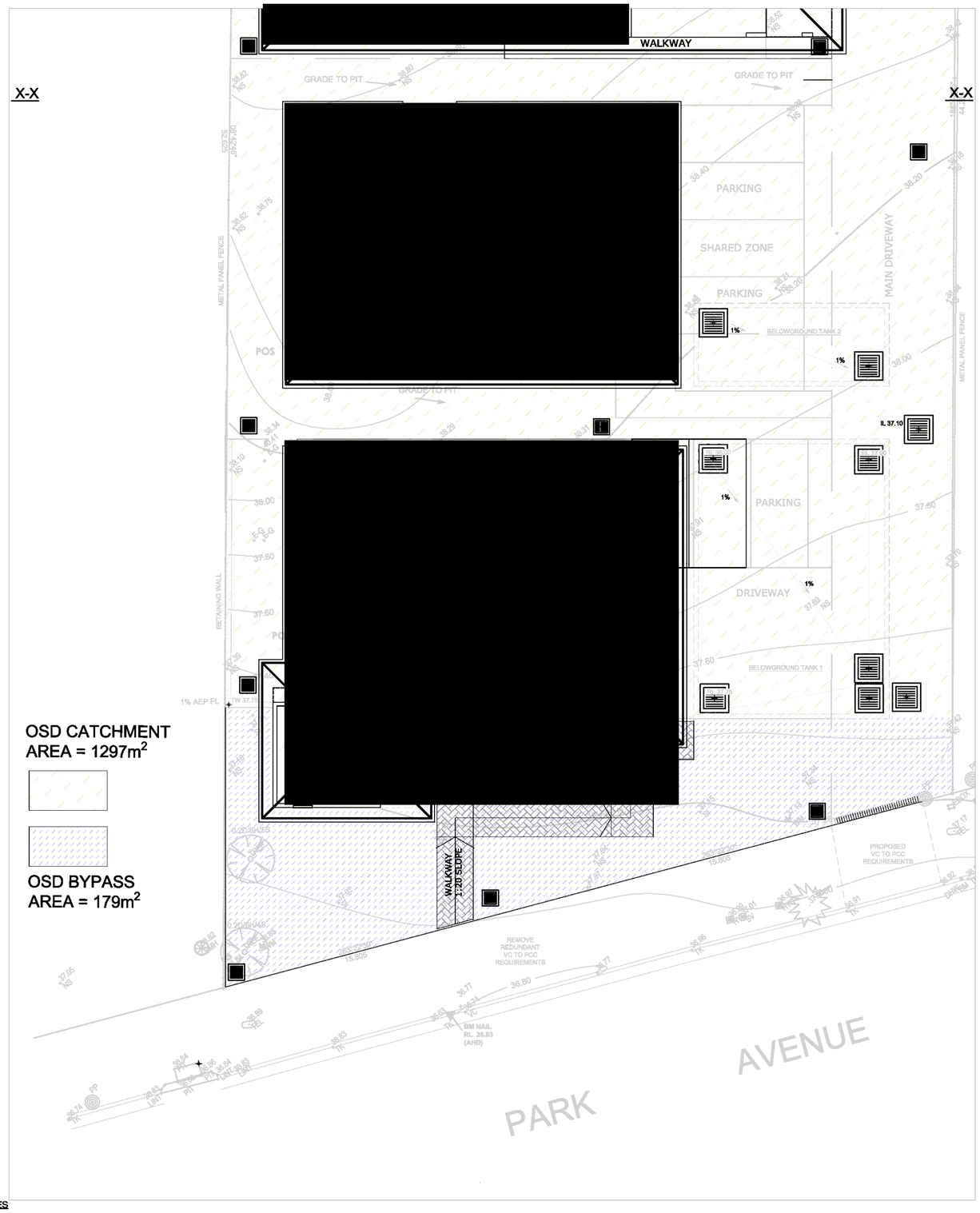
DATE	ISSUE	NOT FOR CONSTRUCTION / AMENDMENTS	DESIGNER
30/10/20	A	FOR COUNCIL APPROVAL - DEVELOPMENT APPLICATION	MPC01

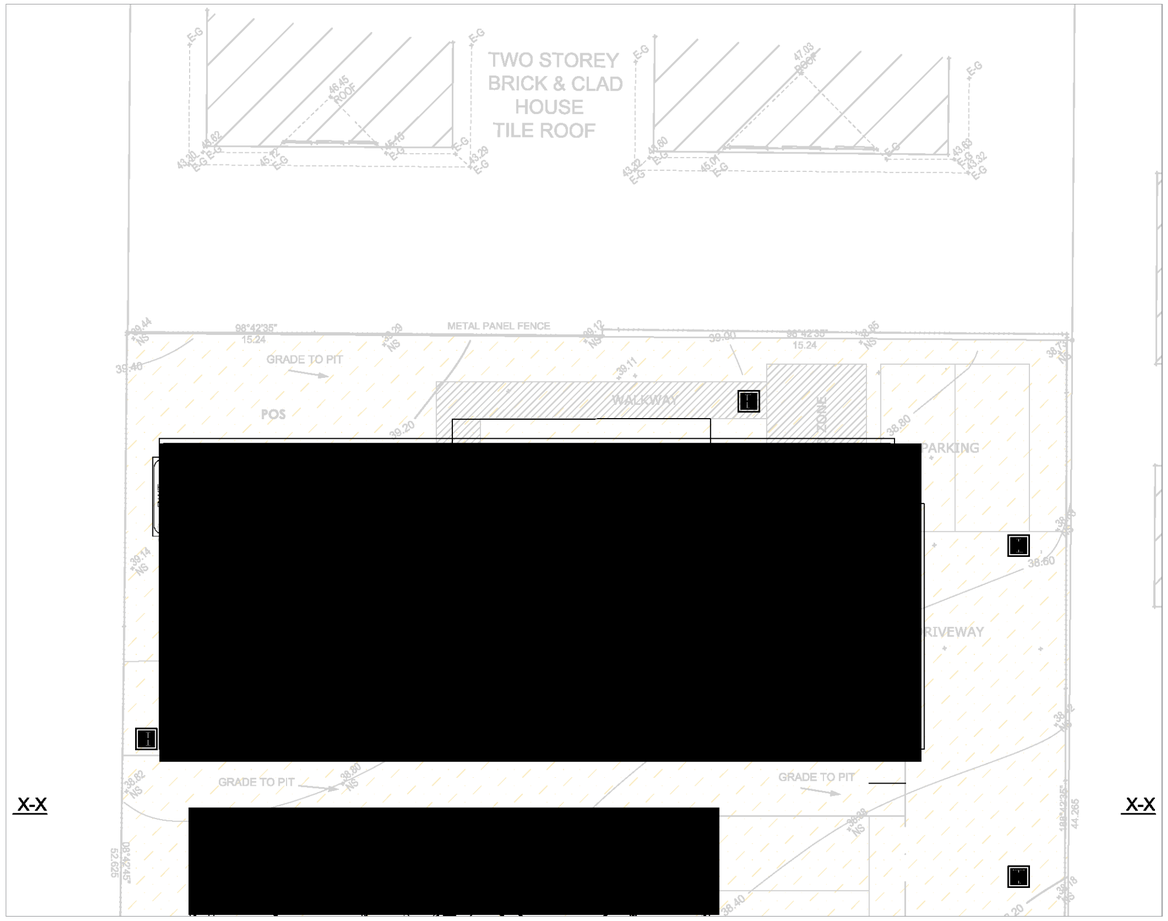
DRAWING NUMBER: SW-2011A-DA-02
SHEET SIZE: A2

Document Set ID: 9366225
Version: 1, Version Date: 06/11/2020

A2

SITE PLAN CONTINUATION AT X-X





SITE PLAN CONTINUATION AT X-X

SCALES

1 0.5 0 1 2 3 4 5m 1 : 100 @ A2

2 1 0 2 4 6 8 10m 1 : 200 @ A3

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Accredited Certifier
(Civil & Structural) (BPB2925)
SIGNED:

PROJECT : 31-32 PARK AVENUE, KINGSWOOD
TITLE : STORMWATER CATCHMENT PLAN

DESIGN BY: MPC	SCALE: 1:100 or As Shown	FILE: JOB 20-165
CHECKED BY: Z KHAN	SHEET: 3 OF 8	DATE: 30 OCTOBER 2020

APPLICANT/CLIENT: ARCHIDROME
ARCHITECT: ARCHIDROME

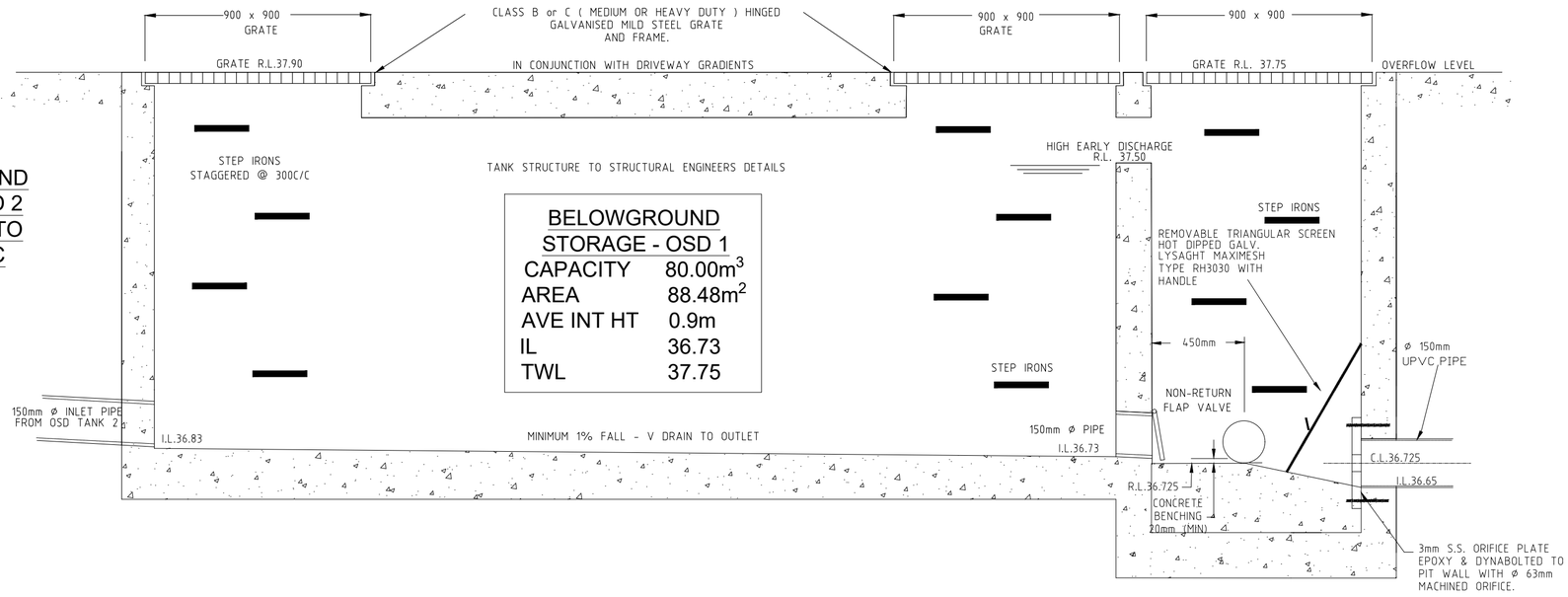
DATE	ISSUE	AMENDMENTS	DESIGNER
		NOT FOR CONSTRUCTION	
30/10/20	A	FOR COUNCIL APPROVAL - DEVELOPMENT APPLICATION	MPC01

DRAWING NUMBER: SW-2011A-DA-03
SHEET SIZE: A2

Document Set ID: 9366225
Version: 1, Version Date: 06/11/2020

A2

NOTE:BELOWGROUND STORAGE FOR OSD 2 SECTION DETAILS TO BE SHOWN ON CC DRAWINGS



BELOWGROUND STORAGE - OSD 1

CAPACITY	80.00m^3
AREA	88.48m^2
AVE INT HT	0.9m
IL	36.73
TWL	37.75

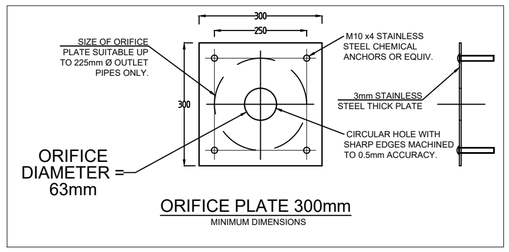
OSD BELOWGROUND DETENTION TANK 1

SECTION VIEW NTS

On-Site Detention Calculation Sheet

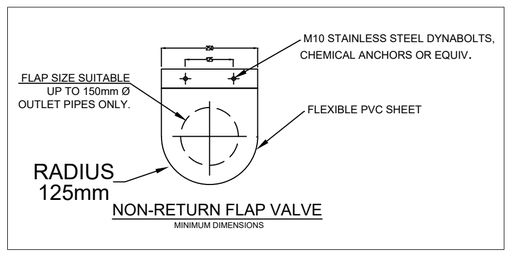
Project:	Proposed Boarding House x3	Lot No.	15-16
Location:	31-32 Park Avenue, Kingswood	DP No.	29528
Designer:	MultiPro Consultants	OSD No	1

OSD Area:			Drowned	
Site Area	0.148		0.148	
Basic Storage Volume	69.40		69.40	
Basic Discharge	6.91		11.81	
Area of Site to Storage	0.130	88%	0.130	88%
Percentage of Site	87.84		87.84	
Storage per ha of contributing area	535.04		535.04	
Volume/PSD Adjustment	67.05		67.05	
PSD for site	8.70		8.70	
Maximum Head to Orifice Centre	1.025		0.550	
Calculated Orifice Diameter	0.063		0.063	
Maximum discharge	8.695		6.373	
Head for high early discharge	0.775		0.300	
High Early Discharge	7.561	87%	4.707	54%
Mean Discharge	8.128		5.540	
Average Discharge per Hectare	62.659		42.709	
Final Site Storage Ratio	566		748	
Site Storage Volume	73.37		97.09	
Volume Provided	99.00	135%	99.000	102%



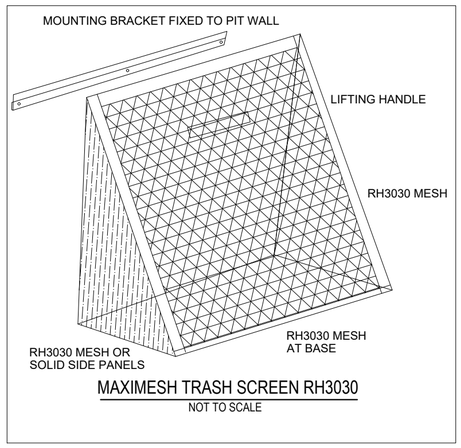
ORIFICE PLATE 300mm

MINIMUM DIMENSIONS



NON-RETURN FLAP VALVE

MINIMUM DIMENSIONS



MAXIMESH TRASH SCREEN RH3030

NOT TO SCALE

INSTALL SIGN NEAR OSD TANK

OSD PLATE

GENERAL NOTES

1. ALL WORKS SHALL GENERALLY BE UNDERTAKEN IN ACCORDANCE WITH AS/NZ 3500.3.2:1998 AND COUNCIL'S SPECIFICATIONS &/OR ENGINEERING GUIDELINES;
2. THIS STORMWATER PLAN SHALL BE READ IN CONJUNCTION WITH THE APPROVED ARCHITECTURAL, LANDSCAPE, SURVEY, AND SITE PLANS;
3. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO **MULTIPRO** CONSULTANTS TO RESOLVE.
4. ALL DRAINAGE LINES SHALL BE AS FOLLOWS -
   - 90mm DIAMETER WHERE THE LINE ONLY RECEIVES ROOF WATER;
   - 100mm DIAMETER WHERE THE LINE RECEIVES SURFACE RUNOFF OR IF THE LINE IS PART OF AN OSD SYSTEM;
   - A MINIMUM PIPELINE GRADE OF 1% FOR PIPES WITH A DIAMETER LESS THAN 150mm AND 0.5% FOR PIPES OF GREATER DIAMETER;
3. ALL DRAINAGE LINES SHALL HAVE A MINIMUM COVER OF 100mm FOR PRIVATE PIPELINES AND 300mm FOR PUBLIC PIPELINES;
4. ALL PITS WITHIN TRAFFICABLE AREAS (I.E DRIVEWAYS) SHALL BE HEAVY DUTY. ALL SURFACE AREAS SHALL BE GRADED TO THE SURFACE INLET PITS/DRAINS.
5. LOCATION OF DOWN PIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY IS TO BE DETERMINED AT CC STAGE AND PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE RELEVANT STANDARDS.

UTILITY SERVICES

1. ALL SERVICES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. EXACT LOCATION SHALL BE ACCURATELY LOCATED BY CONTACTING DIAL BEFORE YOU DIG OR THE RELEVANT UTILITY PROVIDER BEFORE COMMENCING ANY EXCAVATION OR BUILDING WORKS.
2. ALL WORKS UNDERTAKEN WITHIN THE ROAD RESERVE / CARRIAGEWAY SHALL HAVE PRIOR APPROVAL FROM THE RELEVANT AUTHORITY, PRIOR TO COMMENCING WORKS.

ONSITE DETENTION NOTES

1. ALL WALLS FORMING PART OF THE DETENTION BASIN SHALL BE OF MASONRY CONSTRUCTION AN WHOLLY WITHIN THE PROPERTY BOUNDARY;
2. ALL MULCH WITHIN THE ABOVE GROUND DETENTION BASIN (IF PROPOSED) SHALL BE NON-FLOATABLE;
3. ALL GRATES TO BE FITTED WITH CHILD PROOF J-LOCKS;
4. THE CERTIFYING ENGINEER OR COUNCIL'S ENGINEER SHALL INSPECT THE OSD WORKS AT THE CRITICAL STAGES -
   a. PRIOR TO COMMENCING WORK TO DISCUSS SITE CONSTRAINTS;
   b. PRIOR TO LANDSCAPING THE DETENTION BASIN & POURING THE ROOF OF THE DETENTION TANK;
   c. PRIOR TO INSTALLING THE FITTINGS TO THE DISCHARGE CONTROL UNIT;
   d. PRELIMINARY INSPECTION - PRIOR TO CERTIFICATION
   e. FINAL INSPECTION - FOR CERTIFICATION. WORK-AS-EXECUTED [WAE] SHALL BE PREPARED BY A REGISTERED SURVEYOR PRIOR TO FINAL INSPECTION.
3. ALL MAINTENANCE WORK SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE APPROVED BY COUNCIL;
4. DRAINAGE PIPE LINES ARE TO AVOID EXISTING TREES WHEREVER POSSIBLE - GENERALLY OUTSIDE THE DRIP LINE / CANOPY OF THE EXISTING TREE;

SCALES

1 : 100 @ A2

1 : 200 @ A3

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(Civil & Structural) (BPB2925)

SIGNED:

PROJECT: 31-32 PARK AVENUE, KINGSWOOD
TITLE: OSD DETAILS & CALCULATIONS

DESIGN BY: MPC | SCALE: 1:100 or As Shown | FILE: JOB 20-165
CHECKED BY: Z KHAN | SHEET: 4 OF 6 | DATE: 30 OCTOBER 2020

APPLICANT/CLIENT: ARCHIDROME
ARCHITECT: ARCHIDROME

NOT FOR CONSTRUCTION

DATE	ISSUE	AMENDMENTS	DESIGNER
30/10/20	A	FOR COUNCIL APPROVAL - DEVELOPMENT APPLICATION	MPC01

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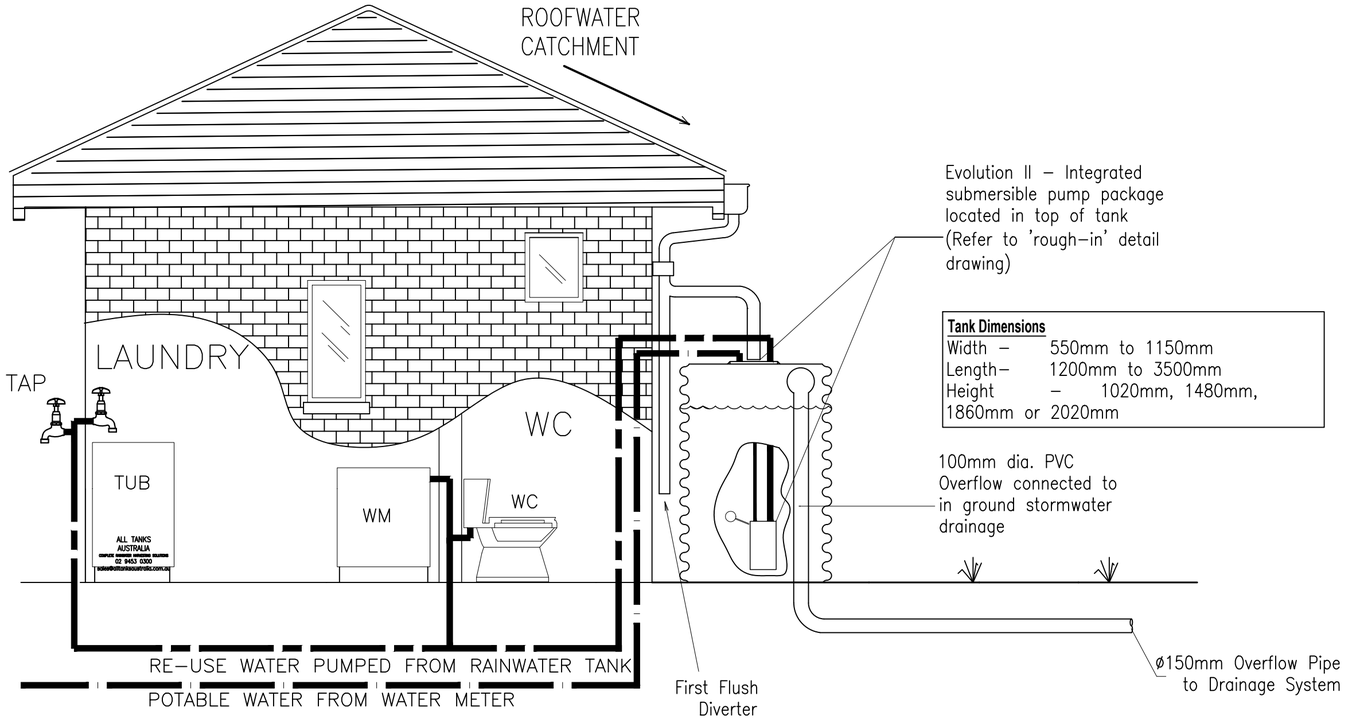
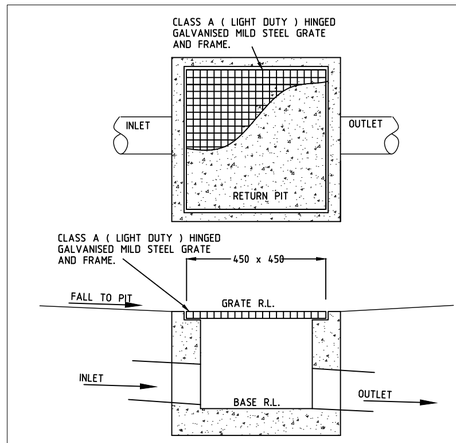
A2



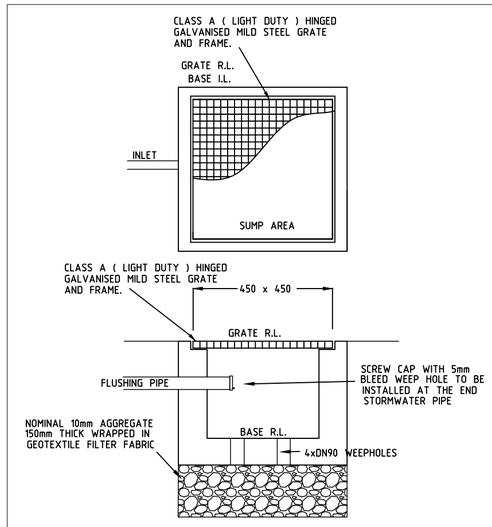
TYPICAL RAINWATER TANK DETAIL

NOT TO SCALE



TYPICAL SURFACE INLET PIT DETAIL

NOT TO SCALE

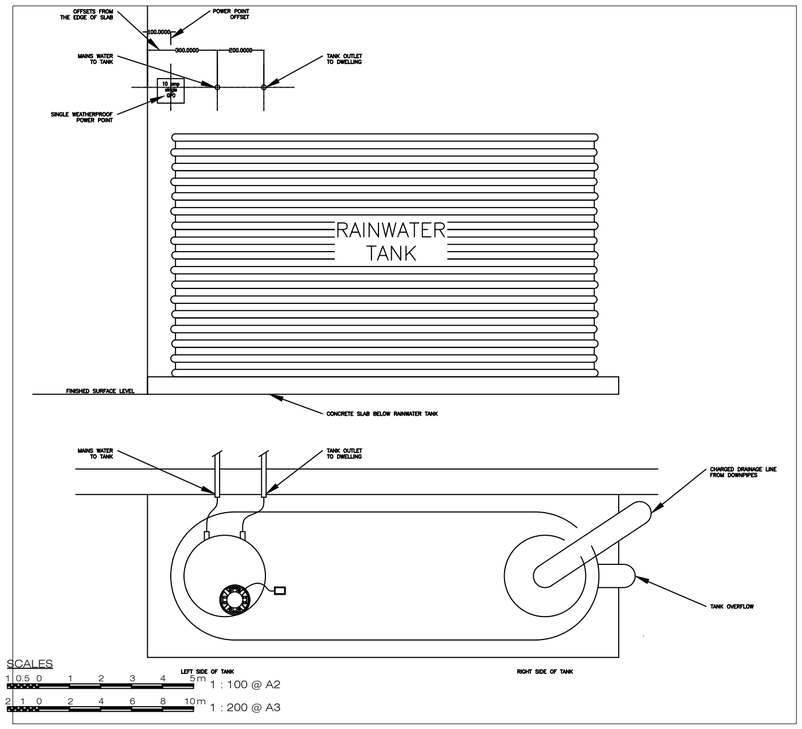


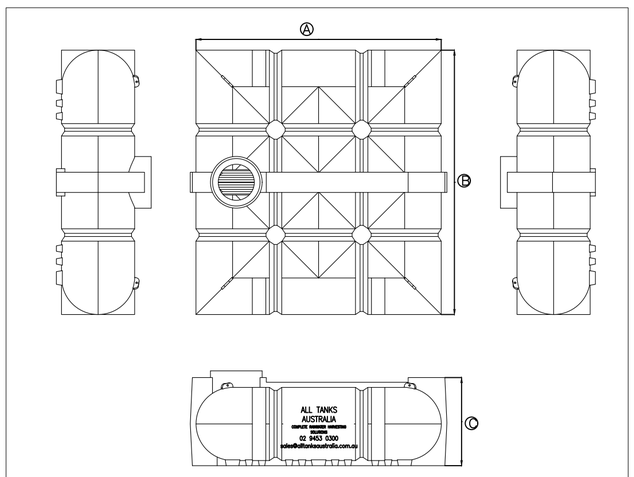
CHARGED LINE CLEANING PIT DETAIL [CP]

NOT TO SCALE

RAINWATER TANK & REUSE NOTES:

1. ALL FIXTURES AND DEVICES INSTALLED FOR THE PURPOSE OF RECYCLE WATER SUPPLY MUST BE NOTED WITH PLAQUE/SIGNAGE FOR IDENTIFICATION AND MARKED WITH "NOT FOR HUMAN CONSUMPTION" OR "NON-POTABLE WATER".
2. THE OVERFLOW FROM THE RAINWATER TANK SHALL BE CONNECTED TO THE INTERNAL STORMWATER DRAINAGE SYSTEM.
3. GARDEN TAPS OR CARWASH TAPS CONNECTED TO THE RECYCLE SYSTEM MUST BE LOCATED 1.5m MIN ABOVE THE SURFACE.
4. ALL RECYCLE WATER PIPES TO BE COLOUR CODED FOR IDENTIFICATION.
5. SYDNEY WATER MUST BE CONTACTED REGARDING RECYCLED WATER ON BUILDINGS AND FOR THE BACKFLOW PREVENTION REQUIREMENTS AND TOP UP SYSTEMS.
6. FOR PERIODS OF LOW WATER LEVELS WITHIN THE RAINWATER TANK, A CONNECTION TO THE WATER MAIN IS NEEDED AND TO BE PROVIDED IN ACCORDANCE WITH SYDNEY WATER'S REQUIREMENTS.
7. ALL FITTINGS AND PUMPS TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
8. THE POSITION OF THE RAINWATER TANKS SHALL BE IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S REQUIREMENTS.





	A	B	C
Volume - Ltrs	Length - mm	Width -mm	Depth - mm
3000	2520	2420	900
5000	3500	2780	950

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APPROVED BY:
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MIEAust, NER (# 2500471)
Accredited Certifier
(Civil & Structural) (BPB2925)
SIGNED:

PROJECT: 31-32 PARK AVENUE, KINGSWOOD
TITLE: RAINWATER TANK AND DRAINAGE DETAILS

DESIGN BY: MPC
CHECKED BY: Z KHAN
SCALE: 1:100 or As Shown
SHEET: 5 OF 6
FILE: JOB 20-165
DATE: 30 OCTOBER 2020

APPLICANT/CLIENT: ARCHIDROME
ARCHITECT: ARCHIDROME

DATE	ISSUE	AMENDMENTS	DESIGNER
		NOT FOR CONSTRUCTION	
30/10/20	A	FOR COUNCIL APPROVAL - DEVELOPMENT APPLICATION	MPC01

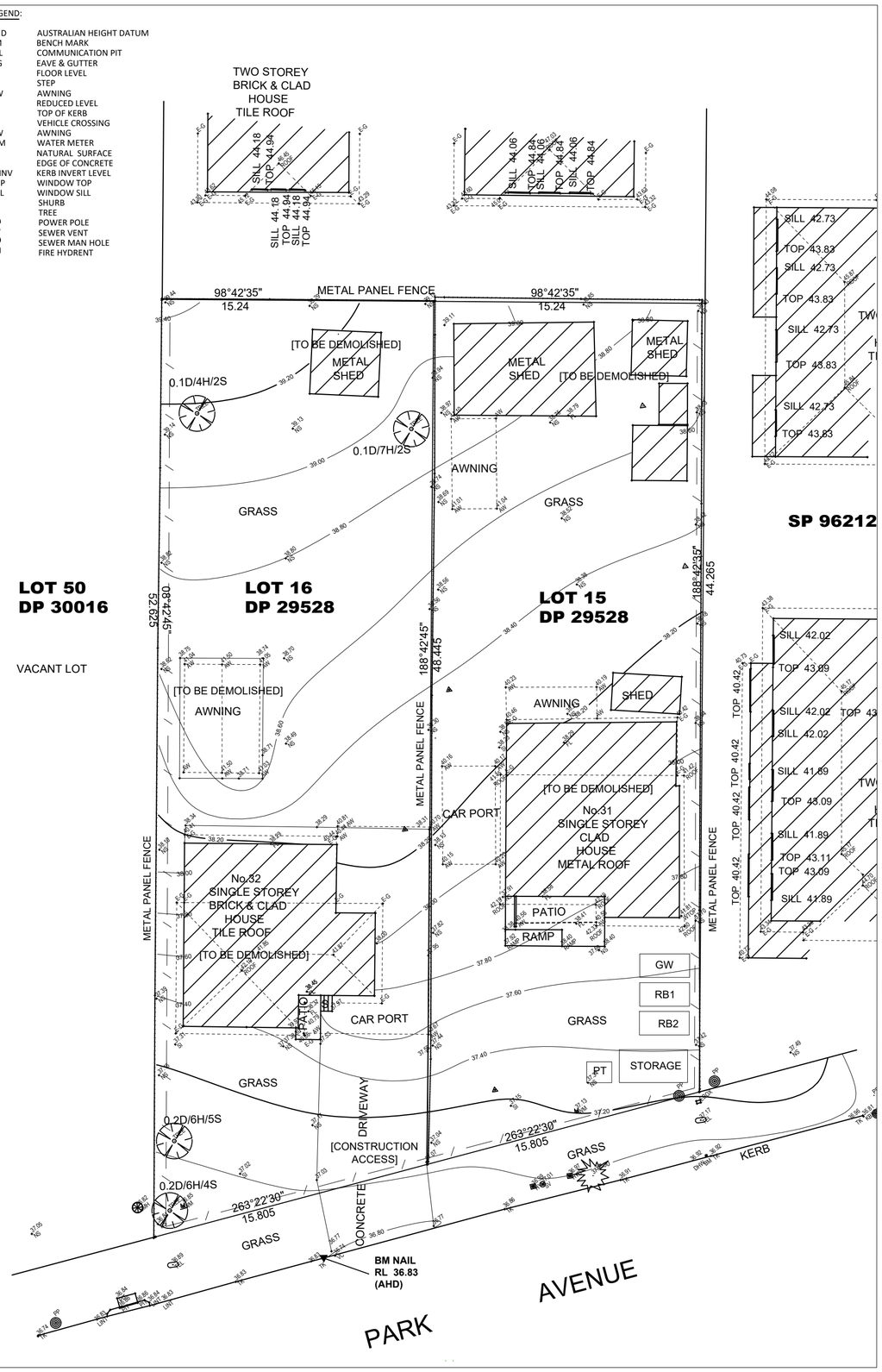
DRAWING NUMBER: SW-2011A-DA-05
SHEET SIZE: A2

Document Set ID: 9366225
Version: 1, Version Date: 06/11/2020

A2

LEGEND:

AHD	AUSTRALIAN HEIGHT DATUM
BM	BENCH MARK
TEL	COMMUNICATION PIT
E-G	EAVE & GUTTER
FL	FLOOR LEVEL
S	STEP
AW	AWNING
RL	REDUCED LEVEL
TK	TOP OF KERB
VC	VEHICLE CROSSING
AW	AWNING
WM	WATER METER
NS	NATURAL SURFACE
EC	EDGE OF CONCRETE
KBINV	KERB INVERT LEVEL
TOP	WINDOW TOP
SILL	WINDOW SILL
	SHURB
	TREE
	POWER POLE
	SEWER VENT
	SEWER MAN HOLE
	FIRE HYDRENT



SCALES

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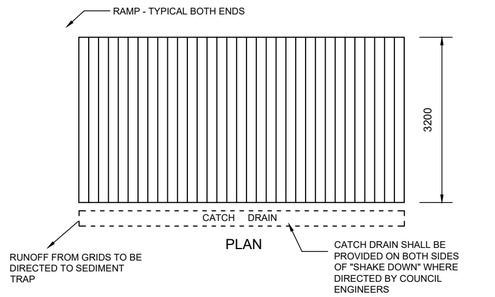
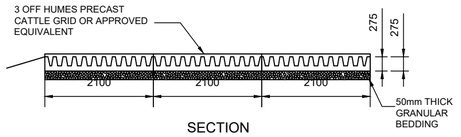
2 1 0 2 4 6 8 10m 1 : 200 @ A3

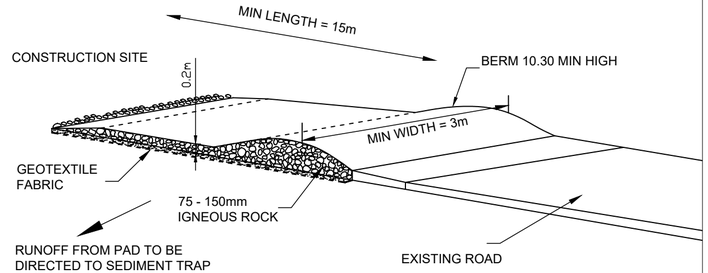




CATTLE GRID ALTERNATIVE

NOT TO SCALE

CONSTRUCTION ACCESS OPTIONS

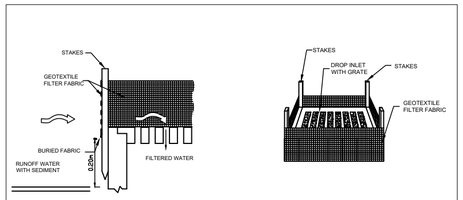


RUBBLE ALTERNATIVE

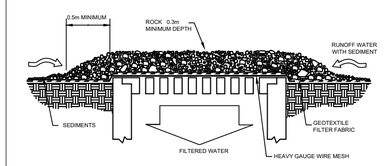
NOT TO SCALE

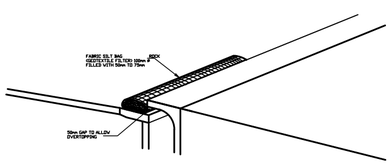
NOTES

1. EXCAVATE AREA APPROX. 3.3m WIDE BY 2.2m LENGTH. THE FLOOR OF THE EXCAVATION MUST BE FLAT, WITHOUT HIGH POINTS. AN EXCAVATED DEPTH OF 100mm ACCOMMODATES A BEDDING LAYER 50mm THICK AND GRID SET DOWN OF 50mm PER UNIT.
2. BEDDING MATERIAL SHALL BE SAND OR OTHER SUITABLE APPROVED MATERIAL. BEDDING MATERIAL SHALL BE EVENLY RAKED OVER FLOOR OF EXCAVATION TO A DEPTH SLIGHTLY MORE THAN 50mm. ENSURE BEDDING IS LEVEL IN BOTH DIRECTIONS.
3. LOWER CATTLE GRID ONTO THE PREPARED BASE. ENSURE THAT NO PART OF THE UNIT IS SITTING ON ANY HIGH POINT.
4. BACKFILL AND COMPACT AROUND GRID. GRADE EXCAVATED MATERIAL UP TO GRID ON EACH SIDE TO FORM A RAMP. IF DEPRESSIONS OCCUR ON THESE RAMPS WITH USE, ADD ADDITIONAL MATERIAL.
5. MAINTAIN SHAKER GRIDS IN CLEAN AND SERVICEABLE CONDITION DURING TOTAL TIME OF USAGE.
6. MINIMUM LENGTH OF SHAKER PAD = 5 UNITS.

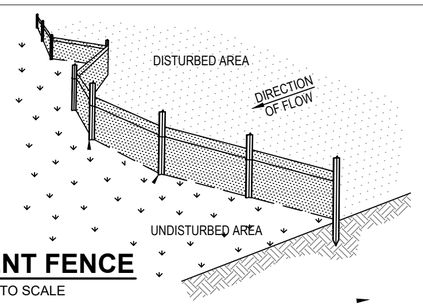


GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP



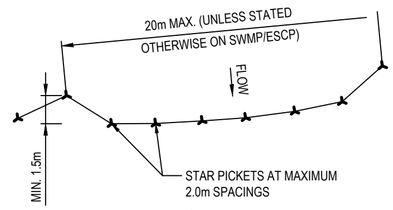


PORTABLE ROCK KERB INLET SEDIMENT TRAP

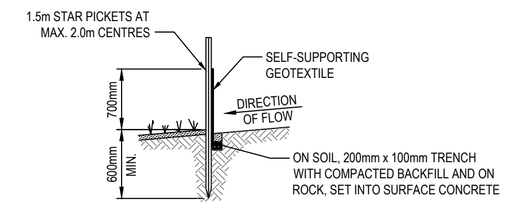


SEDIMENT FENCE

NOT TO SCALE



PLAN



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SIGNED:

PROJECT: 31-32 PARK AVENUE, KINGSWOOD
TITLE: EROSION & SEDIMENT CONTROL PLAN

DESIGN BY: MPC	SCALE: 1:100 or As Shown	FILE: JOB 20-165
CHECKED BY: Z KHAN	SHEET: 6 OF 6	DATE: 30 OCTOBER 2020

APPLICANT/CLIENT: ARCHIDROME

ARCHITECT: ARCHIDROME

DATE	ISSUE	AMENDMENTS	DESIGNER
		NOT FOR CONSTRUCTION	
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