

PROPOSED RESIDENTIAL DWELLING AT 92&94 LANCASTER AVENUE, PUNCHBOWL NSW

CONCEPT STORMWATER DESIGN

TABLE OF SCHEDULES

SHEET #	DRAWING NAME	REV	DATE
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SPECIFICATIONS

THESE PLANS SHALL BE READ IN CONJUNCTION WITH
ARCHITECTURAL DESIGN PLANS AND STRUCTURAL DESIGN PLANS



SITE LOCALITY

ARCHITECT

CLIENT

PREPARED BY



MR KHOURY

GENERAL

ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS, BUILDING CODE OF AUSTRALIA, NSW CODE OF PRACTICE AND THE RELEVANT SERVICE CODES.

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.

ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE IN MILLIMETERS (U.N.O.). DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OF THESE DRAWINGS. USE FIGURED DIMENSIONS ONLY.

BENCHMARKS HAVE BEEN ESTABLISHED WHERE INDICATED ON THE DRAWINGS. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.). THE CONTRACTOR SHALL UNDERTAKE ALL NECESSARY SURVEY WORK TO ENSURE THAT THE WORKS ARE CONSTRUCTED TO DESIGN LINE AND LEVEL.

SETTING OUT DIMENSIONS AND LEVELS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR.

ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT SAA CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH WORK HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT AUTHORITY SAFETY REQUIREMENTS.

NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.

WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.

ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THESE SPECIFICATIONS.

DESIGN LEVELS GIVEN ARE TO FINISHED SURFACE LEVEL AND INCLUSIVE OF TOPSOIL. (TOPSOIL DEPTH VARIES)

THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A N.A.T.A. REGISTERED SURVEYOR.

CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THE DRAWING HAVE BEEN PLOTTED FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. THIS INFORMATION HAS BEEN PREPARED SOLELY FOR THE AUTHORITIES OWN USE AND MAY NOT NECESSARILY BE UPDATED OR ACCURATE.

THE POSITION OF SERVICES AS RECORDED BY THE AUTHORITY AT THE TIME OF INSTALLATION MAY NOT REFLECT CHANGES IN THE PHYSICAL ENVIRONMENT SUBSEQUENT TO INSTALLATION.

CAPITAL ENGINEERING CONSULTANTS DOES NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THE DRAWING SHOWS MORE THAN THE PRESENCE OR ABSENCE OF SERVICES, AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM THE UTILITY SERVICES AUTHORITIES A CURRENT COPY OF UNDERGROUND SERVICES SEARCH FOR THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF ANY WORK AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY. CLEARANCE SHALL BE OBTAINED FROM THE RELEVANT REGULATORY AUTHORITY. CONTRACTOR TO KEEP COPY OF UNDERGROUND SERVICES SEARCH ON SITE AT ALL TIMES. ANY DAMAGES TO SERVICES OR SERVICES ADJUSTMENTS SHALL BE CARRIED OUT BY THE CONTRACTOR OR RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE.

VISIT THE SITE BEFORE SUBMITTING THE FINAL TENDER PRICE TO ASSESS 'ON SITE' CONDITIONS. FAILURE TO DO SO WILL FORFEIT ANY CLAIM FOR NOT BEING AWARE OF CONDITIONS AFFECTING THE TENDER.

THE CONTRACTOR SHALL PREPARE ACCURATE WORK-AS-EXECUTED DRAWINGS FOLLOWING THE COMPLETION OF ALL WORKS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE IN PLACE & MAINTAIN TRAFFIC FACILITIES AT ALL TIMES DURING CONSTRUCTION.

SURVEY

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY xxxxxxxx , BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. CAPITAL ENGINEERING CONSULTANTS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT CAPITAL ENGINEERING CONSULTANTS.

ADOPT SSM xxxxxx RL:xxxxx AS PER SUREY COMPANY REF NO.xxxxxx

RESTORATION

RESTORE ALL TRAFFIC AREAS TO PRE-EXISTING CONDITIONS.

FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED SURFACES TO PRE-EXISTING CONDITIONS AND COMPACT AS SPECIFIED.

MISCELLANEOUS

GEOTEXTILE FABRIC MATERIAL TO BE BIDIM A24 OR APPROVED EQUIVALENT AND SHALL COMPLY WITH AS3705-2012'GEOTEXTILES - IDENTIFICATION, MARKING AND GENERAL DATA'.

STORMWATER

COORDINATE THE INSTALLATION OF NEW SERVICES WITH ALL NEW & EXISTING SERVICES & STRUCTURAL PROVISIONS AS DETERMINED ON SITE.

ALL PIPEWORK TO BE SUPPORTED IN ACCORDANCE WITH AS3500.3-2003.

ALL PIPEWORK IS TO BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS AS SET DOWN IN AS3500.3-2003. ALL IN-GROUND PIPEWORK TO BE INSPECTED BY THE SUPERINTENDENT UNDER TEST CONDITIONS PRIOR TO BACKFILLING. BACKFILLING AND BEDDING TO AS3500.3-2003.

PIPES SHALL BE TRUE TO GRADES SHOWN AND ALIGNED SO THAT THE CENTRE OF THE INLET PIPE INTERSECTS WITH THE CENTRE OF THE OUTLET PIPE AT THE DOWNSTREAM FACE OF THE PIT.

BED ALL PIPES FIRMLY AND EVENLY WITH IMPORTED FILL ONLY. THICKNESS OF BEDDING LAYER SHALL BE 75mm IN SOIL AND 200mm IN ROCK.

LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS3725-2007'DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES'.

ALLOW TO TEST ALL PIPES AND PITS TO LOCAL AUTHORITY'S REQUIREMENTS.

EXCAVATE TRENCHES AND STOCKPILE ALL MATERIAL FOR INSPECTION WITH REGARD TO REUSE FOR TRENCH BACKFILL. REMAINING MATERIAL TO BE REMOVED FROM SITE.

BACKFILL PIPES WITH IMPORTED FILL. PROVIDE 200mm SIDE SUPPORT AND 150mm OVERLAY ABOVE PIPE CROWN. TRENCH FILL ABOVE THE EMBEDMENT ZONE TO THE UNDERSIDE OF THE ROAD PAVEMENT OR THE FOOTWAY SHALL BE AS FOLLOW:-

UNDER ROADWAY
TRENCH FILL MATERIAL SHALL CONSIST OF IMPORTED FILL AS SPECIFIED HEREIN OF EITHER HIGH GRADE COMPACTION SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RMS QA SPECIFICATION 3051 OR SIMILAR.

OTHER THAN ROADWAY
TRENCH MATERIAL EXCAVATED SHALL CONSIST OF SELECT FILL AS SPECIFIED HEREIN AND SHALL NOT CONTAIN MORE THAN 20% OF STONES OF SIZE BETWEEN 25mm AND 75mm AND NONE LARGER THAN 75mm. PRIOR TO USE OF THE EXCAVATED MATERIAL IT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER.

COMPACT BEDDING, EMBEDMENT AND TRENCH FILL MATERIALS AS FOLLOW:-

EMBEDMENT:-
FOR GRANULAR FILL MATERIAL (NON-COHESIVE SOIL) e.g. COARSE AGGREGATE FILL, THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%.

TRENCH FILL:-
FOR GRANULAR MATERIAL (NON COHESIVE SOILS). THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%. FOR NON-GRANULAR FILL MATERIAL (COHESIVE SOILS), THE DRY DENSITY RATIO (RD) SHALL BE NOT LESS THAN 95%.

EXISTING SERVICES
UTILITY INFORMATION SHOWN ON THE PLANS IS NOT INTENDED TO DEPICT MORE THAN THE PRESENCE OF ANY SERVICES. ACTUAL LOCATIONS SHOULD BE VERIFIED BY HAND EXCAVATION PRIOR TO CONSTRUCTION.

THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF ALL EXISTING SERVICES IN AREAS AFFECTED BY THE WORKS.

THE CONTRACTOR SHALL ENSURE THAT SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED AT ALL TIMES. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING WHERE REQUIRED. ONCE THE WORKS ARE COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD ALL DISTURBED AREAS.

DRAINAGE PIPES
EXISTING PIPES WHICH FORM NO PART OF THE DRAINAGE SYSTEM SHALL BE REMOVED OR SEALED AS INDICATED ON THE PLANS. PIPES UP TO 300mm DIAMETER SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS (U.N.O.). ALL PIPE JUNCTIONS AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.

WHERE DOWNPIPES PASS UNDER FLOOR SLABS, SEWER GRADE uPVC WITH RUBBER RING JOINTS ARE TO BE USED.

MINIMUM GRADE TO DRAINAGE PIPES TO BE 1% (U.N.O.), MIN. SIZE 100mm DIAMETER (U.N.O.).

PIPES LARGER THAN OR EQUAL TO 300mm DIAMETER TO BE REINFORCED CONCRETE RUBBER RING JOINTED TYPE (CLASS 2) MANUFACTURED TO AS4058 (U.N.O.).

PIPE INSTALLATION UNDER TRAFFICABLE AREAS SHALL BE IN ACCORDANCE WITH CONCRETE PIPE ASSOCIATION OF AUSTRALIA PUBLICATION "CONCRETE PIPE SELECTION & INSTALLATION" TYPE H53 SUPPORT.

EQUIVALENT STRENGTH FRC PIPES MAY BE USED SUBJECT TO AUTHORITY APPROVAL.

MINIMUM PIPE COVER TO BE 600mm UNDER TRAFFICABLE AREAS AND 300mm ELSEWHERE (U.N.O.).

CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS.

STORMWATER DRAINAGE CONNECTIONS TO COUNCIL'S SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL.

DRAINAGE PITS
PITS DEEPER THAN 1200mm TO BE FITTED WITH STEP IRONS AT 300 CENTRES TO AS1657-2013:FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS - DESIGN, CONSTRUCTION AND INSTALLATION'.

ALL EXPOSED EDGES TO BE ROUNDED WITH 20mm RADIUS, OR CHAMFERED 20mm x 20mm.

PIT REINFORCEMENT - MESH SL82 LAP TO BE 400mm MIN. CLEAR COVER 40 MIN. CAST AGAINST BLINDING OR FORMWORK. CORNER RETURNS MAY BE FABRIC OR EQUIVALENT BARS.

STORMWATER

BENCHING TO BE HALF OUTGOING PIPE DEPTH. CONCRETE FOR BENCHING TO BE 20MPa MASS CONCRETE.

APPROVED PRECAST PITS MAY BE USED.

100mm DIAMETER HOLE FOR SUBSOIL DRAINAGE OUTLET TO BE LOCATED 100mm ABOVE INVERT OF ALL INLET PIPES. SUBSOIL DRAINAGE TO EXTEND FOR A DISTANCE OF 3m UPSTREAM OF PIT (AT EACH INLET TRENCH) WITH THE UPSTREAM END SEALED.

ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.

PIT GRATE, FRAMES AND SOLID COVERS SHALL BE CLASS B IN NON TRAFFIC AREAS AND CLASS D IN TRAFFICABLE AREAS IN ACCORDANCE WITH AS3996.

ALL GRATES SHALL BE PROVIDED WITH A LOCKING CLIP.

MAXIMUM FRONT ENTRY PIPE:-
STRAIGHT ENTRY - ø750
SKEW ENTRY 45° - ø525

PIT GRATING TO BE GALVANISED STEEL TYPE 'WELDLOK' OR APPROVED EQUIVALENT.

SUBSOIL DRAINAGE
SUBSOIL PIPES SHALL BE LAID AT A MIN GRADE OF 0.5% (U.N.O.).

ADDITIONAL SUBSOIL DRAINAGE SHALL BE LAID TO SUIT SITE CONDITIONS AND GROUNDWATER PRESENCE AS DIRECTED.

SUBSOIL PIPES SHALL BE LAID BEHIND KERBS IN CUT AREAS OF THE SITE.

SUBSOIL DRAINAGE SHALL CONSIST OF A SLOTTED 100mm DIAMETER PLASTIC PIPE WRAPPED IN GEOTEXTILE AND PLACED A MINIMUM OF 650mm BELOW THE FINISHED SURFACE LEVEL AND COVERED WITH 500mm OF 20mm GRAVEL. PROVIDE A MINIMUM OF 150mm GRAVEL AROUND SUBSOIL PIPE. TRENCH TO BE LINED WITH GEOTEXTILE FABRIC TYPE BIDIM A24

GRATES TO PITS IN FOOTPATH AREAS SHALL BE HEEL SAFE COMPLYING WITH THE DISABLED ACCESS CODE

EROSION CONTROL

BEFORE EARTHWORKS CAN COMMENCE THE EROSION & SEDIMENT CONTROL MEASURES MUST BE IN PLACE.

DURING THE CONSTRUCTION PERIOD, THESE CONTROL MEASURES WILL NEED TO BE INSPECTED & MAINTAINED REGULARLY, ESPECIALLY AFTER STORM EVENTS, BY THE CONTRACTOR.

ALL WORK IS TO BE CARRIED OUT TO PREVENT EROSION, CONTAMINATION & SEDIMENTATION OF THE STORAGE SITE, SURROUNDING AREAS & DRAINAGE SYSTEMS.

MINIMIZE DISTURBED AREA COVERED WITH NATURAL VEGETATION. ONLY THOSE AREAS DIRECTLY REQUIRED FOR CONSTRUCTION ARE TO BE DISTURBED.

INSTALL EROSION/SEDIMENT CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION OR EXCAVATION OPERATIONS.

PROVIDE SILT FENCE/STRAW BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) EXISTING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.

ISOLATE EXISTING STORMWATER PITS WITH STRAW BALES OR SILT TRAPS TO FILTER ALL INCOMING FLOWS.

DO NOT STOCKPILE EXCAVATED MATERIAL ON THE ROAD WAY.

DIVERT CLEAN WATER FROM UNDISTURBED AREAS AROUND THE WORKING AREAS.

CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING AND LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL.

ADOPT TEMPORARY MEASURES AS MAY BE NECESSARY FOR EROSION & SEDIMENT CONTROL, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: -
- DRAINS: TEMPORARY DRAINS AND CATCH DRAINS.
- SPREADER BANKS OR OTHER STRUCTURES: TO DISPERSE CONCENTRATED RUNOFF.
- SILT TRAPS: CONSTRUCTION AND MAINTENANCE OF SILT TRAPS TO PREVENT DISCHARGE OF STORED MATERIAL TO DOWNSTREAM AREAS.

AFTER RAIN, INSPECT, CLEAN, AND REPAIR IF REQUIRED, TEMPORARY EROSION & SEDIMENT CONTROL MEASURES.

REMOVE TEMPORARY EROSION & SEDIMENT CONTROL MEASURES WHEN THEY ARE NO LONGER REQUIRED.

COMPLY WITH THE REQUIREMENTS OF LANDCOM'S MANAGING URBAN STORMWATER - SOIL AND CONSTRUCTION 'THE BLUE BOOK' LATEST EDITION

THE EROSION & SEDIMENT CONTROL PLAN PROVIDED IS ONLY INDICATIVE. THE CONTRACTOR SHOULD PREPARE A DETAILED ESCP SUITABLE FOR THE SPECIFIC SITE CONDITIONS




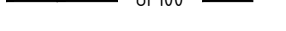
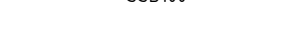

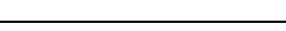
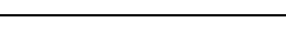
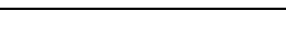





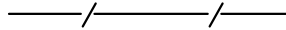

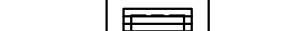


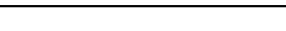
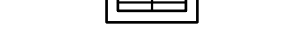



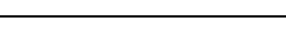




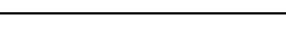
KERB AND GUTTER

ALL KERB AND GUTTER SHALL COMPLY WITH AS2876-2000:CONCRETE KERBS AND CHANNELS-MANUALLY OR MACHINE PLACED'.

CONCRETE CHARACTERISTICS SHALL BE IN ACCORDANCE WITH THE CONCRETE NOTES.

THE CONTRACTOR SHALL LIAISE WITH RELEVANT AUTHORITIES TO DETERMINE THEIR REQUIREMENTS FOR THE KERBS AND GUTTERS.

ALL KERB & GUTTER IS TO BE MACHINE LAID UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT

LEGEND	
 SWRHS	STORMWATER LINE DISCHARGE
 SW100	STORMWATER LINE SURFACE RUNOFF
 SW100	STORMWATER LINE ROOF RUNOFF
 OF100	OVER FLOW PIPE
 SSD100	SUBSOIL DRAINAGE
 SWRMS	STORMWATER RISING MAIN
 eSW100	EXISTING STORMWATER LINE
 SW	AUTHORITY STORMWATER LINE
 EASEMENT	EXISTING STORMWATER EASEMENT
 S	AUTHORITY SEWER LINE
 W	AUTHORITY WATER LINE
 G	AUTHORITY GAS LINE
 E	AUTHORITY ELECTRICITY LINE
 FO	AUTHORITY FIBRE OPTIC LINE
 TEL	AUTHORITY COMMS LINE
	FENCE LINE
	GRADED SURFACE INLET PIT
	GRADED SURFACE INLET PIT WITH ENVIROPOD INSERT
	JUNCTION PIT
	KERB INLET PIT
	EXISTING GRADED SURFACE INLET PIT
	GRADED TRENCH DRAIN
	EXISTING JUNCTION PIT
	EXISTING KERB INLET PIT
 eTEL	EXISTING TELSTRA PIT
 eHYD	EXISTING HYDRANT
 eSMH	EXISTING SEWER MANHOLE
 eGAS	EXISTING GAS VALVE
 ePP	EXISTING POWER POLE
 eBT	EXISTING BOUNDARY TRAP

APPROVALS

THE ASBUILT WORKS SHALL BE INSPECTED BY THE ENGINEER. MINIMUM 48 HOURS NOTICE SHALL APPLY TO ALL INSPECTIONS.



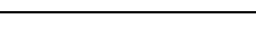













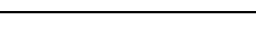
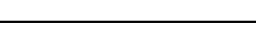
THE DESIGN PLANS HEREIN ARE SUBJECT TO LOCAL COUNCIL APPROVAL PRIOR TO CONSTRUCTION. OBTAIN EXPRESS (WRITTEN) ADVICE TO PROCEED FROM PROJECT SUPERINTENDENT PRIOR TO COMMENCEMENT.

SUBMIT WORK-AS-EXECUTED DRAWINGS IN DWG FORMAT AND HARD COPY FORMAT UNDERTAKEN BY A REGISTERED SURVEYOR. VERIFY ALL CONSTRUCTION WORKS SHOWN HEREON.

CERTIFY THAT THE ASBUILT SYSTEM HAS BEEN BUILT IN ACCORDANCE WITH THE APPROVED PLANS ISSUED FOR CONSTRUCTION.

ALLOW FOR SUBGRADE AND PAVEMENT THICKNESS TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER AFTER INSPECTION OF PRELIMINARY BOXING.

ALLOW FOR ANY SUBGRADE REPLACEMENT WORK TO BE DETERMINED AS REQUIRED BY GEOTECHNICAL ENGINEER AT THE TIME OF PAVEMENT CONSTRUCTION.

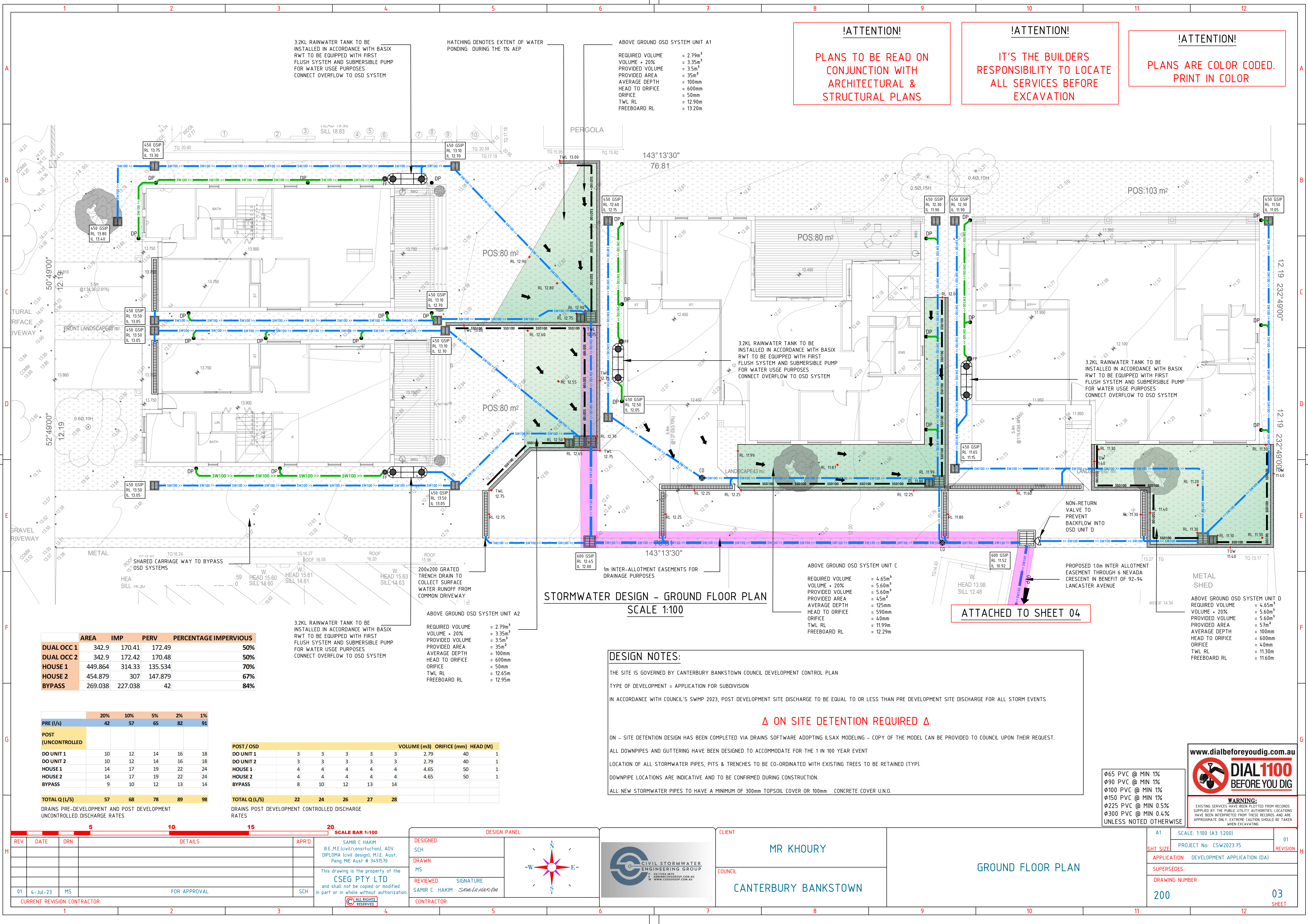
LEGEND	
FF 	FIRST FLUSH
DP 	DOWNPIPE
OFP 	OVERLAND FLOW PATH.
RWO 	RAINWATER OUTLET
CO 	CLEAR OUT POINT
DDO 	DISH DRAIN OUTLET
PD 	PLANTER DRAIN
	CAPPING
101 	PIT TAG/NUMBER
RWH 	RAINHEAD
	DOWNPIPE DROP
	NON RETURN VALVE
	WALL PENETRATION
	DOWNPIPE SPREADER.
	WARNING LIGHT
 RL	SPOT LEVELS
	BENCHMARK
	SLOPE
	RAINWATER TANK

ABBREVIATIONS:

ø or DIA	DIAMETER	TWL	TOP WATER LEVEL
CBR	CALIFORNIA BEARING RATIO	TP	TANGENT POINT
CH	CHAINAGE	UPVC	UNPLASTICISED POLYVINYL
CL	CENTER LINE		
CO	CLEAR OUT		
DD	DISH DRAIN	UNO	CHLORIDE
DDO	DISH DRAIN OUTLET	WPJ	UNLESS NOTED OTHERWISE
DEJ	DOWELLED EXPANSION JOINT	FF	WEAKENED PLANE JOINT
DGB	DENSE GRADED BASECOURSE	TYP	FIRST FLUSH DEVICE
DGS	DENSE GRADED SUB-BASE		TYPICAL
DP	DOWNPIPE		
e	EXISTING		
FFL	FINISHED FLOOR LEVEL		
GTD	GRADED TRENCH DRAIN		
GSIP	GRADED SURFACE INLET PIT		
HYD	HYDRANT		
IJ	ISOLATING JOINT		
IK	INTEGRAL KERB		
IL	INVERT LEVEL		
IP	INTERSECTION POINT		
KIP	KERB INLET PIT		
KO	KERB ONLY		
K&G	KERB & GUTTER		
KR	KERB RETURN		
LS	LONGITUDINAL SECTION		
NGL	NATURAL GROUND LEVEL		
OFP	OVERLAND FLOW PATH		
OSD	ON-SITE DETENTION		
R	RADIUS		
RCP	REINFORCED CONCRETE PIPE		
RK	ROLL KERB & GUTTER		
RL	REDUCED LEVEL		
RW	RETAINING WALL		
RWT	RAINWATER TANK		
SJ	SAWN CONTROL JOINT		
SMH	SEWER MAN HOLE		
SW	STORMWATER		
SWP	STORMWATER PIT		
SWRM	STORMWATER RISING MAIN		
SWS	STORMWATER SUMP		
SV	STOP VALVE		
TOK	TOP OF KERB		
TOW	TOP OF WALL		

GENERAL NOTES

5					10					15					20					SCALE BAR 1:100					DESIGN PANEL					CLIENT					COUNCIL					GENERAL NOTES					A1					SCALE: 1:100 (A3 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REV		DATE		DRN		DETAILS										APR'D		DESIGNED SCH B.B.MEREDITH/construction, AAOV. DIPLOMA/ARCHIT DESIGN, NTEE ARCHT. PERMITS AUST # 3439390										DRAWN MS										REVIEWED SIGNATURE SAMIR C HAKIM										CONTRACTOR:										MR KHOURY										CANTERBURY BANKSTOWN										SHT SIZE					PROJECT No: CSW2023.75					REVISION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	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!ATTENTION!
PLANS TO BE READ ON CONJUNCTION WITH ARCHITECTURAL & STRUCTURAL PLANS

!ATTENTION!
IT'S THE BUILDERS RESPONSIBILITY TO LOCATE ALL SERVICES BEFORE EXCAVATION

!ATTENTION!
PLANS ARE COLOR CODED. PRINT IN COLOR

STORMWATER DESIGN - GROUND FLOOR PLAN
SCALE 1:100

DESIGN NOTES:

THE SITE IS GOVERNED BY CANTERBURY BANKSTOWN COUNCIL DEVELOPMENT CONTROL PLAN
TYPE OF DEVELOPMENT = APPLICATION FOR SUBDIVISION
IN ACCORDANCE WITH COUNCIL'S SWMP 2023, POST DEVELOPMENT SITE DISCHARGE TO BE EQUAL TO OR LESS THAN PRE DEVELOPMENT SITE DISCHARGE FOR ALL STORM EVENTS
Δ ON SITE DETENTION REQUIRED Δ
ON - SITE DETENTION DESIGN HAS BEEN COMPLETED VIA DRAINS SOFTWARE ADOPTING ILSAX MODELING - COPY OF THE MODEL CAN BE PROVIDED TO COUNCIL UPON THEIR REQUEST.
ALL DOWNPIPES AND GUTTERING HAVE BEEN DESIGNED TO ACCOMMODATE FOR THE 1 IN 100 YEAR EVENT
LOCATION OF ALL STORMWATER PIPES, PITS & TRENCHES TO BE CO-ORDINATED WITH EXISTING TREES TO BE RETAINED (TYP).
DOWNPIPE LOCATIONS ARE INDICATIVE AND TO BE CONFIRMED DURING CONSTRUCTION.
ALL NEW STORMWATER PIPES TO HAVE A MINIMUM OF 300mm TOPSOIL COVER OR 100mm CONCRETE COVER U.N.O.

	AREA	IMP	PERV	PERCENTAGE IMPERVIOUS
DUAL OCC 1	342.9	170.41	172.49	50%
DUAL OCC 2	342.9	172.42	170.48	50%
HOUSE 1	449.864	314.33	135.534	70%
HOUSE 2	454.879	307	147.879	67%
BYPASS	269.038	227.038	42	84%

	20%	10%	5%	2%	1%
PRE (l/s)	42	57	65	82	91
POST (UNCONTROLLED)					
DO UNIT 1	10	12	14	16	18
DO UNIT 2	10	12	14	16	18
HOUSE 1	14	17	19	22	24
HOUSE 2	14	17	19	22	24
BYPASS	9	10	12	13	14
TOTAL Q (L/S)	57	68	78	89	98

DRAINS PRE-DEVELOPMENT AND POST DEVELOPMENT UNCONTROLLED DISCHARGE RATES

	POST / OSD	VOLUME (m3)	ORIFICE (mm)	HEAD (M)
DO UNIT 1	3	3	3	3
DO UNIT 2	3	3	3	3
HOUSE 1	4	4	4	4
HOUSE 2	4	4	4	4
BYPASS	8	10	12	13
TOTAL Q (L/S)	22	24	26	27

DRAINS POST DEVELOPMENT CONTROLLED DISCHARGE RATES

REV	DATE	DRN	DETAILS	APR'D
01	4-Jul-23	MS	FOR APPROVAL	SCH

CURRENT REVISION CONTRACTOR:

SCALE BAR 1:100

DESIGNED: SCH
DRAWN: MS
REVIEWED: SAMIR C HAKIM
CONTRACTOR: SAMIR C HAKIM

DESIGN PANEL

CLIENT: MR KHOURY
COUNCIL: CANTERBURY BANKSTOWN

GROUND FLOOR PLAN

200

03 SHEET

ATTACHED TO SHEET 03

STORMWATER DESIGN - EASEMENT PLAN
SCALE 1:100

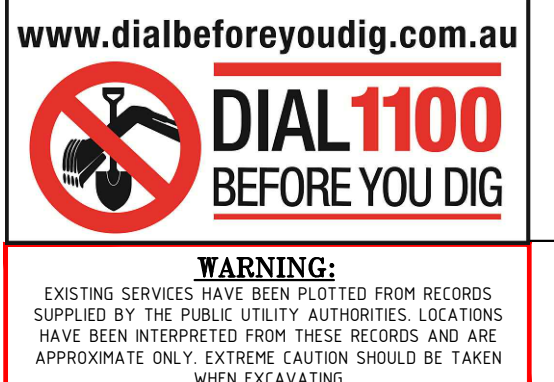
PROPOSED 1.0m INTER ALLOTMENT
EASEMENT THROUGH 6 NEVADA
CRESCENT IN BENEFIT OF 92-94
LANCASTER AVENUE
WITH A MAXIMUM DISCHARGE
RATE OF 28L/S

Pipe diameter	0.15m
Area	0.01767m ²
Perimeter	0.471m
Hydraulic radius	0.0375m
Material	Plastic
Roughness coefficient	150
Pipe length	43m
Drop	0.82m
Slope	0.01907
Flow velocity	1.897m/s
Flow discharge	33.5 liters/s

SITE TO DISCHARGE TO
NEVADA CRESCENT VIA
200x100 RHS AT IL 10.01

NEVADA CRESCENT

Ø65 PVC @ MIN 1%
 Ø90 PVC @ MIN 1%
 Ø100 PVC @ MIN 1%
 Ø150 PVC @ MIN 1%
 Ø225 PVC @ MIN 0.5%
 Ø300 PVC @ MIN 0.4%
 UNLESS NOTED OTHERWISE



!ATTENTION!

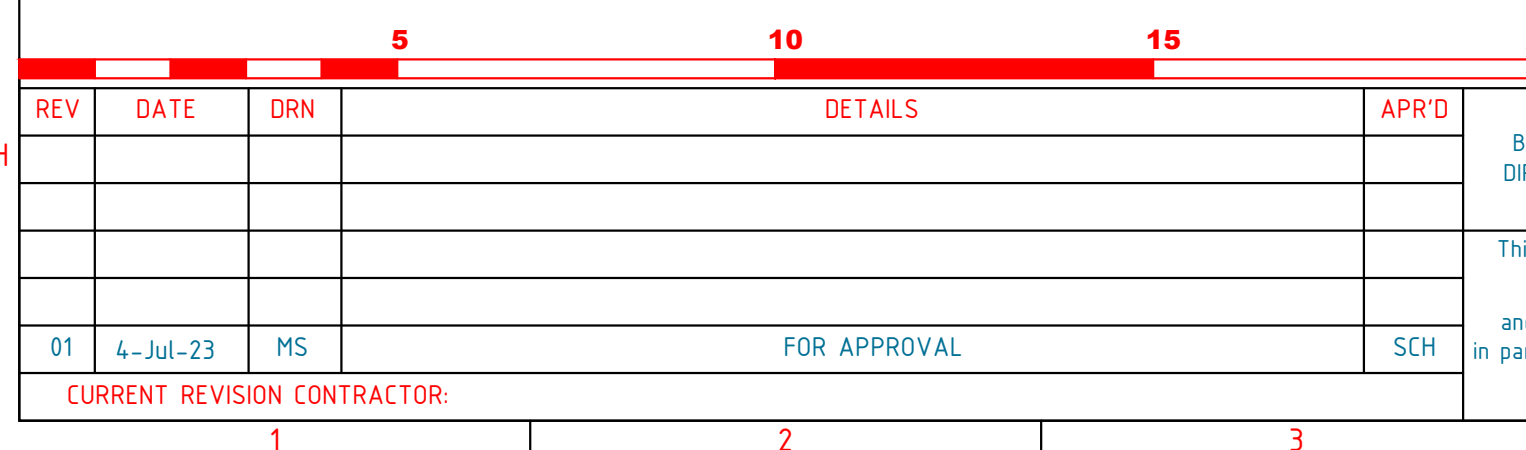
PLANS TO BE READ ON
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STRUCTURAL PLANS

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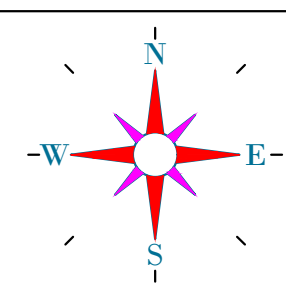
PLANS ARE COLOR CODED.
PRINT IN COLOR



SAMIR C HAKIM
B.E.,M.E.(civil/consruction), ADV.
DIPLOMA (civil design), M.I.E. Aust,
Peng MIE Aust # 3491570

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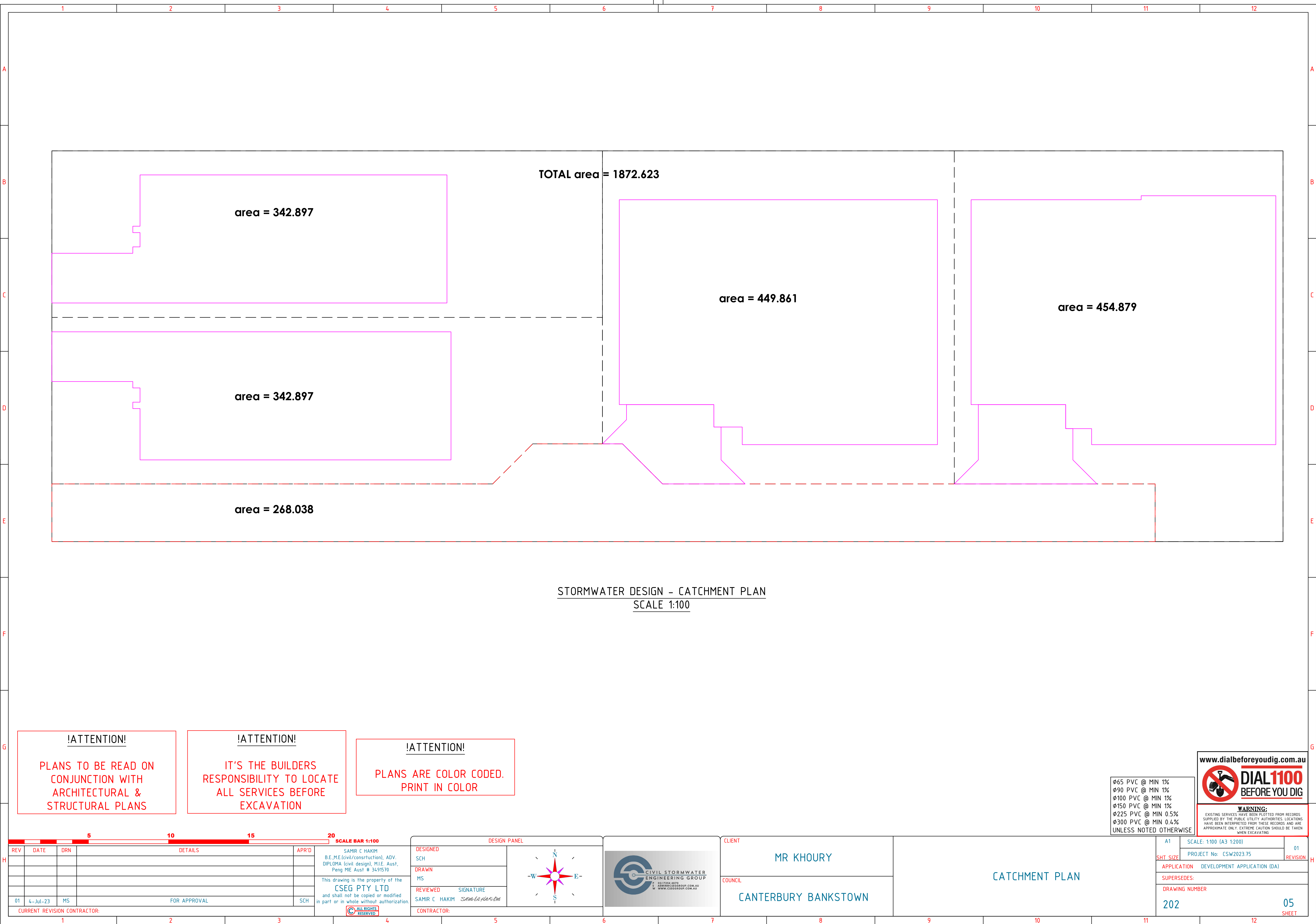
DESIGNED	
SCH	
DRAWN	
MS	
REVIEWED	SIGNATURE
SAMIR C HAKIM	<i>SAMIR C HAKIM</i>
CONTRACTOR:	



CLIENT	MR KHOURY
COUNCIL	CANTERBURY BANKSTOWN

EASEMENT PLAN

A1		SCALE: 1:100 (A3 1:200)		01	
SHT. SIZE		PROJECT No: CSW2023.75		REVISION	
APPLICATION		DEVELOPMENT APPLICATION (DA)			
SUPERSEDES:					
DRAWING NUMBER		04			
201		SHEET			



TOTAL area = 1872.623

area = 342.897

area = 449.861

area = 454.879

area = 342.897

area = 268.038

STORMWATER DESIGN - CATCHMENT PLAN
SCALE 1:100

!ATTENTION!

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CONJUNCTION WITH
ARCHITECTURAL &
STRUCTURAL PLANS

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RESPONSIBILITY TO LOCATE
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EXCAVATION

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PRINT IN COLOR

Ø65 PVC @ MIN 1%
Ø90 PVC @ MIN 1%
Ø100 PVC @ MIN 1%
Ø150 PVC @ MIN 1%
Ø225 PVC @ MIN 0.5%
Ø300 PVC @ MIN 0.4%
UNLESS NOTED OTHERWISE

www.dialbeforeyoudig.com.au



WARNING:
EXISTING SERVICES HAVE BEEN PLOTTED FROM RECORDS
SUPPLIED BY THE PUBLIC UTILITY AUTHORITIES. LOCATIONS
HAVE BEEN INTERPRETED FROM THESE RECORDS AND ARE
APPROXIMATE ONLY. EXTREME CAUTION SHOULD BE TAKEN
WHEN EXCAVATING

REV	DATE	DRN	DETAILS	APR'D
01	4-Jul-23	MS	FOR APPROVAL	SCH

SAMIR C HAKIM
B.E.M.E.(civil/consruction), ADV.
DIPLOMA (civil design), M.I.E. Aust.,
Peng MIE Aust # 3491570

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DESIGNED	SCH
DRAWN	MS
REVIEWED	SIGNATURE
SAMIR C HAKIM	<i>SAMIR C HAKIM</i>
CONTRACTOR:	

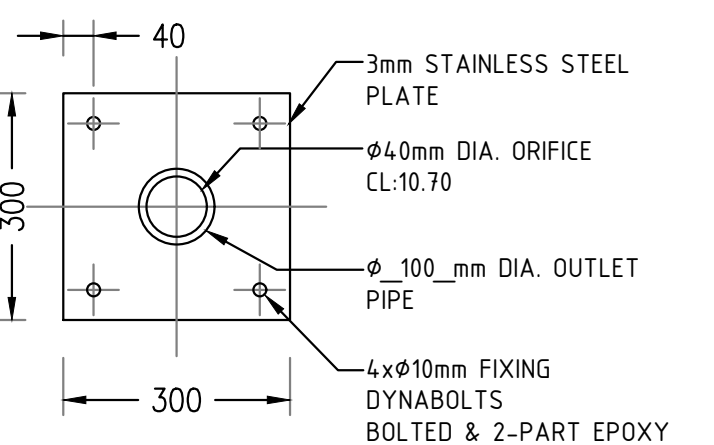
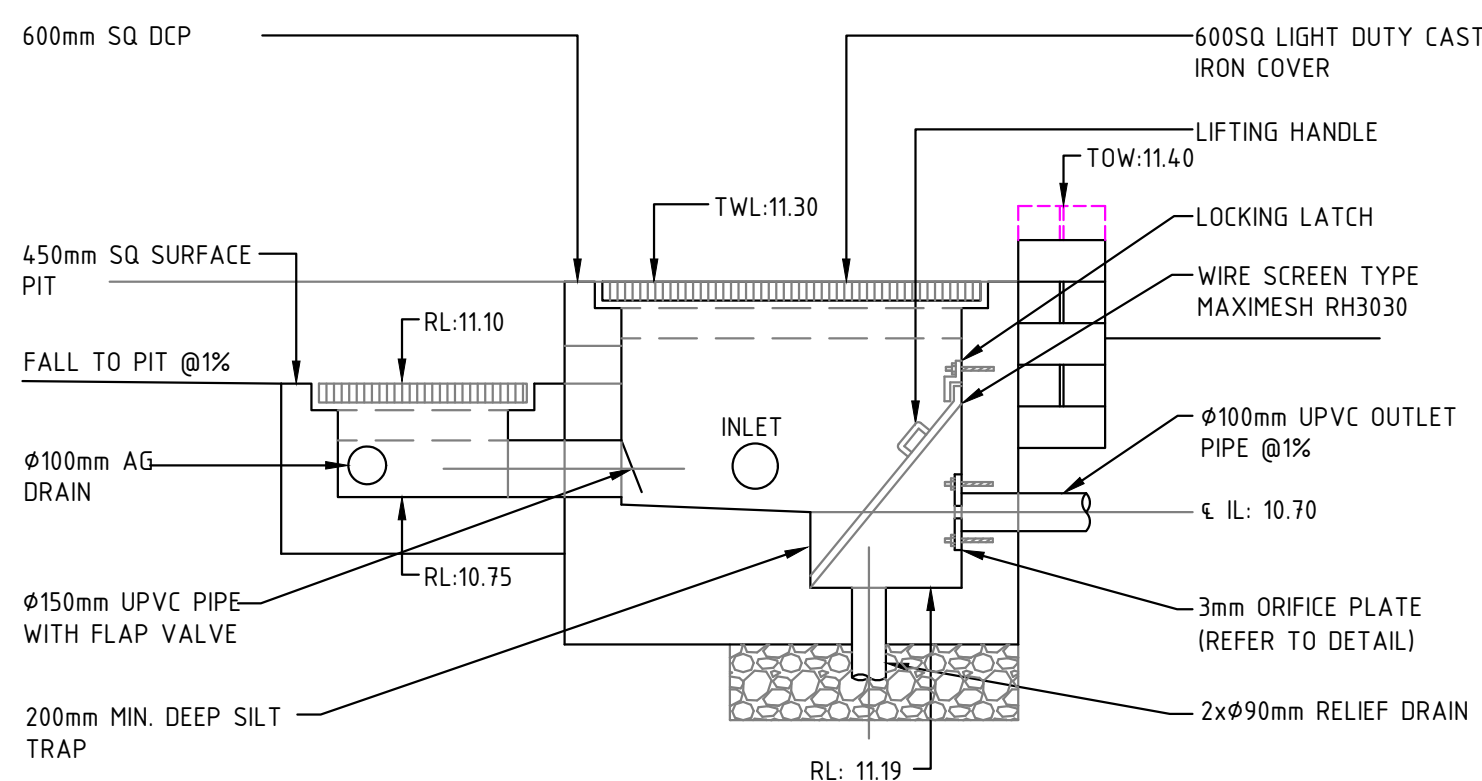
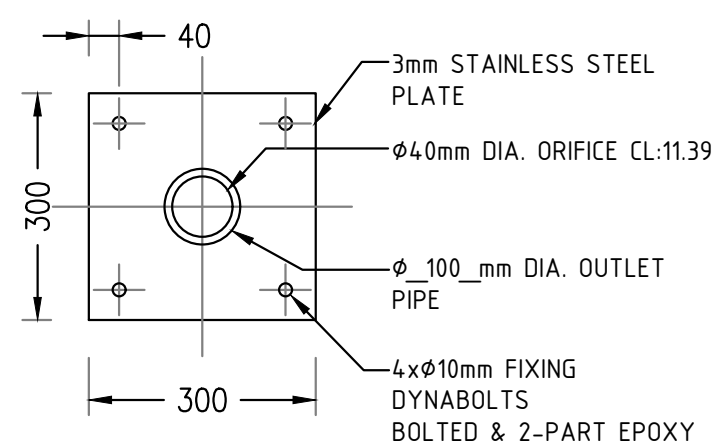
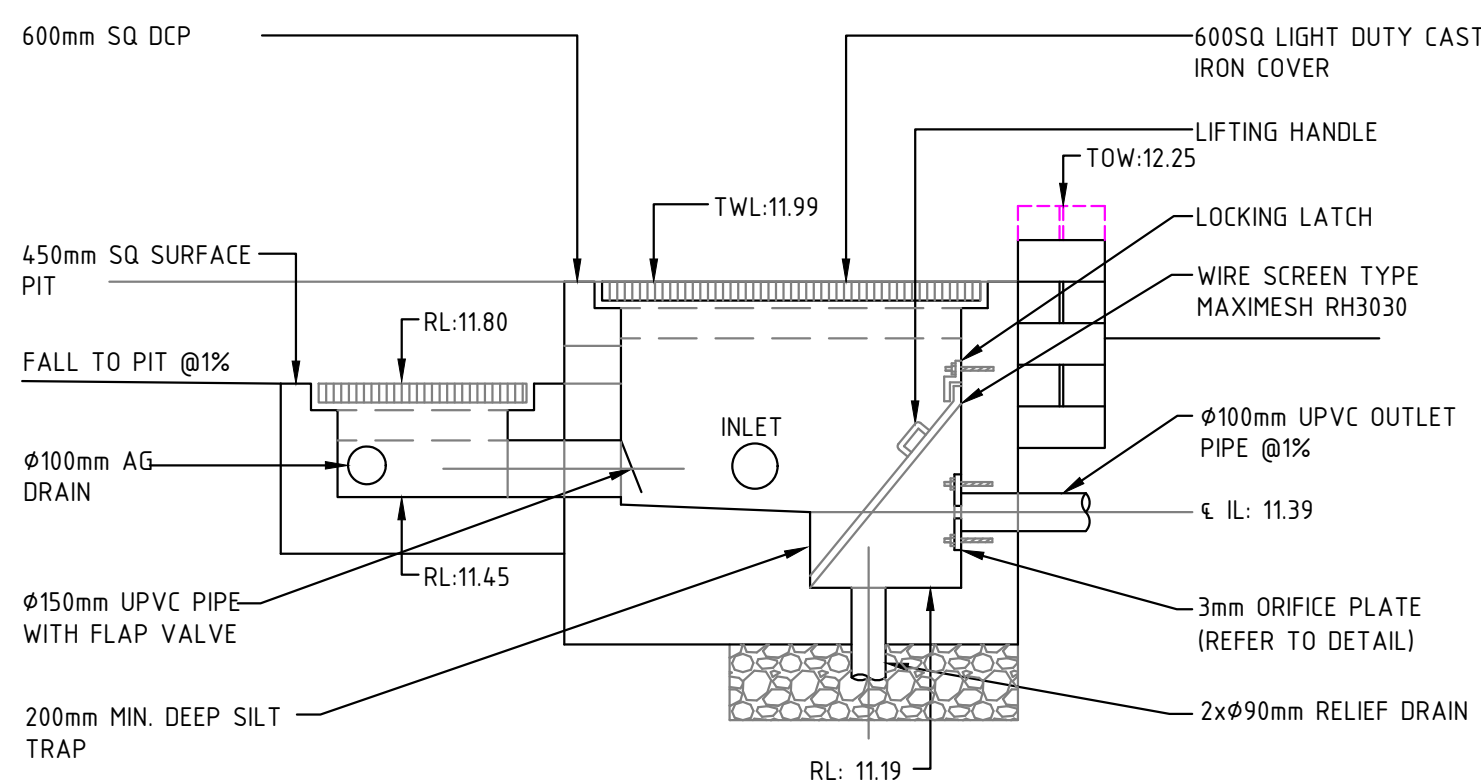
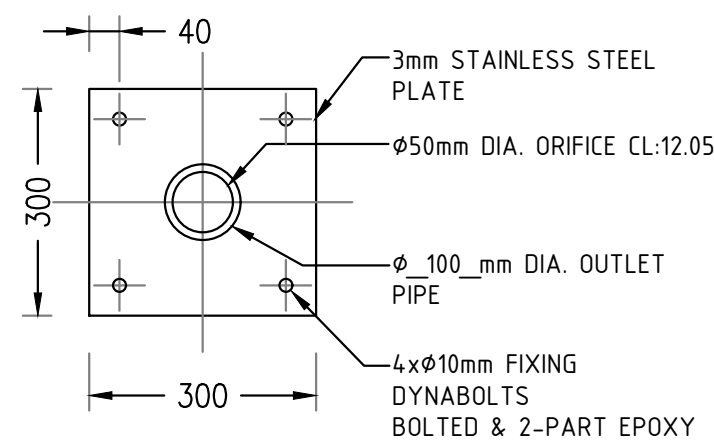
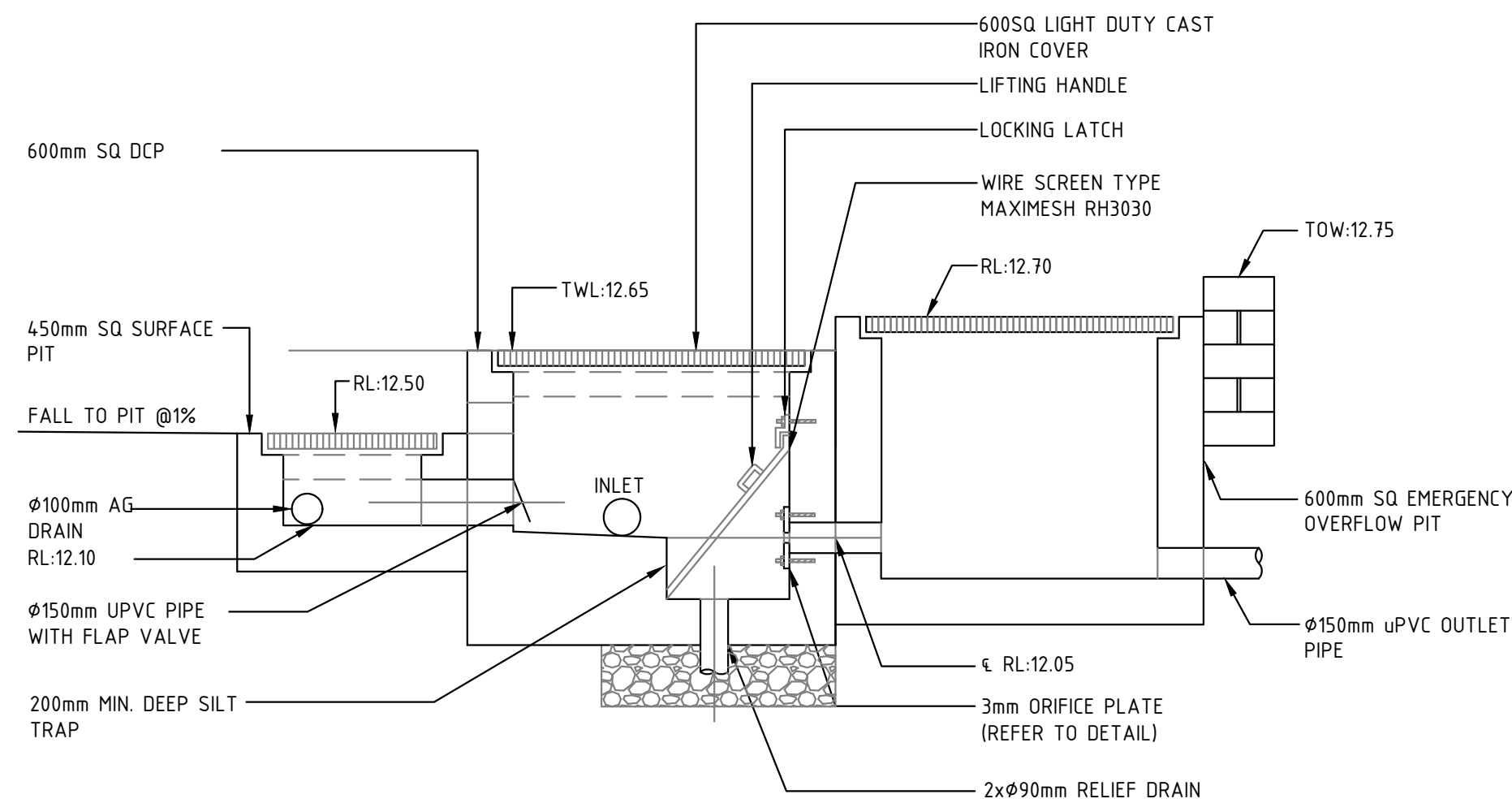
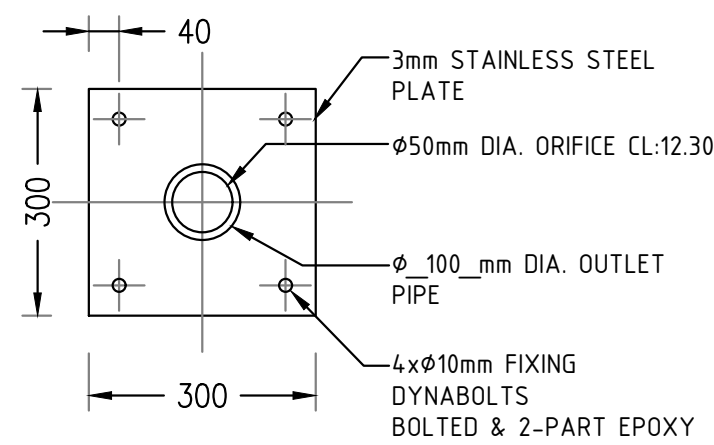
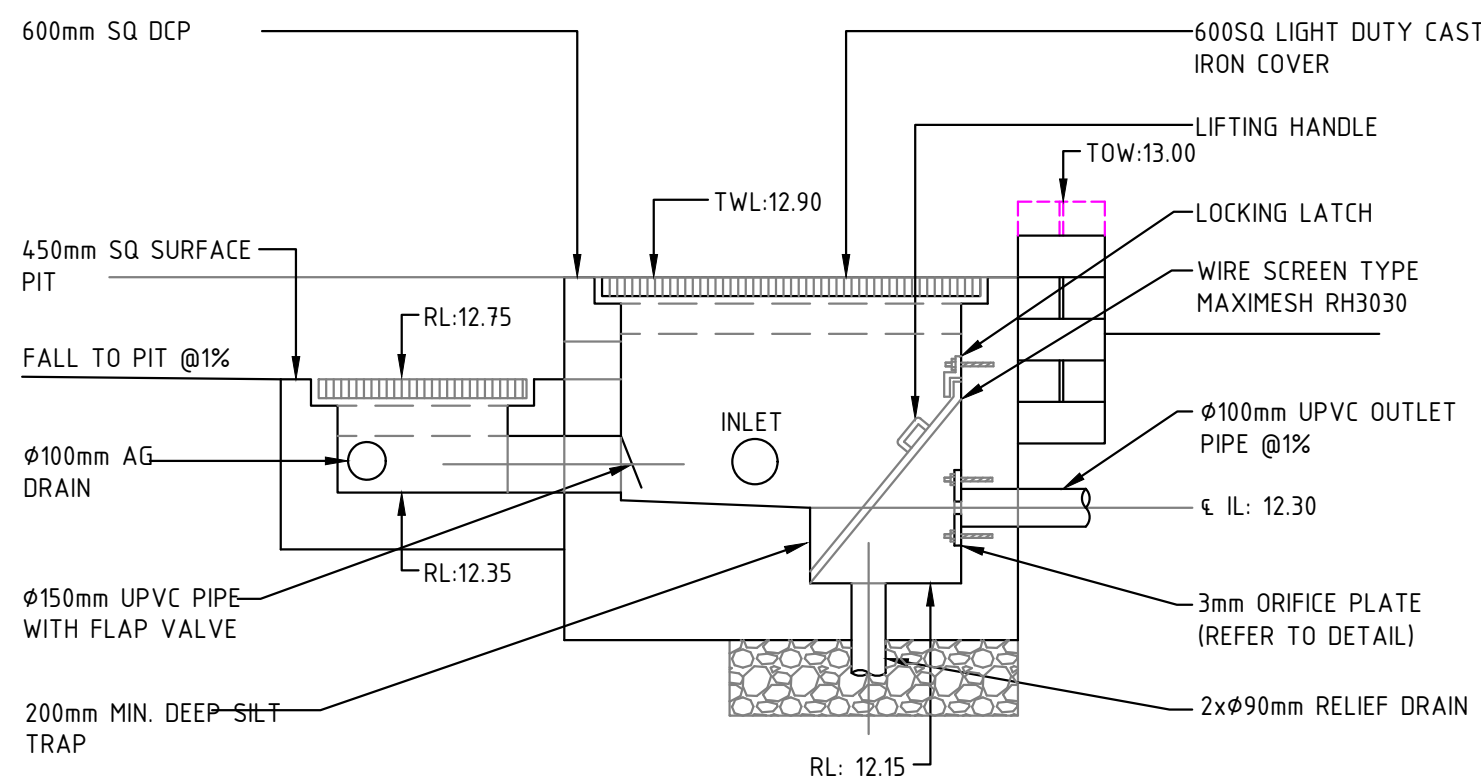


CLIENT
MR KHOURY

COUNCIL
CANTERBURY BANKSTOWN

CATCHMENT PLAN

A1	SCALE: 1:100 (A3 1:200)	01
SHT SIZE	PROJECT No: CSW2023.75	REVISION
APPLICATION DEVELOPMENT APPLICATION (DA)		
SUPERSEDES:		
DRAWING NUMBER		
202		05
		SHEET



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90 PVC @ MIN 1%
100 PVC @ MIN 1%
150 PVC @ MIN 1%
225 PVC @ MIN 0.5%
300 PVC @ MIN 0.4%
UNLESS NOTED OTHERWISE

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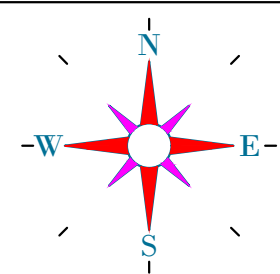


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WHEN EXCAVATING

REV	DATE	DRN	DETAILS	APR'D
01	4-Jul-23	MS	FOR APPROVAL	SCH
CURRENT REVISION CONTRACTOR:				

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B.E.M.E.(civil/construction), ADV.
DIPLOMA (civil design), M.E. Aust.,
Peng MIE Aust # 3491570
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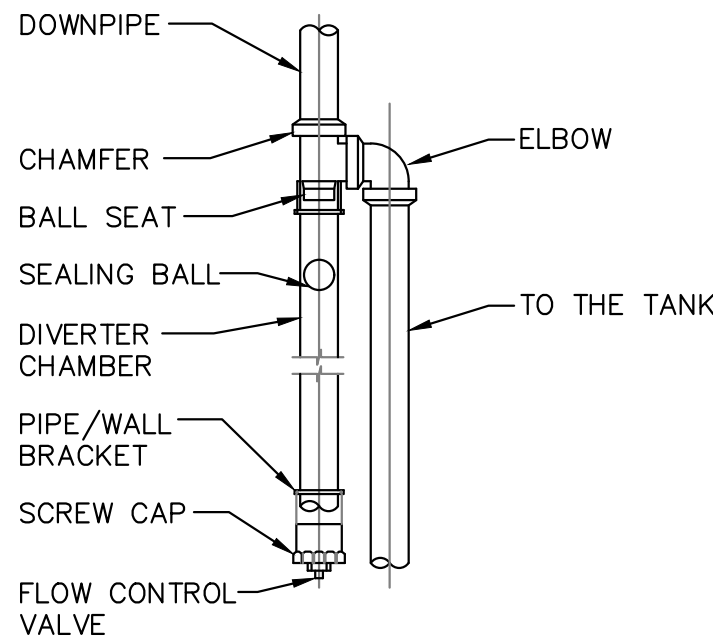
DESIGNED	SCH
DRAWN	MS
REVIEWED	SIGNATURE
SAMIR C HAKIM	<i>SAMIR C HAKIM</i>
CONTRACTOR:	



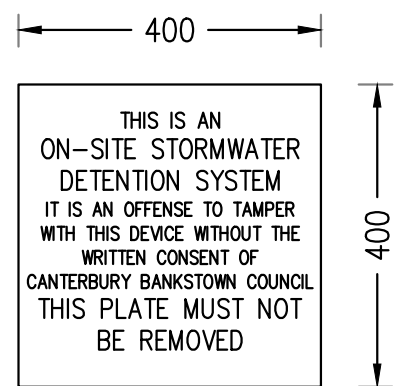
CLIENT	MR KHOURY
COUNCIL	CANTERBURY BANKSTOWN

OSD DETAILED SECTION

A1	SCALE: 1:100 (A3 1:200)	01
SHT SIZE	PROJECT No: CSW2023.75	REVISION
APPLICATION	DEVELOPMENT APPLICATION (DA)	
SUPERSEDES:		
DRAWING NUMBER	300	06 SHEET



DETAIL
FIRST FLUSH DIVERTER
SCALE 1:20

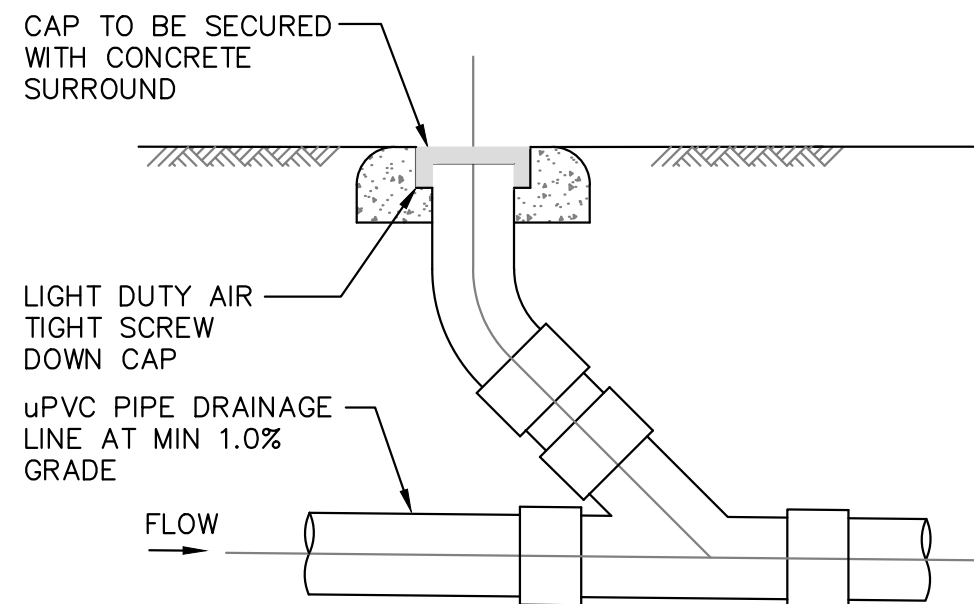


DETAIL
OSD SIGN
SCALE 1:10

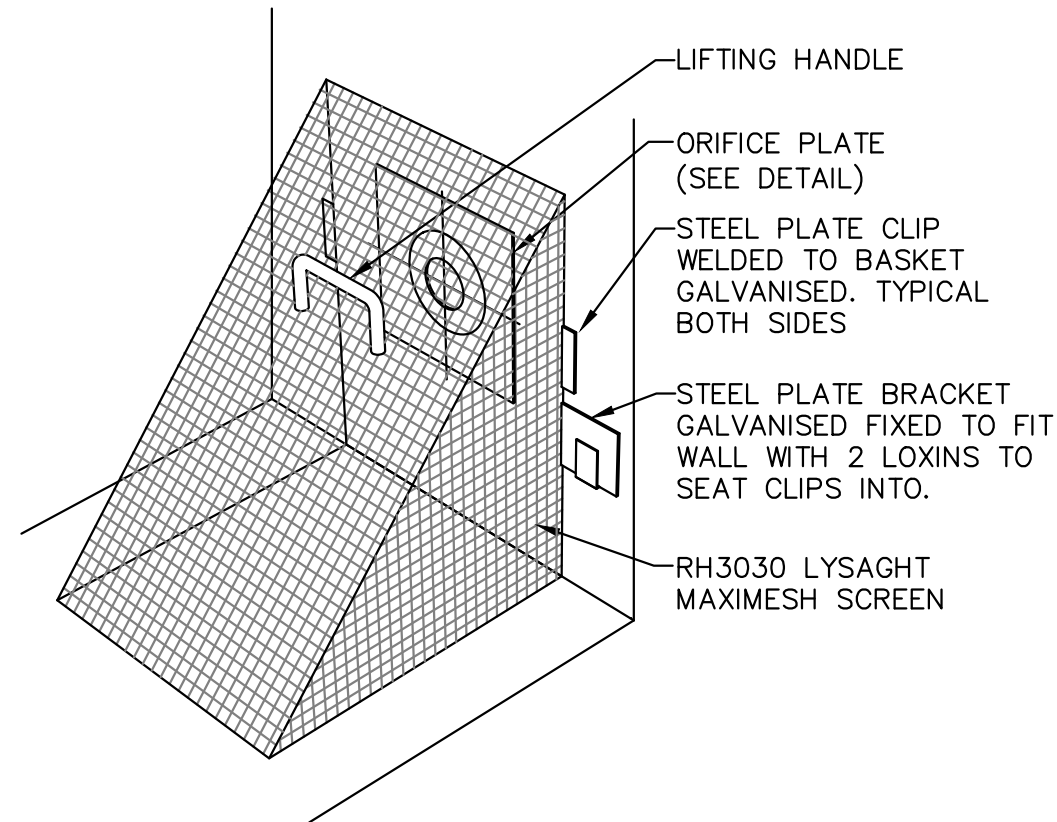


LEGEND:
BACKGROUND IS YELLOW
TEXT IS WHITE ON BLACK
BACKGROUND

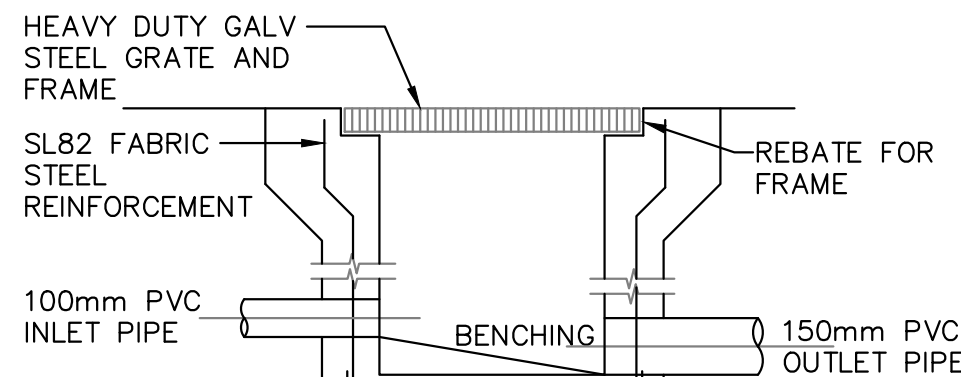
DETAIL
RAINWATER SIGN
SCALE 1:10



DETAIL
CLEANING EYE
SCALE 1:20

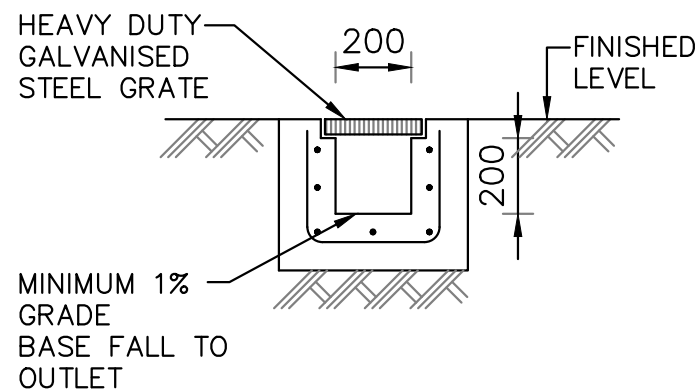


DETAIL
DEBRIS SCREEN
NOT TO SCALE

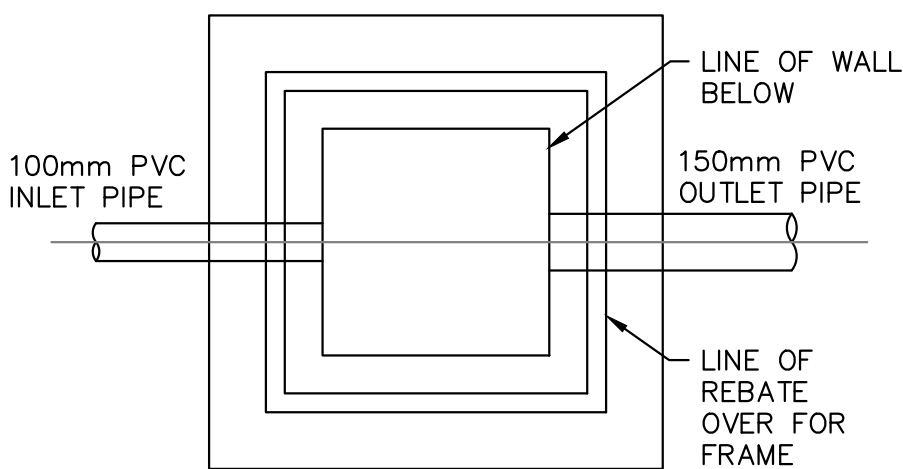


AS SHOWN
ON PLAN

SECTION



DETAIL
GRADED TRENCH DRAIN
SCALE 1:20



PLAN WITHOUT GRATE

DETAIL
STORMWATER PIT
SCALE 1:20

CONNECTION TO KERB

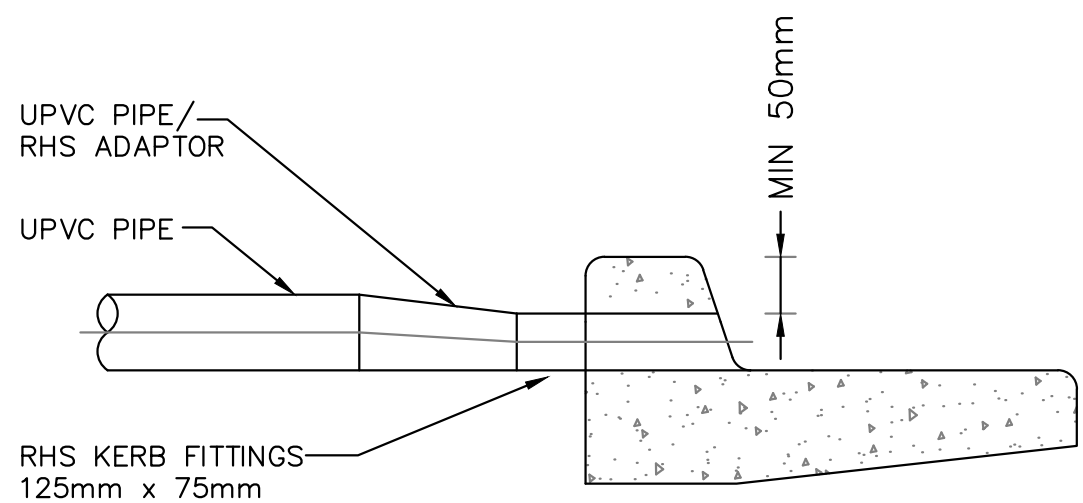
INTERNAL DIAMETER OF PIPES OR INTERNAL HEIGHT OF RECTANGULAR SECTION ACROSS FOOTPATH SHALL BE 100mm MAXIMUM, 90mm MINIMUM

PIPES ACROSS FOOTPATH SHALL BE SEWER GRADE UPVC

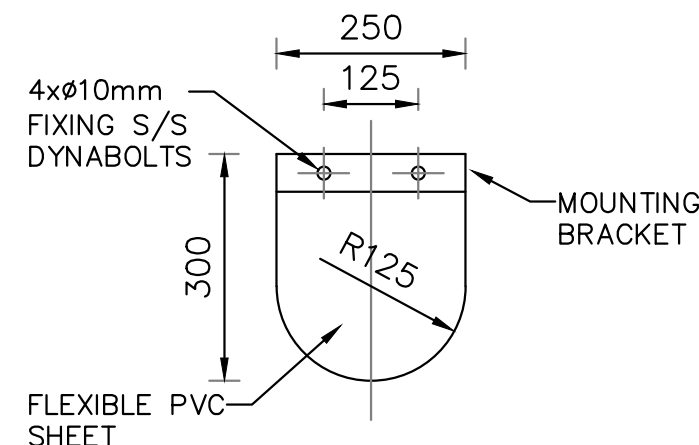
RECTANGULAR HOLLOW SECTIONS ACROSS FOOTPATH SHALL BE HOT DIP GALVANISED RHS

CONVERT 150mm DIAMETER PIPES WITHIN THE PROPERTY TO A 200x100x6mm GALVANISED RHS ACROSS THE FOOTPATH USING A 300x300mm PIT WITH REMOVABLE LID

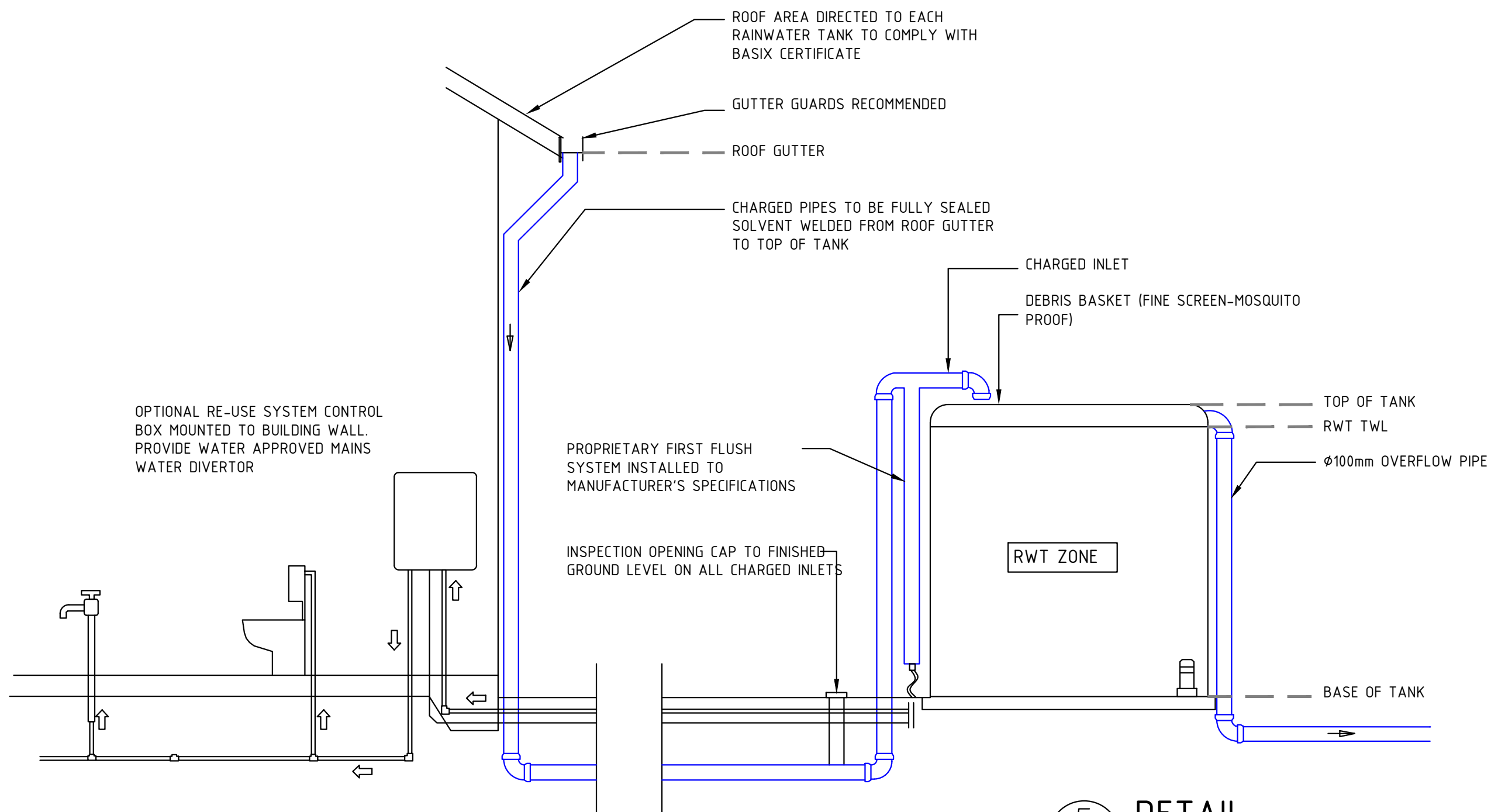
CONNECTIONS TO KERB ACROSS TO THE FOOTPATH TO BE AT A MAXIMUM OF 60 DEGREES TO THE KERB LINE



DETAIL
KERB CONNECTION
SCALE 1:10



DETAIL
FLAP VALVE
SCALE 1:10

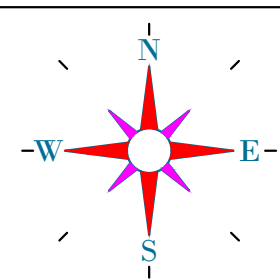


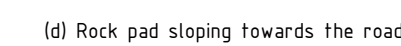
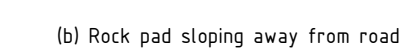
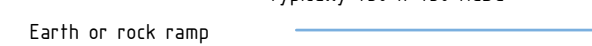
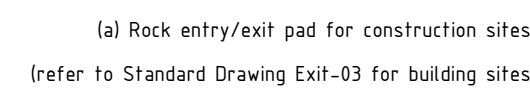
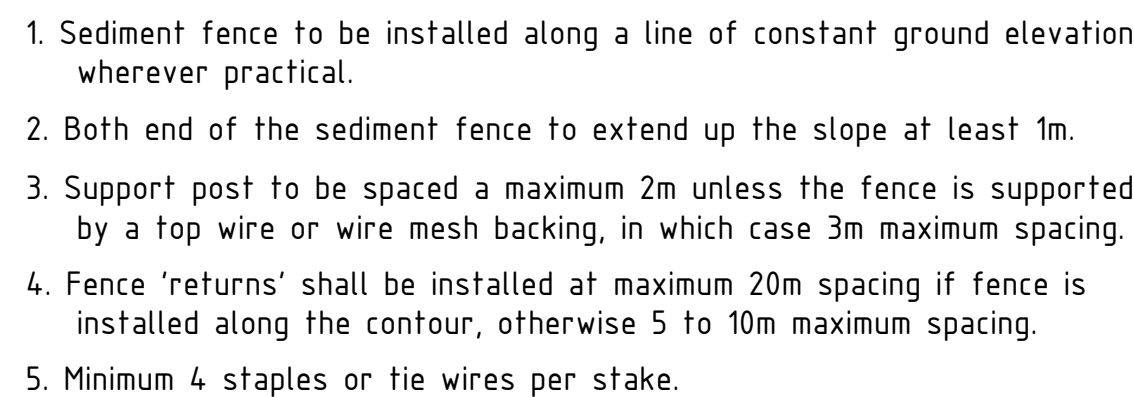
DETAIL
RAINWATER TANK (ABOVE GROUND)
NOT TO SCALE

REV	DATE	DRN	DETAILS	APR'D
01	4-Jul-23	MS	FOR APPROVAL	SCH
CURRENT REVISION CONTRACTOR:				

SAMIR C HAKIM
B.E.M.E.(civil/construction), ADV.
DIPLOMA (civil design), M.I.E. Aust.
Peng MIE Aust # 3491570
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DESIGNED	SCH
DRAWN	MS
REVIEWED	SIGNATURE
SAMIR C HAKIM	<i>SAMIR C HAKIM</i>
CONTRACTOR:	





CONTRACTOR



MR KHOURY

CANTERBURY BANKSTOWN

EROSION AND SEDIMENT CONTROL

08
SHEET