

STORMWATER DRAWINGS

FOR

32-36 HOPE STREET, PENRITH

SYMBOLS

RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
TK	TOP OF KERB
	STORMWATER DRAINAGE PIPE
	DOWNPIPE TO RAINWATER TANK
	OVERFLOW PIPE FROM RAINWATER TANK
	400 SUBSOIL PIPE
	FLOOR WASTE 150x50
	FLOOR WASTE 150x
	RAINWATER OUTLET 300x
	DOWN PIPE
	CLEAN OUT
	INSPECTION OPENING
	VERTICAL DROP
	VERTICAL RISER
	CONCRETE COVER JUNCTION PIT
	GRADED INLET PIT
	WIDE GRATED DRAIN
	OVERLAND FLOW PATH

NOTES

- ALL LINES ARE TO BE MIN. 100x UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE NOTED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
- ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
- ALL PITS IN OTHERWISE BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRADED SURFACE INLET PITS.
- ALL WORK TO BE DONE IN ACCORDANCE WITH AS/NZ 3500.1:2015 AND COUNCIL SPECIFICATIONS.
- LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
- ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
- ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
- ALL GRATES WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES.
- PROVIDE EMERGENCY OVERFLOW TO ALL PLANTER BOX AND BALCONIES.
- ALL PITS WITH DEPTH MORE THAN 90 MUST HAVE BENCH STEPS.
- PROVIDE STORMWATER GRATE 200x2000 AT THE BASE OF ALL MECHANICAL SHAFTS AND UNCOVERED STAIRS OR OPENINGS.
- ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS.

LEGEND

BETTER TO AS 1500 PART 3 TABLE 7.2

P1	100x UPVC PIPE AT 1.0% MIN. GRADE
P2	150x UPVC PIPE AT 1.0% MIN. GRADE
P3	225x UPVC PIPE AT 0.5% MIN. GRADE
P4	300x UPVC PIPE AT 0.4% MIN. GRADE
P5	375x UPVC PIPE AT 0.4% MIN. GRADE



AS 3500.1 - TABLE B.2
SIZE OF MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS

DEPTH OF INLET OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR WIDTH	RECTANGULAR LENGTH	CIRCULAR DIAMETER
<800	400	400	600
>800 <1000	600	600	800
>1000 <1200	800	800	1000
>1200	900	900	1000

DRAWING SCHEDULE

DRAWING No.	DRAWING TITLE
D00	COVER SHEET, LEGEND & DRAWING SCHEDULE
D01	BASEMENT 2 STORMWATER DRAINAGE PLAN
D02	BASEMENT 1 STORMWATER DRAINAGE PLAN
D03	GROUND FLOOR STORMWATER DRAINAGE PLAN
D04	STORMWATER DRAINAGE SECTIONS & DETAILS 1
D05	STORMWATER DRAINAGE SECTIONS & DETAILS 2
D06	ROAD DETAILS
D10	EROSION AND SEDIMENT CONTROL PLAN & DETAILS

18 South Street North Parramatta NSW 2151 ph: +61 2 9630 9911 fax: +61 2 9630 9922 mob: 0431 111 777 admin@designcorp.com.au www.designcorp.com.au												AUSTRALIAN CONSULTING ENGINEERS. AUSTRALIAN CONSULTING ENGINEERS GROUP 2/140 CONCORD RD NORTH STRATHFIELD NSW 2157 PH: (02) 9743 1100 FX: (02) 9743 1016 EMAIL: info@ace-engineers.com.au												PROJECT PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT 32-36 HOPE STREET PENRITH, NSW												SHEET OBJECT COVER SHEET, LEGEND & DRAWING SCHEDULE												PROJECT 32-36 HOPE STREET, PENRITH, NSW DATE NOV 2017 SCALE 1:1 NTS AUTHORED Osman Chowdhury CHECKED D00 DESIGNED S.S.N. DRAWN S.S.N. 171552 REV A											
A FOR S.A. APPROVAL E.A. S.S.A. Z.U.J.L.T. APPROVED END DATE DATE No. APPROVED END DATE DATE No. APPROVED END DATE DATE No. APPROVED END DATE DATE No. APPROVED												PROJECT SHEET OBJECT DATE SCALE NTS AUTHORED CHECKED DESIGNED DRAWN																																															

LEGEND
 REFER TO AS 3600 PART 3 TABLE 7.2
 P1 : 100M UPVC PIPE AT 1.0% MIN. GRADE
 P2 : 150M UPVC PIPE AT 1.0% MIN. GRADE
 P3 : 225M UPVC PIPE AT 0.5% MIN. GRADE
 P4 : 300M UPVC PIPE AT 0.4% MIN. GRADE
 P5 : 375M UPVC PIPE AT 0.4% MIN. GRADE

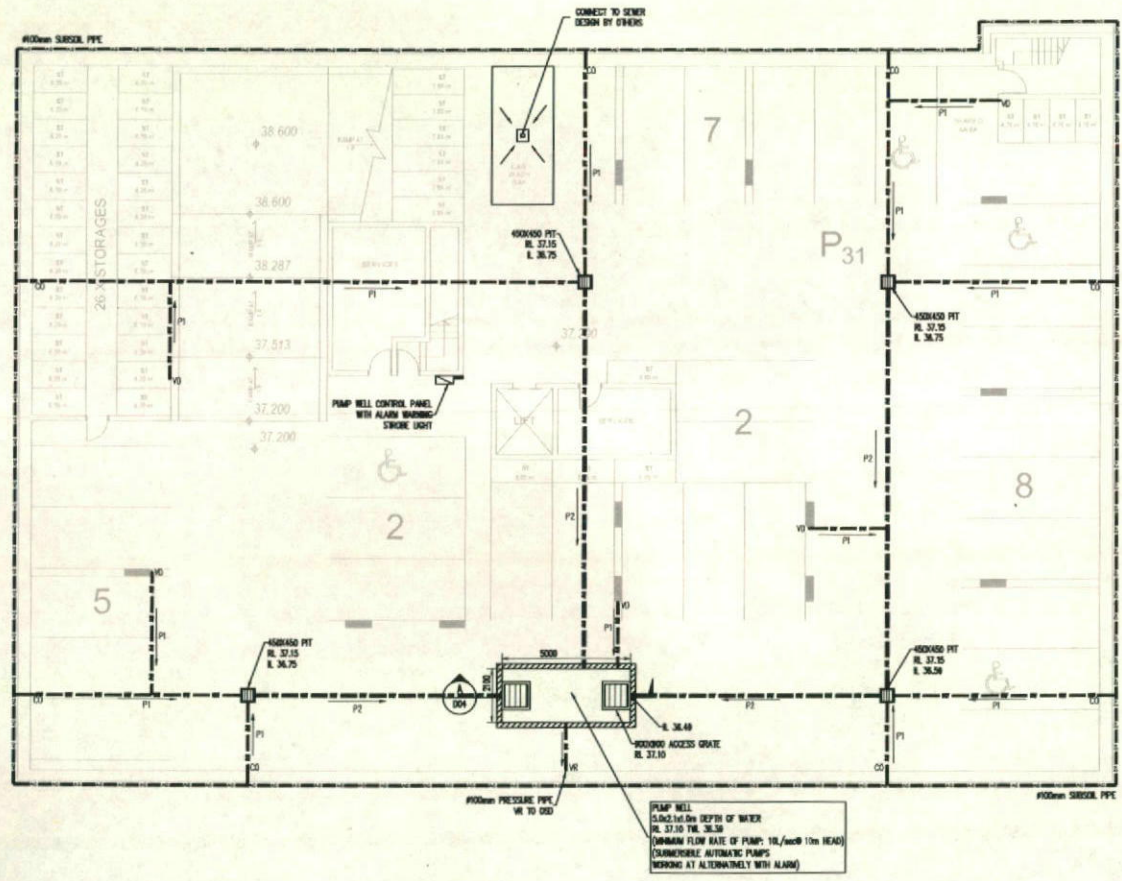


NOTES

1. ALL LINES ARE TO BE MIN. 100M UPVC @ MIN. 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 300mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK TO BE DONE IN ACCORDANCE WITH AS/NZ 3608.3:2005 AND COVER SPECIFICATIONS.
6. LOCATION OF DOMMIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOMMIPES & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BALDWIN & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
9. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
10. ALL OUTLETS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEARED TO ENSURE LEAF LITTER CANNOT COVER THE DOMMIPES.

SYMBOLS

- RL PIT SURFACE LEVEL
- IL INVERT LEVEL
- TK TOP OF KERB
- STORMWATER DRAINAGE PIPE
- DOMMIPES TO RAINWATER TANK
- OVERFLOW PIPE FROM RAINWATER TANK
- RISER SUBSOIL PIPE
- FLOOR WASTE ISOTO
- FLOOR WASTE ISOP
- RAINWATER OUTLET SOOM
- DOWN PIPE
- CLEAN OUT
- INSPECTION OPENING
- VERTICAL DROP
- VERTICAL RISE
- CONCRETE COVER JUNCTION PIT
- GRATED INLET PIT
- WIDE GRATED DRAIN
- OVERLAND FLOW PATH



PUMP WELL
 0.50m MIN. DEPTH OF WATER
 RL 37.10 TO 36.30
 MINIMUM FLOW RATE OF PUMP: 10L/sec (10m HEAD)
 (TOLERABLE AUTOMATIC PUMP WORKING AT ALTERNATELY WITH ALARM)

AS 1:100

NO.	REVISION	DATE	BY	CHKD

designcorp
 ARCHITECTS
 18 Ardill Street
 North Parramatta NSW 2151
 ph. +61 2 9630 0911
 fax. +61 2 9630 0922
 mob. 0431 151 777
 admin@designcorp.com.au
 www.designcorp.com.au

AUSTRALIAN CONSULTING ENGINEERS
 4/177 LINDSAY ST. S.W. 4101 BRISTOL QLD 4101
 PH: (07) 4765 1500 FAX: (07) 4765 1505
 EMAIL: info@acegroup.com.au

PROJECT
 PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT
 32-36 HOPE STREET
 PENRITH, NSW

SHEET NAME
 BASEMENT 2 STORMWATER DRAINAGE PLAN

DATE	ISSUED	REVISION	BY
NOV 2017	S.S.N.	S.S.N.	E.H.
SCALE 1:100		JOB NO. 171552	
AUTHORISED		DWG No.	REV
Osman Chowdhury		D01	A

LEGEND
 REFER TO AS 3500 PART 3 TABLE 7.2
 P1 : 100W UPVC PIPE AT 1.0% MIN. GRADE
 P2 : 150W UPVC PIPE AT 1.0% MIN. GRADE
 P3 : 225W UPVC PIPE AT 0.5% MIN. GRADE
 P4 : 300W UPVC PIPE AT 0.4% MIN. GRADE
 P5 : 375W UPVC PIPE AT 0.4% MIN. GRADE

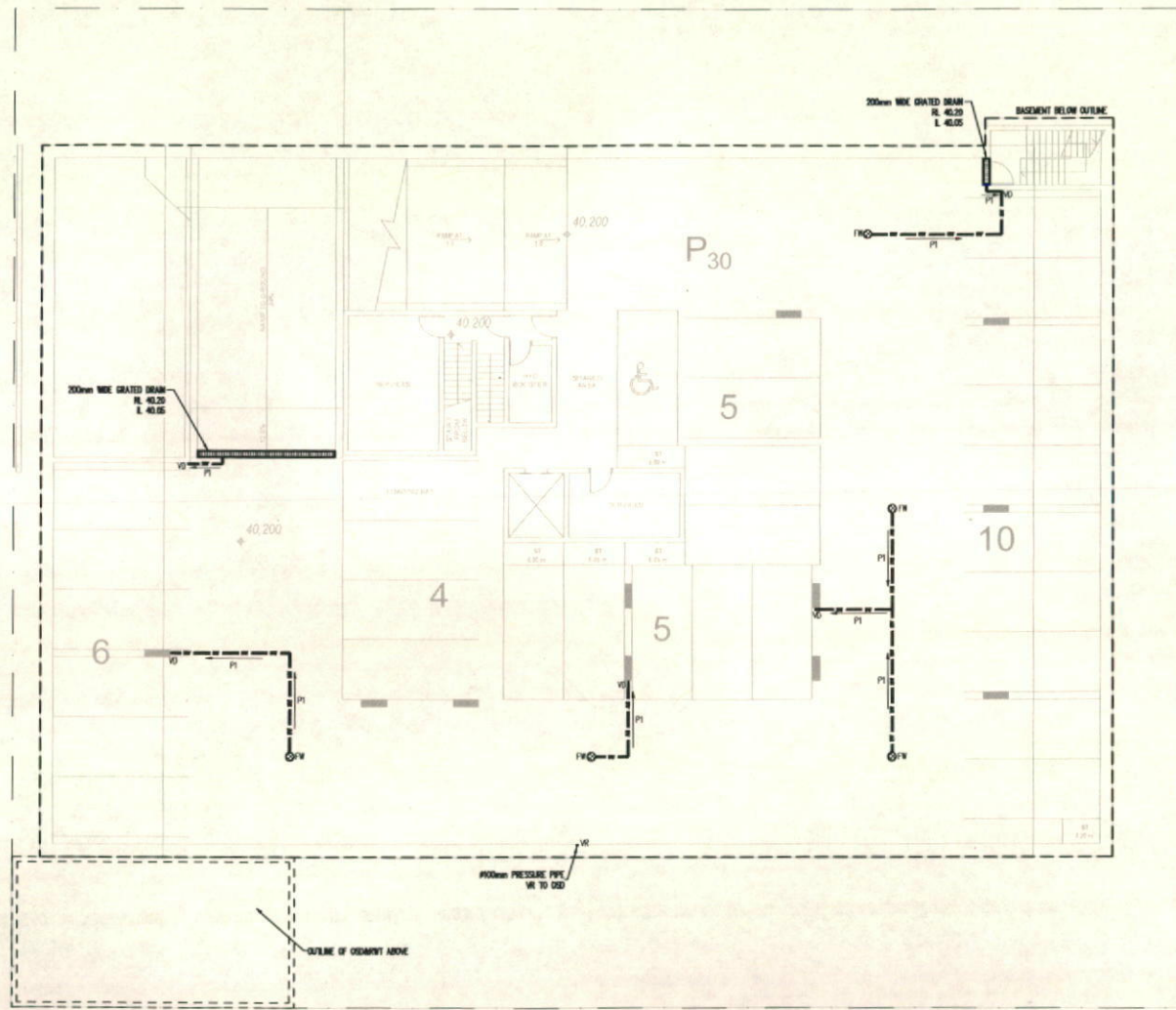


NOTES

1. ALL LINES ARE TO BE MIN 100W UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS OR HEAVY DUTY GRATES, DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK TO BE DONE IN ACCORDANCE WITH AS/NZS 3008.3.2.2010 AND OTHER RELEVANT STANDARDS.
6. LOCATION OF DOWNPIPES & FLOOR WASTE SIZES, LOCATION & QUANTITY TO BE DETERMINED BY BUILDERS & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
9. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
10. ALL GRATES WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES.

SYMBOLS

- RL PIT SURFACE LEVEL
- IL INVERT LEVEL
- TK TOP OF KERB
- STORMWATER DRAINAGE PIPE
- DOWNPIPE TO RAINWATER TANK
- OVERFLOW PIPE FROM RAINWATER TANK
- #100 SUBSOIL PIPE
- ⊗#100 FLOOR WASTE ISOTOID
- ⊗#150 FLOOR WASTE ISOP
- ⊗#300 RAINWATER OUTLET JOOM
- +0P DOWN PIPE
- +0D CLEAN OUT
- +10 INSPECTION OPENING
- +H0 VERTICAL DROP
- +H0 VERTICAL RISER
- ⊗# CONCRETE COVER JUNCTION PIT
- ⊗# GRATED INLET PIT
- ⊗# WIDE GRATED DRAIN
- ← OVERLAND FLOW PATH



AS 1:1000

NO.	REVISION	DATE	BY	CHECKED	DATE	BY	CHECKED

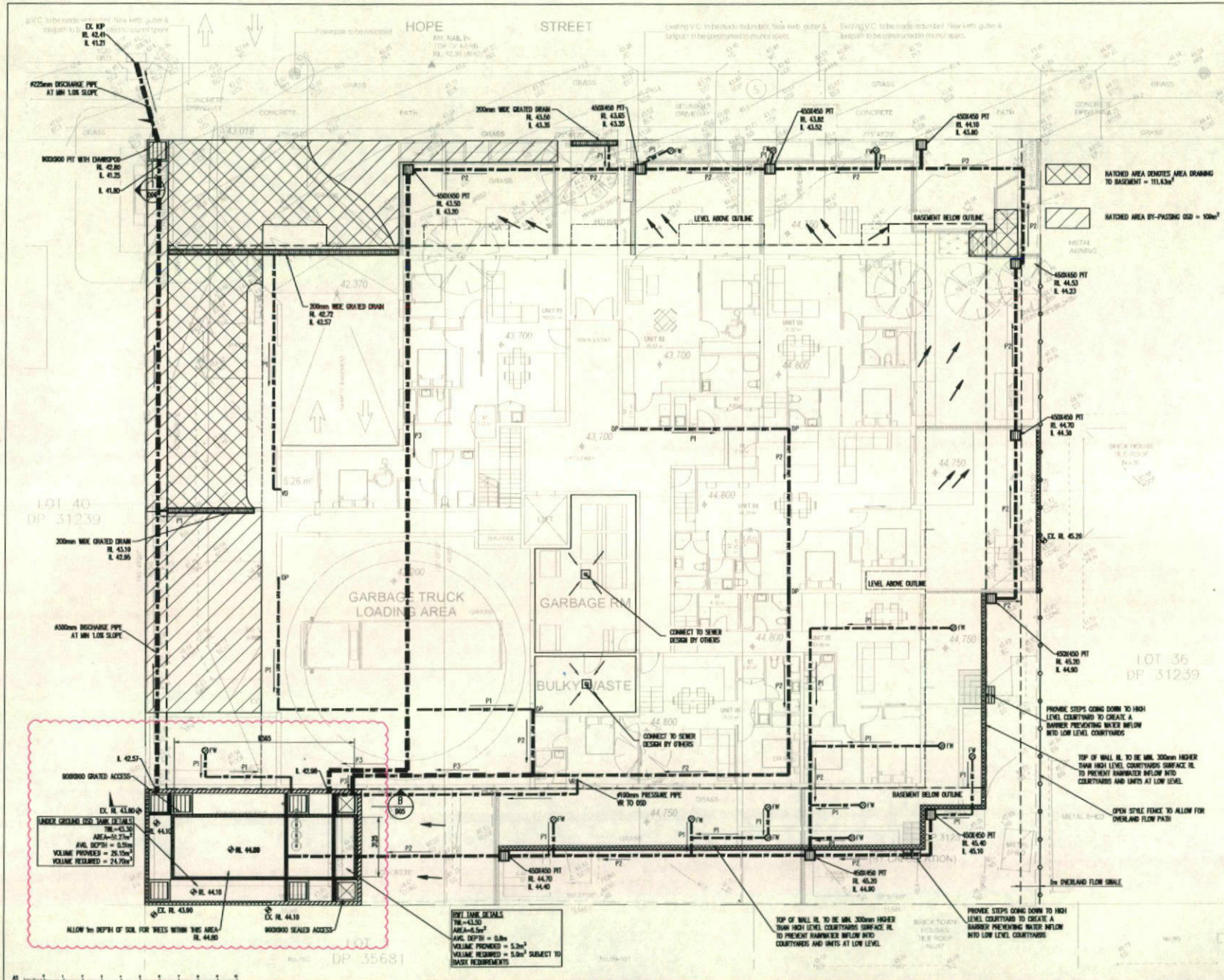
designcorp
 ARCHITECTS
 16 Dundoo Street
 North Parramatta NSW 2151
 ph: +61 2 9630 9911
 fax: +61 2 9630 9922
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au

AUSTRALIAN CONSULTING ENGINEERS
 100/105 HOPE STREET, PENRITH NSW 2150
 PH: 02 9515 1000 FAX: 02 9515 1000
 EMAIL: info@auconeng.com.au

PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT
 32-36 HOPE STREET
 PENRITH, NSW

BASEMENT 1 STORMWATER DRAINAGE PLAN

PROJECT	32-36 HOPE STREET, PENRITH, NSW	DATE	NOV 2017	DESIGN	S.S.N.	ISSUED	S.S.N.	PROJECT	E.H.
SCALE	1:100	NO. TO	171552	APPROVED	Osman Chowdhury	REV NO.	D02	REV	A



LEGEND

REFER TO AS 3500 PART 3, TABLE 7.2

P1 - 150mm UPVIC PIPE AT 1.0% MIN. GRADE
P2 - 150mm UPVIC PIPE AT 1.0% MIN. GRADE
P3 - 225mm UPVIC PIPE AT 0.5% MIN. GRADE
P4 - 300mm UPVIC PIPE AT 0.4% MIN. GRADE
P5 - 375mm UPVIC PIPE AT 0.4% MIN. GRADE



- NOTES**
- ALL LINES ARE TO BE MIN 150mm UPVIC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
 - ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
 - ALL PIPES IN DRIVEWAYS BE HEAVY DUTY GRADES. GREATEST SURFACE FLOW TO ALL GRADED SURFACE INLET PITS.
 - ALL WORK TO BE DONE IN ACCORDANCE WITH AS/NZS 3000.3.2:2010 AND COUNCIL SPECIFICATIONS.
 - LOCATION OF BONNETS & FLOOR WASTES ARE INDICATED ONLY. BONNETS & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY QUALITY & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
 - THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
 - ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
 - ALL PITS OR GRATES IN VISIBLY ACCESSIBLE AREAS TO BE HEAVY DUTY.
 - ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE BONNETS.

SYMBOLS

RL	PIT SURFACE LEVEL
L	BASELINE LEVEL
K	TOP OF KEYS
(---)	STORMWATER DRAINAGE PIPE
(---)	BONNET PIPE TO RAINWATER TANK
(---)	OVERFLOW PIPE FROM RAINWATER TANK
(---)	#100 SIBSOL PIPE
(F)	FLOOR WASTE 150x150
(W)	FLOOR WASTE 150x
(R)	RAINWATER OUTLET 300x
(P)	DOWN PIPE
(O)	CLEAN OUT
(I)	INSPECTION OPENING
(V)	VERTICAL DROP
(R)	VERTICAL RISER
(C)	CONCRETE COVER ANCHOR PIT
(G)	GRADED INLET PIT
(D)	WIDE GRADED DRAIN
(A)	OVERLAND FLOW PATH

NOTE:
ALLOW FOR MIN 150mm GAP BELOW STRUCTURES WITHIN OVERLAND FLOW PATH.

PROVIDE OPEN STYLE FENCE TO ALLOW FOR OVERLAND FLOW PATH.

1.0m

LOT BOUNDARY

TYPICAL SWALE DRAIN DETAIL
SCALE: N.T.S.

NO.	REVISION	DATE	BY	DESCRIPTION

designcorp

18 Dunlop Street
North Parramatta NSW 2151
Ph: +61 2 9630 9911
Fax: +61 2 9630 9922
Mail: 0431 111 777
Email: admin@designcorp.com.au
www.designcorp.com.au

AUSTRALIAN CONSULTING ENGINEERS

111 G.P.O. BOX 971
MELBOURNE VIC 3004
Ph: 03 9353 9000 Fax: 03 9353 9005
Email: wh@auseng.com.au

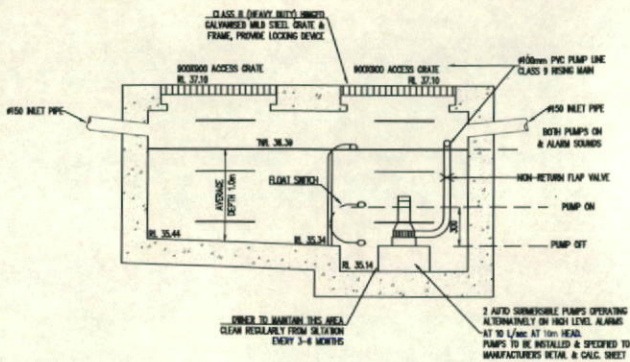
PROJECT

PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT
32-36 HOPE STREET
PENRITH, NSW

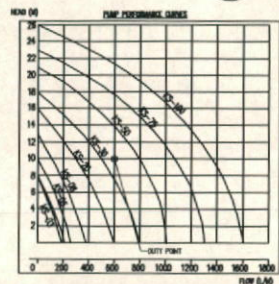
SHEET

GROUND FLOOR STORMWATER DRAINAGE PLAN

PROJECT	32-36 HOPE STREET, PENRITH, NSW
DATE	NOV 2017
DRAWN	S.S.N.
CHECKED	S.S.N.
SCALE	1:100 U.A.O.
NO.	171552
APPROVED	Osman Chowdhury
REV	D03
BY	B



A TYPICAL SECTION THROUGH PUMP PIT SCALE NTS



PUMP WELL DETAILS

AREA DRAINING TO SUMP= 111.83m²

SUMP SIZE BASED ON 100 YEAR 2 HR STORM, I= 44.4 mm/hr, Q=CA/(2400) = 14.4 x 111.83/2400 = 1.37 L/sec

VOLUME REQUIRED = 1.37 (2400x60) = 9912 L = 9.91m³

STORAGE PROVIDED 5.002.100.0 = 10.5m³

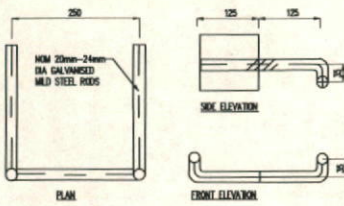
PUMP OUT RATE BASED ON 100% GAIN STORM, I=220 mm/hr (MIN RATE REQUIRED AS PER ASC3000.3 IS 19 L/sec)

Q=CA/(2400) = 14.4 x 111.83/2400 = 6.82 L/sec

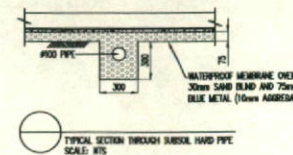
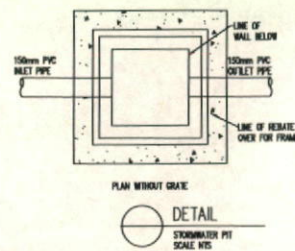
DETAIL

STEP HIGH NTS

NOTE: INSTALL WHERE PITS ARE DEEPER THAN 1000



DETAIL STEP HIGH NTS NOTE: INSTALL WHERE PITS ARE DEEPER THAN 1000



DA

ANGER

CONFINED SPACE

NO ENTRY WITHOUT

CONFINED SPACE

TRAINING

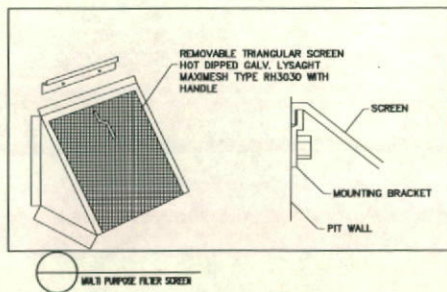
WIDTH 200mm

HEIGHT 150mm

Type	Output		Outlet		Rated Head Capacity		Maximum Capacity		Weight Kg	Dimension		
	HP	kW	mm	Inch	M	LPM	M	LPM		L(mm)	W(mm)	H(mm)
K5-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305
K5-04	1/2	0.4	50	2"	5	150	8	220	11	208	140	359
K5-05	3/2	0.8	50	2"	5	150	10	260	14	230	156	375
K5-08	1	0.75	50	2"	6	240	13	380	21	290	180	425
K5-20	2	1.5	80	3"	10	300	16	600	31	278	187	475
K5-30	3	2.2	80	3"	10	500	18	800	42	390	250	450
K5-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530
K5-75	7 1/2	5.6	100	4"	15	800	23	1300	60	550	310	590
K5-100	10	7.5	150	6"	18	900	25	1600	70	550	310	630

PUMP SPECIFICATIONS STANDARD PUMP-OUT NOTES

- THE PUMP-OUT SYSTEM IS DESIGNED TO WORK IN THE FOLLOWING MANNER -
- THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE EQUAL OPERATION LOAD & PUMP LIFE.
 - A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.
 - A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL. WHICHEVER ONE OF THE PUMPS WILL OPERATE & DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.
 - A THIRD FLOAT BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING & ACTIVATE THE ALARM.
 - AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT & A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE SHORTEST DISTANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF PUMPER FAILURE.



THIS IS AN

ON-SITE STORMWATER

DETENTION SYSTEM

REQUIRED BY YOUR LOCAL COUNCIL

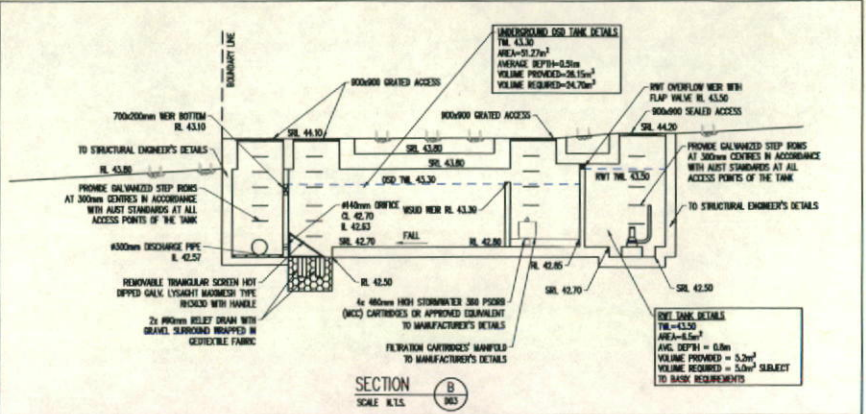
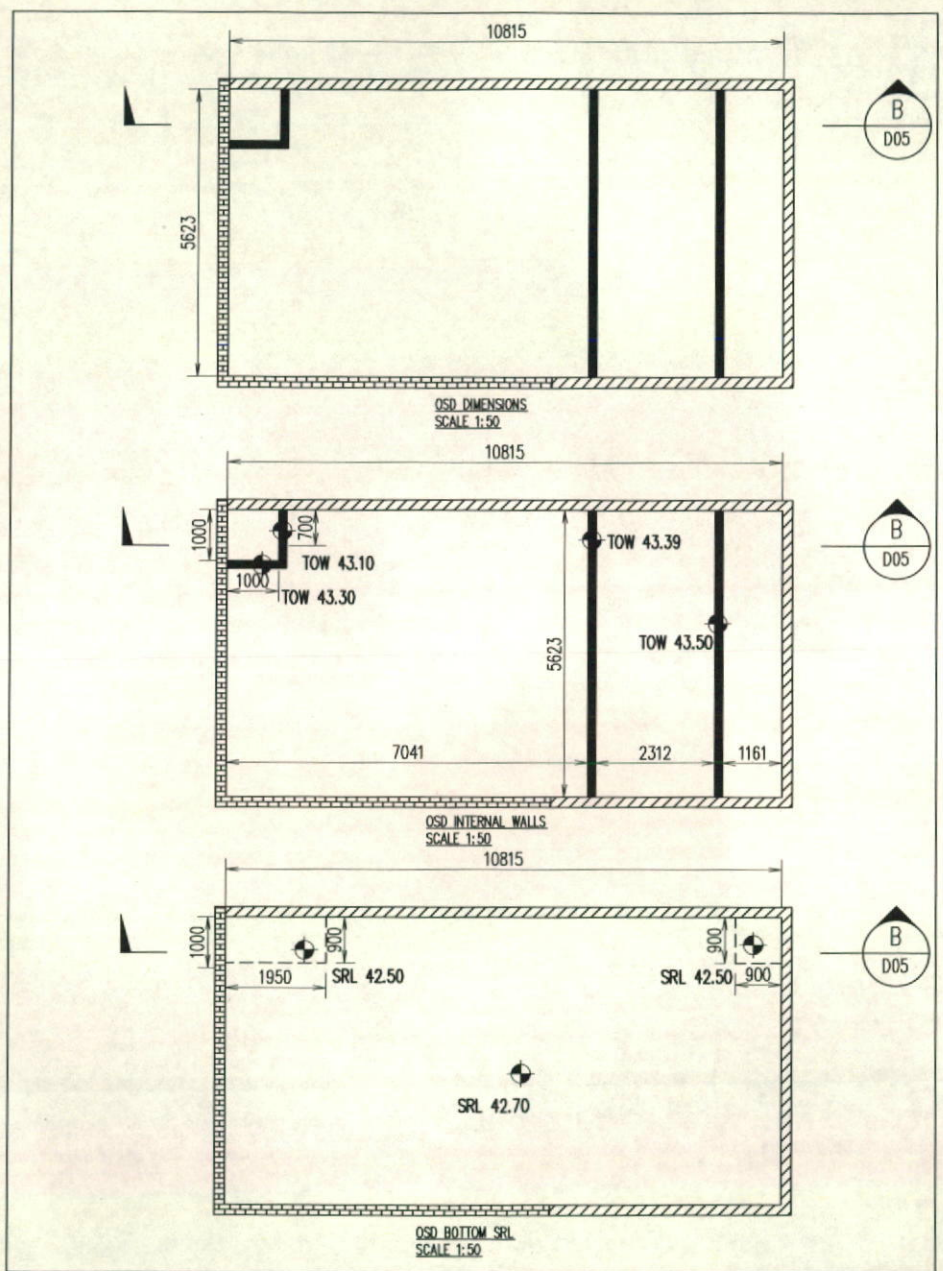
IT IS AN OFFENCE TO REDUCE THE VOLUME OF THE TANK OR BASIN OR TO INTERFERE WITH THE ORIFICE PLATE THAT CONTROLS THE OUTFLOW

THE BASE OF THE OUTLET CONTROL PIT AND THE DEBRIS SCREEN MUST BE CLEANED OF DEBRIS AND SEDIMENT ON A REGULAR BASIS BY THE OWNER

THIS PLATE MUST NOT BE REMOVED

SIZE: 110 mm x 80 mm
 CORNERS: Square
 COLOUR: Etched and filled Black Legend on Natural Silver Background
 MATERIAL: Aluminium 0.9mm Mill

DESIGN				PROJECT				DATE							
NO.	REVISION	DATE	BY	NO.	REVISION	DATE	BY	NO.	REVISION	DATE	BY				
<p>designcorp</p> <p>16 Darling Street North Parramatta NSW 2151 Tel: +61 2 9630 9911 Fax: +61 2 9630 9922 Mob: 0431 111 777 admin@designcorp.com.au www.designcorp.com.au</p>				<p>AUSTRALIAN CONSULTING ENGINEERS</p> <p>160-170 Pitt Street Sydney NSW 2000 Tel: +61 2 9251 5151 Fax: +61 2 9251 5152 Email: info@aucon.com.au</p>				<p>PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT</p> <p>32-36 HOPE STREET</p> <p>PENRITH, NSW</p>				<p>NOV 2017</p> <p>NOV 2017</p> <p>NOV 2017</p> <p>NOV 2017</p>			
<p>A. FOR S.A. APPROVAL</p>				<p>E.S.A. E.S.A. E.S.A.</p>				<p>AS SHOWN</p>							
<p>DATE: 23/11</p>				<p>NO. 171552</p>				<p>DESIGNER: Demian Chowdhury</p>							
<p>NO. 004</p>				<p>NO. 004</p>				<p>NO. 004</p>							



Stormwater Drainage System Maintenance Schedule

Maintenance Action	Frequency	Responsibility	Provision
General			
Inspect and clean inlet/outlet	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 1000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 150mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 200mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 300mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 400mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 600mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 700mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 800mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 900mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 1000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 1200mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 1500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 2000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 2500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 3000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 3500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 4000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 4500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 5000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 5500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 6000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 6500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 7000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 7500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 8000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 8500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 9000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 9500mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public
Inspect and clean 10000mm dia pipe	As required	Contractor	Access to site and roads and safety from public of loading and fuel storage of vehicles in vehicle area and track down any and other access from public

DANGER

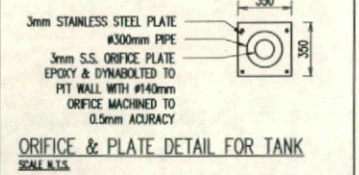
**CONFINED SPACE
NO ENTRY WITHOUT
CONFINED SPACE
TRAINING**

WIDTH 200MM

HEIGHT 150MM

LEGEND

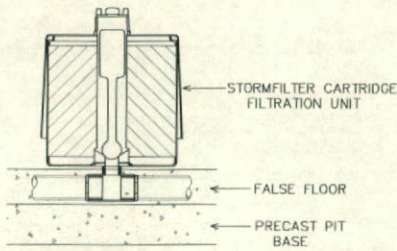
DP : 1000 DOWN PIPE
----- STORMWATER PIPE Ø1X MIN. U.N.O.
P1 : 1000 UPVPC PIPE AT 1% MIN. GRADE U.N.O.
P2 : 1500 UPVPC PIPE AT 1% MIN. GRADE U.N.O.
P3 : 2250 UPVPC PIPE AT 1% MIN. GRADE U.N.O.
P4 : 3000 UPVPC PIPE AT 1% MIN. GRADE U.N.O.
☒ PIPE CAST IN SLAB



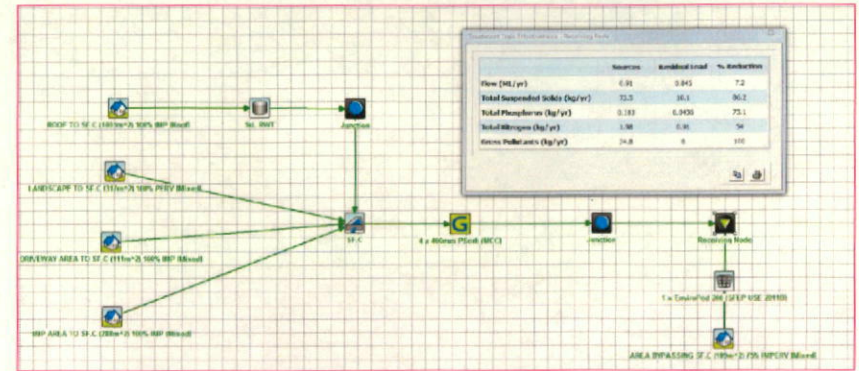
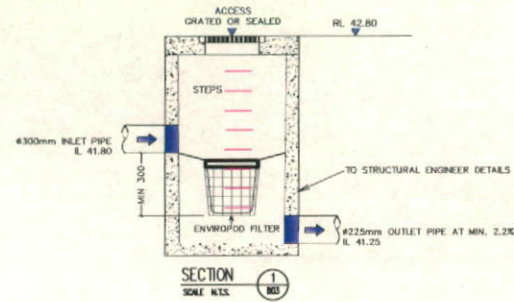
NOTE: AS THE SITE IS AFFECTED BY FLOODING, DRAINS MODELING HAS BEEN ADOPTED INSTEAD OF THE SIMPLIFIED METHOD TO TAKE INTO CONSIDERATION FLOOD LEVEL EFFECT AT THE POINT OF DISCHARGE.

DRAINS MODEL RESULTS SUMMARY

STORM EVENT	PRE-DEVELOPPED SITE DISCHARGE (L/S)	POST-DEVELOPPED SITE DISCHARGE (L/S)
2 YEAR	34	25
5 YEAR	49	31
10 YEAR	60	38
20 YEAR	71	57
50 YEAR	76	71
100 YEAR	87	84



STORMFILTER CARTRIDGE DETAIL

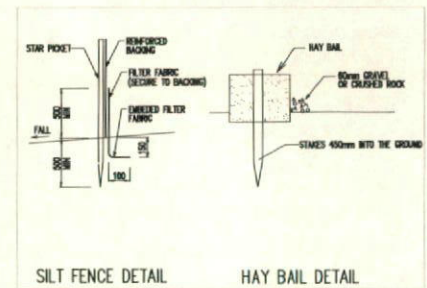
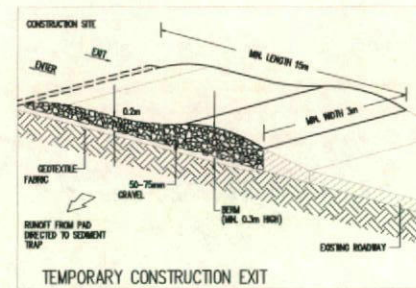
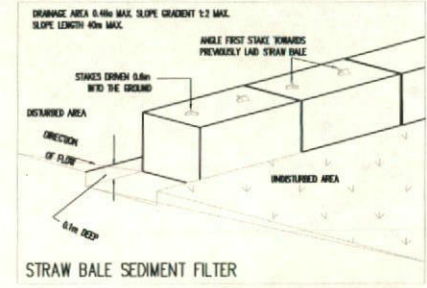
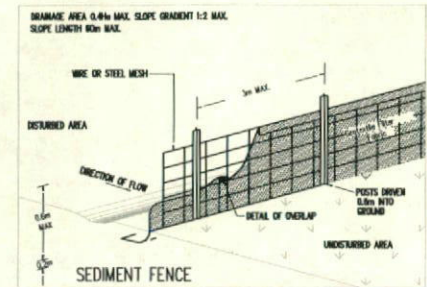
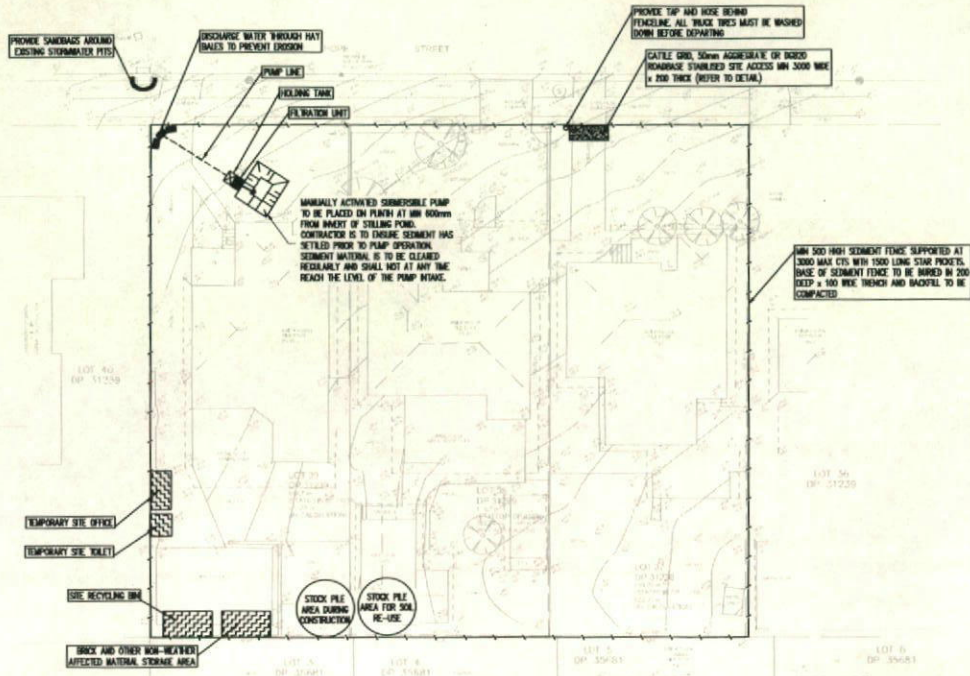


MUSIC MODEL RESULTS – REFER TO STORMWATER QUALITY REPORT (SQR) FOR DETAILS

Filtration Unit Maintenance Schedule

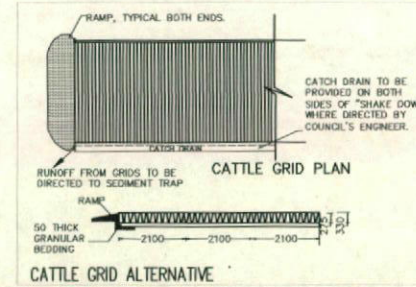
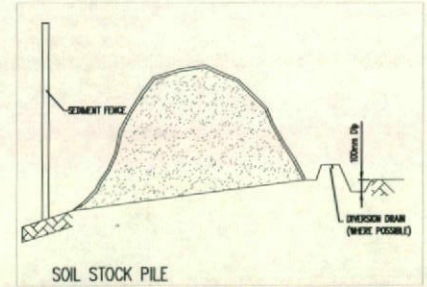
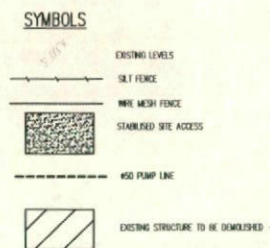
Facility Component Requiring Maintenance	Maintenance Activity	When Maintenance Activity Is Required	Expected Facility Performance After Maintaining	INSPECTION/MINOR MAINTENANCE (TIMES/YEAR)	MAJOR MAINTENANCE (TIMES/YEAR)
StormFilter® Cartridges and Containment Structure	Trash and Debris Removal	Floatable objects or other trash is present in the filter. Remove to avoid hindrance of filtration and eliminate unsightly debris and trash.	Permanent removal from storm system.	2 (and after major storms)	1 (except in case of a spill)
	Cartridge Replacement and Sediment Removal	1. Media has been contaminated by high levels of pollutants, such as after a spill.	1. New media is able to effectively treat stormwater.	-	-
Drainage System Piping	Flushing With Water	Drainage system is obstructed by debris or sediment.	Outflow is not restricted.	-	-

																								PROJECT PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT 32-36 HOPE STREET PENRITH, NSW												SHEET OBJECT WSUD DETAILS												PROJECT 32-36 HOPE STREET, PENRITH, NSW DATE NOV 2017 ISSN S.S.N. DESIGN S.S.N. SECRET E.H. SCALE As Shown JOB NO. 171552 APPROVED Osman Chowdhury CHK No. D06 REV A											
A FOR I.A. APPROVAL E.A. S.S.N. 22/11/17												ADDRESS 16 Dundas Street North Parramatta NSW 2151 Tel: +61 2 9630 9911 Fax: +61 2 9630 9922 Mob: 0431 111 777 admin@designcorp.com.au www.designcorp.com.au												PROJECT PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT 32-36 HOPE STREET PENRITH, NSW												SHEET OBJECT WSUD DETAILS												PROJECT 32-36 HOPE STREET, PENRITH, NSW DATE NOV 2017 ISSN S.S.N. DESIGN S.S.N. SECRET E.H. SCALE As Shown JOB NO. 171552 APPROVED Osman Chowdhury CHK No. D06 REV A											



- NOTES THIS DRAWING**
1. ALL DOCUMENTS WILL BE SUBMITTED TO COUNCIL FOR APPROVAL.
 2. ALL SEDIMENT CONTROL MEASURES ARE TO BE IN PLACE.
 3. INSTALLATION OF SILT FENCING, SEDIMENTATION BARRIERS AROUND DRAINS.
 4. FENCING IS TO BE 1.0m(min) HEIGHT, PLACED AROUND THE SITE UNTIL THE WORK IS COMPLETE.
 5. THE SITE GATES WILL BE LOCATED AT HOPE STREET.
 6. THE UNDISTURBED AREAS OR CATTLE GRIDS WILL BE PLACED AT THE SITE ENTRANCES AND EXITS TO REMOVE THE DRAIN OF DIRT AND GRASS THAT MAY ACCUMULATE ON TRUCK TIRES.
 7. CONTRACTOR WILL CONDUCT REGULAR STREET SWEEPINGS ALONG THE ACCESS ROUTE TO ENSURE THE ROADWAY ADJACENT TO THE SITE ENTRANCES ARE KEPT CLEAR OF ANY DIRT AND DEBRIS.
 8. REGULAR ENVIRONMENTAL INSPECTIONS WILL BE CARRIED OUT BY CONTRACTOR'S PERSONNEL TO ENSURE COMPLIANCE WITH THIS PLAN.

- EROSION CONTROL NOTES**
1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 4TH EDITION' BY LANDSCAPE.
 2. ALL EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND REMOVED REGULARLY DURING CONSTRUCTION.
 3. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE. ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.- CONTRACTOR TO MINIMISE DISTURBED AREAS.
 4. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LAZARUS WATER.
 5. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
 6. ALL DISTURBED AREAS AND STOCKPILES TO BE STABILISED WITHIN 14 DAYS. ALL STOCKPILES TO BE CLEAR FROM DRAINS, CUTS AND TROUCHARS.
 7. TOPSOIL TO BE STRIPPED, STOCKPILED AND RE-SPREAD ON COMPLETION OF CONSTRUCTION. SOIL TO BE REMOVED.
 8. NO DISTURBANCE OF SITE PERMITTED OTHER THAN NECESSARY AREA OF THE WORKS.
 9. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
- NON-COMPLIANCE MAY RESULT IN A \$1000 FINE.



NO.	REVISION	DATE	BY	APP'D	DESCRIPTION	NO.	REVISION	DATE	BY	APP'D	DESCRIPTION

designcorp
ARCHITECTS

18 Bunkle Street
North Parramatta NSW 2151
Tel: +61 2 9633 9811
Fax: +61 2 9633 9822
Mob: 0431 111 777
admin@designcorp.com.au
www.designcorp.com.au

AUSTRALIAN CONSULTING ENGINEERS

18 Bunkle Street
North Parramatta NSW 2151
Tel: +61 2 9633 9811
Fax: +61 2 9633 9822
Mob: 0431 111 777
admin@designcorp.com.au
www.designcorp.com.au

PROPOSED RESIDENTIAL FLAT BUILDING DEVELOPMENT
32-36 HOPE STREET
PENRITH, NSW

EROSION AND SEDIMENT CONTROL PLAN & DETAILS

PROJECT: 32-36 HOPE STREET, PENRITH, NSW	DATE: NOV 2017	ISSUE: S.S.N.	DESIGNER: S.S.N.	PROJECT: E.H.
SCALE: 1:200 UNL.O.	DATE: 8/11	NO: 171552	DATE: 8/11	NO: 171552
DESIGNED BY: Osman Chowdhury	DATE: D10	APP'D BY: A	DATE: D10	APP'D BY: A