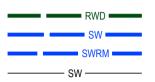
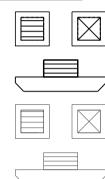
STORMWATER MANAGEMENT 252-254 NEW SOUTH HEAD RD, DOUBLE BAY

LEGEND STORMWATER SERVICES



RAINWATER DRAINAGE STORMWATER STORMWATER RISING MAIN AUTHORITY STORM WATER MAIN

LEGEND - STORMWATER SYMBOLS



PROPOSED STORMWATER PITS GRATE / SOLID COVER

PROPOSED KERB INLET PIT

EXISTING STORMWATER PITS GRATE / SOLID COVER

EXISTING KERB INLET PIT

LEGEND - GENERAL SYMBOLS

	FLOW DIRECTION
	SERVICES TAG
100-	SERVICES DIAMET
	FLOW DIRECTION
O	RISER/TEE RISER
C	DROPPER SYMBO
	TEE DROP SYMBO
	PIPE FLOW SYMBO
C	CAP SERVICE
۶	SERVICES CONTIN
<i>II</i>	SERVICES UNKNO
₽┷┫	CONNECTION TO E

— SERVICES TAG — SERVICES DIAMETER FLOW DIRECTION

RISER/TEE RISER SYMBOL DROPPER SYMBOL

TEE DROP SYMBOL

PIPE FLOW SYMBOL PRESSURE

CAP SERVICE

SERVICES CONTINUOUS SERVICES UNKNOWN CONTINUATION CONNECTION TO EXISTING

LEGEND - ABBREVIATIONS

DOWNPIPE INVERT LEVEL OVERFLOW REDUCED LEVEL RAINWATER OUTLET SYPHONIC DOWNPIPE STORMWATER

OF

RL

RWO

SYDP

STW

SITE WORKS - ACCESS AND SAFETY

1. ALL WORKS ARE TO BE UNDERTAKEN IN A SAFE MANNER IN ACCORDANCE WITH ALL STATUTORY AND INDUSTRIAL RELATION REQUIREMENTS. 2. ACCESS TO ADJACENT BUILDINGS AND PROPERTIES SHALL BE MAINTAINED AT

- ALL TIMES.
- 3. WHERE NECESSARY SAFE PASSAGE SHALL BE PROVIDED FOR VEHICLES AND PEDESTRIANS THROUGH OR ADJACENT TO THE SITE.

SITE WORKS - GENERAL

- 1. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH LOCAL COUNCIL.
- AUSTRALIAN AND AUTHORITY STANDARDS. 2. ALL TRENCHING WORKS ARE TO BE RESTORED TO ORIGINAL CONDITION.
- 3. THE INTEGRITY OF ALL EXISTING AND NEW SERVICES IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- 4. ALL PLANS ARE TO BE READ IN CONJUNCTION WITH APPROVED ARCHITECTS, STRUCTURAL ENGINEERS AND OTHER CONSULTANT'S PLANS. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER FOR CLARIFICATION.
- 5. THE ENGINEER SHALL BE GIVEN A MIN. OF 48 HOURS NOTICE FOR ALL STORMWATER DRAINAGE AND PAVEMENT INSPECTIONS. CONCRETE SHALL NOT BE DELIVERED UNTIL ENGINEERS APPROVAL IS OBTAINED.

STORMWATER

- 1. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS AS2032, AS3500 AND AS3725 AS A MINIMUM.
- 2. ALL PIPES LESS THAN OR EQUAL TO Ø300mm IN SIZE ARE TO BE SOLVENT WELD-JOINTED UPVC CLASS SN8 U.N.O.
- 3. ALL PIPES Ø375mm OR GREATER IN SIZE ARE TO BE MIN. CLASS 2 REINFORCED CONCRETE PIPE (RCP) OR FIBRE REINFORCED CONCRETE (FRC) RUBBER RING JOINTED (RRJ) U.N.O.
- 4. ALL PIPES ARE TO BE LAID AT MIN. 1.0% GRADE U.N.O.
- 5. PIPE BEDDING IS TO BE HS2 UNDER ROADS AND TRAFFICKED AREAS AND SHALL BE H2 IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS U.N.O 6. ALL PIPE BENDS AND JUNCTIONS ARE TO BE MADE WITH EITHER PURPOSE
- MADE FITTINGS OR STORMWATER DRAINAGE PITS. 7. MINIMUM COVER FROM THE OBVERT OF THE STORMWATER PIPE OF 300mm IS TO BE PROVIDED IN LANDSCAPED AREAS AND 600mm IN VEHICULAR
- TRAFFICKED AREAS U.N.O. 8. WHERE MINIMUM COVER CANNOT BE ACHIEVED CONCRETE ENCASEMENT OF THE AFFECTED PIPE IS MAY BE UNDERTAKEN WITH 20MPa CONCRETE WITH A MIN. COVER OF 150mm TO ALL SIDES OF THE PIPE. THE CONTRACTOR SHALL CONFIRM THIS REQUIREMENT WITH THE ENGINEER OR SUPERINTENDENT.
- 9. LAID PIPELINES ARE TO HAVE THE FOLLOWING CONSTRUCTED TOLERANCES: a. HORIZONTAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT; b. VERTICAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT.
- 10. ALL DRAINAGE PITS ARE TO BE CAST IN-SITU, PRECAST DRAINAGE PITS MAY BE USED WITH APPROVAL FROM THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A PRECAST PIT INSTALLATION WORK METHOD STATEMENT FOR ASSESSMENT BY THE ENGINEER FOR APPROVAL.
- 11. DRAINAGE PIT COVERS ARE TO BE EITHER GALVANISED STEEL OR CAST IRON CLASS 'B' IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS AND CLASS 'D' IN ALL VEHICULAR TRAFFICKED AREAS U.N.O.
- 12. DRAINAGE PIT COVERS ARE TO BE 'HEELSAFE' TYPE IN ALL PEDESTRIAN TRAFFICKED AREAS U.N.O.
- 13. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCING WORKS ON SITE.
- 14. PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- 15. DOWN PIPES CONNECTED DIRECT TO PIPES TO BE CONNECTED AT 45° TO THE FLOW DIRECTION WITH A CLEANING EYE PROVIDED AT GROUND LEVEL.

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	AMENDMENTS/REVISIONS					AMENDMENTS/REVISIONS	CLIENT			
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	02	DA ISSUE	BM	03.03.20						
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DESIGN CRITERIA

	<u>~.</u>	
LOCAL GOVERNING AU	THORITY: WC	DOLLAHRA COUNCIL
		IENT PLAN HAS BEEN DESIGNED IN ACCORDANCE E2, STORMWATER AND FLOOD RISK MANAGEMENT
SITE AREA	=	935 m²
REFER TO SW04 FOR C	ATCHMENT F	PLAN
INSPECTION SUMMARY	-	
UTILISES GRAVITY FED DATA WAS UNABLE TO INVESTIGATION IS REQ) STORMWAT LOCATE THE UIRED TO DE	DRAINAGE SYSTEM SUGGESTS THE CURRENT BUILDING TER DRAINAGE. SURVEY INFORMATION AND AVAIABLE E EXISTING DRAINAGE NETWORK. FURTHER DETAILED ETERMINE THE EXTENT AND DISCHARGE ROUTE OF FIRM ABILITY TO ADOPT A SIMILAR GRAVITY FED
CLAUSE 2.2.4 ON SITE S	STORAGE OF	STORMWATER
		LL DEVELOPMENTS WHERE THE TOTAL SITE AREA IS ONAL GROSS IMPERCIOUS AREA IS GREATER THAN
C3 - OSD STORAGE REG	QUIREMENTS	3
- SSR - 1% AEP (100 - PSD - 1% AEP (100	yr ARI) = 20 x yr ARI) = 34 x	x (<u>⁹³⁵)</u> = 18 .7 m³ x (<u>⁹³⁵)</u> = 31.8 L/S
- MAXIMUM DISCHARGE	TO KERB AN	ID GUTTER 20 L/S
CLAUSE 2.2.5 CONNECT	ΓΙΟΝ ΤΟ COU	INCILS DRAINAGE SYSTEM
C3 - WHERE AN OVERFI DESIGNED TO CATER T		/I IS NOT AVAILABLE THE DRAINAGE SYSTEM IS /I 1 IN 100 ARI EVENT
	VING ALTER/ REA LESS TH	
CLAUSE 2.2.3 STORMW	ATER TREAT	MENT
C1 - STORMWATER TRE RESIDENTIAL FLAT BUII		QUIRED FOR ALL NEW COMMERCIAL AND
C7 - WATER QUALITY T	ARGETS	
 90% REMOVAL OF 85% REMOVAL OF 65% REMOVAL OF 45% REMOVAL OF 	TOTAL SUSP TOTAL PHOS	PENDED SOLIDS SPHOROUS
CLAUSE 2.2.12 PUMP AI	ND SUMP SYS	STEMS
	CCORDANCE	ALL A PUMP SYSTEM MUST ALSO INSTALL A WITH SECTION 2.2.2. A RAINWATER TANK IS AT LEASE REA ACROSS THE SITE
		AIN VIA GRAVITY SHALL DRAIN TO PUMP OUT SYSTEM D OSD TANK ON LEVEL 4
PERVIOUS AREA TO PU IMPERVIOUS AREA TO I		
THEREFORE ALLOWING		OF BOTH PERVIOUS AND IMPERVIOUS CATCHMENTS

22.8 m³ + 20% (AS ABSORPTION CAN NOT BE UTILISED) = 28 m³



LOCATION PLAN NOT TO SCALE - COURTESY OF SIXMAPS

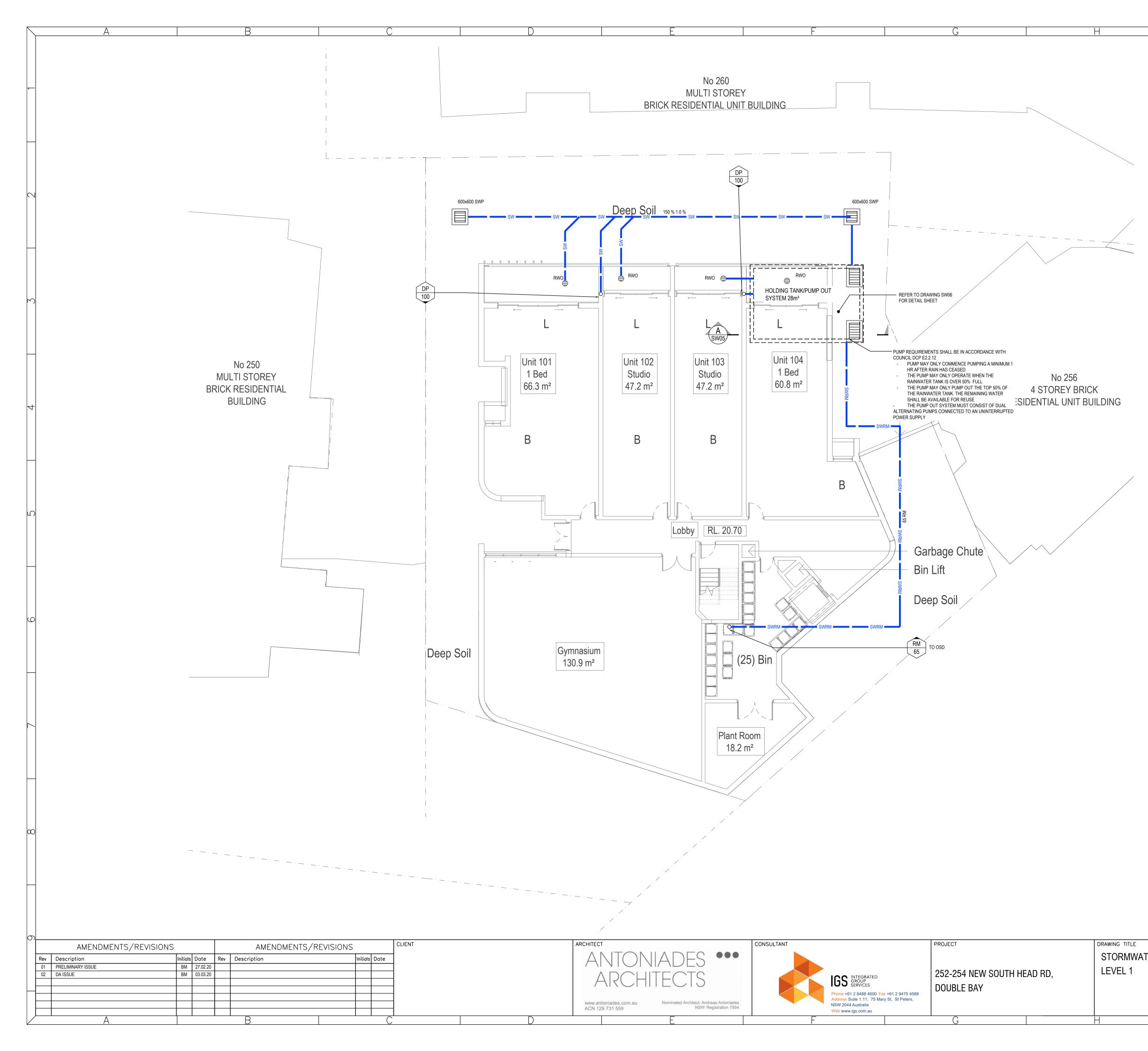
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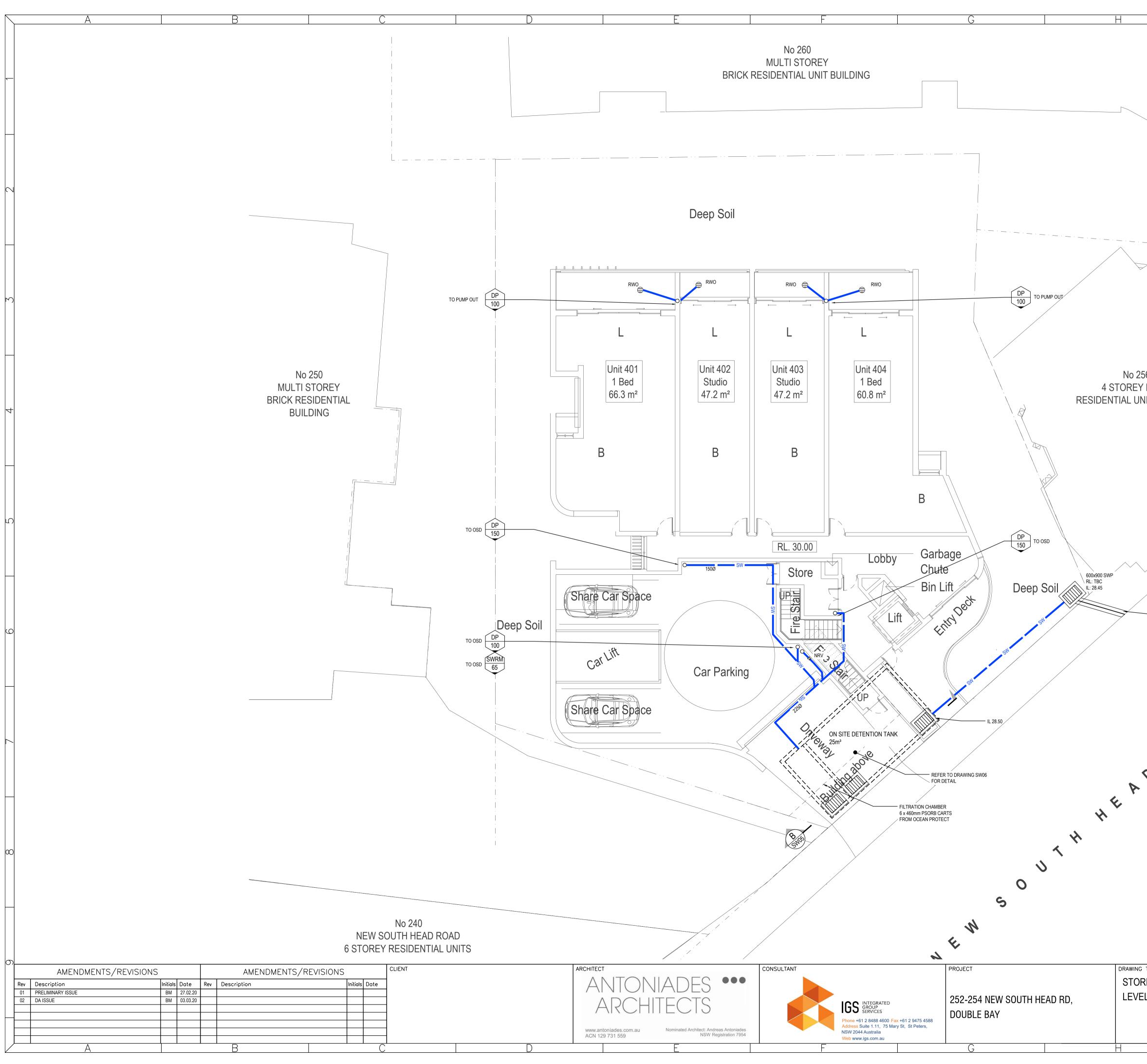


- STORMWATER LEGEND AND COVER SHEET
- LEVEL 1
- LEVEL 4 - ROOF PLAN
- STORMWATER SCHEMATIC
- CATCHMENT PLAN
- DETAIL SHEET
- SEDIMENT AND EROSION CONTROL PLAN

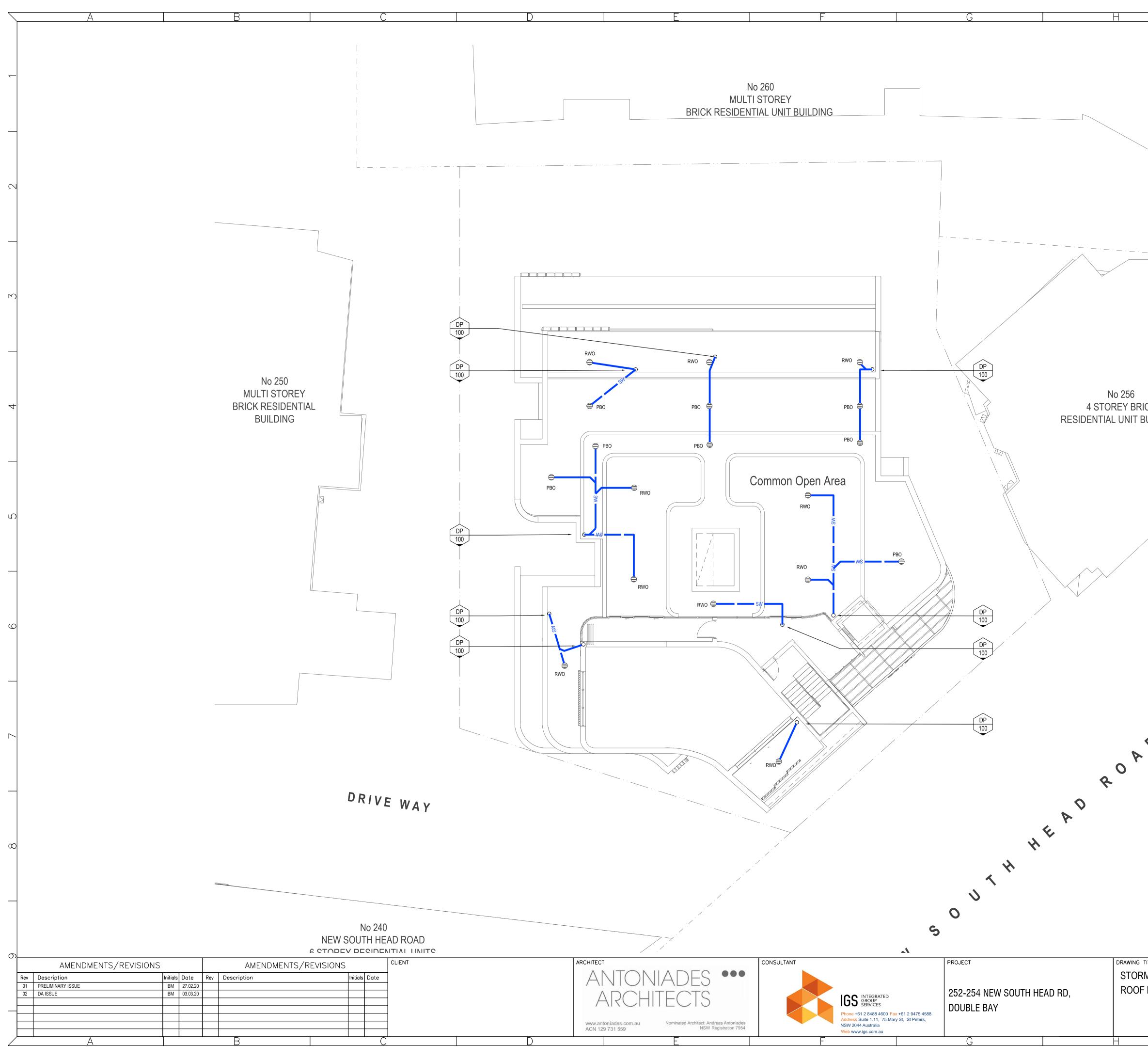
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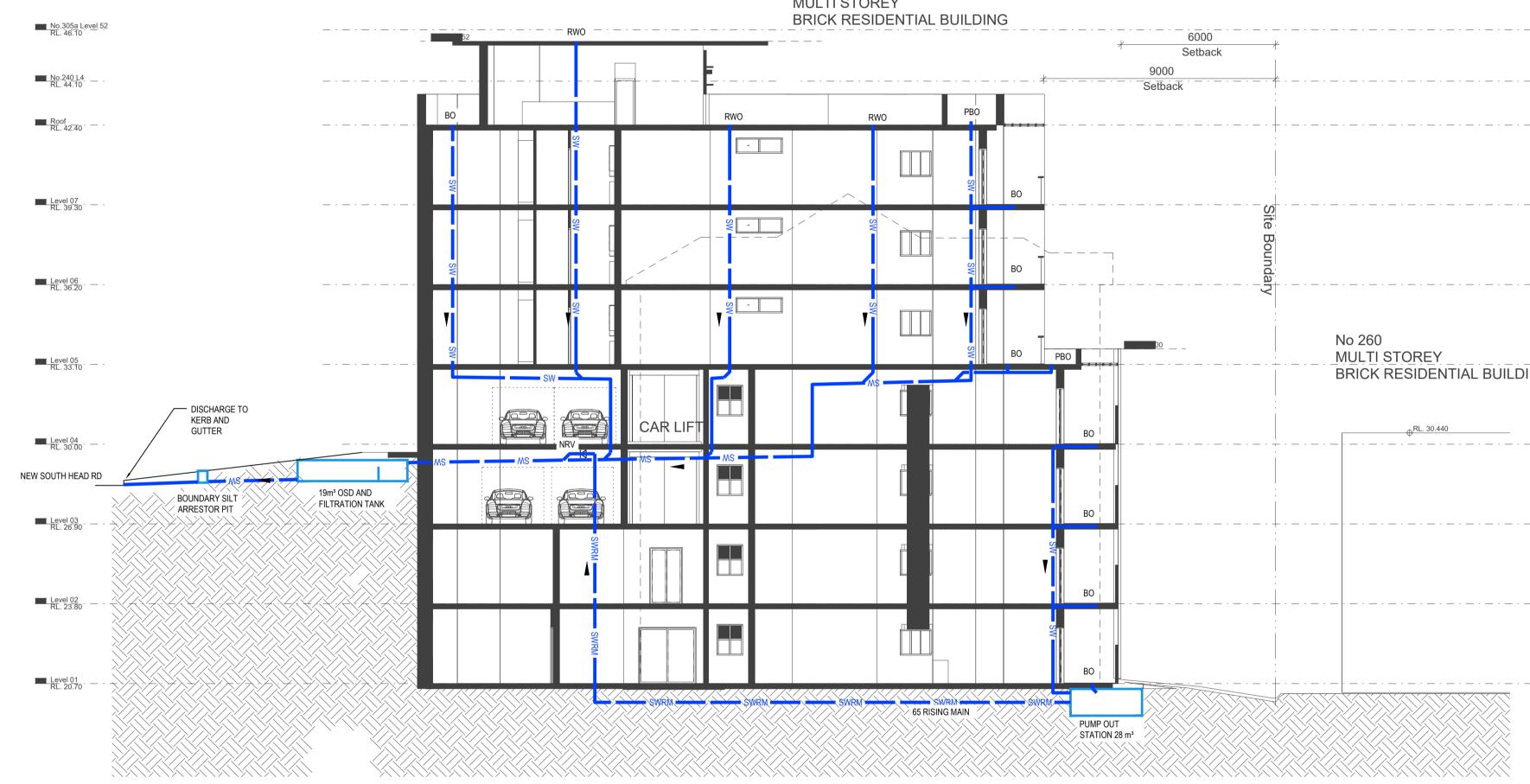
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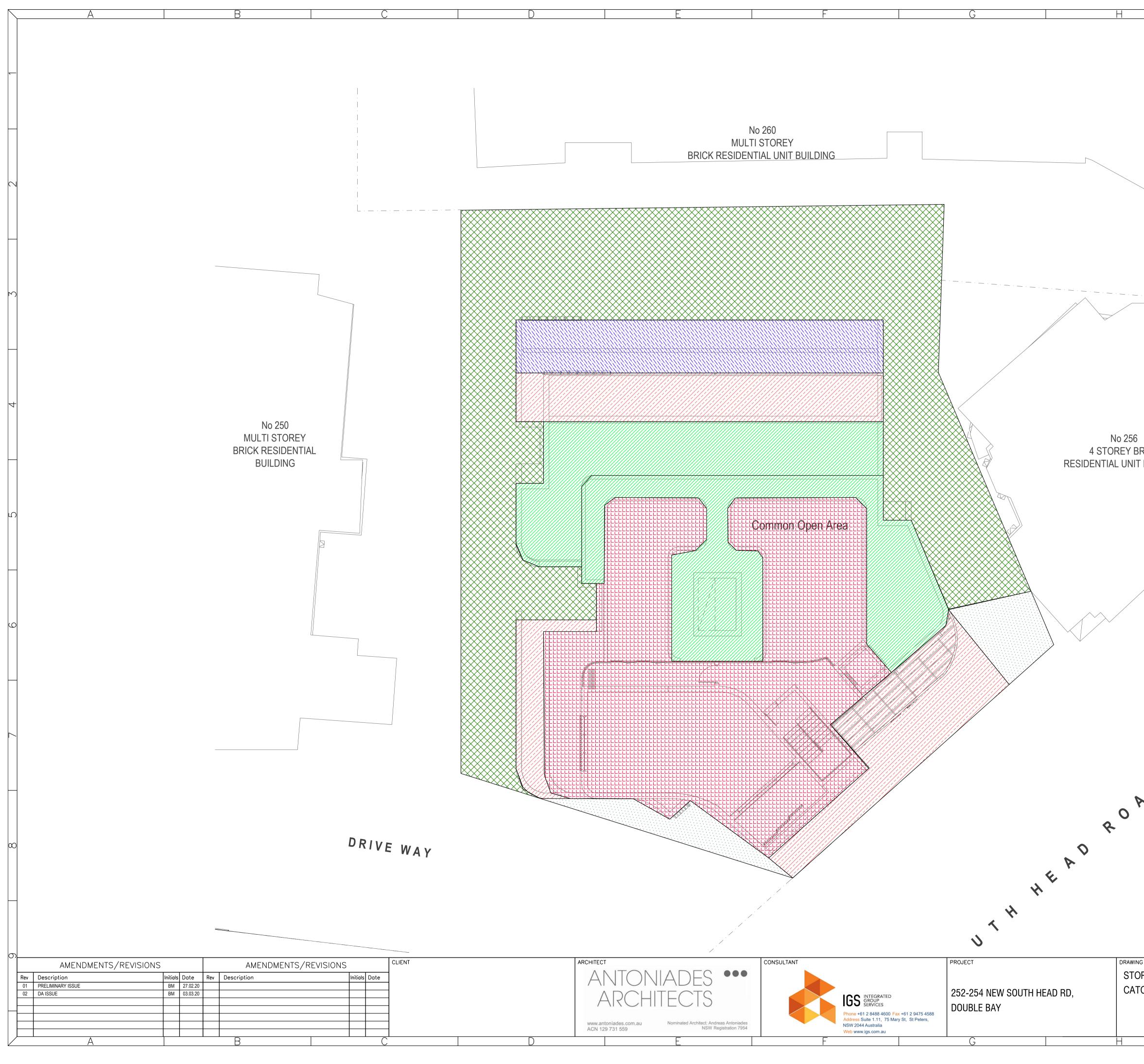


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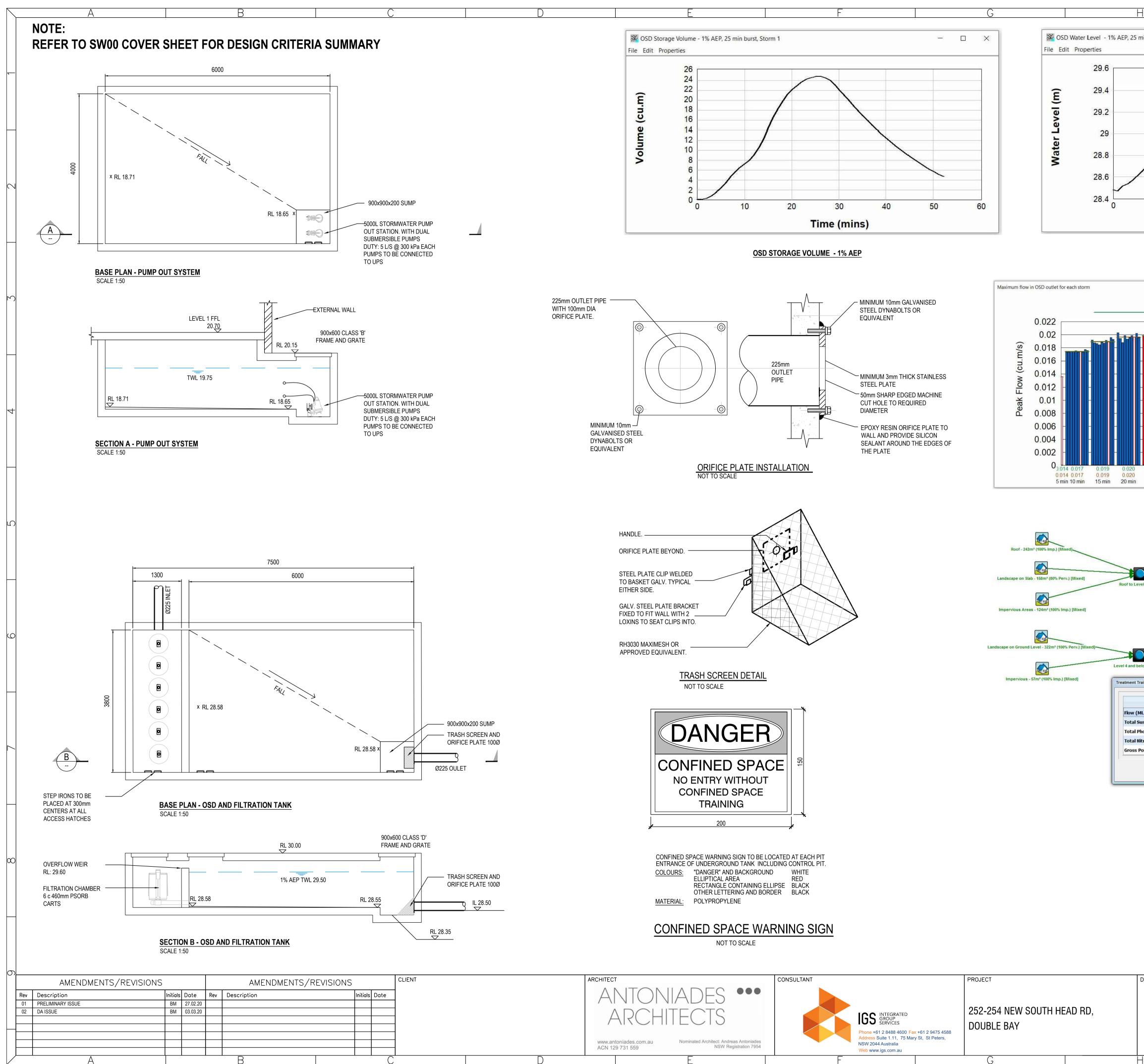
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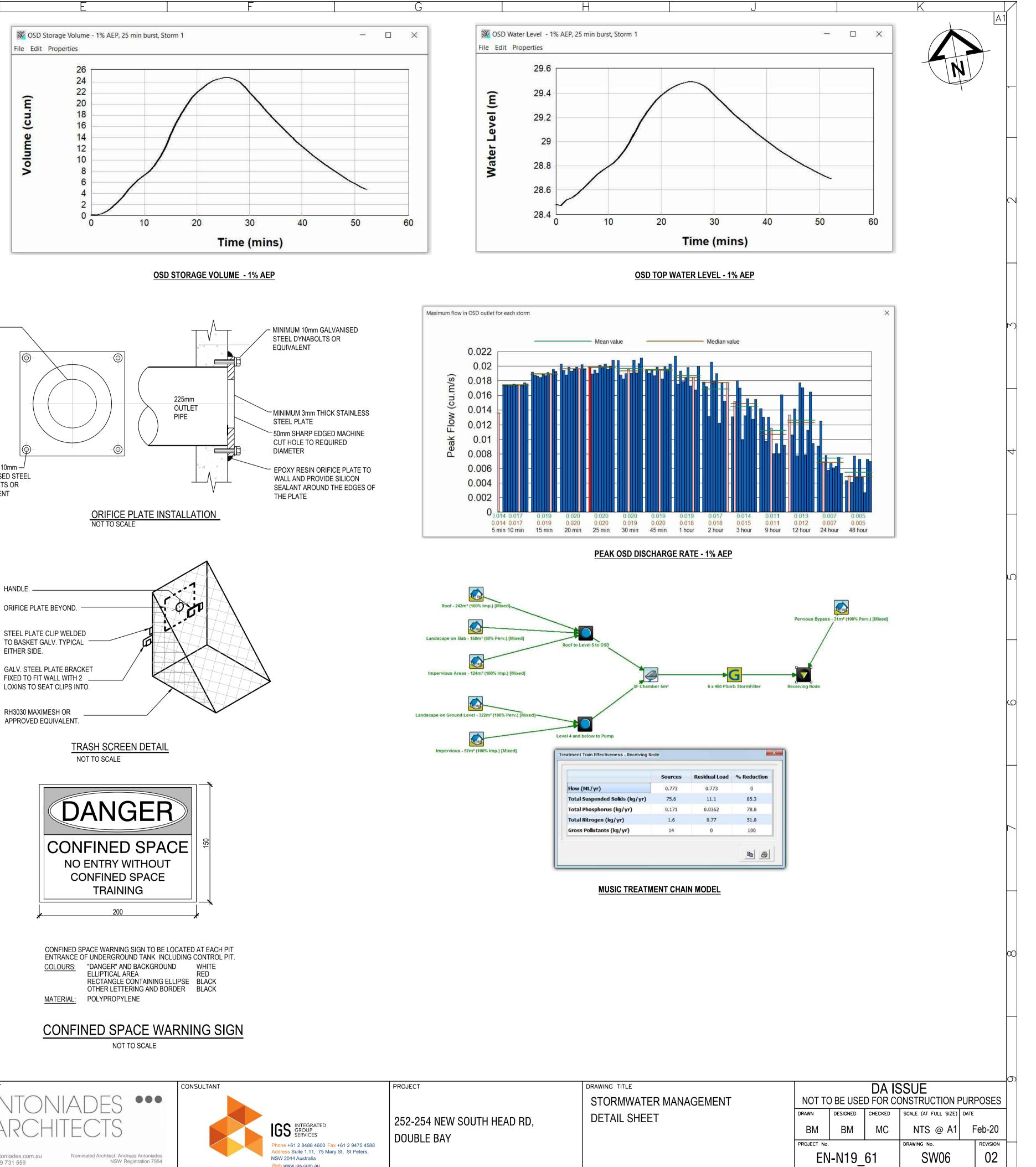
NOTE: SCHEMATIC HAS BEEN DOCUMENTED AS DIAGRAMMATIC REPRESENTATION OF THE DESIGN INTENT ONLY AND DOES NOT REFLECT DETAILED STORMWATER LAYOUT

No 250 MULTI STOREY BRICK RESIDENTIAL BUILDING	
6000 Setback 9000 Setback	M
	4
No 260 MULTI STOREY BO PBO BRICK RESIDENTIAL BUILDING	
BRICK RESIDENTIAL BUILDING	
BO SWRM SWRM SWRM	
65 RISING MAIN PUMP OUT STATION 28 m ³	
	∞
ARCHITECT CONSULTANT PROJECT DRAWING TITLE DA ISSUE	თ
ANTONIADES ARAWN DESIGNED CHECKED STORMWATER MANAGEMENT STORMWATER SCHEMATIC DRAWN DESIGNED CHECKED SCALE (AT FULL BM GM MC NTS (CONSTRUCT)	L SIZE) DATE
Image: Normal and Sector and the se	REVISION



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CATCHMENT PL/ TOTAL SITE ARE			
	ROOF AREA TO OSD 242 m² - 26%		N
	LANDSCAPE ON PODIUM TO OSD 158 m² - 17%		
	IMPERVIOUS AREA TO OSD 124 m² - 13%		
	PERVIOUS AREA TO PUMP OUT 322 m² - 34% IMPERVIOUS AREA TO PUMP OUT		4
	57m ² - 6 % PERVIOUS AREA BY PASS		
	31 m² - 3%		
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		MEASURES AND THE "I CONSTRUC	S IN ACCORDANCE BLUE BOOK" (MANA CTION, PRODUCED	with Shc Ging Ure By the Di	ALHAV BAN ST(EPARTI	EN COUNCIL REQUIREMENTS ORMWATER SOILS AND MENT OF HOUSING). THESE D AND MAINTAINED.				ļ				
	-	CONTRACT ESTABLISH	FOR SHALL AT ALL T IMENT & MANAGEM 5 DESIGN, AND ALL (TIMES BE ENT OF A	RESPO DETAII	ED SCHEME MEETING	E							<u> </u>
٢	C	AS LOW AS				RD ON THE SITE SHALL BE KEP SHOULD BE UNDERTAKEN IN TH				Ĭ				L
		FENCES AF INCORPOR	RE ADJACENT TO EA ATED INTO THE BA	ACH OTHE RRIER FE	ER THE NCE.	AND BARRIER FENCES. WHERE SEDIMENT FENCE CAN BE				 				Unit 40 ²
	-		CT TEMPORARY ST/) WASH PAD.	ABILISED	SITE AC	CCESS. INCLUDING SHAKE								1 Bed
			EDIMENT CONTROL ROL PLANS (ONCE			DUTLINED ON THESE SEDIMEN	r 							66.3 m ²
						EVELOPMENT WORKS SO THA DF MINIMUM WORKABLE SIZE.	г : .							
Λ		LARGE, UN		S WILL BE	KEPT	NDY AND DRY WEATHER, MOIST (NOT WET) BY ER CONTROL.							E	3
	-	SURFACE)		D AS SOC		ROCESS (SPREAD OVER THE OSSIBLE AND WITHIN 10							\	
		SYSTEM U LIKELY SEI	NLESS THE CATCHI DIMENT HAS BEEN F	MENT ARE	A HAS OUT.	IG THE PERMANENT DRAINAGE BEEN STABILISED AND/OR ANY								
Ľ	כ	REMOVED REHABILIT.	ONLY AFTER THE L ATED.	ANDS THE	EY ARE	STRUCTURES SHALL BE PROTECTING ARE STABILISED	1							
			RACTOR SHALL ALL PROTECTION MEAS			TABLISHMENT OF ANY OTHER ABLE)								
	-	ENSURE TH SHALL BE I	HAT THEY OPERATE	EFFECT	IVELY. I	S SHALL BE INSPECTED TO REPAIRS AND/OR MAINTENANC REQUIRED, PARTICULARLY	E						Share	Car Spa
U U		SLURRIES, LITTER. WA ACCORDAI	PAINTS, ACID WAS ASTE FROM THESE NCE WITH REGULAT	HINGS, LI RECEPTO FORY AUT	GHT-W RS SH/ HORIT	OR CONCRETE AND MORTAR EIGHT WASTE MATERIALS AND ALL BE DISPOSED OF IN Y REQUIREMENTS. PAY ALL				L)eep S	OII		Lift
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