

deboke

**REF** | SW21052

REVISION | A

CLIENT | SAMER BACHOUR

ARCHITECT | BAINI DESIGN

ENGINEERING CONSULTANTS

### **DRAINAGE NOTES:**

ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED

100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% **GRADE** 

MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm

ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS

BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL

ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)

SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS

HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS

PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT

ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP

ALL PITS SHALL BE MAINTAINED REGULARLY TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE

DIAMETER MAXIMUM FRONT ENTRY PIPE:-

STRAIGHT ENTRY - Ø750 SKEW ENTRY 45° - Ø525

Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES

COMPRESSIVE STRENGTH f'c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS

ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE

ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm

STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL

# **AUTHORITY STORMWATER NOTES:**

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL SET OUT AND LEVELS PRIOR TO COMMENCEMENT OF WORKS AND TO REPORT ANY DISCREPANCIES FOUND TO THE SUPERINTENDANT.

ALL SET OUT DIMENSIONS ARE TO FACE OF KERB, CENTERLINE OF FENCE/BOLARD/PIPE.

SMOOTH ALL TRANSITIONS BETWEEN NEW AND EXISTING WORK IN BOTH LEVEL AND ALIGNMENT.

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 OCCUPATIONAL 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.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION AND PAVEMENT THICKNESS FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS

PIPE BACKFILL SELECT FILL SELECT FILL (LESS THAN 300mm BELOW BASE COURSE)

BASE COURSE

100% MODIFIED

**DENSITY INDEX 75** 

95% STANDARD

98% MODIFIED

THE AUSPEC SPECIFICATION SHALL BE THE SPECIFICATION FOR THESE WORKS.

# KERB INLET PIT NOTES:

KERB INLET PITS TO BE CONSTRUCTED TO PENRITH COUNCIL STANDARDS.

ALL KERB INLET PITS TO BE CAST IN-SITU, U.N.O. BY PENRITH COUNCIL STANDARD DRAWINGS.

ALL CONCRETE SHALL BE 32MPa STRENGTH AT 28 DAYS WITH F82 MESH CENTRALLY PLACEDBY PENRITH COUNCIL STANDARD DRAWINGS.

# **EROSION & SEDIMENT CONTROL**

PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYPICAL).

ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.

DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

# STORMWATER PIPE **BEDDING/PAVING NOTES:**

WHERE TRENCH BASE IS ROCK A MINIMUM OF 75mm BEDDING TO BE PROVIDED UNDER PIPE COLLARS.

STORMWATER PIPE BEDDING DETAIL TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS. BEDDING DETAILS TO BE CONFIRMED UPON EXCAVATION & PRIOR TO INSTALLATION OF PIPEWORK.

## FOOTPATH REINSTATEMENT NOTES:

REMOVE ALL SAND FILL WITHIN THE FOOTPATH AREA TO THE EXISTING SUBGRADE.

SUPPORT ALL AUTHORITY SERVICES TO STRUCTURAL ENGINEERS DETAILS DURING EXCAVATION.

REINSTATE FOOTPATH SUBGRADE.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS:

SELECT FILL SELECT FILL (LESS THAN 300mm BELOW BASE COURSE) BASE COURSE

100% MODIFIED

95% MODIFIED

98% MODIFIED

<u>ABBR</u>	<b>ABBREVIATIONS</b> :			
Ø or DIA CBR CH CCO DD DDO DEJ DGB DGS DP e FFL GTD GSIP HYD IJ IK IL IP KIP KO K&G	DIAMETER CALIFORNIA BEARING RATIO CHAINAGE CENTER LINE CLEAR OUT DISH DRAIN DISH DRAIN OUTLET DOWELLED EXPANSION JOINT DENSE GRADED BASECOURSE DENSE GRADED SUB-BASE DOWNPIPE EXISTING FINISHED FLOOR LEVEL GRATED TRENCH DRAIN GRATED SURFACE INLET PIT HYDRANT ISOLATING JOINT INTEGRAL KERB INVERT LEVEL INTERSECTION POINT KERB INLET PIT KERB ONLY KERB & GUTTER			
KR LS NGL OFP	KERB RETURN LONGITUDINAL SECTION NATURAL GROUND LEVEL OVERLAND FLOW PATH			
OSD R RCP RK RL	ON-SITE DETENTION RADIUS REINFORCED CONCRETE PIPE ROLL KERB & GUTTER REDUCED LEVEL			
RW RWT SJ SMH	RETAINING WALL RAINWATER TANK SAWN CONTROL JOINT SEWER MAN HOLE			

SEWER MAN HOLE SW STORMWATER SWP STORMWATER PIT STORMWATER RISING MAIN SWRM STORMWATER SUMP SWS STOP VALVE TOK TOP OF KERB

TOW TOP OF WALL TWL TOP WATER LEVEL TP TANGENT POINT UNPLASTICISED POLYVINYL CHLORIDE UNLESS NOTED OTHERWISE UNO WEAKENED PLANE JOINT WPJ

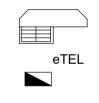
**TYPICAL** 

FIRST FLUSH DEVICE

FF

TYP

<del></del>	
	RAINWATER TANK LINES
	STORMWATER LINE
SSD	SUBSOIL LINE
SWRM SWRM	STORMWATER RISING MAIN
HL	HIGH LEVEL STORMWATER LINE
— OF — OF —	OVERFLOW LINE
e	EXISTING STORMWATER LINE
swsw	AUTHORITY STORMWATER LINE
s	AUTHORITY SEWER LINE
———— W ————	AUTHORITY WATER LINE
———	AUTHORITY GAS LINE
— — Е —	AUTHORITY ELECTRICITY LINE
—— UE— ——	AUTHORITY UNDERGROUND ELECTRICITY LINE
F0 F0	AUTHORITY FIBRE OPTIC LINE
TEL-	AUTHORITY COMMS LINE
	FENCE LINE
	GRATED SURFACE INLET PIT
	JUNCTION PIT
	KERB INLET PIT



LEGEND:

EXISTING KERB INLET PIT

EXISTING TELSTRA PIT **EXISTING HYDRANT** 

 $\bowtie$ EXISTING STOP VALVE

EXISTING POWER POLE





RAINWATER OUTLET CO

CLEAR OUT POINT CAPPING DOWNPIPE DROP

DOWNPIPE

SPOT LEVELS

BENCHMARK

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

DRAWING REGISTER			
NUMBER	NAME	REVISION	
S100	COVER SHEET	А	
S101	SPECIFICATIONS SHEET	А	
S200	BASEMENT PLAN	А	
S201	SITE STORMWATER MANAGMENT PLAN	А	
S300	DETAILS SHEET	А	
S400	EROSION AND SEDIMENT CONTROL	А	
S500	MUSIC CATCHMENT PLAN	Α	



TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

ISSUED FOR DA 2 A.A. 01.03.2021 REV DESCRIPTION APP. DESIGN DATE

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SUPPLIED. APPROVAL TYPE DEVELOPMENT APPLICATION 5. FOR TENDER
COMPLYING DEVELOPMENT 6. OTHER

USED FOR ANY PURPOSES THAN FOR WHICH



A.A. DESIGNED: A.A. DRAWN: REVIEWED: J.D. DATE: 01.03.2021 APPROVED: DATE: 01.03.2021

**B.E CIVIL/STRUCTURAL** 

MEMB. NO: 5579488

BEng,MIEAust

ARCHITECT:

SAMER BACHOUR

CLIENT:

ADDRESS: 198 BENNETT ROAD, ST CLAIR APPLICATION: DEVELOPMENT APPLICATION (DA)

PENRITH COUNCIL

PROJECT:

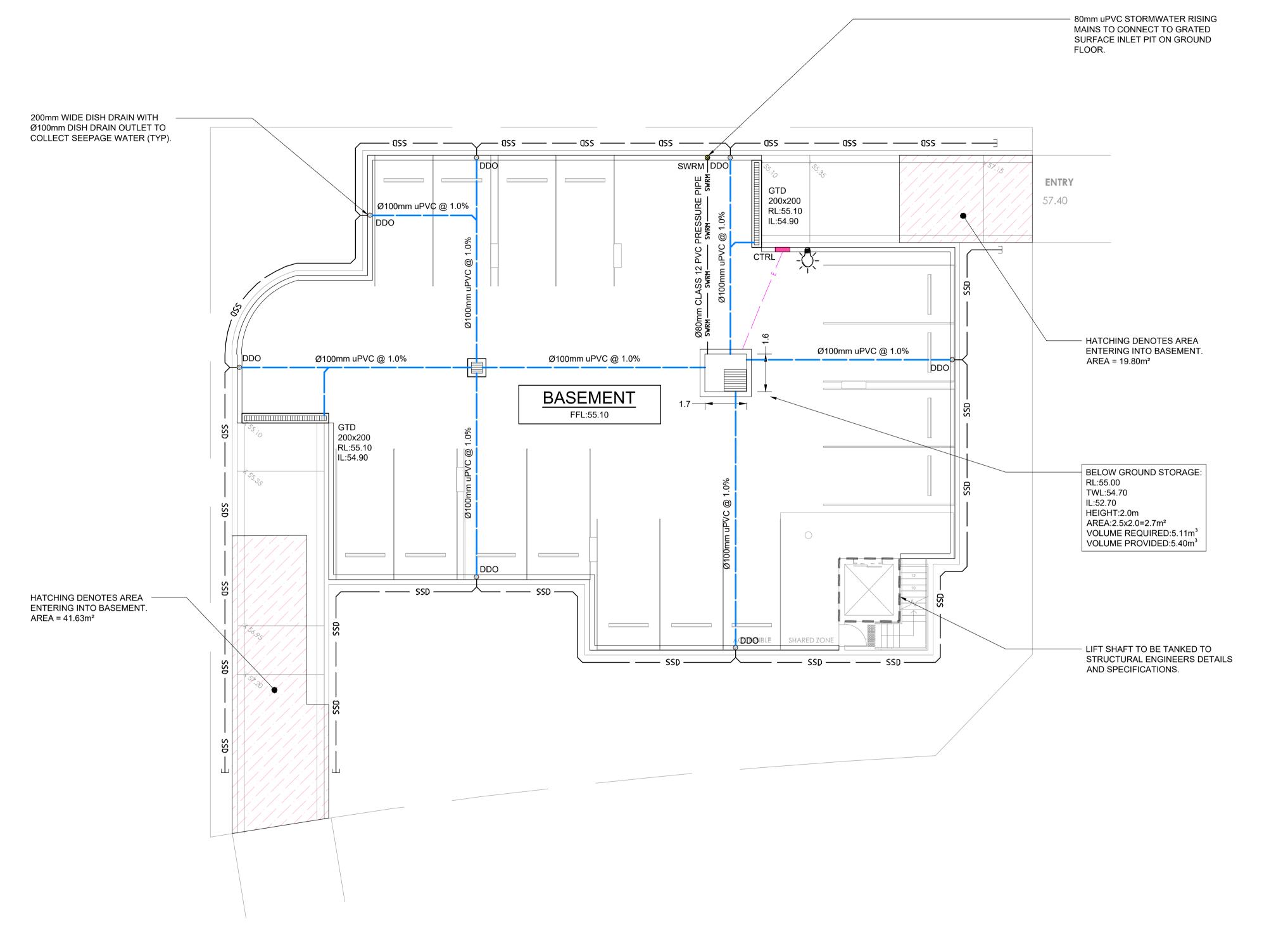
PROPOSED CHILD CARE

IN 'm' SPECIFICATIONS SHEET **UNLESS OTHERWISE** STATED PROJECT NO. SCALE: SW21052 DRAWING NO. S101

ALL DIMENSIONS

Version: 1, Version Date: 06/05/2021

STAMP OF APPROVAL



### SUBSOIL DESIGN CALCS:

PUMP OUT PIT WAS DESIGNED FOR A 100yr 2hr STORM EVENT FOR A MORE CONSERVATIVE STORAGE VOLUME.

100yr 2hr ARI STORM= 41.5mm/hr ARIx2=83.0mm AREA OF DRIVEWAY RAMP UNCOVERED= 61.50m<sup>2</sup>

=61.5x(83/1000) =61.5x0.083

THEREFORE, STORAGE SATISFIES MINIMUM STORAGE REQUIREMENTS AS PER AS/NZS 3500.3.

### **BASEMENT NOTES:**

BASEMENT DRAINAGE DESIGN SUBJECT TO FURTHER GEOTECHNICAL INVESTIGATION AND CONFIRMATION OF GROUND WATER PRESENCE ON SITE IF GROUND WATER TABLE DETECTED DURING EXCAVATION, STORMWATER ENGINEER TO BE CONTACTED PRIOR TO COMMENCING ANY WORKS.

# **KEY NOTES:**

STORMWATER RUNOFF FROM VEHICULAR CROSSING FALLS TO BASEMENT & IS COLLECTED BY BASEMENT PUMP OUT PIT.

INSTALL STEP IRONS FOR EASE OF ACCESS DURING MAINTENANCE OF PUMP OUT CONTROL PIT TO COUNCIL SATISFACTION.

INSTALL CONFINED SPACE SIGN ABOVE PUMP OUT PIT FOR PUBLIC AWARENESS AND

ALL STORMWATER PIPES AND BASEMENT PIPES ARE Ø100mm uPVC AND SLOPING AT 1.0% U.N.O (TYP).

ALL BUILDING AND HYDRAULIC SERVICES TO BE PROPERLY CO-ORDINATED WITH STORMWATER PIPES AND ENSURE NO CLASHES ARE PRESENT DURING CONSTRUCTION (TYP).

STORMWATER PIPE ARRANGEMENT TO BE CO-ORDINTED WITH STRUCTURAL SLAB AND BEAMS WHERE REQUIRED (TYP).

PROVIDE CLEAR OUT POINTS FOR INSPECTION & MAINTENANCE PURPOSES WHERE REQUIRED (TYP).

### STANDARD PUMP OUT DESIGN NOTES:

THE PUMP OUT SYSTEM SHALL BE DESIGNED TO BE OPERATED IN THE FOLLOWING

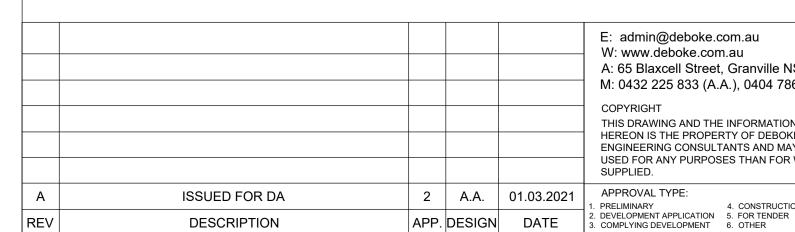
I). THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.

II). A 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 AT THE MINIMUM WATER LEVEL. THE SAME FLOAT SHALL BE SET TO TURN ONE OF THE PUMPS ON UPON THE WATER LEVEL IN THE TANK RISING TO APPROXIMATELY 300MM ABOVE THE MINIMUM WATER LEVEL. THE PUMP SHALL OPERATE UNTIL THE TANK IS DRAINED TO THE MINIMUM WATER LEVEL.

III). A SECOND FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHALL START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.

IV). AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBELIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

V). A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT ALL ACCESS POINTS TO THE PUMP OUT STORAGE TANK.



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4. CONSTRUCTION CERTIFICATE

ENGINEERING CONSULTANTS

A.A. DESIGNED: A.A. REVIEWED: J.D. DATE: 01.03.2021 DATE: 01.03.2021 APPROVED:

**B.E CIVIL/STRUCTURAL** 

BEng,MIEAust

MEMB. NO: 5579488

ARCHITECT:

SAMER BACHOUR

CLIENT:

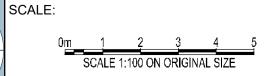
PROPOSED CHILD CARE ADDRESS: 198 BENNETT ROAD, ST CLAIR APPLICATION: DEVELOPMENT APPLICATION (DA)

PROJECT:

PENRITH COUNCIL

BASEMENT PLAN

ALL DIMENSIONS IN 'm' UNLESS OTHERWISE STATED



PROJECT NO. SW21052 DRAWING NO. S200

