NEWCASTLE HIGH SCHOOL
25A NATIONAL PARK STREET
NEWCASTLE WEST NSW 2302
HYDRAULIC DRAWINGS

DRAWING LIST

LOCALITY PLAN

ESSENTIAL FIRE SERVICES COMPLIANCE TABLE		
ITEM	**DESIGN SERVICES COMPLIANCE**	**STANDARD OF PERFORMANCE**
1.	FIRE HYDRANT SYSTEM	NCC/BCA AMENDMENT 1 CLAUSE E1.3, AS/NZ 2419.1-2005 FIRE HYDRANT CODE
2.	FIRE HOSE REELS	NCC/BCA AMENDMENT 1 CLAUSE E1.4, AS/NZ 2441-2005 FIRE HOSE REEL CODE
3.	FIRE ENGINEERING BRIEF QUESTIONNAIRE (FEBQ)	FEBQ REV 4, DATED 14.12.2024.

ISSUED FOR CC2 22.05.24 A N.K
AMENDMENTS DATE ISSUE BY

NOT FOR CONSTRUCTION

NORTH POINT U.N.O.

ARCHITECT
EJE ARCHITECTURE
412 KING STREET
NEWCASTLE NSW 2302

CLIENT
G&W HYDRAULICS
U1 6 HAWKE STREET
KINCUMBER NSW 2251

PROJECT
NEWCASTLE HIGH SCHOOL
25A NATIONAL PARK STREET
NEWCASTLE WEST NSW 2302

DESIGNED H.M | DRAWN N.K | DATE MAY 2024 | SIZE A1 | CAD REF TX17949.00 -H1.01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU

UNIT 1, 3 TEAMSTER CLOSE, TUGGERAH NSW 2259
PO BOX 3197, TUGGERAH NSW 2259

DRAWING TITLE
HYDRAULIC SERVICES
COVER SHEET

PROJECT No. TX17949.00 - DRAWING No. H1.01 ISSUE A

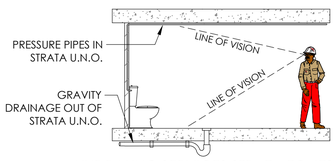
LEGEND

SERVICE PIPES

NEW SERVICE	EXISTING SERVICE	
CHV	echv	CHAMBER VENT
	ecw	COLD WATER
E	ee	ELECTRICAL CONDUIT
	efhr	FIRE HOSE REEL
	efh	FIRE HYDRANT
	eg	GAS
OF	eof	OVERFLOW
	ehw	HOT WATER
NP NP	enp	NON POTABLE COLD WATER
R	er	ROOF STORMWATER
	es es	SEWER DRAINAGE
SRM	esrm	SEWER RISING MAIN
	esw	STORMWATER DRAINAGE
TW TW	etw	TRADE WASTE
TWV	etwv	TRADE WASTE VENT
	evp evp	VENT
	eww eww	WARM WATER
	e e e e	REDUNDANT SERVICE
		PROPOSED STORMWATER (BY OTHERS)

ABBREVIATIONS

AP	ACCESS PANEL
B	BASIN
BBQ	BARBEQUE
CO	CLEAROUT
CTE	CONNECT TO EXISTING
CM	COFFEE MACHINE
DCDV	DOUBLE CHECK DETECTOR VALVE
DCV	DOUBLE CHECK VALVE
DW	DISHWASHER
e	EXISTING
FH	FIRE HYDRANT
FW	FLOOR WASTE
FTW	FOOT WASH
IPMF	INDUCT PIPE MICA FLAP
HT	HOSE TAP
HWU	HOT WATER UNIT
IL	INVERT LEVEL
IS	INSPECTION SHAFT
H/L	HIGH LEVEL PIPEWORK
N.T.S	NOT TO SCALE
NP	NON-POTABLE
RL	RELATIVE LEVEL
t.b.c.	TO BE CONFIRMED
TD	TUNDISH
WM	WATER METER
PE	POLYETHYLENE
PRV	PRESSURE REDUCTION VALVE
RL	RELATIVE LEVEL
RPZD	REDUCED PRESSURE ZONE DEVICE
SHR	SHOWER
SK	KITCHEN SINK
SS	SOIL STACK
ST	SAFE TRAY
S.W.C.	SYDNEY WATER CORPORATION
TD	TUNDISH
TV	TEMPERING VALVE
TMV	THERMOSTATIC MIXING VALVE
UPVC	UNPLASTICISED POLYVINYL CHLORIDE
U.N.O	UNLESS NOTED OTHERWISE
V	VENT PIPE
WC	WATER CLOSET



HYDRAULIC SERVICES STRATA ZONES

SYMBOLS

	SERVICE RISER
	SERVICE DROPPER
	SERVICE CAPPED OFF
	FLOW DIRECTION
	SERVICE CONTINUES
	SERVICE CAST WITHIN SLAB
	PENETRATION
	SAW CUT
AP	ACCESS PANEL
AAV	AIR ADMITTANCE VALVE
	ANGLE VALVE
	BALL VALVE
BT	BOUNDARY TRAP
BTFW	BUCKET TRAP FLOOR WASTE
CV/NRV	CHECK VALVE OR NON RETURN VALVE
CP	CONTROL PANEL
CO	CLEAROUT
	CONTROL TAP
CTE	CONNECT TO EXISTING
DCV	DOUBLE CHECK VALVE
DFH	DUAL PILLAR FIRE HYDRANT
FHR	FIRE HOSE REEL
FH	FIRE HYDRANT
	FIRE HYDRANT (STREET)
FW	FLOOR WASTE
GB	GAS BAYONET
GM	GAS METER
	GAS VALVE
GD	GRATED DRAIN
HT	HOSETAP
HWU	HOT WATER UNIT
RHWU	HOT WATER UNIT (INSTANT.)
IL2.208	INVERT LEVEL
	ISOLATION VALVE
	MANHOLE / SIP
MDL	MODULAR DATA LOGGER
OFG	OVERFLOW GULLY
PV	PATH VALVE
	PUMP
RWO	RAINWATER OUTLET
RPZD	REDUCED PRESSURE ZONE DEVICE
RV	REFLUX VALVE IN INSPECTION SHAFT
	REGULATOR
TV	TEMPERING VALVE
TMV	THERMOSTATIC MIXING VALVE
TD	TUNDISH
WM	WATER METER
	FLOW DIRECTION
SIZE	SERVICE RISER / FLOW IN LITRES/SECOND
	FLOW DIRECTION
D01 / H01	DETAIL NUMBER / DRAWING NUMBER
H01	CONTINUES ON DRAWING H01
Q = --- L/s	QUANTITY IN LITRES PER SECOND
FU	FIXTURE UNITS
N1	NOTE NUMBER

SPECIFICATION NOTES

GENERAL NOTES

G1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH NATIONAL CONSTRUCTION CODE (NCC & PCA), APPLICABLE AUSTRALIAN STANDARDS, LOCAL GOVERNING AUTHORITIES REGULATIONS AND ARCHITECTS APPROVAL.

G2. THIS PLAN SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL AND MECHANICAL PLANS AND SPECIFICATIONS.

G3. CONTRACTOR SHALL OBTAIN ALL AUTHORITY APPROVALS, MAKE ALL APPLICATIONS, AND PAY ALL FEES, ISSUE ALL REQUIRED CERTIFICATES OF COMPLIANCE INDICATING THAT ALL WORK COMPLIES TO THE CURRENT REGULATIONS & REQUIREMENTS.

G4. SITE VISIT AND FAMILIARISATION; THE CONTRACTOR SHALL EXAMINE THE SITE AND REFER TO CURRENT CONTRACT DRAWINGS SO AS TO UNDERSTAND AND TO HAVE SATISFIED HIMSELF AS TO THE VISIBLE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO OPERATE.

G5. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA. THE SUPERINTENDENT DOES NOT GUARANTEE THEIR ACCURACY AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF ANY WORK. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITY.

G6. SET OUT; ALL PIPE WORK SHALL BE CONCEALED (WHEREVER POSSIBLE) IN CEILING SPACES AND WALLS OR CHASED IN WALLS. THE PLUMBER SHALL BE RESPONSIBLE FOR SETTING OUT ALL PIPE RUNS BEFORE THE POURING OF CONCRETE/COVERING UP AND PROVIDING ALL SLEEVES/FIRE COLLARS WHICH MAY BE NECESSARY.

G7. ALL SERVICES THAT CROSS PAVEMENTS, FOOTINGS ETC. SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO SUB GRADE LEVEL AND COMPACTED TO 95 % M.M.D.D.

G8. ON COMPLETION OF PIPE INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AREAS, GRASSED AREAS AND ROAD PAVEMENTS.

G9. TRENCHES THROUGH EXISTING ROAD AND CONCRETE AREAS SHALL BE SAW CUT TO FULL DEPTH OF CONCRETE AND A MIN. OF 50mm IN BITUMINOUS PAVING. REINSTATE WITH ADDITIONAL REINFORCEMENT & DOWELING AS REQUIRED BY STRUCTURAL ENGINEERS.

G10. WHERE NEW WORK ABUTS EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGE IS OBTAINED.

G11. CARE SHALL BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATION SHALL BE TAKEN OVER TELSTRA OR ELECTRICAL SERVICES. EXCAVATE BY HAND IN THESE AREAS.

G12. ALL PRODUCTS AND PROPRIETARY ITEMS ARE TO BE INSTALLED TO THE MANUFACTURERS REQUIREMENTS.

G13. WHERE SANITARY DRAINAGE IS INSTALLED IN THE CEILING OF TENANCIES UNDER, IT MUST BE WRAPPED IN ACOUSTIC INSULATED MATERIAL.

G14. CONTRACTOR SHALL PROVIDE ALL TIMBERING, SHORING AND SHUTTERING AS NECESSARY TO CONSTRUCT PIPEWORK INCLUDING THE REMOVAL OF SAME UPON COMPLETION OF PIPEWORK.

G15. PROVIDE 80mm COMPRESSIBLE MATERIAL OVER PIPEWORK WHERE CLEARANCE TO UNDERSIDE OF FOOTING IS LESS THAN 150mm U.N.O.

G16. A SET OF WORK AS EXECUTED DRAWINGS SHALL BE KEPT ON SITE AND PROGRESSIVELY MAKE UP BY THE CONTRACTOR AS THE WORK PROCEEDS TO RECORD THE LOCATIONS, INVERTS, FINAL LEVELS AND DETAILS OF ALL INSTALLED SERVICES, EQUIPMENT AND VALVES, THESE SHALL BE MADE AVAILABLE ON REASONABLE NOTICE FROM THE SUPERINTENDENT.

GENERAL NOTES

G17. BACK FILLING AND COMPACTION; COMPACTION AS PER AS1289, BACK FILL SERVICE TRENCHES AS SOON AS POSSIBLE AFTER APPROVAL OF LAID AND BEDDED SERVICES. COMPACT TO A COMPACTING DENSITY WHICH APPLIES TO THE LOCATION OF THE SERVICE TRENCH. COVER SERVICE PIPING WITH BEDDING MATERIAL, LAY WARNING TAPE, AND UNLESS OTHERWISE SPECIFIED BACK FILL WITH GENERAL FILLING, WITH NO STONES RETAINING ON A 25mm SIEVE OCCURRING WITHIN 150mm OF THE SERVICE PIPING.

G18. IDENTIFICATION: SERVICES WARNING/IDENTIFICATION TAPE TO BE INSTALLED ABOVE EACH INDIVIDUAL SERVICE PIPE INSTALLED WITHIN TRENCH (FULL LENGTH OF INSTALLATION).

G19. FINAL INSTALLATION OF ALL 'PASSIVE FIRE PROTECTION' MEASURES TO BE APPROVED AND CERTIFIED BY AN EXTERNAL SUITABLY QUALIFIED PASSIVE FIRE PROTECTION SPECIALIST COMPANY.

G20. TESTING; TEST ALL SERVICES DURING INSTALLATION AND PRIOR TO CONCEALING, A MINIMUM 24 HOUR TEST PERIOD WITHOUT EVIDENCE OF LEAKS. ANY LEAKS SHALL BE RECTIFIED AND A RE TEST AS PER TEST REQUIREMENTS. FLOW TESTING SHALL BE CARRIED OUT AT COMPLETION OF WORKS TO PROVIDE ACTUAL FLOW CAPACITY AVAILABLE. CERTIFICATION INFORMATION TO BE FORWARDED TO SUPERINTENDENT AND/OR REPRESENTATIVE.

G21. WARRANTY AND MAINTENANCE PERIOD; PROVIDE 12 MONTHS WARRANTY AND MAINTENANCE PERIOD FOR ALL WORK COVERED BY THIS CONTRACT, RETAIN ALL MANUFACTURER WARRANTIES AND GUARANTEES AND HAND OVER TO ARCHITECT WITH MAINTENANCE MANUALS WHEN INSTALLATION IS COMPLETE.

G22. HYDRAULIC SERVICES WORK AS EXECUTED CAD (AUTO CAD R2002) DRAFTED DRAWINGS AND MAINTENANCE MANUALS TO BE PROVIDED PRIOR TO COMPLETION.

WATER SERVICE NOTES

W1. MINIMUM SIZE INGROUND PIPEWORK SHALL BE Ø 20 INTERNAL DIAMETER.

W2. LAY FOIL BACKED MARKER TAPE 300mm ABOVE ALL WATER NON METALLIC SERVICES.

W3. FLUSH ALL WATER SERVICE PIPES PRIOR TO CONNECTION TO FIXTURES/VALVES ETC.

W4. MINIMUM PIPE DEPTH SHALL BE 450mm U.N.O.

W5. CONSTRUCT ISOLATION VALVES TO ALL WET AREAS. COORDINATE ACCESS COVERS, PIPES ETC. AS REQUIRED.

W6. INGROUND STOP VALVES SHALL BE CONSTRUCTED COMPLETE WITH CAST IRON VALVE BOX AND uPVC RISER.

W7. ALL PIPE SIZES INDICATED ON THE DRAWINGS ARE INTERNAL BORE DIAMETER, UNLESS NOTED OTHERWISE.

W8. INGROUND COLD WATER PIPEWORK DN100 AND LARGER SHALL BE 'HARDIE IPLEX BLUE RHINO' PVC-M CLASS 20 WITH RUBBER RING JOINTS AND CAST IRON FITTINGS. PIPEWORK DN80 AND SMALLER SHALL BE COPPER TUBE TYP 'B' WITH 5% SILVER BRAZED JOINTS OR 'VINIDEX' MDPE, PE80B-PN16-SDR9 WITH ELECTROFUSION JOINTING.

W9. HOT & COLD WATER SERVICES; ALL ABOVE PIPE WORK SHALL BE COPPER TYPE 'B' WITH WITH 5% SILVER BRAZED JOINTS AND COPPER AND/OR BRASS FITTINGS. PIPE WORK BUILT INTO WALLS SHALL BE SECURELY FIXED AND LAGGED WITH 'KEMLAG' INSULATION, ALL PIPE WORK SHALL BE FREE OF WATER HAMMER. ALL HOT/WARM WATER PIPE WORK SHALL BE INSULATED WITH 25mm THICK FOIL BACKED INSULATION & COMPLY WITH SECTION J OF THE BCA. THE USE OF APPROVED CROSS LINKED POLYETHYLENE PIPING (PEX) SYSTEMS CAN BE INSTALLED FOR ROUGH-INS IN WALL TO FIXTURES DIRECTLY FROM HIGH LEVEL

W10. ALL HOT WATER DEAD LEGS TO BE KEPT TO A MINIMUM, ALLOW TO CIRCULATE PIPEWORK WITHIN 2M OF ALL TEMPERING VALVES AND FIXTURES/FITTINGS

NON-POTABLE WATER SERVICE NOTES

NP1. MINIMUM SIZE INGROUND PIPEWORK SHALL BE Ø 20 INTERNAL DIAMETER.

NP2. LAY FOIL BACKED MARKER TAPE 300mm ABOVE ALL WATER NON METALLIC SERVICES.
- ALL PIPES, PIPE SLEEVES, IDENTIFICATION TAPES, AND OUTLETS SHALL BE COLOURED GREEN AND/OR IN ACCORDANCE WITH AS2700.
- ALL PIPES, PIPE SLEEVES AND IDENTIFICATION TAPES SHALL BE MARKED WITH THE FOLLOWING, IN ACCORDANCE WITH AS1345.
  WARNING: RECYCLED OR RECLAIMED - WATER - DO NOT DRINK

NP3. FLUSH ALL WATER SERVICE PIPES PRIOR TO CONNECTION TO FIXTURES/VALVES ETC.

NP4. MINIMUM PIPE DEPTH SHALL BE 450mm U.N.O.

NP5. CONSTRUCT ISOLATION VALVES TO ALL UNITS. COORDINATE ACCESS COVERS, PIPES ETC. AS REQUIRED.

NP6. ALL PIPE SIZES INDICATED ON THE DRAWINGS ARE INTERNAL BORE DIAMETER, UNLESS NOTED OTHERWISE.

NP7. WATER SERVICES; ALL PIPE WORK SHALL BE COPPER TYPE B WITH COPPER AND/OR BRASS FITTINGS. PIPE WORK BUILT INTO WALLS SHALL BE SECURELY FIXED AND LAGGED WITH 'KEMLAG' INSULATION, ALL PIPE WORK SHALL BE FREE OF WATER HAMMER. ALTERNATIVELY PIPEWORK FOR NPCW SYSTEMS CAN BE EITHER CROSSLINKED POLYTHENE OR CLASS 18 UPVC

NP8. HOSE TAP OUTLETS (IF INSTALLED) SHALL:
- CLEARLY MARKED *'WARNING, DO NOT DRINK'* IN ACCORDANCE WITH THE DRINKING' REQUIREMENTS OF AS1319.
- BE OF A TYPE THAT HAS A REMOVABLE HANDLE

FIRE SERVICE NOTES

F1. FIRE HOSE REELS SHALL BE INSTALLED IN ACCORDANCE WITH AS2441 AND COMPLY WITH AS1221.

F2. NO ISOLATING VALVES ON FIRE HOSE REEL SERVICE BETWEEN METER AND FIRE HOSE REEL AS DETAILED FOR UNINTERRUPTED FLOW.

F3. FIRE HOSE REEL PIPEWORK SHALL BE TYPE B COPPER TUBE.

F4. ALL UNDERGROUND HYDRANT PIPEWORK SHALL BE CLASS 20 uPVC BLUE BRUTE WITH RUBBER RING JOINTS AND THRUST BLOCKS INSTALLED AT ALL CHANGES OF DIRECTIONS/GRADES OR BLACK HDPE PRESSURE PIPE WITH RED STRIPE SDR9-PN16 WITH ELECTROFUSION JOINTING.

F5. ALL ABOVE GROUND HYDRANT PIPEWORK SHALL BE GALVANISED IRON WITH SCREWED OR VITRAULIC FITTINGS.

F6. ALL FIRE SERVICES PIPEWORK SHALL BE CLEARLY LABELED NOT LESS THAN 6m INTERVALS.

F7. SUPPLY AND INSTALL PORTABLE FIRE EXTINGUISHERS TO AS2444.

F8. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH AS2419.1 AND FIRE & RESCUE NSW REQUIREMENTS

F9. PIPEWORK SUPPORTS AND COMPONENTS BE OF FERROUS MATERIAL AND PROTECTED FROM DIRECT CONTACT WITH COPPER PIPE OR PIPE FITTINGS. IN NON-SPRINKLERED BUILDINGS SUPPORTS SHALL HAVE A FRL NOT LESS THAN -/60/60, MAINTAINING A TEMPERATURE OF NOT LESS THAN 500°C WHEN TESTED IN ACCORDANCE WITH AS1530.4 OR MEASURES SHALL BE TAKEN TO PREVENT ITS EARLY COLLAPSE WHEN EXPOSED TO FIRE.

F10. SUITABLE MEANS OF FIRE-FIGHTING MUST BE INSTALLED TO A DEGREE NECESSARY IN A BUILDING UNDER CONSTRUCTION TO ALLOW INITIAL FIRE ATTACK BY CONSTRUCTION WORKERS AND FOR THE FIRE BRIGADE TO UNDERTAKE ATTACK ON THE FIRE APPROPRIATE TO; THE FIRE HAZARD AND THE HEIGHT THE BUILDING HAS REACHED DURING ITS CONSTRUCTION.

F11. THRUST BLOCK LOCATIONS ARE NOT LIMITED TO THOSE SHOWN ON PLANS. THRUST BLOCK DESIGN SHALL BE IN ACCORDANCE WITH AS-2419.1 AND IN CONJUNCTION WITH A QUALIFIED SOIL ENGINEER. IN GENERAL, THRUST BLOCKS SHALL BE CONSTRUCTED OF CONCRETE WITH ONE SIDE BEARING AGAINST A FIRM VERTICAL OR HORIZONTAL FACE OF THE EXCAVATION, AS APPROPRIATE, AND DESIGNED SO THAT THE FULL HYDROSTATIC FORCES IN THE PIPING ARE TRANSMITTED TO THE SURROUNDING SOIL WITHOUT THE MAXIMUM BEARING PRESSURES OF THE SOIL AND PIPING MATERIAL BEING EXCEEDED. THRUST BLOCKS AND ANCHORS SHALL BE INSTALLED IN SYSTEMS WITH UNRESTRAINED JOINTS. AN INSTALLATION SHALL NOT BE CHARGED WITH WATER UNTIL ALL THRUST BLOCKS HAVE BEEN ALLOWED SUFFICIENT TIME TO GAIN THEIR DESIGNED STRENGTH.

SANITARY DRAINAGE NOTES

S1. CONTRACTOR TO PROVIDE ANY ADDITIONAL EXCAVATION, BACKFILL OF PIPES, FITTINGS AND ALL JUMP UPS TO AS3500 AND COUNCIL REQUIREMENTS INCLUDING THOSE TO BRANCH DRAINS.

S2. ALL SANITARY DRAINAGE PIPEWORK SHALL BE IN uPVC UNLESS NOTED OTHERWISE.

S3. SANITARY DRAINAGE LINES TO BE LOCATED MINIMUM 1.4m FROM FOOTINGS U.N.O.

S4. ALL TRADE WASTE PIPEWORK SHALL BE FUSION WELDED HDPE.

S5. INSPECTION OPENINGS SHALL BE PROVIDED AT:
THE PROPERTY BOUNDARY
ON EACH WC OR BRANCH
AT MAX. 30m INTERVALS SPREAD EQUIDISTANT WHERE POSSIBLE IMMEDIATELY UPSTREAM AND DOWNSTREAM OF ALL JUMP-UPS AS REQUIRED BY THE AUTHORITY FOR INSPECTION AND MAINTENANCE

S6. DRAINS TO BE SUPPORTED ON OR FROM SOLID GROUND. LOCATION AND DEPTH / INVERT LEVEL OF BRANCH SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORK.

GAS SERVICE NOTES

G1. CONTRACTOR TO PAY ALL FEES AND LIAISE WITH THE NATURAL GAS COMPANY FOR GAS UTILITY SERVICE TO BE SUPPLIED OUTSIDE BOUNDARY. CUSTOMER SERVICE METER SET AND CUSTOMER PIPING SYSTEM BY CONTRACTOR.

G2. CONTRACTOR TO CONFIRM ALL EXISTING GAS PRESSURE AND LOCATION AND REPORT TO SUPERINTENDENT.

G3. ALIGNMENT OF GAS SERVICE TO BE APPROVED BY SUPERINTENDENT PRIOR TO COMMENCEMENT.

G4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH AS5601 AND GAS FITTING RULES.

G5. ALL PIPEWORK SHALL BE COPPER TABLE B TUBE WITH SILVER BRAZING, WITH NO-LESS THAN 15% SILVER.

SANITARY PLUMBING NOTES

SP1. COORDINATE WITH STRUCTURAL DRAWINGS. NO STEEL REINFORCING BARS TO BE CUT WITHOUT PRIOR WRITTEN APPROVAL FROM STRUCTURAL ENGINEER.

SP2. ALL ROOF PENETRATIONS TO DETAIL AND PAINTED COLOUR TO BE ADVISED. ALL VENTS SHALL BE OFFSET IN ROOF SPACE MINIMUM 600 FROM EAVES AND AS SHOWN ON ARCHITECTURAL DRAWINGS.

SP3. SANITARY STACKS AND CONNECTING BRANCHES SHALL BE OF uPVC U.N.O.

SP4. ALL PRESSURE PVC-U PIPES AND FITTINGS FOR RISING MAINS SHALL BE CLASS 12 WITH SOLVENT WELDED JOINTS IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS U.N.O.

SP5. ALL PIPE PENETRATIONS AT WALLS SHALL BE FITTED WITH A PUDDLE FLANGE AND MADE GOOD AND WATER TIGHT.

SP6. ALL SUSPENDED SLAB PENETRATIONS SHALL BE FORMED BY PATENT "SLAB SEAL" OR OTHER APPROVED FIRE ISOLATING CAST IN PENETRATION AND APPROVED BY (IN WRITING) THE SUPERINTENDENT OR AN INDEPENDENT FIRE SPECIALIST CERTIFIERS. THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THEIR LOCATION AND SIZE.

SP7. PIPEWORK THROUGH FIRE RATED STRUCTURE:
WHERE PIPEWORK PASSES THROUGH STRUCTURE WHICH IS TO BE FIRE RATED. PROVIDE APPROVED FIRE COLLARS. WHERE METAL PIPEWORK PASSES THROUGH STRUCTURE WHICH IS TO BE FIRE RATED, MINIMISE PENETRATION SIZE AND PACK AROUND PIPEWORK WITH APPROVED INTUMESCENT SEALANT.

SP8. ALL SANITARY DRAINAGE PIPE WORK ABOVE AND/OR ADJACENT TO LIVING/SLEEPING AREAS SHALL BE INSULATED WITH ACOUSTIC INSULATION EQUAL TO SOUNDGUARD SOUNDLAG 4525L ACOUSTIC PIPE WRAP INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS DISTRIBUTED BY PYROTEK 9631 1333.

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1.	FIRE HYDRANT SYSTEM	NCC/BCA AMENDMENT 1 CLAUSE E1.3, AS/NZ 2419.1-2005 FIRE HYDRANT CODE
2.	FIRE HOSE REELS	NCC/BCA AMENDMENT 1 CLAUSE E1.4, AS/NZ 2441-2005 FIRE HOSE REEL CODE
3.	FIRE ENGINEERING BRIEF QUESTIONNAIRE (FEBQ)	FEBQ REV 4, DATED 14.12.2024.

ISSUED FOR CC2 — 22.05.24 — A — N.K
AMENDMENTS — DATE — ISSUE — BY

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EJE ARCHITECTURE
412 KING STREET
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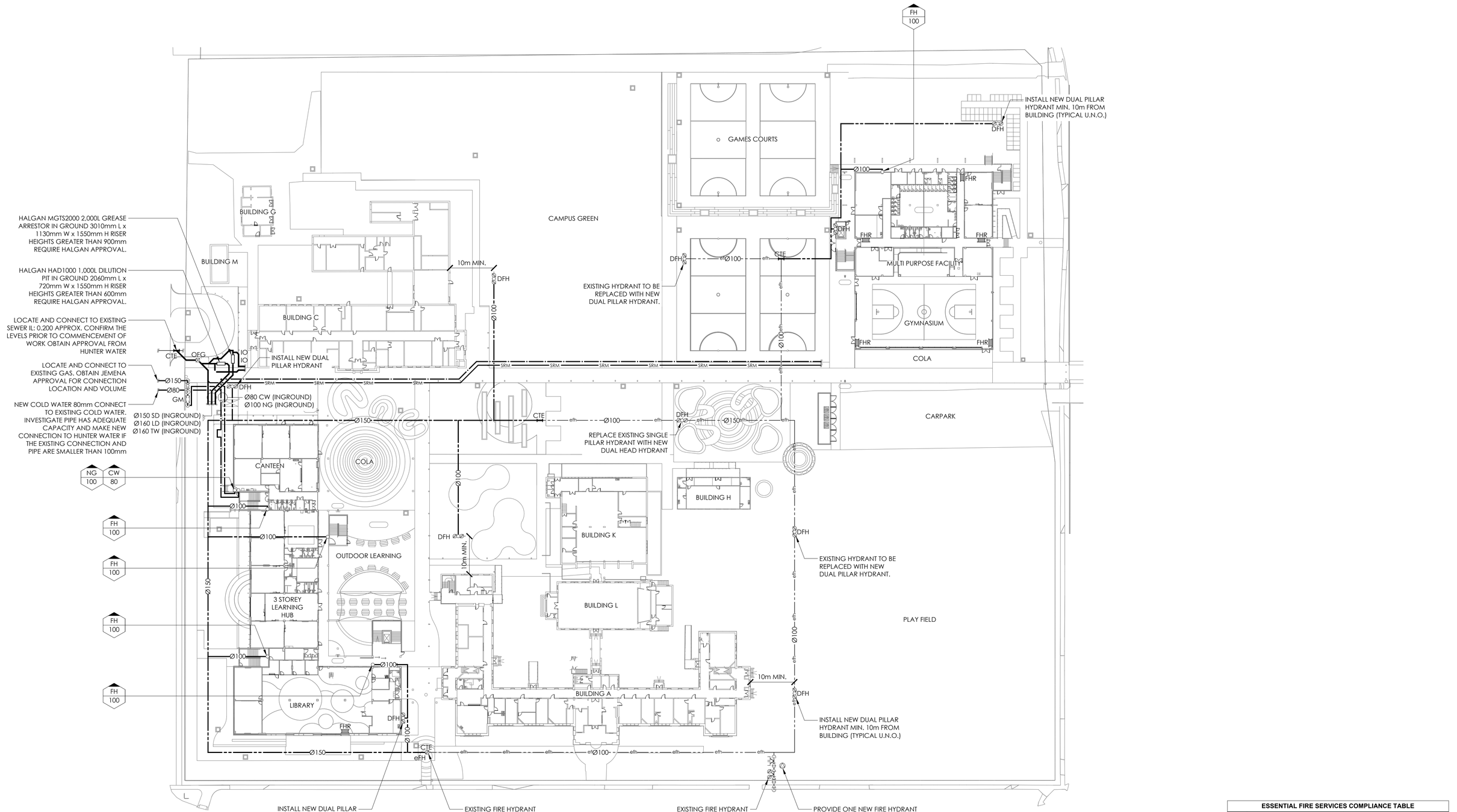
PO BOX 3197, TUGGERAH NSW 2259

DRAWING TITLE
HYDRAULIC SERVICES LEGEND AND NOTES

PROJECT No. TX17949.00 | DRAWING No. H1.02 | ISSUE A



SITE PLAN - GROUND FLOOR

SCALE 1:500 AT A1

0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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HYDRAULIC SERVICES
SITE PLAN - GROUND FLOOR

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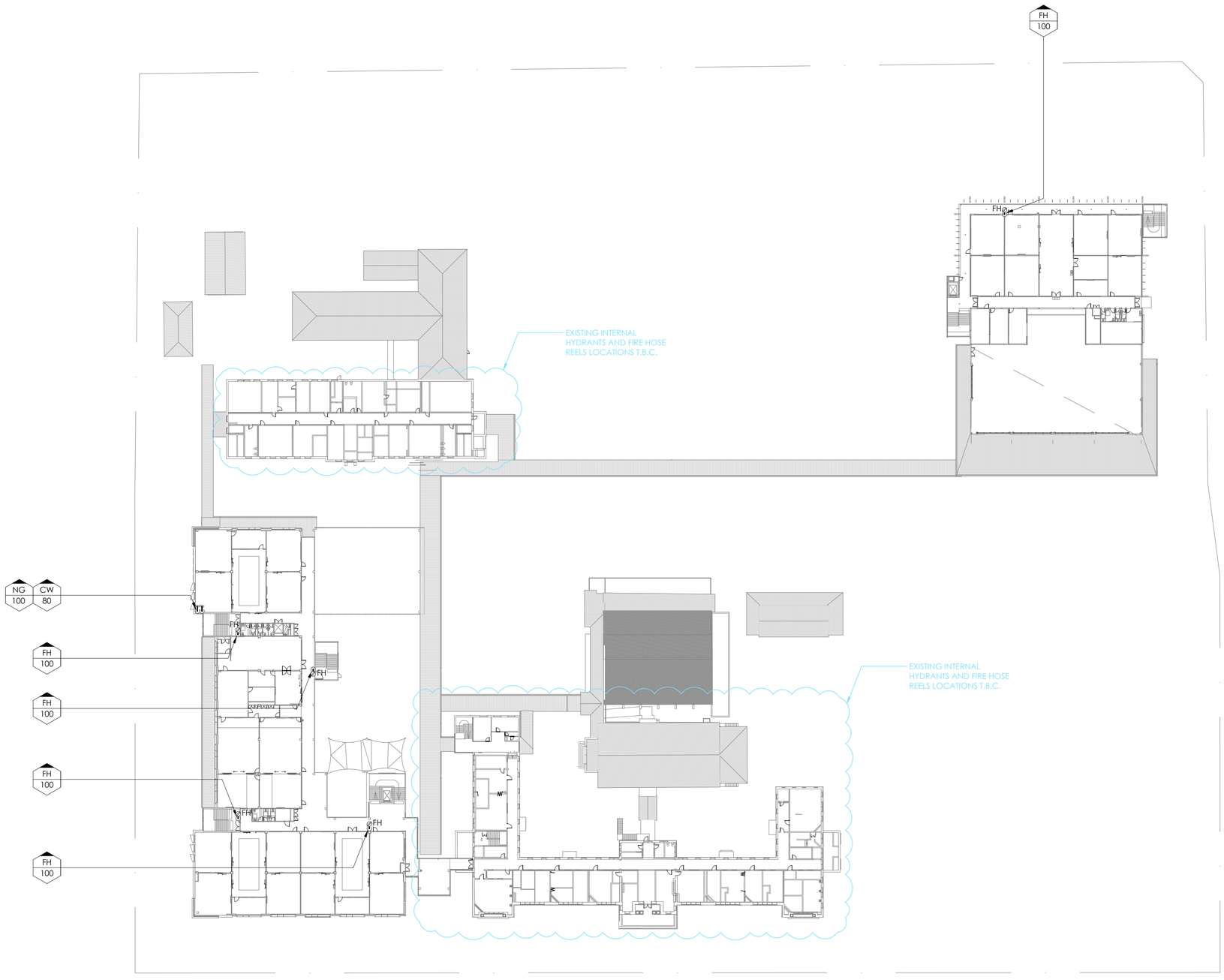

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SITE PLAN - LEVEL 1

SCALE 1:500 AT A1

0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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NEWCASTLE WEST NSW 2302

DESIGNED	DRAWN	DATE	SIZE	CAD REF
H.M	N.K	MAY 2024	A1	TX17949.00 -H2.02

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

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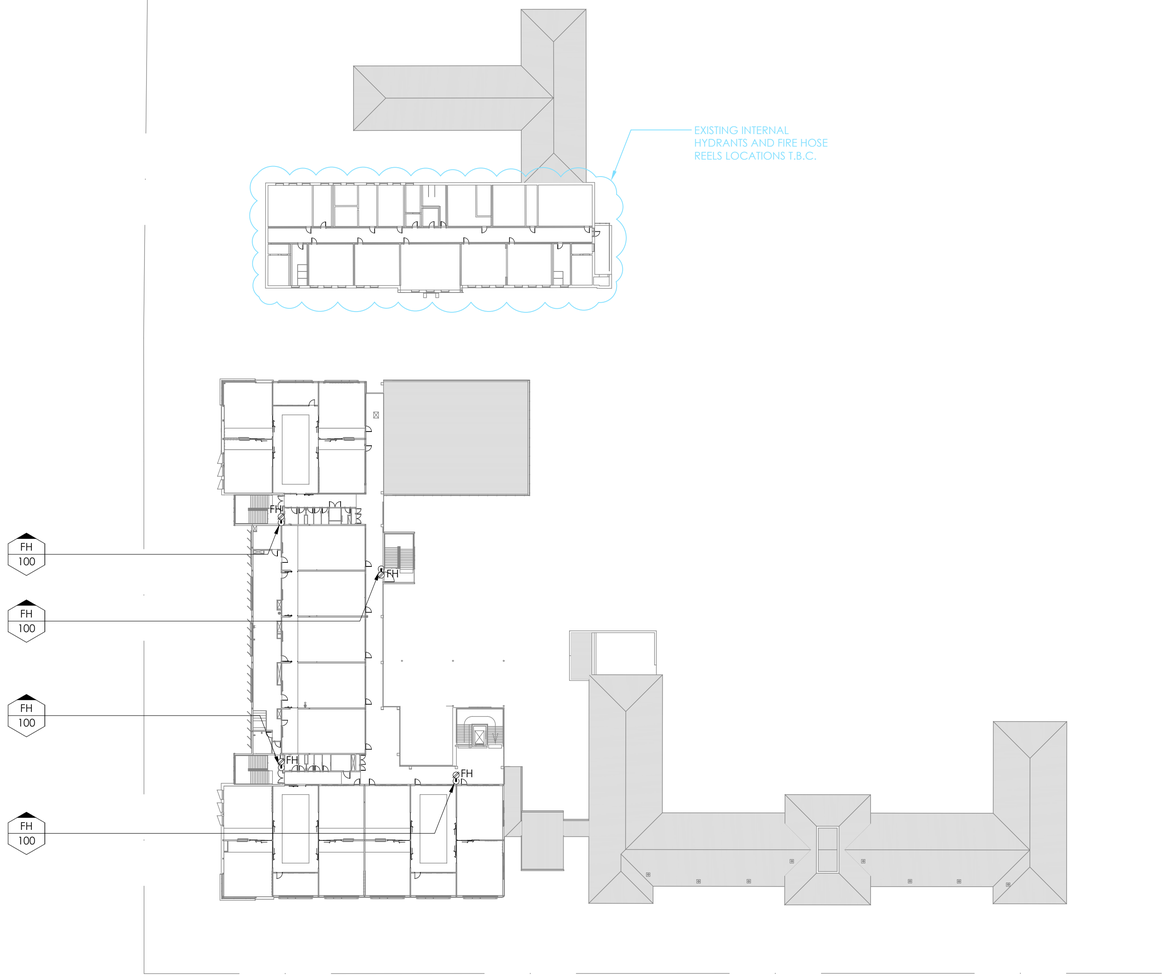
UNIT 1, 3 TEAMSTER CLOSE, TUGGERAH NSW 2259
PO BOX 3197, TUGGERAH NSW 2259

DRAWING TITLE
HYDRAULIC SERVICES
SITE PLAN - LEVEL 1

PROJECT No.	DRAWING No.	ISSUE
TX17949.00 -	H2.02	A



SITE PLAN - LEVEL 2

SCALE 1:500 AT A1

0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

ESSENTIAL FIRE SERVICES COMPLIANCE TABLE

ITEM	DESIGN SERVICES COMPLIANCE	STANDARD OF PERFORMANCE
1.	FIRE HYDRANT SYSTEM	NCC/BCA AMENDMENT 1 CLAUSE E1.3, AS/NZ 2419.1-2005 FIRE HYDRANT CODE
2.	FIRE HOSE REELS	NCC/BCA AMENDMENT 1 CLAUSE E1.4, AS/NZ 2441-2005 FIRE HOSE REEL CODE
3.	FIRE ENGINEERING BRIEF QUESTIONNAIRE (FEBQ)	FEBQ REV 4, DATED 14.12.2024.

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR CC2	22.05.24	A	N.K

NOT FOR CONSTRUCTION

NORTH POINT U.N.O.

ARCHITECT
EJE ARCHITECTURE
412 KING STREET
NEWCASTLE NSW 2302

CLIENT
G&W HYDRAULICS
U1 6 HAWKE STREET
KINCUMBER NSW 2251

PROJECT
NEWCASTLE HIGH SCHOOL
25A NATIONAL PARK STREET
NEWCASTLE WEST NSW 2302

DESIGNED	DRAWN	DATE	SIZE	CAD REF
H.M	N.K	MAY 2024	A1	TX17949.00 -H2.03

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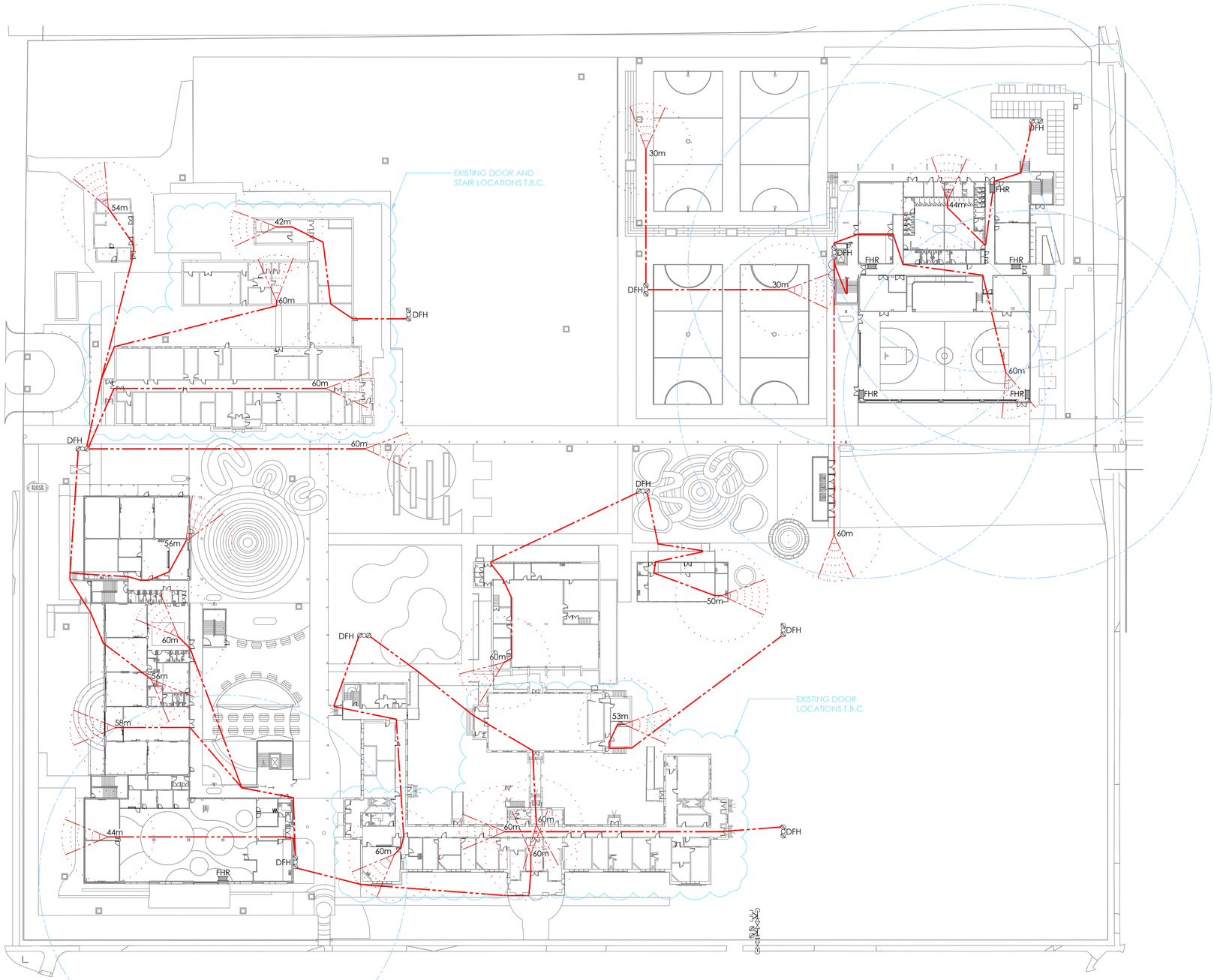
PO BOX 3197, TUGGERAH NSW 2259

DRAWING TITLE
HYDRAULIC SERVICES
SITE PLAN - LEVEL 2

PROJECT No. TX17949.00 - DRAWING No. H2.03 ISSUE A

KEY

- DFH - EXTERNAL FIRE HYDRANT COVERAGE (60+10m SPRAY)
- FHR - FIRE HOSE REEL COVERAGE (36+4m SPRAY)
- FH - PROPOSED INTERNAL FH COVERAGE (30+10m SPRAY)
- FHR - LOCATIONS SHOWN ON ARCHITECTURALS



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FIRE COVERAGE PLAN - GROUND FLOOR

SCALE 1:500 AT A1

0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

ISSUED FOR CC2	22.05.24	A	N.K
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H.M	N.K	MAY 2024	A1	TX17949.00 -H3.01

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PO BOX 3197, TUGGERAH NSW 2259

DRAWING TITLE
HYDRAULIC SERVICES
FIRE COVERAGE PLAN - GROUND FLOOR

PROJECT No.	DRAWING No.	ISSUE
TX17949.00	H3.01	A

KEY

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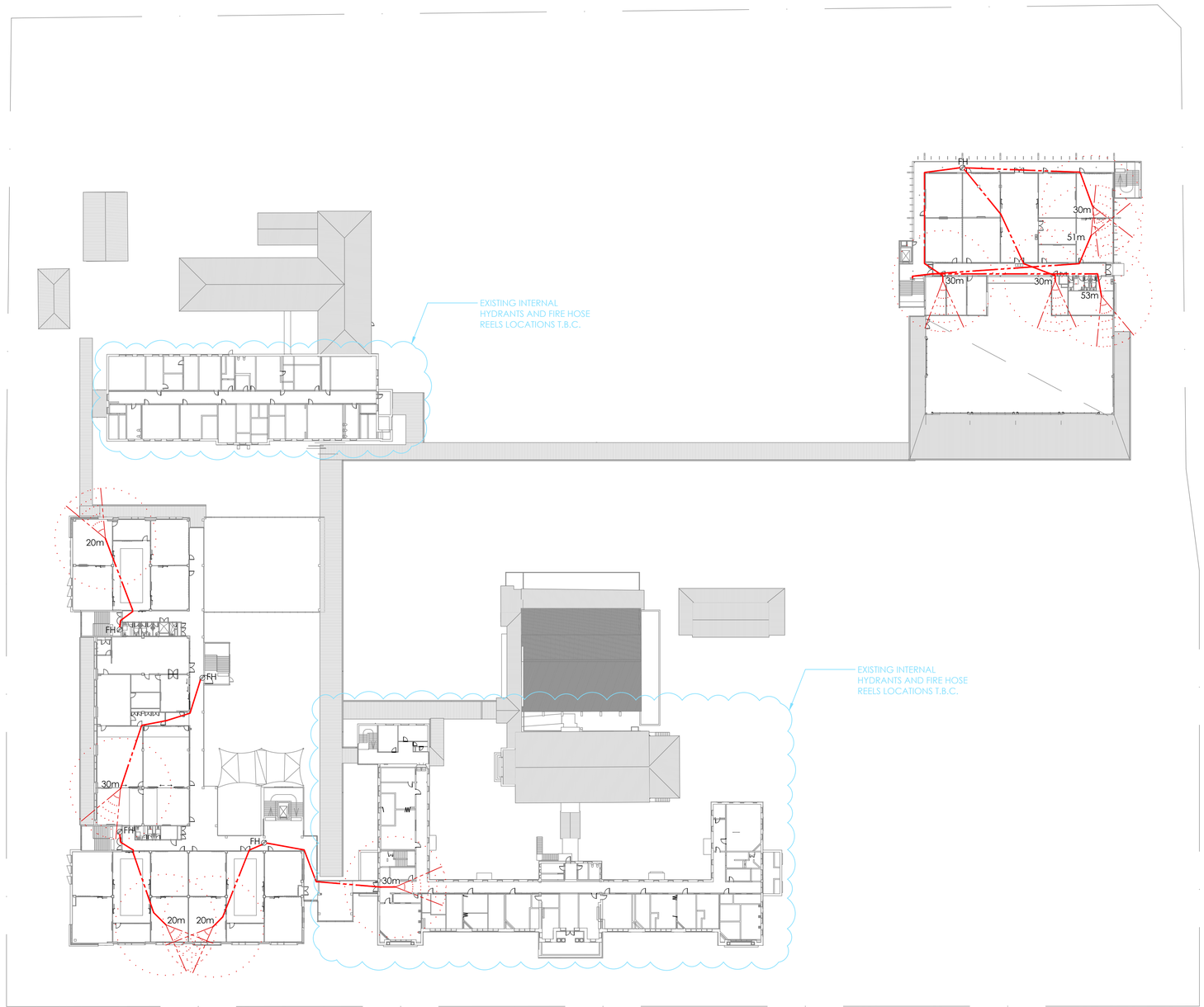

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FIRE COVERAGE PLAN - LEVEL 1

SCALE 1:500 AT A1

0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

ISSUED FOR CC2	22.05.24	A	N.K
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FIRE COVERAGE PLAN - LEVEL 1

PROJECT No. TX17949.00 - DRAWING No. H3.02 ISSUE A

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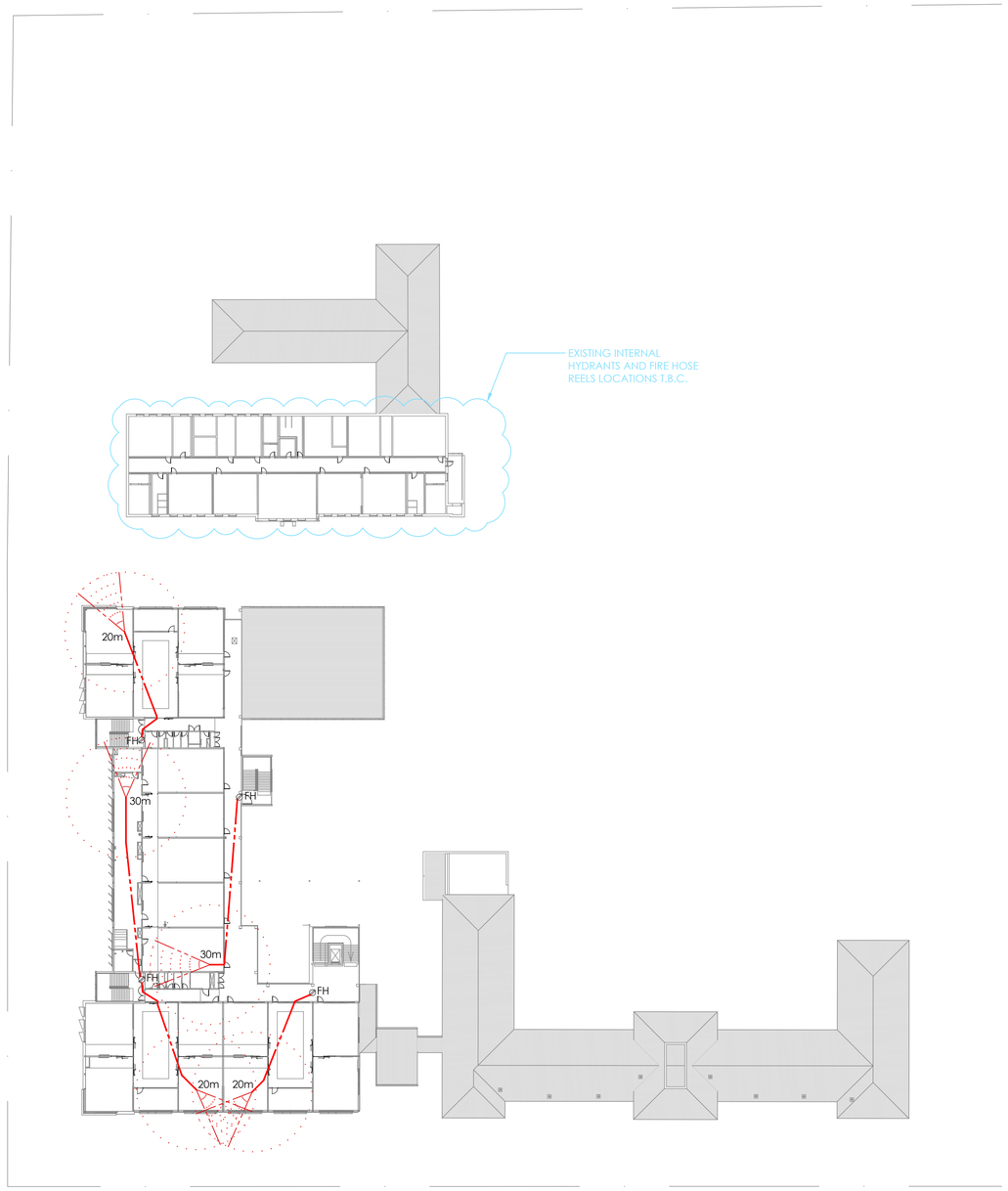

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3.	FIRE ENGINEERING BRIEF QUESTIONNAIRE (FEBQ)	FEBQ REV 4, DATED 14.12.2024.

FIRE COVERAGE PLAN - LEVEL 2

SCALE 1:500 AT A1

0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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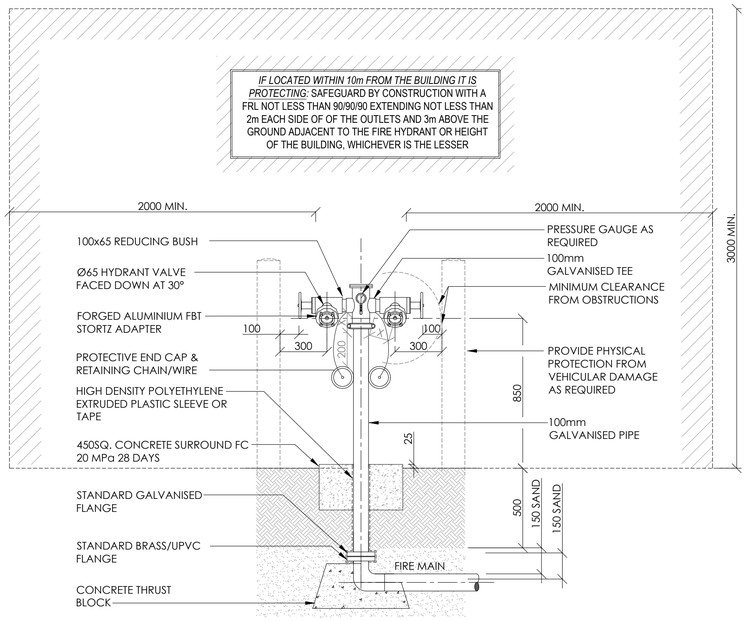
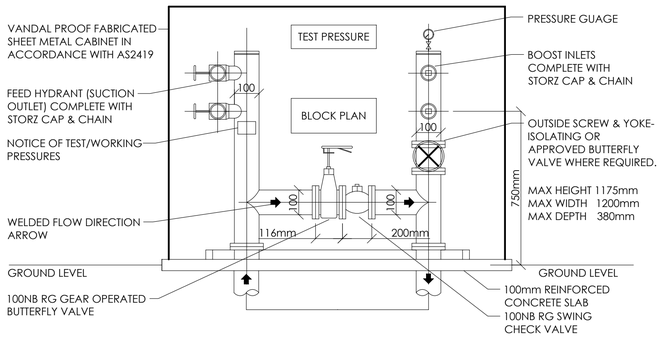
DRAWING TITLE
HYDRAULIC SERVICES
FIRE COVERAGE PLAN - LEVEL 2

PROJECT No.	DRAWING No.	ISSUE
TX17949.00 -	H3.03	A



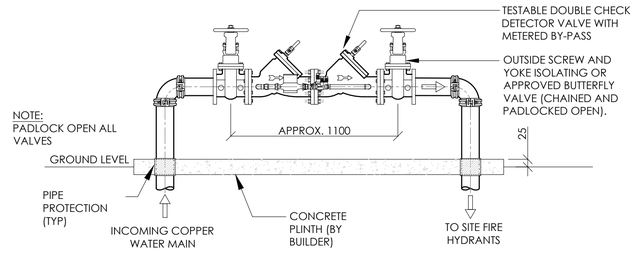
TYPICAL DOUBLE PILLAR HYDRANT DETAIL

N.T.S.



Ø100NB ROLLGROOVED COMBINED SUCTION BOOSTER ASSEMBLY

N.T.S.
NOTE:
1. PAINT ALL PIPEWORK & FITTINGS RED TO AS1345.
2. CENTRE OF SUCTION TO CENTRE OF BOOSTER 800mm.
3. PROVIDE THRUST BLOCKS AS NECESSARY
4. PROVIDE ADEQUATE COVER TO PIPEWORK BELOW GROUND
5. ALL ISOLATION VALVES TO BE LOCKED IN THE OPEN POSITION
6. ALL PIPEWORK FLANGES, NUTS, BOLTS. ETC. TO BE HOT DIPPED GALVANISED



Ø100NB ROLL GROOVED DOUBLE CHECK DETECTOR ASSEMBLY

N.T.S.
NOTE:
1. PROVIDE THRUST BLOCKS AS NECESSARY
2. PROVIDE ADEQUATE COVER TO PIPEWORK BELOW GROUND
3. ALL ISOLATION VALVES TO BE LOCKED IN THE OPEN POSITION.
4. ALL PIPEWORK FLANGES, NUTS, BOLTS ETC. TO BE HOT DIPPED GALVANISED

FIRE HOSE REEL SERVICE DESIGN CALCULATIONS

PRESSURE REQUIRED	210 kPa	
WATER REQUIRED	0.66 L/s	
PRESSURE IN MAIN	455 kPa	T.B.C. (LAPSED HWC SAP RELODGED 21.05.24
LENGTH OF RUN	300m	
PIPING PRESSURE LOSS INCLUDING FITTINGS	140kPa	INCLUDING RPZD AT BOUNDARY
VERTICAL RISE LOSS	85 kPa	
TOTAL PRESSURE LOSS	225 kPa	
PRESSURE AT END FIXTURE	230 kPa	ALL EXISTING PIPE SIZING T.B.C.
A PUMP IS NOT REQUIRED		

FIRE HYDRANT SERVICE DESIGN CALCULATIONS

PRESSURE REQUIRED	250 kPa 700 kPa	FEED HYDRANT ATTACK HYDRANT
WATER REQUIRED	20 L/s	
PRESSURE IN MAIN	450 kPa	T.B.C. (LAPSED HWC SAP RELODGED 21.05.24
LENGTH OF RUN	510m	RING MAIN
PIPING PRESSURE LOSS INCLUDING FITTINGS	127kPa	
VERTICAL RISE LOSS	85 kPa	
TOTAL PRESSURE LOSS	212 kPa	
PRESSURE AT END FIXTURE	238 kPa	T.B.C. (LAPSED HWC SAP RELODGED 21.05.24
A PUMP IS REQUIRED DUTY 10 L/s AT 60m HEAD		

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DESIGNED H.M | DRAWN N.K | DATE MAY 2024 | SIZE A1 | CAD REF TX17949.00 -H4.01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

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UNIT 1, 3 TEAMSTER CLOSE, TUGGERAH NSW 2259
PO BOX 3197, TUGGERAH NSW 2259

DRAWING TITLE
HYDRAULIC SERVICES CALCULATION & DETAIL SHEET

PROJECT No. TX17949.00 - DRAWING No. H4.01 ISSUE A