

# NEW WAREHOUSE

## 28 PLATINUM COURT THRUGOONA NSW 2640

### HYDRAULIC SERVICES

DRAWING SCHEDULE:	
NUMBER	TITLE
H000	COVERSHEET, LEGENDS, NOTES AND DRAWING LIST
H001	HYDRAULIC SPECIFICATIONS
H002	SITE SERVICES
H100	GROUND FLOOR PLAN SANITARY DRAINAGE LAYOUT
H101	MEZZANINE FLOOR PLAN SANITARY DRAINAGE LAYOUT
H102	ROOF PLAN SANITARY DRAINAGE LAYOUT
H200	GROUND FLOOR PLAN WATER AND GAS LAYOUT

#### PIPEWORK

	SANITARY DRAINAGE
	VENT
	COLD WATER
	HOT WATER
	FIRE HYDRANT
	EXISTING FIRE HYDRANT
	REDUNDANT EXISTING FIRE HYDRANT
	FIRE HYDRANT
	FIRE HOSE REEL

#### EXISTING AUTHORITIES

	EXISTING AUTHORITIES WATER MAIN
	EXISTING AUTHORITIES SEWER MAIN
	EXISTING AUTHORITIES GAS MAIN
	EXISTING AUTHORITIES STORMWATER MAIN

#### ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
AWC	ACCESSIBLE WATER CLOSET
B	BASIN
BTH	BATH
CO	CLEAROUT
DE	DIESEL EXHAUST
DP	DOWNPIPE
FE	FIRE EXTINGUISHER
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FW	FLOOR WASTE
HT	HOSE TAP
LT	LAUNDRY TUB
NTS	NOT TO SCALE
OFG	OVERFLOW GULLY
PG	PLANTER GRATE
RW	RAIN WATER REUSE PIPE
RWO	RAIN WATER OUTLET
ST	STACK SYSTEM
KS	KITCHEN SINK
SHR	SHOWER
SS	SINGLE STACK
SV	STOP VALVE
SW	STORMWATER
STWP	STORMWATER PIT
TD	TUNDISH
TTD	TRAP TUNDISH
UR	URINAL
VP	VENT PIPE
WC	WATER CLOSET
WM	WASHING MACHINE
WM	WATER METER
SD	SANITARY DRAINAGE
CHVP	CHAMBER VENT PIPE
SRM	SEWER RISING MAIN

#### DRAINAGE

TD	TUNDISH
RV	REFLUX VALVE IN PIT
RV	REFLUX VALVE
AAV	AIR ADMITTANCE VALVE
BT	BOUNDARY TRAP
CO	CLEAR OUT
FW	FLOOR WASTE
BTFW	BASKET TRAP FLOOR WASTE
	SEWER MANHOLE
ORG	OVERFLOW RELIEF GULLY
IPMF	INDUCT PIPE MICA FLAP
SIP	SEWER INSPECTION PIT (SEALED)
CP	CONTROL PANEL
DTU	DRAINAGE TURN UP
O/F	OVERFLOW

#### MISCELLANEOUS

	DRAWING CONTINUATION
	SERVICES IDENTIFIER - NON-DIRECTIONAL
	SERVICES IDENTIFIER - DOWNWARD FLOW
	SERVICES IDENTIFIER - UPWARD FLOW
	SERVICE TYPE SERVICE SIZE
	DETAIL TAG
	REVISION TAG

ABBREVIATIONS, SYMBOLS AND LINETYPES IN THE LEGEND  
MAY NOT APPEAR ELSEWHERE ON THE DRAWINGS.  
THIS LEGEND SHOULD BE USED AS A GUIDE ONLY

#### COLD & HOT WATER SERVICE

	STOP VALVE
	PATH VALVE
	SOLENOID VALVE
	CHECK VALVE
	REFLUX VALVE IN PATH BOX
	FILTER
	PRESSURE SWITCH
	STRAINER
	PUMP
	BUTTERFLY VALVE
	FLOAT VALVE
	PRESSURE LIMITING VALVE
	PRESSURE REDUCTION VALVE
	BACKFLOW PREVENTION
	BALANCING VALVE
	THERMOSTATIC MIXING VALVE
	HOSE TAP
	WATER METER
	COLD WATER POINT
	HOT AND COLD WATER POINTS
	REDUCED PRESSURE ZONE DEVICE

#### MISCELLANEOUS

	PIPE RISER
	PIPE DROPPER
	PIPE TEE
	PIPEWORK CONTINUATION
	FLOW DIRECTION
	NEW TEE IN EXISTING PIPEWORK
	NEW CONNECTION TO EXISTING PIPEWORK
	FIRE HOSE REEL
	FIRE HYDRANT
	FIRE EXTINGUISHER
	NODE POINT
	PENETRATION
	CAST IN SLAB
	PIPE END SECTION
	LINE BREAK

#### FIRE COVERAGE

	FIRE HYDRANT
	DOUBLE FIRE HYDRANT
	FIRE HOSE REEL
	STREET HYDRANT

P1 30.05.2025 100% FINAL COORDINATION

## HYDRAULIC SERVICES

NEW WAREHOUSE  
32 PLATINUM COURT  
THRUGOONA NSW 2640

Project Number:

24071

Drawing Number:

H000

Revision:

P1



Sydney: (02) 9052 6460  
Newcastle: (02) 9052 6461



**Sydney** Suite 1, 401 Pacific Hwy  
Artarmon, NSW 2064  
**Newcastle** Suite 4, 102 Glebe Road  
The Junction, NSW 2291



info@centricengineers.com.au  
www.centricengineers.com







**CENTRIC**  
Building Services Engineers

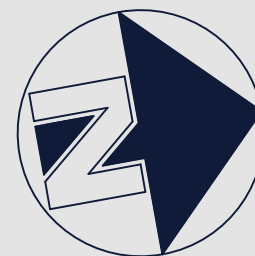
© CENTRIC BUILDING SERVICES ENGINEERS PTY LTD  
This drawing is the property of Centric Building Services PTY Limited and must not be used, reproduced or copied wholly or in part without the written permission of Centric Building Services PTY Limited. The elements shown on this drawing are prototypical design only. The contractor shall produce workshop drawings for construction purposes. The contractor shall not scale from this drawing and all measurements shall be carried out on site.

P1 30.05.2025 100% FINAL COORDINATION

**100%  
ISSUE**

**HYDRAULIC  
SERVICES**

Project North



Client: VINCENT JARVIS  
Project Number: 24071  
Drawing Number: H002  
Revision: P1  
Drawn by: IB  
Designed by: IB  
Approved by: JA  
Scale: 1:300 @ A1

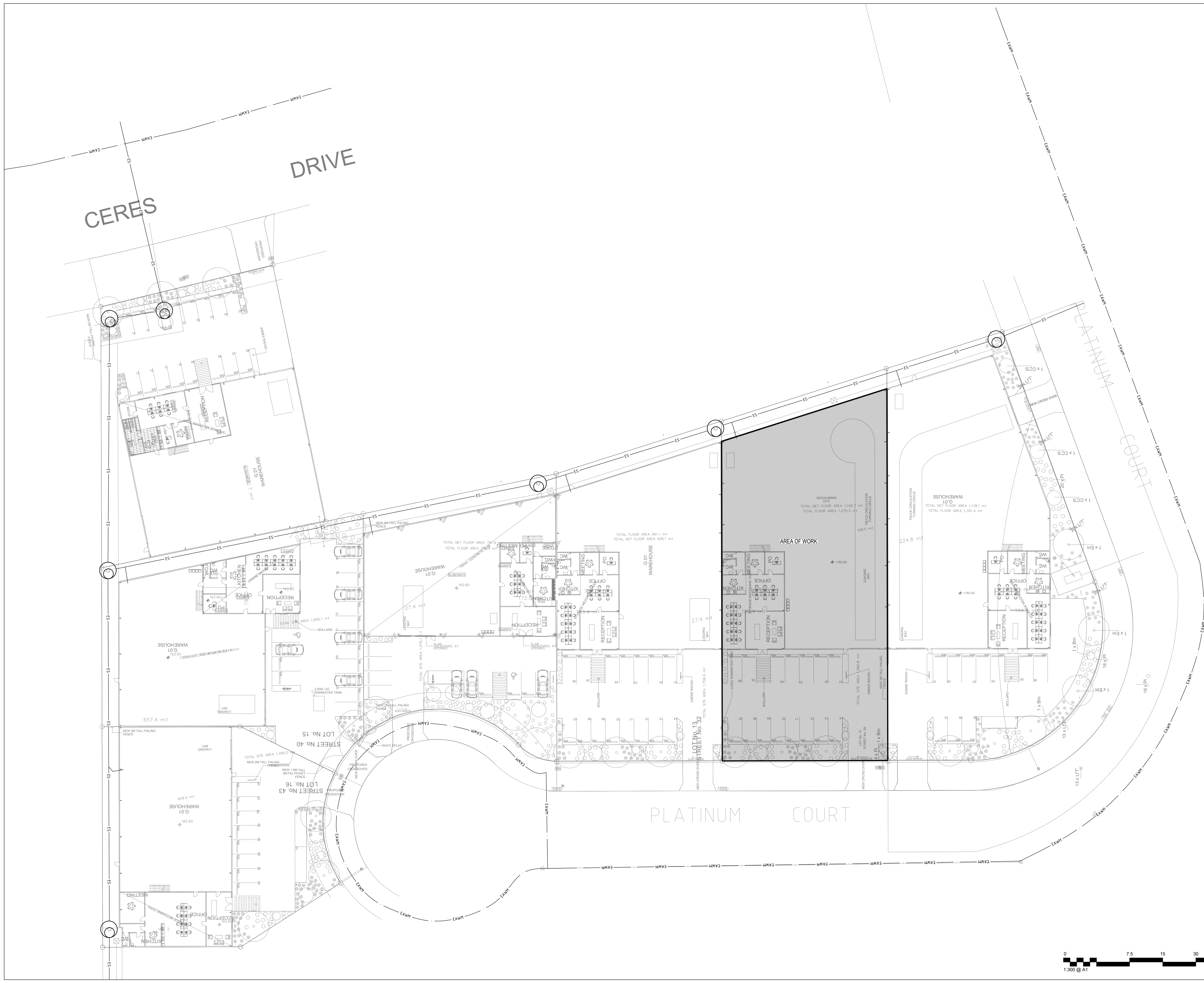
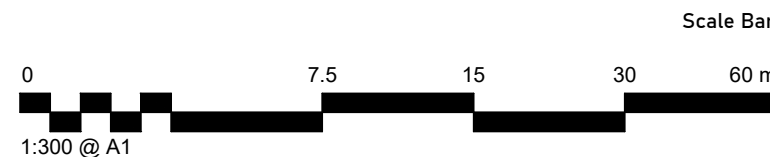
NEW WAREHOUSE, 28 PLATINUM COURT, THRUGOONA, NSW,2640

SITE SERVICES

Sydney: (02) 9052 6460  
Newcastle: (02) 9052 6461

**Sydney:** Suite 1, 401 Pacific Hwy  
Artarmon, NSW 2064  
**Newcastle:** Suite 4, 102 Glebe Road  
The Junction, NSW 2291

info@centricengineers.com.au  
www.centricengineers.com







**CENTRIC**  
Building Services Engineers

© **CENTRIC BUILDING SERVICES ENGINEERS PTY LTD**  
This drawing is the property of Centric Building Services PTY Limited and must not be used, reproduced or copied wholly or in part without the written permission of Centric Building Services Pty Limited. The elements shown on this drawing are prototypical design only. The contractor shall produce workshop drawings for construction purposes. The contractor shall not scale from this drawing and all measurements shall be carried out on site.

P1 30.05.2025 100% FINAL COORDINATION

**100%  
ISSUE**

## HYDRAULIC SERVICES

Project North



Client: Architect: VINCENT JARVIS

Project Number: 24071  
Drawing Number: H001  
Revision: P1

Drawn by: IB  
Designed by: IB  
Approved by: JA  
Scale: NTS

NEW WAREHOUSE, 28 PLATINUM COURT, THRUGOONA, NSW.2640

### HYDRAULIC SPECIFICATIONS

#### GENERAL NOTES:

- THESE DRAWINGS ARE A GUIDE ONLY FOR THE LOCATION AND LAYOUT OF THE SERVICE PIPES. CONTRACTOR TO EXAMINE SITE CONDITIONS AND ROUTE PIPEWORK TO MOST APPROPRIATE LOCATION ON SITE.
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, SPECIFICATIONS AND DRAWINGS. FOR THE FINAL LOCATION OF FIXTURES AND FITTINGS REFER TO ARCHITECTURAL SCHEDULE AND DRAWING PACKAGE.
- THE HYDRAULIC SERVICES WORK SHALL BE CARRIED OUT UNDER THE DIRECT SUPERVISION OF A LICENSED PLUMBER, DRAINER AND GAS FITTER IN STRICT ACCORDANCE WITH THE NSW CODES OF PRACTICE PLUMBING AND DRAINAGE, NATIONAL CONSTRUCTION CODE, RELEVANT AUSTRALIAN STANDARDS, COUNCIL REGULATIONS, FIRE ENGINEERING REPORT WHERE APPLICABLE AND TO THE SATISFACTION OF THE CONTROLLING AUTHORITIES.
- THIS SET OF DRAWINGS IS DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL CO-ORDINATE WITH OTHER TRADES AND SET OUT ALL WORKS TO SUIT ACTUAL ON-SITE CONDITIONS.
- THIS SET OF DRAWINGS IS ISSUED FOR TENDER STATUS FOR THE WORKS WHICH DOES NOT CONSTITUTE AS THE INSTALLATION DRAWINGS. THE CONTRACTOR SHALL DEVELOP THE INFORMATION CONTAINED ON THIS SET OF DRAWINGS INTO A COMPLETE SET OF FULLY DETAILED INSTALLATION DRAWINGS FOR CONSTRUCTION.
- CONFIRM LOCATION, SIZES AND DEPTHS OF STRUCTURAL BEAMS, ALL OTHER SERVICES, CEILING VOID AND CEILING HEIGHT PRIOR TO INSTALLATION. DETERMINE EXACT SIZES AND LOCATIONS OF STRUCTURAL PENETRATIONS ON SITE IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS. OBTAIN APPROVAL FROM STRUCTURAL ENGINEER PRIOR TO DRILLING ANY CORE HOLES AND PENETRATING STRUCTURE.
- DISTURBED AREAS ARE TO BE REINSTATED TO THE ORIGINAL CONDITION. TRENCHES THROUGH EXISTING ROAD AND CONCRETE SHALL BE FILLED AND COMPACTED AS PER STRUCTURAL ENGINEER'S REQUIREMENTS.
- OBTAIN APPROVALS, PERMITS AND FINAL CERTIFICATES FROM CONTROLLING AUTHORITIES PRIOR TO THE COMPLETION OF WORKS.
- PAY ALL APPLICABLE FEES AND CHARGES INCLUDING AREA CONTRIBUTION IN ACCORDANCE WITH CONTROLLING AUTHORITIES' CURRENT FEE SCALES. SUBMIT DETAILED HYDRAULIC CALCULATIONS WITH ISOMETRIC DIAGRAMS FOR THE HYDRAULIC SERVICES SYSTEMS FOR REVIEW PRIOR TO INSTALLATION.
- TECHNICAL SUBMISSION INCLUDING SHOP DRAWINGS, MATERIAL / EQUIPMENT SCHEDULES WITH TECHNICAL INFORMATION, HYDRAULIC CALCULATIONS, BMS SCHEDULES AND SAMPLES SHALL BE SUBMITTED TO CENTRIC FOR REVIEW PRIOR TO INSTALLATION.
- ALL HYDRAULIC SERVICES PIPEWORK SHALL BE LOCATED IN CEILINGS, WALLS, DUCTS OR UNDER BENCHES. PIPEWORK INSTALLED OTHER THAN NOTED SHALL BE APPROVED BY THE SUPERINTENDENT BEFORE WORK IS INSTALLED.

#### LEVELS:

- VERIFY THAT ALL INVERT LEVELS, SURFACE LEVELS AND CLEARANCES ARE CORRECT AND OBTAINABLE PRIOR TO COMMENCING WORKS.
- ALL LEVELS ARE SHOWN IN METRES AHD, UNLESS NOTED OTHERWISE.

#### REGULATIONS:

- ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH NSW CODES OF PRACTICE, NATIONAL CONSTRUCTION CODE, RELEVANT AUSTRALIAN STANDARDS, COUNCIL REGULATIONS, AND WHERE APPLICABLE AND TO THE SATISFACTION OF THE CONTROLLING AUTHORITIES.
- WORKS SHALL BE CONSTRUCTED & INSTALLED BY SUITABLY QUALIFIED, LICENSED, AND COMPETENT TRADES PERSONNEL.
- ALL WORKS RELATING TO NSW EDUCATION SHALL BE IN ACCORDANCE WITH THE EFSG GUIDELINES.

#### TESTING AND INSPECTION

- THE CONTRACTOR SHALL PAY ALL COSTS FOR TESTING OF HYDRAULIC SERVICES. ALL TESTING PROCEDURES TO BE UNDERTAKEN AS PER THE RELEVANT AUSTRALIAN STANDARD AND OR AUTHORITY REQUIREMENTS.
- THE CONTRACTOR SHALL ARRANGE INSPECTIONS WITH THE APPROPRIATE AUTHORITIES PRIOR TO SEALING OF SERVICES AT EACH STAGE WHERE REQUIRED.

#### EXISTING SERVICES

- ALL EXISTING SERVICES MADE REDUNDANT FROM THESE WORKS AND EXISTING REDUNDANT SERVICES SHALL BE REMOVED OR SEALED OFF IN ACCORDANCE WITH THESE DRAWINGS, CONTRACT DOCUMENTS AND TO THE SATISFACTION OF THE LOCAL AUTHORITY.

#### PIPE DIAMETERS

- ALL PIPE DIAMETERS DETAILED ON THESE DRAWINGS ARE SHOWN AS NOMINAL DIAMETERS(DN).
- WHERE PE, PEX, PPR, PB AND COMPOSITE PLASTIC PIPEWORK MATERIALS ARE NOMINATED, THE NOMINAL DIAMETER SHALL BE TAKEN AS THE INTERNAL DIAMETER OF THE PIPEWORK AND NOT THE OUTSIDE DIAMETER. FOR NOMINAL DIAMETERS UP TO DN50, REFER TO AS/NZS3500.1.

#### FIRE RATED PENETRATIONS

- PROVIDE FIRE RATED PENETRATIONS FOR SERVICES PASSING THROUGH EACH FIRE RATED ELEMENT. FIRE RATED PENETRATIONS SHALL ACHIEVE THE SAME RATING AS THE BUILDING ELEMENT PENETRATED. SEAL PENETRATIONS WITH A SYSTEM CONFORMING TO AS4072.1. PASSIVE FIRE ENGINEER AND NCC.
- WHEREVER OR WHENEVER THE PROPOSED WORKS REQUIRE THE PENETRATION OF AN ELEMENT HAVING A FIRE RESISTANCE RATING, THE CONTRACTOR SHALL ENSURE THAT ANY PERSON RESPONSIBLE FOR THE INSTALLATION OF ANY SYSTEM USED TO PROTECT/REINSTATE THE FRL OF THE PENETRATION;
  - HOLDS AN APPROPRIATE LICENSE
  - PROVIDES AN INSTALLATION STATEMENT IN THE FORMAT PRESCRIBED BY AS4072.1 TO DESCRIBE THE PENETRATION, ITS LOCATION AND METHOD OF TREATMENT
  - THE CONTRACTOR SHALL FURNISH A COPY OF THE INSTALLATION STATEMENT AS PROVIDED IN ABOVE TO THE INSPECTING OFFICER PRIOR TO REQUESTING AN INSPECTION FOR 'SUBSTANTIAL COMPLETION'.
- PROVIDE ACCESS TO PASSIVE FIRE PROTECTION DEVICES FOR INSPECTION IN ACCORDANCE WITH AS1851.
- CONTRACTOR TO ENSURE THAT A QUALIFIED PASSIVE FIRE PROTECTION COMPANY IS ENGAGED TO CERTIFY THE FINAL INSTALLATION OF ANY INSTALLED PASSIVE FIRE PROTECTION MEASURES THAT ARE PART OF THIS SCOPE OF WORKS.

#### THERMAL INSULATION OF PIPEWORK

- THERMAL INSULATION SHALL COMPLY IN ALL RESPECTS WITH AS/NZS3500.4.
- FOR INSULATED PIPING, COMPLETELY COVER THE PIPE WITH INSULATION FITTED TIGHTLY TO THE PIPE SURFACE AND SECURED AS PER MANUFACTURES REQUIREMENTS. INSTALL INSULATION SO THAT IT IS READILY REMOVABLE AT UNIONS AND COUPLERS.
- PROVIDE METAL SHEATHING TO INSULATION WHERE PIPEWORK IS IN PLANT ROOMS AND EXTERNAL LOCATIONS. METAL SHEATHING INSTALLED TO MANUFACTURES REQUIREMENTS.
- PROVIDE THERMAL INSULATION TO ALL DOMESTIC WATER PIPEWORK, INCLUDING COLD WATER. ENSURE COLD WATER PIPEWORK IS CONTINUOUSLY VAPOUR PROOFED INSULATED.

#### ACOUSTIC TREATMENT OF PIPEWORK

- ACOUSTIC REDUCTION TREATMENT SHALL BE PROVIDED IN AREAS REQUIRED BY THE NCC. ALL HYDRAULIC PIPES SHALL BE ACOUSTICALLY TREATED WHERE REQUIRED.

#### O AND M MANUALS/COMMISSIONING:

- PRIOR TO PRACTICAL COMPLETION PROVIDE FULLY COMPREHENSIVE SET OF OPERATING AND MAINTENANCE MANUALS. THE CONTENT OF THE MANUALS SHALL MINIMALLY COMPRISE THE FOLLOWING:
  - LOCAL AUTHORITIES CERTIFICATE OF FINAL INSPECTION & APPROVAL.
  - OPERATING INSTRUCTIONS FOR SPECIFIC PLANT THAT REQUIRES DAY TO DAY OPERATIONS BY PERSONNEL.
  - MAINTENANCE INSTRUCTION AS RECOMMENDED BY THE EQUIPMENT SUPPLIER FOR EQUIPMENT AND PLANT THAT IS LIABLE TO FAILURE WITHOUT SUCH MAINTENANCE.
  - MANUFACTURES BROCHURES, PROVIDING VISUAL RECOGNITION OF EACH COMPONENT OF ASSEMBLY AS WELL AS NAME OF MANUFACTURER AND ADDRESS FOR PROCUREMENT.
  - MANUALS ARE TO BE FULLY BOUND IN BOOK FORM COMPRISING OF A4 SHEETS OR A3 SHEETS SUITABLY FOLDED. LARGER SHEETS OR DRAWINGS ARE TO BE ENCLOSED IN CLEAR VINYL SLEEVES. SHEETS AND SLEEVES ARE TO BE PUNCHED AND CONTAINED IN QUALITY VINYL FOLDERS LABELLED ON THE OUTSIDE FRONT COVER AND ON THE SPINE TO INDICATE THE NAME OF THE PROJECT, CLIENT AND THE SERVICES DESCRIBED THEREIN.
  - COPIES OF WARRANTY REGISTRATION CERTIFICATES FOR EACH ITEM OF EQUIPMENT.
  - LOG SHEET FOR RECORDING, THE TESTING OF BACK FLOW PREVENTION DEVICES, TEMPERING VALVES AND THERMOSTATIC MIXING VALVES, THE LOG SHEET DETAIL, AND THE TEST PROCEDURES AND MAINTENANCE OF ALL VALVES, THE LOG SHEET DETAIL, AND THE TEST PROCEDURES AND MAINTENANCE OF ALL VALVES, ALONG WITH LIST OF FUTURE TEST DATES.
  - ORIENTATE AND ADJUST HYDRAULIC SERVICES TO SUIT FINAL LAYOUTS OF THE AMENITIES, TENANCY PLANS AND PLANTS.
- ALL EQUIPMENT AND APPLIANCES SHALL BE INSTALLED TO THE MANUFACTURERS REQUIREMENTS.

#### OCCUPATIONAL HEALTH AND SAFETY:

- FOR RESIDUAL RISKS IDENTIFIED FROM THE DESIGN PROCESS, REFER TO THE PROJECT RISK REGISTER.
- CHANGES TO HYDRAULIC SERVICES DESIGN SHALL BE REVIEWED AGAINST THE PROJECT RISK REGISTER AND MAY REQUIRE FURTHER RISK ASSESSMENT.

#### PLUMBING AND DRAINAGE:

- SUPPLY, INSTALL, TEST AND COMMISSION ALL SEWER DRAINAGE FROM SOIL AND WASTES AND FIXTURES TO THE SEWER CONNECTION. PROVIDE ALL NECESSARY PIPES, JUNCTIONS, BENDS, PITS, FLOOR WASTES, EXCAVATION, SUPPORTS, BACKFILLING, TESTING, AND SUNDRY EQUIPMENT REQUIRED FOR THE INSTALLATION. PIPELINE POSITIONS SHALL BE DETERMINED ON SITE IN CONJUNCTION WITH ALL OTHER DISCIPLINES TO ENSURE ADEQUATE COORDINATION OF ALL SERVICES AND ELEMENTS. COORDINATION SHALL BE CARRIED OUT PRIOR TO ANY SETTING OUT, EXCAVATION AND PIPE INSTALLATION TAKING PLACE.

- PROVIDE IDENTIFICATION TO ALL SERVICE PIPES AND CONDUITS EXPOSED TO VIEW OR IN ACCESSIBLE LOCATIONS SUCH AS DUCTS AND CEILING SPACES AND ALL EQUIPMENT.
- ALL PIPES SHALL BE ADEQUATELY SUPPORTED AND SECURELY FIXED IN ACCORDANCE WITH THE DRAWINGS AND TO THE SATISFACTION OF THE SI. SUCH SUPPORTING AND FIXING TO BE CARRIED OUT WITHOUT CAUSING ANY DISTORTION, DAMAGE OR STRESS ON THE PIPES OR PIPE JOINTS. PIPES SHALL BE SUPPORTED SPECIFIED IN 'PRELIMINARIES' SECTION.
- FIXTURE TRAPS:
  - SINKS - 50mm TWO-PART UNIVERSAL PATTERN.
  - BASIN - 40mm CP COPPER TWO-PART S OR P TRAP WITH 40mmCP EXTENSION RISER.
- TERMINATE ALL VENTS THROUGH ROOF WITH A VENT COWL. FINISH VENTS 300mm ABOVE NON-TRAFFICABLE ROOFS AND 3m ABOVE TRAFFICABLE ROOFS, 6 METRES CLEAR OF OPENINGS AND FRESH AIR INTAKES AS REQUIRED BY THE LOCAL AUTHORITY AND AS INDICATED ON THE DRAWINGS.
- INSTALL INSPECTION OPENINGS IN ACCESSIBLE LOCATIONS SO THAT EACH SECTION OF PIPEWORK CAN BE CLEANED. INSPECTION OPENING SIZES SHALL BE IN ACCORDANCE WITH AUTHORITIES' REQUIREMENTS. INSTALL INSPECTION OPENINGS AS PER AS3500.2.
- SUPPLY AND INSTALL UPVC TUNDISHES IN AREAS REQUIRED FOR MECHANICAL DRAINAGE. TUNDISHES TO BE CHROME PLATED WHERE EXPOSED AND TO COMPLY TO 'MATERIALS' SECTION.
- SUPPORTING AND FIXING TO BE CARRIED OUT WITHOUT CAUSING ANY DISTORTION, DAMAGE OR STRESS ON THE PIPES OR PIPE JOINTS.

#### TRADE WASTE:

- SUPPLY, INSTALL, TEST AND COMMISSION ALL SEWER TRADE WASTE DRAINAGE FROM SOIL AND WASTES AND FIXTURES TO THE SEWER CONNECTION. PROVIDE ALL NECESSARY PIPES, JUNCTIONS, BENDS, PITS, FLOOR WASTES, EXCAVATION, SUPPORTS, BACKFILLING, TESTING, AND SUNDRY EQUIPMENT REQUIRED FOR THE INSTALLATION. PIPELINE POSITIONS SHALL BE DETERMINED ON SITE IN CONJUNCTION WITH ALL OTHER DISCIPLINES TO ENSURE ADEQUATE COORDINATION OF ALL SERVICES AND ELEMENTS. COORDINATION SHALL BE CARRIED OUT PRIOR TO ANY SETTING OUT, EXCAVATION AND PIPE INSTALLATION TAKING PLACE.
- ALL TRADE WASTE MATERIALS AND EQUIPMENT TO COMPLY WITH THE REGULATIVE AUTHORITY AND WATERMARK SCHEME.

#### COLD WATER SERVICE:

- SUPPLY, INSTALL, TEST AND COMMISSION ALL DOMESTIC COLD WATER PIPES FROM THE AUTHORITY'S MAIN TO ALL FIXTURES, FITTINGS AND FAUCETS REQUIRING DOMESTIC COLD WATER. INCLUDE FOR ALL PIPEWORK, BENDS, OFFSETS, BRACKETS, PUMPS, TAPS AND FAUCETS AND SUNDRY EQUIPMENT REQUIRED FOR THE INSTALLATION. REFER TO 'MATERIALS' SECTION FOR PIPING SCHEDULE.
- APPLY TO WATER AUTHORITY FOR THE SUPPLY OF ALL METERS, TAKE DELIVERY FROM AUTHORITY'S STORE AND INSTALL ON SITE, COMPLETE WITH ALL VALVES AND FITTINGS REQUIRED.
- EXCAVATE, LOCATE, AND CONNECT TO THE EXISTING AUTHORITIES WATER MAINS FOR THE SERVICES AS REQUIRED AND EXTEND TO THE RETICULATION. CONTRACTOR TO APPLY, MAKE ALL RELEVANT APPLICATIONS AND PAY ALL ASSOCIATED FEES.
- PROVIDE A WATER PRESSURE TEST OF 1500 KPA FOR A PERIOD OF TWO HOURS. DISCONNECT ANY EQUIPMENT CONNECTED TO THE SERVICE NOT RATED TO THE TEST PRESSURE BEFORE TESTING COMMENCES.
- HYDRAULICS SHALL FLUSH OUT, REMOVE ALL FOREIGN MATTER, AND CLEAN ALL THE SYSTEMS. WATER SYSTEMS SHALL BE FLUSHED OUT WITH CLEAN WATER.
- PROVIDE AND INSTALL HOSE TAPS WITH ANTI-VANDAL HEADS. (WHERE REQUIRED)
- ALL PIPES SHALL BE ADEQUATELY SUPPORTED AND SECURELY FIXED IN ACCORDANCE WITH AS3500.1

#### HEATED WATER SERVICE:

- SUPPLY, INSTALL, TEST AND COMMISSION THE DOMESTIC HOT WATER SERVICE AND WARM WATER SERVICE FROM THE HOT WATER HEATERS TO THE FIXTURES AND APPLIANCES. INCLUDE FOR ALL PIPING, FITTINGS, SUPPORTS, INSULATION, HOT WATER HEATERS, VALVES, CIRCULATING PUMPS AND OTHER SUNDRY ITEMS OF EQUIPMENT REQUIRED FOR THE INSTALLATION.
- PROVIDE A WATER PRESSURE TEST OF 1500 KPA FOR A PERIOD OF TWO HOURS. DISCONNECT ANY EQUIPMENT CONNECTED TO THE SERVICE NOT RATED TO THE TEST PRESSURE BEFORE TESTING COMMENCES.
- MAKE ADEQUATE PROVISION FOR EXPANSION AND CONTRACTION BY THE PROVISION OF CLIPS/BRACKETS WITH WOODEN EXPANSION BLOCKS SO THAT UNDER ALL WORKING CONDITIONS NO STRAIN IS IMPOSED ON PIPEWORK OR FITTINGS.
- PROVIDE AIR RELIEF VALVES WITH TO PIPELINES AT THE TOP OF CIRCULATION LOOPS (FLOW AND RETURN) THAT DO NOT HAVE AN OUTLET AT THE HIGHEST POINT IN THE LOOP. EXTEND A 15MM DRAIN PIPELINE FROM THE VALVE TO A DRAINAGE POINT OR TUNDISH.
- SUPPLY AND INSTALL AN ADJUSTABLE TEMPERING VALVE SET AT 50°C TO ALL BASINS AND SHOWERS OR AREAS OF ABOLITION.
- SUPPLY AND INSTALL THERMOSTATIC MIXING VALVES TO ALL ACCESSIBLE TOILETS AND ALL SANITARY FIXTURES, AS INDICATED ON THE DRAWINGS SET AT 45°C.
- SUPPLY, INSTALL AND FIX HOT WATER HEATERS IN THE LOCATIONS INDICATED ON THE DRAWINGS. INSTALLATION OF HOT WATER HEATERS AS PER AS3500.4. TEMPERATURE PRESSURE RELIEF VALVE TO BE DIRECTED TO TUNDISH.
- SUPPLY AND INSTALL BOILING WATER UNITS AS PER ARCHITECTURAL DOCUMENTATION.

#### RAINWATER REUSE SYSTEM:

- THE RAINWATER WILL BE COLLECTED FROM THE ROOF AND STORED IN A WATER TANK AS SHOWN ON THE DRAWINGS. RAINWATER WILL BE PRESSURISED INTO A DEDICATED RAINWATER REUSE PIPE SYSTEM.
- IDENTIFY ALL RAINWATER PIPEWORK AND EQUIPMENT WITH THE FOLLOWING:
  - "WARNING RECYCLED / RECLAIMED / RAINWATER REUSE WATER - DO NOT DRINK".
- THE CONTRACTOR IS TO SUPPLY AND INSTALL A RAINWATER RE-USE TANK AS PER CIVIL ENGINEER/ARCHITECTS REQUIREMENTS.
- THE CONTRACTOR IS TO SUPPLY AND INSTALL A RAINWATER RE-USE PUMP AND ASSOCIATED FILTERS, BACKFLOW PREVENTION AND SWITCHOVER DEVICES AS PER HYDRAULIC DRAWINGS.

#### GAS SERVICES:

- SUPPLY, INSTALL, TEST AND COMMISSION THE GAS SERVICE FROM THE POINT OF CONNECTION TO ALL GAS POINTS. EXTEND AS SPECIFIED SUPPLYING ALL METERS, REGULATORS, FILTERS, PIPEWORK AND SUNDRY ITEMS TO COMPLETE THE SYSTEM TO COMPLY TO THE LOCAL GAS AUTHORITIES' REGULATIONS.
- CARRY OUT THE GAS INSTALLATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE REGULATORY AUTHORITIES AND RELEVANT GAS STANDARDS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY FOR THE GAS APPLICATION AND PAY ALL FEES ASSOCIATED. ASCERTAIN THE DEPTH, POSITION AND SUITABILITY OF THE GAS CONNECTION POINTS PRIOR TO THE COMMENCEMENT. INSTALL GAS PATH VALVE 225MM FROM BOUNDARY FOR GAS AUTHORITY CONNECTION. TO COMPLY WITH GAS AUTHORITY.
- CARRY OUT THE REQUIRED TESTS IN THE PRESENCE OF THE SUPERINTENDENT AND AN AUTHORISED REPRESENTATIVE OF THE RELEVANT AUTHORITY. SUPPLY THE APPARATUS AND MATERIALS NECESSARY. SUBMIT THE TEST RESULTS IN WRITING. REPLACE AND RETEST COMPONENTS, IF ANY, WHICH FAIL THE REQUIRED TEST.
- ON COMPLETION OF INSTALLATION AND TESTING, TURN ON ISOLATING AND CONTROL VALVES, AND PURGE AND CHARGE THE INSTALLATION. HAND OVER THE INSTALLATION FULLY CHARGED WITH GAS.
- LPG INSTALLATION SHALL BE AS PER AS1596 AND RELEVANT GAS SUPPLIER REQUIREMENTS.

#### FIRE HOSE REEL SERVICE:

- SUPPLY, INSTALL, TEST AND COMMISSION THE HOSE REEL SERVICE FROM THE POINT OF CONNECTION TO ALL FIRE HOSE REELS ALL IN ACCORDANCE WITH THE NCC AND AS 2441.
- SUPPLYING ALL FITTINGS, VALVES, BRACKETS, PUMPS AND SUNDRY ITEMS TO COMPLETE THE INSTALLATION INCLUDING THE HOSE REELS TO THE APPROVAL OF THE NSW FIRE BRIGADE, THE LOCAL COUNCIL AND THE SI. FIRE HOSE REELS TO BE INSTALLED WITHIN 4M OF EGRESS.
- ON COMPLETION OF THE FIRE HOSE REEL INSTALLATION, PROVIDE 'TAGS' FOR ALL FIRE HOSE REELS AND ENGAGE A FIRE PROTECTION CONTRACTOR TO INSPECT THE HOSE REELS FOR COMPLIANCE. FLUSH SYSTEM TO REMOVE DEBRIS.

#### FIRE HYDRANT SERVICE:

- SUPPLY, INSTALL, TEST AND COMMISSION THE FIRE HYDRANT SERVICE FROM THE INCOMING WATER MAIN TO ALL FIRE HYDRANTS REQUIRED. INCLUDE FOR ALL PIPING, FITTINGS, VALVES, HYDRANT VALVES, PUMPS, CONTROL EQUIPMENT ELECTRICAL WIRING AND OTHER SUNDRY ITEMS OF EQUIPMENT AS REQUIRED FOR THE INSTALLATION IN ACCORDANCE WITH THE NCC AND AS 2419. PROVIDE A FLOW TEST TO COMPLY TO AS2419.1.
- PROVIDE DOUBLE CHECK DETECTOR VALVE ASSEMBLIES WITH DOUBLE CHECK DETECTOR VALVES AND BY-PASS METERS. DOUBLE CHECK DETECTOR ASSEMBLIES TO BE BURN - 350DA OR APPROVED EQUAL AND INSTALLED UPSTREAM OF FIRE HYDRANT VALVE ASSEMBLIES.
- SUPPLY AND INSTALL AN APPROVED FIRE HYDRANT BOOSTER VALVE IN ACCORDANCE WITH AS2419.1 & FPAA101H SPRINKLER SYSTEM.
- SUPPLY AND INSTALL INTERNAL LANDING VALVE HYDRANTS IN APPROVED LOCATIONS WITH THE CENTRE OF THE VALVE 750MM ABOVE FLOOR AND HAVING AT LEAST 300MM CLEARANCE AND ANGLED 350 DOWN FROM THE HORIZONTAL PLANE. INSTALL HYDRANTS CLEAR OF FIRE EGRESS PATH.
- INSTALL FIRE HYDRANTS WHERE NOMINATED ON DRAWINGS.
- TEST ALL PIPEWORK 1700 KPA FOR A PERIOD OF TWO HOURS.
- ALL PIPES SHALL BE ADEQUATELY SUPPORTED AND SECURELY FIXED IN ACCORDANCE WITH THE DRAWINGS AND TO THE SATISFACTION OF THE SI. SUCH SUPPORTING AND FIXING TO BE CARRIED OUT WITHOUT CAUSING ANY DISTORTION, DAMAGE OR STRESS ON THE PIPES OR PIPE JOINTS. THE SUBCONTRACTOR SHALL PAY PARTICULAR ATTENTION TO ANY INTERNAL FIRE HYDRANT SUPPLY PIPING THAT IS TO BE INSTALLED WITHIN A NON-FIRE SPRINKLER PROTECTED SPACE / BUILDING. FIXINGS AND SUPPORTS ARE REQUIRED TO BE 60/- RATED IN ACCORDANCE WITH AS2419. EVIDENCE THAT THIS FIXING AND SUPPORT COMPLIANCE IS REQUIRED TO BE PROVIDED PRIOR TO INSTALLATION.
- PROVIDE A BLOCK PLAN IN ACCORDANCE WITH AS 2419.1. IT SHALL BE FIXED WITHIN OR ADJACENT TO THE BOOSTER CABINET, ENCLOSURE, OR RECESS WHERE IT CAN BE READILY SEEN BY FIRE FIGHTERS AND OTHERS RESPONDING TO AN ALARM OR AT OTHER POSITIONS AS REQUIRED BY THE REGULATORY AUTHORITY.

#### FIRE EXTINGUISHERS:

- SUPPLY, INSTALL AND COMMISSION THE FIRE EXTINGUISHER SYSTEM ALL TO COMPLY TO AS2444 & NCC. INSTALL IN LOCATIONS AS NOMINATED ON DRAWINGS.
- PROVIDE SIGNAGE IN ACCORDANCE WITH AS2444.



Sydney: (02) 9052 6460  
Newcastle: (02) 9052 6461



**Sydney:** Suite 1, 401 Pacific Hwy  
Artarmon, NSW 2064  
**Newcastle:** Suite 4, 102 Glebe Road  
The Junction, NSW 2291



info@centricengineers.com.au  
www.centricengineers.com



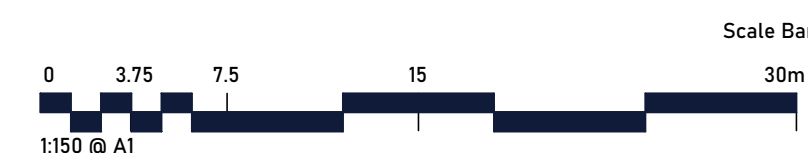




P1 30.05.2025 100% FINAL COORDINATION

## HYDRAULIC SERVICES

### GROUND FLOOR PLAN SANITARY DRAINAGE LAYOUT





**CENTRIC**  
Building Services Engineers

© **CENTRIC BUILDING SERVICES ENGINEERS PTY LTD**  
This drawing is the property of Centric Building Services PTY Limited and must not be used, reproduced or copied wholly or in part without the written permission of Centric Building Services PTY Limited. The elements shown on this drawing are prototypical design only. The contractor shall produce workshop drawings for construction purposes. The contractor shall not scale from this drawing and all measurements shall be carried out on site.

P1 30.05.2025 100% FINAL COORDINATION

**100%  
ISSUE**

**HYDRAULIC  
SERVICES**

Project North

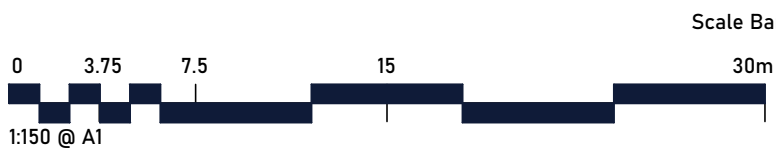
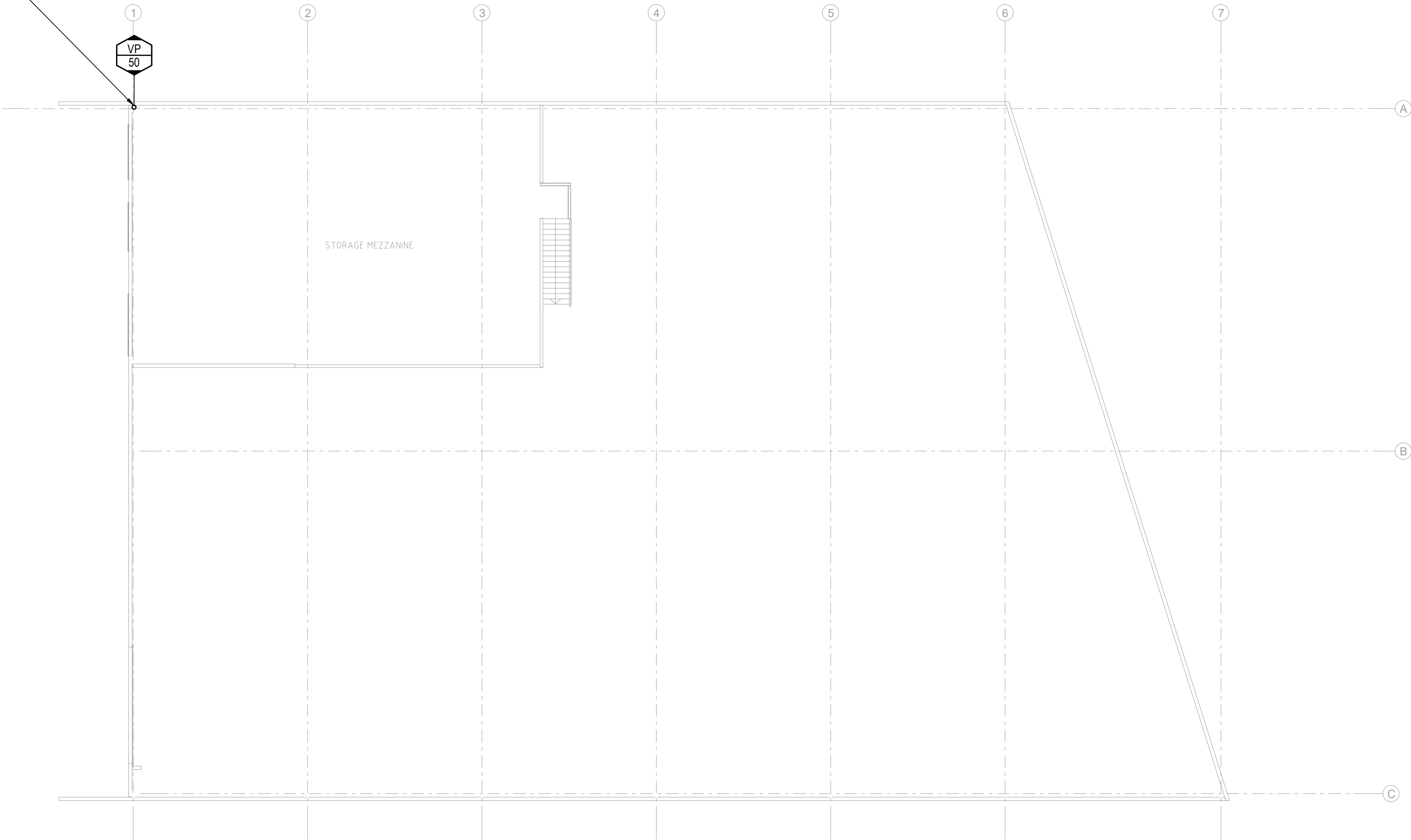


Client:  
Architect: VINCENT JARVIS  
Project Number: 24071  
Drawing Number: H101  
Revision: P1  
Drawn by: IB  
Designed by: IB  
Approved by: JA  
Scale: 1:150 @ A1

NEW WAREHOUSE, 28 PLATINUM  
COURT, THRUGOONA, NSW,2640

LEVEL M FLOOR PLAN SANITARY  
DRAINAGE LAYOUT

50mm VENT PIPE CLIPPED TO SIDE WALL



Sydney: (02) 9052 6460  
Newcastle: (02) 9052 6461



**Sydney:** Suite 1, 401 Pacific Hwy  
Artarmon, NSW 2064  
**Newcastle:** Suite 4, 102 Glebe Road  
The Junction, NSW 2291



info@centricengineers.com.au  
www.centricengineers.com





CENTRIC  
Building Services Engineers

© CENTRIC BUILDING SERVICES ENGINEERS PTY LTD  
This drawing is the property of Centric Building Services PTY Limited and must not be used, reproduced or copied wholly or in part without the written permission of Centric Building Services PTY Limited. The elements shown on this drawing are prototypical design only. The contractor shall produce workshop drawings for construction purposes. The contractor shall not scale from this drawing and all measurements shall be carried out on site.

P1 30.05.2025 100% FINAL COORDINATION

100%  
ISSUE

HYDRAULIC  
SERVICES

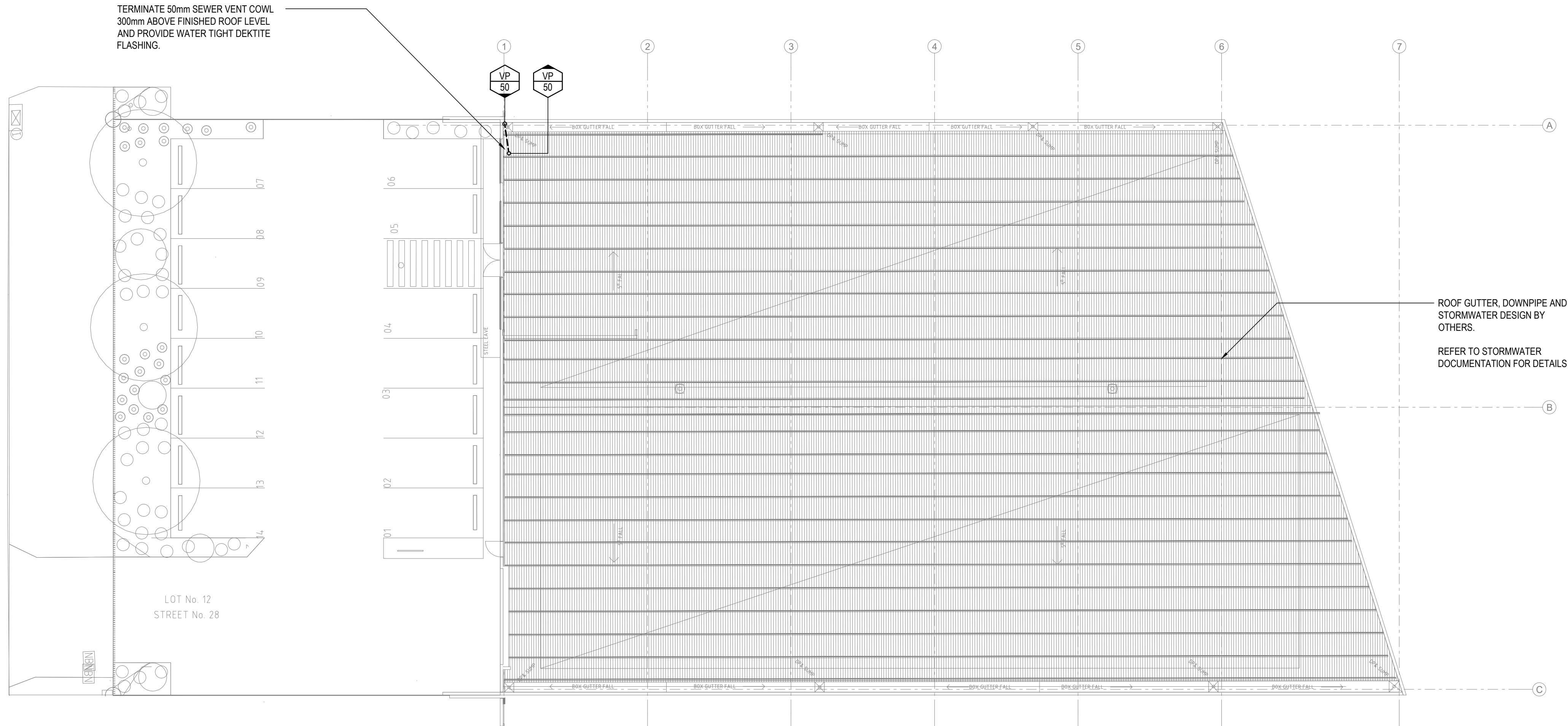
Project North



Client:  
Architect: VINCENT JARVIS  
Project Number: 24071  
Drawing Number: H102  
Revision: P1  
Drawn by: IB  
Designed by: IB  
Approved by: JA  
Scale: 1:150 @ A1

NEW WAREHOUSE, 28 PLATINUM  
COURT, THRUGOONA, NSW,2640

ROOF PLAN SANITARY DRAINAGE  
LAYOUT







P1 30.05.2025 100% FINAL COORDINATION

## HYDRAULIC SERVICES

NEW WAREHOUSE, 28 PLATINUM COURT, THRUGOONA, NSW, 2640



DOCUMENT REGISTER & TRANSMITTAL NOTICE



**Centric Building Services Engineers Pty Ltd**  
 Sydney: Suite 1, 401 Pacific Hwy, Artarmon, NSW 2064  
 Newcastle: Suite 4, 102 Glebe Road, The Junction, NSW, 2291  
 Sydney: +61 - (02) 9052 6460 | Newcastle: +61 - (02) 9052 6461  
[info@centricengineers.com.au](mailto:info@centricengineers.com.au)  
[www.centricengineers.com.au](http://www.centricengineers.com.au)

**Job Title: NEW WAREHOUSE**  
**Address: 28 PLATINUM COURT THRU GOONA NSW 2640**  
**Job No: 24071**  
**Discipline: Hydraulic**

[illegible]