SPECIFICATION NOTES

EXTENT

THE EXTENT OF THE HYDRAULIC SERVICES INSTALLATION IS AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION AND IS TO INCLUDE ALL NECESSARY PIPEWORK AND FITTINGS TO COMPLETE THE WORKS IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITIES AND THIS SPECIFICATION.

THE WORK IS TO INCLUDE:

- STORMWATER DRAINAGE
- SEWER HOUSE DRAINAGE
- SANITARY PLUMBING
- COLD WATER
- HOT WATER
- WARM WATER
- FIRE HOSE REEL SYSTEM
- FIRE HYDRANT SYSTEM
- SANITARY FIXTURES, FITTINGS, AND TAPWARE
- GAS SERVICE
- DOWNPIPES
- MATERIALS

VISIT SITE TO ASSESS SITE CONDITIONS. FAILURE TO DO SO WILL FORFEIT ANY CLAIM FOR NOT BEING AWARE OF CONDITIONS AFFECTING THE TENDER.

SAFELY CARRY OUT ALL REQUIRED EXCAVATION AND BACK FILLING OF TRENCHES. INCLUDING COMPACTION AND REINSTATEMENT OF SURFACE FINISHES.

ALL PIPEWORK AND FITTINGS WHERE IN-GROUND ARE TO BE FIRMLY BEDDED ON SAND OR AS REQUIRED BY THE AUTHORITY.

DURING CONSTRUCTION, ERECT AND MAINTAIN SUITABLE EROSION CONTROL BARRIERS TO PREVENT SEDIMENT AND RUBBISH FROM TRAVELING INTO THE IN-GROUND DRAINAGE AND WATER SUPPLY SYSTEMS.

HYDRAULIC SERVICES WORK AS EXECUTED CAD DRAFTED DRAWINGS AND MANUAL TO BE PROVIDED.

AUTHORITIES

THE WHOLE OF THE WORKS IS TO BE CARRIED OUT BY A FULLY LICENSED PLUMBER, DRAINER AND GAS FITTER, TO THE STANDARDS AND LATEST REGULATIONS OF ALL GOVERNING AUTHORITIES HAVING JURISDICTION OVER THE WORKS AND IN PARTICULAR THOSE LISTED BELOW:-

- SYDNEY WATER
- AGL SYDNEY LIMITED (AGILITY)
- BUILDING CODE OF AUSTRALIA 2009
- KU-RING-GAI COUNCIL

MAKE APPLICATIONS TO, AND PAY TO THE RELEVANT AUTHORITIES, ALL FEES AND CHARGES LEGALLY DEMANDABLE.

OBTAIN CERTIFICATES FROM AUTHORITIES INDICATING SATISFACTORY COMPLETION OF SERVICES. HAND OVER TO THE ARCHITECT BEFORE APPLICATION FOR FINAL PAYMENT AND PRACTICAL COMPLETION.

ARRANGE AND BE PRESENT FOR ALL AUTHORITIES INSPECTIONS, TESTS AND APPROVALS AS REQUIRED, USING THE METHODS AND PROCEDURES PRESCRIBED BY THEM. WORK IS TO NOT BE COVERED OR CONCEALED FROM VIEW UNTIL IT HAS BEEN INSPECTED, TESTED AND APPROVED AS REQUIRED OR DIRECTED. RECTIFY ANY DEFECTS AND RETEST AS NECESSARY. SUBMIT A WRITTEN PROGRAMMED SCHEDULE OF TESTS PRIOR TO COMMENCEMENT OF THE WORKS.

ANY SECTION OF THE WORK WHICH DOES NOT COMPLY WITH THE LATEST REQUIREMENTS OF RELEVANT AUTHORITIES REQUIREMENTS MUST BE DISCLOSED, BEFORE COMMENCEMENT OF WORK.

ALL DRAINAGE IS TO BE LAID TO CORRECT FALLS, TRUE TO BORE FROM POINT TO POINT.

WHERE DRAINS PASS THROUGH WALLS OR STRUCTURAL FOOTINGS, PROVIDE A SLEEVED PENETRATION TO PERMIT A CLEAR 25MM SPACE AROUND THE DRAIN PIPE. AT OUTER WALLS, MAKE SUITABLE PROVISION TO PREVENT THE ENTRY OR VERMIN THROUGH THE SPACE.

ALLOW FULL CO-ORDINATION WITH WORKS BY ALL OTHER TRADES.

DRAWINGS AND COORDINATION

THE DRAWINGS SHOW THE ROUTES OF THE VARIOUS HYDRAULIC SERVICES FOR LAY OUT. THE DRAWINGS ARE CONCEPTUAL AND ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS FOR THE PROJECT. ATTEND TO ALL DETAILS AND SITE CO-ORDINATION. GENERALLY, NO PIPE RUN IS TO BE EXPOSED WITHOUT PRIOR APPROVAL. AT THE COMPLETION OF THE PROJECT AND PRIOR TO PRACTICAL COMPLETION PREPARE DRAWINGS IN ACCORDANCE WITH THE AS-BUILT DRAWINGS SECTION OF THIS SPECIFICATION.

TESTING AND INSPECTIONS

ARRANGE AND BE PRESENT FOR ALL AUTHORITIES INSPECTIONS, TESTS AND APPROVALS AS REQUIRED, USING THE METHODS AND PROCEDURES PRESCRIBED BY THEM. NOTIFY WITH A MINIMUM OF 24 HOURS NOTICE OF ALL TESTS. WORK IS TO NOT BE COVERED OR CONCEALED FROM VIEW UNTIL IT HAS BEEN INSPECTED, TESTED AND APPROVED AS REQUIRED OR DIRECTED BY THE ARCHITECT. RECTIFY ANY DEFECTS AND RE-TEST AS NECESSARY.

CONCEALED PIPEWORK

EXCEPT WHERE CONNECTING TO FIXTURES OR EQUIPMENT PIPING IS TO BE CONCEALED WITHIN WALL CHASES, IN ROOF SPACES OR DESIGNATED ZONES.

CHASING IS TO BE CARRIED OUT WITH A MECHANICAL SAW. CHASING WILL NOT BE PERMITTED IN MASONRY WALLS OR SLABS WITHOUT PRIOR APPROVAL OF THE ARCHITECT.

PENETRATIONS

EXACT SIZE & LOCATION OF STRUCTURAL PENETRATIONS TO BE DETERMINED ON SITE IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS.

PENETRATIONS THROUGH STRUCTURES TO BE APPROVED IN WRITING BY STRUCTURAL ENGINEER PRIOR TO BEING MADE.

WHERE SERVICES PENETRATE STRUCTURE THE PENETRATION IS TO BE FIRE RATED TO THE SAME RATING AS THE STRUCTURE BEING PENETRATED, TO THE APPROVAL OF ALL AUTHORITIES AND IN ACCORDANCE WITH CLAUSES C3.12 AND C3.15 OF BCA 2009.

OPENINGS

ALL OPENINGS FOR SERVICES INSTALLATIONS ARE TO BE PROTECTED FROM FIRE AND SMOKE SPREAD BY TESTED SYSTEMS.

ACCESS

PROVIDE ACCESS TO ALL SERVICES AND COMPONENTS IN ACCORDANCE WITH CLAUSE NSW J8.2 OF BCA 2009.

EXISTING SERVICES

ALLOW TO INVESTIGATE FOR AND LOCATE ALL EXISTING SERVICES. CO-ORDINATE THE NEW WORKS WITH THE EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS. CONFIRM SUITABILITY OF LOCATION, LEVEL, SIZE AND CONNECTION POINT OF ALL SERVICES OR ADVISE OTHERWISE PRIOR TO THE COMMENCEMENT OF WORK.

EXISTING SERVICES SHALL NOT BE INTERRUPTED AT ANY TIME OTHER THAN WITH THE APPROVAL OF THE ARCHITECT. ALL WORK IN CONNECTION WITH THE EXISTING SERVICES SHALL BE CARRIED OUT EXPEDITIOUSLY SO THAT THE NUMBER AND DURATION OF INTERRUPTIONS ARE REDUCED TO A MINIMUM. INTERRUPTION TO EXISTING SERVICES REQUIRE A MINIMUM 48 HOURS NOTICE.

CAP OFF ANY EXISTING SERVICES THAT MAY BECOME REDUNDANT DURING THE PROGRESS OF THE PROJECT.

MATERIALS AND WORKMANSHIP

ALL MATERIALS ARE TO BE THE BEST QUALITY AND TYPE OF THEIR KIND AS NOMINATED IN THE SPECIFICATION AND SUITABLY PROTECTED AGAINST DAMAGE UNTIL COMPLETION. IN ALL CASES, THEY ARE TO CONFORM TO THE REQUIREMENTS OF THE LATEST RELEVANT SPECIFICATION OF THE STANDARDS ASSOCIATION OF AUSTRALIA.

ALL COMPONENTS OF THE HYDRAULIC SERVICES ARE TO BE SELECTED TO ENSURE MINIMUM POSSIBLE DETERIORATION BOTH IN THE STORED AND THE INSTALLED LOCATION.

CO-ORDINATE INSTALLATION OF PIPEWORK WITH OTHER TYPES OF TRADE SERVICES AND STRUCTURE. SET OUT ALL CORE HOLES AND SLEEVES AS REQUIRED TO CO-ORDINATE WITH ALL OTHER TRADES AND STRUCTURE.

ALL SUITABLE PRECAUTIONS ARE TO BE TAKEN TO ENSURE NO NOISE OR VIBRATION IS TRANSMITTED FROM THE INSTALLATIONS, OR CAUSE A NUISANCE TO OCCUPANTS OR EQUIPMENT IN THE BUILDING, BOTH DURING CONSTRUCTION, AND AFTER COMPLETION.

ALL DRAINAGE IS TO BE LAID TO CORRECT FALLS, TRUE TO BORE FROM POINT TO POINT.

ALL SERVICES PENETRATING FIRE RATED ELEMENTS SHALL BE PROVIDED WITH FIRE STOPS AS REQUIRED BY THE BCA AND OTHER RELEVANT CODES AND STANDARDS.

ALL WATER PIPEWORK IS TO BE INSTALLED USING A MINIMUM NUMBER OF JOINTS.

DO NOT COVER OR CONCEAL UNDERGROUND OR ENCLOSED WORK UNTIL IT HAS BEEN INSPECTED AND TESTED AS REQUIRED.

ALL INSTALLED SERVICES ARE TO COMPLY WITH THE REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA AND AS 3500.

PROVIDE 12 MONTHS WARRANTY & MAINTENANCE PERIOD FOR ALL WORK COVERED BY THIS CONTRACT.

RETAIN ALL MANUFACTURERS WARRANTIES AND GUARANTEES AND HAND OVER TO ARCHITECT WHEN INSTALLATION IS COMPLETE.

SANITARY FACILITIES SHAL BE IN ACCORDANCE WITH AS 1428.1

AS BUILT DRAWINGS

PROGRESSIVELY, THROUGHOUT THE COURSE OF THE INSTALLATION, MARK-UP A SET OF HYDRAULIC SERVICES DRAWINGS AT A MINIMUM SCALE OF 1:100 WITH ELECTRONIC DRAWING FILES AND HARD COPIES BEING PROVIDED, INDICATING POSITIONS OF INSTALLED SERVICES, WITH DIMENSIONS TO CENTRELINE OF PIPE, REFERRED TO BUILDING FINISHED STRUCTURE. INDICATE ALSO, DIMENSIONED POSITION AND DEPTH OF ALL EXTERNAL SERVICES. PROVIDE OPERATIONS AND MAINTENANCE MANUAL IN REQUIRED FORMAT INCLUSIVE OF WARRANTIES AND OTHER RELEVANT INFORMATION.

SEWER DRAINAGE

SUPPLY AND INSTALL ALL SEWER HOUSE DRAINAGE TO CONNECT ALL FIXTURES TO SYDNEY WATER CORPORATION REQUIREMENTS. SURCHARGE GULLY REQUIREMENTS ARE TO BE SATISFIED VIA AN OVERFLOW GULLY INSTALLED IN A POSITION AS REQUIRED BY THE AUTHORITIES AND CODES.

PROVIDE ALL SEWER DRAINAGE FROM SOIL AND WASTE FIXTURES TO THE SEWER CONNECTION INDICATED ON THE HYDRAULIC SERVICES DRAWINGS. PROVIDE ALL NECESSARY PIPES, JUNCTIONS, BENDS, PITS, FLOOR WASTES, EXCAVATION, BACKFILLING, TESTING AND SUNDRY EQUIPMENT REQUIRED FOR THE INSTALLATION. THE LOCATIONS OF PIPELINES INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC. PIPELINE POSITIONS ARE TO BE DETERMINED ON SITE IN CONJUNCTION WITH ALL OTHER DISCIPLINES TO ENSURE ADEQUATE CO-ORDINATION OF ALL SERVICES AND ELEMENTS. CO-ORDINATION IS TO BE CARRIED OUT PRIOR TO ANY SETTING OUT, EXCAVATION OR PIPE INSTALLATION TAKES PLACE.

CLEAROUTS BROUGHT TO SURFACE LEVEL OF GROUND OR BUILDING FABRIC ARE TO BE BRASS SCREWED TYPE, PROTECTED BY A CONCRETE SURROUND.

STORMWATER DRAINAGE

SUPPLY AND INSTALL ALL STORMWATER DRAINAGE TO CONNECT ALL DOWNPIPES AND STORMWATER OUTLETS TO THE STORMWATER DRAINAGE SYSTEM.

ALLOW TO INVESTIGATE FOR AND LOCATE THE EXISTING DISCHARGE POINTS. CLEAR REMAINING EXISTING DRAINAGE WITH ELECTRIC EEL AND TEST WITH COLOURED DYE AS NECESSARY TO ENSURE ADEQUATE FLOW AND ESTABLISH DISCHARGE POINTS. MINIMUM FALL TO BE 1:100 UNLESS NOTED OTHERWISE.

PIPELINE POSITIONS ARE TO BE DETERMINED ON SITE IN CONJUNCTION WITH ALL OTHER DISCIPLINES TO ENSURE ADEQUATE CO-ORDINATION OF ALL SERVICES AND ELEMENTS. CO-ORDINATION IS TO BE CARRIED OUT PRIOR TO ANY SETTING OUT, EXCAVATION OR PIPE INSTALLATION TAKES PLACE.

CLEAROUTS BROUGHT TO SURFACE LEVEL OF GROUND OR BUILDING FABRIC ARE TO BE BRASS SCREWED TYPE, PROTECTED BY A CONCRETE SURROUND.

STORMWATER DRAINAGE IS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF CLAUSE F1.1 OF THE BCA 2009 AND AS 3500.3

SANITARY PLUMBING

PROVIDE ALL THE SANITARY PLUMBING FOR THE PROJECT. CO-ORDINATE PIPEWORK AND INSTALL APPROVED ACCESS PANELS IN PLACES APPROVED AND REQUIRED BY THE AUTHORITY.

VENTS ARE TO BE UPVC, TERMINATED AND FLASHED IN ROOF MATERIAL, OR COMPATIBLE PRODUCTS AS RECOMMENDED BY THE MANUFACTURER OF THE ROOFING PRODUCT.

COLD WATER

PROVIDE THE COMPLETE COLD WATER SERVICE FROM THE CONNECTIONS INDICATED ON THE DRAWINGS TO ALL FIXTURES AND DRAW OFF POINTS.

PROVIDE ALL BACKFLOW PREVENTION AND CONTAINMENT DEVICES FOR THE PROJECT AS REQUIRED BY THE RELEVANT AUTHORITIES AND CURRENT CODES AND STANDARDS.

ALL TAPWARE TO BE WELLS RATED.

ALL ISOLATION VALVES SHALL BE POSITIONED IN AN ACCESSIBLE LOCATION ADJACENT EQUIPMENT. VALVES LOCATED IN DUCTS OR WALLS TO BE LOCATED BEHIND ACCESS COVERS.

HOT WATER

THE HOT WATER SYSTEM IS TO BE CONNECTED FROM THE COLD WATER SUPPLY TO THE HOT WATER HEATERS IN THE POSITIONS INDICATED ON THE DRAWINGS.

PROVIDE THERMOSTATIC MIXING VALVES & / OR TEMPERING VALVES AS REQUIRED BY THE BUILDING CODE OF AUSTRALIA AND AS 3500.

ALL TAPWARE TO BE WELLS RATED.

ALL ISOLATION VALVES SHALL BE POSITIONED IN AN ACCESSIBLE LOCATION ADJACENT EQUIPMENT. VALVES LOCATED IN DUCTS OR WALLS TO BE LOCATED BEHIND ACCESS COVERS.

FIRE HOSE REEL SYSTEM

INSTALL A FIRE HOSE REEL SYSTEM THAT IS FULLY COMPLIANT WITH THE REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA AND AS 2441

THE SYSTEM SHALL EXTEND FROM THE DOMESTIC COLD WATER SUPPLY. CONNECT TO THE EXISTING SYSTEM AND RE-COMMISSION THE SYSTEM READY FOR OPERATION AT COMPLETION. UNDERTAKE ALL NECESSARY TESTS TO ENSURE THE EXISTING SYSTEM IS SERVICEABLE AND COMPLIES WITH COUNCIL REQUIREMENTS.

GENERALLY THE PIPEWORK SHALL BE A MINIMUM OF 25MM O.D COPPER TUBE TO AS 1432 TYPE B. FIRE HOSE REELS SHALL COMPRISE A 36 METRE LONG BY 19 MM DIAMETER HOSE, GALVANISED STEEL MOUNTING PLATES, REEL ROLLER GUIDES, 19 MM DIAMETER NOZZLE, 25 MM DIAMETER BRASS STOP VALVE FITTED WITH A SWINGING ARM, WHICH, WHEN EXTENDED SHALL EXTEND BEYOND THE CABINET.

FIXTURES

PROVIDE AI NECESSARY NOGGINGS AND MOUNTING BOARDS WITHIN STUD WALLS TO SUPPORT FIXTURES AND FITTINGS.

GAS SERVICE

THE NATURAL GAS SERVICE IS TO BE TO AGL REQUIREMENTS.

ALL TESTS ARE TO BE UNDERTAKEN TO THE REQUIREMENTS OF AGL IN THE PRESENCE OF THE AUTHORITIES INSPECTOR AND THE ARCHITECT.

THE FOLLOWING STANDARDS ARE TO APPLY TO THE GAS SERVICE INSTALLATION;

AS 1697	SA GAS PIPELINE CODE
AG 601	INSTALLATION CODE FOR GAS BURNING APPLIANCES AND EQUIPMENT
AGA & ALPGA	APPROVED APPLIANCE AND COMPONENTS

MATERIALS

STORMWATER DRAINAGE

Component	Material	Comment
Pipework up to and including Ø150mm	UPVC SWV	Solvent cement joints
Ø225mm and over	FRC or RCP	Class to suit depth and load

SEWER DRAINAGE

Component	Material type	Comment
Pipework	UPVC SWV	Solvent cement joints
Clear outs	Brass	

COLD WATER

Component	Material/type	Comment
Pipework	Copper type B tube	Generally Sleeved in ground Insulated where chased Chrome plated where exposed
Control Valves	Spherical ball valves throughout	Equal to Johns or Richards
Reduced pressure zone device	Enware	As required
Double check valve	Enware	As required

HOT WATER

Component	Material/type	Comment
Pipework	Copper Type B	Generally
Thermal Insulation	Thermotec Polytube	Generally
Control Valves	Spherical ball	Johns, Richards
Heaters	As noted on drawings	On copper safe tray and support; drain to waste
Thermostatic Mixing Valves	Enware Aquablend 2000	to as 3500

SANITARY PLUMBING

Component	Material	Comment
Pipework	UPVC	Generally
Traps	UPVC	Concealed - bare Exposed - chrome plated
Tundishes	C P Copper	Trapped

TRADE WASTE DRAINAGE

Component	Material	Comment
Pipework	HDPE	
Insulation	Thermotec Thermalag	Throughout

FIRE HOSE REEL

Component	Material	Comment
Pipework	Copper Type B	Minimum 25mm diameter
Reel	Quell	36M

DOWNPIPE

Component	Material	Comment
Pipework	UPVC	Where concealed

GAS SERVICE

Component	Material	Comment
Pipework	Copper Type B	Throughout
Control Valves	Spherical Ball Valve	Throughout

RECEIVED
- 1 NOV 2013
Ku Ring Gai Council

Issue	Amendment	Date
A	D A SUBMISSION	03.07.12

Client
PYMBLE LADIES COLLEGE
PYMBLE

Architect
PMDL
P O Box 1465
CROWS NEST NSW 2065
Email: pmdl@pmdl.com.au
PH : 02 8458 5500
FAX : 02 8458 5555

Project
PYMBLE LADIES COLLEGE
CONCEPT MASTERPLAN
PHASE 2

Title
HYDRAULIC SERVICES
SPECIFICATION

Hydraulic Services
SYDNEY ALL SERVICES Pty Ltd
PO BOX 216
THORNLEIGH NSW 2120
Ph: (02) 9962 9658
Email: sasmail@bigpond.com

Date	October 2011
Drawn	ND/VK
Scales	NTS
Dwgs In Set	5 IN 6
Job No.	30442
Drawing No.	H05
Issue	D