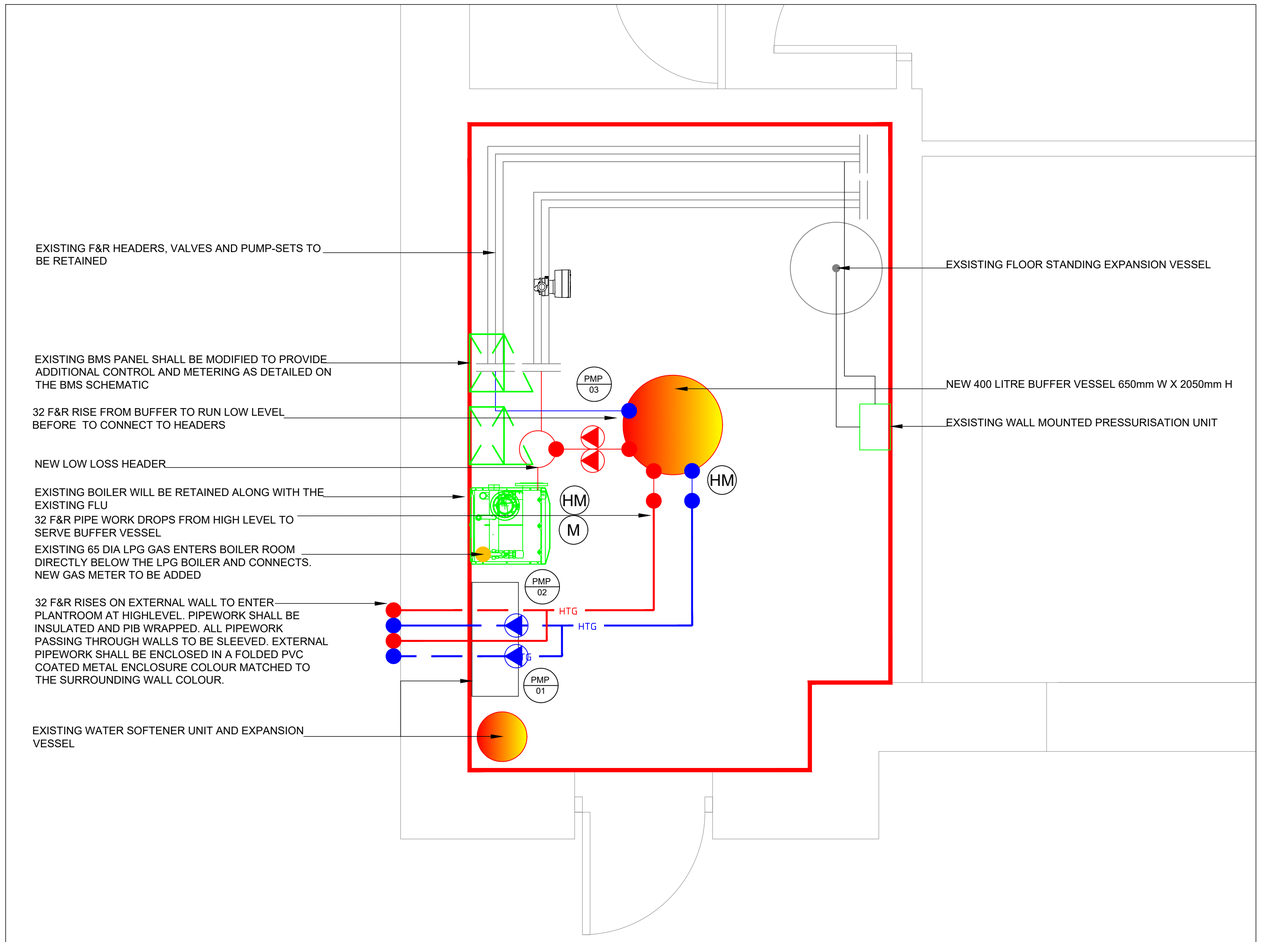
THIS DRAWING IS FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCING WORKING DRAWINGS



BOILERHOUSE LAYOUT (1:20)

LEGEND

- PIPE AT LOW LEVEL
- PIPE IN CEILING VOID
- PIPE AT HIGH LEVEL
- PIPE IN FLOOR
- ISOLATION VALVES
- ISOLATING VALVE
- DC DRAIN COCK
- COMMISSIONING SET
- DOUBLE REGULATING VALVE
- LSV LOCK SHIELD VALVE
- 3 PORT CONTROL VALVE
- 2 PORT CONTROL VALVE
- SV SAFETY VALVE
- AF ANTI-FREEZE VALVE
- BP BINDER POINT
- AAV AUTOMATIC AIR VENT
- T TEMPERATURE GAUGE
- P PRESSURE GAUGE
- HP/LP HIGH PRESSURE/LOW PRESSURE TEMP SENSOR
- Ts BMS TEMPERATURE STAT
- FLEXIBLE CONNECTIONS
- M METER
- STRAINER
- GAS DETECTION/PRESSURE PROVING PANEL
- GAS SOLENOID VALVE
- REMOTE 'KNOCK OFF' BUTTON
- S NATURAL GAS SENSOR
- HM HEAT METER

HEATING NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION & ALL OTHER RELEVANT DRAWINGS.
2. THE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR CO-ORDINATING THE MECHANICAL SERVICES SO AS TO ENSURE A NEAT AND ACCESSIBLE INSTALLATION
3. REFER TO OTHER RELEVANT STRUCTURE DRAWINGS INCLUDING ARCHITECTURAL DETAILED ROOM LAYOUTS.
4. CONTRACTOR SHALL TAKE FULL COGNISANCE OF THE SAFETY AND HEALTH PLAN, AND PROVIDE FULL METHOD STATEMENTS FOR ALL HAZARDOUS OPERATIONS LISTED THEREIN. METHOD STATEMENTS SHALL ALSO BE PROVIDED FOR ANY HAZARDOUS OPERATION WHICH BECOMES APPARENT THROUGHOUT THE CONSTRUCTION PHASE.
5. ALL HEATING PIPEWORK SHALL BE MEDIUM GRADE STEEL AND SHALL BE INSTALLED IN ACCORDANCE WITH PART 3 OF THE STANDARD SPECIFICATION.
6. ALL PIPEWORK IN PLANTROOM, CEILING VOIDS, FLOOR DUCTS AND RISING SERVICES DUCTS SHALL BE INSULATED IN ACCORDANCE WITH THE SPECIFICATION.
7. WHERE PIPEWORK PASSES THROUGH WALLS OR FLOOR SLABS, SLEEVES MANUFACTURED FROM SIMILAR MATERIAL SHALL BE PROVIDED.
8. AUTOMATIC AIR VENTS SHALL BE PROVIDED ON ALL HIGH POINTS IN THE PIPEWORK INSTALLATION TO FACILITATE VENTING OF THE SYSTEM AND DRAINED TO TUNDISH.
9. DRAIN VALVES SHALL BE PROVIDED ON ALL LOW POINTS OF THE INSTALLATION TO FACILITATE COMPLETE DRAINING DOWN OF THE SYSTEM.
10. HEATING SYSTEM TO BE COMPLETE WITH NECESSARY CORROSION INHIBITOR AS DETAILED BY THE MANUFACTURER.
11. ALL HEATING PIPEWORK TO BE HYDRAULICALLY TESTED TO TWICE THE WORKING PRESSURE FOR A PERIOD OF TWO HOURS. TEST TO WITNESSED BY THE ENGINEER (TEST CERTIFICATE TO BE PROVIDED BY THE CONTRACTOR).
12. ALL LPHW PIPEWORK PASSING THROUGH FIRE COMPARTMENT WALLS & FLOORS TO BE FIRE DAMPED, STOPPED & SLEEVED BY THE CONTRACTOR.

PUMP SCHEDULE

ITEM	CIRCUIT	DUTY	STATIC HEAD	TYPE	POWER	CONTROLS
P01	HEAT PUMP LOOP	0.5 kg/s	35 kPA	SINGLE HEAD INLINE	230v/1ph/50Hz	VARIABLE SPEED PUMP c/w DIFFERENTIAL PRESSURE CONTROLS & BACNET BMS LINK
P02	HEAT PUMP LOOP	0.5 kg/s	35 kPA	SINGLE HEAD INLINE	230v/1ph/50Hz	VARIABLE SPEED PUMP c/w DIFFERENTIAL PRESSURE CONTROLS & BACNET BMS LINK
P03	BUFFER PRIMARY LOOP	5.0 kg/s	60 kPA	TWIN HEAD INLINE	230v/1ph/50Hz	VARIABLE SPEED PUMP c/w DIFFERENTIAL PRESSURE CONTROLS & BACNET BMS LINK

BUFFER VESSEL SCHEDULE

ITEM	MAKE/MODEL	CAPACITY:	PRESSURE RATING	SIZE:	NOTES:
BFF 01	400 LITRE BUFFER VESSEL SUITABLE FOR LARGE VOLUME STORAGE OF HOT WATER	400 LITRES	3 Bar	1700mmH x 600mmØ	PRE INSULATED - FACTORY FITTED. SENSOR POCKETS TO BE PROVIDED ALONG THE VERTICAL FACE OF THE BUFFER VESSEL FOR TEMPERATURE MONITORING.

AIR TO WATER HEAT PUMP SCHEDULE

ITEM	MAKE/MODEL	NOMINAL HEATING CAPACITY (EN14511)	SIZE	SCOP @ NOMINAL OUTPUT	DESIGN TEMPERATURES	REFRIGERANT	COMPRESSOR TYPE	POWER SUPPLY	NOTES:
ASHP 01	HIGH TEMPERATURE AIR SOURCE HEAT PUMP.	16.0KW	1440X1160X380L XWXH	3.43	55°C FLOW TEMPERATURE @ A7 / W55	R290	SEMI-HERMETIC	230/1ph/50Hz	ASHP TO BE SUPPLIED WITH MASTER/SLAVE CONTROLLER TO ENABLE STEPPED PERFORMANCE c/w ALL PIPE FITTINGS, PUMPS AND FINAL CONNECTORS. HEAT PUMPS TO BE PROVIDED WITH INTEGRAL HYDRAULIC CONNECTOR KIT WITH FLANGED CONNECTION FOR HEATING FLOW AND RETURN.
ASHP 02	HIGH TEMPERATURE AIR SOURCE HEAT PUMP.	16.0KW	1440X1160X380L XWXH	3.43	55°C FLOW TEMPERATURE @ A7 / W55	R290	SEMI-HERMETIC	230/1ph/50Hz	ASHP TO BE SUPPLIED WITH MASTER/SLAVE CONTROLLER TO ENABLE STEPPED PERFORMANCE c/w ALL PIPE FITTINGS, PUMPS AND FINAL CONNECTORS. HEAT PUMPS TO BE PROVIDED WITH INTEGRAL HYDRAULIC CONNECTOR KIT WITH FLANGED CONNECTION FOR HEATING FLOW AND RETURN.

REV	DESCRIPTION	DRN	CKD	DATE
P02	TENDER STAGE	KC	SF	20.04.2026
P01	TA ISSUE	KC	SF	10-04-2026

ISSUE: TENDER STAGE

semple mckillop
NATURALLY INNOVATIVE **CONSULTING ENGINEERS**
ISO 9001 ISO 14001 ISO 45001 Registered
Belfast +44 (0)28 90331700
Castleblayney +353 (0)42 9749570
www.semplemckillop.com admin@semplemckillop.com

PROJECT TITLE
SCHOOLS ENERGY PATHFINDER - 8.3
CASTLEJORDAN NATIONAL SCHOOL

DRAWING TITLE
MECHANICAL SERVICES INSTALLATION

DRAWING REFERENCE	DRN	SCALE
3232-SMK-8.3-L0-DR-M-5103 (Project – Originator – Volume – Level – Type – Role – Number)	KC	A1 ASI