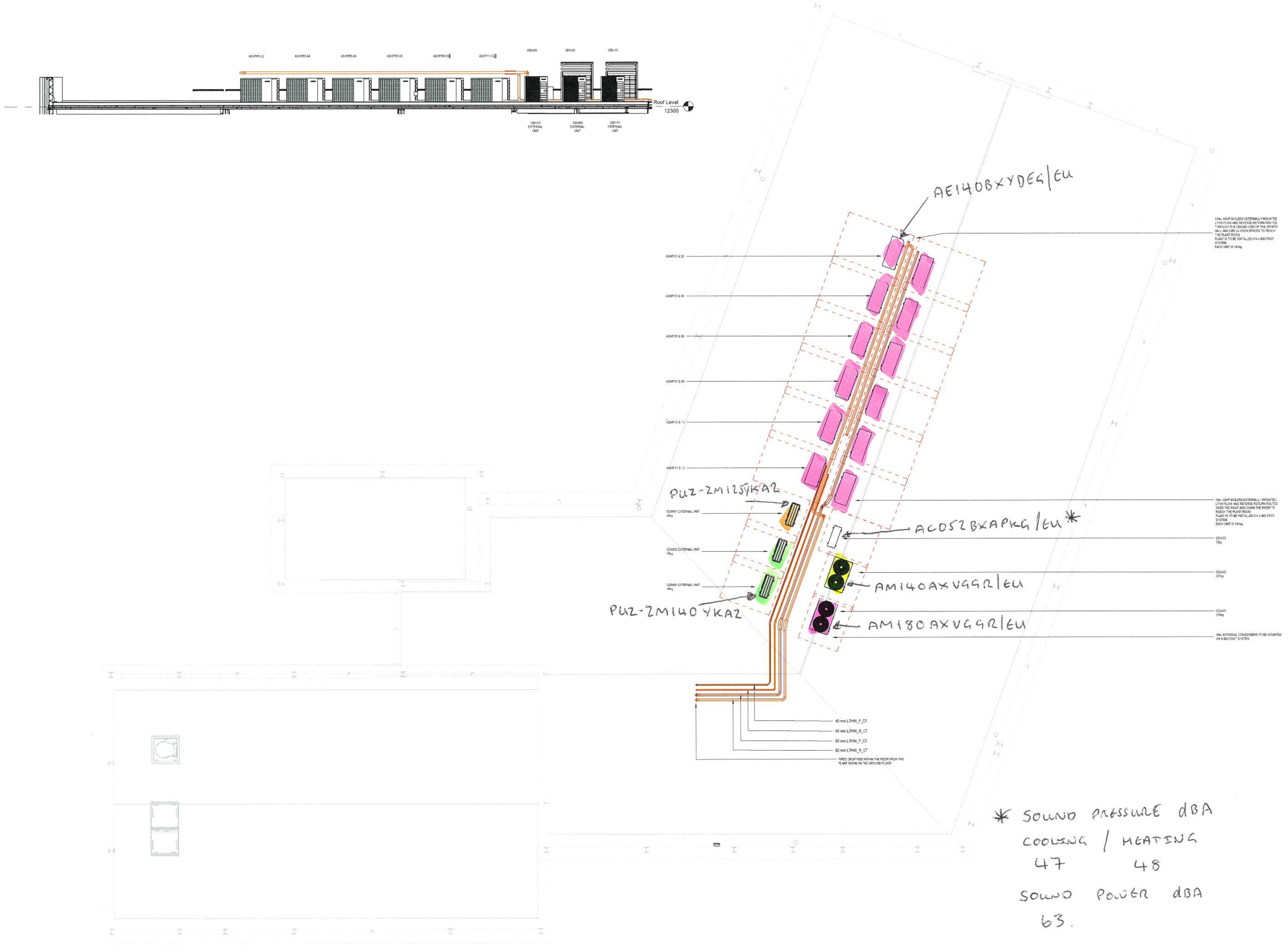

AE140BXYDEG/EU

PUZ-ZM125YKA2

AC052BXAPKG/EU*

AM140AXVGGR/EU

AM180AXVGGR/EU

PUZ-ZM140YKA2

10No. ASHP BOILERS EXTERNALLY MOUNTED. LTHW FLOW AND REVERSE RETURN ROUTES THROUGH THE CEILING VOID OF THE SPORTS HALL AND CIRCULATION SPACES TO REACH THE PLANT ROOM.
PLANT IS TO BE ISNTALLED ON A BIG FOOT SYSTEM.
EACH UNIT IS 141kg.

2No. ASHP BOILERS EXTERNALLY MOUNTED. LTHW FLOW AND REVERSE RETURN ROUTES OVER THE ROOF AND DOWN THE RISER TO REACH THE PLANT ROOM.
PLANT IS TO BE INSTALLED ON A BIG FOOT SYSTEM.
EACH UNIT IS 141kg.

5No. EXTERNAL CONDENSERS TO BE MOUNTED ON A BIG FOOT SYSTEM.

PIPES DROP/RISE WITHIN THE RISER FROM THE PLANT ROOM ON THE GROUND FLOOR

* SOUND PRESSURE dBA
COOLING / HEATING
47 48
SOUND POWER dBA
63.

This drawing should not be scaled. Dimensions to be verified on site.
Any discrepancies should be referred to the Engineer prior to work being put in hand.

GENERAL NOTES

GENERAL

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL, STRUCTURAL AND ENGINEERING SERVICES DRAWINGS, SPECIFICATIONS AND ALL OTHER DOCUMENTS ISSUED WITH THIS CONTRACT.
2. THIS DRAWING IS INTENDED TO ILLUSTRATE PERFORMANCE INFORMATION ONLY AND REFLECTS THE DESIGN INTENT OF THE INSTALLATION. THE DETAILED DESIGN OF THE SERVICES INSTALLATION SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
3. ON COMPLETION AND PRIOR TO HANDOVER, THE MECHANICAL CONTRACTOR SHALL PROVIDE 2 COPIES OF O&M MANUALS/AS FITTED DRAWINGS ETC. ILLUSTRATING ALL THE MECHANICAL SERVICES UNDERTAKEN AS PART OF THIS CONTRACT.
4. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE WBS MECHANICAL WORKMANSHIP SPECIFICATION AND THE MECHANICAL PARTICULAR SPECIFICATION ISSUED WITH THIS CONTRACT.
5. THE CONTRACTOR SHALL ENSURE ALL EQUIPMENT IS INSTALLED TO ALLOW ACCESS FOR INSTALLATION, COMMISSIONING, MAINTENANCE, CLEANING AND REMOVAL.
6. SERVICES ROUTES, FINAL PLANT LOCATIONS, SIZES AND NUMBERS SHOWN ON THIS DRAWING ARE INDICATIVE ONLY AND SUBJECT TO THE DETAIL DESIGN OF THE MECHANICAL SERVICES BY THE MECHANICAL CONTRACTOR.

HEATING INSTALLATION

1. THE HEATING INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH THE WBS MECHANICAL SPECIFIC SPECIFICATION, MECHANICAL WORKMANSHIP SPECIFICATION AND THE CURRENT BS/BS EN STANDARDS.
2. ALL HEATING PIPEWORK SHALL BE HEAVY WEIGHT MILD STEEL TO THE CURRENT BS/BS EN STANDARDS. REFERENCE SHALL BE MADE TO THE WBS MECHANICAL WORKMANSHIP SPECIFICATION FOR DETAILS.
3. ALL FITTINGS USED SHALL MATCH THE PIPEWORK SPECIFICATION USED.
4. HEATING PIPEWORK 65MM AND ABOVE SHALL BE WELDED WITH MATCHING FITTINGS.
5. ALL PIPES THROUGH WALLS, FLOOR AND CEILINGS SHALL BE SLEEVED AND FITTED WITH PIPE COVERS.
6. HEATING FLOW AND RETURN TEMPERATURES SHALL BE 56°C FLOW AND 40°C FLOW RETURN UNLESS INDICATED OTHERWISE.
7. AAV'S SHALL BE INSTALLED ON ALL SYSTEM HIGH POINTS AND WHERE INDICATED ON THE DRAWINGS.
8. DOC'S AND DIRT POCKETS SHALL BE PROVIDED AT ALL LOW SYSTEM LOW POINTS AND WHERE INDICATED ON THE DRAWINGS.
9. THERMAL INSULATION SHALL BE APPLIED TO ALL PIPEWORK IN VOIDS, RISER'S BOXINGS AND WHERE IT IS NOT REQUIRED TO PROVIDING INCIDENTAL SPACE HEATING. THE THERMAL INSULATION SHALL BE OF A THICKNESS, TYPE AND FINISH AS OUTLINED IN THE WBS WORKMANSHIP SPECIFICATION.
10. ALL PIPEWORK AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED AS OUTLINED IN THE WBS MECHANICAL WORKMANSHIP SPECIFICATION. THE MECHANICAL CONTRACTOR SHALL ALLOW FOR ALL NECESSARY SECONDARY SUPPORT STEEL WORK AND BRACKETS ETC REQUIRED TO FULLY INSTALL ALL THE PIPEWORK AND EQUIPMENT ASSOCIATED WITH THE INSTALLATION.
11. PIPEWORK EXPANSION IS A CONTRACTOR DESIGN ELEMENT. THE CONTRACTOR SHALL DESIGN AND INSTALL ALL BELLOW, ANCHORS GUIDES ETC (EXPANSION LOOP IN PIPEWORK SHALL NOT BE USED). THE CONTRACTOR DESIGN SHALL BE COMMENTED ON BY THE ENGINEER PRIOR TO THE ORDERING OF MATERIALS AND INSTALLATION.
12. ALL PIPEWORK LIABLE TO FREEZING SHALL BE TRACE HEATED.
13. ALL EXPOSED PIPEWORK SERVING HEAT EMITTERS SHALL BE BOXED IN.
14. THE MAIN/MECHANICAL CONTRACTOR SHALL COORDINATE ALL BOXING IN WITH THE ARCHITECT.
15. FIRE STOPPING SHALL BE PROVIDED AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT/FIRE ELEMENT.
16. FIRE STOPPING SHALL BE EQUAL TO OR EXCEED THE RATING OF THE ELEMENT THE PIPE PASSES THOUGH.
17. THE MECHANICAL CONTRACTOR SHALL INCLUDE FOR FULLY COMMISSIONING THE HEATING INSTALLATION AS OUTLINED IN THE WBS MECHANICAL WORKMANSHIP SPECIFICATION. THIS SHALL INCLUDE BUT NOT LIMITED TO THE PRESSURE TESTING OF ALL PIPEWORK, FILLING, VENTING AND BALANCING OF THE COMPLETED INSTALLATION.
18. ALL ASHP BOILERS, HOT WATER HEATERS, PUMP SET, AND SYSTEM FLOW AND RETURNS SHALL BE INSTALLED WITH ALTITUDE AND TEMPERATURE GAUGES.
19. VALVE ARRANGEMENTS SHOWN ON THE SCHEMATICS SHALL TAKE PRECEDENT OVER ANY VALVE ARRANGEMENTS SHOWN ON THE LAYOUT DRAWINGS.
20. THE CONTRACTOR IS REQUIRED TO CORRECTLY SIZE ALL CONTROL VALVES AND COMMISSIONING SETS.
21. PRESSURE INDEPENDENT CONTROL VALVES ARE TO BE SIZED TO HAVE A MINIMUM OF 15-20 KPA PRESSURE DROP ACROSS THE VALVE.
22. COMMISSIONING SETS ARE TO BE SIZED TO HAVE A MINIMUM OF 1KPA PRESSURE DROP ACROSS THE VALVE WHEN FULLY OPEN AND ARE TO HAVE 10 PIPE DIAMETERS OF STRAIGHT PIPE ONTO THE VALVE AND 5 PIPE DIAMETERS OF STRAIGHT PIPE AFTER THE VALVE.
23. CONTROL VALVES SHALL BE SELECTED TO HAVE AN AUTHORITY OF 0.5.
24. DIFFERENTIAL PRESSURE CONTROL VALVES SHALL BE DESIGNED IN LINE WITH MANUFACTURES RECOMMENDATIONS.
25. MAXIMUM NUMBER OF EMITTERS TO BE SERVED VIA A DPCV SET IS TO BE DETERMINED IN LINE WITH THE MANUFACTURES RECOMMENDATIONS.
26. EACH BOILER AND HOT WATER GENERATOR SHALL BE SUPPLIED COMPLETE WITH A SAFETY VALVE.
27. THE DISCHARGE FROM ALL SAFETY AND RELIEF VALVES SHALL DISCHARGE TO DRAIN VIA A TUNDISH WITH A VISIBLE AIR GAP LOCATED IN A SAFE AND CONSPICUOUS LOCATION.

ABBREVIATIONS

CHWF	CHILLED WATER FLOW
CHWR	CHILLED WATER RETURN
DHF	DISTRICT HEATING FLOW
DHR	DISTRICT HEATING RETURN
DCW	DOMESTIC COLD WATER
DHW-F	DOMESTIC HOT WATER
DHW-R	DOMESTIC HOTWATER RETURN
FPW	FIRE PROTECTION WET
FHWF	FLOOR HEATING WATER FLOW
FHWR	FLOOR HEATING WATER RETURN
LTHW_VT_F	VARIABLE TEMPERATURE FLOW
LTHW_VT_R	VARIABLE TEMPERATURE RETURN
LTHW_CT_F	CONSTANT TEMPERATURE FLOW
LTHW_CT_R	CONSTANT TEMPERATURE RETURN
AAV	AUTOMATIC AIR VENT
WP	WASTE PIPE
SWP	SOIL & WASTE PIPE
SVP	SOIL VENT PIPE
FG	FLOOR GULLY
RWP	RAIN WATER PIPE
HVU	HYBRID VENTILATION UNIT
H/L	HIGH LEVEL
L/L	LOW LEVEL
F/A	FROM ABOVE
F/B	FROM BELOW
T/B	TO BELOW
T/A	TO ABOVE
SU / SD	SET UP / SET DOWN

Rev	Date	Description	By	Chk
C01	24/09/24	Construction Issue	JB	NM

Amendments

Project
Loreto College

Title
Mechanical
Heating and Comfort Cooling
Roof Level Main Build

Client
Loreto College

PEL
Performance Electrical Ltd.
123 Radcliffe Road, Bury, BL9 9LD

MURRAY BUILDING
SERVICES LIMITED

- DESIGN
- PROJECT MANAGEMENT
- MECHANICAL & ELECTRICAL ENGINEERING
- MAINTENANCE

Work Stage	STAGE 5 RIBA
Suitability	CONSTRUCTION S5

Designed By	Director	Waterman Ref.
LH	NM	BSD15263
Drawn By	**Date**	**Scales @ A0**
JB	JULY 24	1 : 50

Project | Originator | Functional | Spatial | Type | Role | Number	Revision
C1617-MB-M12	C01

LOR-PEL-ZZ-ZZ-M3-ME-00001

PM_40_40 Design drawings