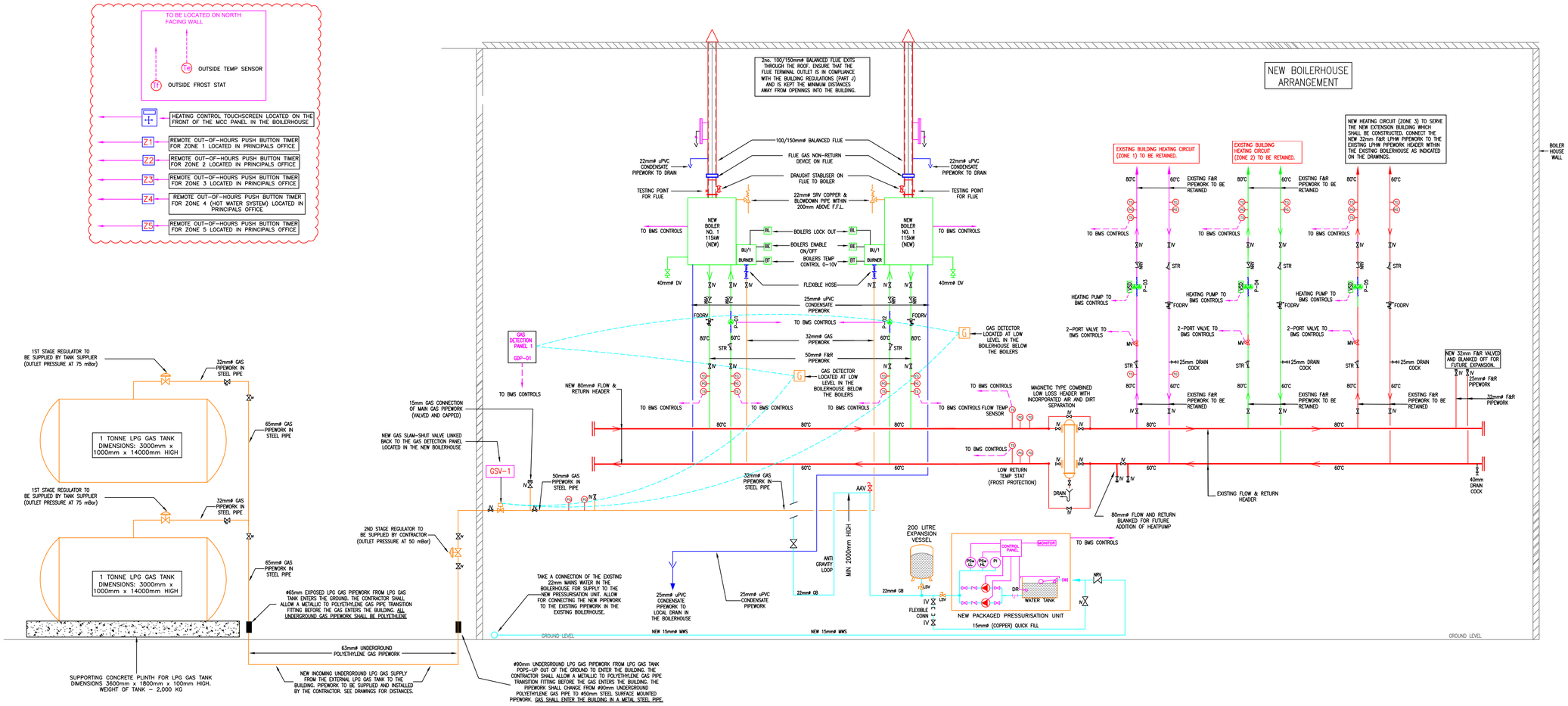
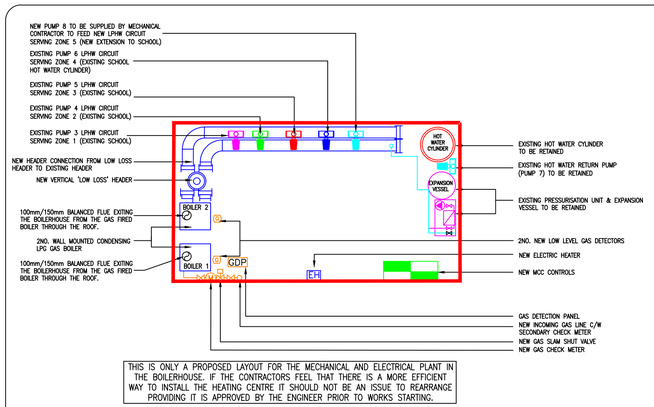
A1



MECHANICAL SCHEMATIC LAYOUT (NOT TO SCALE)



THIS IS ONLY A PROPOSED LAYOUT FOR THE MECHANICAL AND ELECTRICAL PLANT IN THE BOILERHOUSE. IF THE CONTRACTORS FEEL THAT THERE IS A MORE EFFICIENT WAY TO INSTALL THE HEATING CENTRE IT SHOULD NOT BE AN ISSUE TO REARRANGE PROVIDING IT IS APPROVED BY THE ENGINEER PRIOR TO WORKS STARTING.

BOILER HOUSE LAYOUT (SCALE 1:50)

MECHANICAL SCHEMATIC SYMBOLS

- F FLOW
- R RETURN
- GB GUN BARRELL
- OF OIL FILTER
- DWV DEAD WEIGHT VALVE
- 3-PORT MOTORISED MIXING VALVE (* DENOTES NUMBER OF VALVE)
- ALTITUDE GAUGE
- SINGLE HEAD PUMP (* DENOTES REFERENCE NUMBER OF PUMP)
- GSV-* GAS SOLENOID VALVE (* DENOTES NUMBER OF VALVE)
- GAS PRESSURE REGULATOR
- STR STRAINER
- DV DRAIN VALVE
- A.A.V. AUTOMATIC AIR VENT
- DWV DEAD WEIGHT VALVE
- IV ISOLATION VALVE
- LSV LOCK SHIELD VALVE
- l/s LITRES PER SECOND
- FODRV FIXED ORIFICE DOUBLE REGULATING VALVE (COMMISSIONING)
- FIXED ORIFICE DOUBLE REGULATING VALVE (COMMISSIONING)
- FIXED ORIFICE DOUBLE REGULATING VALVE (COMMISSIONING)
- NRV NON RETURN VALVE
- SRV SAFETY RELEASE VALVE
- G GAS DETECTOR
- VSD P* TWIN HEAD PUMP C/W VARIABLE SPEED DRIVE (* DENOTES NUMBER OF PUMP)
- FODRV COMMISSIONING REGULATING VALVE
- GM* GAS CHECK METER (* DENOTES NUMBER OF METER)
- TS TEMPERATURE SENSOR/STAT (* DENOTES NUMBER OF DEVICE)
- TG TEMPERATURE GAUGE
- PG PRESSURE GAUGE
- F.F.L. FINISHED FLOOR LEVEL
- PRV PRESSURE REDUCING VALVE
- GAS SLAM-SHUT VALVE
- Z* OUT-OF-HOURS PUSH BUTTON (* DENOTES REFERENCE NUMBER)

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS & SPECIFICATIONS.
2. THE CONTRACTOR SHALL CO-ORDINATE FULLY WITH ALL OTHER TRADES BEFORE COMMENCING WORK. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL THE NECESSARY INFORMATION TO ALLOW THE MAIN CONTRACTOR CO-ORDINATE ALL SERVICES.
3. THE MECHANICAL CONTRACTOR SHALL ALLOW FOR CO-ORDINTATING THE MECHANICAL INSTALLATION WITH THE ELECTRICAL CONTRACTOR ON SITE. EXTRA COSTS INCURRED DUE TO THE CO-ORDINATION EXERCISE NOT BEING COMPLETED WILL NOT BE ACCEPTED BY THE ENGINEER.
4. DO NOT SCALE THIS DRAWING. ALL DIMENSIONS TO BE TAKEN ON SITE.
5. THE CONTRACTOR SHALL ALLOW FOR THE SUPPLY AND INSTALLATION OF ALL MECHANICAL SERVICES INDICATED ON THIS DRAWING.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY SUITABLE FINAL ROUTES FOR PIPEWORK, MECHANICAL SERVICES, ETC. AS INDICATED ON THE DRAWINGS.
7. NEW MAINS RUN OF MECHANICAL PIPEWORK SHALL BE INSTALLED IN THE AREAS AS INDICATED. THIS IS INDICATIVE ONLY AND IF THE CONTRACTOR FINDS A MORE CONVENIENT ROUTE FOR THE MECHANICAL SERVICES ON SITE THEN THAT WILL BE ACCEPTABLE.
8. FINAL LOCATION OF ALL ITEMS OF PLANT/EQUIPMENT/PIPEWORK, ETC. SHALL BE AGREED ON SITE WITH THE EMPLOYERS REPRESENTATIVE AND THE CLIENT.
9. ALL SERVICES THROUGH FIRE BARRIERS SHALL BE SLEEVED EACH SIDE OF THE BARRIER. THE MAIN CONTRACTOR SHALL ALLOW FOR FIRE PROOFING THE OPES AFTER SERVICES IS INSTALLED.
10. THE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY LABOUR, WIRING AND ATTENDANCES IN COMPLETING ALL THE MECHANICAL WORKS AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.

MECHANICAL SCHEMATIC NOTES:

11. THE EXISTING LPHW HEADER ARRANGEMENT SHALL BE RETAINED. THE EXISTING LPHW HEATING CIRCUITS AND HOT WATER CIRCUITS AND ASSOCIATED HOT WATER CYLINDER SHALL BE RETAINED. THE EXISTING LPHW HEATING PUMPS AND HOT WATER RETURN PUMPS SHALL BE RETAINED.
12. THE EXISTING MCC CONTROLS PANEL SHALL BE DECOMMISSIONED AND REMOVED FROM SITE. THERE SHALL BE A NEW MCC CONTROLS PANEL INSTALLED FOR THE ALTERATIONS TO THE BOILERHOUSE.
13. LOCATION OF ALL ITEMS OF PLANT/EQUIPMENT/PIPEWORK ROUTES, ETC. SHALL BE AGREED ON SITE WITH THE EMPLOYERS REPRESENTATIVE AND THE CLIENT.
14. REFER TO ALL OTHER DRAWINGS FOR SPECIFIC LAYOUT OF REQUIRED SERVICES THROUGHOUT THE BUILDING.
15. AUTOMATIC AIR VENTS SHALL BE PROVIDED AT ALL HIGH POINTS THROUGHOUT THE SYSTEM.
16. DRAIN VALVES SHALL BE PROVIDED AT ALL LOW POINTS THROUGHOUT THE SYSTEM.
17. THE BOILER SHALL BE FITTED WITH A PERMANENTLY FIXED NOTICE, 200 X 200mm SCREWED TO THE BOILER CASING WITH THE FOLLOWING WORDING: "IMPORTANT NOTICE – DO NOT REDUCE THE BOILER OPERATING FLOW TEMPERATURE BELOW 80°C".
18. THE HEATING SYSTEM PIPEWORK THROUGHOUT (INCLUDING ALL HEATING PIPEWORK IN THE PLANTROOM AND IN THE BUILDING) SHALL BE MEDIUM GRADE BLACK MILD STEEL TUBE.
19. INSULATION SHALL BE PREFORMED SECTIONS OF RIGID MINERAL WOOL WITH ALUMINIUM FOIL LAMINATE COVER. INSULATION SHALL BE FITTED TO ALL CONNECTIONS, BENDS, TEE'S AND VALVES.
20. ALL HEATING PUMPS SHALL BE OPERATED THROUGH VARIABLE SPEED DRIVES.
21. UNLESS INDICATED, THE SIZE OF ISOLATION VALVES, DRAIN VALVES, COMMISSIONING VALVES, ETC. SHALL MATCH THE INDICATED LINE SIZE OF THE PIPEWORK, WHERE THE EQUIPMENT IS INDICATED.
22. THE CONTRACTOR SHALL ALLOW FOR ALL BENDS, ELBOWS AND NECESSARY PIPEWORK IN ORDER TO INSTALL THE COMPLETE HEATING SYSTEM.
23. SEE SPECIFICATION FOR FURTHER INFORMATION ON THE MECHANICAL AND ELECTRICAL ATTENDANCES REQUIRED.
24. REFER TO ALL OTHER DRAWINGS FOR SPECIFIC LAYOUT OF REQUIRED HEATING SERVICES THROUGHOUT THE BUILDING.

REV	DATE	PREPARED BY/PROJECT ENGINEER	QUALITY CHECK BY:
T2	17.07.2026	E.OLAYA	G.BENNDORF
T1	14.08.2024	K. DAVITT	G. BENNDORF

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Job Title: KILDANGAN NATIONAL SCHOOL, KILDANGAN, MONASTEREVIN, CO. KILDARE.

Drawing Title: MECHANICAL SERVICES SCHEMATIC

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Scale:	Drawn By:	
N.T.S @ A1	E.O	
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