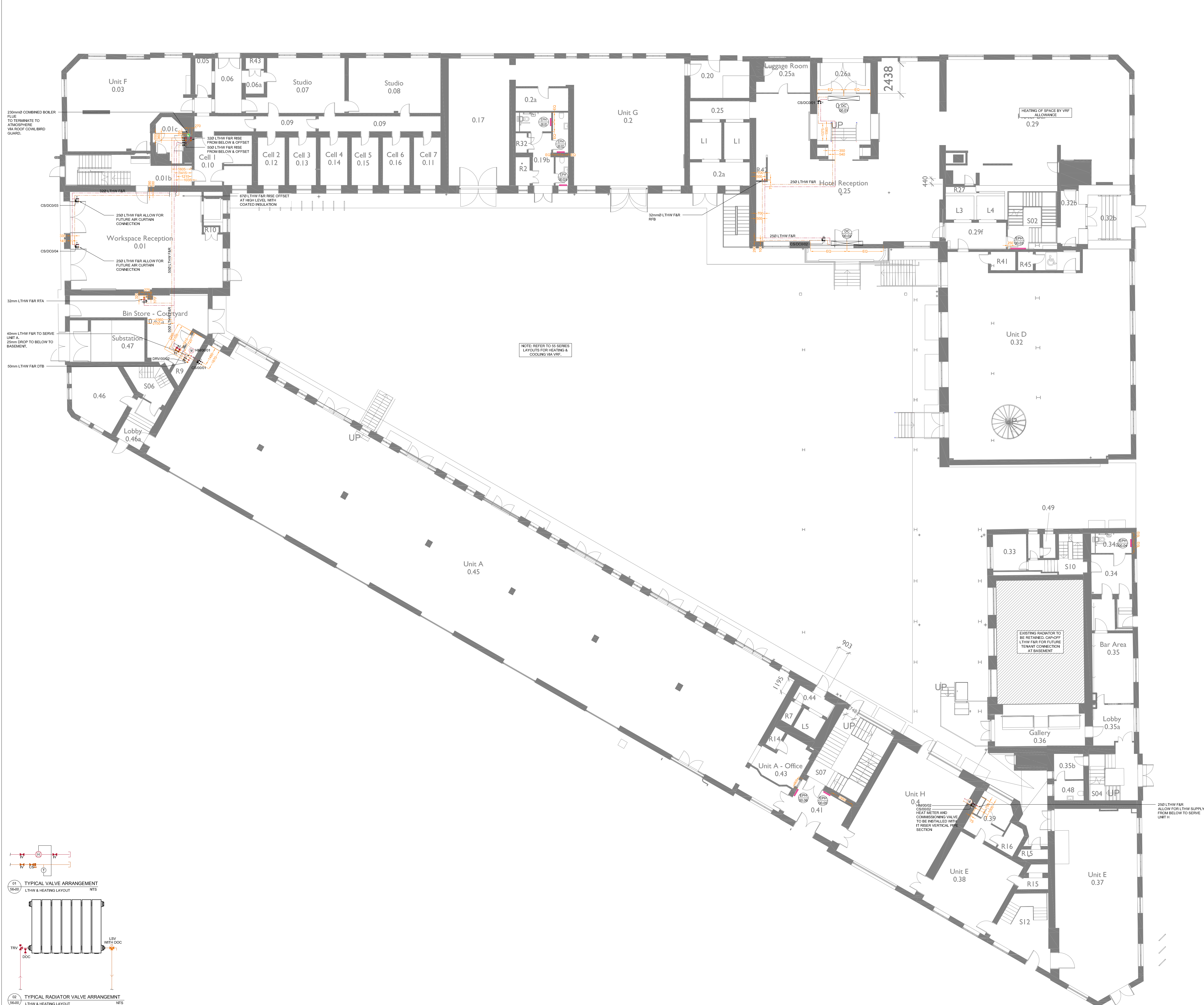


10
0 10
Millimetres

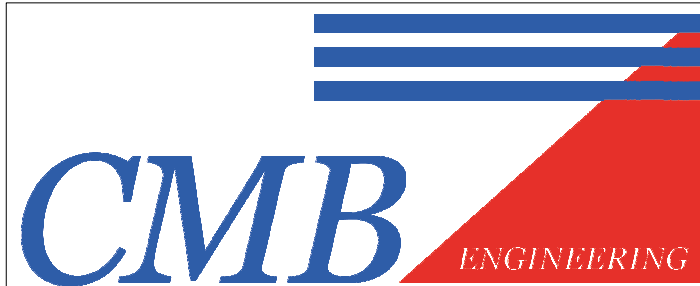


- NOTES**
- DO NOT SCALE FROM THIS DRAWING.
 - ALL DIMENSIONS SHALL BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS. FABRICATION OF PARTS, ORDERING MATERIALS OR COMMENCING WORKS.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS, SPECIFICATIONS AND SCHEDULES.
 - ANY PENETRATION THROUGH FLOOR, SEEK STRUCTURAL ENGINEERS APPROVAL BEFORE COMMENCEMENT.
 - ALL PLANT AND EQUIPMENT SHALL BE INSTALLED FULLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- HEATING INSTALLATION**
- VALVE ARRANGEMENTS SHOWN ON THE SCHEMATICS SHALL TAKE PRECEDENCE OVER ANY VALVE ARRANGEMENTS SHOWN ON THE (R) SERIES LAYOUT DRAWINGS.
 - EACH BOILER SHALL BE SUPPLIED WITH A SAFETY VALVE
 - THE DISCHARGE FROM ALL SAFETY AND RELIEF VALVES SHALL DISCHARGE TO DRAIN VIA A TRUCKER WITH A VISIBLE AIR GAP LOCATED IN A SAFE AND CONSPICUOUS LOCATION.
 - ALL HEATING PIPEWORK SHALL BE COPPER TABLE X.
 - ALL PIPES THROUGH WALLS, FLOORS & CEILINGS SHALL BE SLEEVED & FITTED WITH PIPE COVERS.
 - FIRE STOPPING SHALL BE PROVIDED AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT.
 - MECHANICAL CONTRACTOR TO INCLUDE FOR FILLING, VENTING & BALANCING OF PROPOSED SERVICES AND PRESSURE TESTING OF ALL PIPEWORK.
 - ALL PIPEWORK IN VOIDS / BOXING ETC NOT PROVIDING USEFUL HEAT TO BE INSULATED IN ACCORDANCE WITH THE MECHANICAL PARTICULAR SPECIFICATION.
 - FLUES ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE CLEAN AIR ACT MEMORANDUM ON CHIMNEY HEIGHTS, THE BUILDING REGULATIONS PART L AND BS11510.
 - THE BOILER FLUES SHALL BE COMPLETE WITH ACCESS PANELS IN RISERS AND H/S AT 5m INTERVALS AND AT EVERY JOINT.
- LTHW & HEATING LEGEND**
- VARIABLE TEMPERATURE HEATING FLOW
 - VARIABLE TEMPERATURE HEATING RETURN
 - PIPEWORK IN CEILING VOID
 - PIPEWORK AT LOW LEVEL
 - PIPEWORK IN UNDERGROUND
 - RADIATOR
 - ELECTRIC PANEL HEATER
 - ELECTRIC TOWEL RAIL
 - FLUE RISE/DROP
 - COMMISSIONING SET
 - ISOLATION VALVE
 - LOCK SHIELD VALVE
 - THERMOSTATIC RADIATOR VALVE
 - METER
 - ITEM ABBREVIATION
 - REFERENCE NUMBER
- ABBREVIATIONS**
- LL - LOW LEVEL
 - HL - HIGH LEVEL
 - FV - FLOOR VOID
 - CV - CEILING VOID
 - FB - FROM BELOW
 - FA - FROM ABOVE
 - DTB - DROP TO BELOW
 - RTA - RISE TO ABOVE
 - DC - DOOR CURTAIN
 - EPH - ELECTRIC PANEL HEATER
 - RA - RADIATOR

C02	03.03.25	GA's UPDATED	CMB	CW	LM
C01	20.01.25	FOR CONSTRUCTION	CC	CW	LM
Rev.	Date	Description	By	Chk'd	App'd

Drawing Suitability

STAGE 5 - FOR CONSTRUCTION



Client

ALLIED LONDON

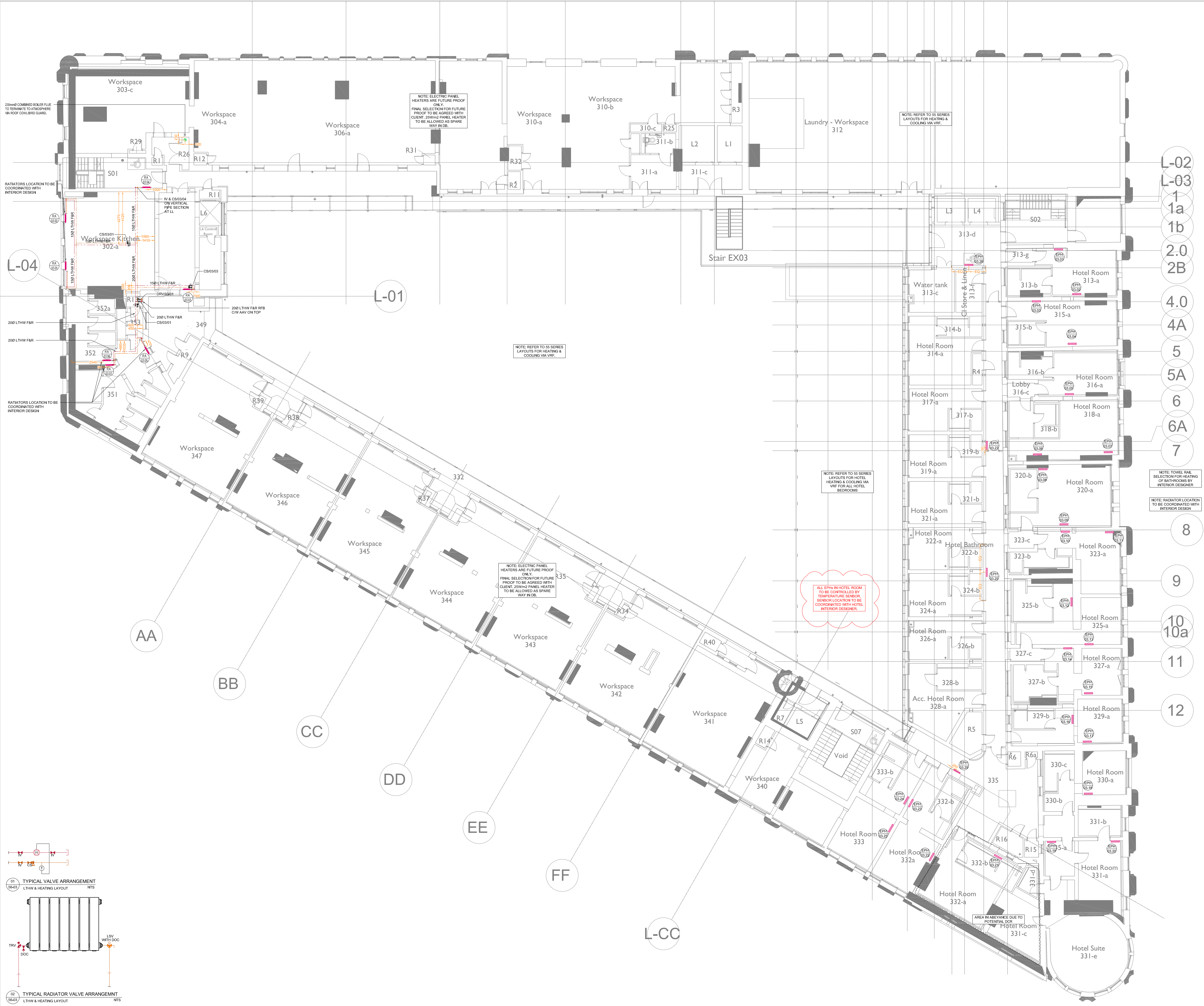
Project Title
LONDON ROAD FIRE STATION
FIRE STATION, LONDON ROAD, MANCHESTER, M1 2PH

Drawing Title
MECHANICAL SERVICES
LTHW & HEATING LAYOUT
GROUND FLOOR

Scale	1:100	Designed	CC	Drawn	JH	Checked	CW	Authorised	LM
Original Size	A0	Date	20.01.25	Date	20.01.25	Date	20.01.25	Date	20.01.25

Drawing Number	LRFS-CMB-M-00-XX-DR-5601	Revision	C02
----------------	--------------------------	----------	-----

Millimetres
0 10 100



NOTES

- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS SHALL BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION OF PARTS, ORDERING MATERIALS OR COMMENCING WORKS.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS, SPECIFICATIONS AND SCHEDULES.
- ANY PENETRATION THROUGH FLOOR, SEEK STRUCTURAL ENGINEERS APPROVAL BEFORE COMMENCEMENT.
- ALL PLANT AND EQUIPMENT SHALL BE INSTALLED FULLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

HEATING INSTALLATION

- VALVE ARRANGEMENTS SHOWN ON THE SCHEMATICS SHALL TAKE PRECEDENCE OVER ANY VALVE ARRANGEMENTS SHOWN ON THE (R) SERIES LAYOUT DRAWINGS.
- EACH BOILER SHALL BE SUPPLIED WITH A SAFETY VALVE
- THE DISCHARGE FROM ALL SAFETY AND RELIEF VALVES SHALL DISCHARGE TO DRAIN VIA A TRUCKER WITH A VISIBLE AIR GAP LOCATED IN A SAFE AND CONSPICUOUS LOCATION.
- ALL HEATING PIPEWORK SHALL BE COPPER TABLE X.
- ALL PIPES THROUGH WALLS, FLOORS & CEILINGS SHALL BE SLEEVED & FITTED WITH PIPE COVERS.
- FIRE STOPPING SHALL BE PROVIDED AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT.
- MECHANICAL CONTRACTOR TO INCLUDE FOR FILLING, VENTING & BALANCING OF PROPOSED SERVICES AND PRESSURE TESTING OF ALL PIPEWORK.
- THE BOILER FLUE IS TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL PIPEWORK IN VOIDS / BOXING ETC NOT PROVIDING USEFUL HEAT TO BE INSULATED IN ACCORDANCE WITH THE MECHANICAL PARTICULAR SPECIFICATION.
- FLUES ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, THE CLEAN AIR ACT MEMORANDUM ON CHIMNEY HEIGHTS, THE BUILDING REGULATIONS PART L AND ICSU1010.
- THE BOILER FLUES SHALL BE COMPLETE WITH ACCESS PANELS IN RISERS AND H/S AT 5m INTERVALS AND AT EVERY JOINT.

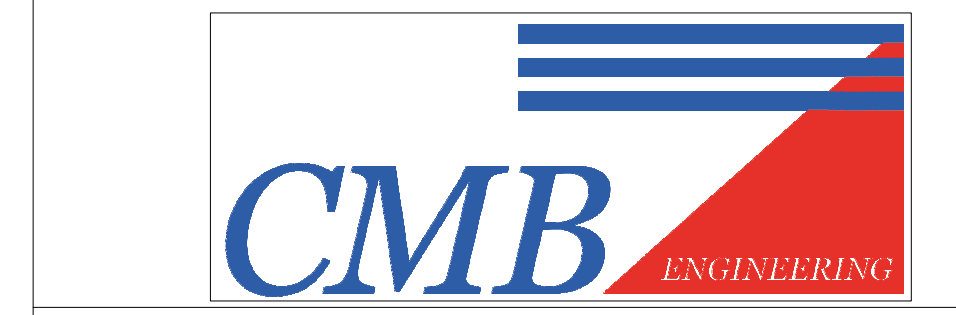
LTHW & HEATING LEGEND

- VARIABLE TEMPERATURE HEATING FLOW
- VARIABLE TEMPERATURE HEATING RETURN
- PIPEWORK IN CEILING VOID
- PIPEWORK AT LOW LEVEL
- PIPEWORK IN UNDERGROUND
- RADIATOR
- ELECTRIC PANEL HEATER
- ELECTRIC TOWEL RAIL
- FLUE RISE/DROP
- COMMISSIONING SET
- IV
- LOCK SHIELD VALVE
- TRV
- THERMOSTATIC RADIATOR VALVE
- METER

ABBREVIATIONS

- LL - LOW LEVEL
- HL - HIGH LEVEL
- FV - FLOOR VOID
- CV - CEILING VOID
- FB - FROM BELOW
- FA - FROM ABOVE
- DTB - DROP TO BELOW
- RTA - RISE TO ABOVE
- DC - DOOR CURTAIN
- EPH - ELECTRIC PANEL HEATER
- RA - RADIATOR

Rev.	Date	Description	By	Chk'd	App'd	Status
P05	03.03.25	GA's UPDATED	CMB	CW	LM	
P04	29.01.25	REVISED PER COMMENTS	CC	CW	LM	
P03	14.11.24	REVISED PER COMMENTS	CC	CW	LM	
P02	06.08.24	REVISED GA & INCORPORATE COMMENTS	JH	CC	LM	
P01	11.04.24	REISSUED AT (P) STAGE 5 PREVIOUS DRAWINGS SUPERCEDED	JH	CC	LM	

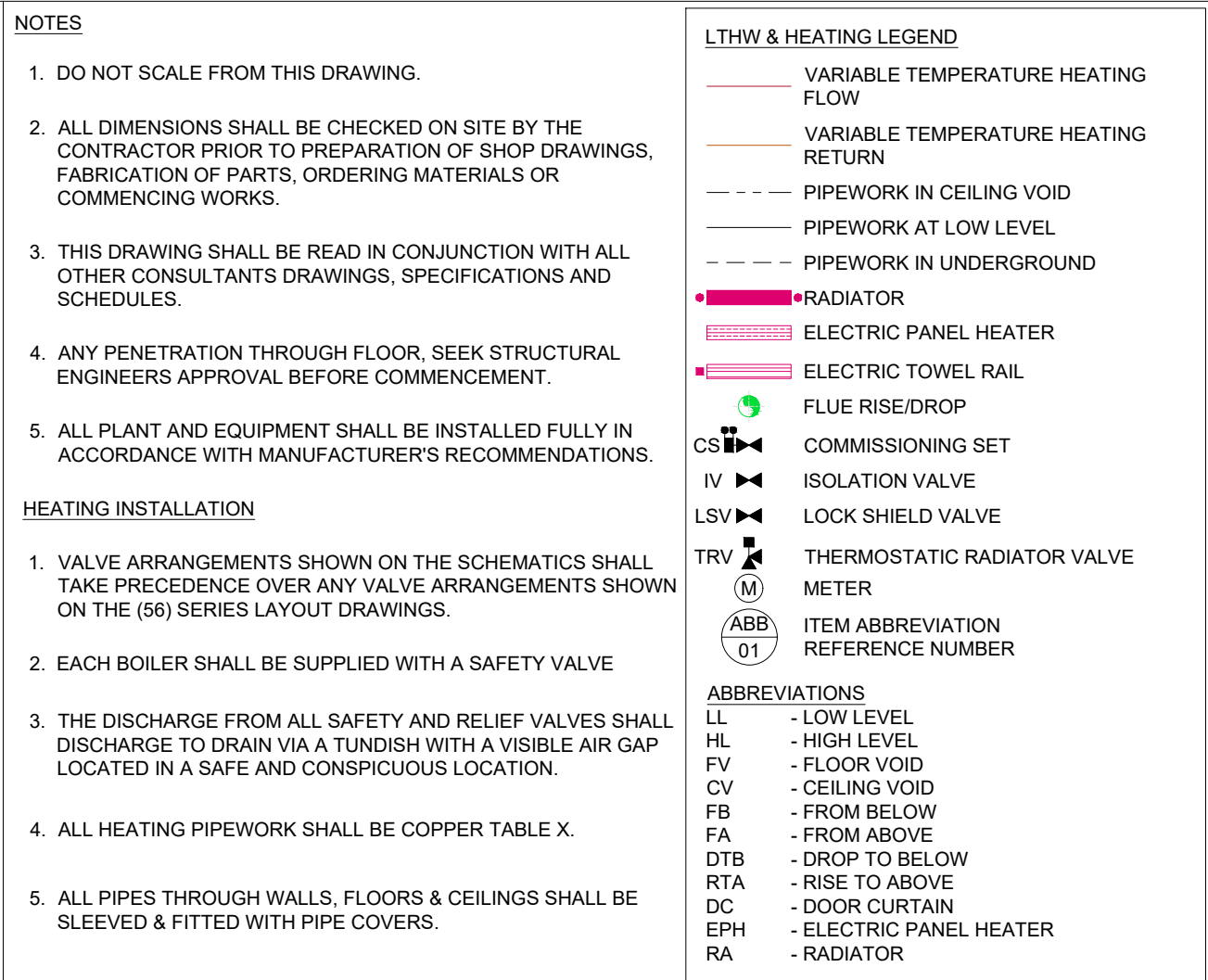


Client
ALLIED LONDON

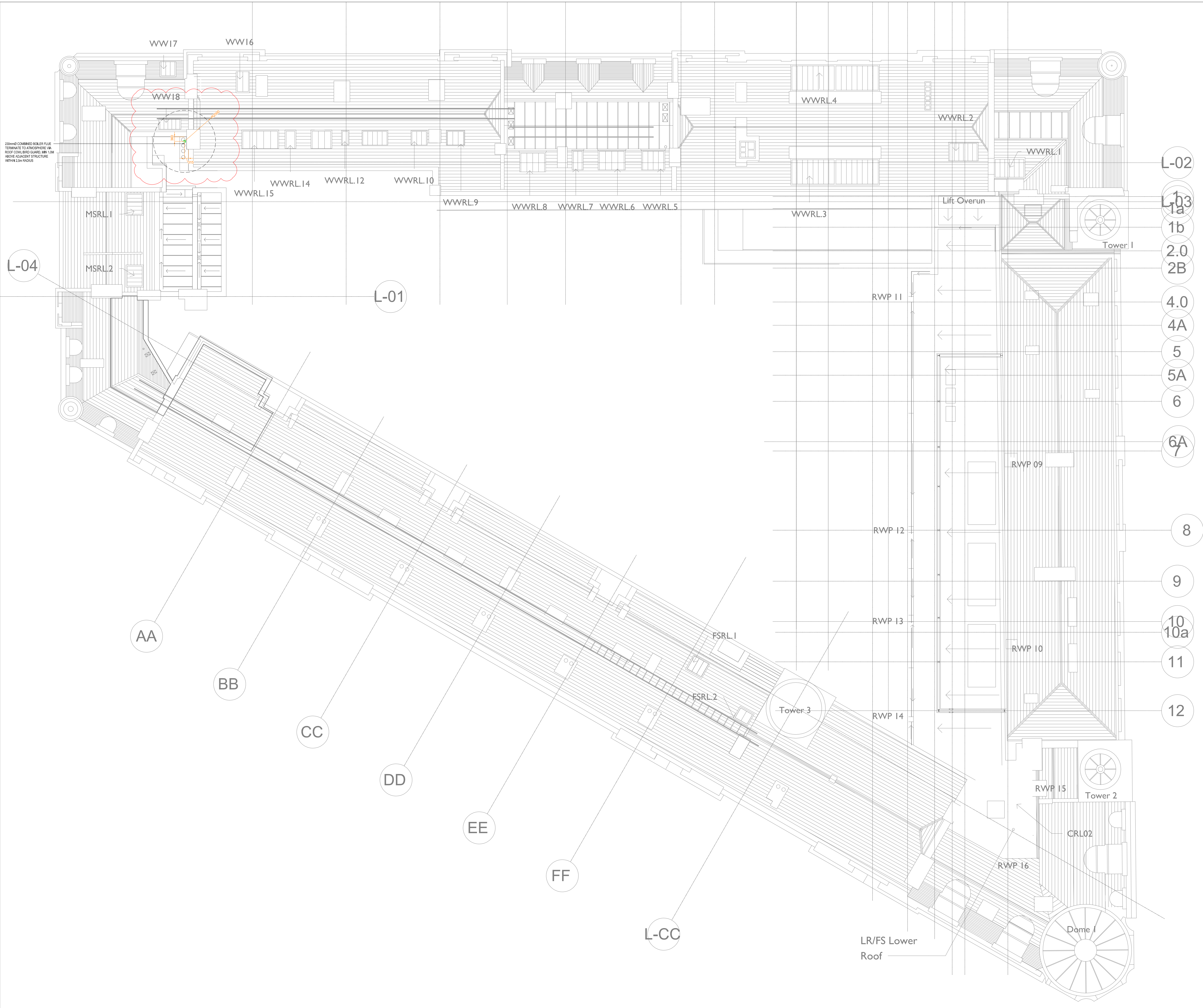
Project Title
LONDON ROAD FIRE STATION
FIRE STATION, LONDON ROAD, MANCHESTER, M1 2PH

Drawing Title
**MECHANICAL SERVICES
LTHW & HEATING LAYOUT
THIRD FLOOR**

Scale	Designed	Drawn	Checked	Authorised
1:100	CC	JH	CC	LM
Original Size	Date	Date	Date	Date
-	11.04.24	11.04.24	11.04.24	11.04.24
Drawing Number	Revision	Revision	Revision	Revision
LRFS-CMB-M-03-XX-DR-5601				P05

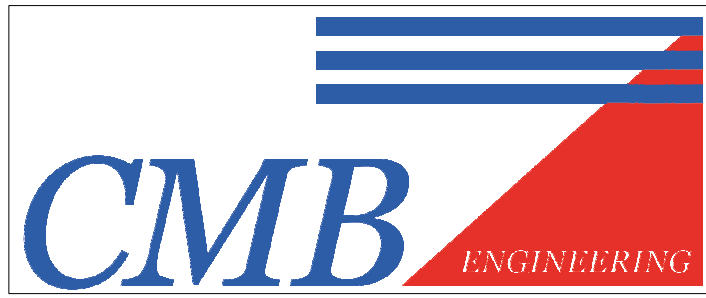


10
0 10
Millimetres



- NOTES**
1. DO NOT SCALE FROM THIS DRAWING.
 2. ALL DIMENSIONS SHALL BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION OF PARTS, ORDERING MATERIALS OR COMMENCING WORKS.
 3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS, SPECIFICATIONS AND SCHEDULES.
 4. ANY PENETRATION THROUGH FLOOR, SEEK STRUCTURAL ENGINEERS APPROVAL BEFORE COMMENCEMENT.
 5. ALL PLANT AND EQUIPMENT SHALL BE INSTALLED FULLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- HEATING INSTALLATION**
1. VALVE ARRANGEMENTS SHOWN ON THE SCHEMATICS SHALL TAKE PRECEDENCE OVER ANY VALVE ARRANGEMENTS SHOWN ON THE (R) SERIES LAYOUT DRAWINGS.
 2. EACH BOILER SHALL BE SUPPLIED WITH A SAFETY VALVE
 3. THE DISCHARGE FROM ALL SAFETY AND RELIEF VALVES SHALL DISCHARGE TO DRAIN VIA A TRUCKW/ WITH A VISIBLE AIR GAP LOCATED IN A SAFE AND CONSPICUOUS LOCATION.
 4. ALL HEATING PIPEWORK SHALL BE COPPER TABLE X.
 5. ALL PIPES THROUGH WALLS, FLOORS & CEILINGS SHALL BE SLEEVED & FITTED WITH PIPE COVERS.
 6. FIRE STOPPING SHALL BE PROVIDED AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT.
 7. MECHANICAL CONTRACTOR TO INCLUDE FOR FILLING, VENTING & BALANCING OF PROPOSED SERVICES AND PRESSURE TESTING OF ALL PIPEWORK.
 8. THE BOILER FLUE IS TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 9. ALL PIPEWORK IN VOIDS / BOXING ETC NOT PROVIDING USEFUL HEAT TO BE INSULATED IN ACCORDANCE WITH THE MECHANICAL PARTICULAR SPECIFICATION.
 10. FLUES ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, THE CLEAN AIR ACT MEMORANDUM ON CHIMNEY HEIGHTS, THE BUILDING REGULATIONS PART L AND GSI/110.
 11. THE BOILER FLUES SHALL BE COMPLETE WITH ACCESS PANELS IN RISERS AND H/S AT 5m INTERVALS AND AT EVERY JOINT.
- LTHW & HEATING LEGEND**
- VARIABLE TEMPERATURE HEATING FLOW
 - VARIABLE TEMPERATURE HEATING RETURN
 - PIPEWORK IN CEILING VOID
 - PIPEWORK AT LOW LEVEL
 - PIPEWORK IN UNDERGROUND
 - RADIATOR
 - ELECTRIC TOWEL HEATER
 - ELECTRIC TOWEL RAIL
 - FLUE RISE/DROP
 - COMMISSIONING SET
 - ISOLATION VALVE
 - LOCK SHIELD VALVE
 - THERMOSTATIC RADIATOR VALVE
 - METER
- ABBREVIATIONS**
- LL - LOW LEVEL
 - HL - HIGH LEVEL
 - FV - FLOOR VOID
 - CV - CEILING VOID
 - FB - FROM BELOW
 - FA - FROM ABOVE
 - DTB - DROP TO BELOW
 - RTA - RISE TO ABOVE
 - DC - DOOR CURTAIN
 - EPH - ELECTRIC PANEL HEATER
 - RA - RADIATOR

Rev.	Date	Description	By	Chk'd	App'd
P04	03.03.25	GA's UPDATED	CMB	CW	LM
P03	29.01.25	REVISED PER COMMENTS	CC	CW	LM
P02	06.06.24	TO INCORPORATE COMMENT (GA BACKGROUND UPDATED ONLY)	JH	CC	LM
P01	11.04.24	REISSUED AT (P) STAGE 5 PREVIOUS DRAWINGS SUPERCEDED	JH	CC	LM
Drawing Suitability					Status



Client

ALLIED LONDON

Project Title

LONDON ROAD FIRE STATION
FIRE STATION, LONDON ROAD, MANCHESTER, M1 2PH

Drawing Title

MECHANICAL SERVICES
LTHW & HEATING LAYOUT
ROOF LEVEL

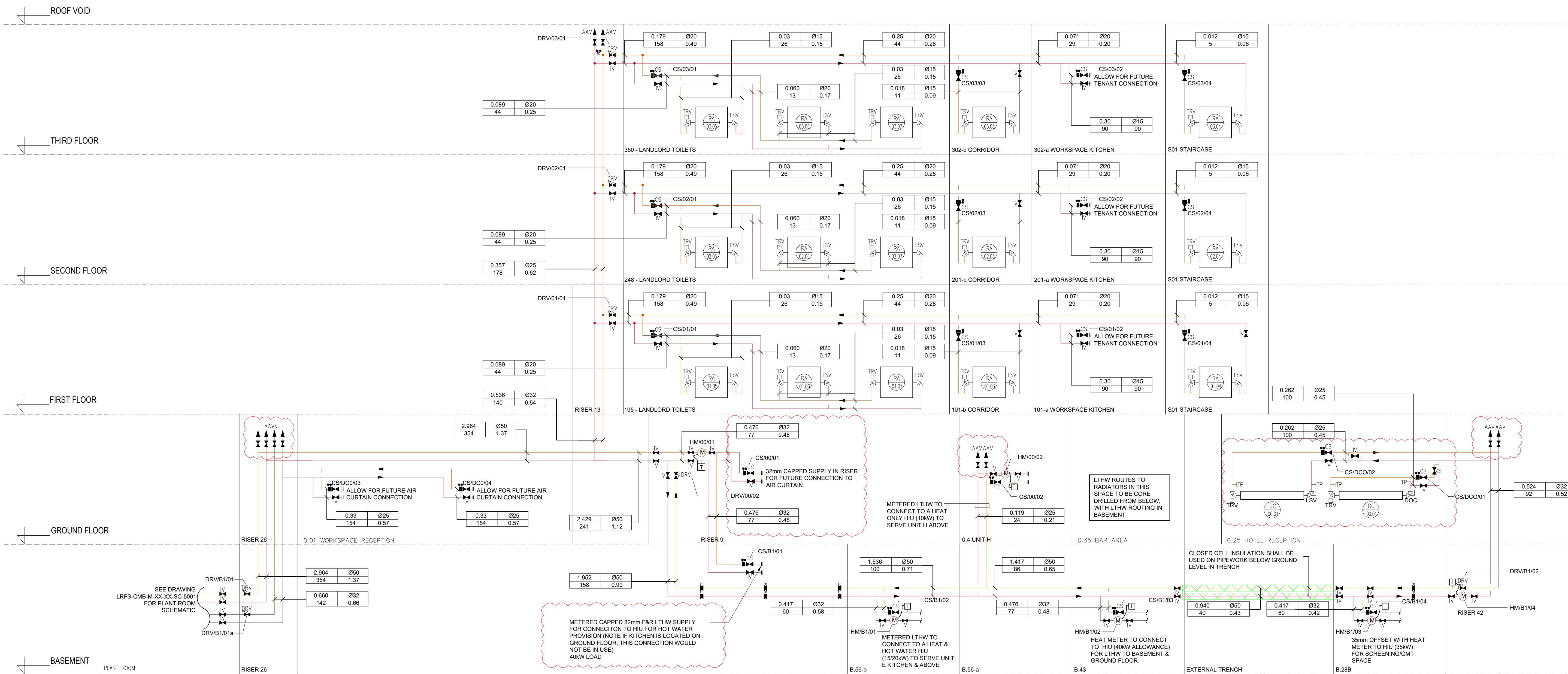
Scale	1:100	Designed	CC	Drawn	JH	Checked	CC	Authorised	LM
Original Size	-	Date	11/04/24	Date	11/04/24	Date	11/04/24	Date	11/04/24
Drawing Number	LRFS-CMB-M-RL-XX-DR-5601								Revision
								P04	

100
0 10
Millimetres

SYMBOLS LEGEND	
	FLOW DIRECTION ARROW
	2-PORT MOTORISED VALVE
	3-PORT MOTORISED VALVE
	4-PORT MOTORISED VALVE
	ANCHOR POINT (2025204mm)
	AUTOMATIC AIR VENT
	CHECK VALVE
	COMMISSIONING SET
	DIFFERENTIAL PRESSURE RELIEF VALVE
	DOUBLE CHECK VALVE
	DOUBLE REGULATING VALVE
	DRAIN OFF COCK
	EXPANSION BELLOW (2532mm)
	EMERGENCY CONTROL VALVE
	FIXED ORIFICE DOUBLE REGULATING VALVE
	FLEXIBLE CONNECTION
	FLUS VALVE
	FLOW MONITORING STATION VALVE
	FILL POINT
	GAS COCK
	GAS SOLENOID VALVE
	ISOLATION VALVE
	LOCK SHIELD VALVE
	MANUAL AIR VENT
	MIXING VALVE
	NORMALLY CLOSED VALVE
	NONRETURN VALVE
	OFFICE PLATE
	PRIORITY DEMAND VALVE
	PURGE POINT
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	PRESSURE INDEPENDENT CONTROL VALVE
	SAFETY VALVE
	SOLENOID VALVE
	SPRING CHECK VALVE
	STOPCOCK
	STRAINER
	SWING CHECK VALVE
	THERMOSTATIC BALANCING VALVE
	THERMOSTATIC MIXING VALVE
	THERMOSTATIC MIXING VALVE 2
	TUNDISH
	ROOM TEMPERATURE DETECTOR
	DIFFERENTIAL PRESSURE SWITCH
	TEST POINT
	THERMOMETER
	WATER METER
	RENEWABLE HEAT ENERGY METER
	PUMP SET (REFER TO SCHEDULE)

- NOTES
- DO NOT SCALE FROM THIS DRAWING
 - ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION OF PARTS, ORDERING MATERIALS OR COMMENCING WORKS
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS, SPECIFICATIONS AND SCHEDULES.
 - ANY PENETRATION THROUGH FLOOR, SEEK STRUCTURAL ENGINEERS APPROVAL BEFORE COMMENCEMENT
 - ALL PLANT AND EQUIPMENT SHALL BE INSTALLED FULLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
- HEATING INSTALLATION
- VALVE ARRANGEMENTS SHOWN ON SCHEMATICS & MANUFACTURERS INSTALLATION MANUALS SHALL TAKE PRECEDENCE OVER ANY VALVE ARRANGEMENTS SHOWN ON THE (S6) SERIES LAYOUT DRAWINGS
 - EACH RADIATOR SHALL BE FITTED WITH A THERMOSTATIC RADIATOR VALVE & DRAIN OFF COCK
 - WHERE LOCATED IN ACCESSIBLE AREA, RADIATORS SHALL BE SET A MEAN WATER RADIATOR TEMPERATURE OF 43°C IN COMPLIANCE WITH HSE GUIDELINES FOR HEATING IN DISABLED AREAS
 - EACH BOILER SHALL BE SUPPLIED WITH A SAFETY VALVE & PRESSURE RELIEF VALVE
 - 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
 - ALL HEATING PIPEWORK SHALL BE COPPER IN COMPLIANCE WITH BS EN 1057
 - ALL PIPES THROUGH WALLS, FLOORS & CEILINGS TO BE SLEEVED & FITTED WITH PIPE COVERS IN COMPLIANCE WITH EN 13501-1
 - FIRE STOPPING IS TO BE PROVIDED AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT
 - MECHANICAL CONTRACTOR TO INCLUDE FOR FILLING, VENTING & BALANCING OF PROPOSED SERVICES AND PRESSURE TESTING OF ALL PIPEWORK IN ACCORDANCE WITH BS 7593
 - THE BOILER FLUE IS TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS & SHALL COMPLY WITH BS 6798
 - ALL PIPEWORK IN VOIDS / ROOFING ETC, NOT PROVIDING USEFUL HEAT, TO BE INSULATED IN ACCORDANCE WITH THE MECHANICAL PARTICULARS SPECIFICATION
 - WITHIN EACH RISE AND FALL BETWEEN FLOOR LEVELS, ALL PIPES SHALL BE ALLOWED FOR OFFSETS DURING INSTALLATION
 - ALL RADIATORS TO BE INSTALLED & TESTED IN COMPLIANCE WITH BS EN 442-1
 - ALL RADIATOR POSITIONS ARE TO BE MARKED UP ON SITE AND ALL DIMENSIONS CHECKED PRIOR TO ORDERING

1/2	mm
Pg/m	m/s



P03	14.11.24	REVISED PER COMMENTS	CC	CW	LM
P02	06.08.24	REVISED	JH	CC	LM
P01	19.04.24	REISSUED AT (P) STAGE 5 PREVIOUS DRAWINGS SUPERCEDED	KD	CC	LM
Rev.	Date	Description	By	Chk'd	App'd

Drawing Suitability Status



Client

ALLIED LONDON

Project Title
LONDON ROAD FIRE STATION
FIRE STATION, LONDON ROAD, MANCHESTER, M1

Drawing Title
**MECHANICAL SERVICES
SCHEMATIC
LTHW & HEATING**

Scale 1:100	Designed CC	Drawn KD	Checked CC	Authorised LM
Original Size A0	Date 19/04/24	Date 19/04/24	Date 19/04/24	Date 19/04/24

Drawing Number
LRFS-CMB-M-XX-XX-SC-5601

Revision
P03

