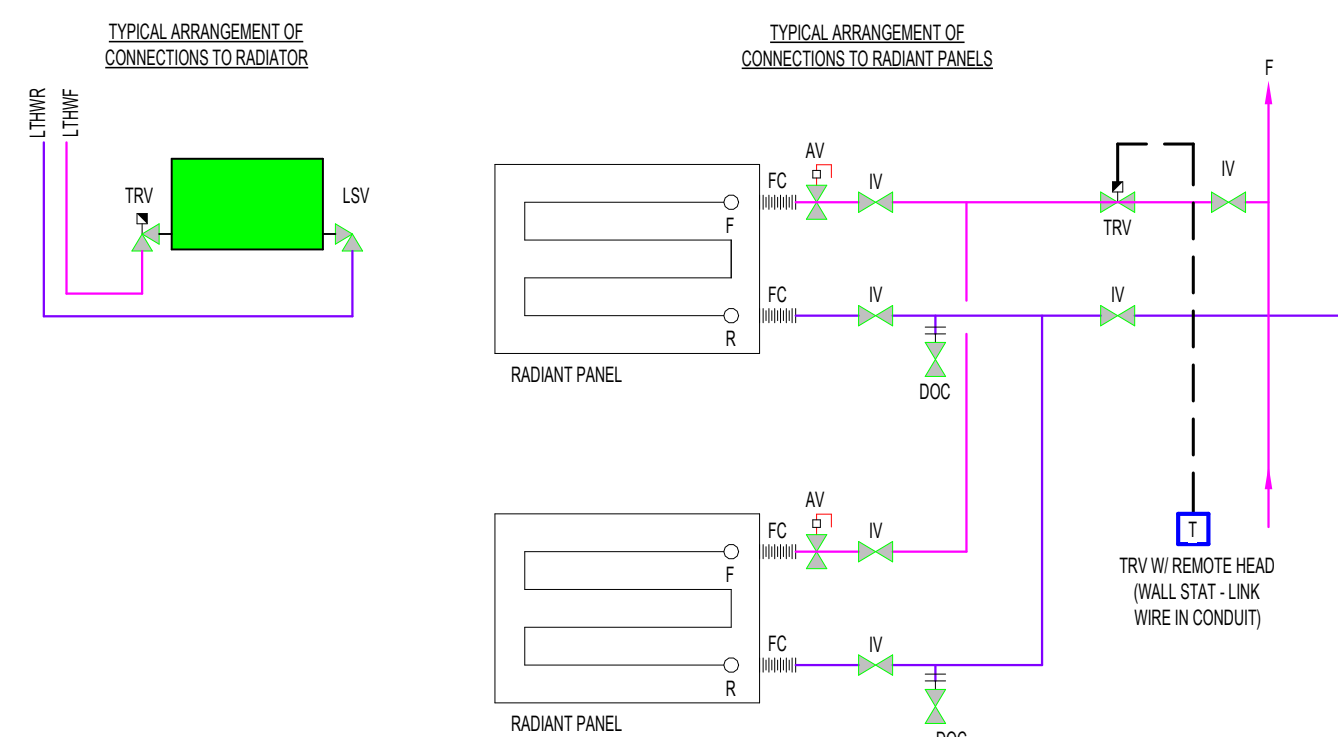
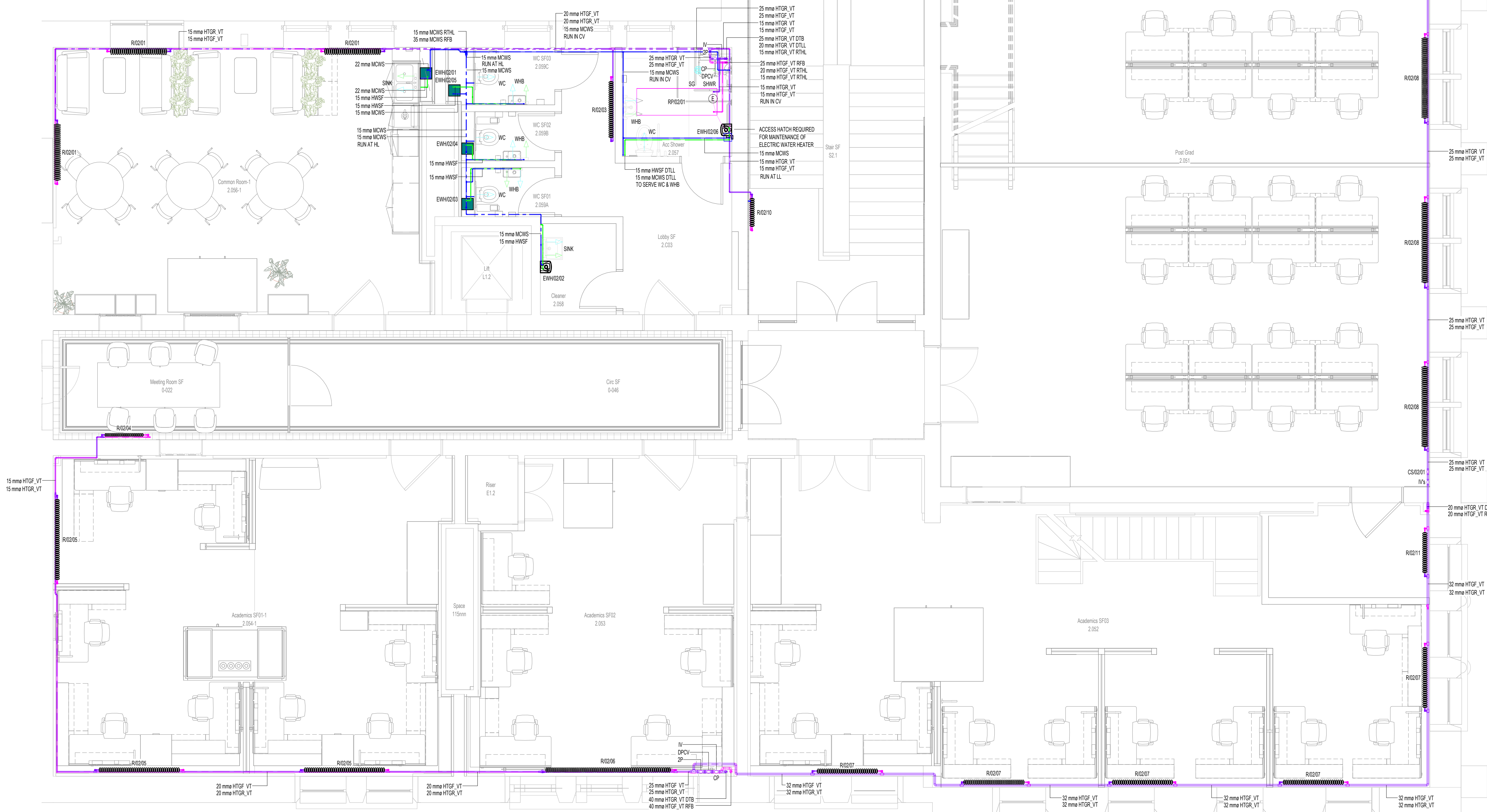




1 02 - Piped Services Design
1 : 50

LEGEND:		VALVE ASSOCIATIONS			
	COLD WATER SERVICE - MAINS				HEATING - FLOW
	HOT WATER SERVICE - FLOW	CS	COMMISSIONING SETS		HEATING - RETURN
	HOT WATER SERVICE - RETURN	CV	CHECK VALVE	_____	PIPEWORK - CEILING VOID
_____	PIPEWORK - CEILING VOID	HM	HEAT METER	_____	PIPEWORK - FLOOR VOID
_____	PIPEWORK - FLOOR VOID	IV	ISOLATION VALVE	_____	PIPEWORK - HIGH LEVEL
_____	PIPEWORK - HIGH LEVEL	WM	WATER METER	_____	PIPEWORK - LOW LEVEL
_____	PIPEWORK - LOW LEVEL	2P	2 PORT		THERMOSTAT
HWSF	HOT WATER SERVICE - FLOW	DP/CV	DIFFERENTIAL PRESSURE CONTROL VALVE		
HWSR	HOT WATER SERVICE - RETURN	CP	COMPANION VALVE		
MWS	MAINS COLD WATER SERVICE				

NOTES:
THIS IS A DESIGN DRAWING NOT AN INSTALLATION DRAWING.
DIMENSIONS SHOULD NOT BE SCALED.
SITE DIMENSIONS TO BE CHECKED BEFORE PRODUCTION OF CRITICAL
MANUFACTURING DRAWINGS.
THE DRAWING IS COPYRIGHT AND NO PART MAY BE REPRODUCED
WITHOUT WRITTEN CONSENT.

DOMESTICS NOTES:

1. ALL CONNECTIONS PREPARED TO BE INSULATED.
2. ALL HOT AND COLD TERMINAL BRANCHES TO BE 15mm AND SOLID END CONNECTIONS UNLESS OTHERWISE STATED.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PARTICULAR PROJECT SPECIFICATIONS AND ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS.
4. AAVs TO BE INSTALLED TO ALL HIGH POINTS.
5. DCS TO BE INSTALLED TO ALL LOW POINTS.
6. ALL FLOW MEASUREMENT DEVICES SHALL BE INSTALLED AT LEAST 10 DIAMETERS UPSTREAM AND 10 DIAMETERS DOWNSTREAM OF ANY FITTINGS.
7. PROVIDE TERMINAL BRANCH ISOLATION TO ALL HOT & COLD WATER OUTLETS.
8. COLD WATER BELOW 20°C AFTER RUNNING THE TAP FOR AT LEAST 2 MINUTES HOT WATER ABOVE 50°C AFTER RUNNING THE TAP FOR AT LEAST 1 MINUTE.
9. ALL HOT WATER OUTLETS SERVING WASH BASIN BASINS TO BE BLENDING TO 40°C MAXIMUM.
10. CWS PIPWORK TO BE INSTALLED IN COPPER.
11. THIS DRAWING IS TO BE INSTALLED IN HEAVY GRADE MILD STEEL.
12. EXPOSED PIPWORK WITHIN ROOMS TO BE NON-INSULATED AND PAINTED TO ARCHITECTS PREFERENCE (RAL 9010).

HEATING & COOLING NOTES:

1. FINAL CONNECTIONS TO BE MADE TO SUIT UP TO DATE ARCHITECTS LAYOUT
2. H/V'S TO BE INSTALLED TO ALL HIGH POINTS.
3. DOCS TO BE INSTALLED TO ALL LOW POINTS.
4. 150 MM HEAVY-DUTY DEVICES TO BE INSTALLED AT LEAST 10 DIAMETERS UPSTREAM AND 5 DIAMETERS DOWNSTREAM OF ANY FITTINGS
5. H/Vs AND G/S TO BE INSTALLED ON MAIN BRANCHES.
6. ALL HEATING/FLUO AND RETURN PIPEWORK TO BE 15mm UNLESS OTHERWISE STATED
7. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE PARTICULAR PROJECT STANDARD SPECIFICATION AND ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWING
8. THIS DRAWING IS FOR COSTING PURPOSE ONLY INSTALLATION DRAWINGS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATION
9. THE MECHANICAL CONTRACTOR SHALL COORDINATE ALL MECHANICAL SERVICES
10. ALL PIPEWORK WITHIN CEILING VOID/LOFT VOIDERS TO BE THERMALLY INSULATED IN ACCORDANCE WITH THE SPECIFICATION
11. FLUSHING BYPASS VALVES SHALL BE INSTALLED AS BS84 APPLICATION GUIDE 189
12. THE MECHANICAL CONTRACTOR SHALL ALLOW FOR EXPANSION ON ALL PIPEWORK BY INCLUDING FOR BELLLOWS EXPANSION LOOPS AND ANCHOR POINTS
13. ALL TAIL CONNECTIONS TO BE HARD PIPED
14. HEATING PIPEWORK TO BE MANIATED AS PER ARCHITECTS DETAILS RAL 9010 WITH TRADITIONAL, SADDLE BRACKET OR RING BRACKETS
15. ALL PIPEWORK PASSING THROUGH FIRE BARRIERS & WALLS THROUGH WALL FIRE SLEEVES ALL PIPEWORK PASSING THROUGH WALLS THROUGH WALL FIRE SLEEVES
16. ALLOW A DOUBLE PIPE STEP WHEREVER PIPES PASS THROUGH WALLS, CEILINGS OR FLOORS TO ALLOW FOR POSSIBLE STRUCTURAL OBSTRUCTIONS
17. DRAIN COCKS TO BE INSTALLED AT LOW POINTS & AIR VENTS AT ALL HIGH POINTS
18. CONTRACTOR SHALL ALLOW FOR ALL ADDITIONAL BENDS & FITTINGS NECESSARY TO AVOID OTHER SERVICES ETC.
19. ALLOWANCE TO BE MADE FOR DRILLING HOLES THROUGH WALLS FOR THE INSTALLATION OF NEW PIPEWORK AND MAKING GOOD ON COMPLETION.
20. ALL EXPOSED HEATING PIPEWORK TO REMAIN UNINSULATED

HOLD NOTE: FINAL DISTRIBUTION DEPENDENT ON EXISTING SERVICES
ROUTING TO ENABLE RE-USE OF EXISTING BUILDERSWORK HOLES AND
FIXINGS

FOR BUILDING SECTIONS REFER TO DRAWING:
UOMRB-CAD-XX-XX-DR-M-56005

Rev C03	STAGE 4 ISSUE - MCC COMMENTS INCORPORATED				
By:	JD	Chkd:	JFH	Date:	06.12.24 App: JCF
Rev C02	STAGE 4 CONTRACT ISSUE - RADIATOR LOCATION REVISED				
By:	JD	Chkd:	JFH	Date:	06.09.24 App: JCF
Rev C01	STAGE 4 CONTRACT ISSUE				
By:	JN	Chkd:	JFH	Date:	16.08.24 App: JCF

Status	Description	Stage
A4	STAGE 4A COMPLETED	4

Client

MANCHESTER
1824

The University of Manchester

Project	UNIVERSITY OF MANCHESTER RUTHERFORD BUILDING
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Drawing

MECHANICAL SERVICES
PIPED SERVICES
SECOND FLOOR
GENERAL ARRANGEMENT LAYOUT



CAD21 LTD
BUILDING
SERVICES
& ENERGY
CONSULTING ENGINEERS

NEWCASTLE ■ TEESSIDE ■ YORKSHIRE ■ NORTH WEST

Drawing Number	Revision
UOMRB-CAD-XX-02-DR-M-56003	C03

Scale	Size
As indicated	A1

Drawing Origins :
RBUM-IBI-XX-XX-M3-A-000002 Rev 241108