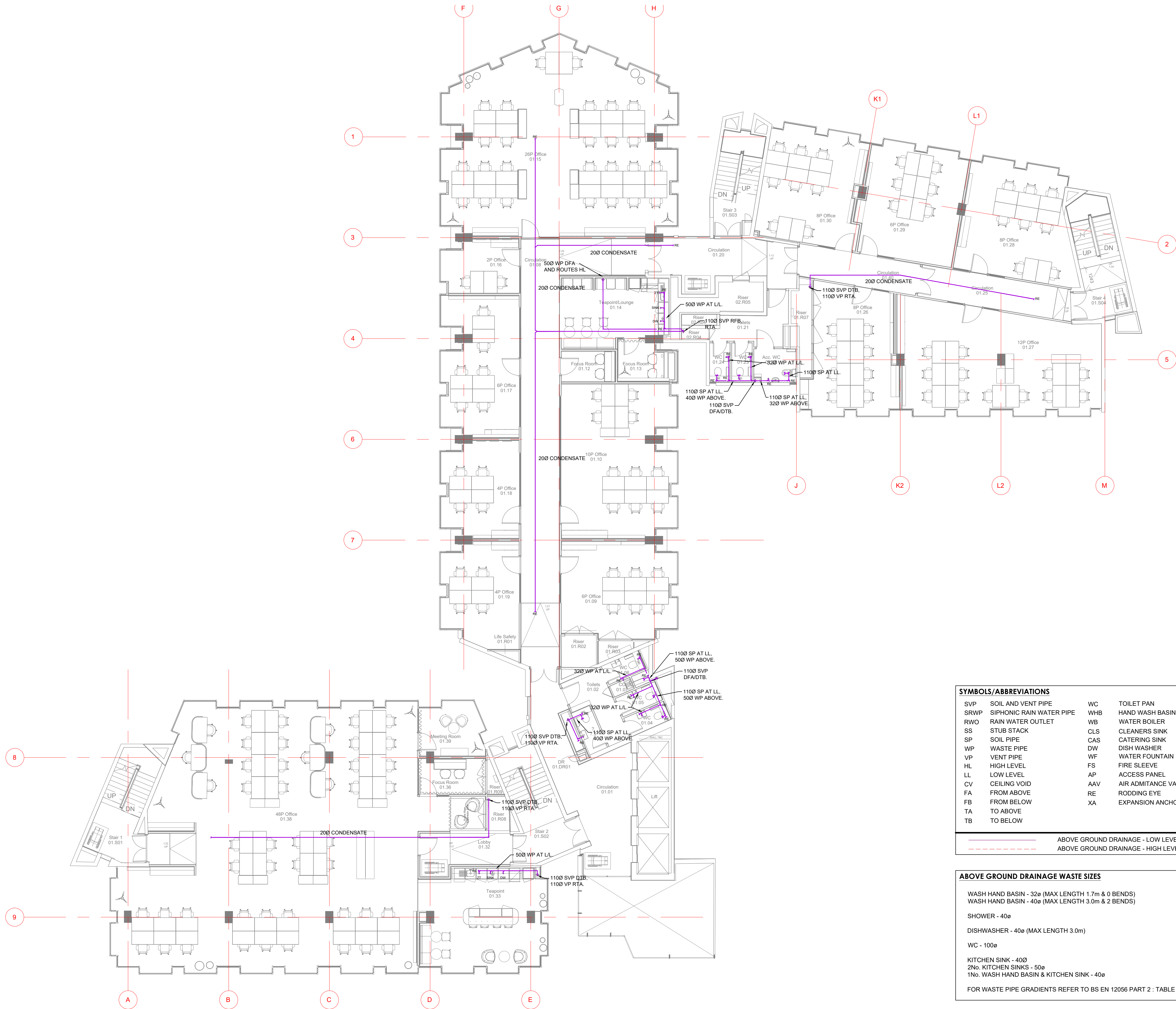


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SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
SP	SOIL PIPE	CAS	CATERING SINK
WP	WASTE PIPE	DW	DISH WASHER
VP	VENT PIPE	WF	WATER FOUNTAIN
HL	HIGH LEVEL	FS	FIRE SLEEVE
LL	LOW LEVEL	AP	ACCESS PANEL
CV	CEILING VOID	AAV	AIR ADMITTANCE VALVE
FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		

	ABOVE GROUND DRAINAGE - LOW LEVEL
	ABOVE GROUND DRAINAGE - HIGH LEVEL

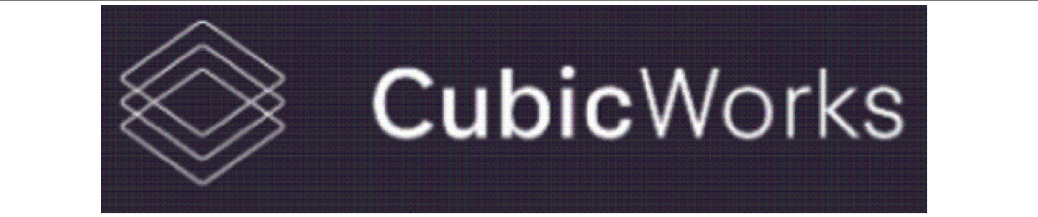
ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)	
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40ø	
DISHWASHER - 40ø (MAX LENGTH 3.0m)	
WC - 100ø	
KITCHEN SINK - 40ø	
2No. KITCHEN SINKS - 50ø	
1No. WASH HAND BASIN & KITCHEN SINK - 40ø	
FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

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- NOTES**
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 - ALL SUB STACKS SHALL BE PROVIDED WITH AIR ADMITTANCE VALVES INSTALLED WITHIN SERVICE RISERS, IPS SYSTEMS OR CONCEALED BOXING AND SHALL BE PROVIDED WITH SUFFICIENT NATURAL VENTILATION TO COMPLY WITH BBA CERTIFICATE.
 - VENTILATION PIPES SHALL TERMINATE AT ROOF LEVEL COMPLETE WITH A DURABLE BIRD PROOF COWL.
 - WC CISTERN OVERFLOWS SHALL DISCHARGE INTERNALLY WITHIN THE WC CISTERN IN COMPLIANCE WITH THE WATER REGULATIONS GUIDE.
 - RODDING POINTS SHALL BE PROVIDED WHERE WASTE PIPEWORK IS UNACCESSIBLE FROM ANY OTHER PART OF THE SYSTEM. RODDING EYES AT THE HEAD OF LOW LEVEL FLOATS SERVING WC'S SHALL BE UPTURNED THROUGH 90° & TERMINATE ABOVE SPILL OVER LEVEL.
 - ALL SOIL AND VENT PIPES SHALL BE PROVIDED WITH AN ACCESS DOOR 600mm AFFL BEFORE THE GROUND CONNECTION.
 - WHERE BRANCH CONNECTIONS ARE AT LOW LEVEL ACCESS DOORS SHALL BE INSTALLED ABOVE THE HIGHEST SANITARY FITTING CONNECTION ENSURING THAT THE DOOR IS INSTALLED ABOVE THE FLOOD LEVEL OF THE HIGHEST CONNECTED APPLIANCE.
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 - AN ALLOWANCE FOR EXPANSION SHOULD BE MADE EVERY 4m.
 - PIPE SOCKETS SHOULD BE SECURELY ANCHORED TO THE STRUCTURE TO PREVENT EXCESSIVE THERMAL MOVEMENT WITH THE EXCEPTION OF THE INTERMEDIATE PIPE SOCKETS WHICH SHOULD ALLOW FOR PIPE WORK EXPANSION AND CONTRACTION.
 - PIPE WORK SHOULD BE INSERTED INTO THE INTERMEDIATE SOCKET AND THEN WITHDRAWN TO PROVIDE A 10mm GAP.
 - RING SEAL ADAPTORS CAN BE USED ON SOLVENT SYSTEMS
 - EXPANSION COUPLERS CAN BE USED ON ABS AND MuPVC SYSTEMS.

P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV	CHK	DATE	DESCRIPTION

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Date: JUN 2022	Scale: 1:100		

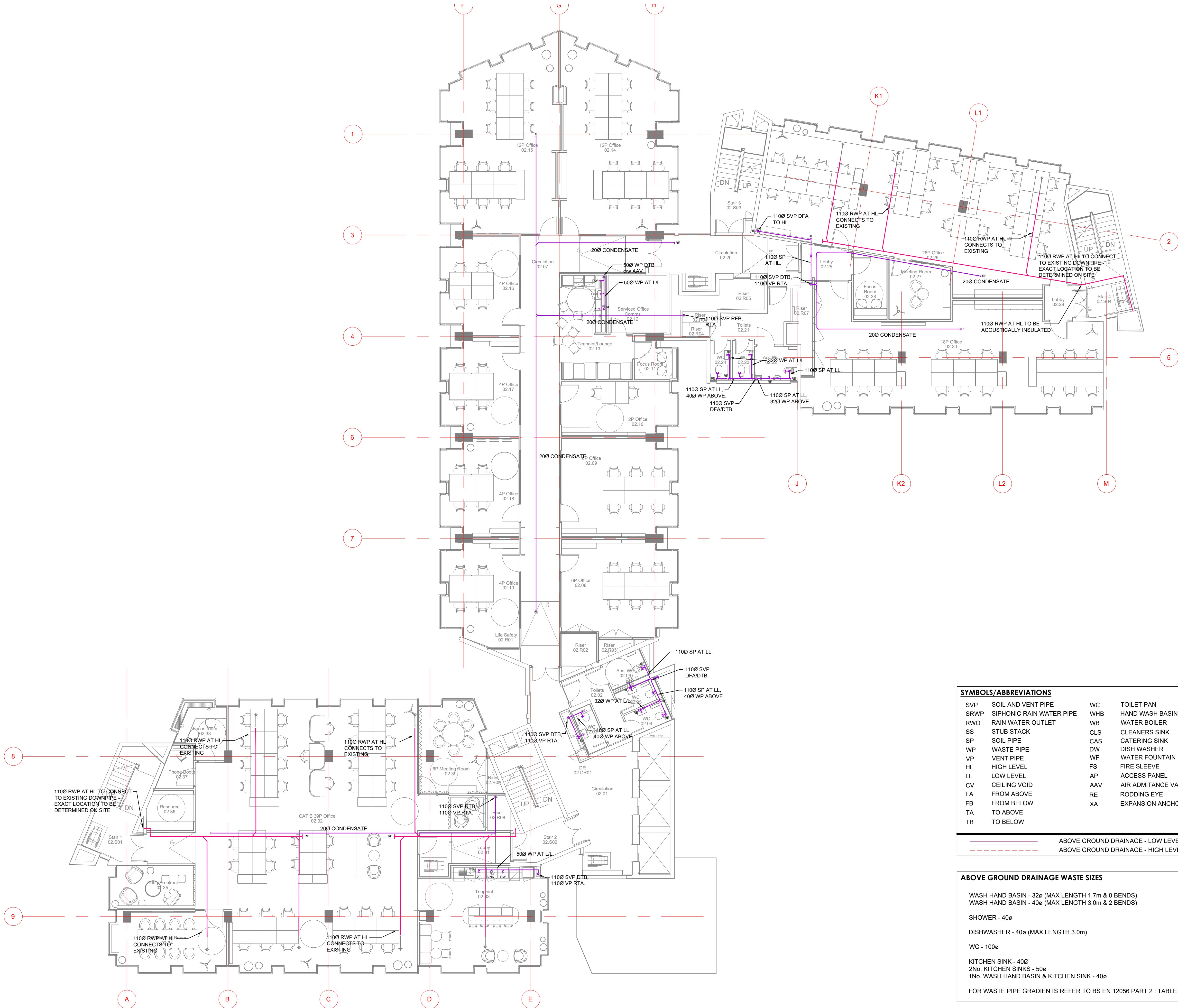
Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **ABOVE GROUND DRAINAGE LAYOUT FIRST FLOOR**

Drawing No: C3781-HEC-ZZ-01-DR-M-5200	Rev: P04
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SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
SP	SOIL PIPE	CAS	CATERING SINK
WP	WASTE PIPE	DW	DISH WASHER
VP	VENT PIPE	WF	WATER FOUNTAIN
HL	HIGH LEVEL	FS	FIRE SLEEVE
LL	LOW LEVEL	AP	ACCESS PANEL
CV	CEILING VOID	AAV	AIR ADMITTANCE VALVE
FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		

	ABOVE GROUND DRAINAGE - LOW LEVEL
	ABOVE GROUND DRAINAGE - HIGH LEVEL

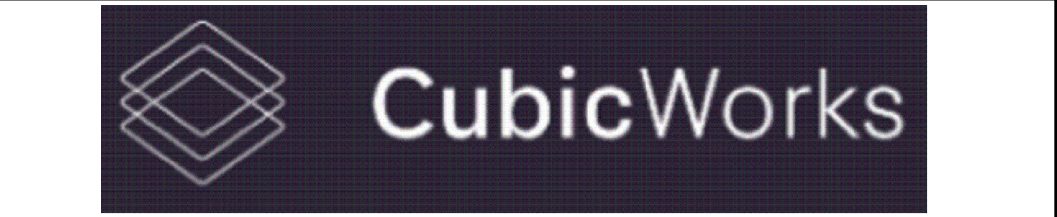
ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)	
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40ø	
DISHWASHER - 40ø (MAX LENGTH 3.0m)	
WC - 100ø	
KITCHEN SINK - 40ø	
2No. KITCHEN SINKS - 50ø	
1No. WASH HAND BASIN & KITCHEN SINK - 40ø	
FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

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 5. VENTILATION PIPES SHALL TERMINATE AT ROOF LEVEL COMPLETE WITH A DURABLE BIRD PROOF COWL.
 6. WC CISTERN OVERFLOWS SHALL DISCHARGE INTERNALLY WITHIN THE WC CISTERN IN COMPLIANCE WITH THE WATER REGULATIONS GUIDE.
 7. RODDING POINTS SHALL BE PROVIDED WHERE WASTE PIPEWORK IS UNACCESSABLE FROM ANY OTHER PART OF THE SYSTEM. RODDING EYES AT THE HEAD OF LOW LEVEL FLOATS SERVING WC'S SHALL BE UPTURNED THROUGH 90° & TERMINATE ABOVE SPILL OVER LEVEL.
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P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

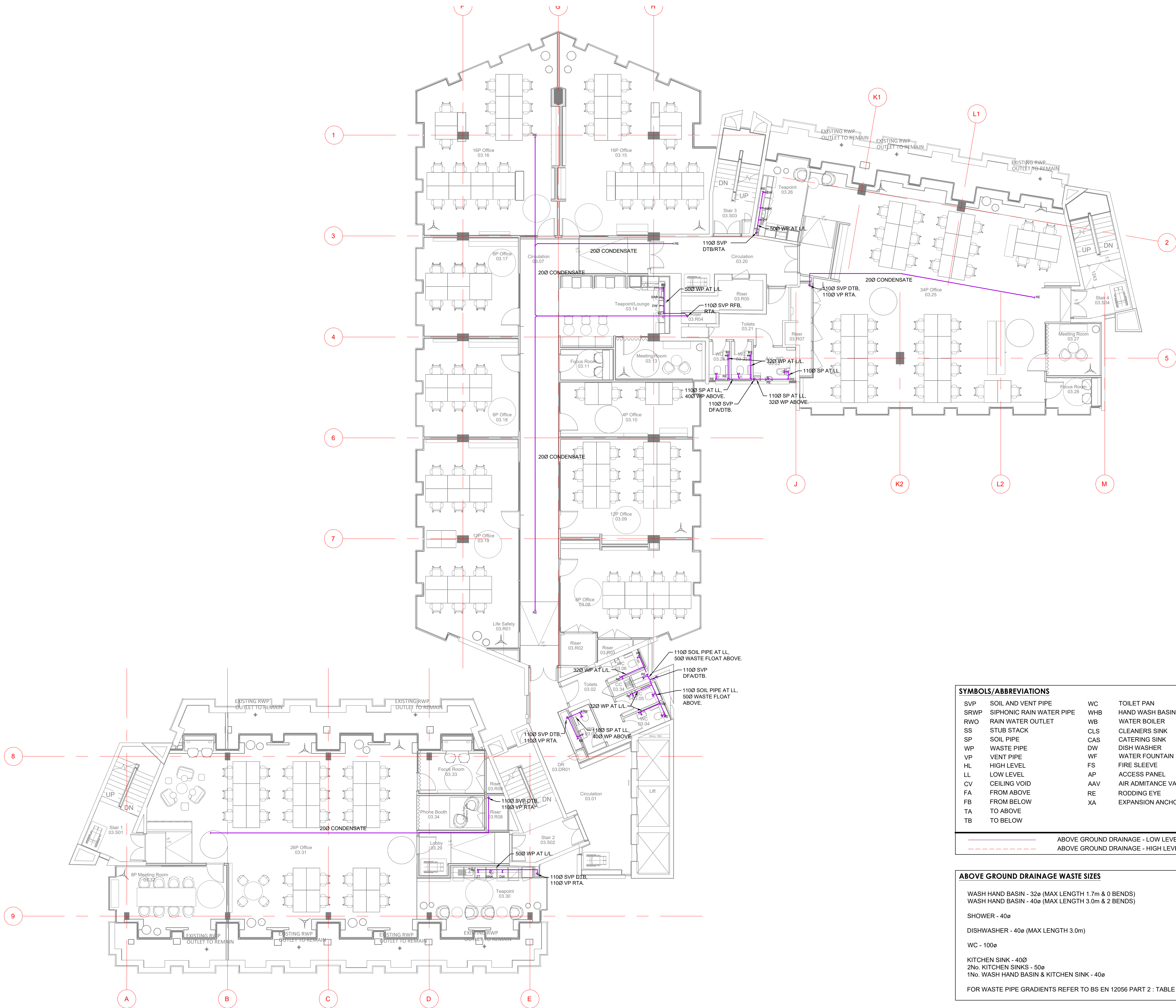
Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **ABOVE GROUND DRAINAGE LAYOUT SECOND FLOOR**

Drawing No: C3781-HEC-ZZ-02-DR-M-5200	Rev: P04
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SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
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FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		

ABOVE GROUND DRAINAGE - LOW LEVEL

ABOVE GROUND DRAINAGE - HIGH LEVEL

ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32a (MAX LENGTH 1.7m & 0 BENDS)	
WASH HAND BASIN - 40a (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40a	
DISHWASHER - 40a (MAX LENGTH 3.0m)	
WC - 100a	
KITCHEN SINK - 40Ø	
2No. KITCHEN SINKS - 50a	
1No. WASH HAND BASIN & KITCHEN SINK - 40a	
FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

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4.

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5.

VENTILATION PIPES SHALL TERMINATE AT ROOF LEVEL COMPLETE WITH A DURABLE BIRD PROOF COWL.
6.

WC CISTERN OVERFLOWS SHALL DISCHARGE INTERNALLY WITHIN THE WC CISTERN IN COMPLIANCE WITH THE WATER REGULATIONS GUIDE.
7.

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8.

ALL SOIL AND VENT PIPES SHALL BE PROVIDED WITH AN ACCESS DOOR 600mm AFFL BEFORE THE GROUND CONNECTION.
9.

WHERE BRANCH CONNECTIONS ARE AT LOW LEVEL ACCESS DOORS SHALL BE INSTALLED ABOVE THE HIGHEST SANITARY FITTING CONNECTION ENSURING THAT THE DOOR IS INSTALLED ABOVE THE FLOOD LEVEL OF THE HIGHEST CONNECTED APPLIANCE.
11.

AN ALLOWANCE FOR EXPANSION SHOULD BE MADE EVERY 4m.
12.

PIPE SOCKETS SHOULD BE SECURELY ANCHORED TO THE STRUCTURE TO PREVENT EXCESSIVE THERMAL MOVEMENT WITH THE EXCEPTION OF THE INTERMEDIATE PIPE SOCKETS WHICH SHOULD ALLOW FOR PIPE WORK EXPANSION AND CONTRACTION.
13.

PIPE WORK SHOULD BE INSERTED INTO THE INTERMEDIATE SOCKET AND THEN WITHDRAWN TO PROVIDE A 10mm GAP.
14.

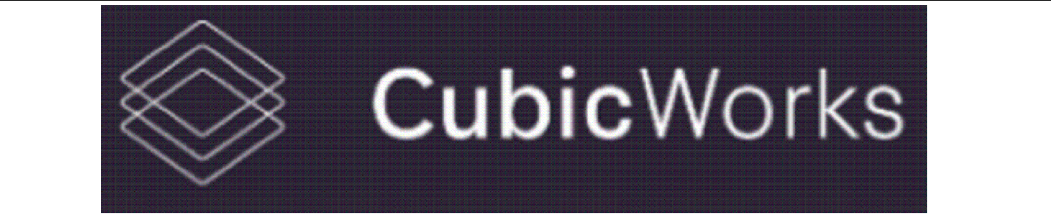
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15.

EXPANSION COUPLERS CAN BE USED ON ABS AND MuPVC SYSTEMS.

P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

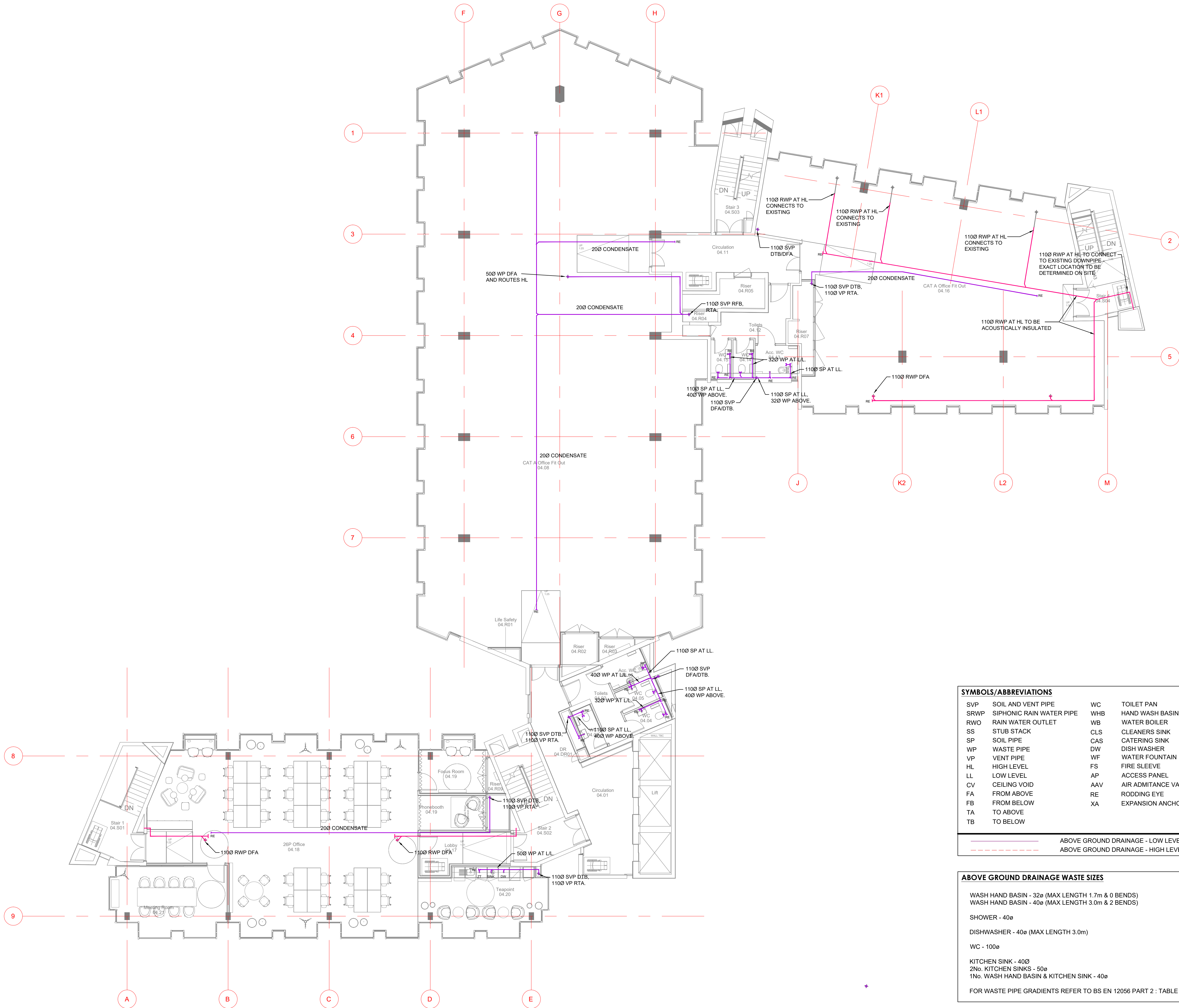
Client: CUBIC WORKS

Project: PALL MALL MANCHESTER

Drawing Title: ABOVE GROUND DRAINAGE LAYOUT THIRD FLOOR

Drawing No: C3781-HEC-ZZ-03-DR-M-5200	Rev: P04
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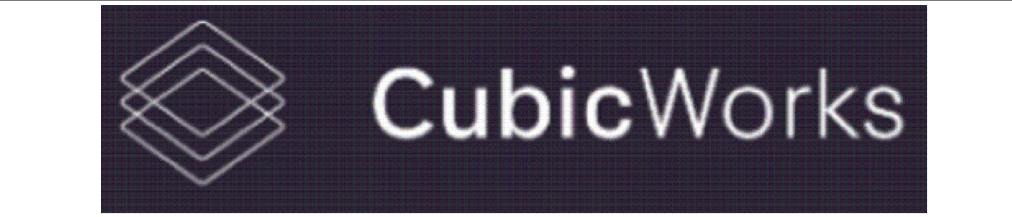


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P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

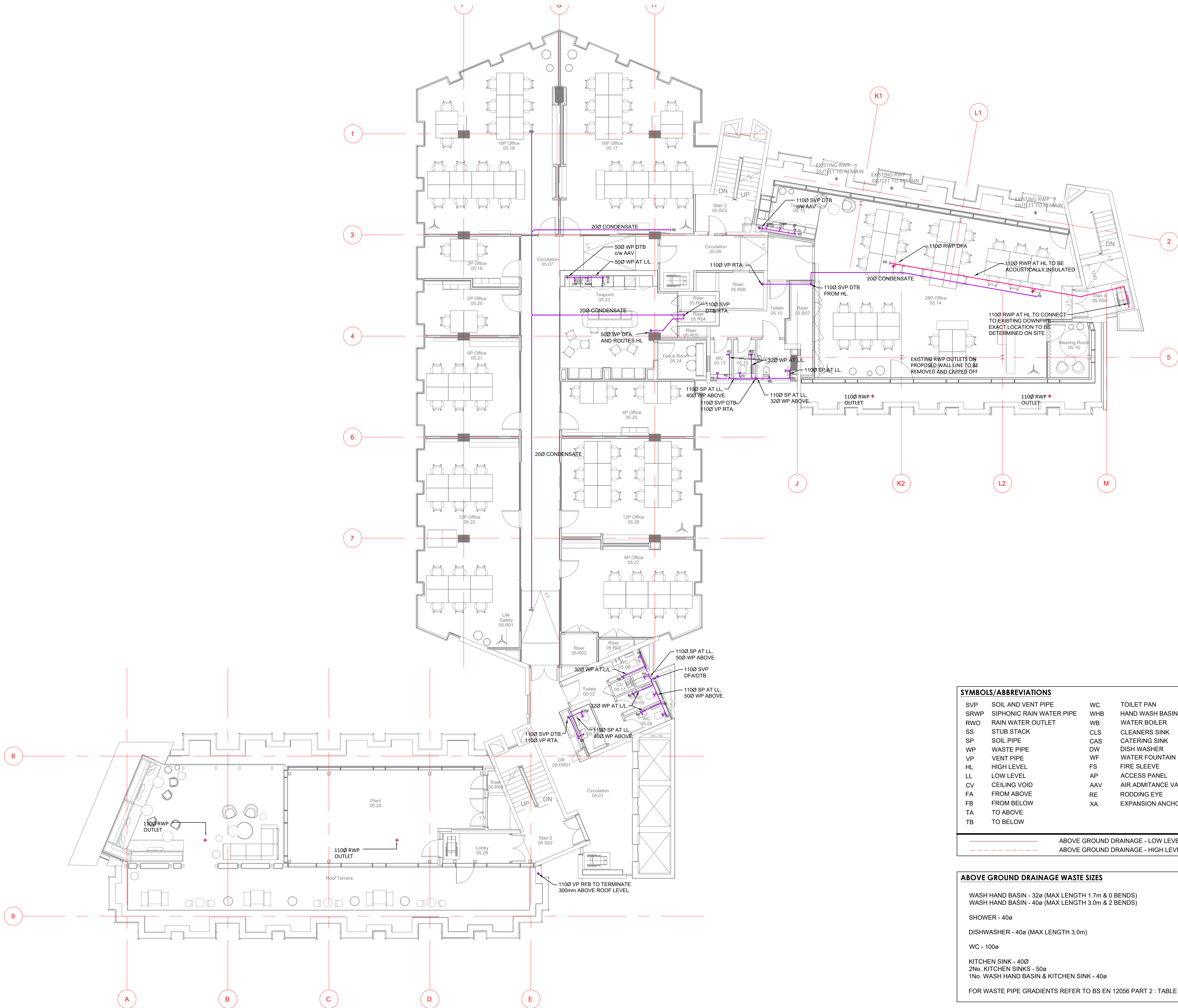
Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **ABOVE GROUND DRAINAGE LAYOUT FOURTH FLOOR**

Drawing No: C3781-HEC-ZZ-04-DR-M-5200	Rev: P04
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SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
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FA	FROM ABOVE	RE	RODDING EYE
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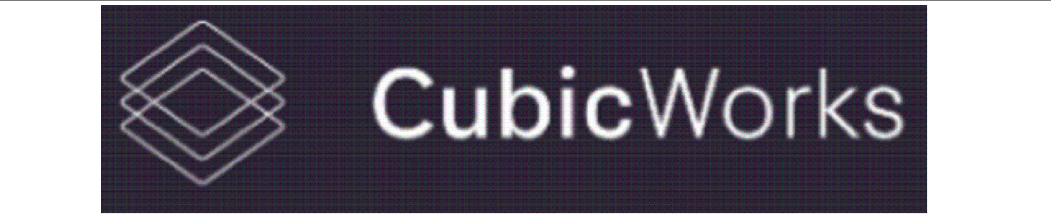
ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)	
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40ø	
DISHWASHER - 40ø (MAX LENGTH 3.0m)	
WC - 100ø	
KITCHEN SINK - 40ø	
2No. KITCHEN SINKS - 50ø	
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FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

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 9. WHERE BRANCH CONNECTIONS ARE AT LOW LEVEL ACCESS DOORS SHALL BE INSTALLED ABOVE THE HIGHEST SANITARY FITTING CONNECTION ENSURING THAT THE DOOR IS INSTALLED ABOVE THE FLOOD LEVEL OF THE HIGHEST CONNECTED APPLIANCE.
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P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

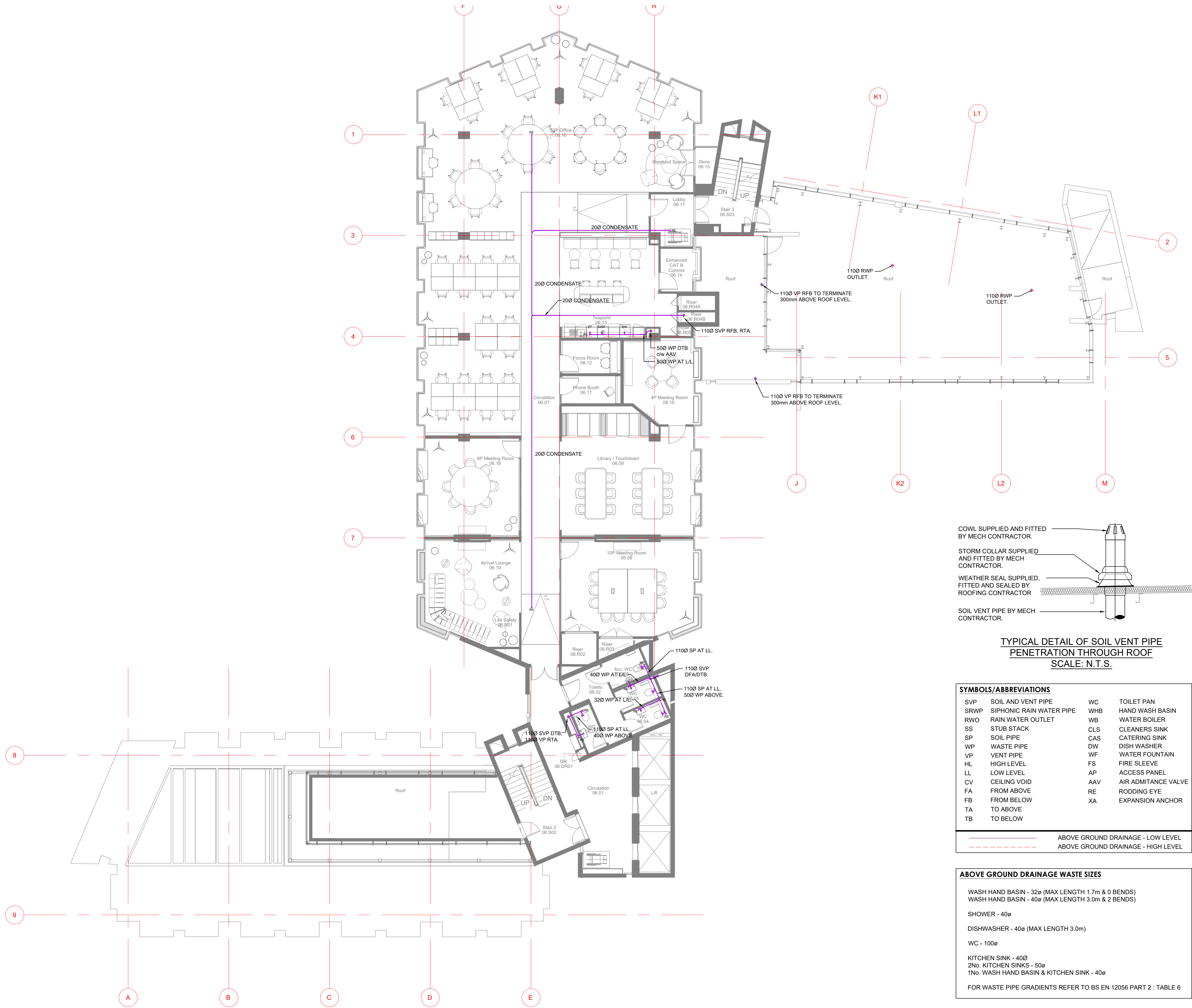
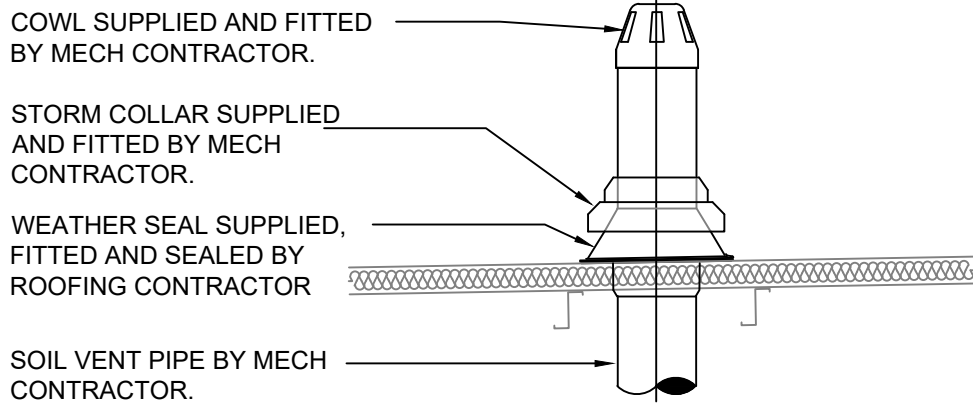
Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **ABOVE GROUND DRAINAGE LAYOUT FIFTH FLOOR**

Drawing No: C3781-HEC-ZZ-05-DR-M-5200	Rev: P04
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TYPICAL DETAIL OF SOIL VENT PIPE
PENETRATION THROUGH ROOF
SCALE: N.T.S.

SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
SP	SOIL PIPE	CAS	CATERING SINK
WP	WASTE PIPE	DW	DISH WASHER
VP	VENT PIPE	WF	WATER FOUNTAIN
HL	HIGH LEVEL	FS	FIRE SLEEVE
LL	LOW LEVEL	AP	ACCESS PANEL
CV	CEILING VOID	AAV	AIR ADMITTANCE VALVE
FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		
—		ABOVE GROUND DRAINAGE - LOW LEVEL	
---		ABOVE GROUND DRAINAGE - HIGH LEVEL	

ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS) WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40ø	
DISHWASHER - 40ø (MAX LENGTH 3.0m)	
WC - 100ø	
KITCHEN SINK - 40Ø 2No. KITCHEN SINKS - 50ø 1No. WASH HAND BASIN & KITCHEN SINK - 40ø	
FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

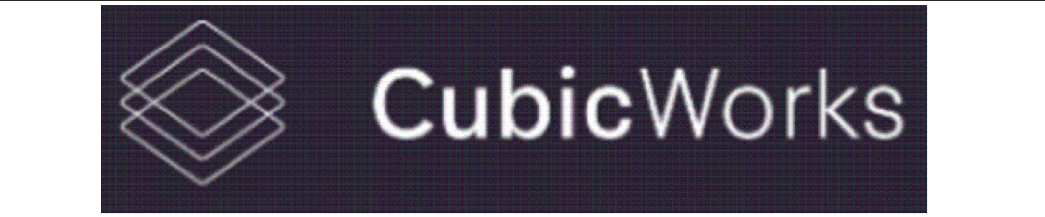
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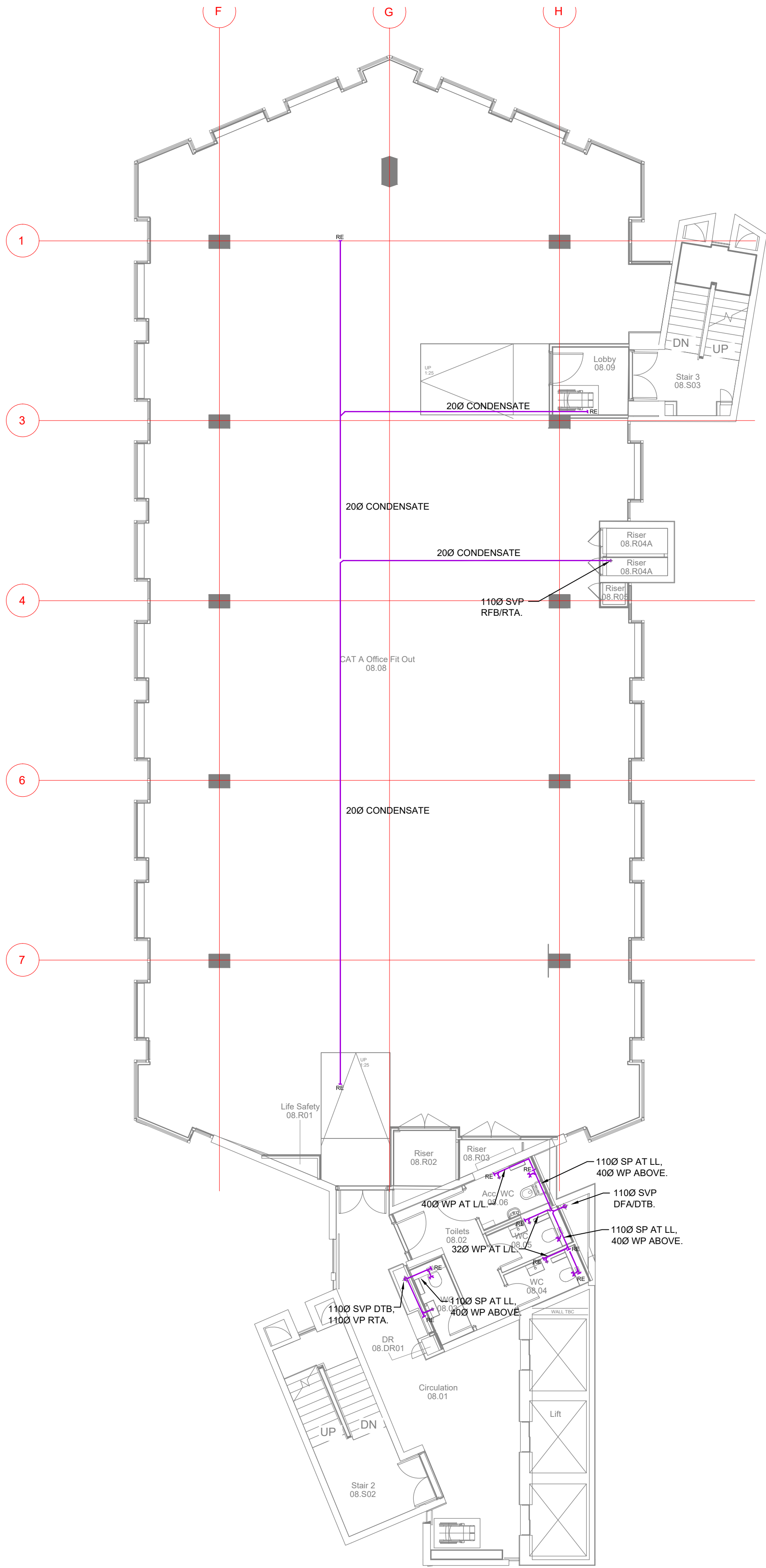
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Date: JUN 2022	Scale: 1:100		

Client: CUBIC WORKS

Project: PALL MALL MANCHESTER

Drawing Title: ABOVE GROUND DRAINAGE LAYOUT SIXTH FLOOR

Drawing No: C3781-HEC-ZZ-06-DR-M-5200	Rev: P04
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SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
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HL	HIGH LEVEL	FS	FIRE SLEEVE
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CV	CEILING VOID	AAV	AIR ADMITTANCE VALVE
FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		

	ABOVE GROUND DRAINAGE - LOW LEVEL
	ABOVE GROUND DRAINAGE - HIGH LEVEL

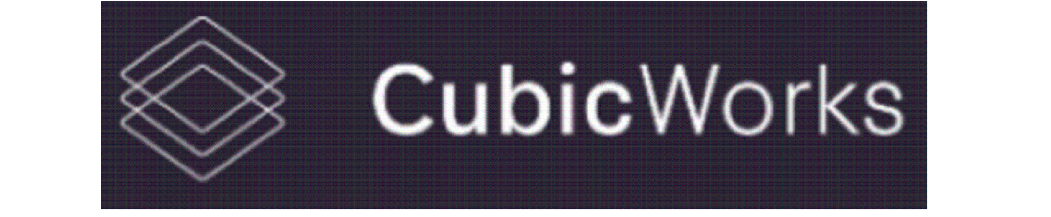
ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)	
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40ø	
DISHWASHER - 40ø (MAX LENGTH 3.0m)	
WC - 100ø	
KITCHEN SINK - 40Ø	
2No. KITCHEN SINKS - 50ø	
1No. WASH HAND BASIN & KITCHEN SINK - 40ø	
FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

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Date: JUN 2022	Scale: 1:100		

Client: CUBIC WORKS

Project: PALL MALL MANCHESTER

Drawing Title: ABOVE GROUND DRAINAGE LAYOUT EIGHTH FLOOR

Drawing No: C3781-HEC-ZZ-08-DR-M-5200	Rev: P03
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SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
SP	SOIL PIPE	CAS	CATERING SINK
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WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)

SHOWER - 40ø

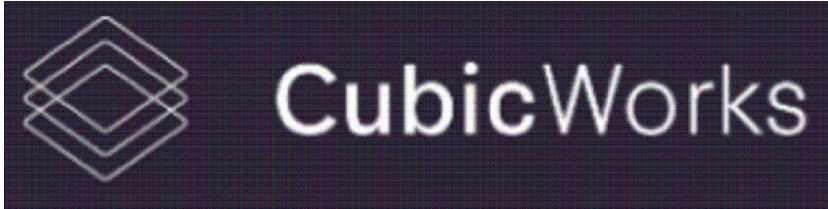
DISHWASHER - 40ø (MAX LENGTH 3.0m)

WC - 100ø

KITCHEN SINK - 40Ø
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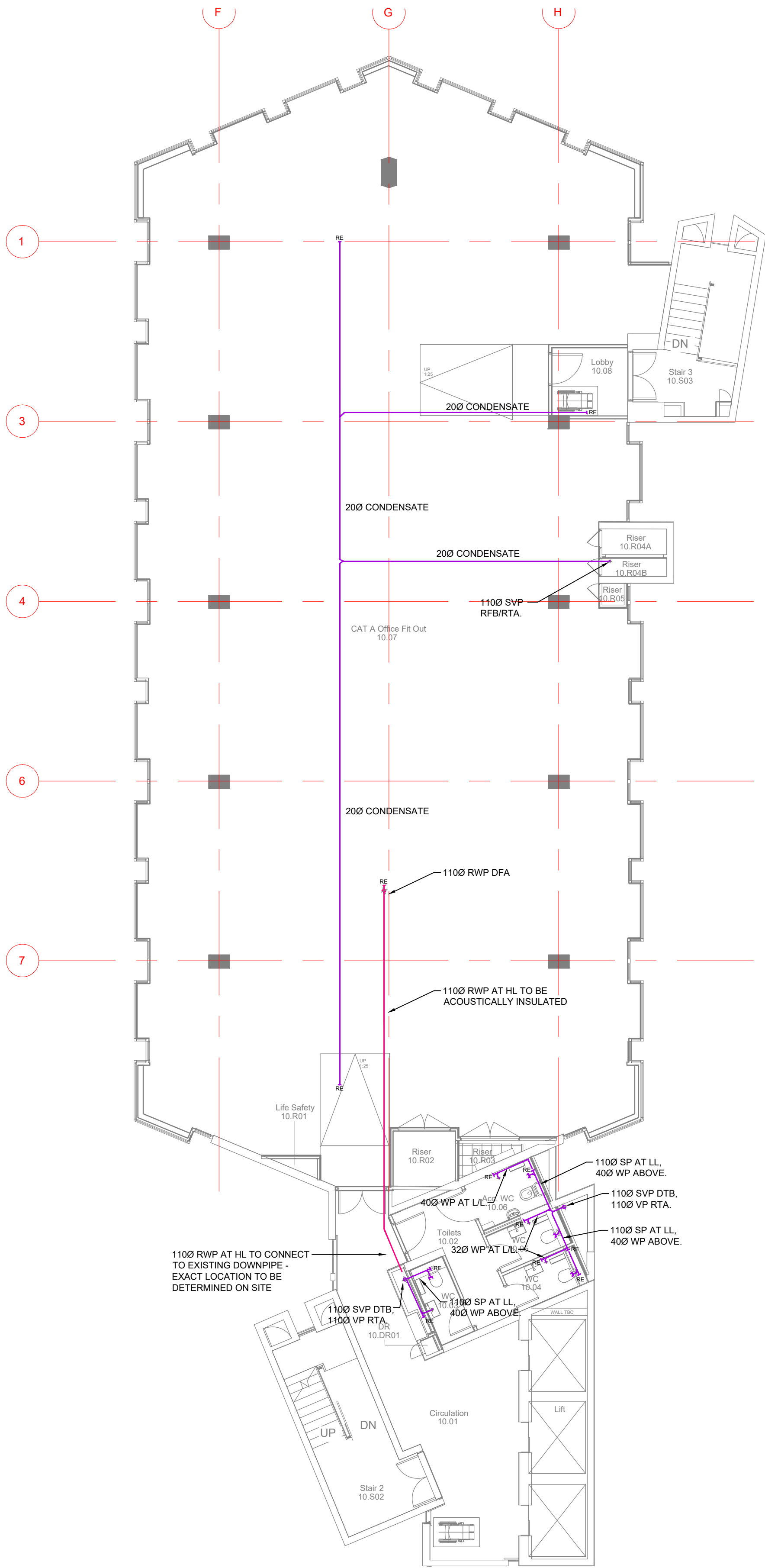
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MANCHESTER

Drawing Title:
**ABOVE GROUND DRAINAGE LAYOUT
NINTH FLOOR**

C3781-HEC-ZZ-09-DR-M-5200

Rev:
P03



SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
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<div></div>	ABOVE GROUND DRAINAGE - LOW LEVEL
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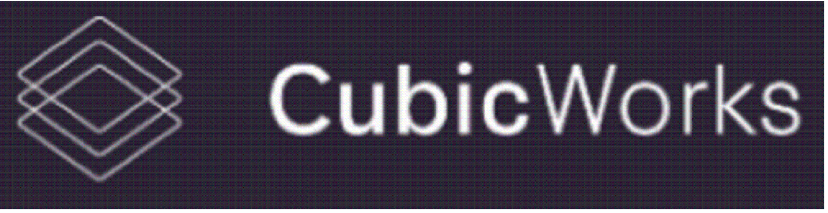
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Date: JUN 2022	Scale: 1:100		

Client: CUBIC WORKS

Project: PALL MALL MANCHESTER

Drawing Title: ABOVE GROUND DRAINAGE LAYOUT TENTH FLOOR

Drawing No: C3781-HEC-ZZ-10-DR-M-5200	Rev: P03
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Filename: C:\USERS\HURST\HURSTWOOD\FILESTORE - CURRENT PROJECTS\PROJECTS\3781 - PALL MALL\05-XREFS\52 DRAINAGE MAY V0.DWG



SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANERS SINK
SP	SOIL PIPE	CAS	CATERING SINK
WP	WASTE PIPE	DW	DISH WASHER
VP	VENT PIPE	WF	WATER FOUNTAIN
HL	HIGH LEVEL	FS	FIRE SLEEVE
LL	LOW LEVEL	AP	ACCESS PANEL
CV	CEILING VOID	AAV	AIR ADMITTANCE VALVE
FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		
—		ABOVE GROUND DRAINAGE - LOW LEVEL	
---		ABOVE GROUND DRAINAGE - HIGH LEVEL	

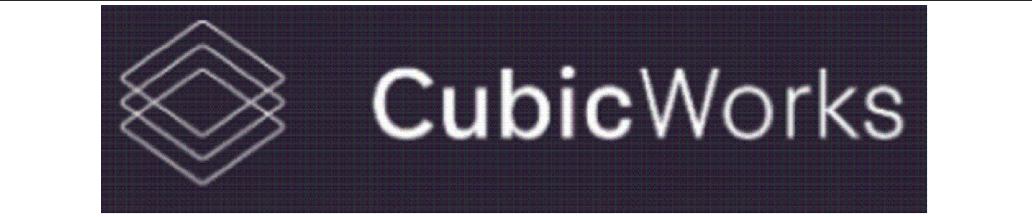
ABOVE GROUND DRAINAGE WASTE SIZES	
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)	
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)	
SHOWER - 40ø	
DISHWASHER - 40ø (MAX LENGTH 3.0m)	
WC - 100ø	
KITCHEN SINK - 40ø	
2No. KITCHEN SINKS - 50ø	
1No. WASH HAND BASIN & KITCHEN SINK - 40ø	
FOR WASTE PIPE GRADIENTS REFER TO BS EN 12056 PART 2 : TABLE 6	

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- NOTES**
- THE ABOVE GROUND DRAINAGE INSTALLATION SHALL BE DESIGNED, SUPPLIED AND INSTALLED IN ACCORDANCE WITH BS EN 12056-2:2000.
 - THE FINAL LOCATION AND PROVISION OF ALL FOUL WATER DRAINAGE AND SURFACE WATER DRAINAGE IS SUBJECT TO CONFIRMATION.
 - THE ABOVE GROUND DRAINAGE INSTALLATION SHALL CONFORM WITH ALL PARTS OF BUILDING REGULATIONS, APPROVED DOCUMENT PART H AND BE SUBJECT TO BUILDING CONTROL APPROVAL.
 - ALL SUB STACKS SHALL BE PROVIDED WITH AIR ADMITTANCE VALVES INSTALLED WITHIN SERVICE RISERS, IPS SYSTEMS OR CONCEALED BOXING AND SHALL BE PROVIDED WITH SUFFICIENT NATURAL VENTILATION TO COMPLY WITH BBA CERTIFICATE.
 - VENTILATION PIPES SHALL TERMINATE AT ROOF LEVEL COMPLETE WITH A DURABLE BIRD PROOF COWL.
 - WC CISTERN OVERFLOWS SHALL DISCHARGE INTERNALLY WITHIN THE WC CISTERN IN COMPLIANCE WITH THE WATER REGULATIONS GUIDE.
 - RODDING POINTS SHALL BE PROVIDED WHERE WASTE PIPEWORK IS UNACCESSIBLE FROM ANY OTHER PART OF THE SYSTEM. RODDING EYES AT THE HEAD OF LOW LEVEL FLOATS SERVING WC'S SHALL BE UPTURNED THROUGH 90° & TERMINATE ABOVE SPILL OVER LEVEL.
 - ALL SOIL AND VENT PIPES SHALL BE PROVIDED WITH AN ACCESS DOOR 600mm AFFL BEFORE THE GROUND CONNECTION.
 - WHERE BRANCH CONNECTIONS ARE AT LOW LEVEL ACCESS DOORS SHALL BE INSTALLED ABOVE THE HIGHEST SANITARY FITTING CONNECTION ENSURING THAT THE DOOR IS INSTALLED ABOVE THE FLOOD LEVEL OF THE HIGHEST CONNECTED APPLIANCE.
 - FIRE COLLARS SHALL BE PROVIDED WHERE WASTE PIPEWORK 400 OR ABOVE PASSES THROUGH A COMPARTMENTATION SLAB OR WALL AND SHALL BE INSTALLED IN LINE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - AN ALLOWANCE FOR EXPANSION SHOULD BE MADE EVERY 4m.
 - PIPE SOCKETS SHOULD BE SECURELY ANCHORED TO THE STRUCTURE TO PREVENT EXCESSIVE THERMAL MOVEMENT WITH THE EXCEPTION OF THE INTERMEDIATE PIPE SOCKETS WHICH SHOULD ALLOW FOR PIPE WORK EXPANSION AND CONTRACTION.
 - PIPE WORK SHOULD BE INSERTED INTO THE INTERMEDIATE SOCKET AND THEN WITHDRAWN TO PROVIDE A 10mm GAP.
 - RING SEAL ADAPTORS CAN BE USED ON SOLVENT SYSTEMS
 - EXPANSION COUPLERS CAN BE USED ON ABS AND MuPVC SYSTEMS.

P05	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P04	PC	17.03.23	PRELIMINARY ISSUE - STACK REFS ADDED
P03	PC	07.03.23	PRELIMINARY ISSUE - FUTURE RETAIL ADDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV	CHK	DATE	DESCRIPTION

Architectural X-Ref Drawings:
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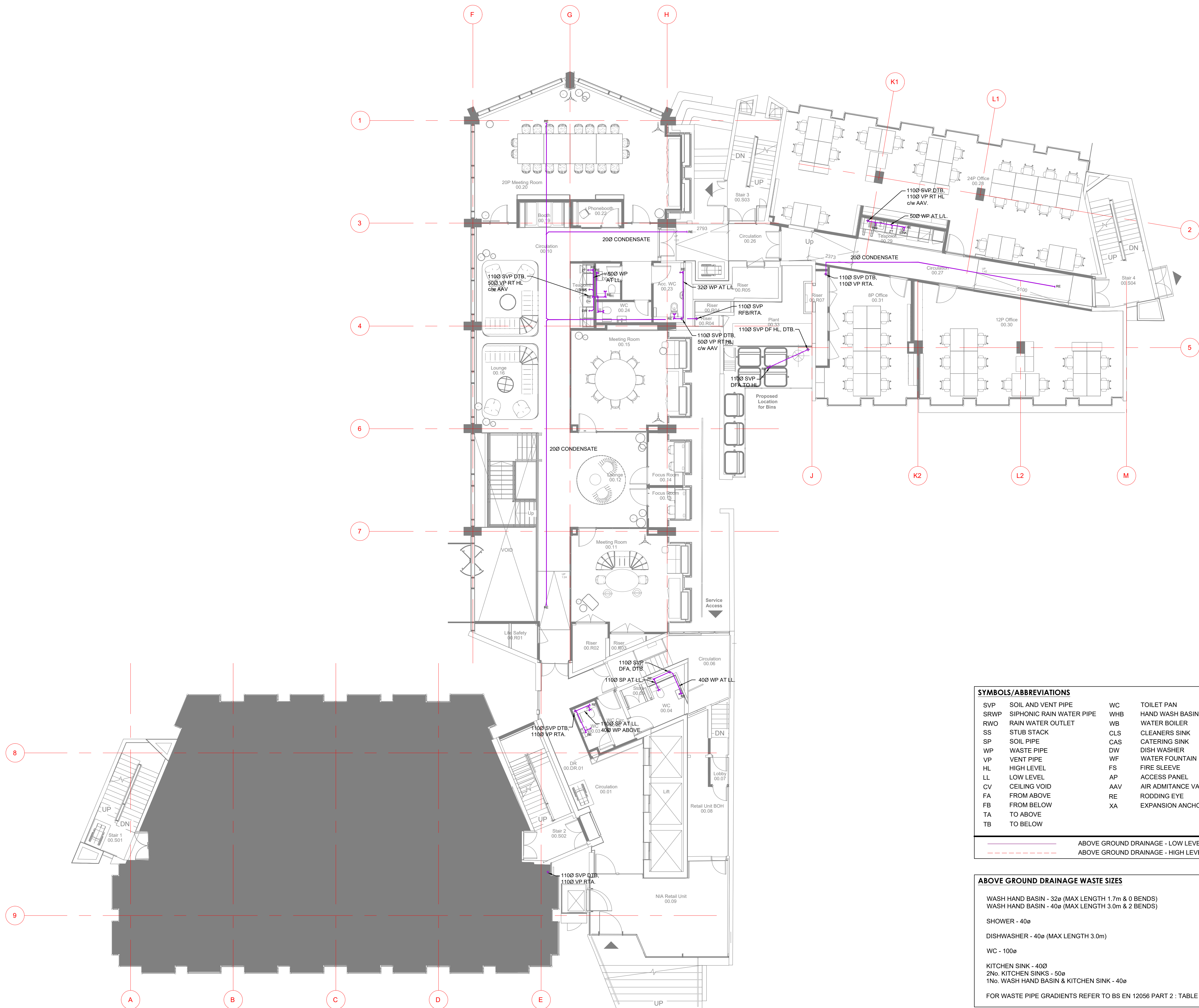
Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **ABOVE GROUND DRAINAGE LAYOUT BASEMENT LEVEL**

Drawing No: C3781-HEC-ZZ-BL-DR-M-5200	Rev: P05
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SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
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		ABOVE GROUND DRAINAGE - HIGH LEVEL	

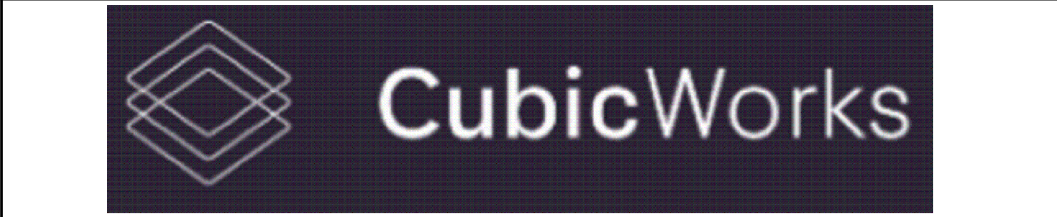
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P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P02	PC	08.12.22	PRELIMINARY ISSUE - COMMENTS INCORPORATED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV	CHK	DATE	DESCRIPTION

Architectural X-Ref Drawings:
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Drawing Status: **PRELIMINARY ISSUE**



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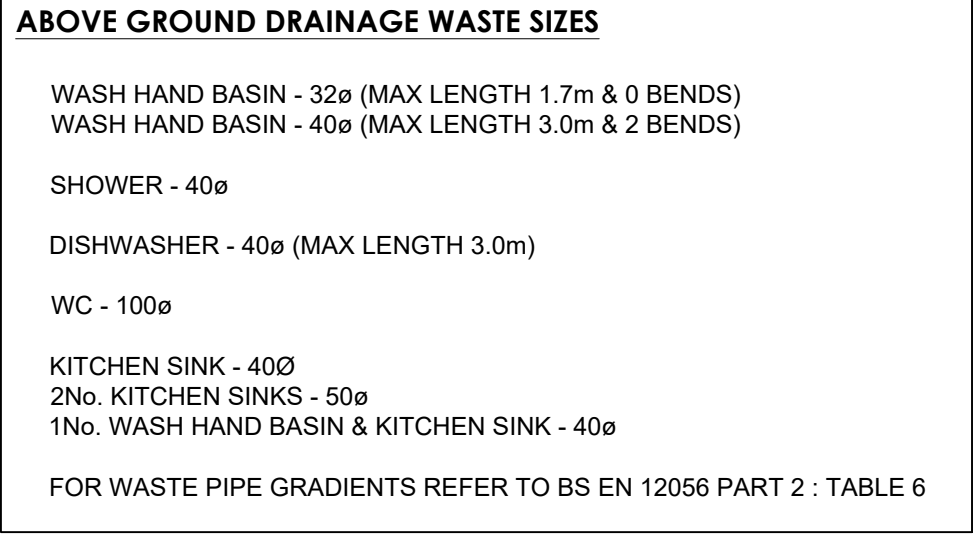
Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **ABOVE GROUND DRAINAGE LAYOUT GROUND FLOOR**

Drawing No: C3781-HEC-ZZ-GF-DR-M-5200	Rev: P04
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NOTES

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Drawing No:	Rev:
C3781-HEC-ZZ-LG-DR-M-5200	P05

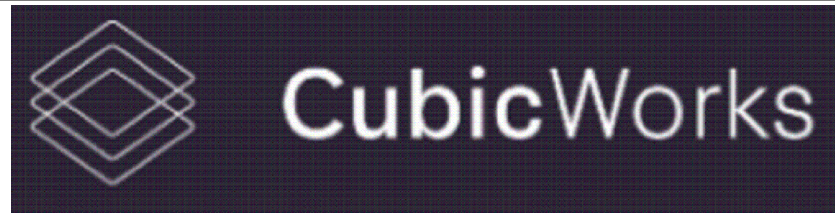
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P03	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P02	PC	17.03.23	PRELIMINARY ISSUE - DRAINAGE AMENDED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV	CHK	DATE	DESCRIPTION

Architectural X-Ref Drawings:
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client: _____

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
ABOVE GROUND DRAINAGE LAYOUT
ROOF LEVEL

Drawing No:	Rev:
C3781-HEC-ZZ-RL-DR-M-5200	P03

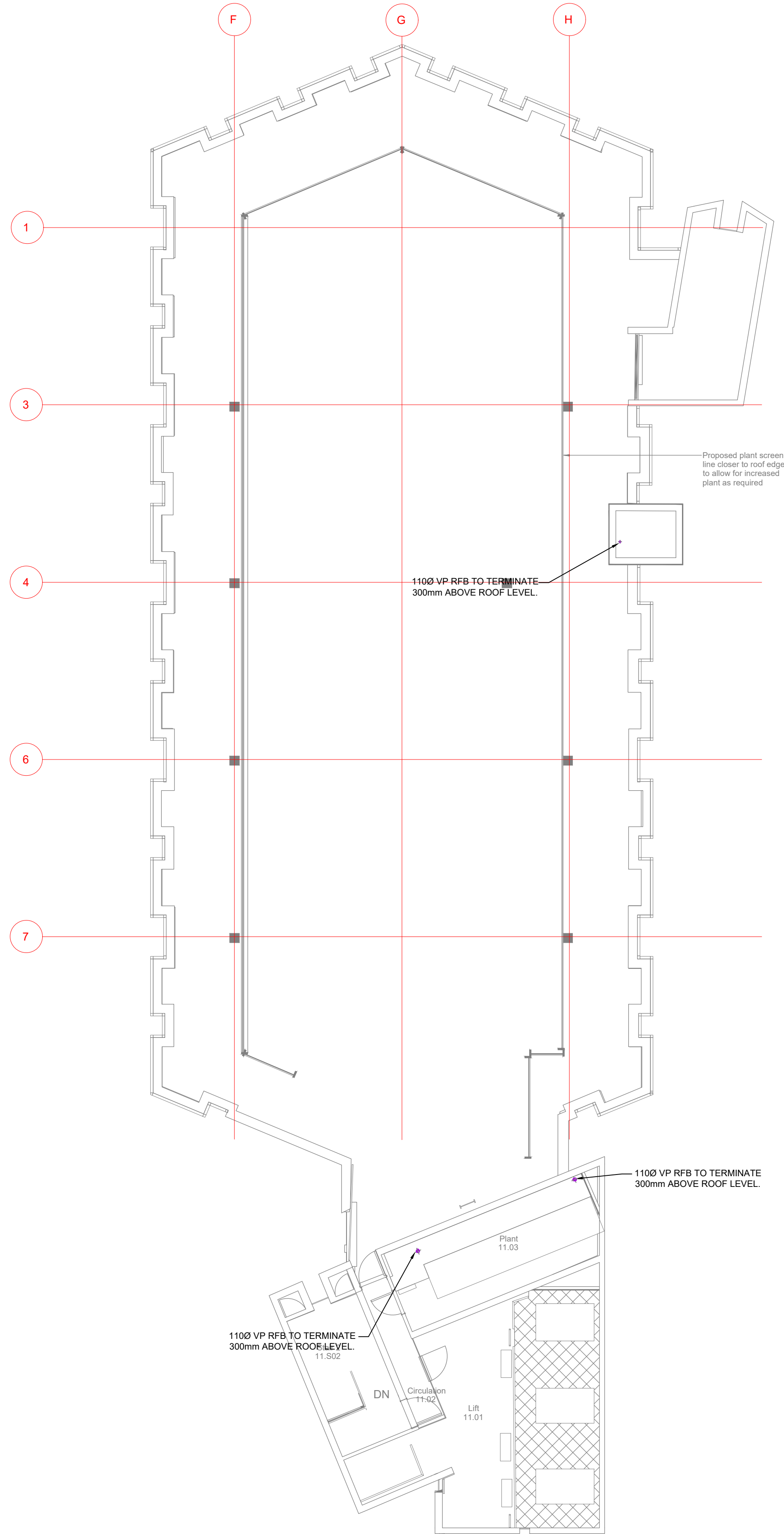


Diagram illustrating the installation of a storm collar on a roof:

- COWL SUPPLIED AND FITTED BY MECH CONTRACTOR.
- STORM COLLAR SUPPLIED AND FITTED BY MECH CONTRACTOR.
- WEATHER SEAL SUPPLIED, FITTED AND SEALED BY ROOFING CONTRACTOR
- SOIL VENT PIPE BY MECH CONTRACTOR.

TYPICAL DETAIL OF SOIL VENT PIPE
PENETRATION THROUGH ROOF
SCALE: N.T.S.

SYMBOLS/ABBREVIATIONS			
SVP	SOIL AND VENT PIPE	WC	TOILET PAN
SRWP	SIPHONIC RAIN WATER PIPE	WHB	HAND WASH BASIN
RWO	RAIN WATER OUTLET	WB	WATER BOILER
SS	STUB STACK	CLS	CLEANER'S SINK
SP	SOIL PIPE	CAS	CATERING SINK
WP	WASTE PIPE	DW	DISH WASHER
VP	VENT PIPE	WF	WATER FOUNTAIN
HL	HIGH LEVEL	FS	FIRE SLEEVE
LL	LOW LEVEL	AP	ACCESS PANEL
CV	CEILING VOID	AAV	AIR ADMITTANCE VALVE
FA	FROM ABOVE	RE	RODDING EYE
FB	FROM BELOW	XA	EXPANSION ANCHOR
TA	TO ABOVE		
TB	TO BELOW		

ABOVE GROUND DRAINAGE - LOW LEVEL
ABOVE GROUND DRAINAGE - HIGH LEVEL

ABOVE GROUND DRAINAGE WASTE SIZES

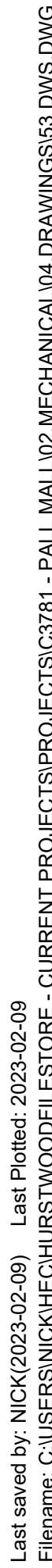
WASH HAND BASIN - 32ø (MAX LENGTH 1.7m & 0 BENDS)
WASH HAND BASIN - 40ø (MAX LENGTH 3.0m & 2 BENDS)

SHOWER - 40ø

DISHWASHER - 40ø (MAX LENGTH 3.0m)

WC - 100ø

KITCHEN SINK - 40Ø
2No. KITCHEN SINKS - 50ø
1No. WASH HAND BASIN & KITCHEN SINK - 40ø



53 DOMESTIC WATER NOTES

1. ALL HOT AND COLD WATER SERVICES PIPEWORK SHALL BE INSULATED AND IDENTIFIED
2. AUTOMATIC AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
3. DRAIN OFF COCKS SHALL BE INSTALLED AT ALL LOW POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
4. ALL EXPOSED LL PIPEWORK SHALL BE CHROME PLATED COPPER
5. ALL CONCEALED DOMESTIC HOT AND COLD WATER PIPEWORK SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH BS5422 AND IDENTIFIED IN ACCORDANCE WITH BS1710
6. ON COMPLETION OF THE HOT AND COLD WATER PIPEWORK INSTALLATION, EACH SYSTEM SHALL BE PRESSURE TESTED, FLUSHED AND CHLORINATED
7. SAFETY VALVES SHALL TERMINATE INTO A LOCAL SVP VIA A BOSS CONNECTOR AND SELF SEALING TRAP OR OVER FLOOR GULLEY
8. ALL ITEMS OF PLANT SHALL BE IDENTIFIED AND TAGGED WITH TRAFFOLYTE LABELS
9. ALL LAYOUT DRAWING TO BE READ IN CONJUNCTION WITH DWS SCHEMATIC AND PROJECT SPECIFICATIONS/SCHEDULES
10. ALL SANITARY ITEMS AND APPLIANCES TO HAVE LOCAL ISOLATION (BALOFIX TYPE VALVES ETC)

53 DOMESTIC WATER SYMBOLS/ABBREVIATIONS

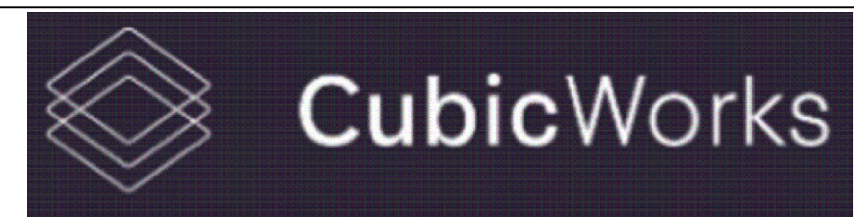
IV	ISOLATION VALVE	MCW	MAINS COLD WATER
TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
CV	CHECK VALVE	HWF	HOT WATER FLOW
DCV	DOUBLE CHECK VALVE	HWR	HOT WATER RETURN
PRV	PRESSURE REGULATING VALVE	RTA	RISE TO ABOVE
SV	SOLENOID VALVE	RFB	RISE FROM BELOW
TMV	TERMOSTATIC MIXING VALVE	DFA	DROP FROM ABOVE
SV	SAFETY VALVE	DTB	DROP TO BELOW
DOC	DRAIN OFF COCK	WC	TOILET
AP	ANCHOR POINT	WB	ELECTRIC WATER BOILER
EXB	EXPANSION BELLOW	WHB	WASH HAND BASIN
BV	BALL VALVE	SINK	SINK
DW	DISHWASHER	SH	SHOWER

	HOT WATER FLOW (HIGH LEVEL)		HOT WATER RETURN (HIGH LEVEL)		COLD WATER (HIGH LEVEL)
	HOT WATER FLOW (LOW LEVEL)		HOT WATER RETURN (LOW LEVEL)		COLD WATER (LOW LEVEL)

P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV/CHK	DATE	DESCRIPTION	

Architectural X-Ref Drawings:	
FF&E X-Ref Drawings:	

Drawing Status:	STAGE 4
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Date: JUN 2022	Scale: 1:100		
Client:			

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
FIRST FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-01-DR-M-5300	P02



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EXB	EXPANSION BELLOW	WHB	WASH HAND BASIN
BV	BALL VALVE	SINK	SINK
DW	DISHWASHER	SH	SHOWER

---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

P02 PC 09.02.23 PRELIMINARY ISSUE - UPDATED

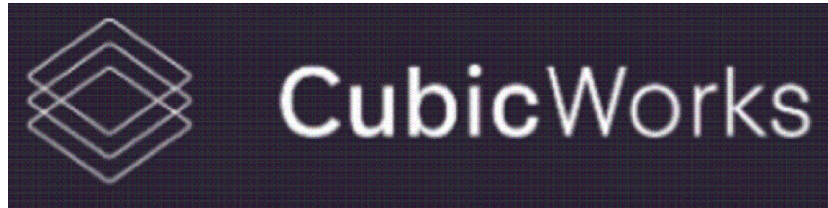
P01 PC 27.06.22 PRELIMINARY ISSUE

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Drawn: N KIBLER Chkd: P CHAMBERS App: M JORDAN
Date: JUN 2022 Scale: 1:100
Client: A1

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
SECOND FLOOR

Drawing No: C3781-HEC-ZZ-02-DR-M-5300 Rev: P02

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53 DOMESTIC WATER NOTES

- ALL HOT AND COLD WATER SERVICES PIPEWORK SHALL BE INSULATED AND IDENTIFIED
- AUTOMATIC AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
- DRAIN OFF COCKS SHALL BE INSTALLED AT ALL LOW POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
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- SAFETY VALVES SHALL TERMINATE INTO A LOCAL SVP VIA A BOSS CONNECTOR AND SELF SEALING TRAP OR OVER FLOOR GULLEY
- ALL ITEMS OF PLANT SHALL BE IDENTIFIED AND TAGGED WITH TRAFFOLYTE LABELS
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- ALL SANITARY ITEMS AND APPLIANCES TO HAVE LOCAL ISOLATION (BALOFIX TYPE VALVES ETC)

53 DOMESTIC WATER SYMBOLS/ABBREVIATIONS

IV	ISOLATION VALVE	MCW	MAINS COLD WATER
TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
CV	CHECK VALVE	HWF	HOT WATER FLOW
DCV	DOUBLE CHECK VALVE	HWR	HOT WATER RETURN
PRV	PRESSURE REGULATING VALVE	RTA	RISE TO ABOVE
SV	SOLENOID VALVE	RFB	RISE FROM BELOW
TMV	TERMOSTATIC MIXING VALVE	DFA	DROP FROM ABOVE
SV	SAFETY VALVE	DTB	DROP TO BELOW
DOC	DRAIN OFF COCK	WC	TOILET
AP	ANCHOR POINT	WB	ELECTRIC WATER BOILER
EXB	EXPANSION BELLOW	WHB	WASH HAND BASIN
BV	BALL VALVE	SINK	SINK
DW	DISHWASHER	SH	SHOWER

---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

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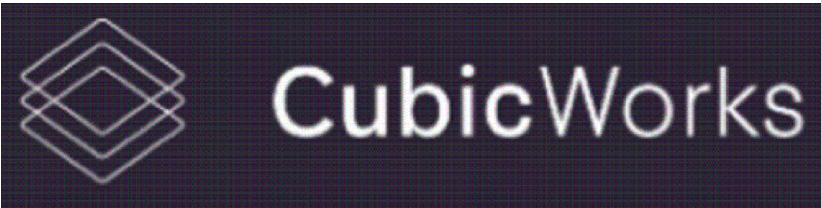
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Date: JUN 2022 Scale: 1:100

Client:

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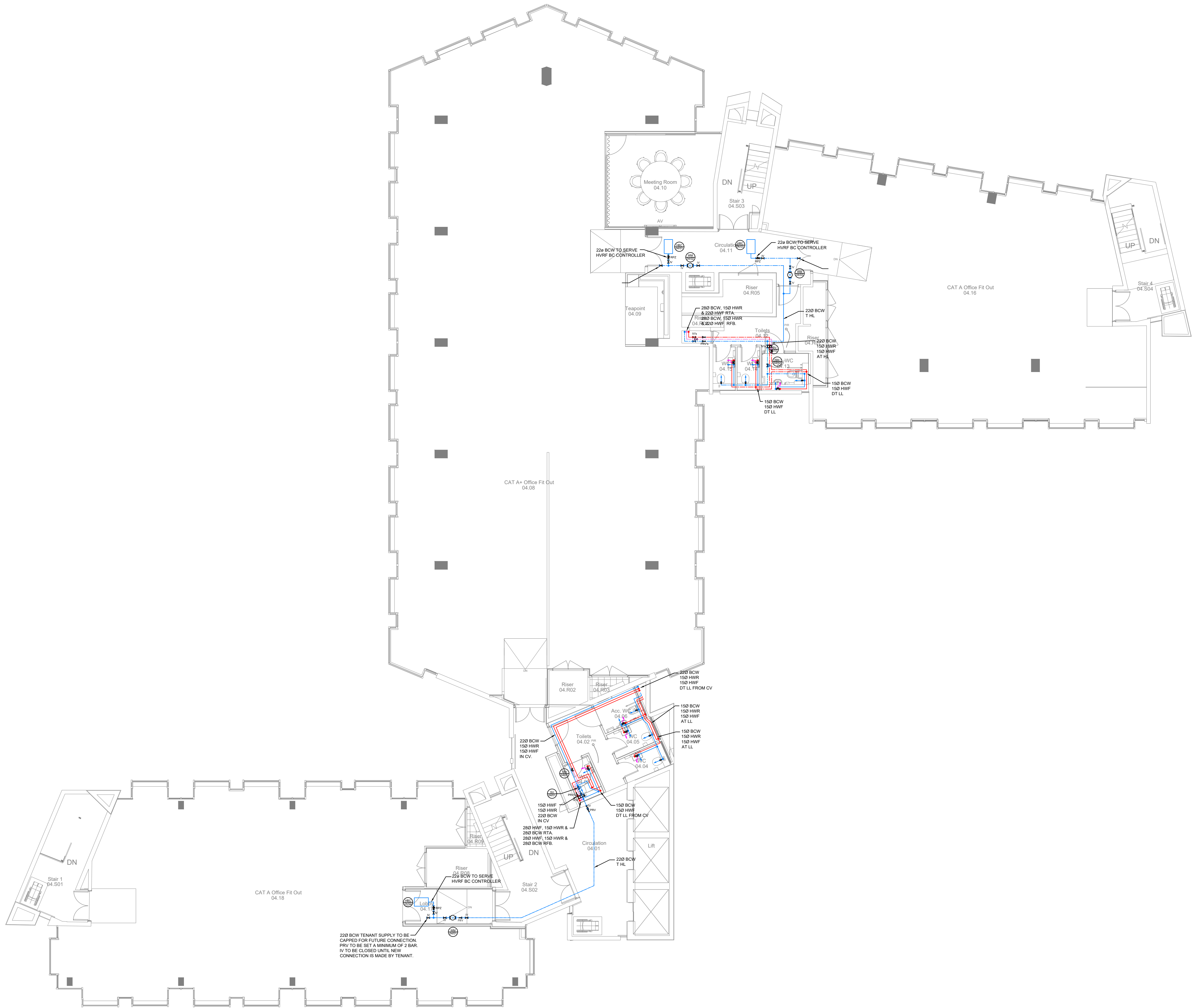
Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**DOMESTIC WATER SERVICES LAYOUT
THIRD FLOOR**

Drawing No:
C3781-HEC-ZZ-03-DR-M-5300

Rev:
P02

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- ALL SANITARY ITEMS AND APPLIANCES TO HAVE LOCAL ISOLATION (BALOFIX TYPE VALVES ETC)

53 DOMESTIC WATER SYMBOLS/ABBREVIATIONS

IV	ISOLATION VALVE	MCW	MAINS COLD WATER
TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
CV	CHECK VALVE	HWF	HOT WATER FLOW
DCV	DOUBLE CHECK VALVE	HWR	HOT WATER RETURN
PRV	PRESSURE REGULATING VALVE	RTA	RISE TO ABOVE
SV	SOLENOID VALVE	RFB	RISE FROM BELOW
TMV	TERMOSTATIC MIXING VALVE	DFA	DROP FROM ABOVE
SV	SAFETY VALVE	DTB	DROP TO BELOW
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EXB	EXPANSION BELLOW	WHB	WASH HAND BASIN
BV	BALL VALVE	SH	SINK
DW	DISHWASHER	SH	SHOWER

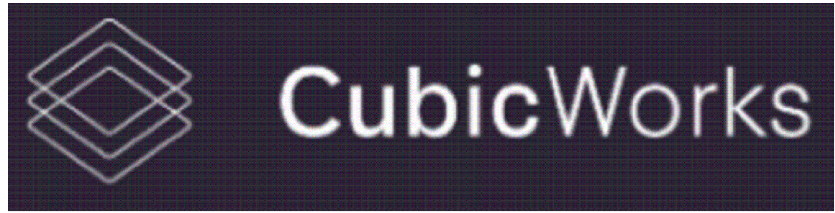
---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

Client: CUBIC WORKS

Project: PALL MALL MANCHESTER

Drawing Title: DOMESTIC WATER SERVICES LAYOUT FOURTH FLOOR

Drawing No: C3781-HEC-ZZ-04-DR-M-5300	Rev: P02
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SV	SAFETY VALVE	DTB	DROP TO BELOW
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AP	ANCHOR POINT	WB	ELECTRIC WATER BOILER
EXB	EXPANSION BELLOW	WHB	WASH HAND BASIN
BV	BALL VALVE	SINK	SINK
DW	DISHWASHER	SH	SHOWER

---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

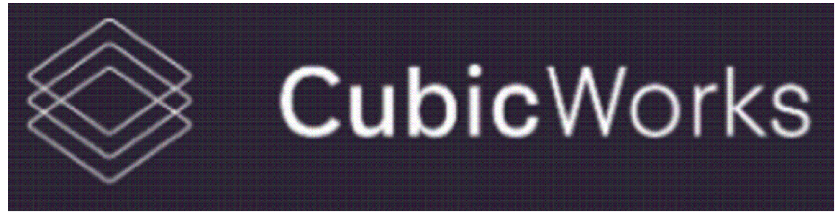
P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
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Date: JUN 2022	Scale: 1:100		
Client:			

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
FIFTH FLOOR

Drawing No:	C3781-HEC-ZZ-05-DR-M-5300	Rev:	P02
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IV	ISOLATION VALVE	MCW	MAINS COLD WATER
TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
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PRV	PRESSURE REGULATING VALVE	RTA	RISE TO ABOVE
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BV	BALL VALVE	SINK	SINK
DW	DISHWASHER	SH	SHOWER

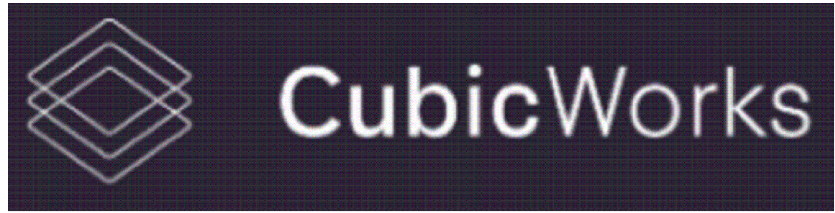
---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
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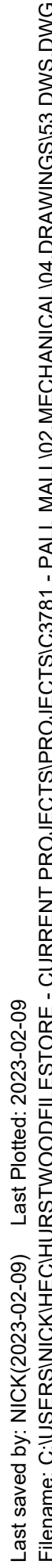
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Date: JUN 2022	Scale: 1:100	Client:	

CUBIC WORKS

Project: **PALL MALL MANCHESTER**

Drawing Title: **DOMESTIC WATER SERVICES LAYOUT SIXTH FLOOR**

Drawing No: C3781-HEC-ZZ-06-DR-M-5300	Rev: P02
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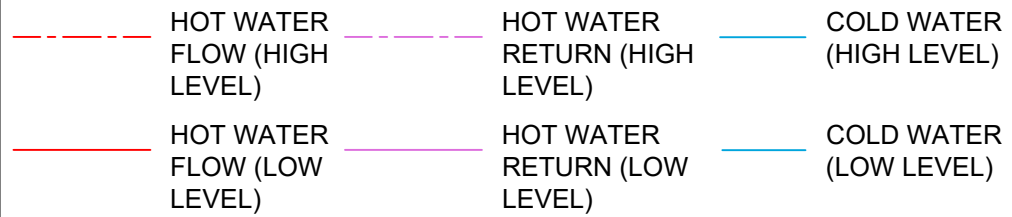
53_DOMESTIC WATER NOTES

53_DOMESTIC WATER NOTES

1. ALL HOT AND COLD WATER SERVICES PIPEWORK SHALL BE INSULATED AND IDENTIFIED
2. AUTOMATIC AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
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4. ALL EXPOSED LL PIPEWORK SHALL BE CHROME PLATED COPPER
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10. ALL SANITARY ITEMS AND APPLIANCES TO HAVE LOCAL ISOLATION (BALOFIX TYPE VALVES ETC)

53_DOMESTIC WATER SYMBOLS/ABBREVIATIONS

IV	ISOLATION VALVE	MCW	MAINS COLD WATER
 TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
CV	CHECK VALVE	HWF	HOT WATER FLOW
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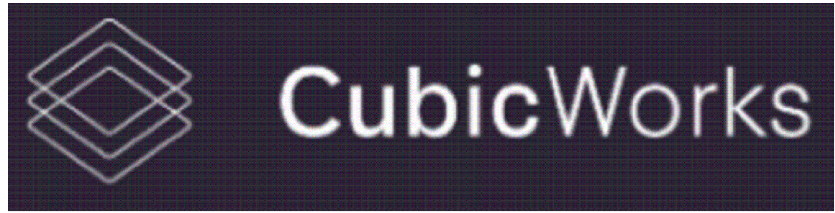
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Drawn: N KIBLER

Chkd: P CHAMBER.

App:
M JORDAN

A1

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

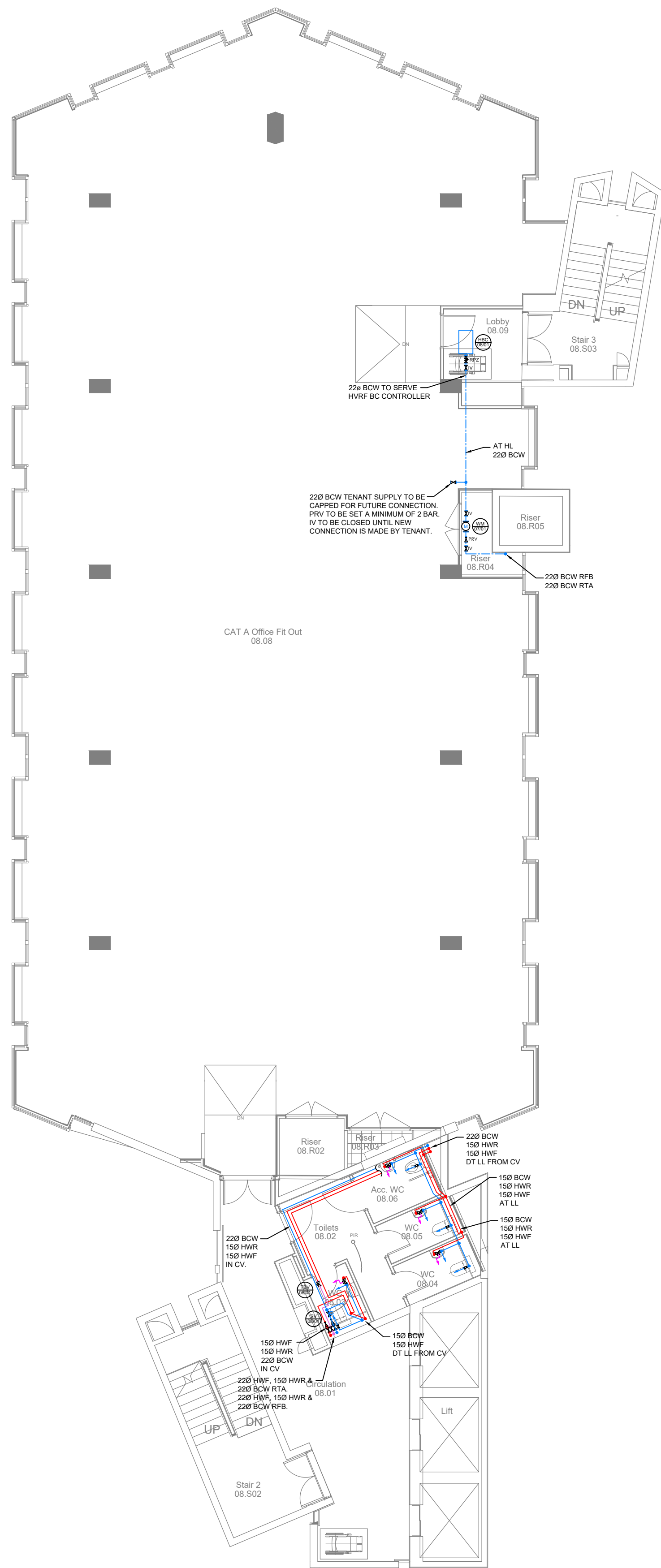
DOMESTIC WATER SERVICES LAYOUT SEVENTH FLOOR

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P02



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	TVB	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
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	DCV	DOUBLE CHECK VALVE	HWR	HOT WATER RETURN
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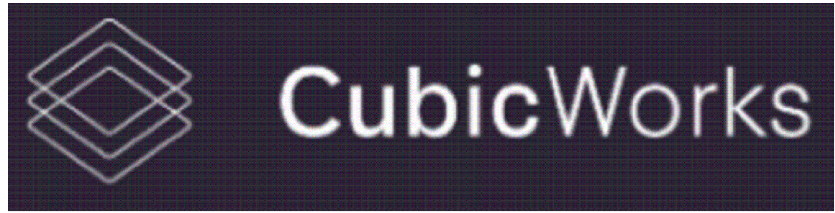
	HOT WATER FLOW (HIGH LEVEL)		HOT WATER RETURN (HIGH LEVEL)		COLD WATER (HIGH LEVEL)
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P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

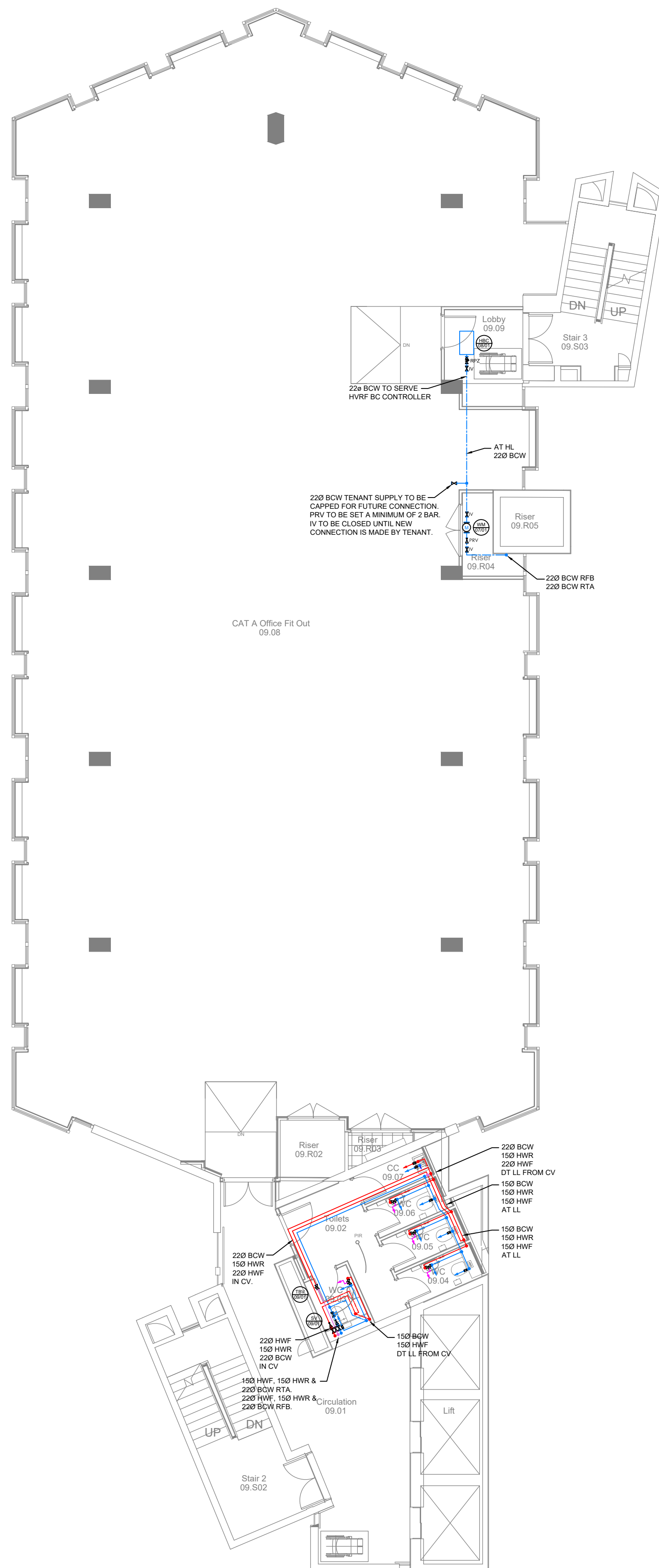
Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
EIGHTH FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-08-DR-M-5300	P02



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53_DOMESTIC WATER NOTES

1. ALL HOT AND COLD WATER SERVICES PIPEWORK SHALL BE INSULATED AND IDENTIFIED
2. AUTOMATIC AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
3. DRAIN OFF COCKS SHALL BE INSTALLED AT ALL LOW POINTS THROUGH OUT THE HOT AND COLD WATER SYSTEMS
4. ALL EXPOSED LI PIPEWORK SHALL BE CHROME PLATED COPPER
5. ALL CONCEALED DOMESTIC HOT AND COLD WATER PIPEWORK SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH BS5422 AND IDENTIFIED IN ACCORDANCE WITH BS1710
6. ON COMPLETION OF THE HOT AND COLD WATER PIPEWORK INSTALLATION, EACH SYSTEM SHALL BE PRESSURE TESTED, FLUSHED AND CHLORINATED
7. SAFETY VALVES SHALL TERMINATE INTO A LOCAL SVP VIA A BOSS CONNECTOR AND SELF SEALING TRAP OR OVER FLOOR GULLEY
8. ALL ITEMS OF PLANT SHALL BE IDENTIFIED AND TAGGED WITH TRAFFOLYTE LABELS
9. ALL LAYOUT DRAWING TO BE READ IN CONJUNCTION WITH DWS SCHEMATIC AND PROJECT SPECIFICATIONS/SCHEDULES
10. ALL SANITARY ITEMS AND APPLIANCES TO HAVE LOCAL ISOLATION (BALOFIX TYPE VALVES ETC)

53_DOMESTIC WATER SYMBOLS/ABBREVIATIONS

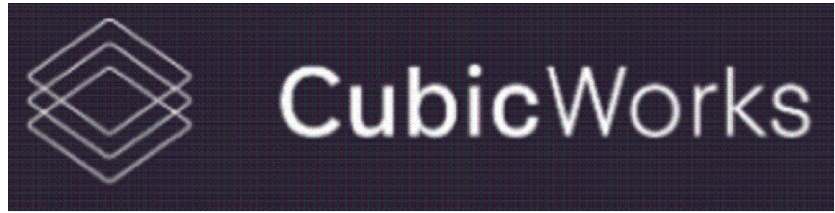
	IV	ISOLATION VALVE	MCW	MAINS COLD WATER
	TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
	CV	CHECK VALVE	HWF	HOT WATER FLOW
	DCV	DOUBLE CHECK VALVE	HWR	HOT WATER RETURN
	PRV	PRESSURE REGULATING VALVE	RTA	RISE TO ABOVE
	SV	SOLENOID VALVE	RFB	RISE FROM BELOW
	TMV	THERMOSTATIC MIXING VALVE	DFA	DROP FROM ABOVE
	SV	SAFETY VALVE	DTB	DROP TO BELOW
	DOC	DRAIN OFF COCK	WC	TOILET
	AP	ANCHOR POINT	WB	ELECTRIC WATER BOILER
	EXB	EXPANSION BELLOW	WHB	WASH HAND BASIN
	BV	BALL VALVE	SINK	SINK
	DW	DISHWASHER	SH	SHOWER

	HOT WATER FLOW (HIGH LEVEL)		HOT WATER RETURN (HIGH LEVEL)		COLD WATER (HIGH LEVEL)
	HOT WATER FLOW (LOW LEVEL)		HOT WATER RETURN (LOW LEVEL)		COLD WATER (LOW LEVEL)

P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
P01	PC	27.06.22	PRELIMINARY ISSUE
REVCHK	DATE	DESCRIPTION	

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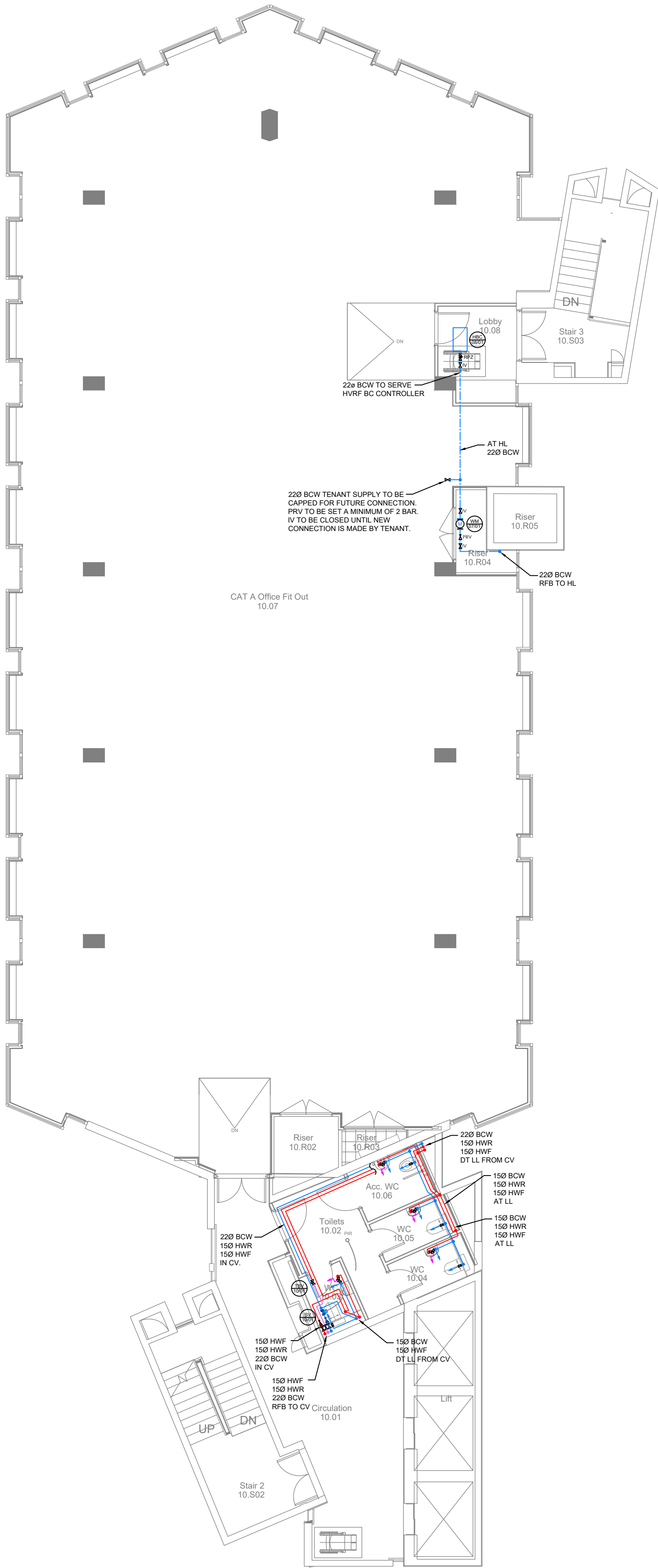
Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
NINTH FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-09-DR-M-5300	P02



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TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
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BV	BALL VALVE	SINK	SINK
DW	DISHWASHER	SH	SHOWER

---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

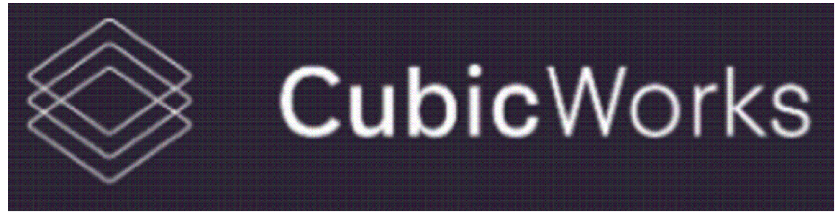
P02	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
P01	PC	27.06.22	PRELIMINARY ISSUE
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Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

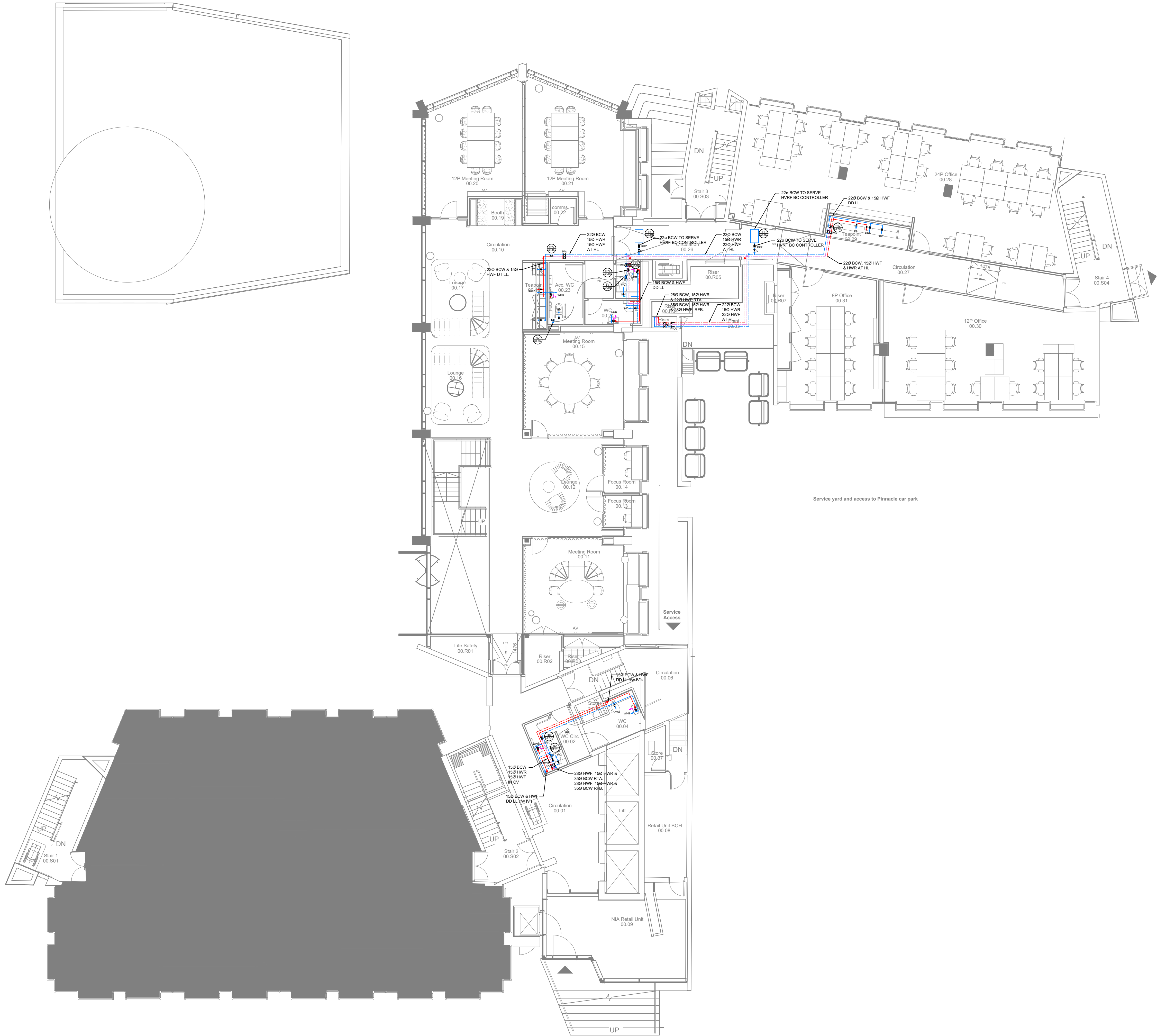
Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
TENTH FLOOR

Drawing No:	C3781-HEC-ZZ-10-DR-M-5300	Rev:	P02
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TBV	THERMAL BALANCING VALVE	BCW	BOOSTED COLD WATER
CV	CHECK VALVE	HWF	HOT WATER FLOW
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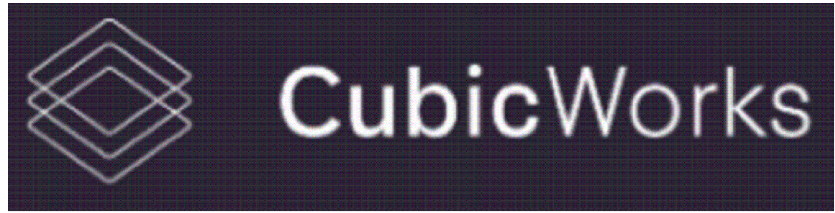
---	HOT WATER FLOW (HIGH LEVEL)	---	HOT WATER RETURN (HIGH LEVEL)	---	COLD WATER (HIGH LEVEL)
---	HOT WATER FLOW (LOW LEVEL)	---	HOT WATER RETURN (LOW LEVEL)	---	COLD WATER (LOW LEVEL)

P03	PC	09.02.23	PRELIMINARY ISSUE - UPDATED
P02	PC	10.09.22	PRELIMINARY ISSUE
P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		
Client:			

CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**DOMESTIC WATER SERVICES LAYOUT
GROUNG FLOOR**

Drawing No:	Rev:
C3781-HEC-ZZ-GF-DR-M-5300	P03



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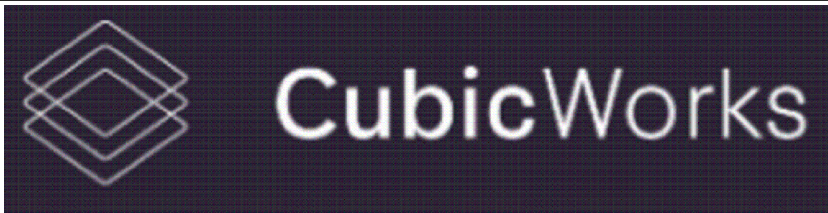
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P02	PC	10.09.22	PRELIMINARY ISSUE
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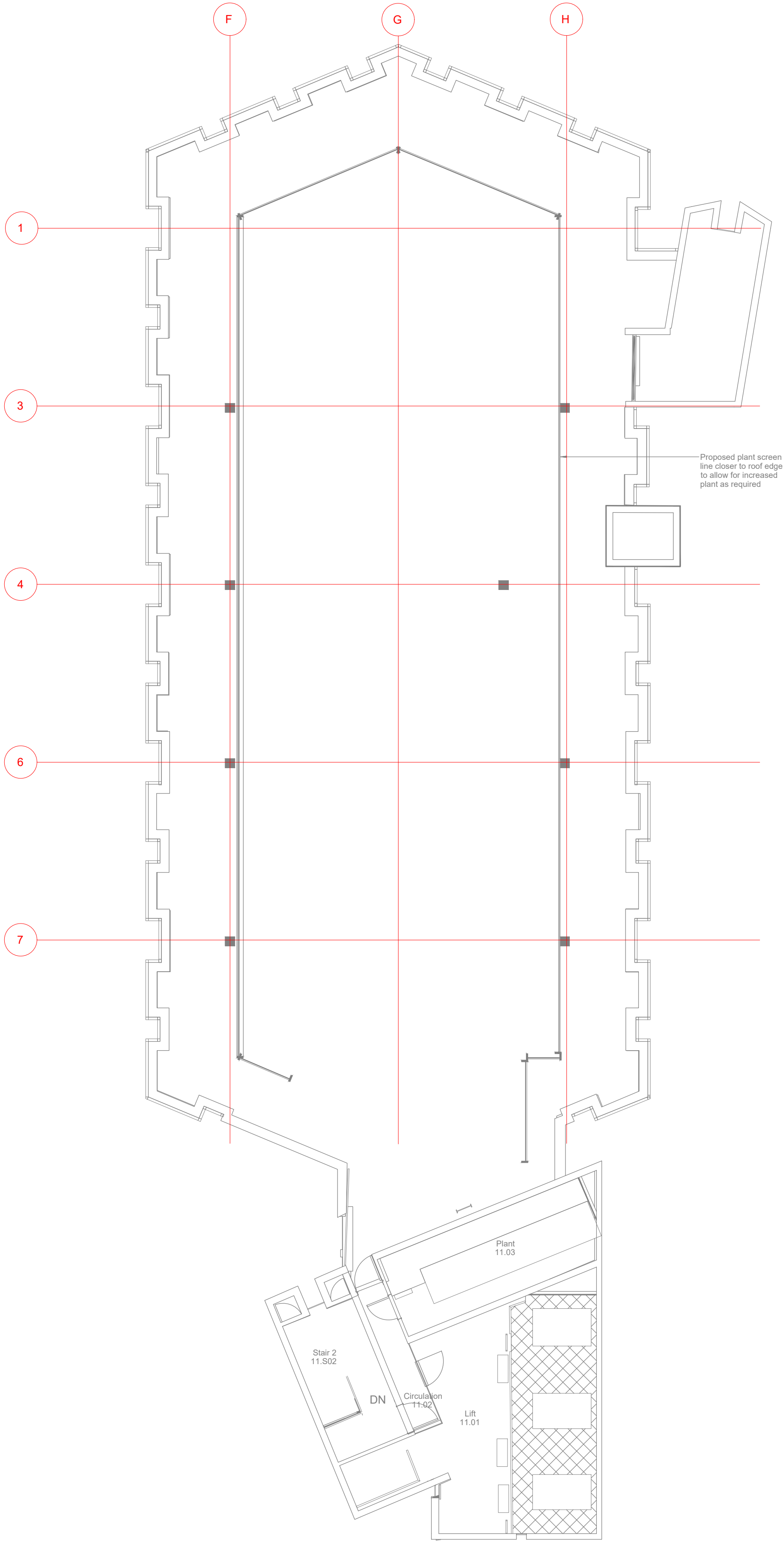
CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
LOWER GROUND FLOOR

Drawing No:	C3781-HEC-ZZ-LG-DR-M-5300	Rev:	P04
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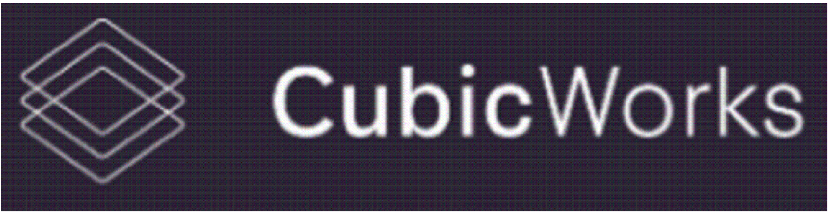
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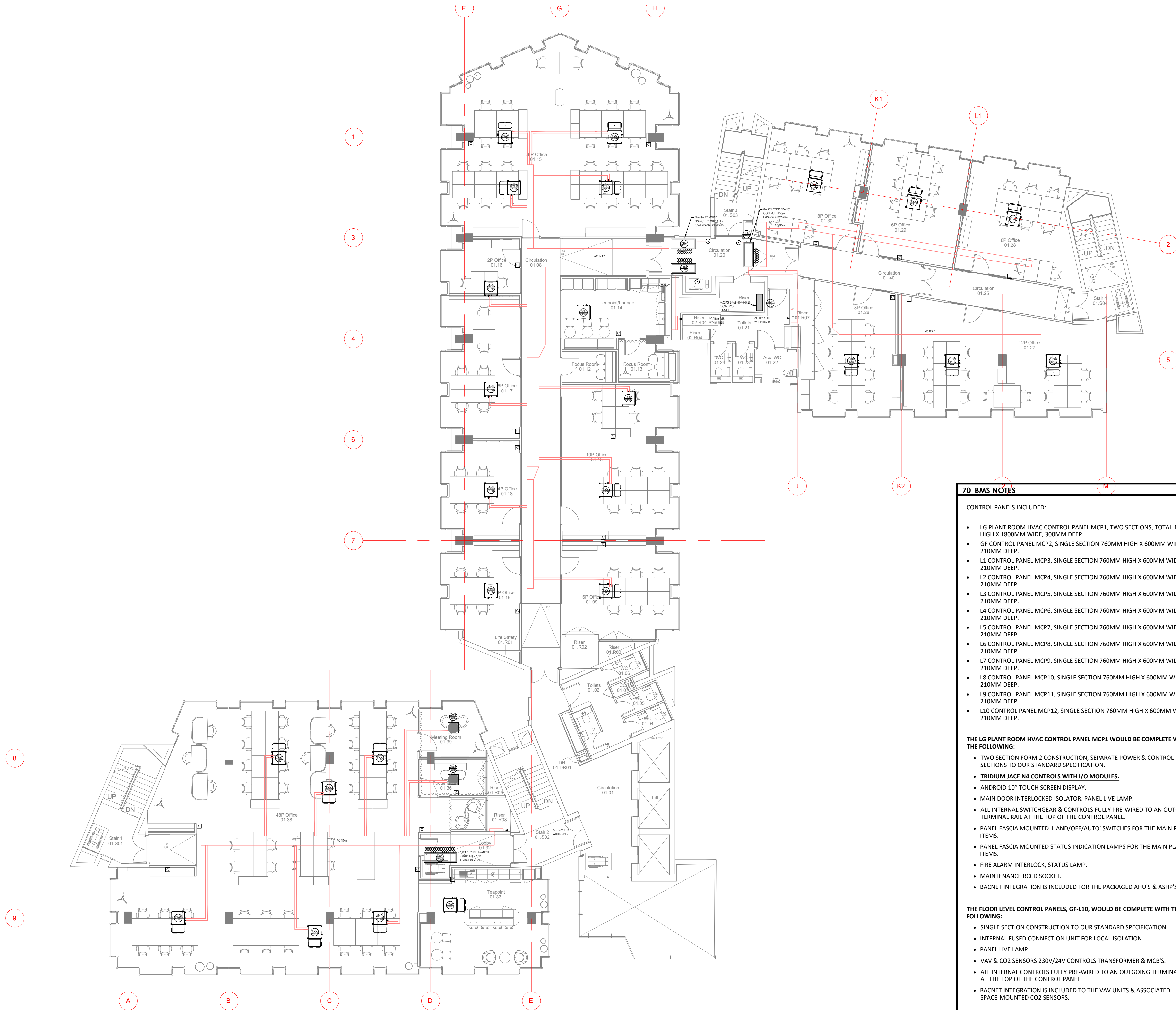
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Date: JUN 2022	Scale: 1:100		
Client:			

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
DOMESTIC WATER SERVICES LAYOUT
ROOF LEVEL

Drawing No:	C3781-HEC-ZZ-RL-DR-M-5300	Rev:	P01
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55 AIR CONDITIONING NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ANY RELEVANT STRUCTURAL, ARCHITECTURAL AND CONSULTANTS DRAWINGS.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SERVICES SPECIFICATION.
- ALL DIMENSIONS IN MM.
- SELECTIONS TO BE BASED ON MITSUBISHI ELECTRIC R32 HYBRID VRF SYSTEM. 2-PIPE FAN COIL UNITS AS PART OF THE R32 HVRF SYSTEM
- INDOOR UNIT SELECTIONS TO ACHIEVE DUTIES BASED ON MEDIUM SPEED FAN MODE
- FINAL PIPEWORK SIZING AND DESIGN OF HVRF SYSTEM TO BE PRODUCED BY MITSUBISHI ELECTRIC AND PIPEWORK AND VALVES TO BE PROVIDED AND INSTALLED BY CONTRACTOR IN LINE WITH THE MITSUBISHI ELECTRIC REQUIREMENTS.
- R32 REFRIGERANT TO BE USED AND REFRIGERANT LEAK DETECTION TO BE PROVIDED (AS PER MANUFACTURERS RECOMMENDATIONS) AT LOW POINTS WHERE REFRIGERANT RUNS INTERNALLY (AT BOTTOM OF RISERS, UNDERNEATH BC BOXES ETC).
- LOCAL TEMPERATURE AND CO2 SENSORS TO BE PROVIDED FOR EACH FCU

55 AIR CONDITIONING REFERENCES & SYMBOLS

	WALL MOUNTED AIR CONDITIONING UNIT
	BC MULTIPIPE CONTROLLER (HVRF SYSTEMS)
	CEILING MOUNTED AIR CONDITIONING UNIT
	CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE)
	HVRF CONDENSER UNIT

70 BMS NOTES

CONTROL PANELS INCLUDED:

- LG PLANT ROOM HVAC CONTROL PANEL MCP1, TWO SECTIONS, TOTAL 1200MM HIGH X 1800MM WIDE, 300MM DEEP.
- GF CONTROL PANEL MCP2, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L1 CONTROL PANEL MCP3, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L2 CONTROL PANEL MCP4, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L3 CONTROL PANEL MCP5, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L4 CONTROL PANEL MCP6, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L5 CONTROL PANEL MCP7, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L6 CONTROL PANEL MCP8, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L7 CONTROL PANEL MCP9, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L8 CONTROL PANEL MCP10, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L9 CONTROL PANEL MCP11, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L10 CONTROL PANEL MCP12, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.

THE LG PLANT ROOM HVAC CONTROL PANEL MCP1 WOULD BE COMPLETE WITH THE FOLLOWING:

- TWO SECTION FORM 2 CONSTRUCTION, SEPARATE POWER & CONTROL SECTIONS TO OUR STANDARD SPECIFICATION.
- TRIDIUM JACE N4 CONTROLS WITH I/O MODULES.**
- ANDROID 10" TOUCH SCREEN DISPLAY.
- MAIN DOOR INTERLOCKED ISOLATOR, PANEL LIVE LAMP.
- ALL INTERNAL SWITCHGEAR & CONTROLS FULLY PRE-WIRED TO AN OUTGOING TERMINAL RAIL AT THE TOP OF THE CONTROL PANEL.
- PANEL FASCIA MOUNTED 'HAND/OFF/AUTO' SWITCHES FOR THE MAIN PLANT ITEMS.
- PANEL FASCIA MOUNTED STATUS INDICATION LAMPS FOR THE MAIN PLANT ITEMS.
- FIRE ALARM INTERLOCK, STATUS LAMP.
- MAINTENANCE RCCD SOCKET.
- BACNET INTEGRATION IS INCLUDED FOR THE PACKAGED AHU'S & ASHP'S.

THE FLOOR LEVEL CONTROL PANELS, GF-L10, WOULD BE COMPLETE WITH THE FOLLOWING:

- SINGLE SECTION CONSTRUCTION TO OUR STANDARD SPECIFICATION.
- INTERNAL FUSED CONNECTION UNIT FOR LOCAL ISOLATION.
- PANEL LIVE LAMP.
- VAV & CO2 SENSORS 230V/24V CONTROLS TRANSFORMER & MCB'S.
- ALL INTERNAL CONTROLS FULLY PRE-WIRED TO AN OUTGOING TERMINAL RAIL AT THE TOP OF THE CONTROL PANEL.
- BACNET INTEGRATION IS INCLUDED TO THE VAV UNITS & ASSOCIATED SPACE-MOUNTED CO2 SENSORS.

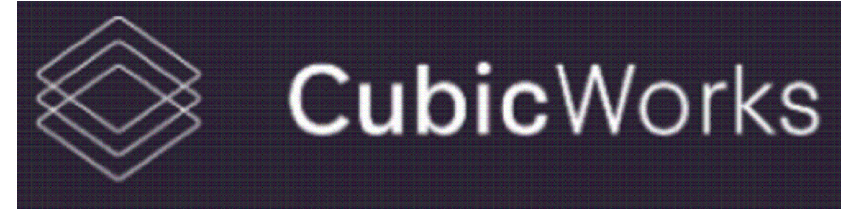
P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	13.02.23	PRELIMINARY ISSUE - BMS INCLUDED
P02	PC	09.12.22	PRELIMINARY ISSUE - HBC BOXES AMENDED
P01	PC	28.09.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

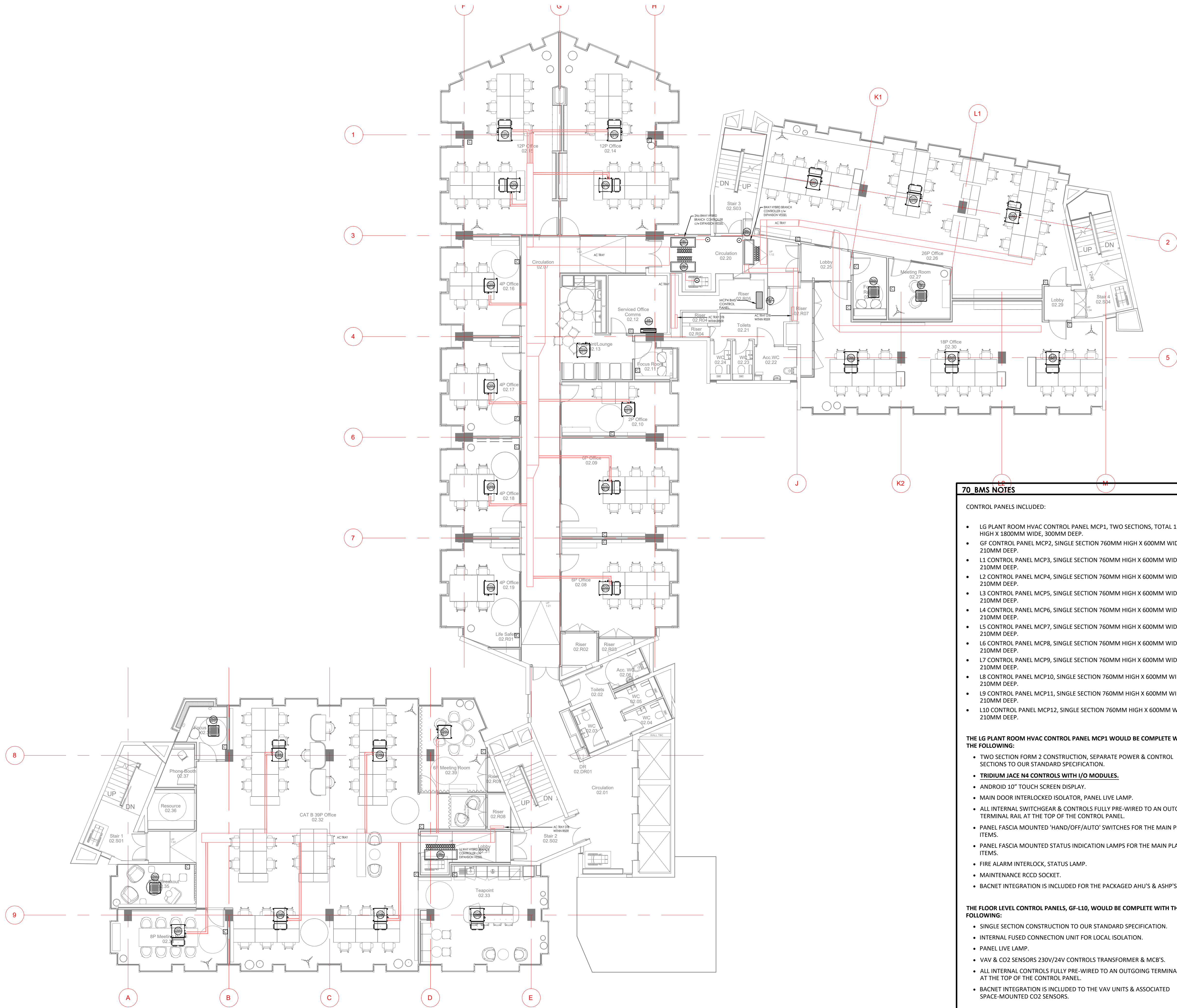
Client:

CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**AIR CONDITIONING SERVICES LAYOUT
FIRST FLOOR**

Drawing No: C3781-HEC-ZZ-01-DR-M-5500	Rev: P04
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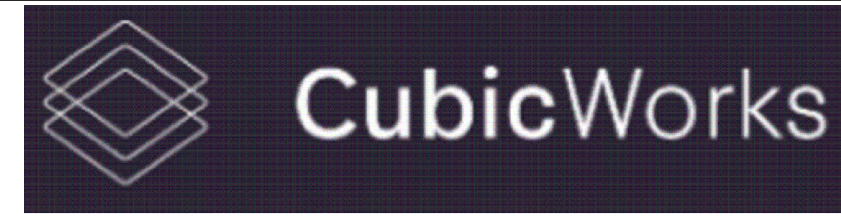
- ### 55 AIR CONDITIONING NOTES
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 - LOCAL TEMPERATURE AND CO2 SENSORS TO BE PROVIDED FOR EACH FCU

- ### 55 AIR CONDITIONING REFERENCES & SYMBOLS
- | | |
|----------|--|
| ACU-*** | WALL MOUNTED AIR CONDITIONING UNIT |
| HBC-*** | BC MULTIPIPE CONTROLLER (HVRF SYSTEMS) |
| ACU-*** | CEILING MOUNTED AIR CONDITIONING UNIT |
| FCU | CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE) |
| HVRF-*** | HVRF CONDENSER UNIT |

- ### 70 BMS NOTES
- CONTROL PANELS INCLUDED:
- LG PLANT ROOM HVAC CONTROL PANEL MCP1, TWO SECTIONS, TOTAL 1200MM HIGH X 1800MM WIDE, 300MM DEEP.
 - GF CONTROL PANEL MCP2, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
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 - L7 CONTROL PANEL MCP9, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
 - L8 CONTROL PANEL MCP10, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
 - L9 CONTROL PANEL MCP11, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
 - L10 CONTROL PANEL MCP12, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
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 - ANDROID 10" TOUCH SCREEN DISPLAY.
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P03	PC	13.02.23	PRELIMINARY ISSUE - BMS INCLUDED
P02	PC	09.12.22	PRELIMINARY ISSUE - HBC BOXES AMENDED
P01	PC	28.09.22	PRELIMINARY ISSUE
REV/CHK	DATE	DESCRIPTION	

Architectural X-Ref Drawings:
FF&E X-Ref Drawings:
Drawing Status: **PRELIMINARY ISSUE**





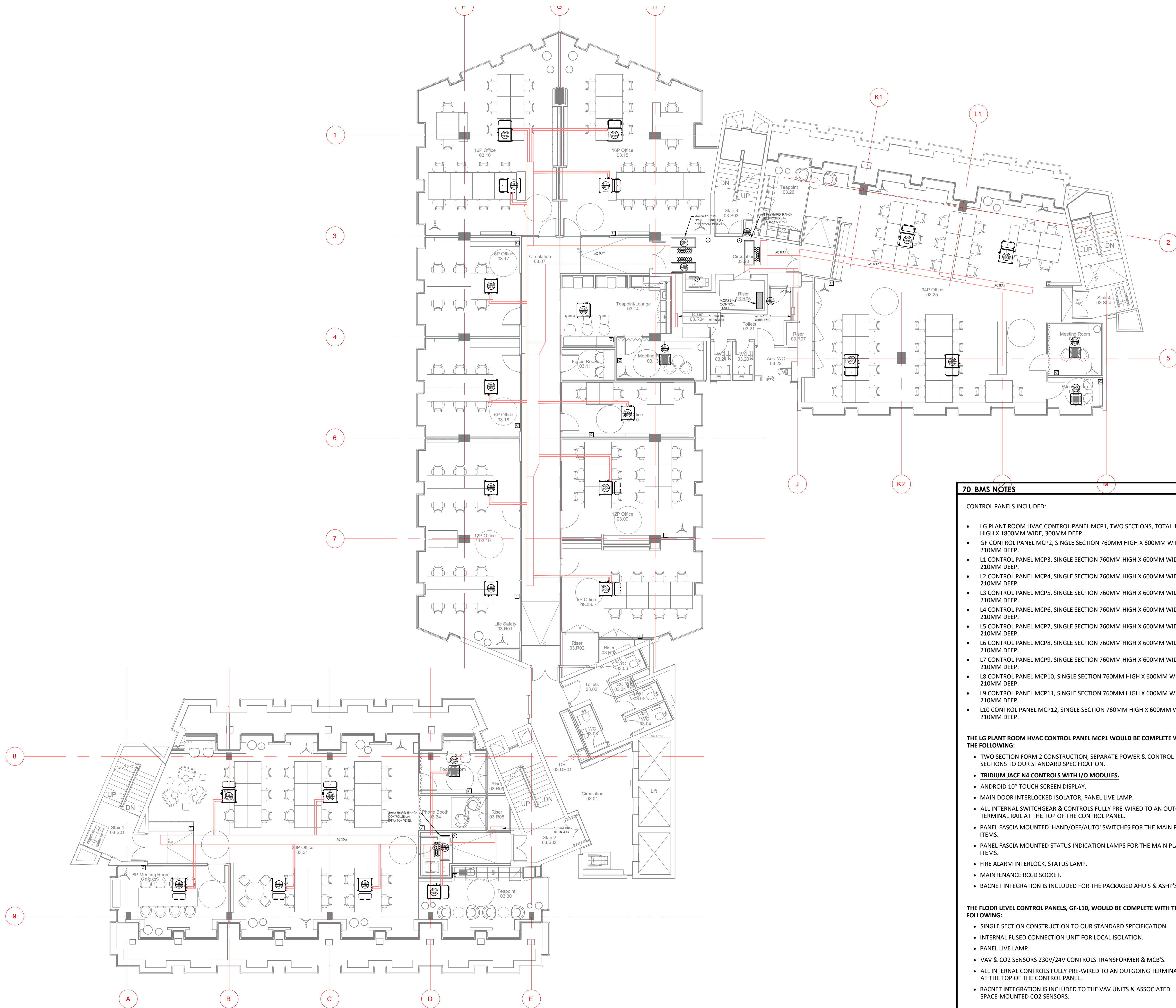
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		
Client:			
CUBIC WORKS			
Project:			
PALL MALL MANCHESTER			
Drawing Title:			
AIR CONDITIONING SERVICES LAYOUT SECOND FLOOR			
Drawing No:			Rev:
C3781-HEC-ZZ-02-DR-M-5500			P04



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- LOCAL TEMPERATURE AND CO2 SENSORS TO BE PROVIDED FOR EACH FCU

55 AIR CONDITIONING REFERENCES & SYMBOLS

	WALL MOUNTED AIR CONDITIONING UNIT
	BC MULTIPIPE CONTROLLER (HVRF SYSTEMS)
	CEILING MOUNTED AIR CONDITIONING UNIT
	CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE)
	HVRF CONDENSER UNIT

70 BMS NOTES

CONTROL PANELS INCLUDED:

- LG PLANT ROOM HVAC CONTROL PANEL MCP1, TWO SECTIONS, TOTAL 1200MM HIGH X 1800MM WIDE, 300MM DEEP.
- GF CONTROL PANEL MCP2, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
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- L8 CONTROL PANEL MCP10, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L9 CONTROL PANEL MCP11, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
- L10 CONTROL PANEL MCP12, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.

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- PANEL FASCIA MOUNTED STATUS INDICATION LAMPS FOR THE MAIN PLANT ITEMS.
- FIRE ALARM INTERLOCK, STATUS LAMP.
- MAINTENANCE RCCD SOCKET.
- BACNET INTEGRATION IS INCLUDED FOR THE PACKAGED AHU'S & ASHP'S.

THE FLOOR LEVEL CONTROL PANELS, GF-L10, WOULD BE COMPLETE WITH THE FOLLOWING:

- SINGLE SECTION CONSTRUCTION TO OUR STANDARD SPECIFICATION.
- INTERNAL FUSED CONNECTION UNIT FOR LOCAL ISOLATION.
- PANEL LIVE LAMP.
- VAV & CO2 SENSORS 230V/24V CONTROLS TRANSFORMER & MCB'S.
- ALL INTERNAL CONTROLS FULLY PRE-WIRED TO AN OUTGOING TERMINAL RAIL AT THE TOP OF THE CONTROL PANEL.
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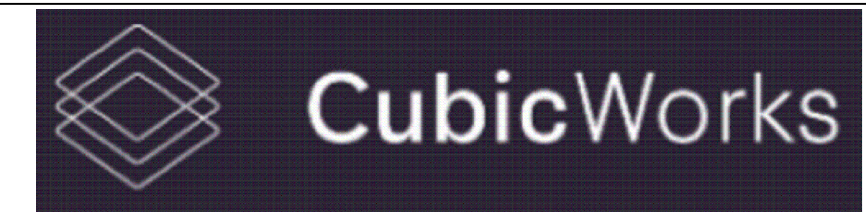
P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
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P02	PC	09.12.22	PRELIMINARY ISSUE - HBC BOXES AMENDED
P01	PC	28.09.22	PRELIMINARY ISSUE
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

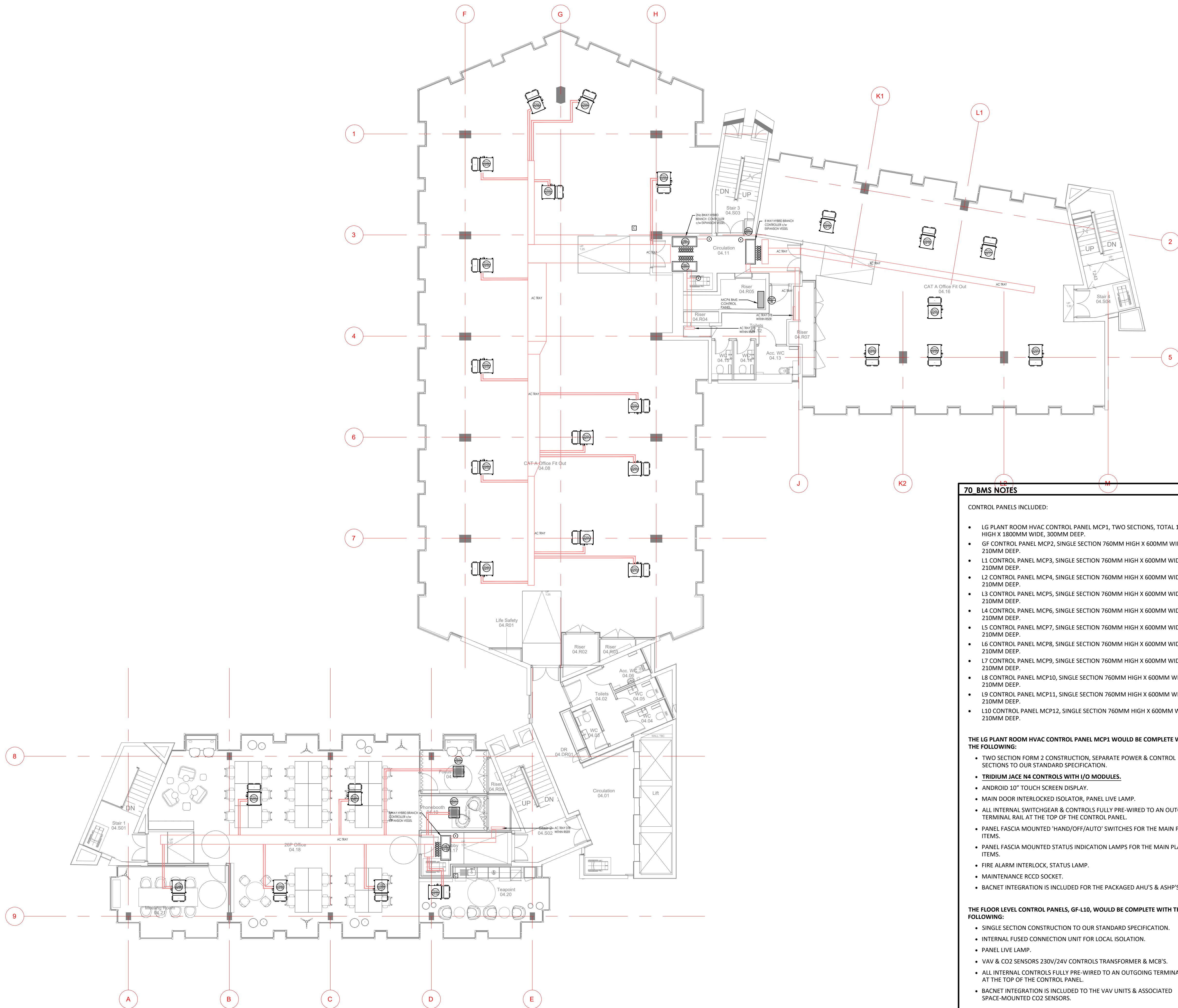
Client:

CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**AIR CONDITIONING SERVICES LAYOUT
THIRD FLOOR**

Drawing No: C3781-HEC-ZZ-03-DR-M-5500	Rev: P04
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ACU-***	WALL MOUNTED AIR CONDITIONING UNIT
HBC-***	BC MULTIPipe CONTROLLER (HVRF SYSTEMS)
ACU-***	CEILING MOUNTED AIR CONDITIONING UNIT
FCU	CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE)
HVRF-***	HVRF CONDENSER UNIT

70 BMS NOTES

CONTROL PANELS INCLUDED:

- LG PLANT ROOM HVAC CONTROL PANEL MCP1, TWO SECTIONS, TOTAL 1200MM HIGH X 1800MM WIDE, 300MM DEEP.
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THE FLOOR LEVEL CONTROL PANELS, GF-L10, WOULD BE COMPLETE WITH THE FOLLOWING:

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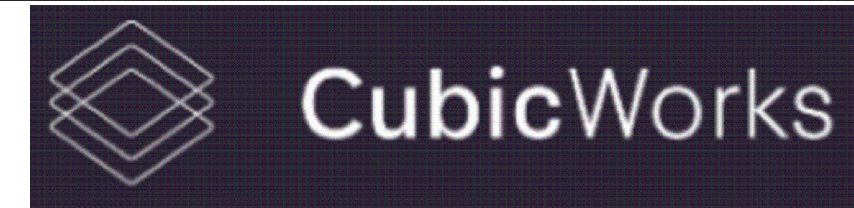
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REV	CHK	DATE	DESCRIPTION

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FF&E X-Ref Drawings:

Drawing Status:

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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

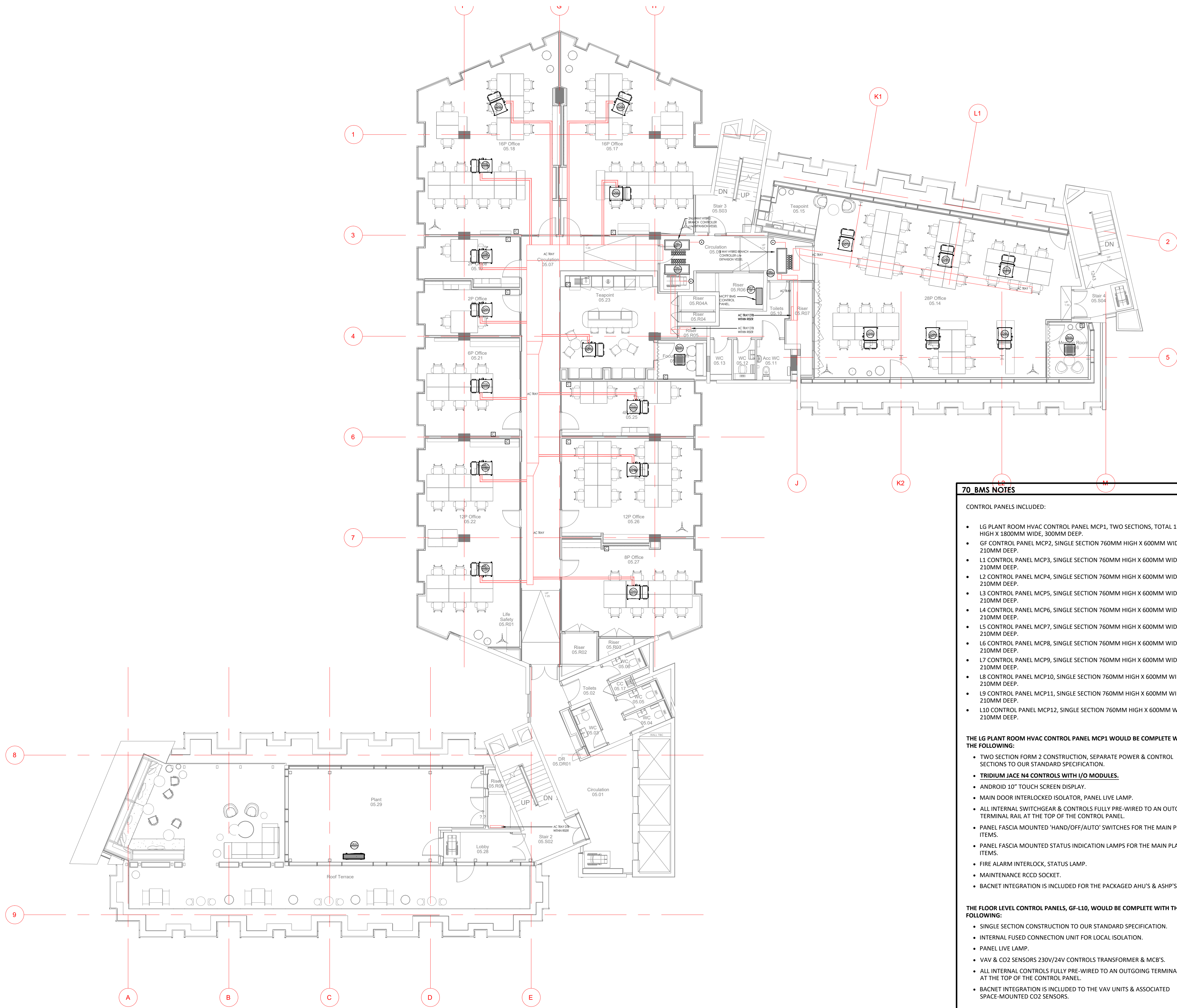
Client:

CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**AIR CONDITIONING SERVICES LAYOUT
FOURTH FLOOR**

Drawing No:	Rev:
C3781-HEC-ZZ-04-DR-M-5500	P04



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- INTERNAL FUSED CONNECTION UNIT FOR LOCAL ISOLATION.
- PANEL LIVE LAMP.
- VAV & CO2 SENSORS 230V/24V CONTROLS TRANSFORMER & MCB'S.
- ALL INTERNAL CONTROLS FULLY PRE-WIRED TO AN OUTGOING TERMINAL RAIL AT THE TOP OF THE CONTROL PANEL.
- BACNET INTEGRATION IS INCLUDED TO THE VAV UNITS & ASSOCIATED SPACE-MOUNTED CO2 SENSORS.

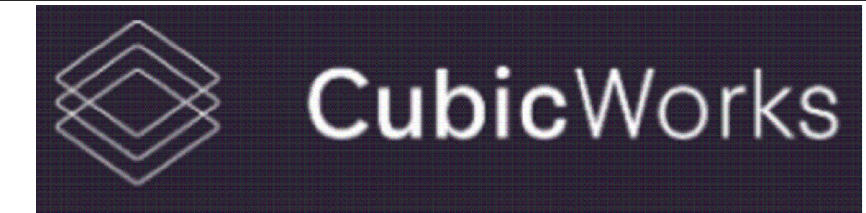
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P03	PC	13.02.23	PRELIMINARY ISSUE - BMS INCLUDED
P02	PC	09.12.22	PRELIMINARY ISSUE - HBC BOXES AMENDED
P01	PC	28.09.22	PRELIMINARY ISSUE
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Date: JUN 2022	Scale: 1:100		

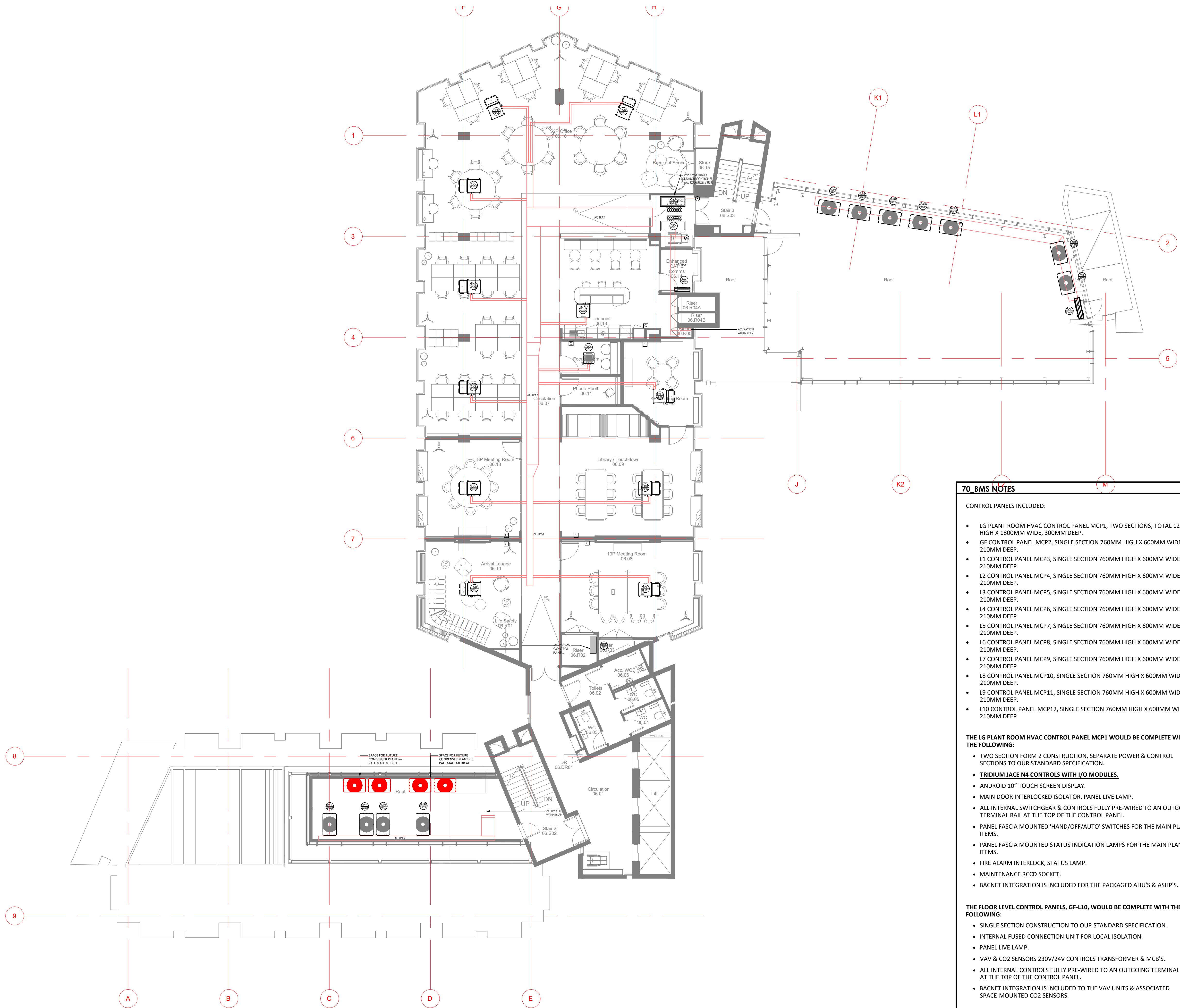
Client:

CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**AIR CONDITIONING SERVICES LAYOUT
FIFTH FLOOR**

Drawing No: C3781-HEC-ZZ-05-DR-M-5500	Rev: P04
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- ALL DIMENSIONS IN MM.
- SELECTIONS TO BE BASED ON MITSUBISHI ELECTRIC R32 HYBRID VRF SYSTEM. 2-PIPE FAN COIL UNITS AS PART OF THE R32 HVRF SYSTEM.
- INDOOR UNIT SELECTIONS TO ACHIEVE DUTIES BASED ON MEDIUM SPEED FAN MODE
- FINAL PIPEWORK SIZING AND DESIGN OF HVRF SYSTEM TO BE PRODUCED BY MITSUBISHI ELECTRIC AND PIPEWORK AND VALVES TO BE PROVIDED AND INSTALLED BY CONTRACTOR IN LINE WITH THE MITSUBISHI ELECTRIC REQUIREMENTS.
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- LOCAL TEMPERATURE AND CO2 SENSORS TO BE PROVIDED FOR EACH FCU

55 AIR CONDITIONING REFERENCES & SYMBOLS

ACU-***	WALL MOUNTED AIR CONDITIONING UNIT
HBC-***	BC MULTIPUPE CONTROLLER (HVRF SYSTEMS)
ACU-***	CEILING MOUNTED AIR CONDITIONING UNIT
FCU	CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE)
HVRF-***	HVRF CONDENSER UNIT

70 BMS NOTES

CONTROL PANELS INCLUDED:

- LG PLANT ROOM HVAC CONTROL PANEL MCP1, TWO SECTIONS, TOTAL 1200MM HIGH X 1800MM WIDE, 300MM DEEP.
- GF CONTROL PANEL MCP2, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
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- L9 CONTROL PANEL MCP11, SINGLE SECTION 760MM HIGH X 600MM WIDE X 210MM DEEP.
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- MAIN DOOR INTERLOCKED ISOLATOR, PANEL LIVE LAMP.
- ALL INTERNAL SWITCHGEAR & CONTROLS FULLY PRE-WIRED TO AN OUTGOING TERMINAL RAIL AT THE TOP OF THE CONTROL PANEL.
- PANEL FASCIA MOUNTED 'HAND/OFF/AUTO' SWITCHES FOR THE MAIN PLANT ITEMS.
- PANEL FASCIA MOUNTED STATUS INDICATION LAMPS FOR THE MAIN PLANT ITEMS.
- FIRE ALARM INTERLOCK, STATUS LAMP.
- MAINTENANCE RCCD SOCKET.
- BACNET INTEGRATION IS INCLUDED FOR THE PACKAGED AHU'S & ASHP'S.

THE FLOOR LEVEL CONTROL PANELS, GF-L10, WOULD BE COMPLETE WITH THE FOLLOWING:

- SINGLE SECTION CONSTRUCTION TO OUR STANDARD SPECIFICATION.
- INTERNAL FUSED CONNECTION UNIT FOR LOCAL ISOLATION.
- PANEL LIVE LAMP.
- VAV & CO2 SENSORS 230V/24V CONTROLS TRANSFORMER & MCB'S.
- ALL INTERNAL CONTROLS FULLY PRE-WIRED TO AN OUTGOING TERMINAL RAIL AT THE TOP OF THE CONTROL PANEL.
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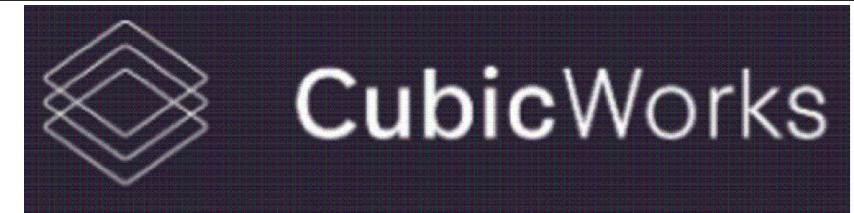
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P04	PC	13.02.23	PRELIMINARY ISSUE - BMS INCLUDED
P03	PC	16.01.23	PRELIMINARY ISSUE - FUTURE CONDENSER SPACE ADDED
P02	PC	09.12.22	PRELIMINARY ISSUE - HBC BOXES AMENDED
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Date:	JUN 2022	Scale:	1:100			

Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
AIR CONDITIONING SERVICES LAYOUT
SIXTH FLOOR

Drawing No:	C3781-HEC-ZZ-06-DR-M-5500	Rev:	P05
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- HBC-***
BC MULTIPIPE CONTROLLER (HVRF SYSTEMS)
- ACU-***
CEILING MOUNTED AIR CONDITIONING UNIT
- FCU
CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE)
- HVRF-***
HVRF CONDENSER UNIT

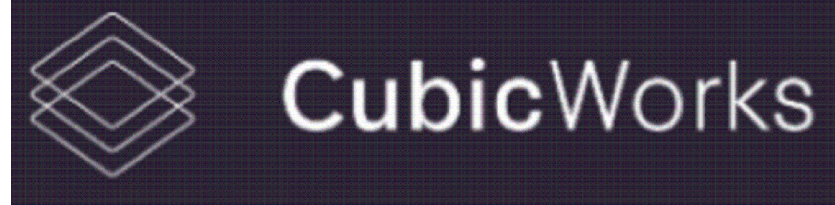
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Date: JUN 2022	Scale: 1:100		

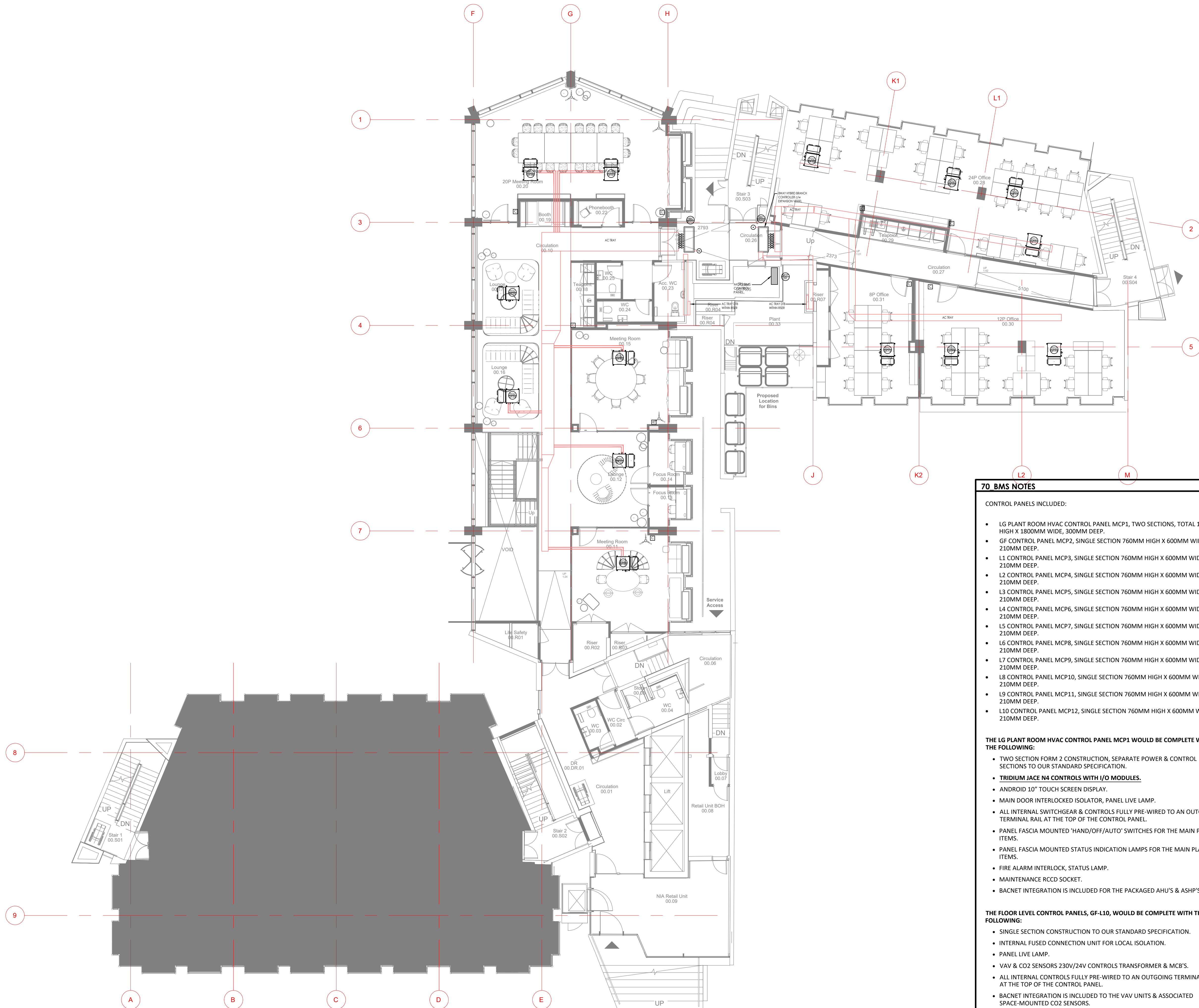
Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
AIR CONDITIONING SERVICES LAYOUT
BASEMENT LEVEL

Drawing No: C3781-HEC-ZZ-BL-DR-M-5500	Rev: P04
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CONTROL PANELS INCLUDED:

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- PANEL FASCIA MOUNTED 'HAND/OFF/AUTO' SWITCHES FOR THE MAIN PLANT ITEMS.
- PANEL FASCIA MOUNTED STATUS INDICATION LAMPS FOR THE MAIN PLANT ITEMS.
- FIRE ALARM INTERLOCK, STATUS LAMP.
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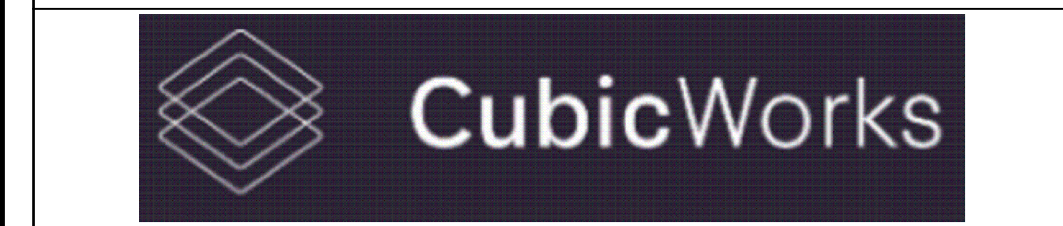
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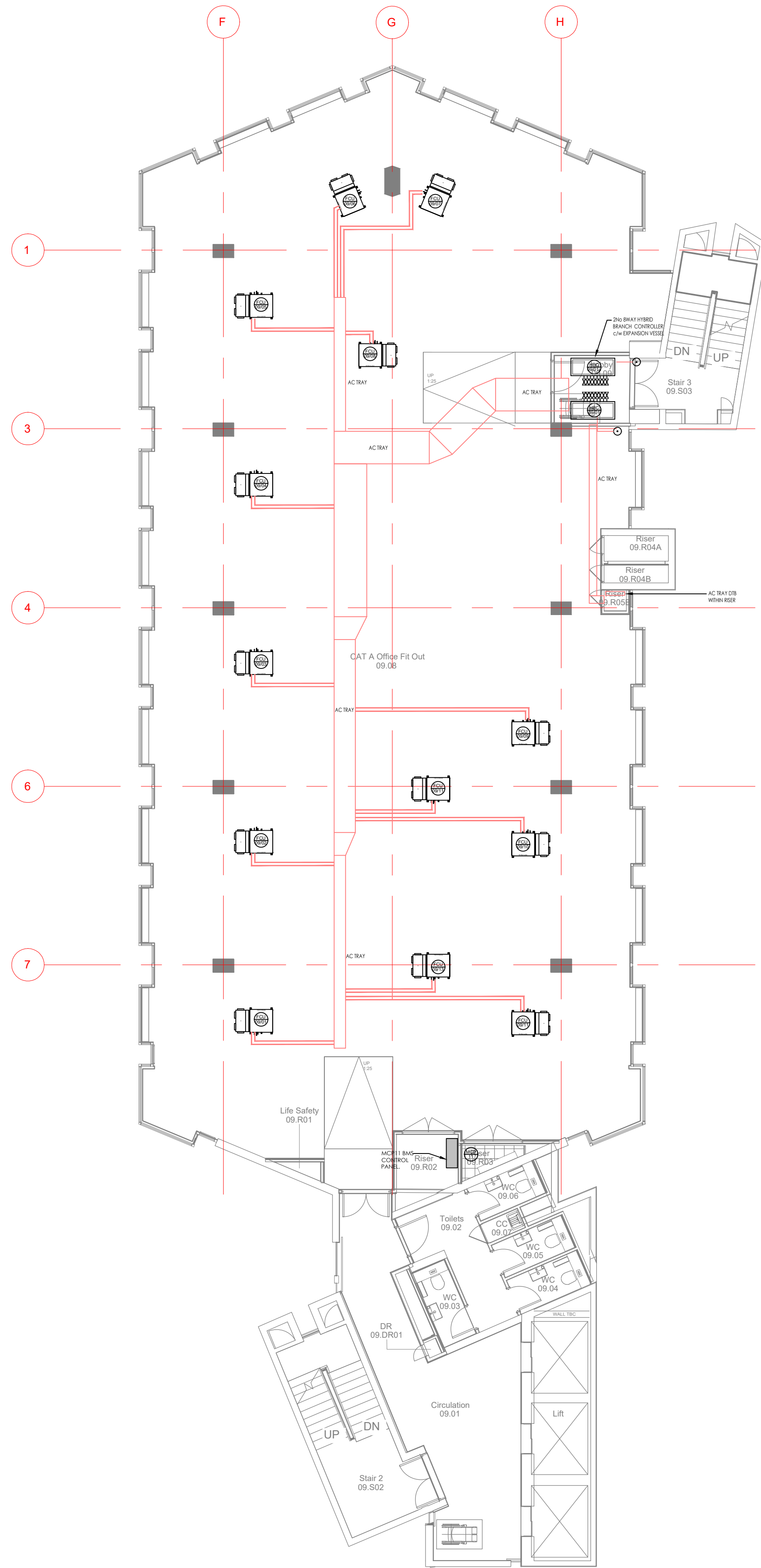
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Date:	JUN 2022	Scale:	1:100			

Client: **CUBIC WORKS**

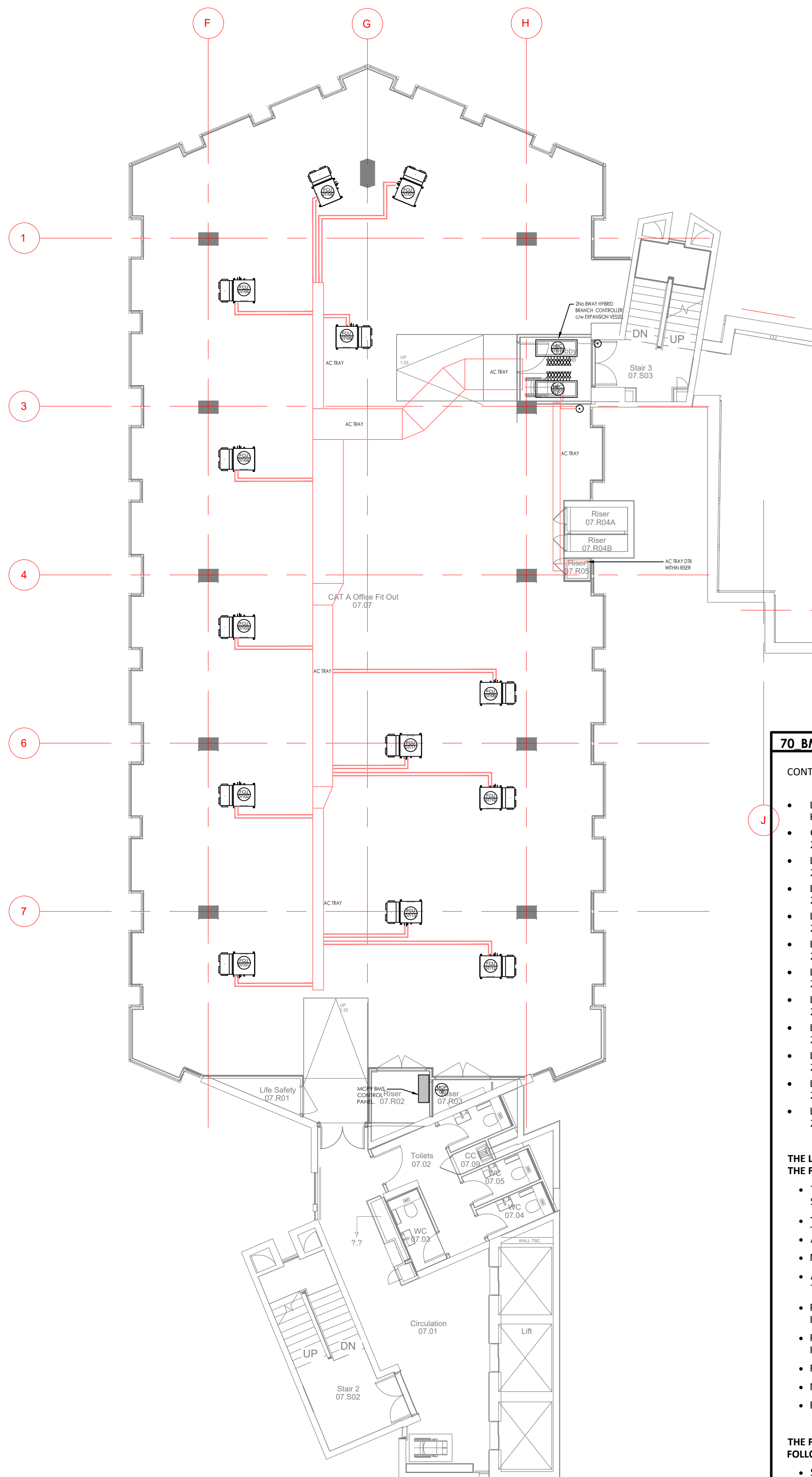
Project: **PALL MALL MANCHESTER**

Drawing Title: **AIR CONDITIONING SERVICES LAYOUT GROUND FLOOR**

Drawing No:	C3781-HEC-ZZ-GF-DR-M-5500	Rev:	P04
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8th FLOOR



7th FLOOR

70. BMS NOTES

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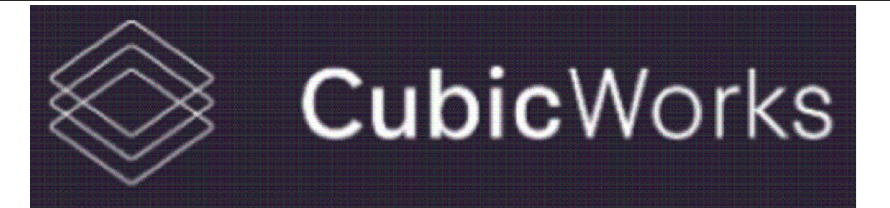
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Date: JUN 2022	Scale: 1:100		
Client:			

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
AIR CONDITIONING SERVICES LAYOUT
SEVENTH & EIGHTH FLOOR

Drawing No:	C3781-HEC-ZZ-ZZ-DR-M-5500	Rev:	P04
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55_AIR CONDITIONING NOTES

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4. SELECTIONS TO BE BASED ON MITSUBISHI ELECTRIC R32 HYBRID VRF SYSTEM, 2-PIPE FAN COIL UNITS AS PART OF THE R32 HVRF SYSTEM
5. INDOOR UNIT SELECTIONS TO ACHIEVE DUTIES BASED ON MEDIUM SPEED FAN MODE
6. FINAL PIPEWORK SIZING AND DESIGN OF HVRF SYSTEM TO BE PRODUCED BY MITSUBISHI ELECTRIC AND PIPEWORK AND VALVES TO BE PROVIDED AND INSTALLED BY CONTRACTOR IN LINE WITH THE MITSUBISHI ELECTRIC REQUIREMENTS.
7. R32 REFRIGERANT TO BE USED AND REFRIGERANT LEAK DETECTION TO BE PROVIDED (AS PER MANUFACTURERS RECOMMENDATIONS) AT LOW POINTS WHERE REFRIGERANT RUNS INTERNALLY (AT BOTTOM OF RISERS, UNDERNEATH BC BOXES ETC).
8. LOCAL TEMPERATURE AND CO2 SENSORS TO BE PROVIDED FOR EACH ECU

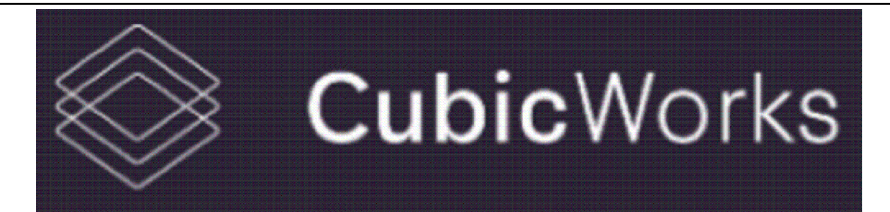
55 AIR CONDITIONING REFERENCES & SYMBOLS

ACU-***	WALL MOUNTED AIR CONDITIONING UNIT
HBC-***	BC MULTIPLE CONTROLLER (HVRF SYSTEMS)
ACU-***	CEILING MOUNTED AIR CONDITIONING UNIT
FCU	CEILING MOUNTED AIR CONDITIONING UNIT (FAN COIL UNIT TYPE)
HVRF-***	HVRF CONDENSER UNIT

P04	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P03	PC	13.02.23	PRELIMINARY ISSUE - BMS INCLUDED
P02	PC	09.12.22	PRELIMINARY ISSUE - HBC BOXES AMENDED
P01	PC	28.09.22	PRELIMINARY ISSUE
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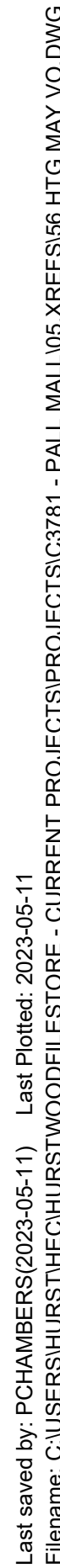
CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
**AIR CONDITIONING SERVICES LAYOUT
NINTH, TENTH & ROOF FLOOR**

Drawing No:
C3781-HEC-ZZ-ZZ-DR-M-5501

P04



56 LOW PRESSURE HOT WATER HEATING NOTES

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8. FIRE STOPPING IS TO BE PROVIDED BY OTHERS AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT.
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Date: JUN 2022	Scale: 1:100		

Client: CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:	LPHW SERVICES LAYOUT FIRST FLOOR
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Drawing No:	Rev:
C3781-HEC-ZZ-01-DR-M-5600	P04



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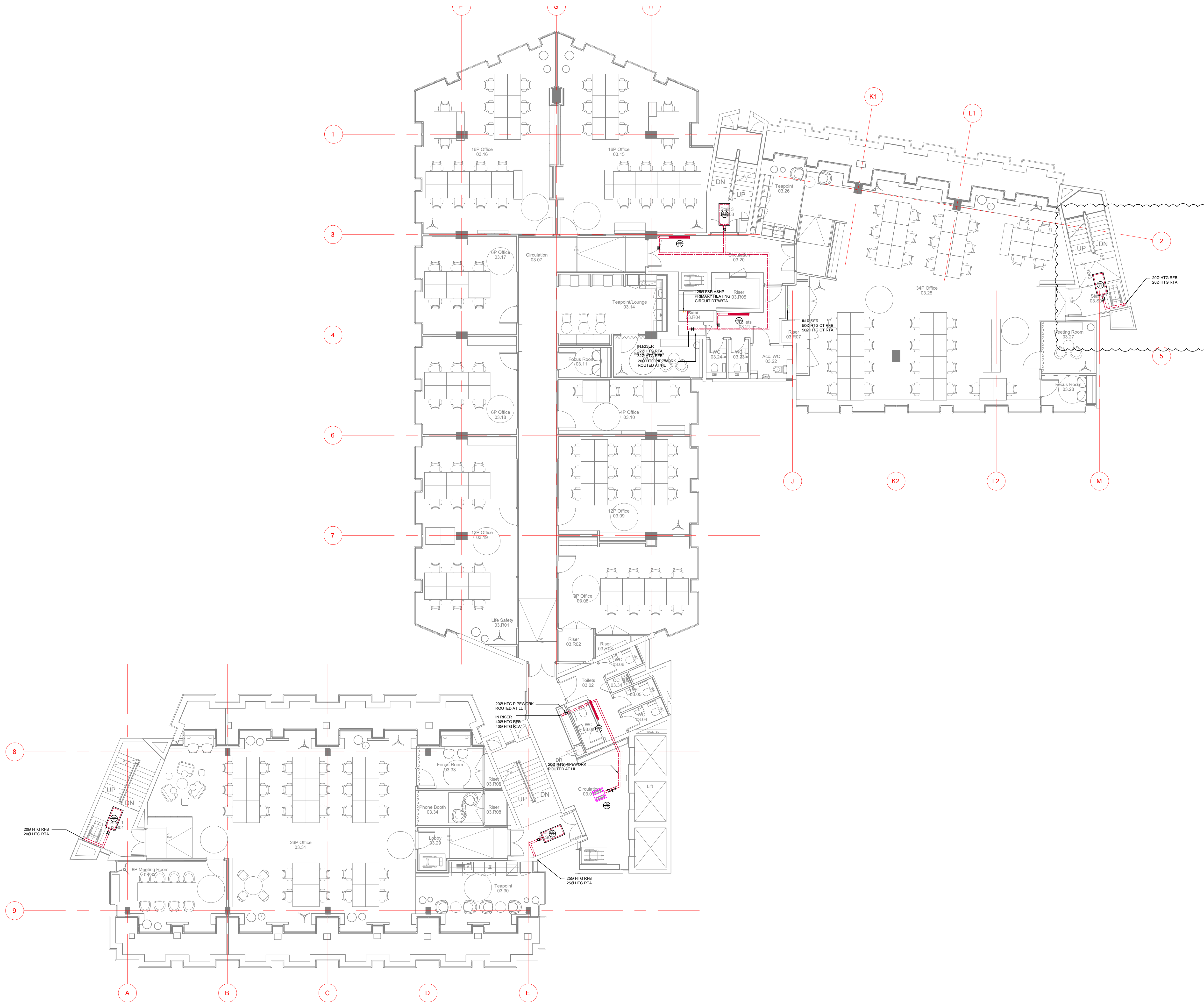
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Project: PALL MALL MANCHESTER			
Drawing Title: LPHW SERVICES LAYOUT SECOND FLOOR			
Drawing No: C3781-HEC-ZZ-02-DR-M-5600			Rev: P04

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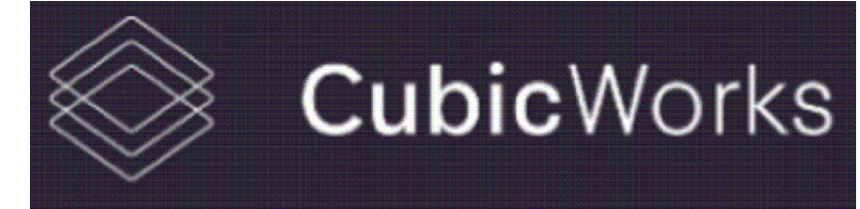
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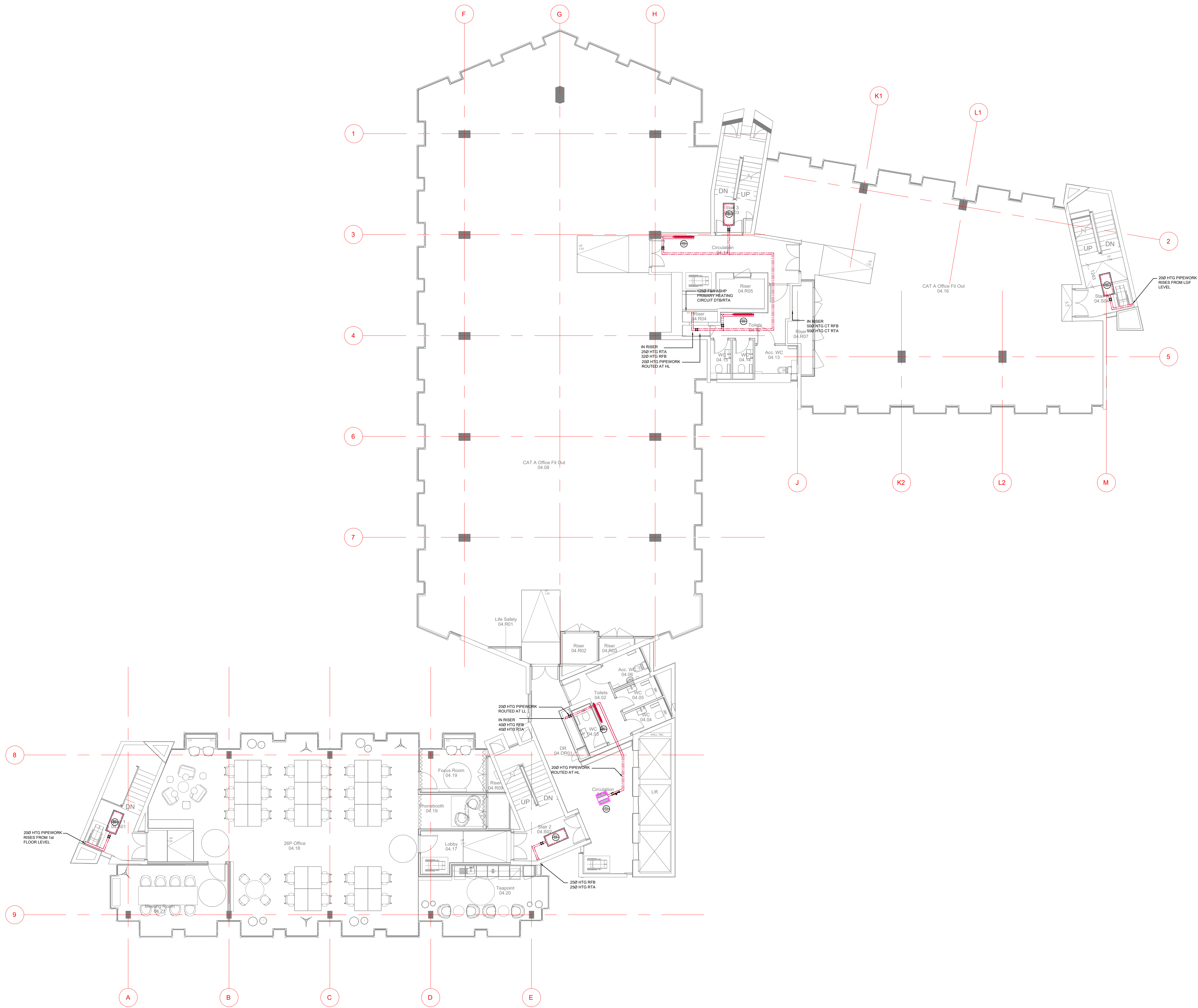
CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**LPHW SERVICES LAYOUT
THIRD FLOOR**

Drawing No:	C3781-HEC-ZZ-03-DR-M-5600	Rev:	P04
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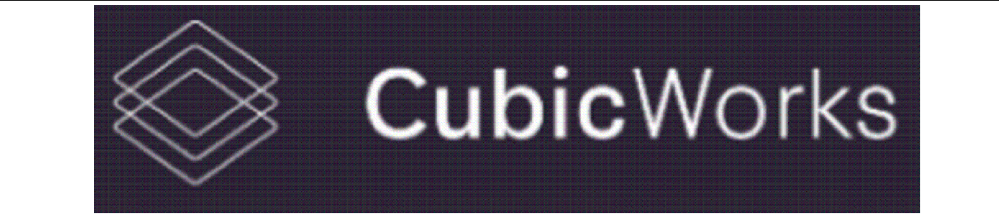
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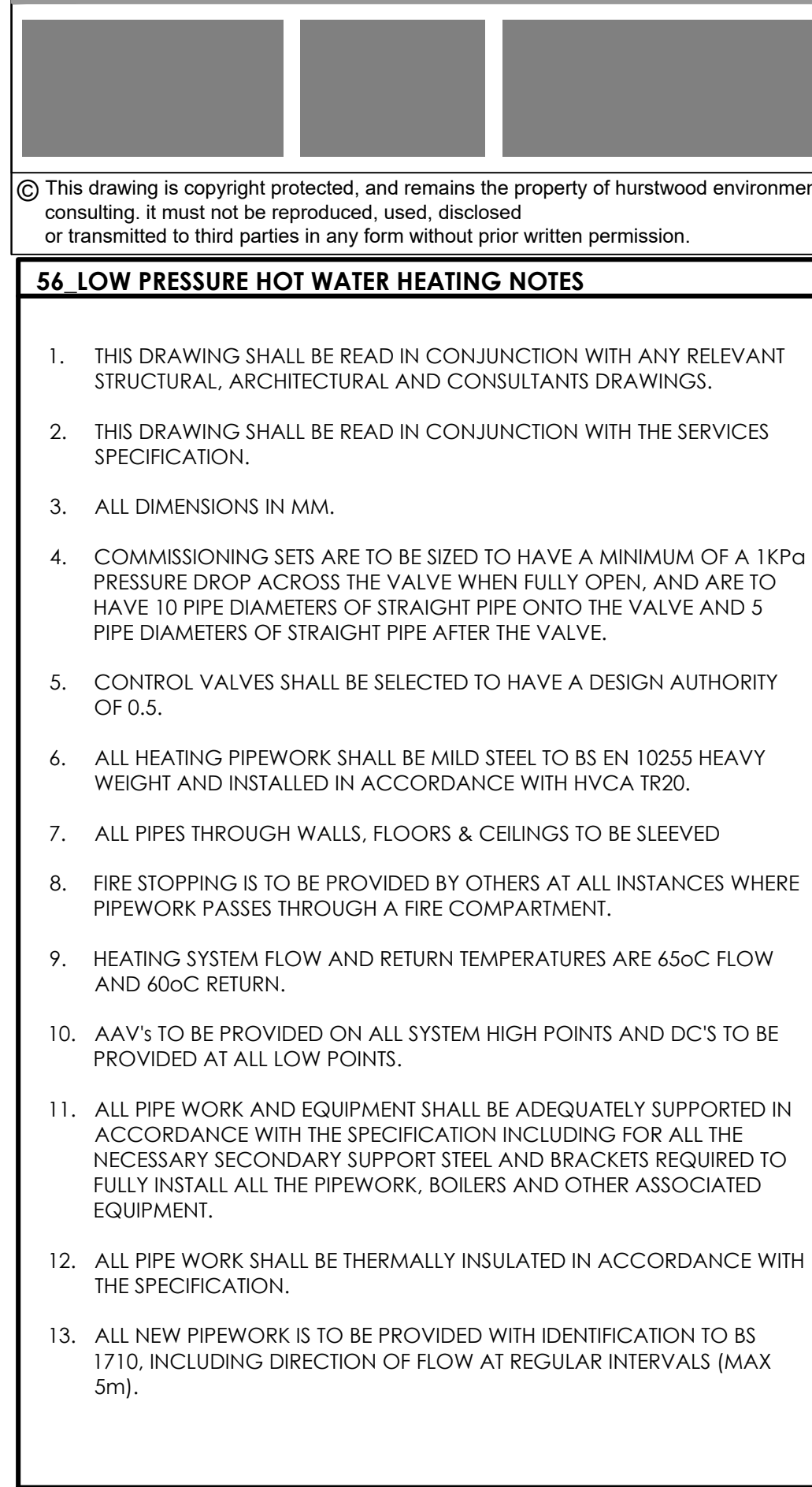
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Client: **CUBIC WORKS**

Project: **PALL MALL MANCHESTER**

Drawing Title: **LPHW SERVICES LAYOUT FOURTH FLOOR**

Drawing No: C3781-HEC-ZZ-04-DR-M-5600	Rev: P04
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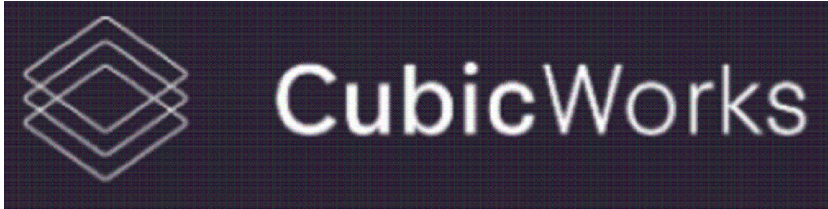
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M JORDAN

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Project:

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MANCHESTER

Drawing Title:

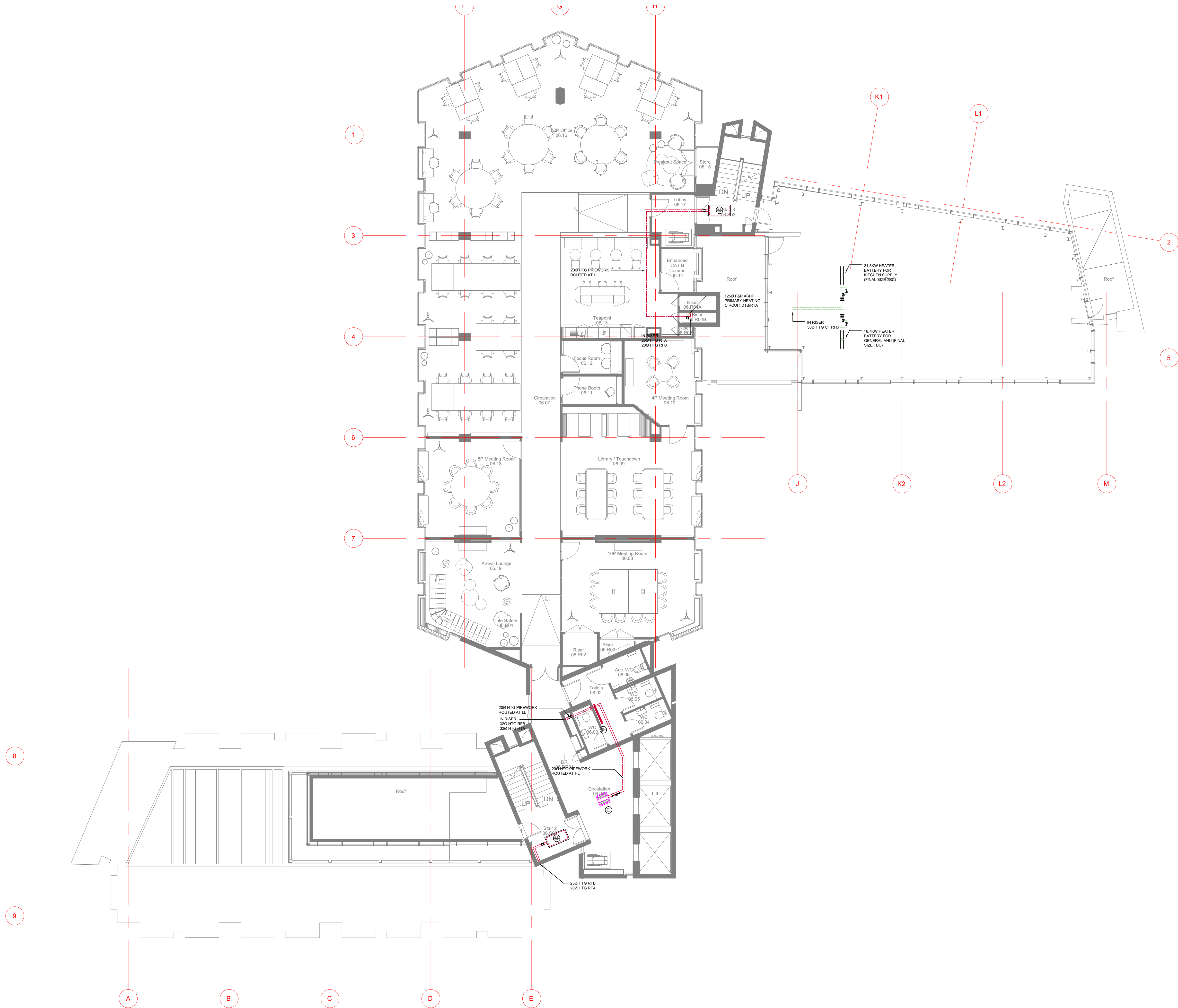
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FIFTH FLOOR

Drawing No:

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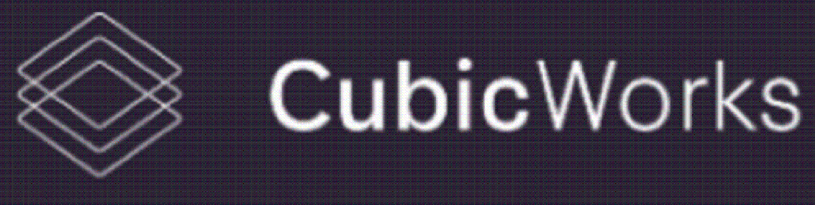
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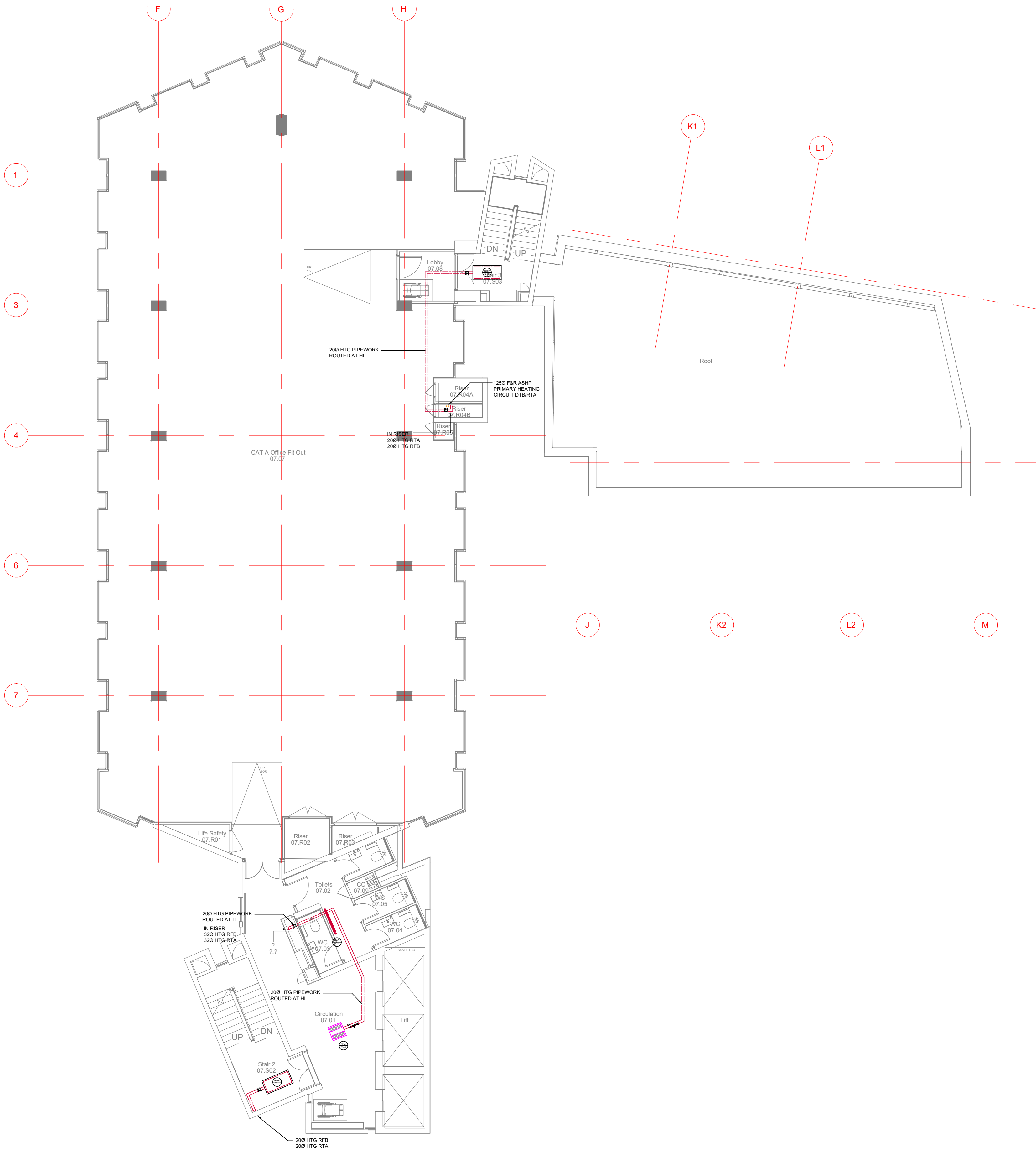
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CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**LPHW SERVICES LAYOUT
SIXTH FLOOR**

Drawing No: C3781-HEC-ZZ-06-DR-M-5600	Rev: P04
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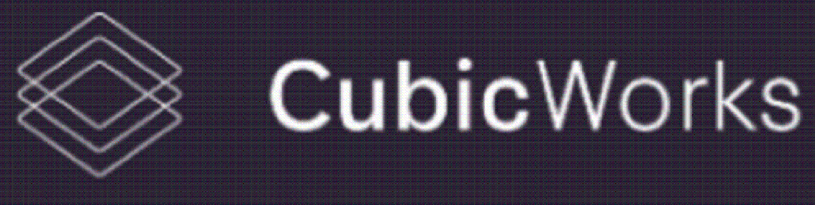
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Date: JUN 2022	Scale: 1:100		

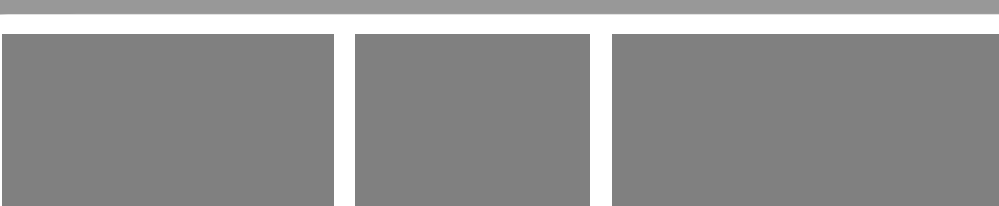
Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

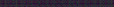
Drawing Title:
LPHW SERVICES LAYOUT
SEVENTH FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-07-DR-M-5600	P04



56 LOW PRESSURE HOT WATER HEATING NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ANY RELEVANT STRUCTURAL, ARCHITECTURAL AND CONSULTANTS DRAWINGS.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SERVICES SPECIFICATION.
3. ALL DIMENSIONS IN MM.
4. COMMISSIONING SETS ARE TO BE SIZED TO HAVE A MINIMUM OF A 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.
5. CONTROL VALVES SHALL BE SELECTED TO HAVE A DESIGN AUTHORITY OF 0.5.
6. ALL HEATING PIPEWORK SHALL BE MILD STEEL TO BS EN 10255 HEAVY WEIGHT AND INSTALLED IN ACCORDANCE WITH HVCA TR20.
7. ALL PIPES THROUGH WALLS, FLOORS & CEILINGS TO BE SLEEVED
8. FIRE STOPPING IS TO BE PROVIDED BY OTHERS AT ALL INSTANCES WHERE PIPEWORK PASSES THROUGH A FIRE COMPARTMENT.
9. HEATING SYSTEM FLOW AND RETURN TEMPERATURES ARE 65oC FLOW AND 60oC RETURN.
10. AAV'S TO BE PROVIDED ON ALL SYSTEM HIGH POINTS AND DC'S TO BE PROVIDED AT ALL LOW POINTS.
11. ALL PIPE WORK AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED IN ACCORDANCE WITH THE SPECIFICATION INCLUDING FOR ALL THE NECESSARY SECONDARY SUPPORT STEEL AND BRACKETS REQUIRED TO FULLY INSTALL ALL THE PIPEWORK, BOILERS AND OTHER ASSOCIATED EQUIPMENT.
12. ALL PIPE WORK SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH THE SPECIFICATION.
13. ALL NEW PIPEWORK IS TO BE PROVIDED WITH IDENTIFICATION TO BS 1710, INCLUDING DIRECTION OF FLOW AT REGULAR INTERVALS (MAX 5m).



CubicWorks

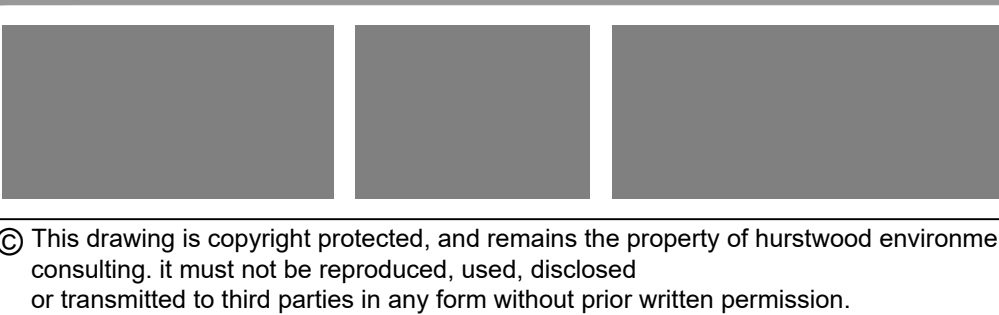


CUBIC WORKS

CUBIC WORKS

Drawing Title:
LPHW SERVICES LAYOUT
EIGHTH FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-08-DR-M-5600	P04

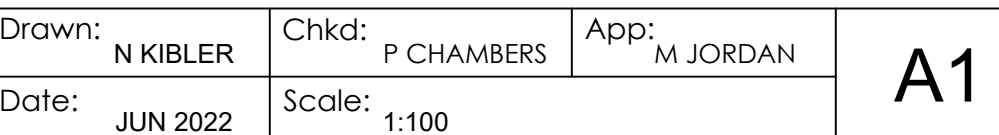


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Architectural X-Ref Drawings:
FF&E X-Ref Drawings:



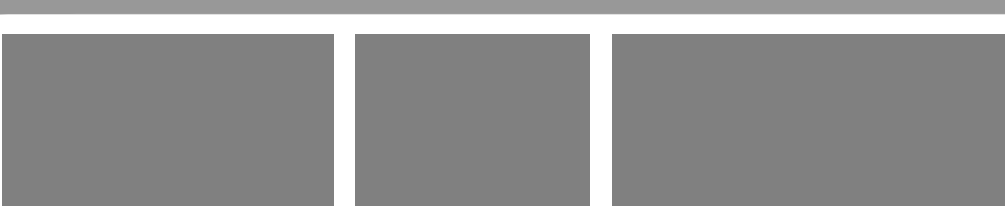
CubicWorks



CUBIC WORKS

Drawing Title:
LPHW SERVICES LAYOUT
NINTH FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-09-DR-M-5600	P04



56 LOW PRESSURE HOT WATER HEATING NOTES

- | | | | |
|-----|-----|----------|--|
| P04 | PC | 10.05.23 | PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES |
| P03 | PC | 22.09.22 | PRELIMINARY ISSUE - UPDATED WITH FAN CONVECTORS AND RADIANT PANELS |
| P02 | PC | 06.09.22 | PRELIMINARY ISSUE |
| P01 | PC | 08.08.22 | PRELIMINARY ISSUE |
| REV | CHK | DATE | DESCRIPTION |

FF&E X-Ref Drawings:



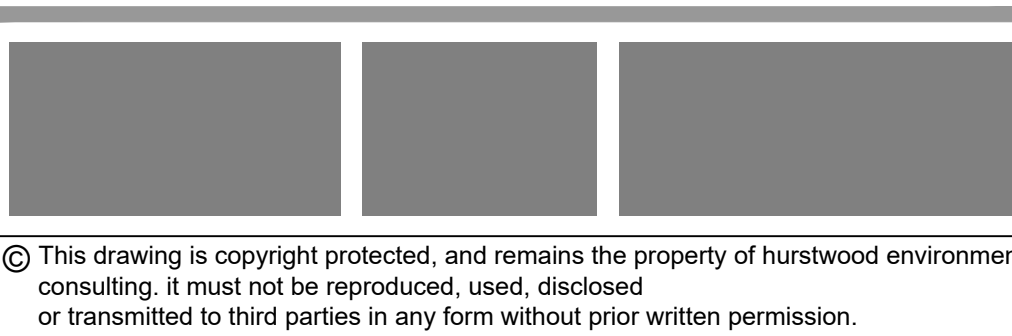
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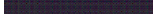
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PALL MALL
MANCHESTER

Drawing No:	Rev:
C3781-HEC-ZZ-10-DR-M-5600	P04

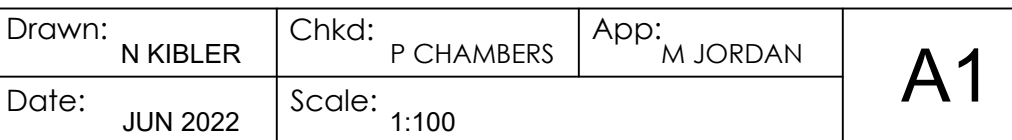


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Architectural X-Ref Drawings:
FF&E X-Ref Drawings:



CubicWorks

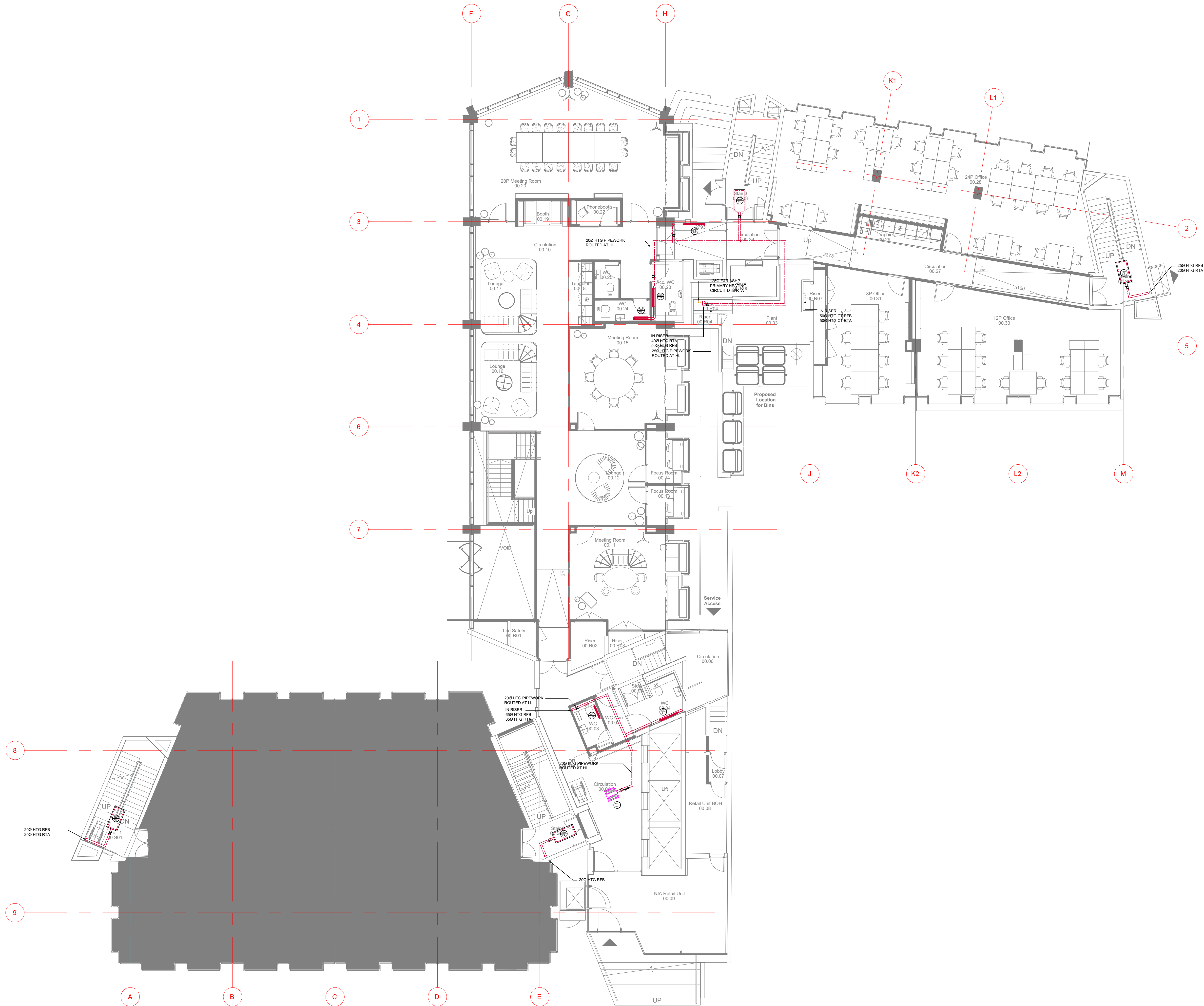


CUBIC WORKS

Drawing Title:
LPHW SERVICES LAYOUT
BASEMENT LEVEL

Drawing No:	Rev:
C3781-HEC-ZZ-BL-DR-M-5600	P05

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Filename: C:\USERS\HURSTW\HURSTWOOD\FILESTORE - CURRENT PROJECTS\PROJECTS\G3781 - PALL MALL\05-XREFS\56 HTG MAY VO.DWG



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56 LOW PRESSURE HOT WATER HEATING NOTES

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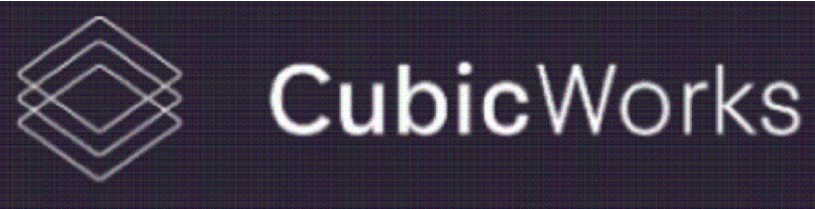
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P03	PC	22.09.22	PRELIMINARY ISSUE - UPDATED WITH FAN CONVECTORS AND RADIANT PANELS
P02	PC	06.09.22	PRELIMINARY ISSUE
P01	PC	08.08.22	PRELIMINARY ISSUE
REV/CHK	DATE	DESCRIPTION	

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FF&E X-Ref Drawings:

Drawing Status:

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Date: JUN 2022	Scale: 1:100		

Client:

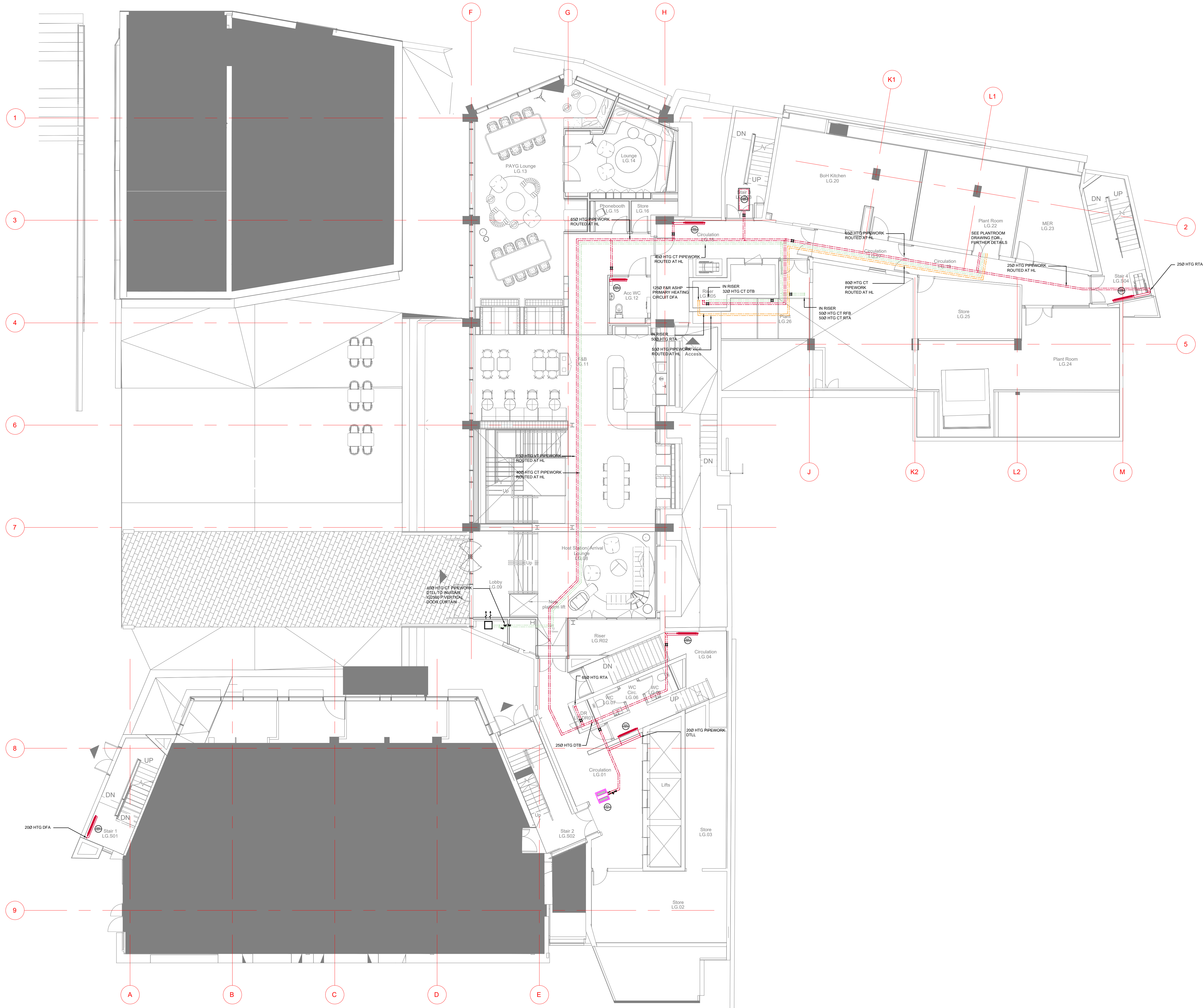
CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
LPHW SERVICES LAYOUT
GROUND FLOOR

Drawing No:	C3781-HEC-ZZ-GF-DR-M-5600	Rev:	P04
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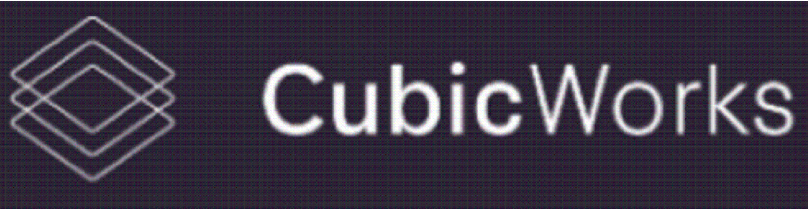
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P04	PC	14.04.23	PRELIMINARY ISSUE - UPDATED WITH TRENCH HEATING & DOOR CURTAIN
P03	PC	22.09.22	PRELIMINARY ISSUE - UPDATED WITH FAN CONVECTORS AND RADIANT PANELS
P02	PC	06.09.22	PRELIMINARY ISSUE
P01	PC	08.08.22	PRELIMINARY ISSUE
REV/CHK	DATE	DESCRIPTION	

Architectural X-Ref Drawings:

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Drawing Status:

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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**LPHW SERVICES LAYOUT
LOWER GROUND FLOOR**

Drawing No: C3781-HEC-ZZ-LG-DR-M-5600	Rev: P05
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LEGEND:

S	SUPPLY.	CV	CEILING VOID.
E	EXTRACT.	FV	FLOOR VOID.
FA	FRESH AIR.	HL	HIGH LEVEL.
EA	EXHAUST AIR.	ML	MID LEVEL.
DE	DIRTY EXTRACT.	LL	LOW LEVEL.
DS	DIRTY SUPPLY.	DT	DROP TO.
SG	SUPPLY GRILLE.	RT	RISE TO.
EG	EXTRACT GRILLE.	DFA	DROP FROM ABOVE.
WL	WEATHER LOUVRE.	DTB	DROP TO BELOW.
VCD	VOLUME CONTROL DAMPER.	RTA	RISE TO ABOVE.
FD	FIRE DAMPER.	RFB	RISE FROM BELOW.
SFD	SMOKE FIRE DAMPER.		
AD	ACCESS DOOR.		
ATT	ATTENUATOR.		
CTA	CROSS TALK ATTENUATOR.		
VAV	VARIABLE AIR VOLUME DEVICE.		
CAV	CONSTANT AIR VOLUME DEVICE.		
FCU	VRF FAN COIL UNIT.		
DEF	DIRTY EXTRACT FAN.		

	SWIRL DIFFUSER
	LOUVRE FACED GRILLE
	LINEAR DIFFUSER
	SIDEWALL DIFFUSER
	AIR VALVE

ITEM 1-02	ITEM REFERENCE FLOOR 1 ITEM 02
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NOTES:

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3. ALL DUCTWORK SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE HVAC SPECIFICATIONS DW144 - LOW PRESSURE CLASSIFICATION A.
4. ALL KITCHEN EXTRACT DUCTWORK SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE HVAC SPECIFICATION DW172.
5. ALL DUCTWORK SHALL BE DELIVERED, STORED AND INSTALLED IN ACCORDANCE WITH THE HVAC SPECIFICATIONS TR19 - GUIDE TO GOOD PRACTICE - INTERNAL CLEANLINESS OF NEW DUCTWORK INSTALLATIONS.
6. ALL PRIMARY SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED IN LINE WITH THE SPECIFICATION. SECONDARY SUPPLY DUCTWORK SHALL BE INTERNALLY PRE-INSULATED AS LINDAB ISOL RANGE EQUAL AND APPROVED.
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8. VOLUME CONTROL DAMPERS UP TO AND INCLUDING 300Ø OR RECTANGULAR SHALL BE SINGLE BLADE TYPE, ALL OTHER VCDs SHALL BE MULTI BLADE.
9. ALL DAMPERS CONNECTING TO EXTERNAL LOUVRES SHALL BE PROVIDED WITH BLADE SEALS TO PROVIDE A TIGHT SHUT-OFF..
10. ACCESS DOORS FOR INSPECTION AND CLEANING SHALL BE INSTALLED IN ACCORDANCE WITH HVAC SPECIFICATIONS DW144, DW172 & DW19.
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13. ALL HIGH LEVEL SERVICES ARE EXPOSED, CARE SHALL BE TAKEN TO ENSURE WORKMANSHIP IS NEAT AND TIDY WITH END CAPS PROVIDED TO UNISTRUT AND SCREWED ROD.

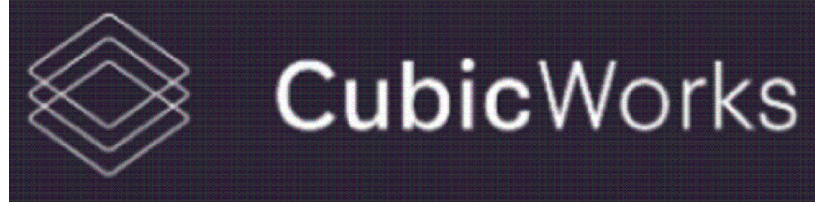
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P06	PC	28.02.23	RISER DUCTWORK AMENDED
P05	PC	28.02.23	FIRE DAMPERS ADDED, TOILET VENT AMENDED
P04	PC	16.01.23	AMENDMENTS AS PER COMMENTS RECEIVED
P03	PC	08.12.22	GRILLES RELOCATED AS PER COMMENTS RECEIVED
P02	PC	14.10.22	GRILLE REFS ADDED, TOWER BLOCK WC VENT AMENDED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV/CHK	DATE	DESCRIPTION	

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Drawing Status:

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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

VENTILATION LAYOUT
FIRST FLOOR

Drawing No:

C3781-HEC-ZZ-01-DR-M-5700

Rev:

P07



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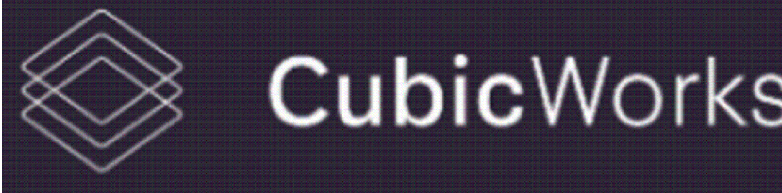
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P06	PC	28.02.23	RISER DUCTWORK AMENDED
P05	PC	28.02.23	FIRE DAMPERS ADDED, TOILET VENT AMENDED
P04	PC	16.01.23	AMENDMENTS AS PER COMMENTS RECEIVED
P03	PC	08.12.22	GRILLES RELOCATED AS PER COMMENTS RECEIVED
P02	PC	14.10.22	GRILLE REFS ADDED, TOWER BLOCK WC VENT AMENDED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV	CHK	DATE	DESCRIPTION

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STAGE 4



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Bolton	Liverpool	London
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

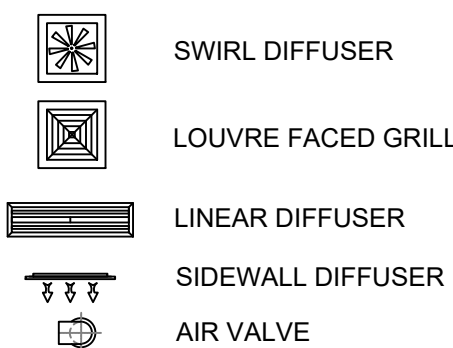
Drawing Title:
VENTILATION LAYOUT
SECOND FLOOR

Drawing No:	Rev:
C3781-HEC-ZZ-02-DR-M-5700	P07

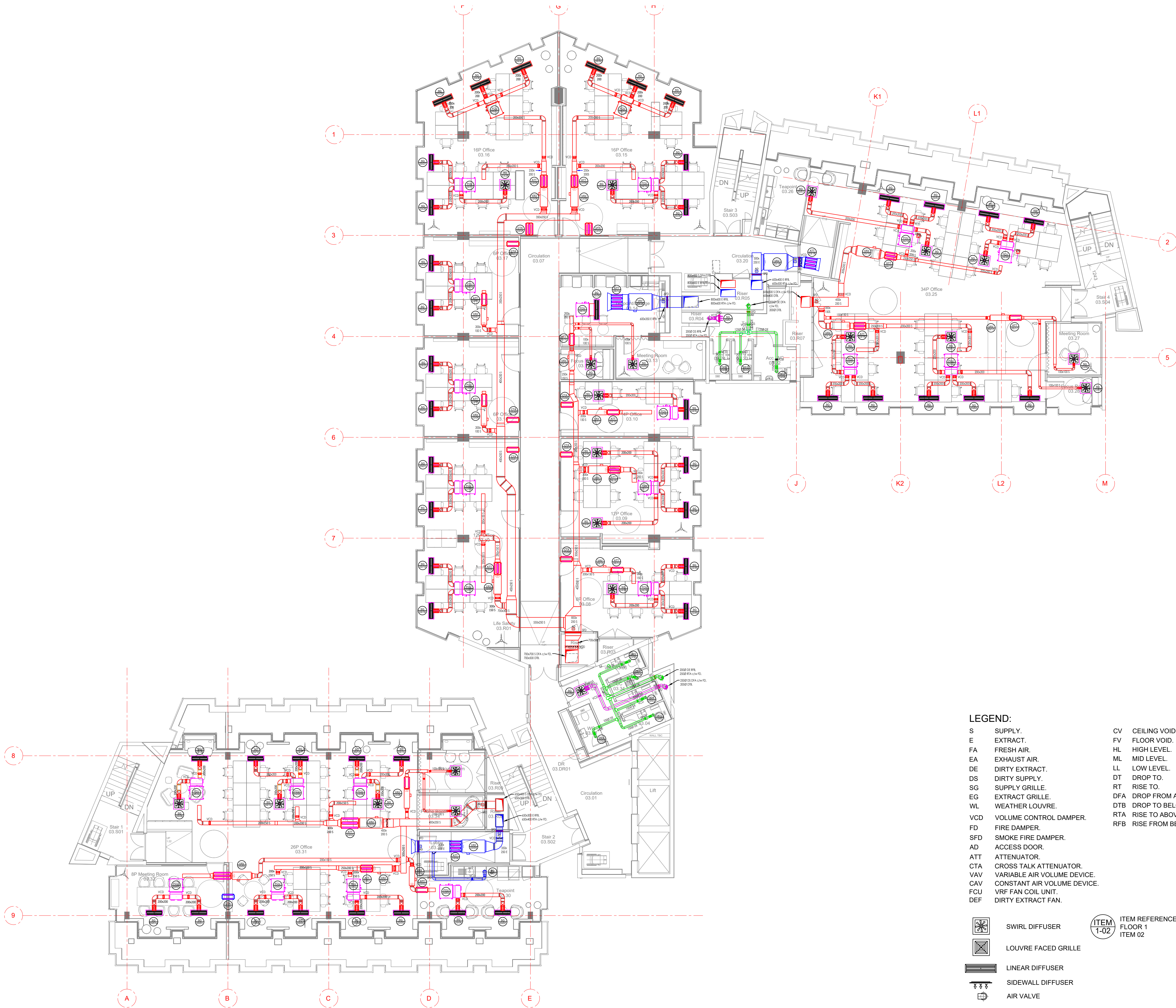
LEGEND:

S	SUPPLY.
E	EXTRACT.
FA	FRESH AIR.
EA	EXHAUST AIR.
DE	DIRTY EXTRACT.
DS	DIRTY SUPPLY.
SG	SUPPLY GRILLE.
EG	EXTRACT GRILLE.
WL	WEATHER LOUVRE.
VCD	VOLUME CONTROL DAMPER.
FD	FIRE DAMPER.
SFD	SMOKE FIRE DAMPER.
AD	ACCESS DOOR.
ATT	ATTENUATOR.
CTA	CROSS TALK ATTENUATOR.
VAV	VARIABLE AIR VOLUME DEVICE.
CAV	CONSTANT AIR VOLUME DEVICE.
FCU	VRF FAN COIL UNIT.
DEF	DIRTY EXTRACT FAN.

CV CEILING VOID.
FV FLOOR VOID.
HL HIGH LEVEL.
ML MID LEVEL.
LL LOW LEVEL.
DT DROP TO.
RT RISE TO.
DFA DROP FROM ABOVE.
DTB DROP TO BELOW.
RTA RISE TO ABOVE.
RFB RISE FROM BELOW.



ITEM 1-02
ITEM REFERENCE
FLOOR 1
ITEM 02



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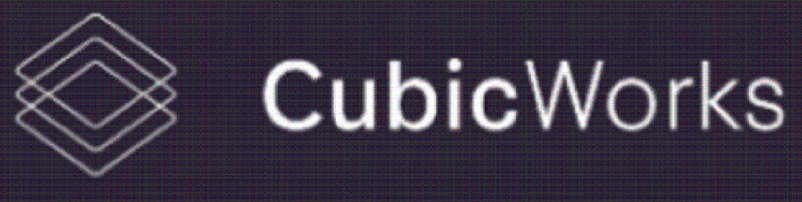
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P06	PC	28.02.23	RISER DUCTWORK AMENDED
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P02	PC	14.10.22	GRILLE REFS ADDED, TOWER BLOCK WC VENT AMENDED
P01	PC	27.06.22	PRELIMINARY ISSUE
REV/CHK	DATE	DESCRIPTION	

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Drawn: N KIBLER Chkd: P CHAMBERS App: M JORDAN **A1**
Date: JUN 2022 Scale: 1:100

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

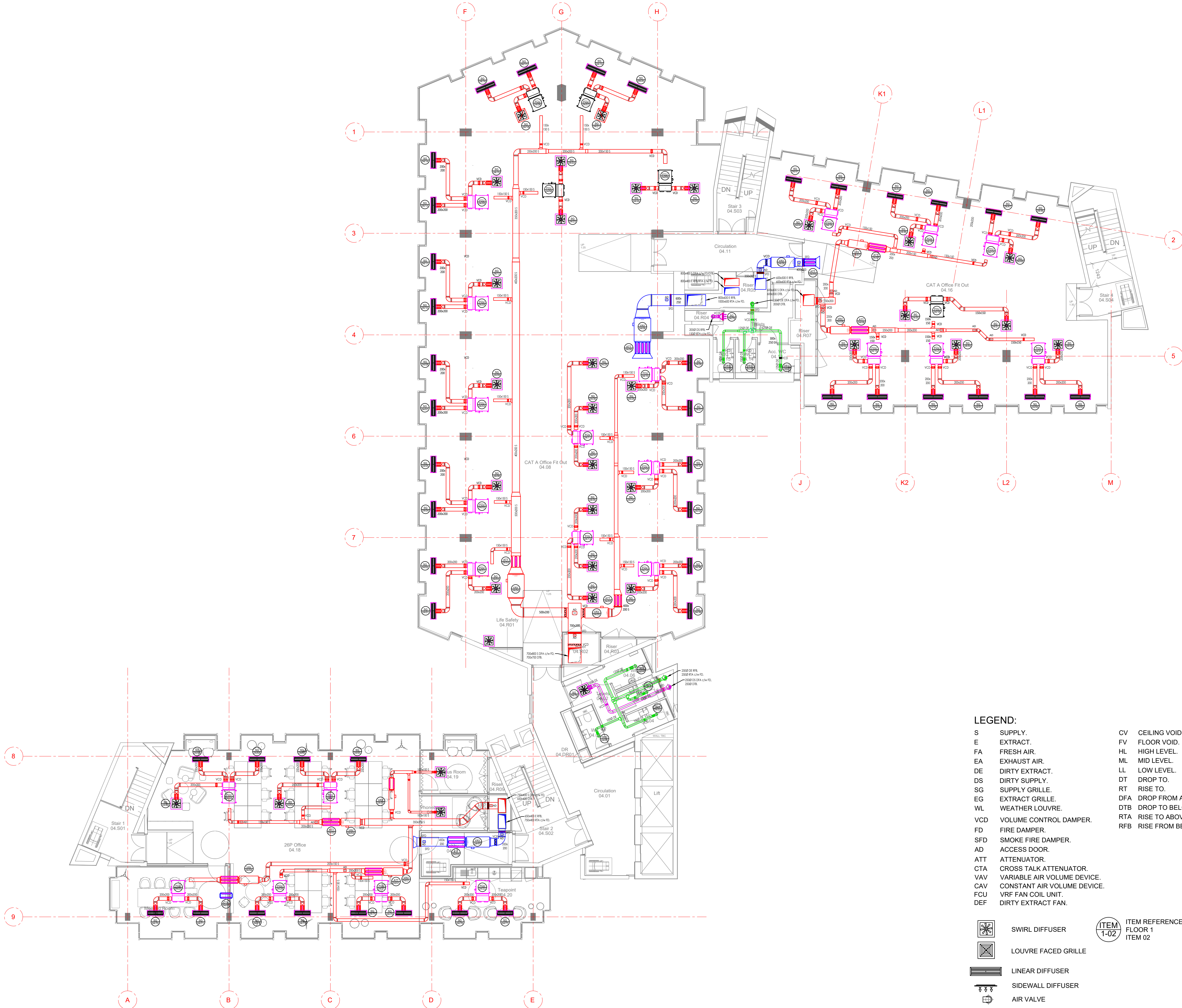
VENTILATION LAYOUT
THIRD FLOOR

Drawing No:

C3781-HEC-ZZ-03-DR-M-5700

Rev:

P07



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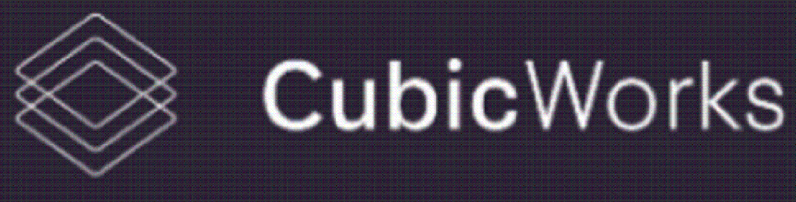
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P04	PC	16.01.23	AMENDMENTS AS PER COMMENTS RECEIVED
P03	PC	08.12.22	GRILLES RELOCATED AS PER COMMENTS RECEIVED
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P01	PC	27.06.22	PRELIMINARY ISSUE
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Date: JUN 2022 Scale: 1:100

Client:

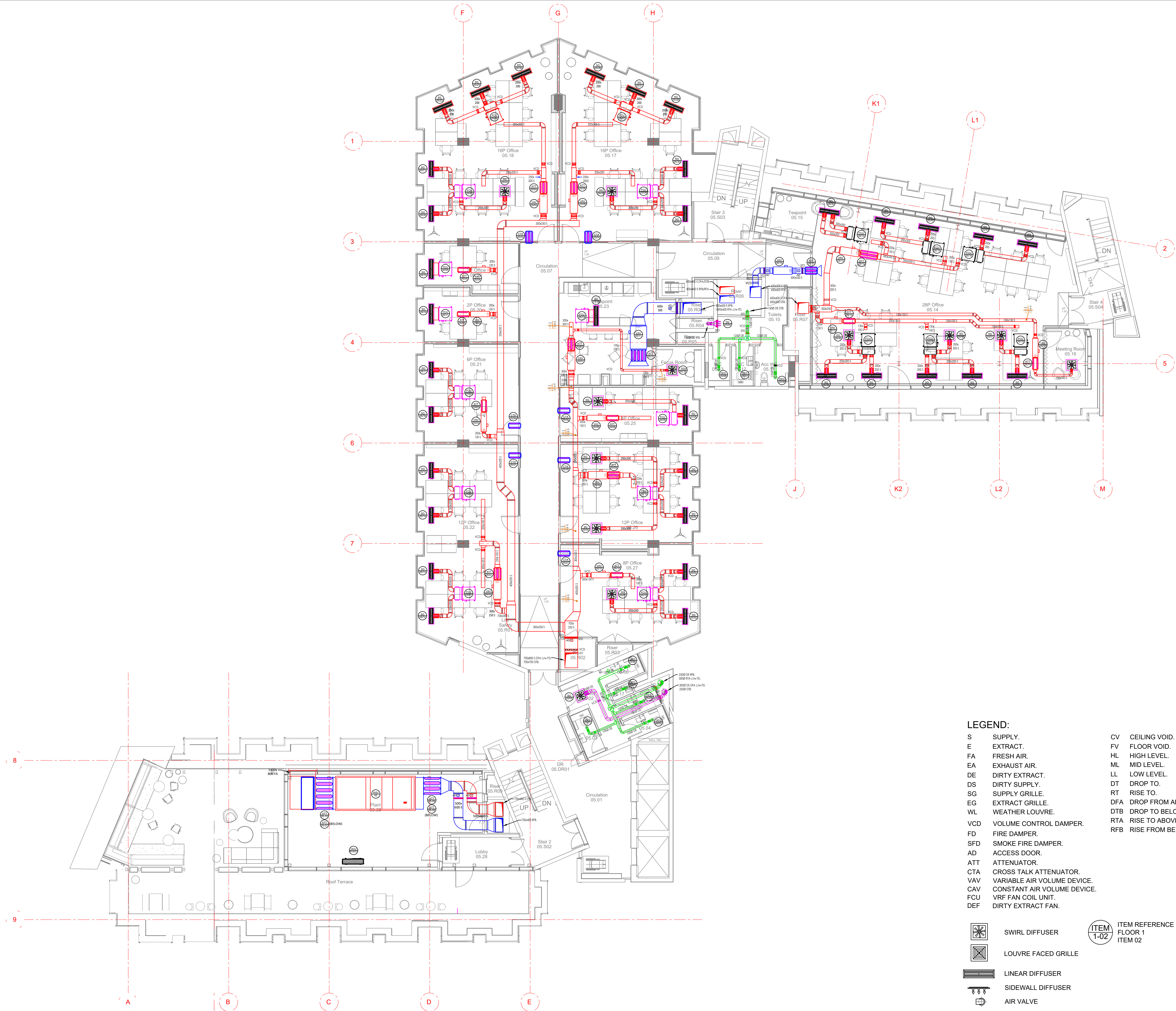
CUBIC WORKS

Project:
**PALL MALL
MANCHESTER**

Drawing Title:
**VENTILATION LAYOUT
FOURTH FLOOR**

Drawing No: **C3781-HEC-ZZ-04-DR-M-5700** Rev: **P07**

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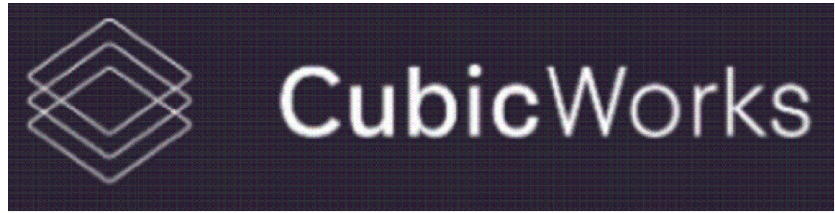
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P07	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P06	PC	28.02.23	RISER DUCTWORK AMENDED
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P01	PC	27.06.22	PRELIMINARY ISSUE
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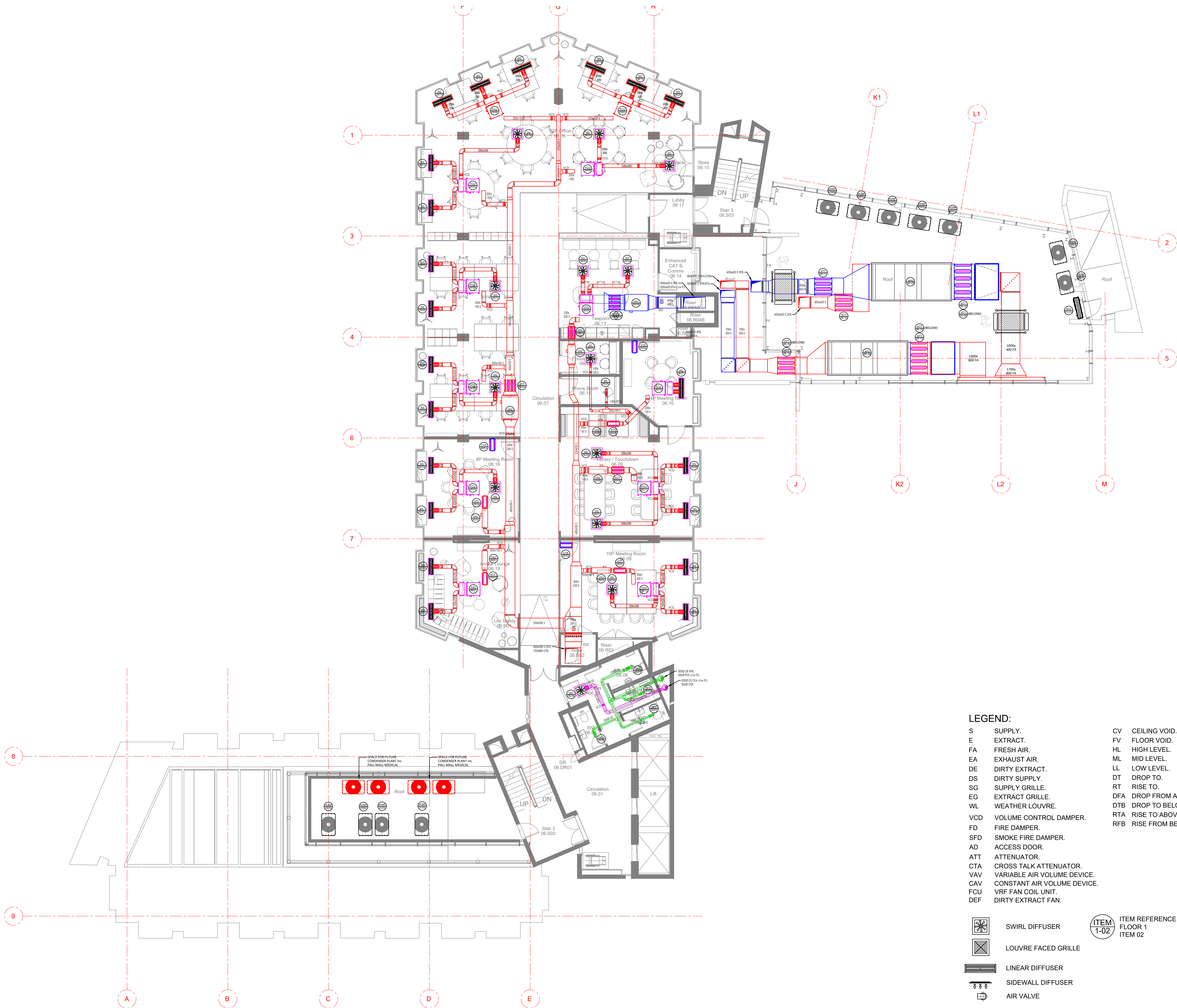
Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		
Client:			

CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing Title:
VENTILATION LAYOUT
FIFTH FLOOR

Drawing No:	C3781-HEC-ZZ-05-DR-M-5700	Rev:	P08
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LEGEND:

- | | | | |
|-----|-----------------------------|-----|------------------|
| S | SUPPLY. | CV | CEILING VOID. |
| E | EXTRACT. | FV | FLOOR VOID. |
| FA | FRESH AIR. | HL | HIGH LEVEL. |
| EA | EXHAUST AIR. | ML | MID LEVEL. |
| DE | DIRTY EXTRACT. | LL | LOW LEVEL. |
| DS | DIRTY SUPPLY. | DT | DROP TO. |
| SG | SUPPLY GRILLE. | RT | RISE TO. |
| EG | EXTRACT GRILLE. | DFA | DROP FROM ABOVE. |
| WL | WEATHER LOUVRE. | DTB | DROP TO BELOW. |
| VCD | VOLUME CONTROL DAMPER. | RTA | RISE TO ABOVE. |
| FD | FIRE DAMPER. | RFB | RISE FROM BELOW. |
| SFD | SMOKE FIRE DAMPER. | | |
| AD | ACCESS DOOR. | | |
| ATT | ATTENUATOR. | | |
| CTA | CROSS TALK ATTENUATOR. | | |
| VAV | VARIABLE AIR VOLUME DEVICE. | | |
| CAV | CONSTANT AIR VOLUME DEVICE. | | |
| FCU | VRF FAN COIL UNIT. | | |
| DEF | DIRTY EXTRACT FAN. | | |

- | | |
|--|---------------------|
| | SWIRL DIFFUSER |
| | LOUVRE FACED GRILLE |
| | LINEAR DIFFUSER |
| | SIDEWALL DIFFUSER |
| | AIR VALVE |

ITEM
1-02

ITEM REFERENCE
FLOOR 1
ITEM 02



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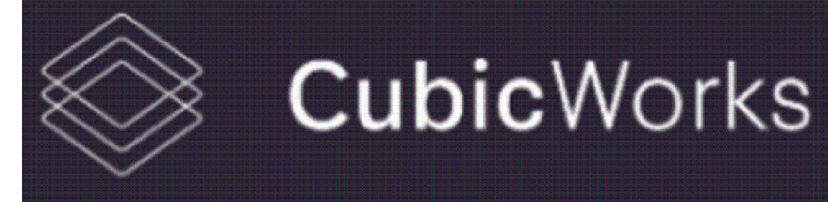
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

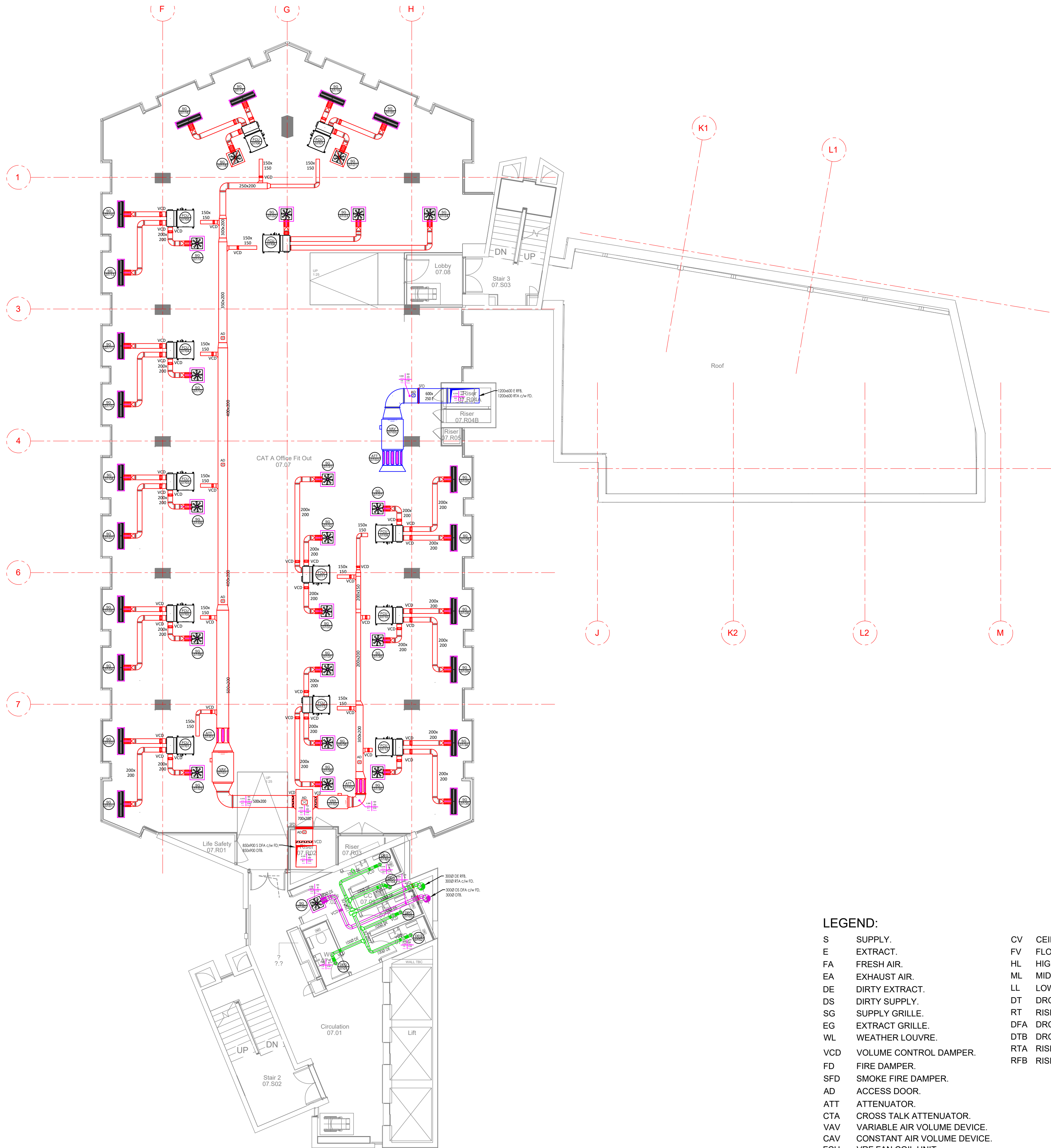
VENTILATION LAYOUT
SIXTH FLOOR

Drawing No:

C3781-HEC-ZZ-06-DR-M-5700

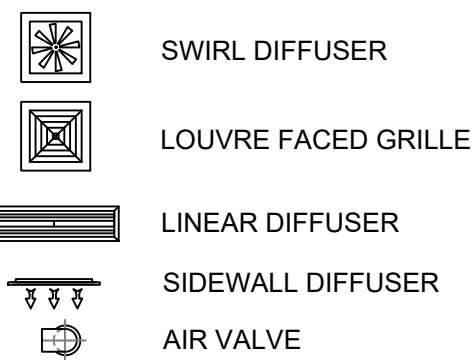
Rev:

P07



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ITEM
1-02

ITEM REFERENCE
FLOOR 1
ITEM 02



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P07	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P06	PC	28.02.23	RISER DUCTWORK AMENDED
P05	PC	28.02.23	FIRE DAMPERS ADDED, TOILET VENT AMENDED
P04	PC	16.01.23	AMENDMENTS AS PER COMMENTS RECEIVED
P03	PC	08.12.22	GRILLES RELOCATED AS PER COMMENTS RECEIVED
P02	PC	14.10.22	GRILLE REFS ADDED, TOWER BLOCK WC VENT AMENDED
P01	PC	27.06.22	PRELIMINARY ISSUE
REVCHK	DATE	DESCRIPTION	

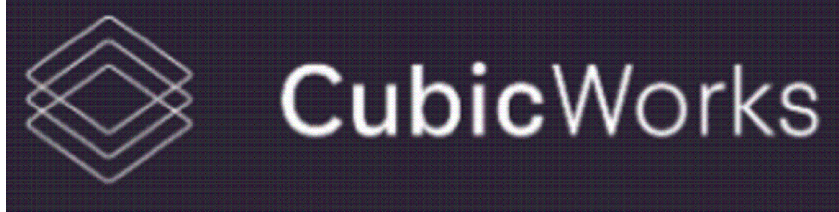
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Drawing

Status:

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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

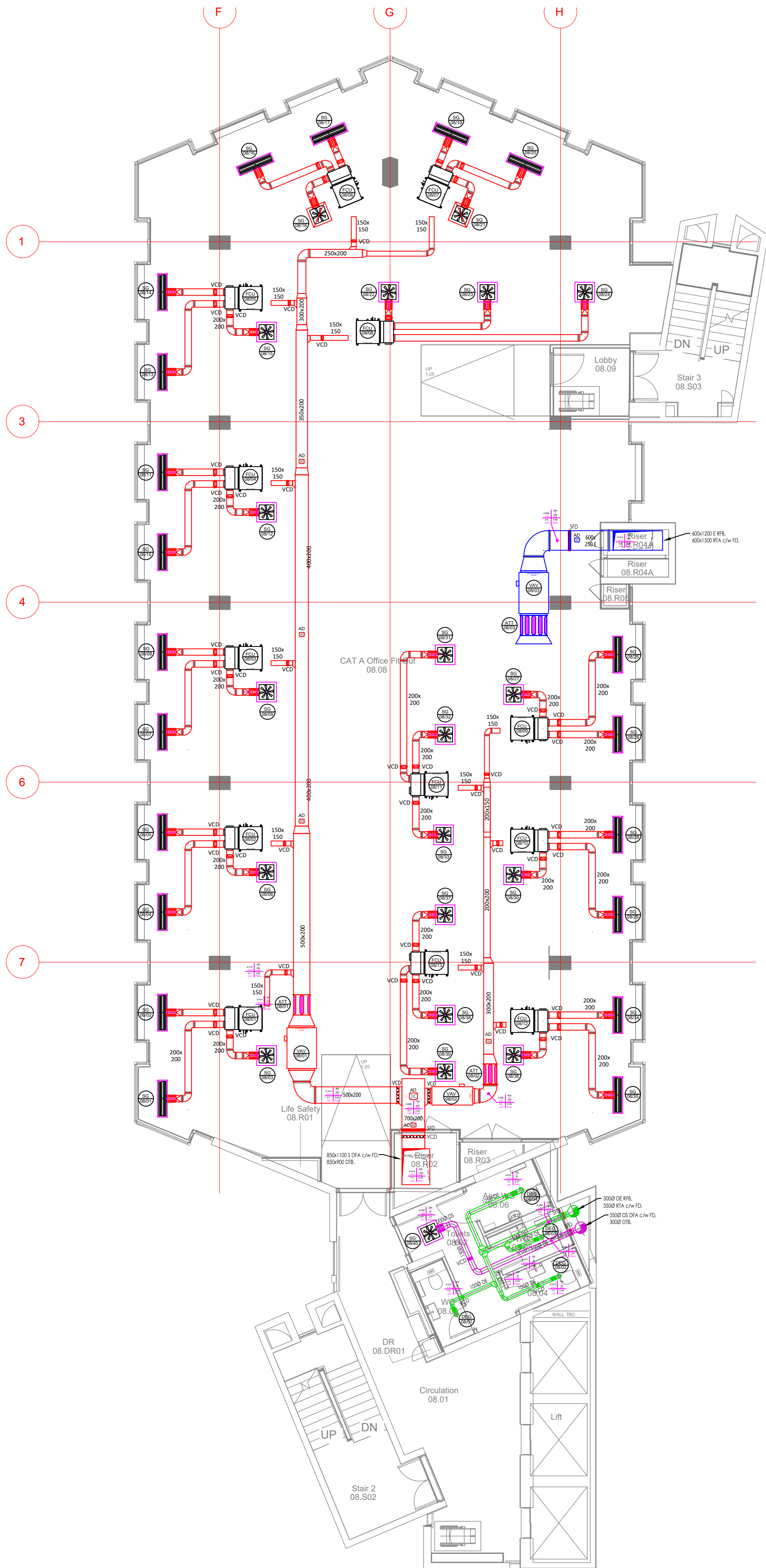
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SEVENTH FLOOR

Drawing No:

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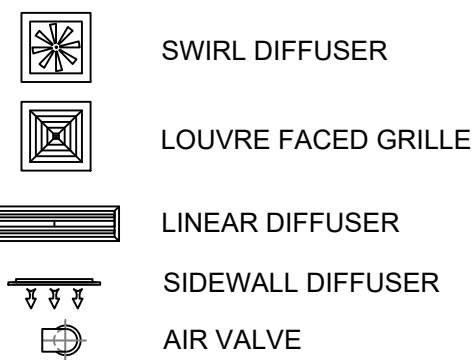
Rev:

P07



LEGEND:

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|-----|-----------------------------|-----|------------------|
| S | SUPPLY. | CV | CEILING VOID. |
| E | EXTRACT. | FV | FLOOR VOID. |
| FA | FRESH AIR. | HL | HIGH LEVEL. |
| EA | EXHAUST AIR. | ML | MID LEVEL. |
| DE | DIRTY EXTRACT. | LL | LOW LEVEL. |
| DS | DIRTY SUPPLY. | DT | DROP TO. |
| SG | SUPPLY GRILLE. | RT | RISE TO. |
| EG | EXTRACT GRILLE. | DFA | DROP FROM ABOVE. |
| WL | WEATHER LOUVRE. | DTB | DROP TO BELOW. |
| VCD | VOLUME CONTROL DAMPER. | RTA | RISE TO ABOVE. |
| FD | FIRE DAMPER. | RFB | RISE FROM BELOW. |
| SFD | SMOKE FIRE DAMPER. | | |
| AD | ACCESS DOOR. | | |
| ATT | ATTENUATOR. | | |
| CTA | CROSS TALK ATTENUATOR. | | |
| VAV | VARIABLE AIR VOLUME DEVICE. | | |
| CAV | CONSTANT AIR VOLUME DEVICE. | | |
| FCU | VRF FAN COIL UNIT. | | |
| DEF | DIRTY EXTRACT FAN. | | |



ITEM
1-02

ITEM REFERENCE
FLOOR 1
ITEM 02

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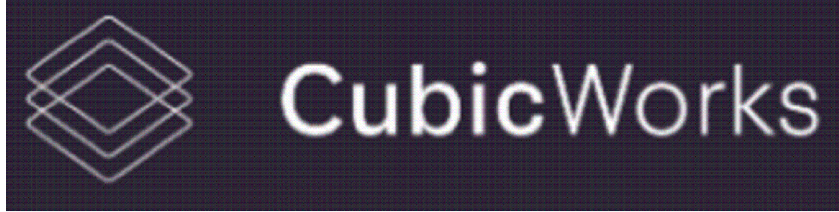
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

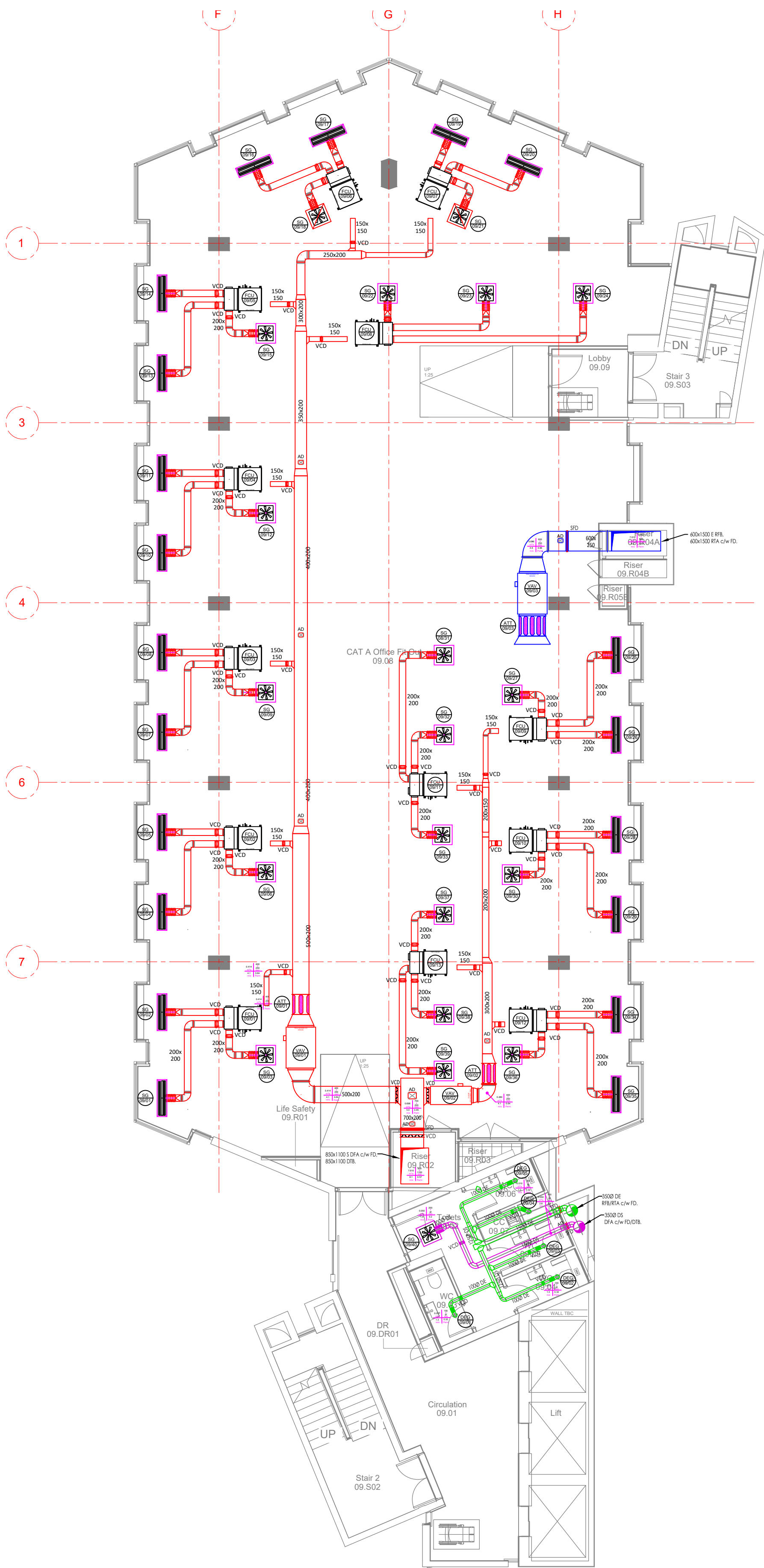
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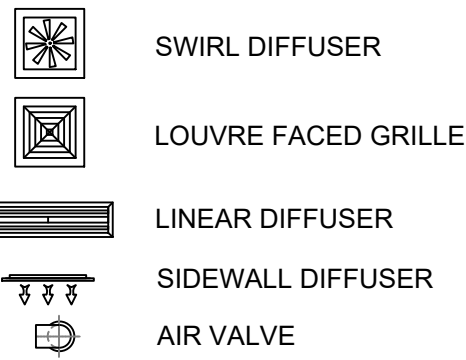
Rev:

P07



LEGEND:

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|-----|-----------------------------|-----|------------------|
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ITEM
1-02

ITEM REFERENCE
FLOOR 1
ITEM 02

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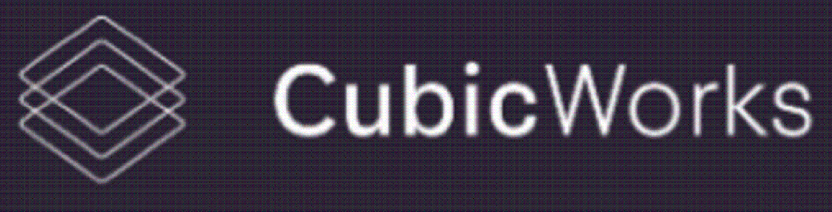
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Drawing
Status:

STAGE 4



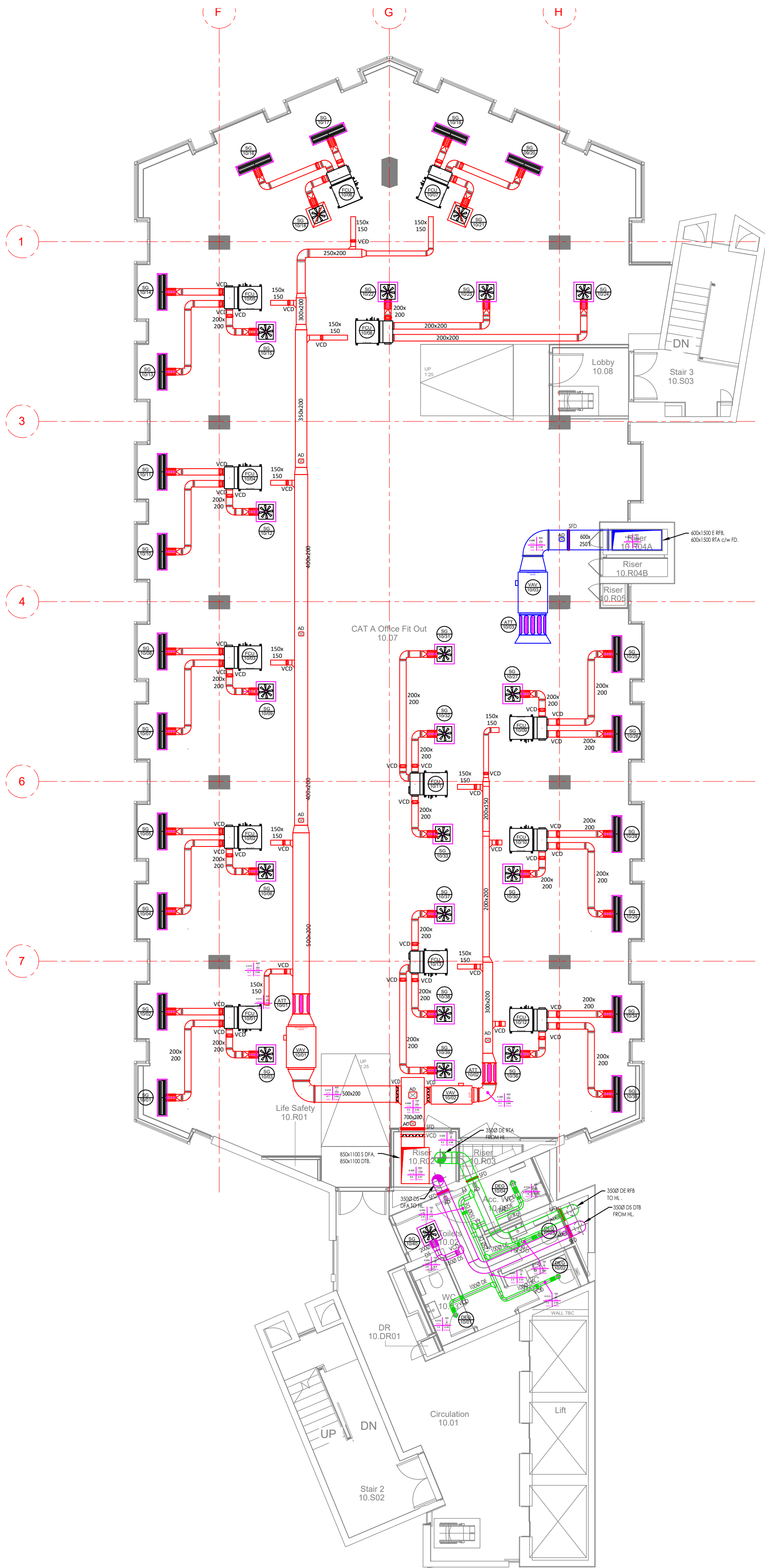
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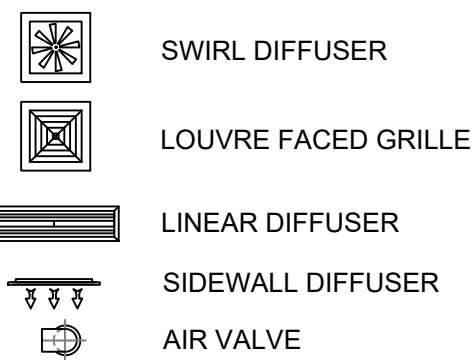
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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		
Client: CUBIC WORKS			
Project: PALL MALL MANCHESTER			
Drawing Title: VENTILATION LAYOUT NINTH FLOOR			
Drawing No: C3781-HEC-ZZ-09-DR-M-5700			Rev: P07



LEGEND:

- | | | | |
|-----|-----------------------------|-----|------------------|
| S | SUPPLY. | CV | CEILING VOID. |
| E | EXTRACT. | FV | FLOOR VOID. |
| FA | FRESH AIR. | HL | HIGH LEVEL. |
| EA | EXHAUST AIR. | ML | MID LEVEL. |
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| CTA | CROSS TALK ATTENUATOR. | | |
| VAV | VARIABLE AIR VOLUME DEVICE. | | |
| CAV | CONSTANT AIR VOLUME DEVICE. | | |
| FCU | VRF FAN COIL UNIT. | | |
| DEF | DIRTY EXTRACT FAN. | | |



ITEM
1-02
ITEM REFERENCE
FLOOR 1
ITEM 02



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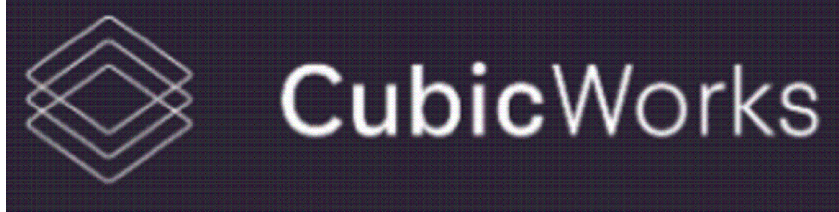
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FF&E X-Ref Drawings:

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Drawn: N KIBLER	Chkd: P CHAMBERS	App: M JORDAN	A1
Date: JUN 2022	Scale: 1:100		

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:

VENTILATION LAYOUT
TENTH FLOOR

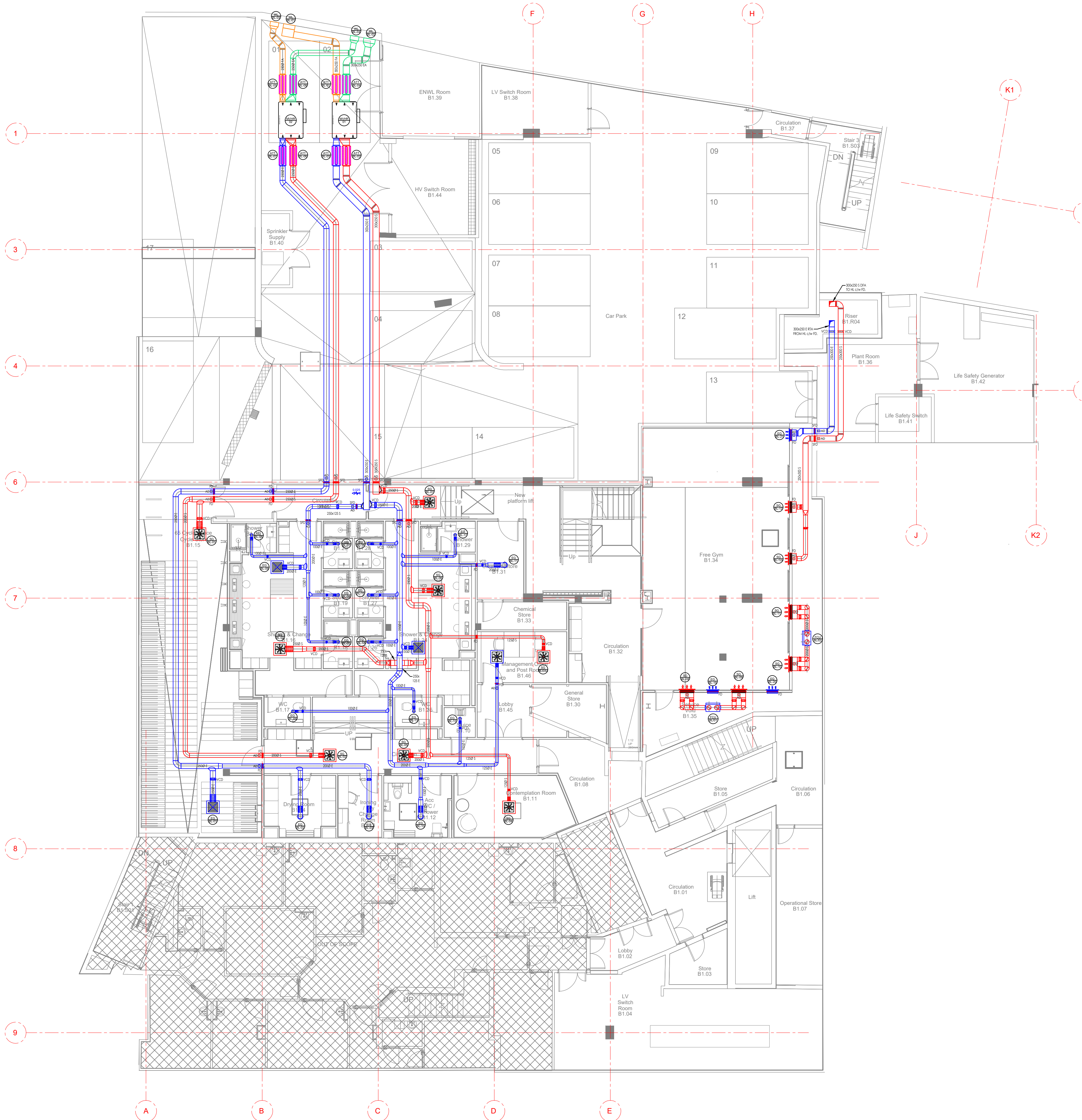
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C3781-HEC-ZZ-10-DR-M-5700

Rev:

P07

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LEGEND:

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|-----|-----------------------------|-----|------------------|
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| E | EXTRACT. | FV | FLOOR VOID. |
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| DEF | DIRTY EXTRACT FAN. | | |

- | | |
|--|---------------------|
| | SWIRL DIFFUSER |
| | LOUVRE FACED GRILLE |
| | LINEAR DIFFUSER |
| | SIDEWALL DIFFUSER |
| | AIR VALVE |

ITEM
1-02

ITEM REFERENCE
FLOOR 1
ITEM 02

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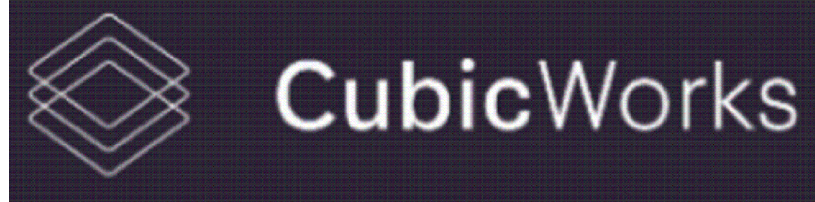
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Status:

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Client:

CUBIC WORKS

Project:

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MANCHESTER

Drawing Title:

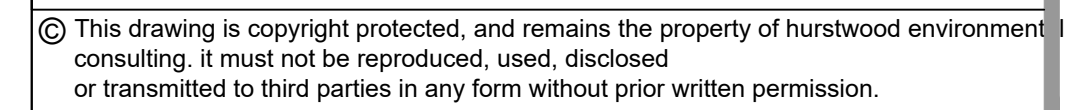
VENTILATION LAYOUT
BASEMENT LEVEL

Drawing No:

C3781-HEC-ZZ-BL-DR-M-5700

Rev:

P06



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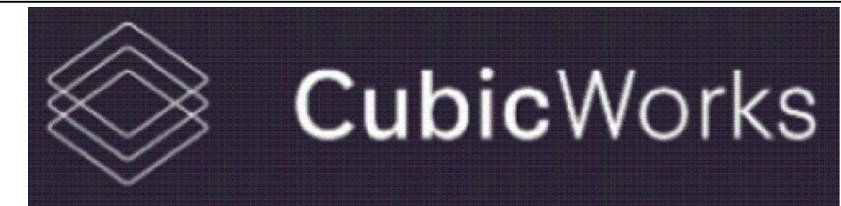
1. ALL DIMENSIONS WHERE SHOWN ARE IN MILLIMETERS/METERS. THIS DRAWING SHALL NOT BE SCALED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL DIMENSIONS THROUGH SITE MEASUREMENTS PRIOR TO COMMENCEMENT OF THE WORKS.
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6. FIRE DAMPERS SHALL BE PROVIDED WHERE GENERAL SUPPLY AND EXTRACT SYSTEMS PASS THROUGH FIRE COMPLEMENTATION WALLS AND FLOORS *OR* A LOCAL ACCESS DOOR FOR INSPECTION/RESET.
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P07	PC	10.05.23	PRELIMINARY ISSUE - UPDATED INLINE WITH ARCHITECTS LATEST CHANGES
P06	PC	08.03.23	VAV BOXES ADDED TO TOWER BLOCK
P05	PC	27.02.23	FIRE DAMPERS ADDED
P04	PC	16.01.23	AMENDMENTS AS PER COMMENTS RECEIVED
P03	PC	08.12.22	GRILLES RELOCATED AS PER COMMENTS RECEIVED
P02	PC	14.10.22	GRILLE REFS ADDED
P01	PC	17.08.22	PRELIMINARY ISSUE
REV	CHK	DATE	DESCRIPTION

FF&E X-Ref Drawings:

Drawing
Status:

STAGE 4



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Drawn: N K

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App: M JORDAN

Date: JUN 19 1991

JUN 2022	Scale: 1:100
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A1

Client:

CUBIC WORKS

Project:

PALL MALL
MANCHESTER

Drawing Title:
VENTILATION LAYOUT
GROUND FLOOR

Drawing No:

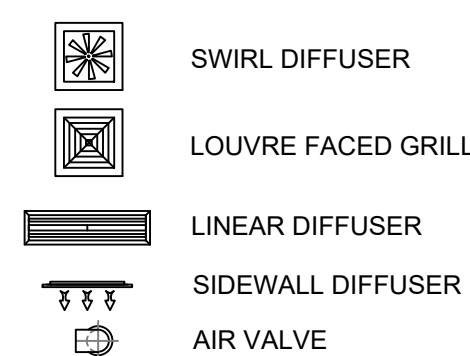
C3781-HEC-ZZ-GF-DR-M-5700

Rev:	P07
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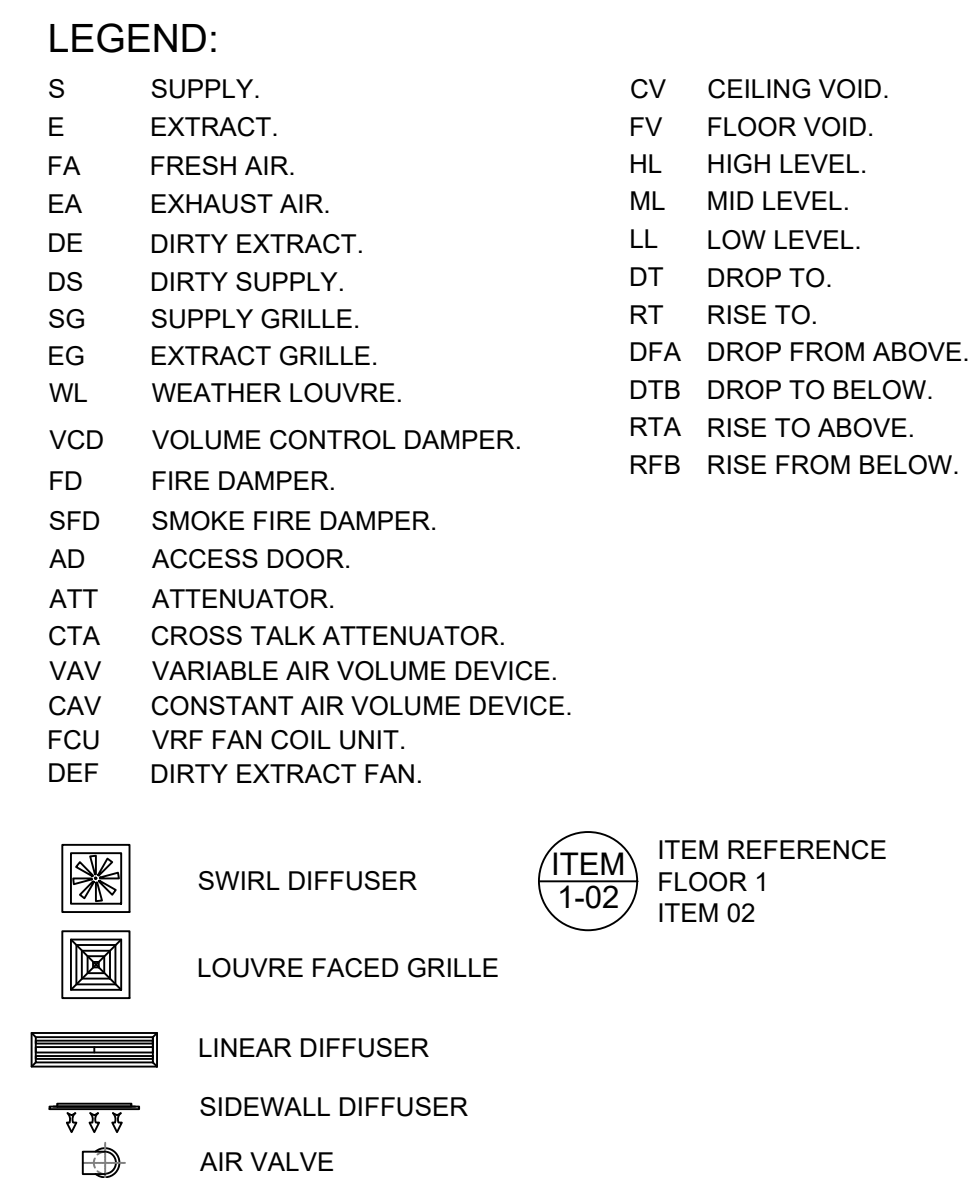
S SUPP

S	SUPPLY.
E	EXTRACT.
FA	FRESH AIR.
EA	EXHAUST AIR.
DE	DIRTY EXTRACT.
DS	DIRTY SUPPLY.
SG	SUPPLY GRILLE.
EG	EXTRACT GRILLE.
WL	WEATHER LOUVRE.
VCD	VOLUME CONTROL DAMPER.
FD	FIRE DAMPER.
SFD	SMOKE FIRE DAMPER.
AD	ACCESS DOOR.
ATT	ATTENUATOR.
CTA	CROSS TALK ATTENUATOR.
VAV	VARIABLE AIR VOLUME DEVICE.
CAV	CONSTANT AIR VOLUME DEVICE.
FCU	VRF FAN COIL UNIT.
DEF	DIRTY EXTRACT FAN.

CV CEILING VOID.
FV FLOOR VOID.
HL HIGH LEVEL.
ML MID LEVEL.
LL LOW LEVEL.
DT DROP TO.
RT RISE TO.
DFA DROP FROM ABOVE.
DTB DROP TO BELOW.
RTA RISE TO ABOVE.
RFB RISE FROM BELOW.



ITEM 1-02



NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND DOCUMENTS RELATING TO THE MECHANICAL AND ELECTRICAL INSTALLATIONS.
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Architectural X-Ref Drawings:

FF&E X-Ref Drawings:

 CubicWorks

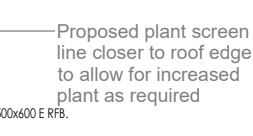
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Spa Road	Speke	Bloomsbury
Bolton	Liverpool	London
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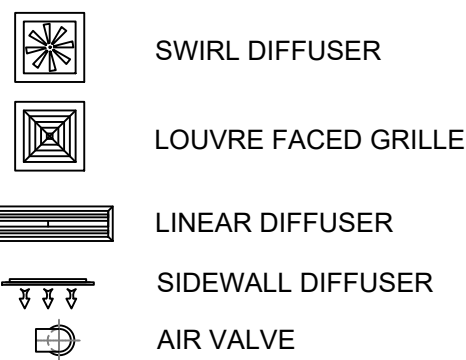
CUBIC WORKS

Project:
PALL MALL
MANCHESTER

Drawing No:	Rev:
C3781-HEC-ZZ-LG-DR-M-5700	P06



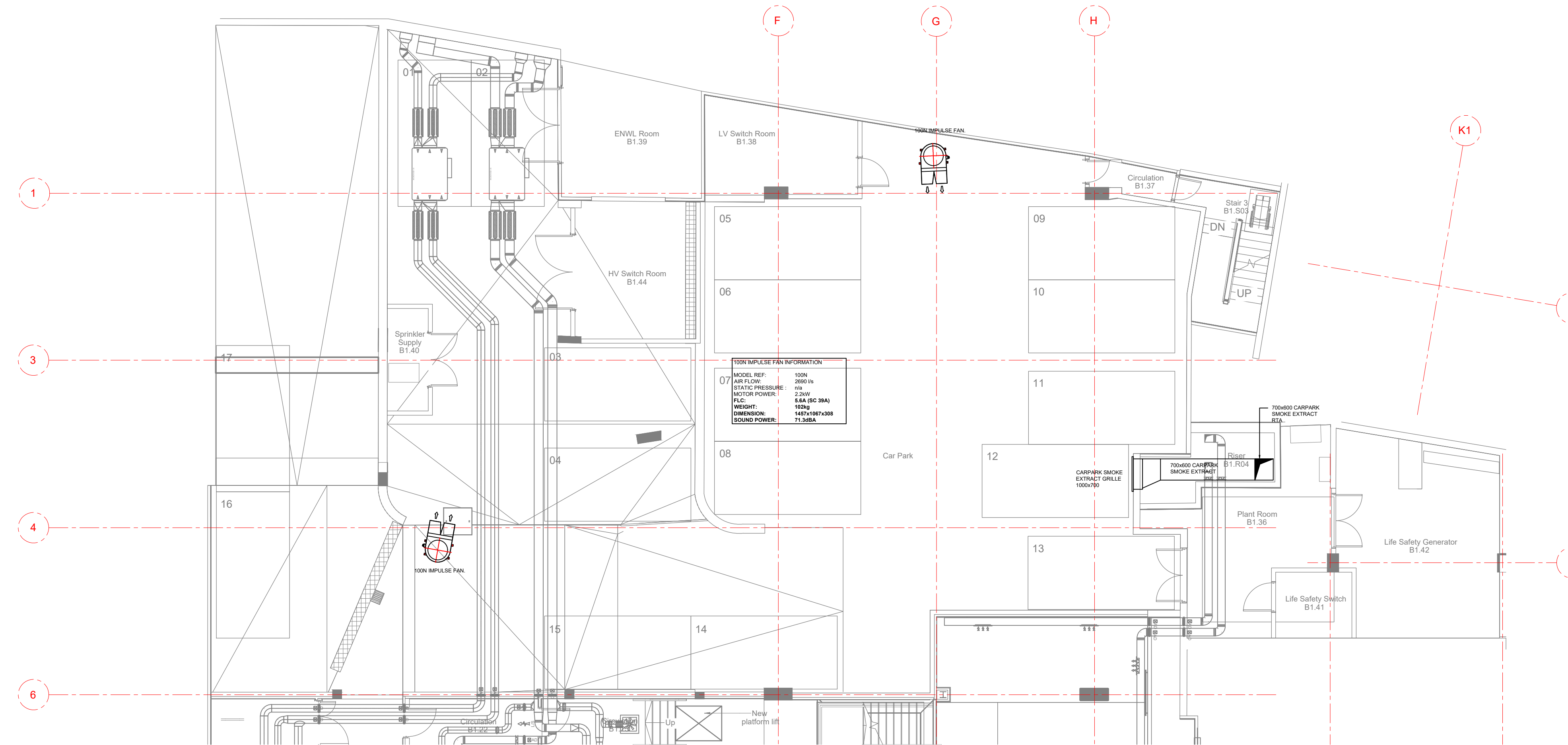
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1-02	FLOOR 1 ITEM 02



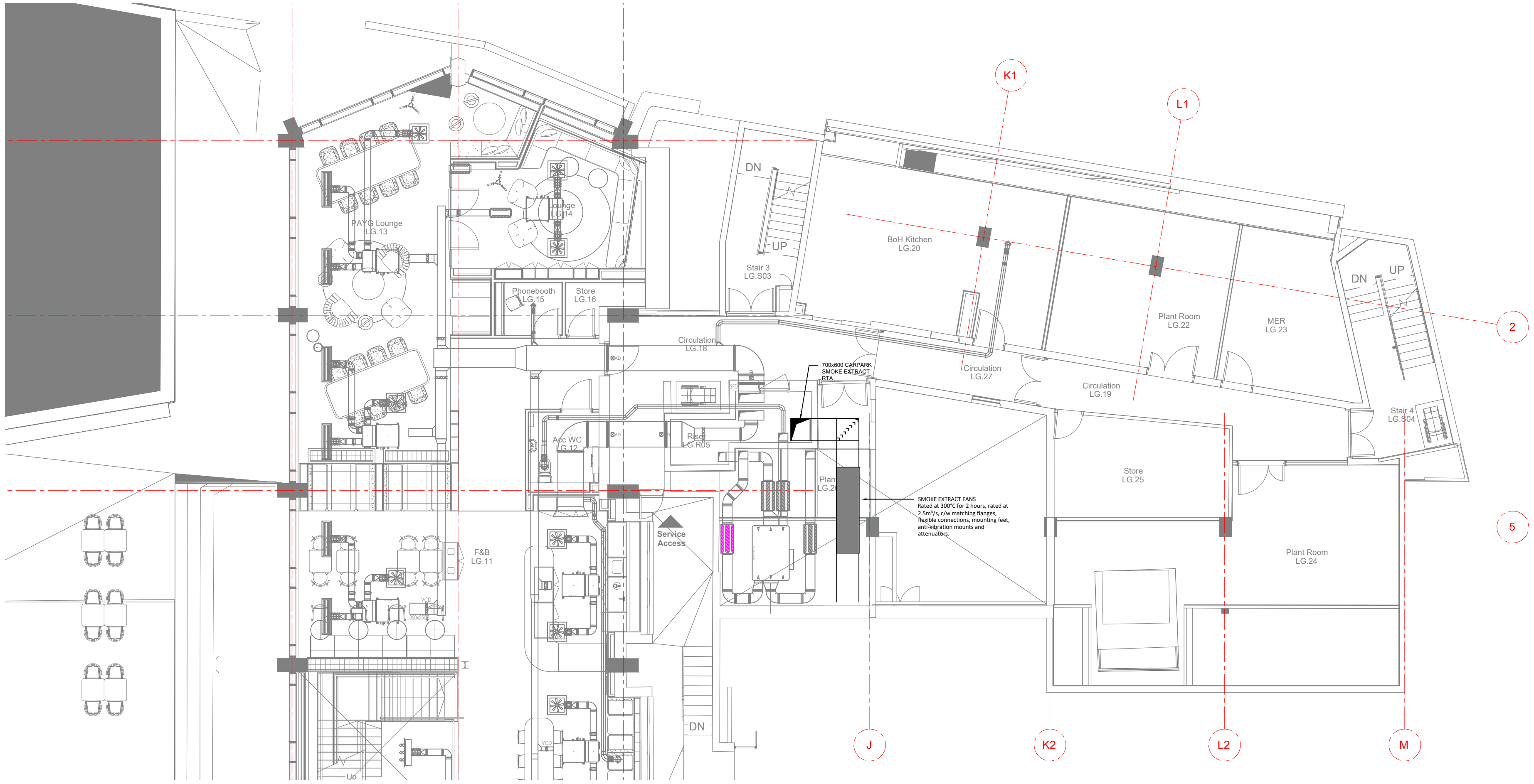
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Drawing No:	Rev:
C3781-HEC-ZZ-RL-DR-M-5700	P05

Last saved by: PCHAMBERS(2023-07-05) Last Plotted: 2023-07-05
Filename: C:\USERS\HURSTWOOD\HURSTWOOD\PROJECTS\3781 - PALL MALL\05.XREFS\59 SMOKE VENT.DWG



CARPARK SMOKE EXTRACT LAYOUT BASEMENT LEVEL



CARPARK SMOKE EXTRACT LAYOUT GROUND LEVEL

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 - ANTI-VIBRATION MOUNTING KITS REQUIRED FOR ALL FANS
 - CARPARK EXTRACT FAN & ALL IMPULSE FANS TO HAVE DEDICATED CONTROLS HARD WIRED AND LINKED TO FIRE ALARM SYSTEM. ALL FANS TO BE FIRE RATED.
 - 100N FAN IS THE CAR PARK INDUCTION JET FANS. THESE ARE A LOW PROFILE, HIGH VELOCITY INDUCTION FAN, WHICH CONTROLS AIR MOVEMENT IN UNDERGROUND SERVICE AREAS AND CAR PARKS, DIRECTING POLLUTED AIR TOWARDS THE EXTRACT POSITIONS. IT IS TESTED AND CERTIFIED TO EN 12101-3

P02	PC	28.06.23	UPDATED IMPULSE FAN LAYOUT
P01	PC	07.12.22	PRELIMINARY ISSUE
REVCHK	DATE	DESCRIPTION	

Architectural X-Ref Drawings:
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Drawing Status:

STAGE 4

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Drawn:	N KIBLER	Chkd:	P CHAMBERS	App:	M JORDAN	A1
Date:	JUN 2022	Scale:	1:100			

Client:

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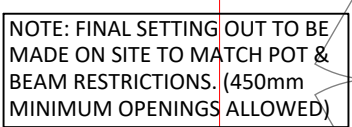
Project:

PALL MALL
MANCHESTER

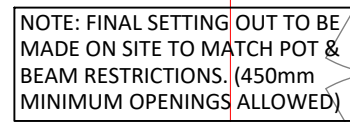
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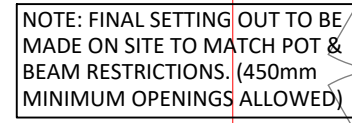
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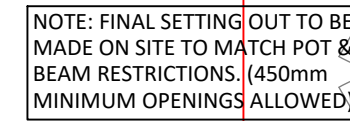
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KING STRE
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KING STREET
Scale 1:50



KING STREET
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KING STREET
Scale 1:50

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P01	PC	17.11.22	PRELIMINARY ISSUE
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REV	CHK	DATE	DESCRIPTION
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Date: JUN 2022	Scale: 1:100
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App:

A1

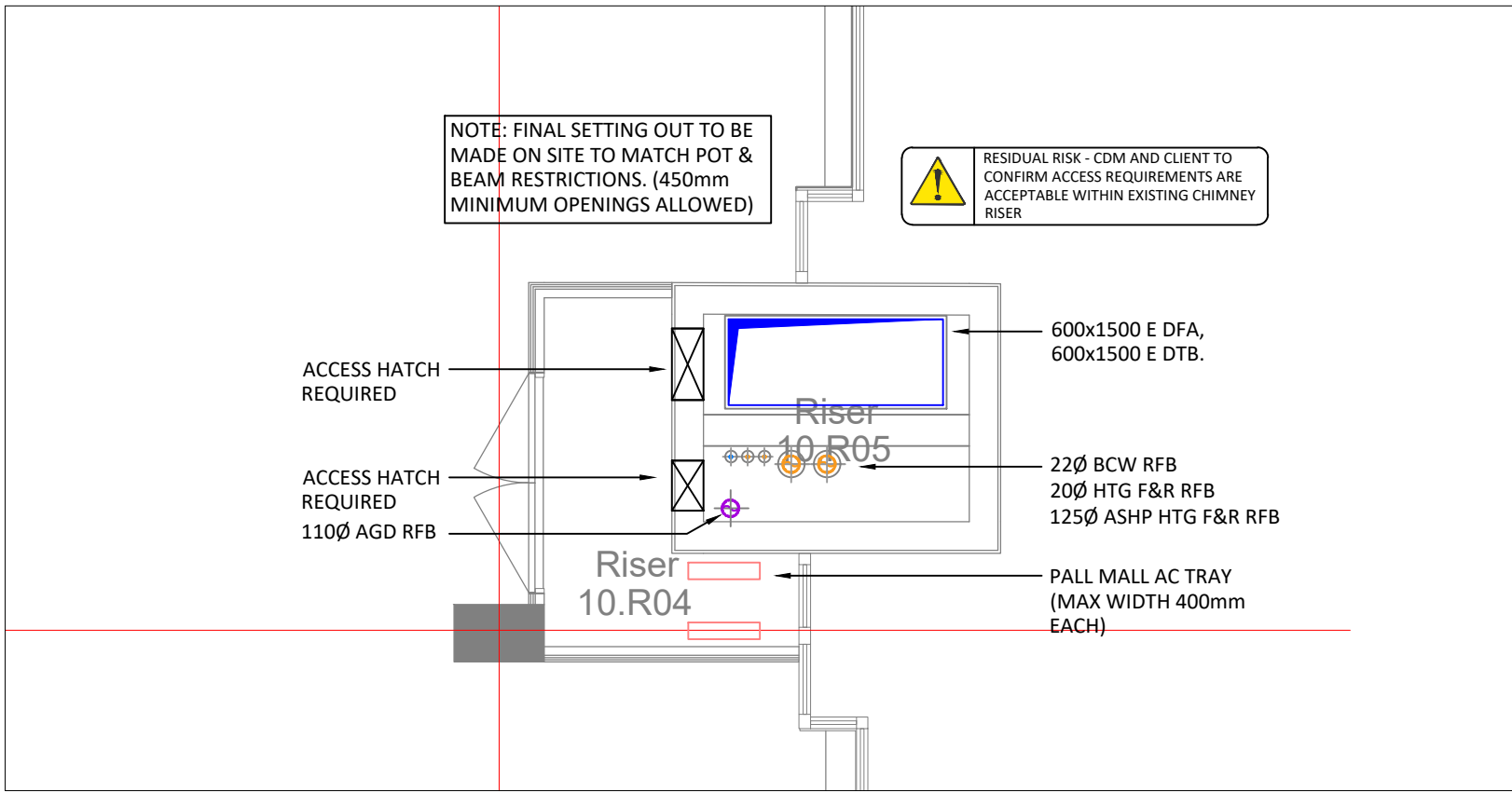
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PALL MALL
MANCHESTER

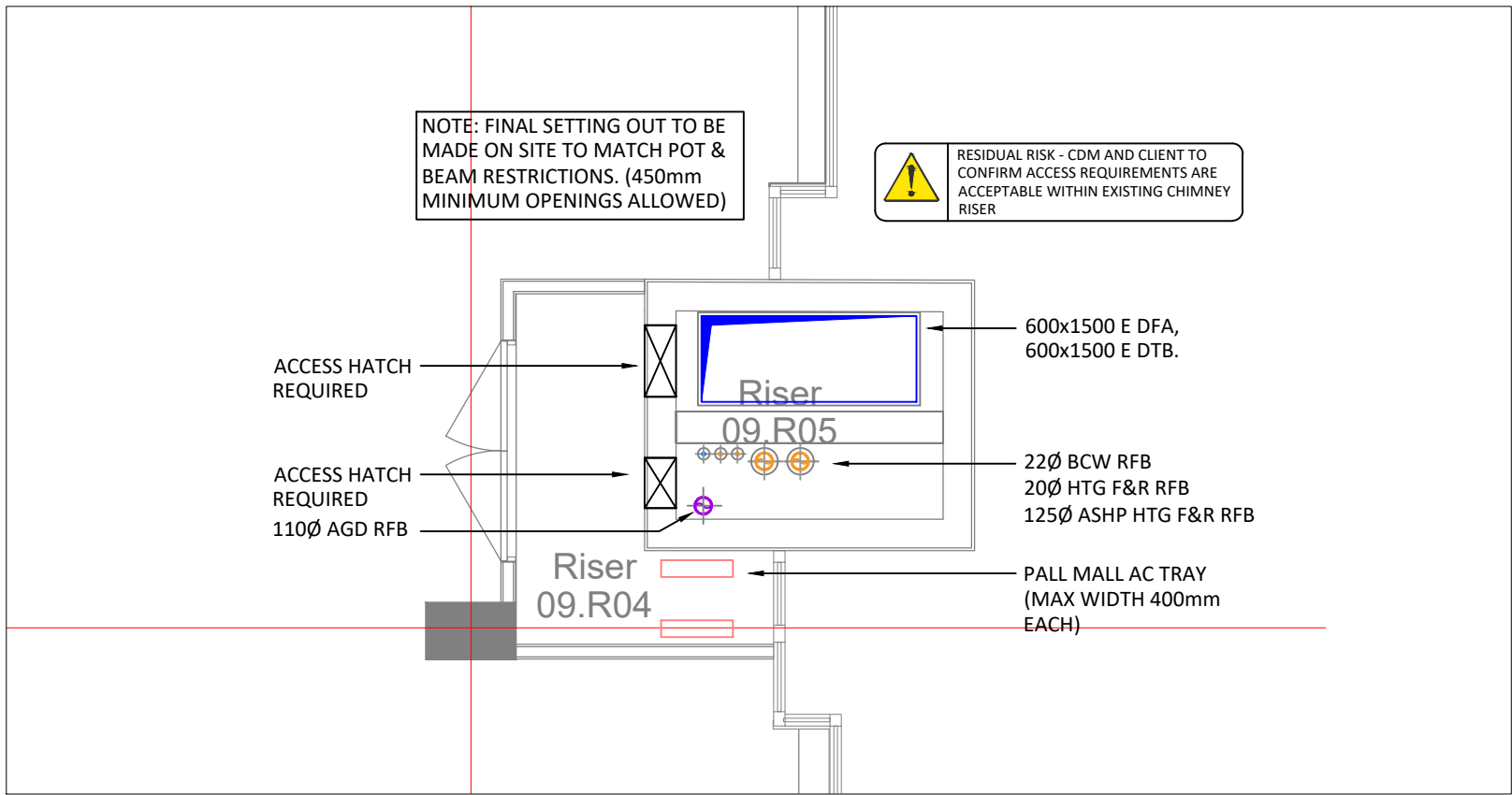
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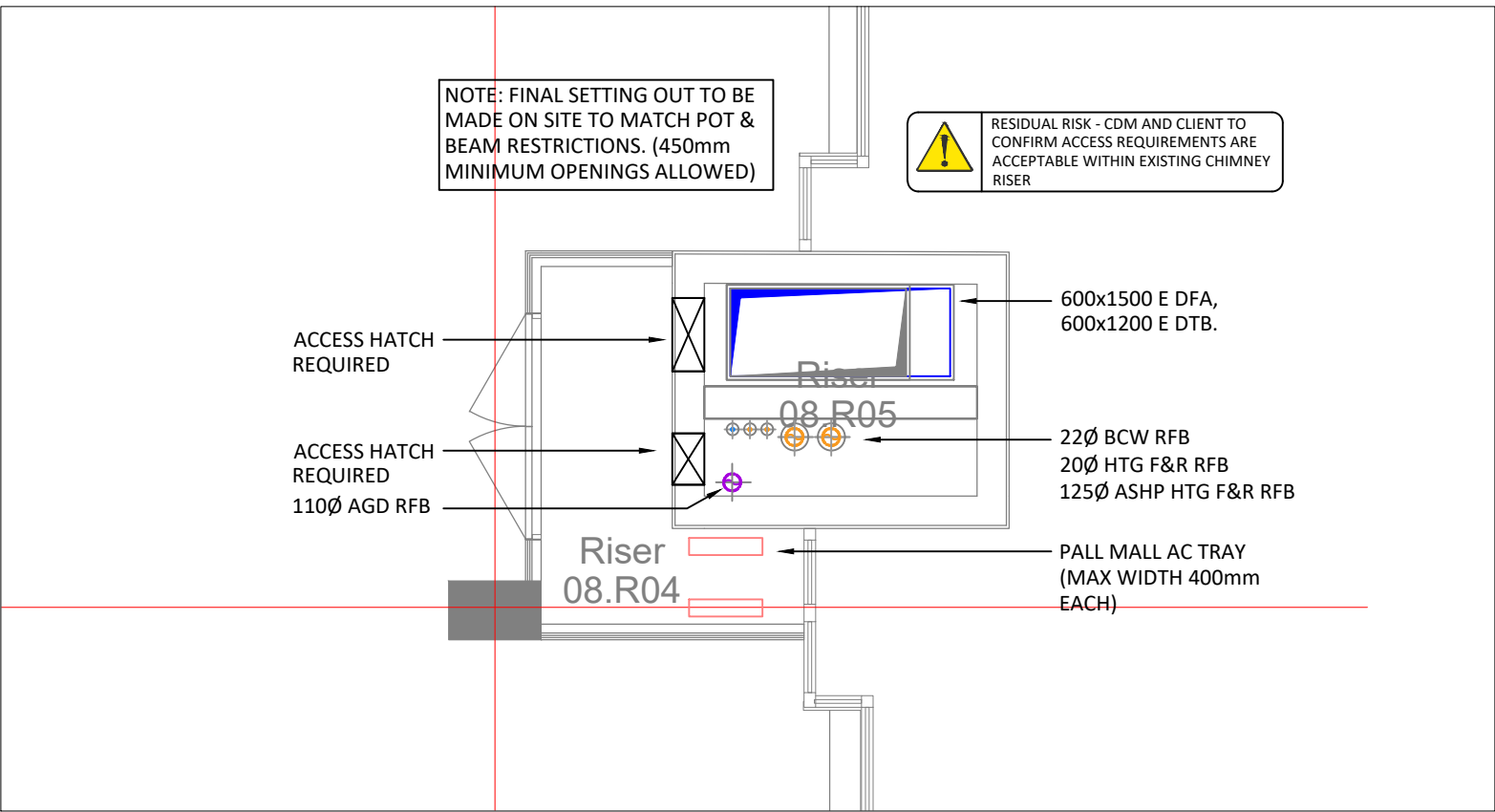
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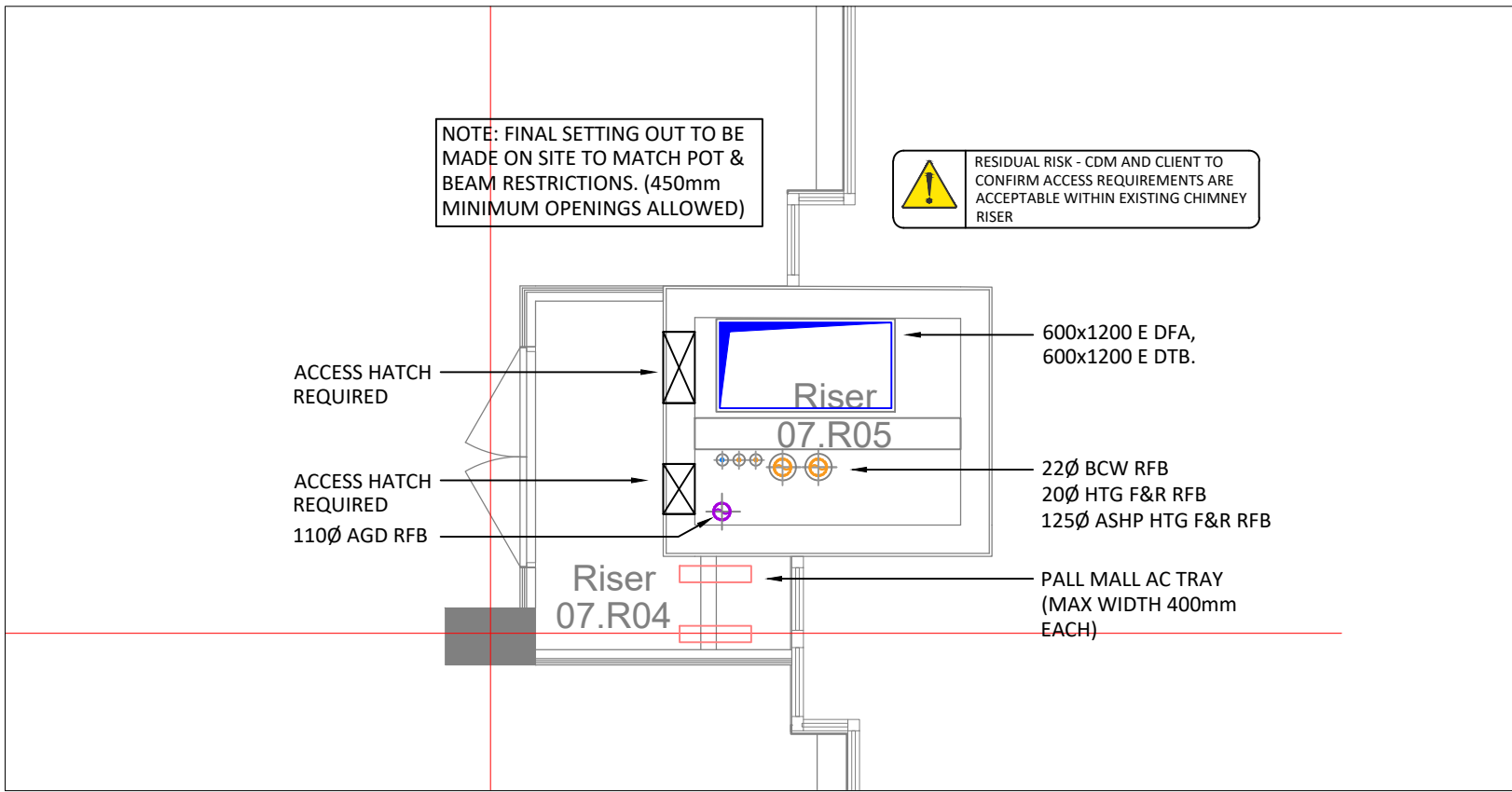
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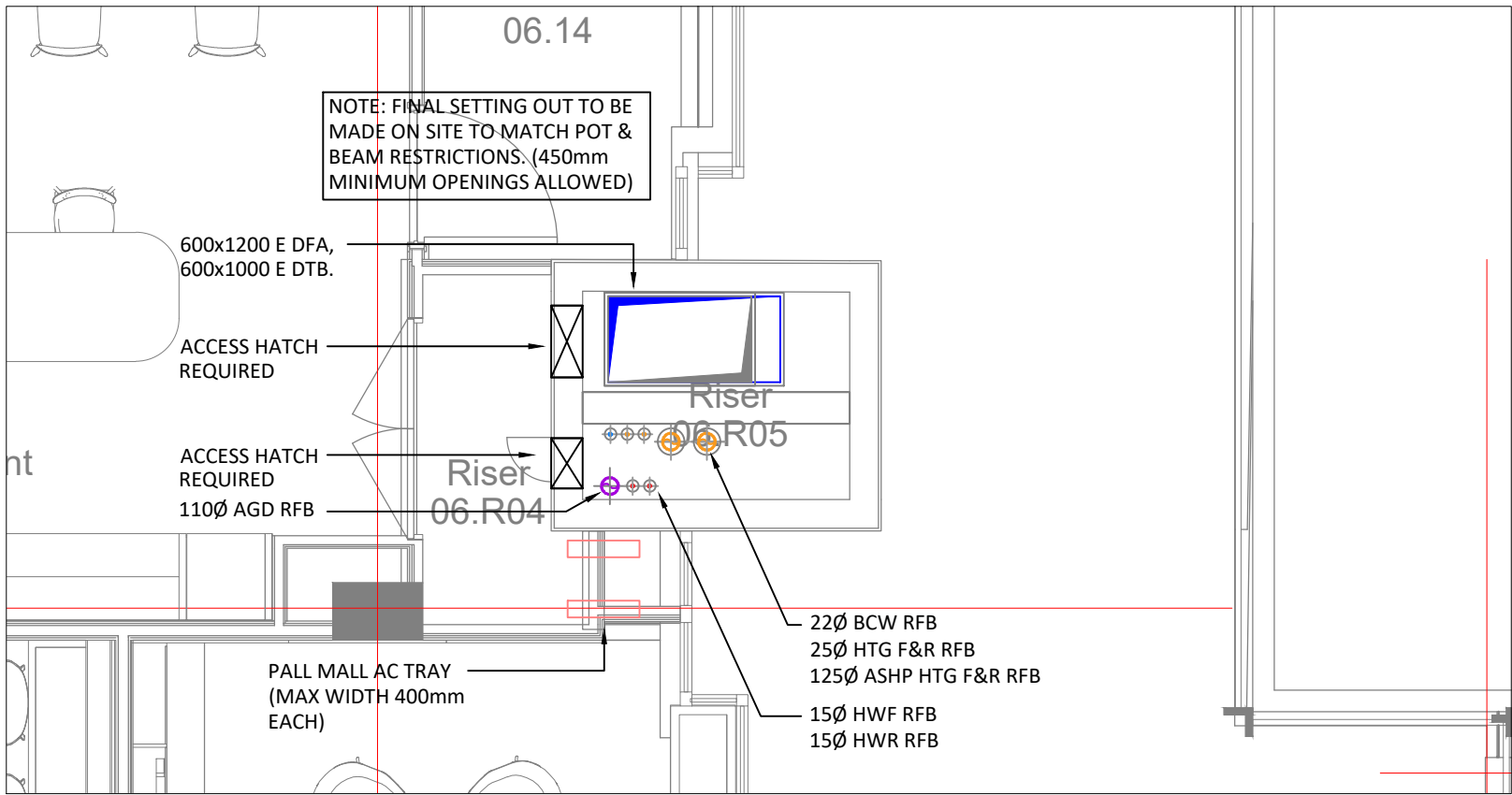
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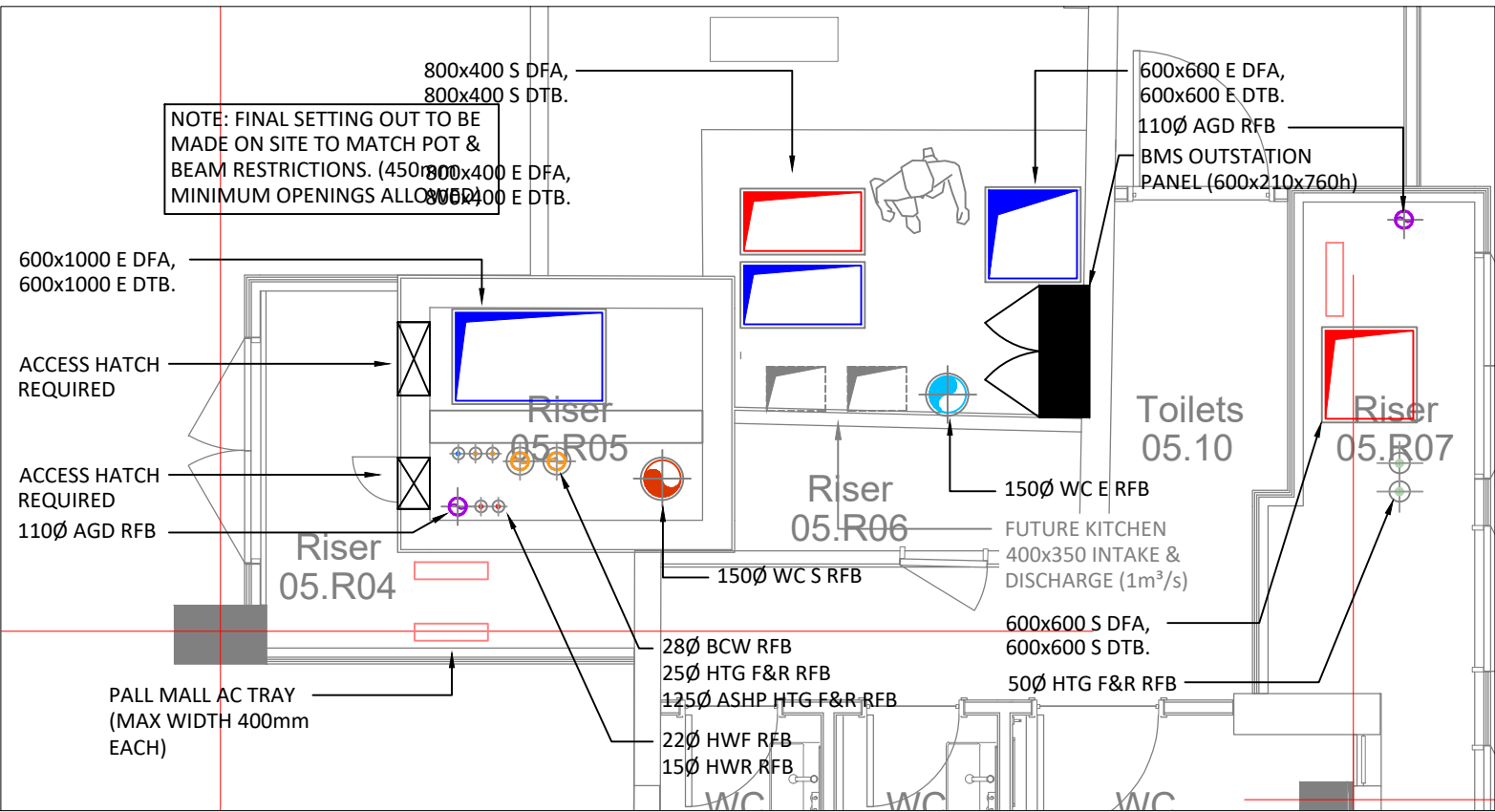
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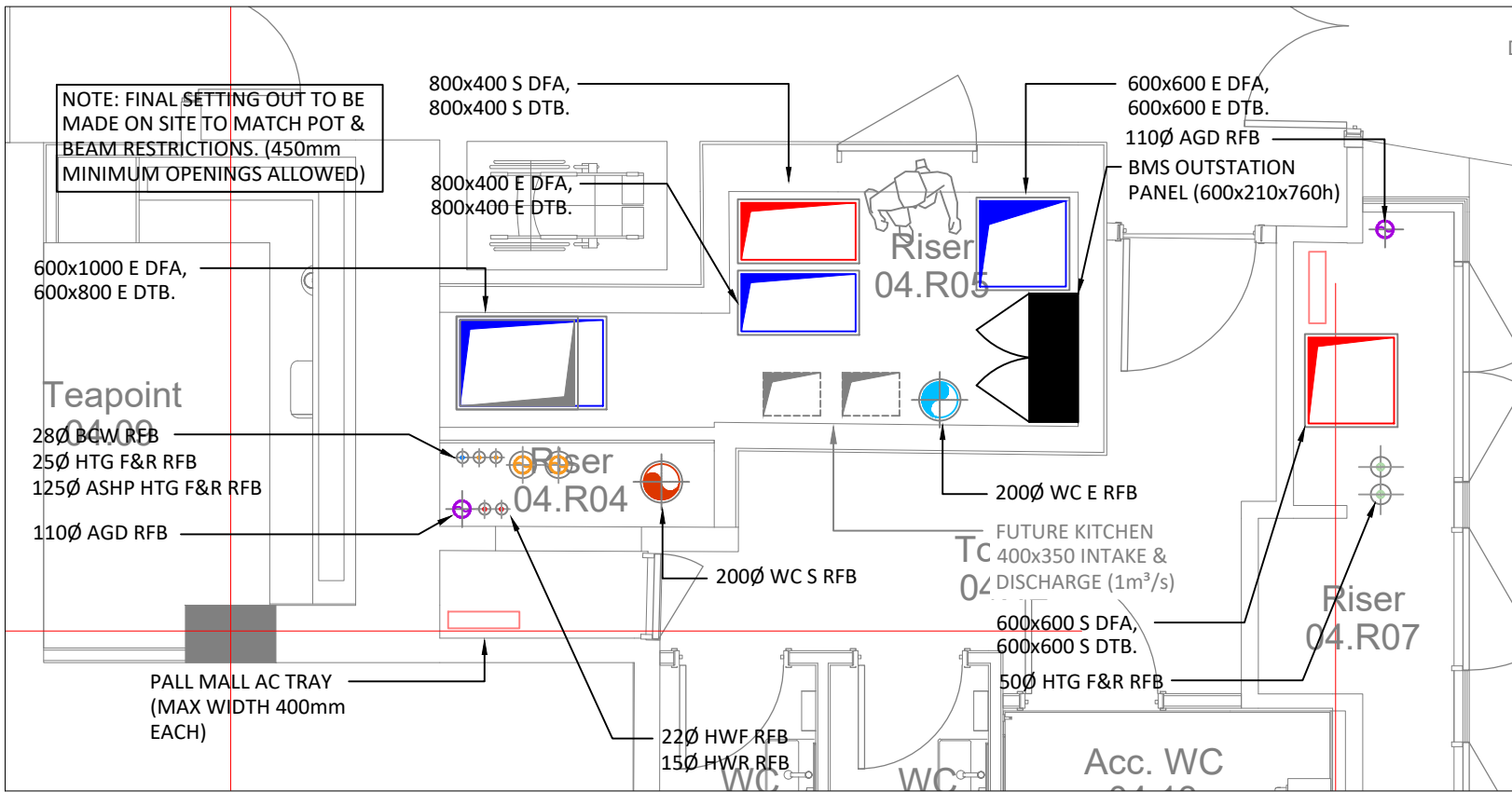
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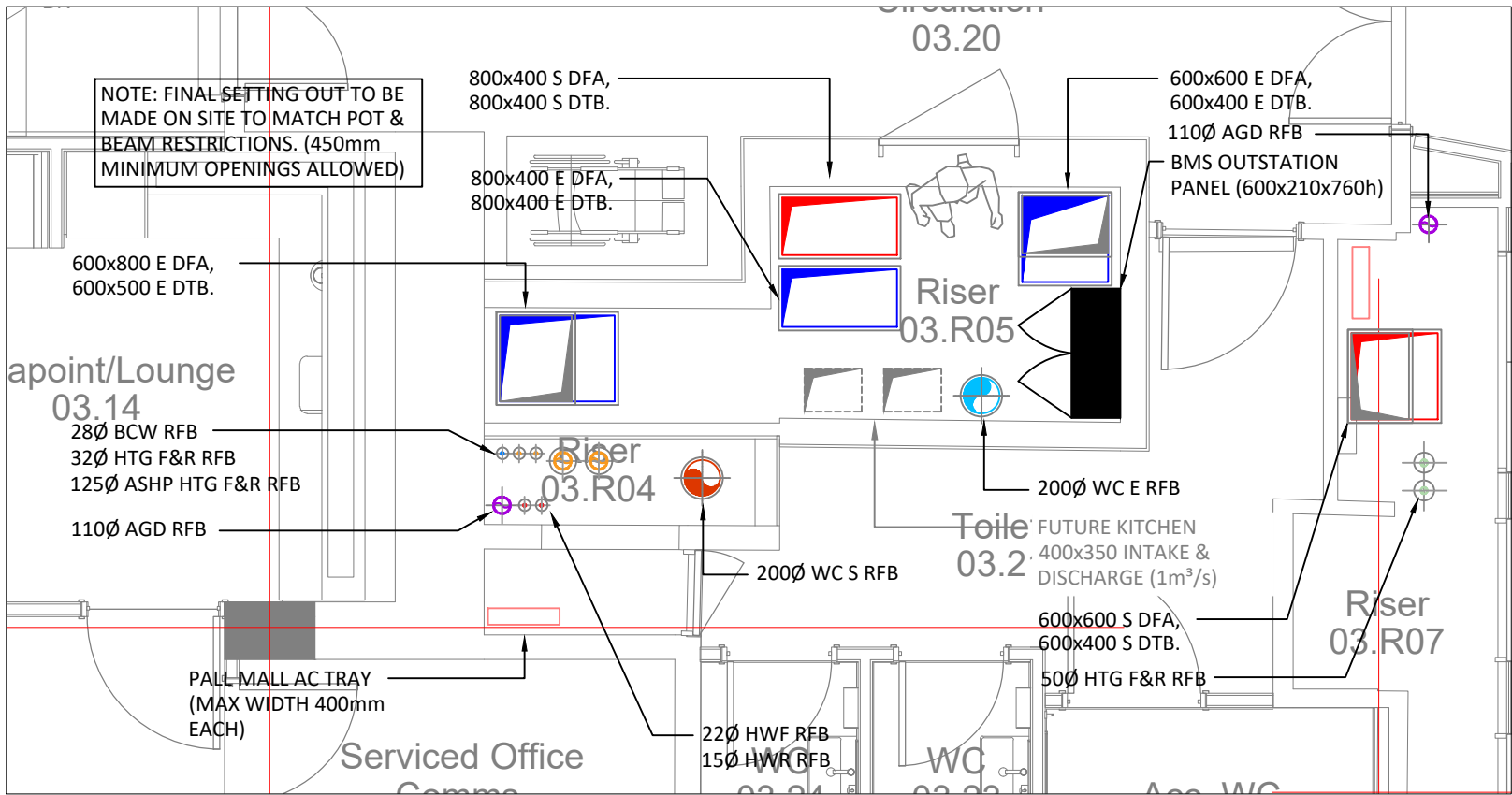
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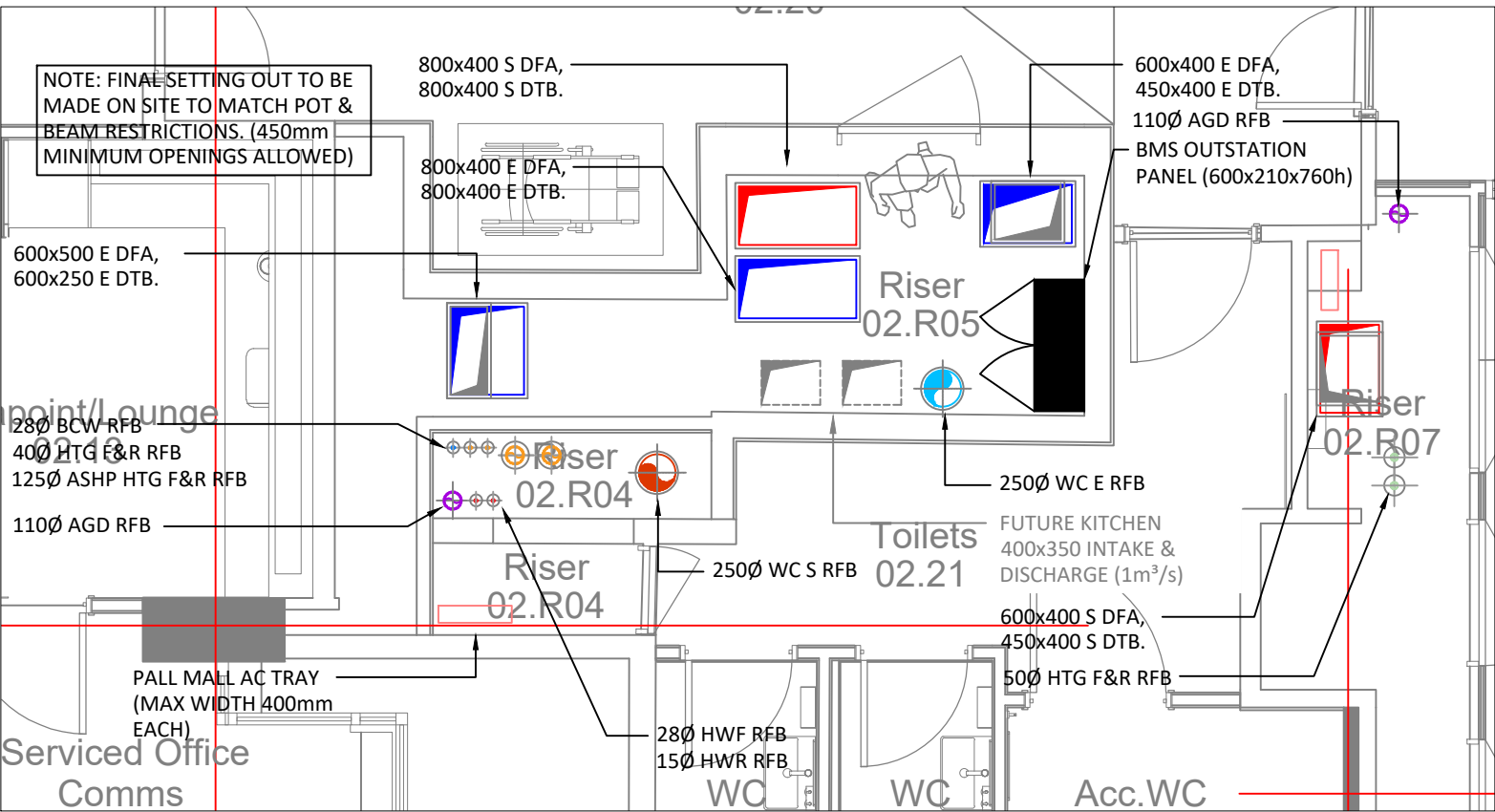
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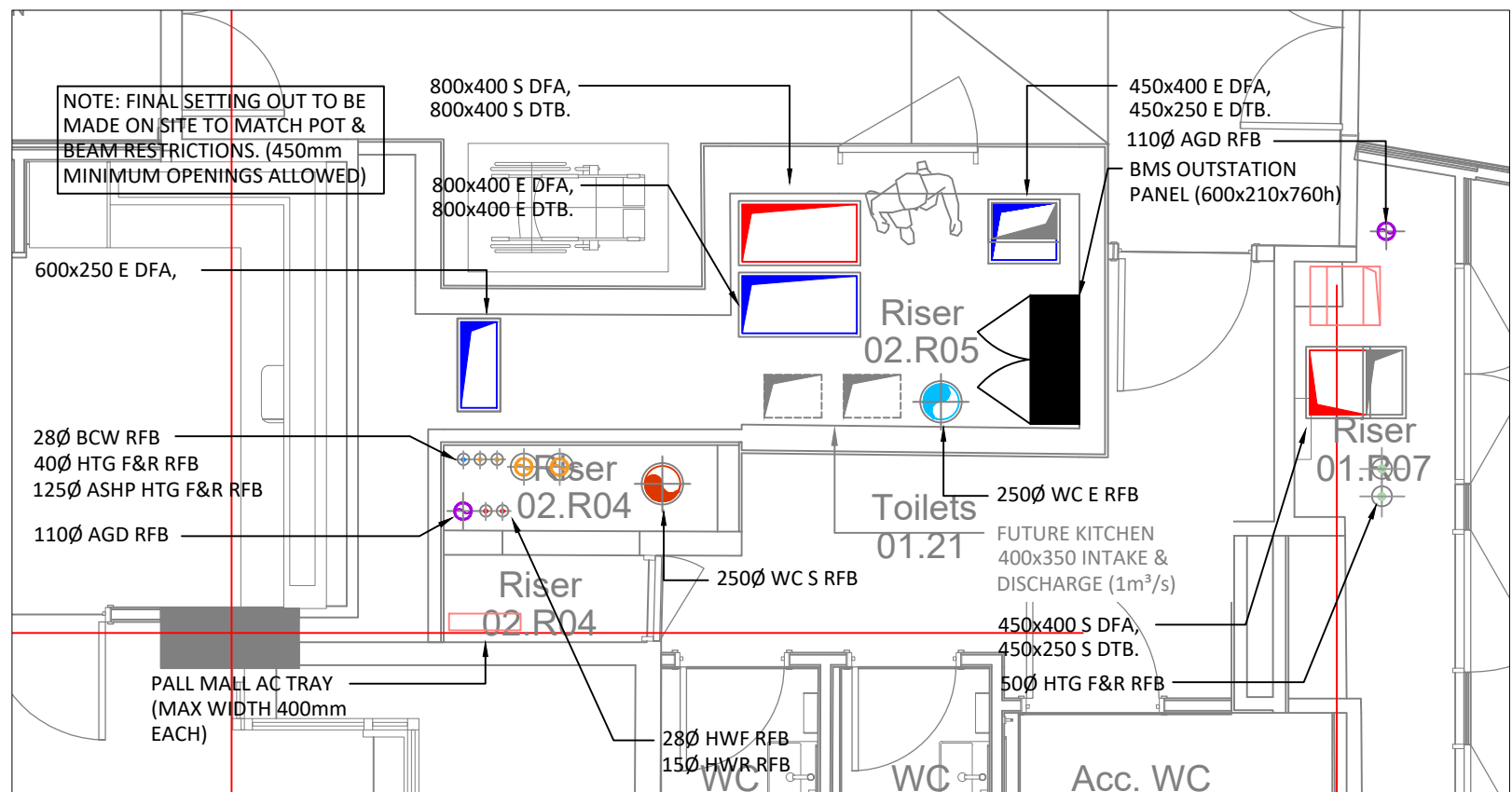
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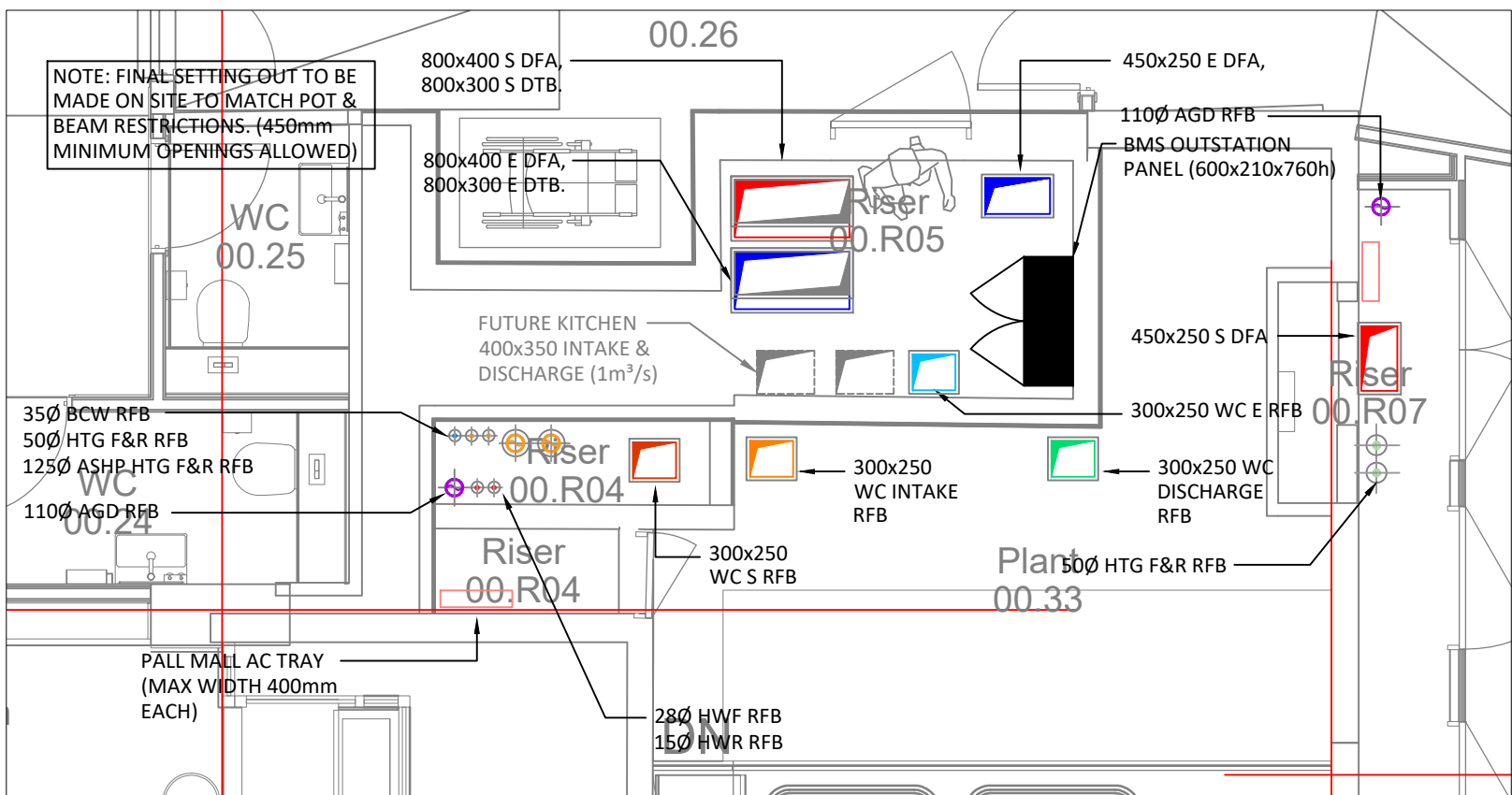
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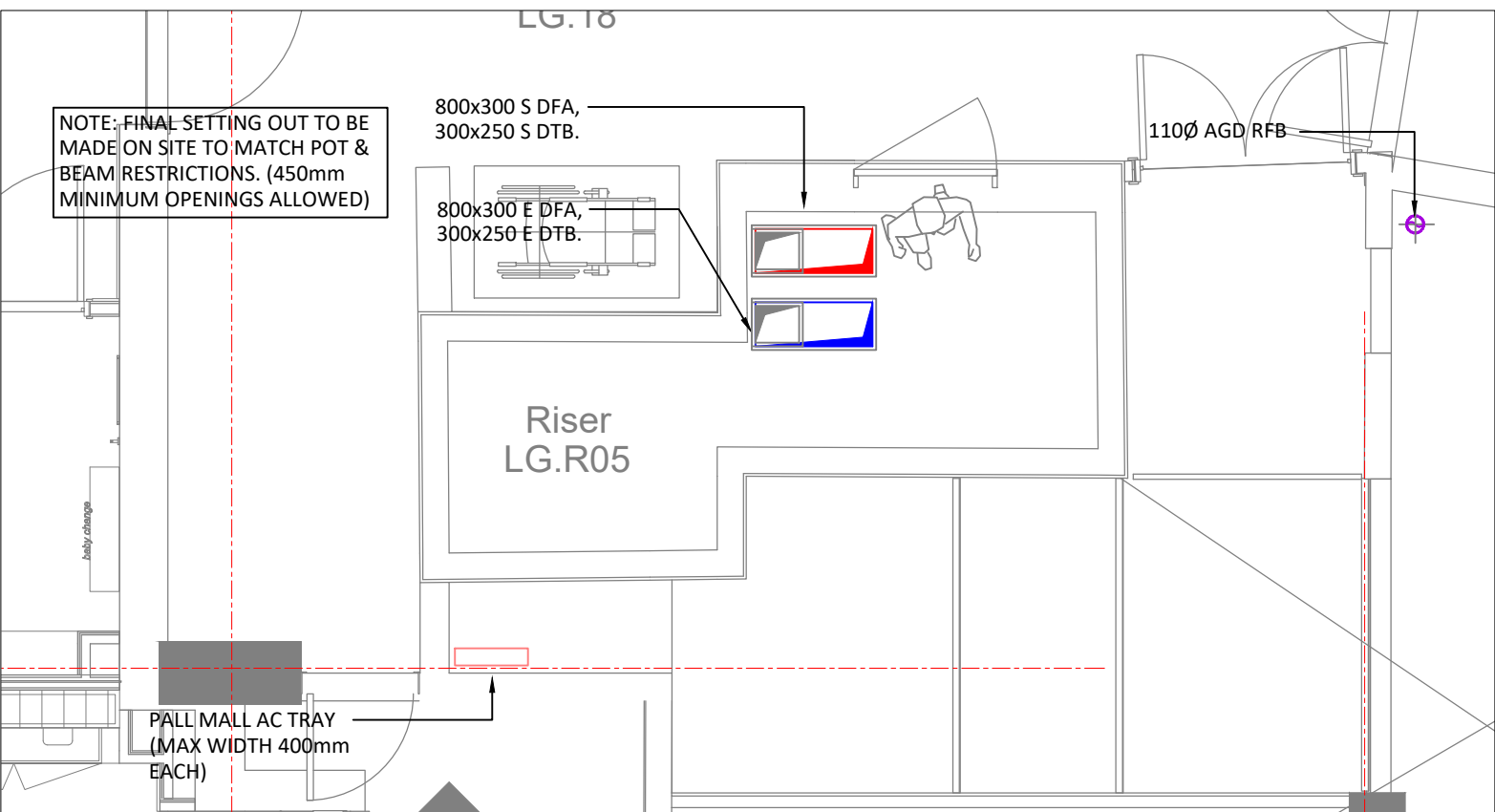
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Scale 1:50



TOWER EXTRACT & MARSDEN RISER - Gnd FLOOR
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TOWER EXTRACT & MARSDEN RISER - LGF FLOOR
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P01	PC	22.02.23	PRELIMINARY ISSUE
REVCHK	DATE	DESCRIPTION	
Architectural X-Ref Drawings:			
FF&E X-Ref Drawings:			
Drawing Status:		STAGE 4	
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Date:	JUN 2022	Scale:	1:100
Client:	CUBIC WORKS		
Project:	PALL MALL MANCHESTER		
Drawing Title:	TOWER & MARSDEN STREET RISER LAYOUT ALL LEVELS		
Drawing No:	C3781-HEC-ZZ-ZZ-DR-M-5072		Rev: P01