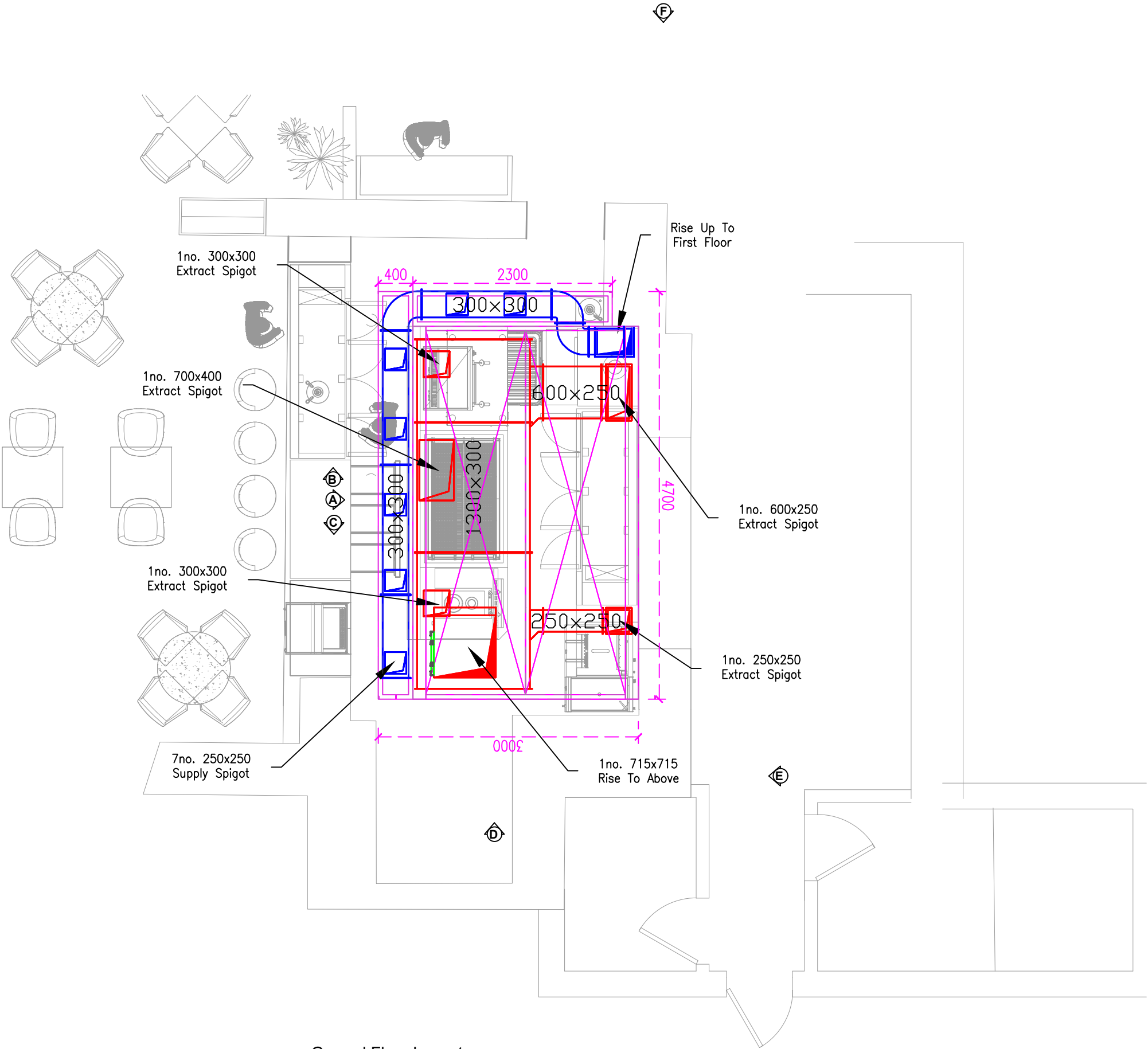


Kitchen Ventilation Design

Project	The Priory Caerleon	Designed By	Mark Fisher	Date	21/12/2024			
Item Ref	Appliance	Width (m)	Depth (m)	Area (m²)	Power	Coefficient	Volume	
7	Pasta Cooker	0.400	0.785	0.314	Electric	0.20	0.063	
8	Deep Fat Fryer *(1no.)	0.600	0.785	0.471	Electric	0.45	0.212	
9	Benches, Table & Worktops	0.830	1.000	0.830	N/A	0.03	0.025	
10	Benches, Table & Worktops	0.460	0.700	0.322	N/A	0.03	0.010	
11	Combi Oven (Stand Mounted 6 Grid)	0.810	0.727	0.589	Electric	0.30	0.177	
12	Induction Hob, Ceramic Stove	0.350	0.654	0.229	Electric	0.20	0.046	
13	Refridgeration Unit	2.265	0.770	1.744	Electric	0.03	0.052	
14	Chargrill/Charbroiler	1.480	0.910	1.347	Gas	0.95	1.279	
15	Benches, Table & Worktops	1.580	1.000	1.580	N/A	0.03	0.047	
16	Benches, Table & Worktops	1.200	1.000	1.200	N/A	0.03	0.036	
17	Salamander Grill	0.733	0.562	0.412	Electric	0.55	0.227	
18	Refridgeration Unit	1.100	0.700	0.770	Electric	0.03	0.023	
19	Enclosed Charcoal Oven	0.900	0.700	0.630	Solid Fuel	1.24	0.781	
Drawing Ref		Modo DP		Theoretical Extract Volume Required (m³/sec)				2.978
Revision		Rev A - 20/11/24		Canopy Factor		Island (OPEN BOTH ENDS)		1.35

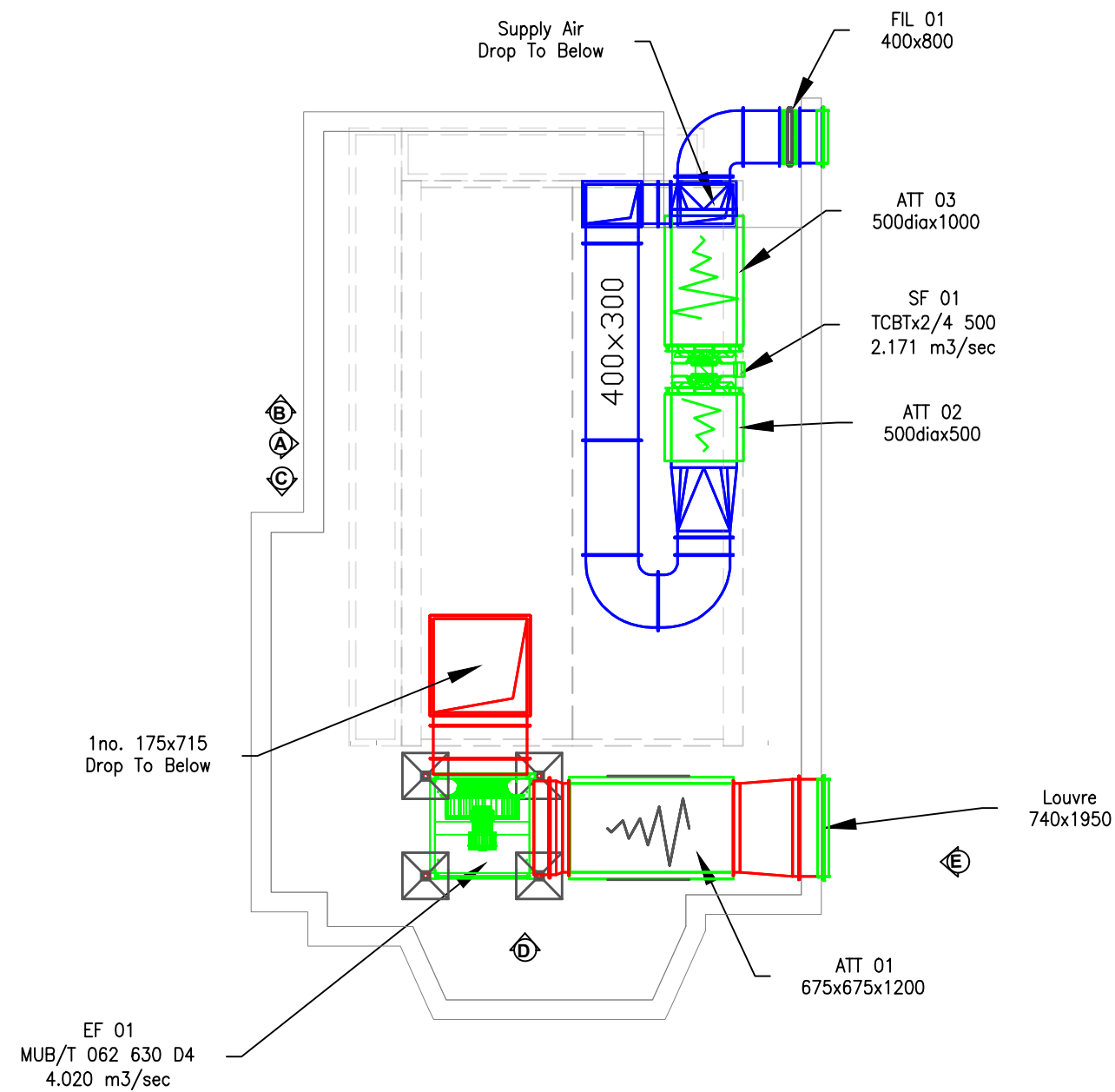
CANOPY DETAILS			FILTER DETAILS			GRILLE DETAILS		
Canopy Type	Island - Extract Only		Filter Type	Spark Arrest Filter		Grille Type	Plenum - Perforated	
Canopy Length	4300	mm	Filter Size	500 x 400		Grille Size	6000 x 400	
Canopy Depth	2600	mm	Number Of Filters	14	no.	Number Of Grilles	1	no.
Canopy Back Height	400	mm	Volume Per Filter	0.287	m³/sec	Volume Per Grille	2.171	m³/sec
Canopy Front Height	400	mm	Free Area Per Filter	0.078	m²	Free Area Per Grille	1.375	m²
Canopy Area	11.180	m²	Velocity Per Filter	3.7	m/s	Velocity Per Grille	1.6	m/s
Face Velocity Method	3.913	m³/sec	Pressure Loss	-	Pa	Pressure Loss	-	Pa

EXTRACT SYSTEM DETAILS			SUPPLY AIR SYSTEM DETAILS		
Extract Volume Required	4.020	m³/sec	54% Supply Volume Required	2.171	m³/sec
Header Velocity (Advised 6 - 9)	10.3	m/s	Header Velocity (Advised 6 - 8)	18.0	m/s
Header Duct Size (Rectangle)	300 x 1300	mm	Header Duct Size (Rectangle)	400 x 300	mm
Number Of Spigot	7	no.	Number Of Spigot	7	no.
Spigot Velocity (Advised 5 - 7)	6.0	m/s	Spigot Velocity (Advised 3 - 5)	5.0	m/s
Spigot Duct Size (Rectangle)	300 x 320	mm	Spigot Duct Size (Rectangle)	250 x 250	mm
Termination Type	High Velocity Cowl		Termination Type	Louvre With Mesh	
Termination Velocity (Advised 10-15)	15.0	m/s	Termination Velocity (Advised 2 - 4)	3.0	m/s
Termination Size (Rectangle)	520 x 520	mm	Termination Size (Rectangle)	600 x 1200	mm



0 Ground Floor Layout
Scale - 1:50

H	Supply Louvre Rotated
G	Revised Supply Louvre Location
F	Amended With Supply Louvre
E	Relocated Supply Fan Internally
D	First Floor Extract Header Revised
C	Relocated Extract System
B	Revised Supply Fan Location
A	For Approval
Revision:	



1 First Floor Layout
Scale - 1:50

H	Supply Louvre Rotated
G	Revised Supply Louvre Location
F	Amended With Supply Louvre
E	Relocated Supply Fan Internally
D	First Floor Extract Header Revised
C	Relocated Extract System

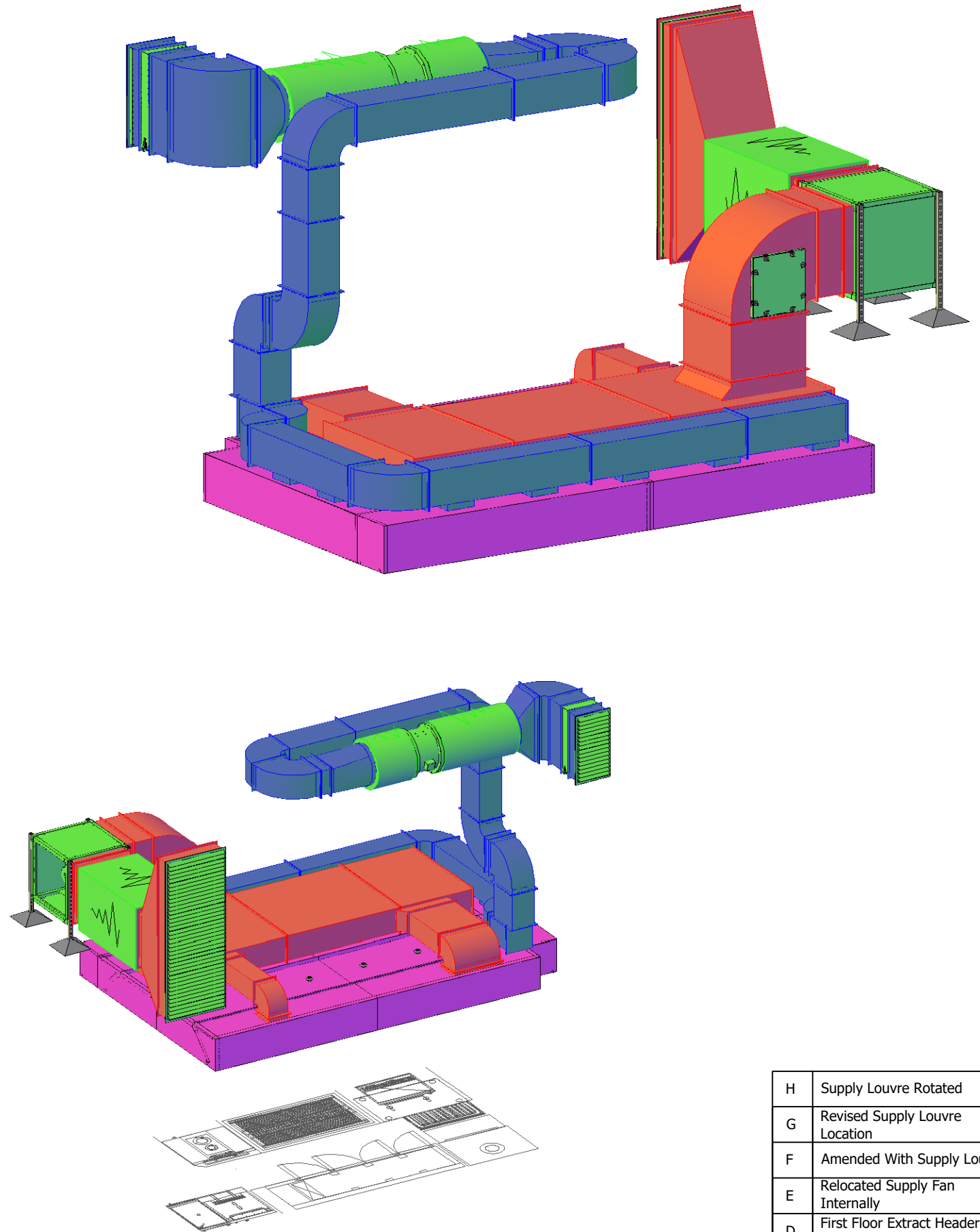
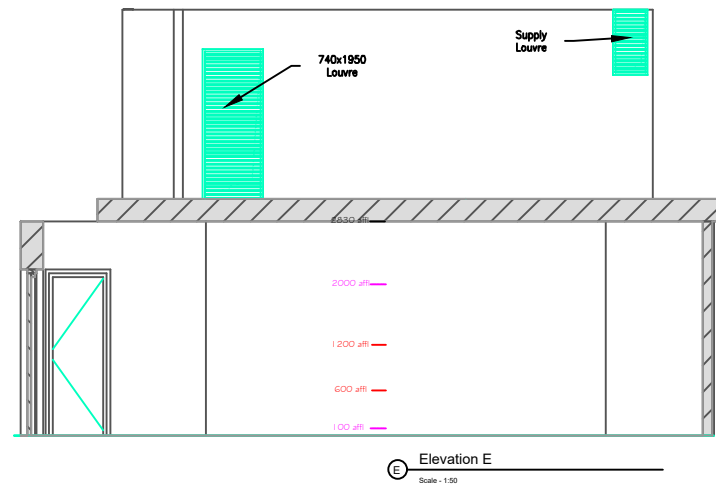
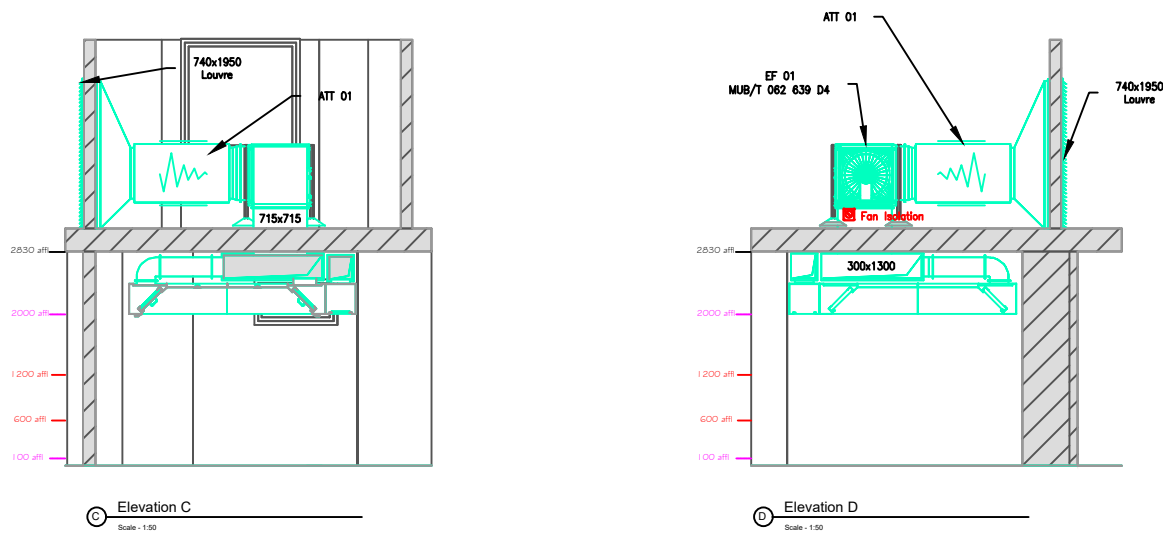
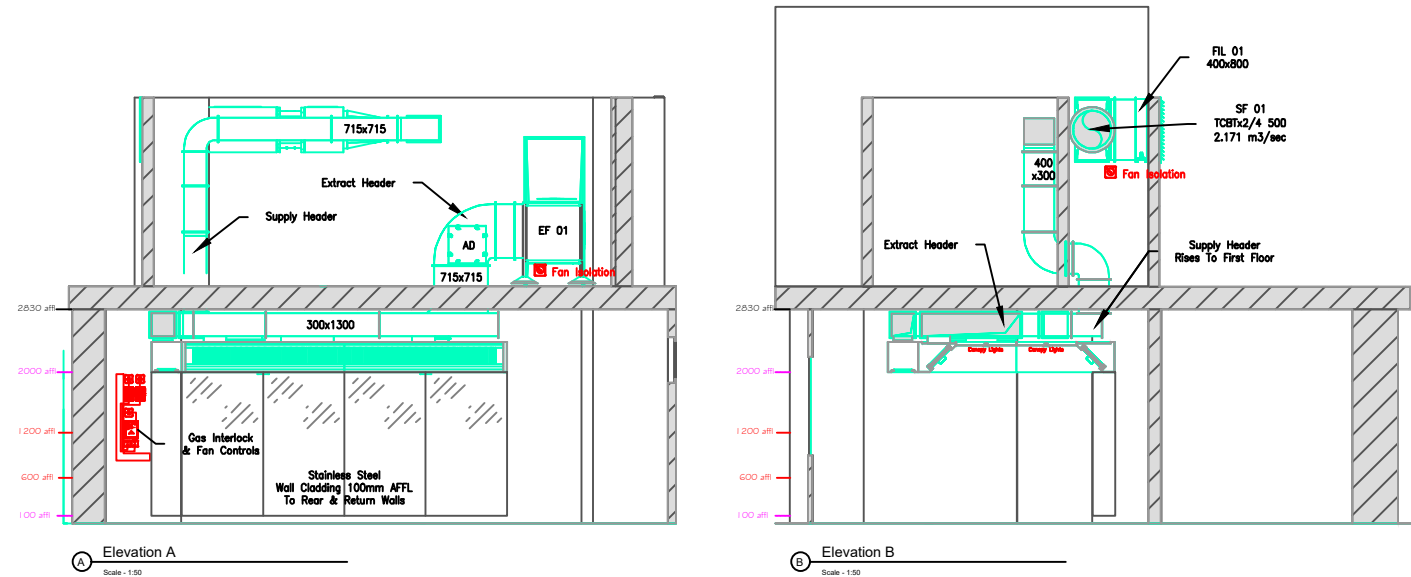
B	Revised Supply Fan Location
A	For Approval

Revision:



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Customer:	The Priory Caerleon	CCF Ref:	CCF 22314	Scale:	1:50 @ A3
Project:	Ground Floor Vent Layout	Date:	30/08/25	Drawn By:	SB
Description:		DrawingNo:	TPC-GA-00-001	Material:	



H	Supply Louvre Rotated
G	Revised Supply Louvre Location
F	Amended With Supply Louvre
E	Relocated Supply Fan Internally
D	First Floor Extract Header Revised
C	Relocated Extract System

B	Revised Supply Fan Location
A	For Approval

Revision:



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Customer:	CCF Ref: CCF 22314	Scale: 1:50 @ A3
Project: The Priory Cearleon	Date: 30/08/25	Drawn By: SB
Description: Elevations & 3D Visual	DrawingNo: TPC-EL-00-003	Material:

EQUIPMENT SCHEDULE

			Description	Nominal Data						Free Area		Ventilation			Efficiency	Electrical Supply							
				Diameter (mm)	Width (mm)	Height (mm)	Length or Depth (mm)	Weight (kg)	Temp Rating (°C)	Free Area (%)	Free Area (m)	Airflow (m3/sec)	Velocity (m/s)	Pressure Loss (PA)	Efficiency (%)	Volatage (V)	Phase (~)	Frequency (Hz)	Loading (kW)	Amps (A)	Motor Type	Pole (p)	Speed (RPM)
Fans																							
EF 01	Kitchen Extract	MUB/T 062 630 D4	Backward Curved Blade Fan - Straight Flow	-	820	820	820	112.5	120							400	3	50	4.517	8.08	AC	4	1464
SA 01	Kitchen Supply Air	TCBTx2/4-500	Axial Fan	595	-	-	375	50	70							400	3	50	1.7	3.4	AC	4	1370
Silencers																							
ATT 01	Kitchen Extract		Silencer		675	675	1200					4.020		45									
ATT 02	Kitchen Supply Air		Silencer	500			500					2.171		20									
ATT 03	Kitchen Supply Air		Silencer	500			1000					2.171		30									
Filters																							
FIL 01	Kitchen Supply Air	Pleated Filter	600x600x50		595	595	45					1.086		25									
FIL 01	Kitchen Supply Air	Pleated Filter	600x600x50		595	595	45					1.086		25									
Extract Grilles																							
BF 01	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 02	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 03	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 04	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 05	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 06	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 07	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 08	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 09	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 10	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 11	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 12	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 13	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
BF 14	Kitchen Extract	500x400 Baffle Filter	500x400 Standard Type 2 Baffle filter		495	395	45			40%	0.078	0.287	3.67	10									
Supply Grilles																							
SG 01	Kitchen Supply Air	1050x250 DDG	1050 x 250 Eggcrate Grille		1083	283					0.312	0.184	0.59	1									
SG 02	Kitchen Supply Air	1050x250 DDG	1050 x 250 Eggcrate Grille		1083	283					0.312	0.184	0.59	1									
SG 03	Kitchen Supply Air	1050x250 DDG	1050 x 250 Eggcrate Grille		1083	283					0.312	0.184	0.59	1									
SG 04	Kitchen Supply Air	1050x250 DDG	1050 x 250 Eggcrate Grille		1083	283					0.312	0.184	0.59	1									
SG 05	Kitchen Supply Air	1100x250 DDG	1100 x 250 Eggcrate Grille		1133	283					0.312	0.193	0.62	1									
SG 06	Kitchen Supply Air	1100x250 DDG	1100 x 250 Eggcrate Grille		1133	283					0.312	0.193	0.62	1									

H	Supply Louvre Rotated
G	Revised Supply Louvre Location
F	Amended With Supply Louvre
E	Relocated Supply Fan Internally
D	First Floor Extract Header Revised
C	Relocated Extract System



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Customer:		CCF Ref:		Scale: 1:50 @ A3		B	Revised Supply Fan Location
Project: The Priory Caerleon		Date: 30/08/25		Drawn By: SB		A	For Approval
Description: Equipment Schedule		DrawingNo: TPC-ES-00-004		Material:		Revision:	

Notes:

1) Responsibility for Cable Sizing

It is the responsibility of the first fix electrician to ensure that the correct sizing of cables is determined for all electrical installations. This includes taking into account factors such as current load, voltage drop, and cable length in compliance with relevant regulations and safety standards. Proper cable sizing is essential to ensure the safe and efficient operation of the electrical system.

2) Compliance with Wiring Regulations:

The first fix electrician must ensure all cable installations comply with the latest edition of the IET Wiring Regulations (BS 7671) and any other relevant local electrical codes. Non-compliance may result in project delays, rework, or safety hazards.

3) Coordination with Other Trades:

The first fix electrician is responsible for coordinating with other trades (e.g., plumbers, carpenters, plasterers) to ensure that electrical routing does not interfere with other installations, and proper clearances are maintained.

4) Load Calculations and Circuit Design:

The first fix electrician is responsible for calculating electrical loads to determine the appropriate circuit design, ensuring that circuits are neither underloaded nor overloaded, preventing future electrical faults.

5) Testing and Verification:

All cable installations and circuits must be tested and verified to ensure they meet performance and safety standards before being covered by plaster or other finishes. Proper documentation of test results must be provided.

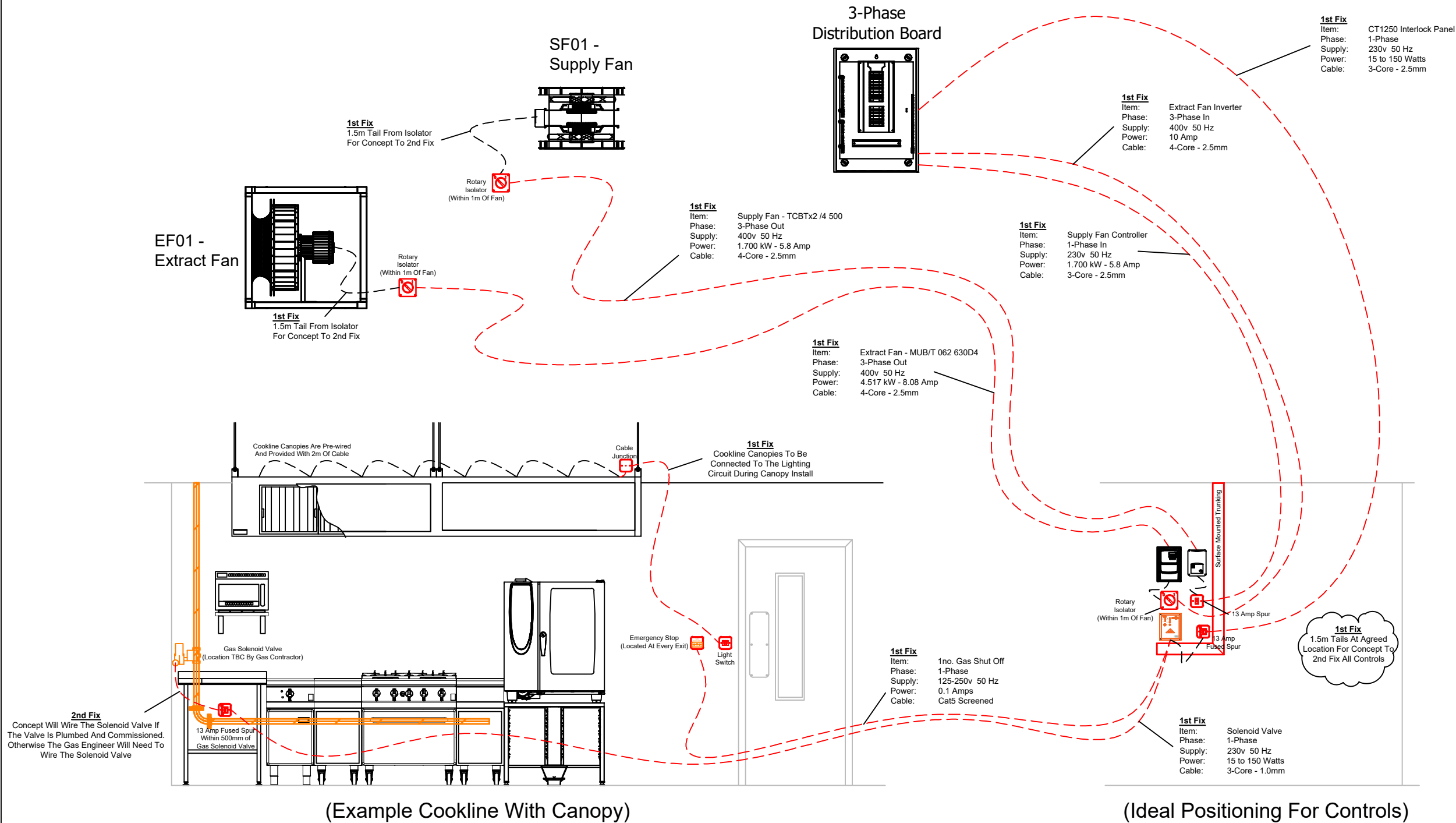
6) Identification of Circuits:

All cables should be properly labeled and identified during the first fix stage to avoid confusion in later phases. Clear identification assists in future maintenance and troubleshooting.

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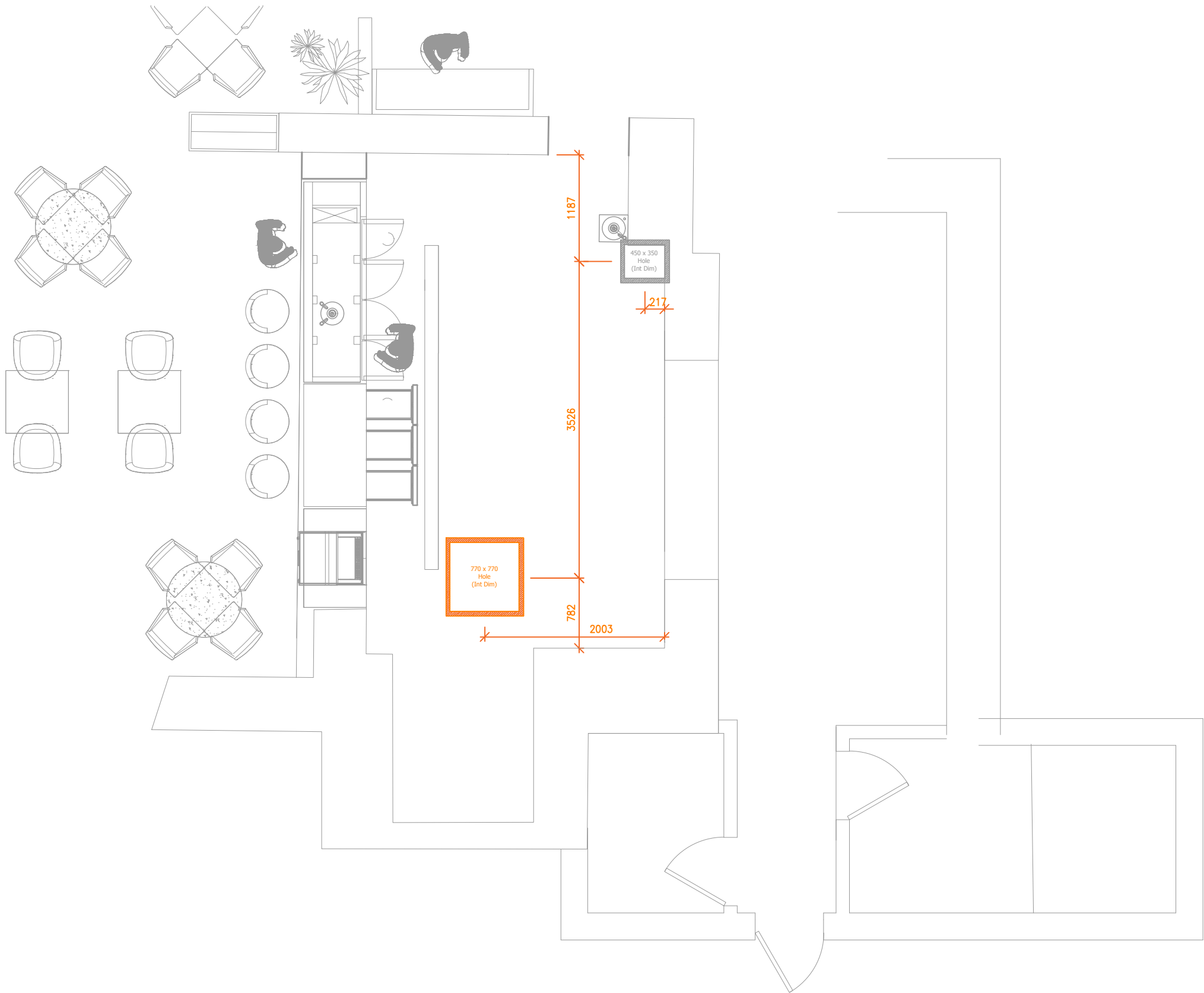
B	Revised Supply Fan Location
A	For Approval

Revision:



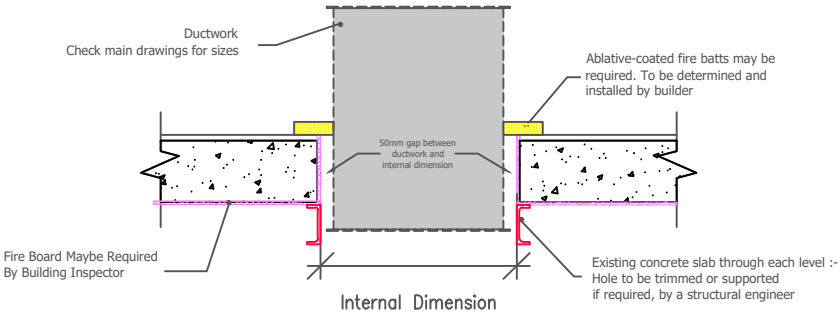
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Customer:	CCF Ref:	CCF 22314	Scale:	Not To Scale	B	Revised Supply Fan Location	
Project:	The Priory Caerleon	Date:	30/08/25	Drawn By:	SB	A	For Approval
Description:	Services Schematic	DrawingNo:	TPC-SS-00-005	Material:	Revision:		



0 Builders Work - Ductwork Holes For Canopy
Scale - 1:50

Ductwork Penetration - Through Floors Levels
(Concrete - Structure to engineers detail)



Builders Holes

Roof & Upstands

Dimensions shown are internal measurements from the ground floor kitchen, and should follow the same plumb line through the building, including the roof penetrations. It is advised that a 45mm timber upstand is constructed around the hole on the roof, and weathered by a roofing contractor. Concept to provide a galavanised cravat or cowl with the ductwork sections that drops over the pre-weathered upstand.

Holes Through Floor Levels

All holes through floor levels should be cut by the builder prior to Concepts installation and covered with a temporary covering, which can be easily removed. Fire batt or heavy gauge steel sheets may be required though internal levels. An approved contractor will be required to install these, after all ventilation has been installed.

Holes Through Block/Brick Walls

All lintels required for block and brick walls should be designed and be installed as per the structural engineer's specifications, prior to ventilation install.

Make Up & Trims

After the ductwork has been passed through the ventilation holes, the builder is responsible for making up or trimming the holes to ensure a sufficient, neat finish. All holes must be trimmed to a size that is appropriate for the ducting, with sufficient clearance and sealed. Ensure that any gaps between the duct and the hole are properly sealed using appropriate materials (e.g., fire-rated sealant, foam, or mineral wool) to maintain the integrity of the building and prevent drafts, water ingress, or fire hazards.

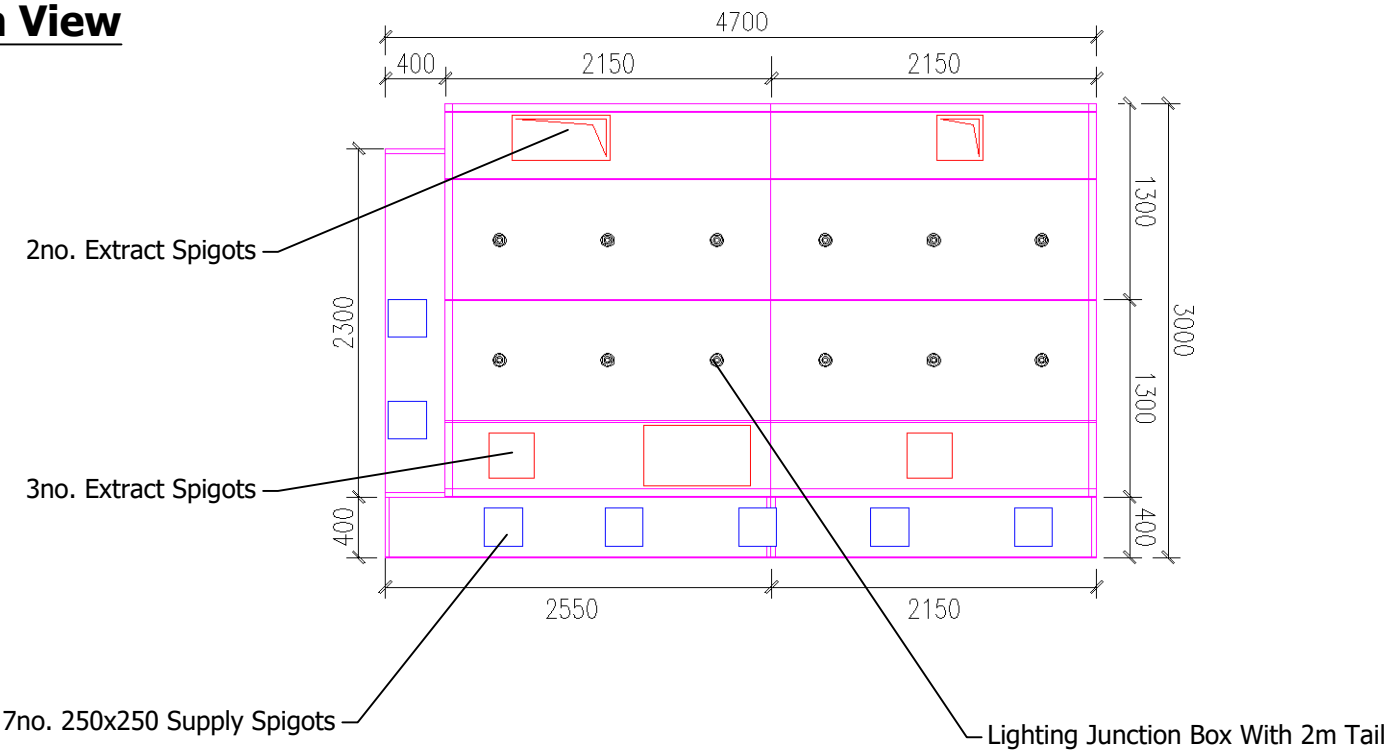
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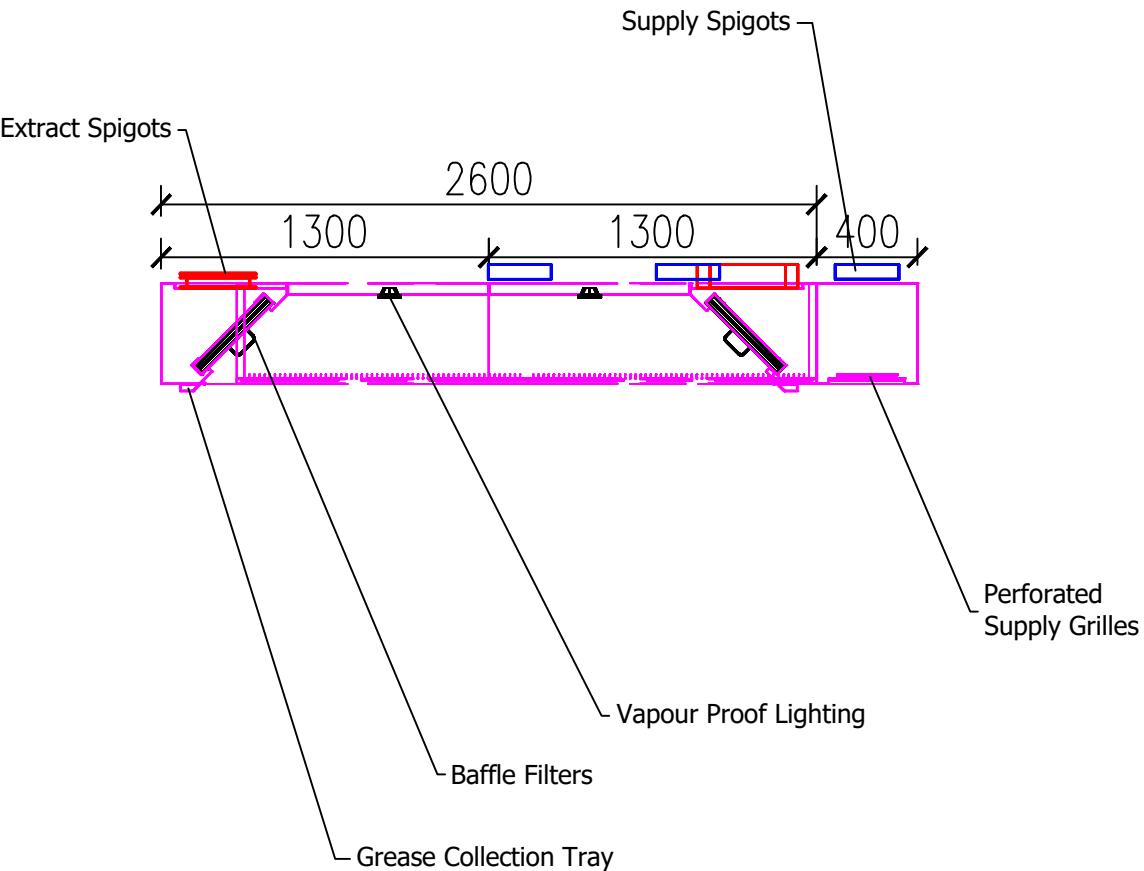
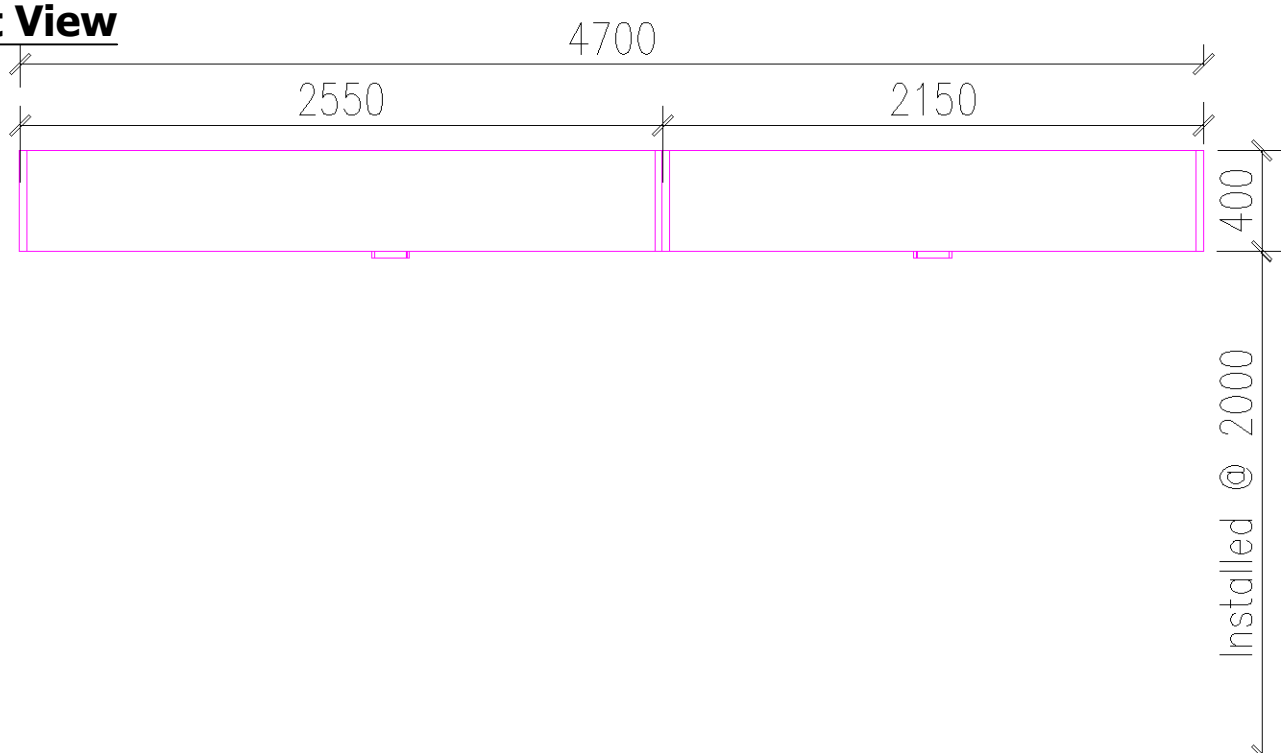
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Customer:	The Priory Caerleon	CCF Ref:	CCF 22314	Scale:	1:50 @ A3	B	Revised Supply Fan Location
Project:		Date:	30/08/25	Drawn By:	SB	A	For Approval
Description:	Builders Work & Setting Out	DrawingNo:	TPC-BW-00-006	Material:		Revision:	

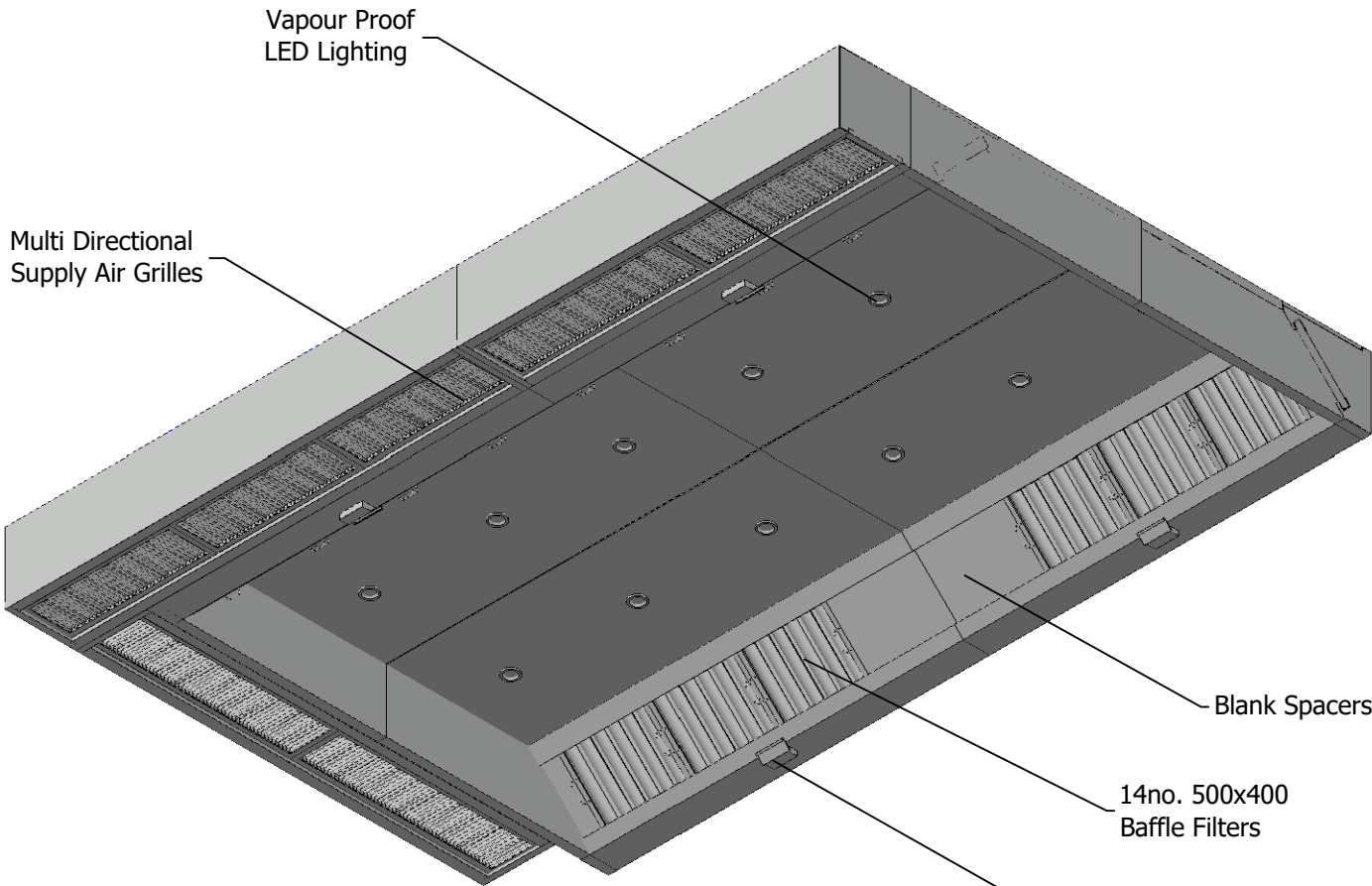
Plan View



Front View



Side Elevation



3D Visual

Canopy Material & Thickness
304 Grade 1.2mm
Extract Flowrate (m3/sec)
4.020 m3/sec
Supply Flowrate (m3/sec)
2.171 m3/sec

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Customer:		CCF Ref:	CCF 22314	Scale:	1:50 @ A3	Revision:	
Project:		Date:	30/08/25	Drawn By:		A	
Description:		DrawingNo:		Material:		Revision:	
The Priory Caerleon		TPC-MF-00-007		Stainless Steel			
Manufacture - Main Canopy							