

General Notes:-

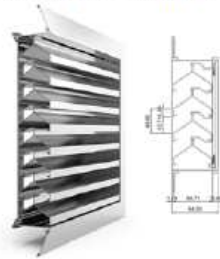
- To comply with the CP's, where a ventilation connection is to be made, the sandwich panel behind the perforated panel is to be cut away and a rain defence louvre installed behind the perforated fascia panel. The below sequence / method has been provided by FKN to undertake these works:-
 - Working from outside remove -
 - cover caps
 - pressure plates
 - perforated panel with blanking middle sheet
 - mineral wool insulation.
 - Working from inside -
 - Cut required opening size in back sheet.
 - Install & seal internal angles.
 - Working from outside -
 - install insulation
 - install thermal stop
 - install external angles & epdm seal opening
 - install louvre
 - cut blanking middle sheet to size
 - remove surplus studs to perforated panel
 - install middle backing sheet with perforated panel
 - install pressure plates
 - install cover caps.
 - Complete.
- The louvre zones depicted on the attached mark-up are approximate. The pressure drop calcs have taken into account the available size to physical accommodate the louvre.

- Following a review of our CP's we need to correct our previous statement, in fact a Class A Rain defence louvre was always stated in our CP's. The previous reference to a Class B, was an error on our behalf.
- See extract highlighted below:-

For areas with connection to ventilation devices, the insulated blanking panels will be cut out and receive a weathering louvre with stainless steel insect mesh behind.

Proposed Louvre system: MLL, type 782 or equivalent:

Rain defence classification:	Class A (Rain Entry Rate 0.35 litre/hr/m ²)
Flow coefficient exhaust air / supply air:	0.18



- The information provided is based on CS Group PL5700 louvre type, except where stated otherwise. Please note the PL 5700 is designed and tested with an integral perforated panel in front which is extremely close to the properties of the architectural panel we have, therefore the existing test data can be used to assess the louvre performance requirements rather than having to undertaken specific testing to demonstrate.
- CIBSE Guidance for minimum distance between supply & extract louvres is 2m as advised by CWC.

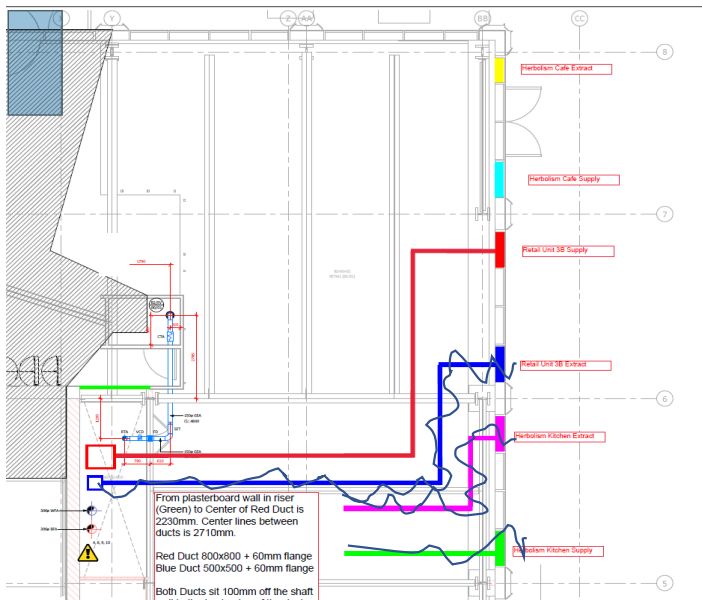
- The insect mesh has not been allowed for with the Pa (Pressure Drop) figures, this will add, a minimum of 15% when clean and more when dirty. Due to access restrictions we have not allowed for insect mesh on the louvre, this is to be negated by filters on the ventilation system / plant by others.
- Proposal amended to identify a maximum pressure drop (Pa) of no more than 30 as noted by CWC at meeting on 19th Jan 2021.
- Please refer to FKN preliminary drawing references CS-FKN-B2-OG-DR-X-3176, 3319, 3175, 3120 & 3118 for details. Please note these drawings were based on a previous louvre extent and are therefore to be referred too for typical details only, rather than extent.
- Please note the clear height from the underside of the louvre connection from FFL within the retail demise, is currently shown as 3.56m (39.330 – 35.770).

- In order to allow confirmation of the acceptable Pressure Drop (Pa), we have compiled the table below for each connection, In order to finalise the quantity of each louvre required we require confirmation of the following:-
 - Item 1 – Which pressure drop is acceptable to confirm how many louvre modules are required?
 - Item 2 - Which pressure drop is acceptable to confirm how many louvre modules are required?
 - Item 3 – Is the 49Pa acceptable? If so we can use the same proposed PL 5700 louvre? If not we will have to select the RS5605, which we would also like confirmation that the stated Pa is acceptable?

<u>Circle Square - Louvre Comparison</u>					
Item	Louvre Connection	Approx 1000 x 1100 Opening	Pa		Comments
			Class A (PL 5700)	RS5605	
1	EAI 125 - Building 3 – Unit 3B – Supply & Kitchen Make-Up	4 Module	10.3	NA	
		3 Module	18.3	NA	
		2 Module	41.18	NA	
		1 Module	163	NA	
2	EAI 125 - Building 3 – Unit 3B – General Extract	2 Module	4.23	NA	
		1 Module	16.9	NA	
3	EAI 125 - Building 3 – Unit 3B – Kitchen Extract	2 Module	17.54	NA	Cannot achieve 2 connections due to shear wall constraints behind
		1 module	49	25.85	Values stated @ 2.5m/s, RS5605 is approx 2 X cost

- We have also amended the configuration of the future Herbalism requirements to demonstrate these can be positioned on the South elevation. However without confirmation of Pa requirements we would not be in a position to confirm whether 1 louvre module / connection was sufficient or not as indicated.

EAI 125 - Building 3 – Unit 3B – Supply & Kitchen Make-Up

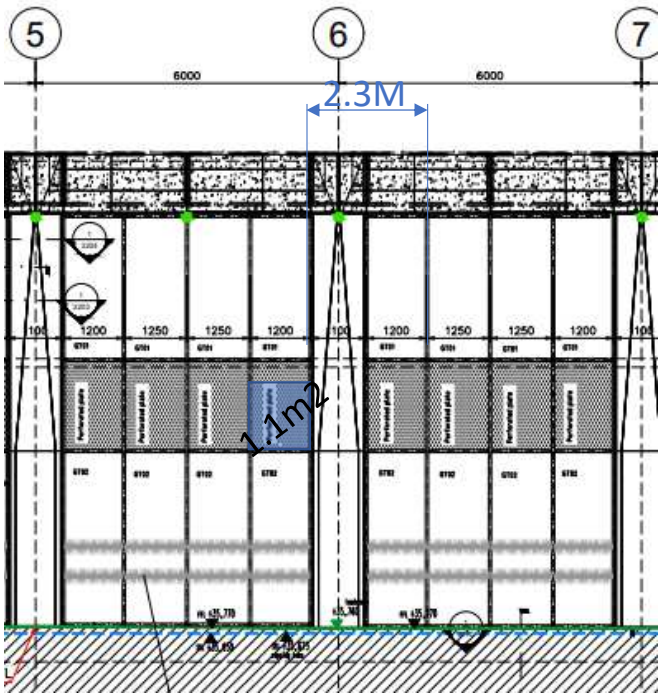
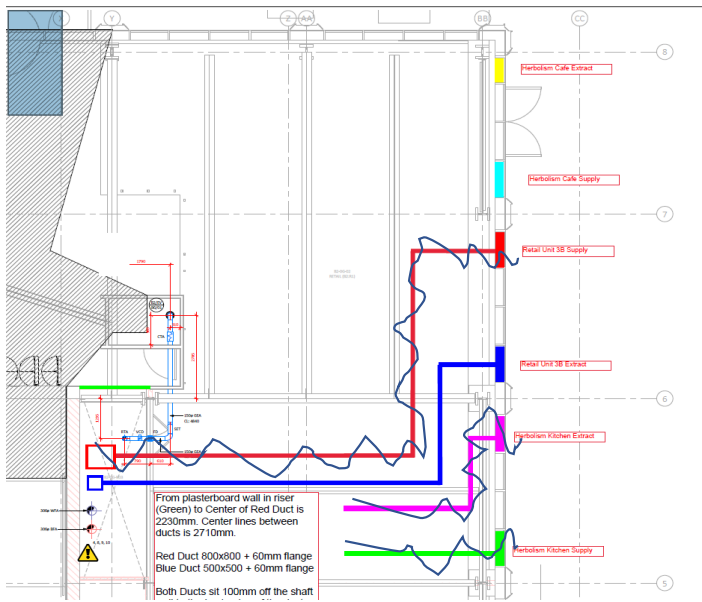


- Queries:-
- Based on a PL-5700 Louvre type a pressure drop of 18.30Pa is calculated. This is to be verified with Bruntwood.
 - Proximity to the Final Escape door (DE.B2.00.05) has been reviewed by DFC and confirmed acceptable.

Building 3 - Unit 3B	Retail Area (m ²)	Occupancy (based on 1 person per 3m ²)	Fresh Air for Occupancy @ 10l/s pp (m ³ /s)	Kitchen Extract Make Up (m ³ /s)	Total Supply/Extract Air (m ³ /s)	Louvre Face Velocity (m/s)	Louvre Free Area (50%)	Min. Actual Louvre Area Required (m ²)
General Supply + Kitchen Make-Up	465	155	1.55	3.00	4.55	2	0.5	4.55
General Extract	465	155	1.55	3.00	1.55	2	0.5	1.55
Kitchen Extract	N/A	N/A	N/A	3.00	3.00	2	0.5	3.00
Total Louvre Area Required								9.10

- Notes:-
- Distance between adjacent extract and supply in excess of 2M as advised by CIBSE, therefore OK.
 - It will not be possible to accommodate the future Herbalism requirements as previously planned (slide 6) and an alternative configuration will be required, potentially like slide 7.

EAI 125 - Building 3 – Unit 3B – General Extract

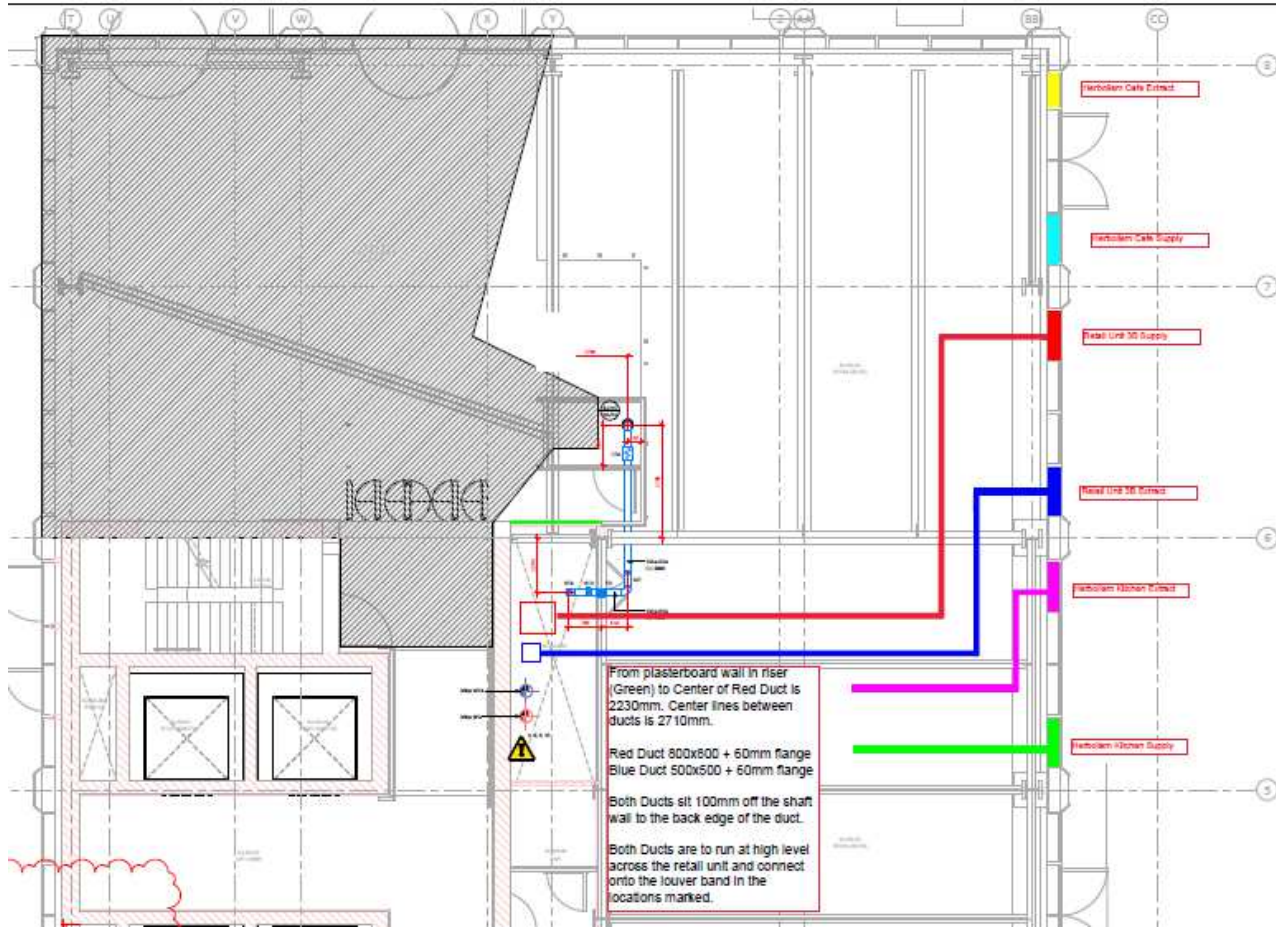


- Queries:-
- Based on a PL-5700 Louvre type a pressure drop of 16.9Pa is calculated. This is to be verified with Bruntwood.

Building 3 - Unit 3B	Retail Area (m²)	Occupancy (based on 1 person per 3m²)	Fresh Air for Occupancy @ 10l/s pp (m³/s)	Kitchen Extract Make Up (m³/s)	Total Supply/Extract Air (m³/s)	Louvre Face Velocity (m/s)	Louvre Free Area (50%)	Min. Actual Louvre Area Required (m²)
General Supply +								
Kitchen Make-Up	465	155	1.55	3.00	4.55	2	0.5	4.55
General Extract	465	155	1.55	3.00	1.55	2	0.5	1.55
Kitchen Extract	N/A	N/A	N/A	3.00	3.00	2	0.5	3.00
Total Louvre Area Required								9.10

- Notes:-
- Distance between adjacent extract and supply in excess of 2M as advised by CIBSE, therefore OK.
 - It will not be possible to accommodate the future Herbalism requirements as previously planned (slide 6) and an alternative configuration will be required, potentially like slide 7.

Herbalism Future Requirements:- Original Proposal



General Notes:-

- For EAI 125 the louvre sizes are currently sized on the noted Pa values (slides 4, 5 & 8). If these values are not acceptable by Bruntwood the louvre sizes will need to change.
- Based on the current proposal, we cannot accommodate the future Herbalism requirements as previously drawn opposite.

22/07/20			
Status	Scale	Sheet Size	Riv
A6 - Approved & Accepted	1 : 50	A0	C05
Drawing No. CS-NGB-B2-0G-DR-M-5701			
Project Code Originator Issue Drawn Type Scale Revision			
Copyright in this drawing is the property of M&R Bailey Limited. It must not be reproduced or amended or used for the execution of any works without the prior written consent of M&R Bailey Limited. The rest made from this drawing.			

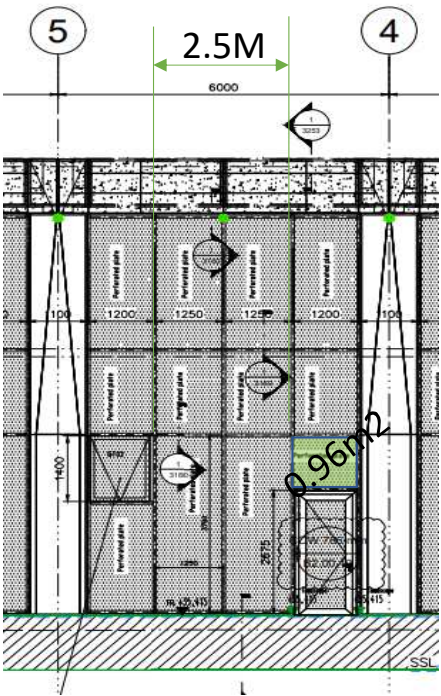
From plasterboard wall in riser (Green) to Center of Red Duct is 2230mm. Center lines between ducts is 2710mm.

Red Duct 800x800 + 60mm flange
Blue Duct 500x500 + 60mm flange

Refer to slide 4

Refer to slide 5

EAI 125 - Building 3 – Unit 3B – Kitchen Extract



- Queries:-
- The current louvre extent is restricted due to the BWIC allowances to the shear wall behind.
 - Based on The PL-5700 louvre type a pressure drop of 49Pa would be achieve with air speed / velocity of 2.5m/s.
 - An alternative type PL-5605 Louvre would achieve a 25.85Pa Pressure drop with air speed / velocity of 2.5m/s.
 - Our preference would be to use the PL-5700 louvre type, but both values would need to be checked with Bruntwood as to which is acceptable.
 - Proximity to the MOE and AOV has been reviewed by DFC and confirmed acceptable.

Building 3 - Unit 3B	Retail Area (m²)	Occupancy (based on 1 person per 3m²)	Fresh Air for Occupancy @ 10l/s pp (m³/s)	Kitchen Extract Make Up (m³/s)	Total Supply/Extract Air (m³/s)	Louvre Face Velocity (m/s)	Louvre Free Area (50%)	Min. Actual Louvre Area Required (m²)
General Supply + Kitchen Make Up	465	155	1.55	3.00	4.55	2	0.5	4.55
General Extract	465	155	1.55	3.00	1.55	2	0.5	1.55
Kitchen Extract	N/A	N/A	N/A	3.00	3.00	2	0.5	3.00
Total Louvre Area Required								9.10

Notes:-

* Please note the current BWIC as Curtin’s sketch ref:- MA1420-SK20072202 (Rev P02) is required to be amended to align with the louvre location as indicated below. In principal the BWIC needs to be extended higher to allow a duct connection to the rear of the louvre at the same height, currently the BWIC detailed is too low. This has been discussed with Curtin’s and is feasible to achieve.

Approx.
location of
louvre band

