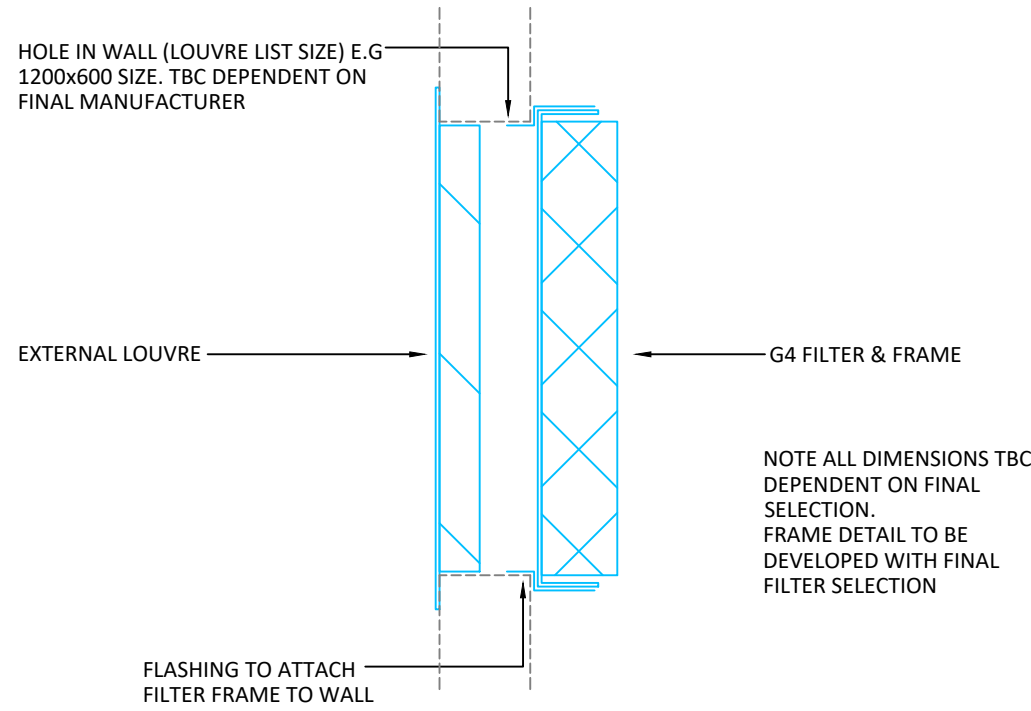
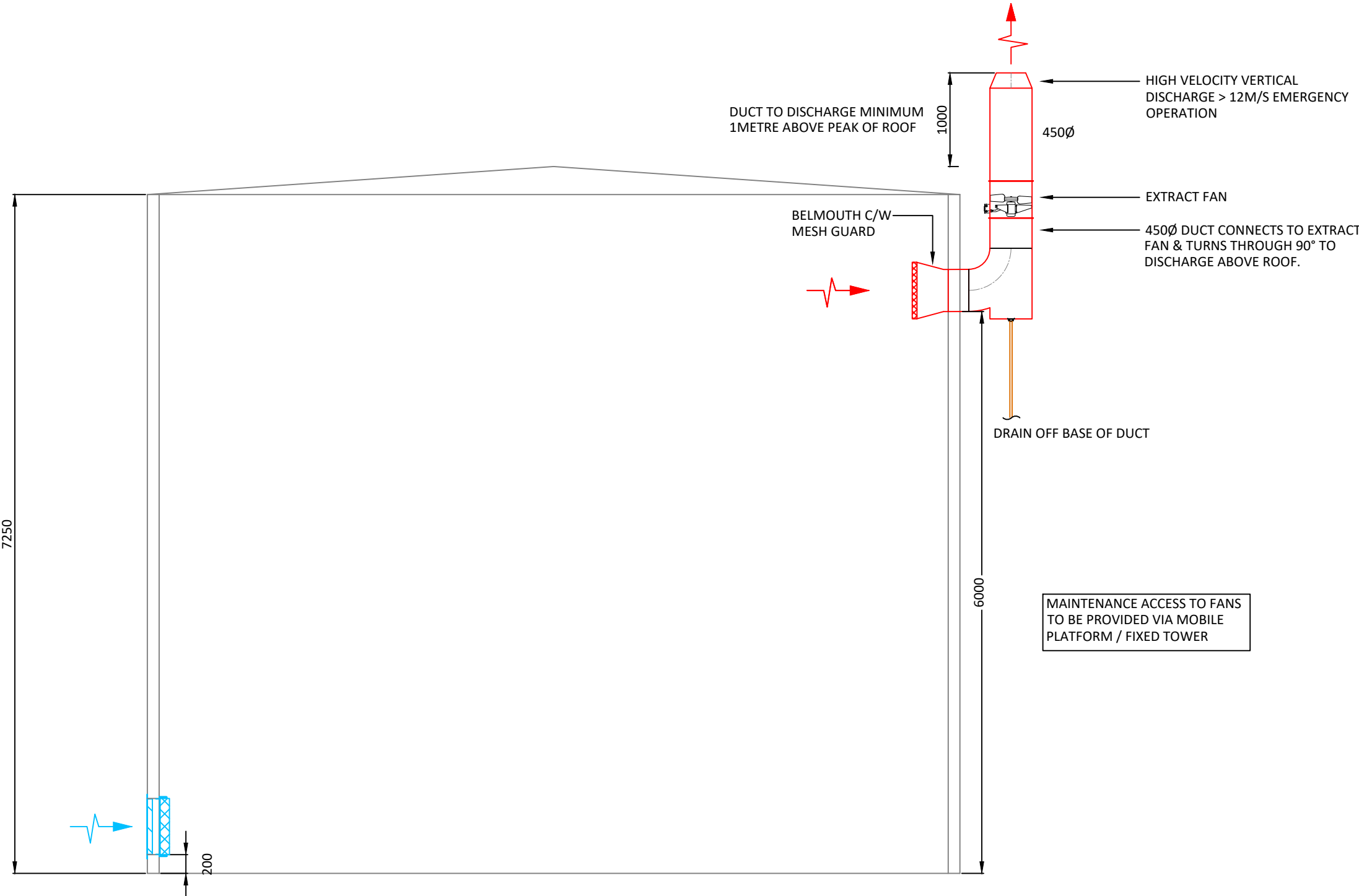


Extract Flowrate Calculation						
Mode	Room Length (m)	Room Width (m)	Room Height (m)	Room Volume (m³)	ACH	Extract Air Flowrate (m³/s)
Normal	23.77	8.425	7.25	1452	4	1.613
Emergency	23.77	8.425	7.25	1452	15	6.050

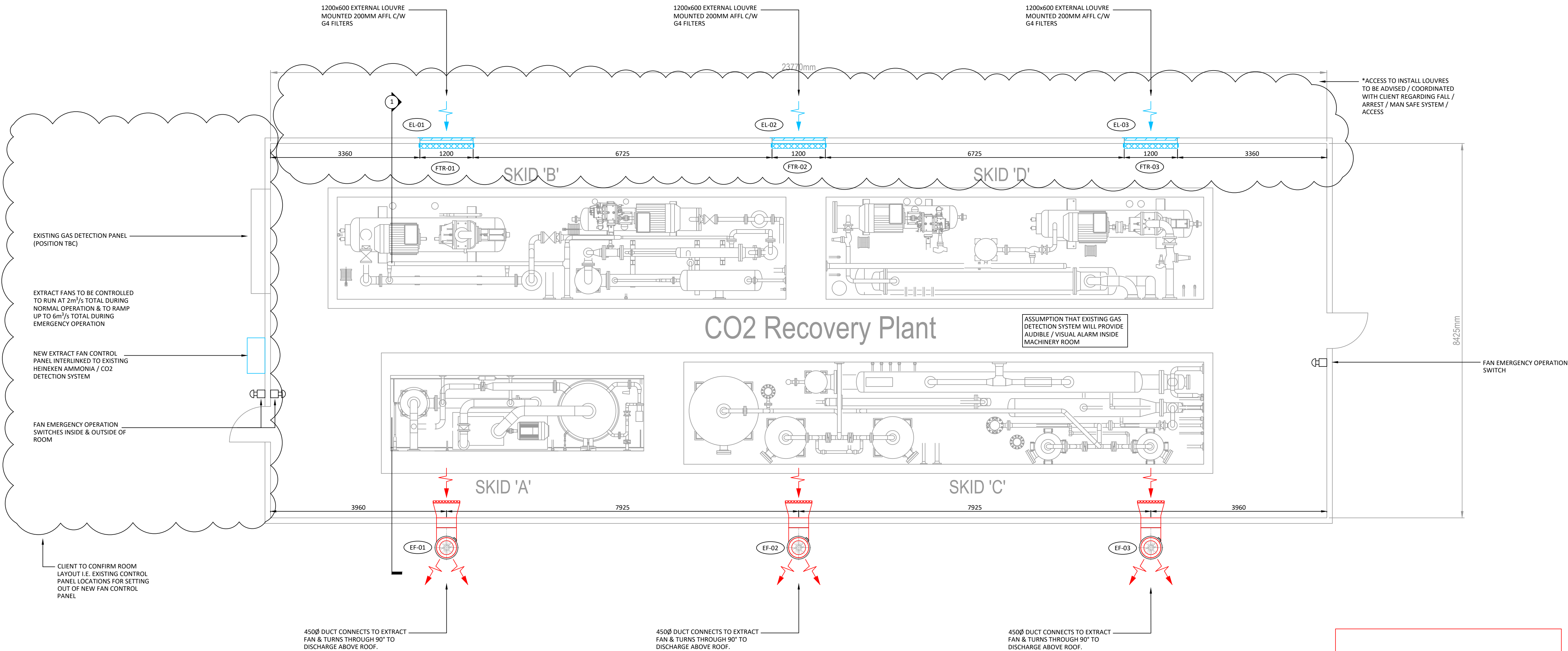
*Design flowrates to comply with BS EN 00378



2 LOUVRE & FILTER DETAIL
1:10



1 VENTILATION SECTION 1
1:50



0 VENTILATION LAYOUT
1:50

NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS, CONTRACT DOCUMENTATION, SCHEDULES AND SPECIFICATION FOR THE WORKS.
 - ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - DO NOT SCALE FROM THIS DRAWING AND ALL MEASUREMENTS TO BE CHECKED ON SITE.
- #### HVAC
- MECHANICAL VENT SHALL VENT TO OUTSIDE VIA VERTICAL DISCHARGE.
 - MECHANICAL VENTILATION SHALL BE INSTALLED SO THAT BLIND CORNERS ARE PREVENTED.
 - THE MOTOR TO POWER THE FAN SHALL BE INSTALLED OUTSIDE OF THE AIRFLOW OR THE MOTOR DESIGNED FOR EXPLOSIVE AREAS.
 - FANS TO BE PROVIDED WITH INVERTORS TO SWITCH BETWEEN NORMAL OPERATION & EMERGENCY OPERATION.
 - THE FAN SHALL BE LOCATED TO AVOID PRESSURISATION OF THE EXHAUST DUCTWORK.
 - THE FAN SHALL NOT CAUSE SPARKS TO OCCUR IF IT CONTACTS THE DUCT MATERIAL.
 - THE OUTLET FROM THE EXHAUST TO BE IN ACCORDANCE WITH LOCAL REGULATIONS.
 - DRAINAGE TO BE PROVIDE FROM BASE OF EXHAUST DUCT.
 - THE EXTRACT OUTLET SHALL BE AT HIGH LEVEL & THE SUPPLY AIR INTAKE AT LOW LEVEL.
 - THE SUPPLY AIR INTAKE SHALL BE POSITIONED WITH THE LOWER EDGE OF THE OPENING SHALL BE A HEIGHT OF 200MM OR LESS. THE UPPER EDGE OF THE UPPER OPENING SHALL BE HIGHER THAN THE DOOR OPENING.
 - THE MECHANICAL VENTILATION INSTALLATION SHALL BE IN ACCORDANCE WITH BS EN 00378.
 - EXTERIOR OPENINGS SHALL NOT BE SITUATED WITHIN 2M OF BUILDING EMERGENCY EXIT STAIRCASES OR OTHER BUILDING OPENINGS.

CONTROLS

- A NEW FAN CONTROL PANEL SHALL BE PROVIDED TO CONTROL THE FANS DURING NORMAL OPERATION (CONSTANT) & EMERGENCY OPERATION (INCREASED DUTY) MODES. THE NEW FAN CONTROL PANEL SHALL BE INTERLINKED TO THE EXISTING GAS DETECTION SYSTEM TO RECEIVE SIGNALS OF GAS DETECTION & TO RELAY SIGNAL OF FANS OPERATION.
- ACTIVATION OF THE MECHANICAL VENTILATION EMERGENCY OPERATION SHALL BE BY THE EXISTING GAS DETECTION SYSTEM.
- AT LEAST 2NO. EMERGENCY SWITCHES TO ACTIVATE THE MECHANICAL VENTILATION SHALL BE INSTALLED, ONE INSIDE & ONE OUTSIDE THE MACHINERY ROOM IN ACCORDANCE WITH EN ISO 13850.
- VENTILATION SHALL BE ACCORDANCE WITH NATIONAL REGULATIONS WITH A MINIMUM OF 4 AIR CHANGES PER HOUR AT ALL TIMES WHEN THE ROOM IS OCCUPIED. IN THE EVENT THAT THE NECESSARY VENTILATION RATE CANNOT BE ACHIEVED AN AUDIBLE OR VISUAL ALARM SHALL BE INITIATED AND, WHERE RELEVANT, ELECTRICAL SUPPLIES SHALL BE TERMINATED.
- WHEN GAS IS DETECTED VIA THE EXISTING GAS SENSORS / GAS DETECTION SYSTEM THE NEW FAN CONTROL PANEL WILL RECEIVE A SIGNAL & INCREASE THE FAN SPEED TO PROVIDE 15ACH PER HOUR UNTIL GAS IS NO LONGER DETECTED WITHIN THE SET LIMITS.

FANS ARE NOT ATEX RATED AS MOTORS ARE EXTERNAL TO MACHINERY ROOM & OUT OF AIR STREAM

THE FOLLOWING INTERFACES SHALL BE PROVIDED BY OTHERS:

- DATA
- FIRE ALARM
- CONTROL PANEL LINK
- BUILDERSWORK

-	PRELIMINARY	-
Rev	Amendment	Date

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Client	HEINEKEN		
Project Title	AMMONIA EXTRACT		
Drawing Title	MECHANICAL SERVICES VENTILATION LAYOUT		
Drawn By MT	Checked By SF	Designed By MT	Scale @ A3 1:50
BSI192 Document Number: C1827-KEY-XX-DR-M-57-001			RIBA Stage 4
Status PRELIMINARY	Revision -		

DRAFT