

TECHNICAL SUBMITTAL APPROVAL FORM

Subcontractor / Supplier: **Lorne Stewart**
Works Package: **F301**

Project: **Centre Point**

Tech Sub Ref No: **F301-TS-019**

Rev: 2

Date: 20/05/16

Title: **Retail Kitchen Air Handling Units**

Floor/
Location: Sub-Basement AHU Plantroom & Level 2 Podium of CPH

Specification
Reference: Section 7 of the Mechanical Specification rev 11

Other:

Submittal Notes:

All attenuators for these units will be submitted for approval via a separate tech sub.

The architects and structural engineers are deemed to have reviewed this and the previous revision of this tech sub and should be aware of the dimensions and weights of the units.

We have carried out the coordination of the plantrooms for the AHU'S listed in this tech sub and can confirm that they all fit within the spaces provided.

LS can confirm that Units R01 to 04 are all external units.

Signed: _____ On behalf of: **ARCHITECT** Date: _____

Status: **A B C** (circle one)

Comment:

Signed: _____ On behalf of: **GMJ** Date: _____

Status: **A B C** (circle one)

Comment:

Signed: _____ On behalf of: **CMT (GMJ)** Date: _____

Status: **A B C** (circle one)

Comment:

Signed: _____ On behalf of: **CMT (CP/(RMA)** Date: _____

Status: **A B C** (circle one)

Comment:

Signed: _____ On behalf of: **BMCE** Date: _____

FINAL STATUS: A B C (circle one)

1 - Technical Submission Front Page

Trade Contractor:	Lorne Stewart	From:	P. Stone
Trade Contractor Sub No:	F301	Date:	20-05-16

Approval of the following equipment is required:

Equipment:	Kitchen Air Handling Units	Make :	Halton
Equipment References:	AHU/R01 – R06	Areas Used:	As sheet above
Description:			
Planned On Site Date:	June 2016	Fully Compliant	Yes

Attached detail documents:

(Tick if included and Insert references within boxes identifying supporting documentation included within this submission)

Description	Tick	Doc Ref	Description	Tick	Doc Ref
Technical submission front sheet	✓		Interfaces and Dependencies Schedule	✓	
Specification & Technical Schedule Compliance	✓		Builders Work Requirements	✓	
Certified Performance Levels			O&M Information		
Manufacturers Information	✓		List of recommended spares	✓	
Manufacturers Drawings	✓		Other		

Signed by Trade Contractor:	<i>Paul Stone</i>
Date: 20.05.16	

Approval (Note that approval and status of all technical submissions is to be given through the Aconex process. This section is included for cases where it is expedient to provide a paper sign off of the front sheet however in all such cases the consultant must attach this form to the TS on Aconex)

Company	Sign	Date	Status	Comments
BMCE				

2 – Specification & Non- Compliance Schedule

The equipment offered is from the specified manufacturer and meets the intention of mechanical specification rev 11, in particular section 7, apart from the following items:

- Plug fans included not belt driven
- Sizes of the units vary from specification
- Weights of the units vary from specification



3 – Manufacturers Information

Enclosed



TECHNICAL SPECIFICATION SHEET

Version: HALTON-AHU 2.20

Version Date: 21 Nov 2012

PROJECT DETAILS			
Date	Project No.	Project Reference	Unit No.
25/03/2015	22917	CENTRE POINT	KITCHEN~2
Customer	Rev Date	Customer Reference	Air Volume
LORNE STEWART PLC.	25/03/2015	Kitchen Extract R04	6.8 m3/s
External Pressure		Exhaust Velocity	
35 Pa		2.38 m/s	

UNIT CONSTRUCTION			
Panel Thickness	Panel Insulation	Aluminium Framework	Frame Coating
0.00 mm			Unpainted
Panel External Sheet	Panel Internal Sheet	Base Frame	Unit Location
		100mm High Channel Base - 3mm Sheet Steel	Internal
Access Side	Unit Model	Roof Type	Reinforced Floor
Right		None	None

SECTION WEIGHTS AND DIMENSIONS				
Section No.	Length	Width	Height	Weight
A	1540 mm	1930 mm	1750 mm	529 kg
B	800 mm	1930 mm	1750 mm	668 kg
C	2060 mm	1930 mm	1750 mm	738 kg

OVERALL UNIT DIMENSIONS AND CENTRE OF GRAVITY				
Length	Width	Height	Weight	COG X
4400 mm	1930 mm	1750 mm	1935 kg	2339 mm

001 INLET SECTION				
Air Flow	Air Velocity	Pressure Drop	Model	Dimension
6.75 m ³ /s	2.38 m/s	0 Pa	110	1830 x 1550 mm
Damper	Flexible Connection	Louvre	Actuator	
Yes	No	No	No	

002 PANEL AND BAG FILTER							
Velocity	Class	Type	Model	Withdrawal	Qty Size 1	Qty Size 2	Length
2.57 m/s	G4	Panel	Pleated Disposable	Side	6x592x592	3x592x292	100 mm
2.57 m/s	F8	Bag	Microfine GF Bag 22"	Side	6x592x592	3x592x292	550 mm

002 ACCESSORIES							
Fitted Touch Screen							

002 ACCESS DOOR							
Dimension				Type			
580 x 1650 mm				Liftoff door			

003 HEPA FILTER							
Velocity	Class	Type	Model	Withdrawal	Qty/Size1	Qty/Size2	Length
2.57 m/s	H10	HEPA	HEPA	Front	6 / 592x592	3 / 592x292	300 mm

003 ACCESS DOOR							
Dimension				Type			
500 x 1650 mm				Liftoff door			

004 CARBON FILTER							
Velocity	Class	Type	Model	Withdrawal	Qty/Size1	Qty/Size2	Length
2.50 m/s	Carbon	Carbon	30mm Carbon Filter Matrix	Side	6 / 600x600	3 / 600x300	600 mm

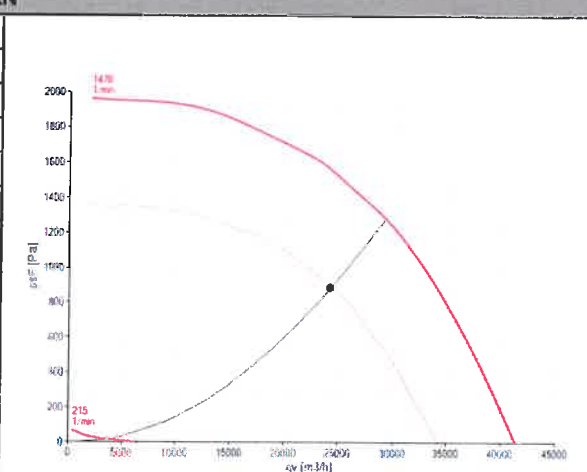
TECHNICAL SPECIFICATION SHEET

Version: HALTON-AHU 2.20

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Customer	Rev Date	Customer Reference	Air Volume
LORNE STEWART PLC.	25/03/2015	Kitchen Extract R04	6.8 m3/s
External Pressure		Exhaust Velocity	
35 Pa		2.38 m/s	

004 ACCESS DOOR	
Dimension	Type
700 x 1650 mm	Liftoff door

005 PLENUM FAN								
Fan Type	Wheel Type		Drive Type					
Plenum	Backward Curve		Direct Drive					
Model	Impeller Diam.		Abs Power					
00C-4DN.K7.1R-130549/0201	800 mm		9.13 kW					
Quantity	Duty % Per Fan		Poles					
1	Single Fan		4					
Air Flow Volume	Outlet Velocity		Motor Speed					
6.75 m³/s	0.0 m/s		1465 rpm					
Ext Static Pressure	Fan Speed		Power					
35.00 Pa	1201 rpm		15.00 kW					
Unit Static Pressure	Static Efficiency		FLC					
803.00 Pa	59.39 %		28.55 A					
Fan Total Pressure	VSD		Volts/Ph/Hz					
887 Pa	Automatic (DOL/Star delta)		380/3/50					
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Inlet (1)	46	67	71	77	83	85	77	75
Outlet (2)	53	71	79	88	88	90	81	77
(1) SWL INSIDE The Inlet Duct (dB)				(2) SWL INSIDE The Outlet Duct (dB)				

005 ACCESS DOOR	
Dimension	Type
780 x 1650 mm	Liftoff door

AHU ACOUSTIC DATA EXHAUST SECTION									
Frequency	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Overall dB(A)	Description
	71	79	88	88	90	81	77	94	Outlet Sound Power(dB)
	67	71	77	83	85	77	75	88	Inlet Sound Power(dB)
	71	79	88	88	90	81	77	94	Airborne sound power (dB)

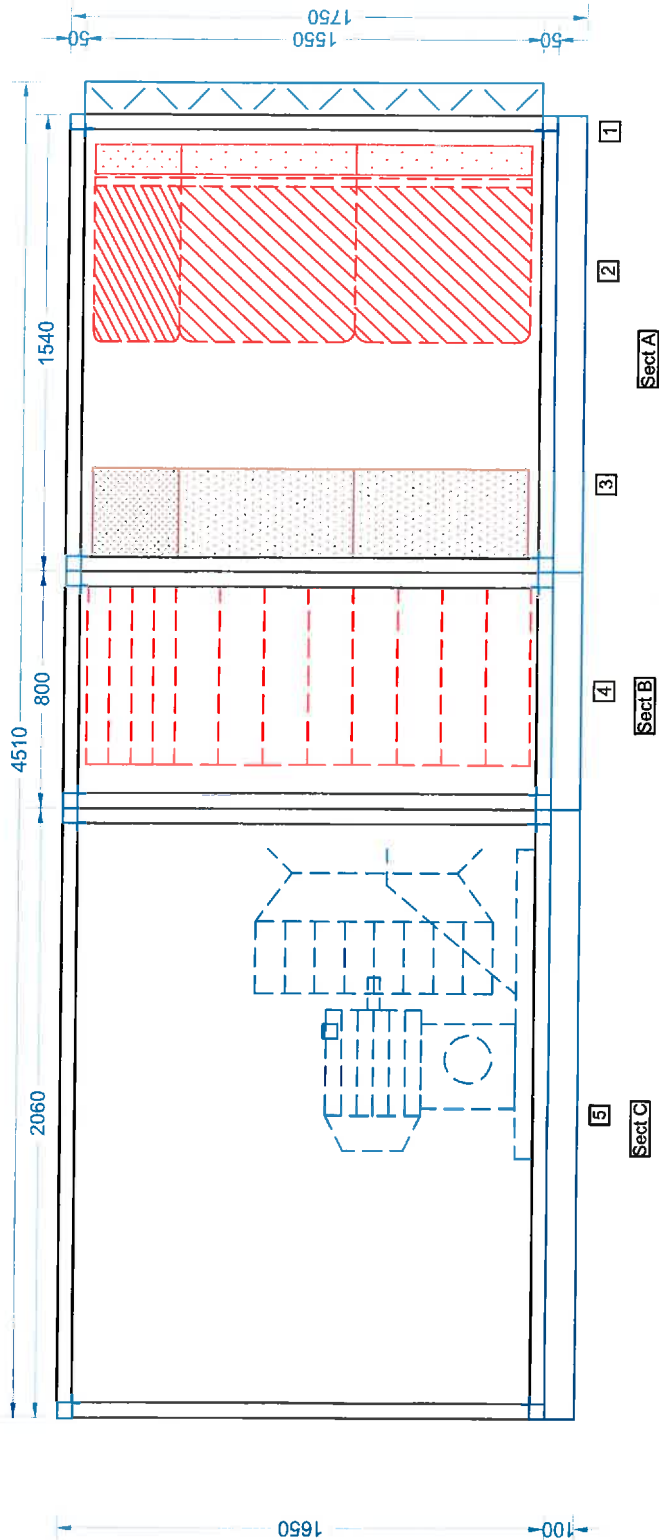
SPECIFIC FAN POWER			
Supply Fan		Extract Fan	
Filter Conditions		Filter Conditions	Clean
Absorbed Power	NaN Kw	Absorbed Power	5.05 Kw
Drive Efficiency	NaN%	Drive Efficiency	100%
Inverter Efficiency	NaN%	Inverter Efficiency	98%
Motor Efficiency	NaN%	Motor Efficiency	100%
Air Volume	m³/s	Air Volume	6.75 m³/s
AHU SFP	.76 Kw/m³/s		



4- Manufacturers Drawings

Enclosed





Section A: Weight +-5% = 529Kgs	
Components	
1 Inlet Section	mm
2 Panel & Bag Filter	840 mm
3 Hepa Filter	500 mm
Section B: Weight +-5% = 668Kgs	
Components	
4 Carbon Filter	700 mm
Section C: Weight +-5% = 738Kgs	
Components	
5 Plug Fan	1960 mm

ELEVATION

DO NOT SCALE:
ALL DIMENSIONS IN MILLIMETRES
HALTON COMPONENTS FABRICATED FROM 1.2mm
STAINLESS STEEL GRADE 304 S18 (EN58) TO BS 1449-PART 4
FOR THE MECHANICAL KITCHEN VENTILATION
SYSTEM (EXTRACT & MAKE UP AIR).
FORWARD & FOLDED CONSTRUCTION.
SITE JOINT

PLEASE NOTE:
TO COMPLY WITH BS-6173-2009
MANDATORY INTERLOCKS ARE NOW
REQUIRED FOR ALL MECHANICAL KITCHEN VENTILATION
SYSTEMS (EXTRACT & MAKE UP AIR).
PLEASE ASCERTAIN WHICH CONTRACTION
IS TO SUPPLY THESE INTERLOCKS

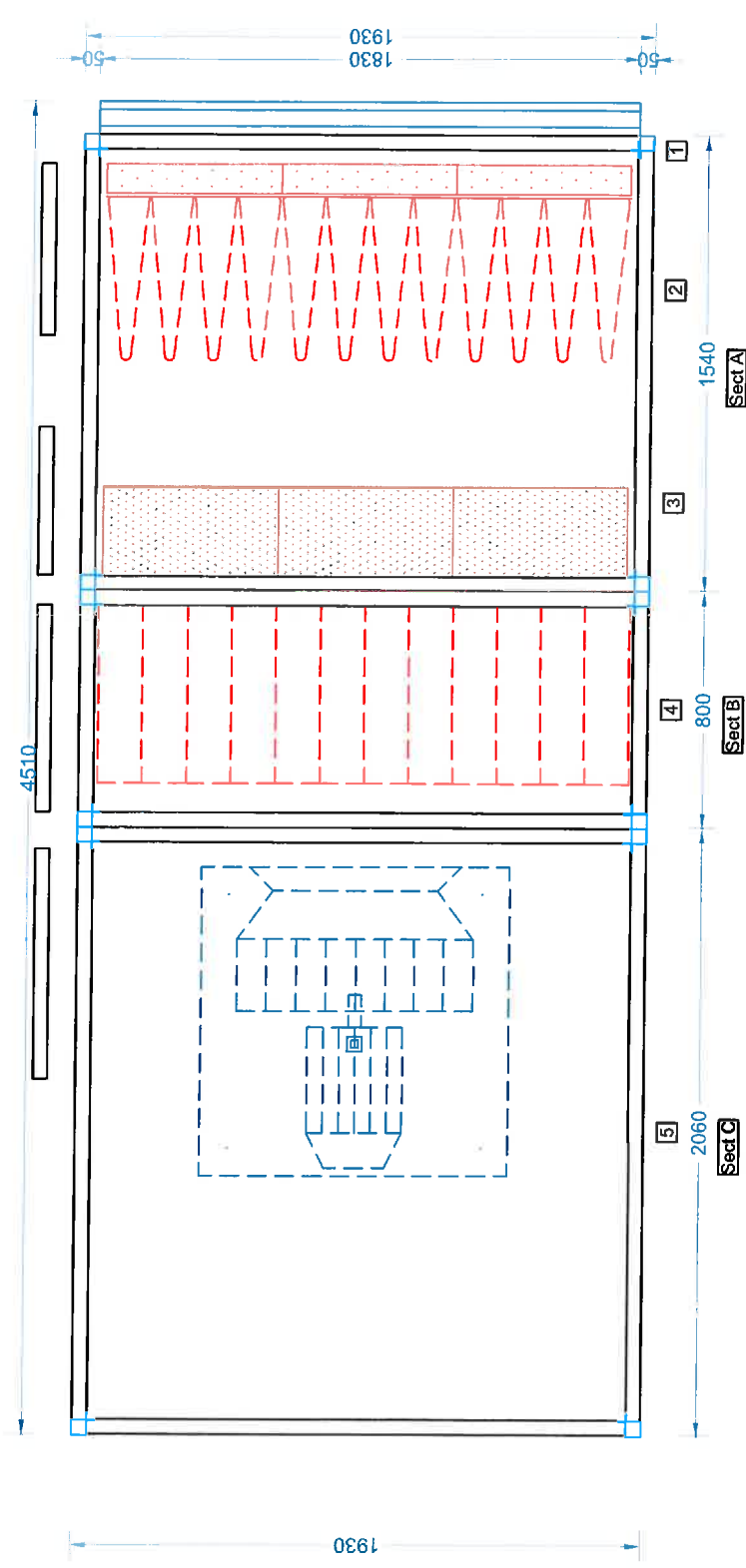
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REVISIONS

CLIENT: **LORNE STEWART PLC.**
PROJECT: **CENTRE POINT**

DRAWING CONTENT
/PST07
/6.75

QUOTATION ISSUE	
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TYPE	Kitchen Extract R04
CHECKED:	
SCALE:	1:20 @ A1
DATE:	
UNIT NO:	22917--



Section A: Weight $\pm 5\%$ = 529Kgs		
Components		
1 Inlet Section	mm	
2 Panel & Bag Filter	840 mm	
3 Hepa Filter	500 mm	
Section B: Weight $\pm 5\%$ = 668Kgs		
Components		
4 Carbon Filter	700 mm	
Section C: Weight $\pm 5\%$ = 738Kgs		
Components		
5 Plug Fan	1960 mm	

PLAN DECK

DO NOT SCALE:
ALL DIMENSIONS IN MILLIMETRES
HALTON COMPONENTS FABRICATED FROM 18G (1.2)
AND 16G (0.8) STEEL GRADES 304 & 316 (ENSURE TO BE 1449 PART 4
AND 1450 PART 4) WITH 100% TYPICAL FINISH, ALL WELDED
CONNECTIONS TO BE FULL PENETRATION BUTT JOINTS
CONFORMED TO BS EN 10204 (3.1) CERTIFICATE
FOR WELDING CONSTRUCTION
SITE JOINT

PLEASE NOTE:
TO COMPLY WITH BS-5732-2009
MANDATORY INTERLOCKS ARE NOW
REQUIRED FOR ALL KITCHEN EXTRACTS
THE MECHANICAL KITCHEN VENTILATION
SYSTEM EXTRACT & MAKE UP AIR.
PLEASE ASCERTAIN WHICH CONTRACTOR
IS TO SUPPLY THESE INTERLOCKS



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REVISIONS	

CLIENT: **LORNE STEWART PLC.**

PROJECT: **CENTRE POINT**

DRAWING CONTENT

/PST07
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QUOTATION ISSUE

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