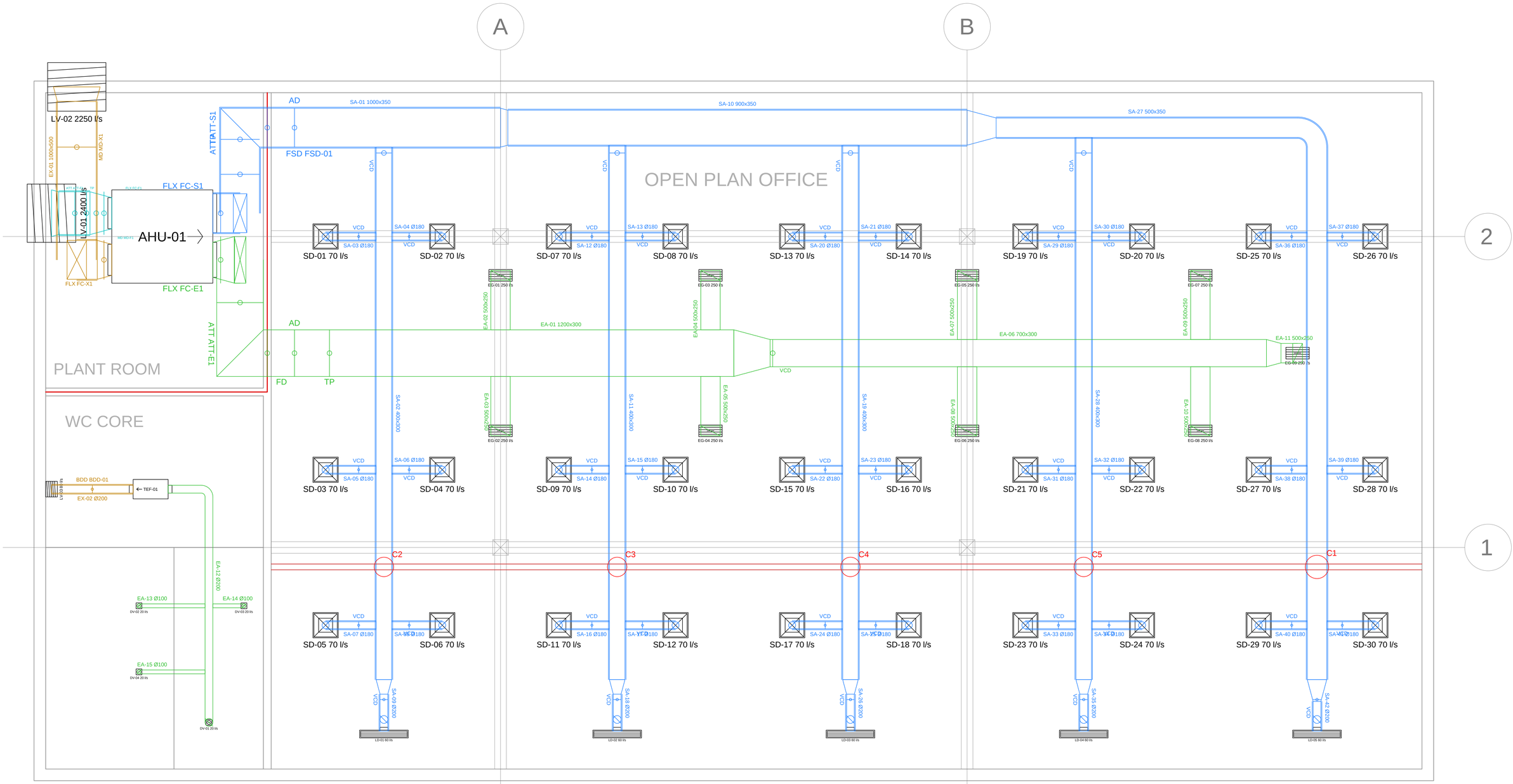


LEVEL 2 DUCTWORK, GENERAL ARRANGEMENT 1:50

LEGEND

- Supply air (AHU-01)
- Extract air (AHU-01, TEF-01)
- Fresh air to AHU-01
- Exhaust air to louvres
- Fire-compartment line (plant room)
- Clash mark (DUCTCLASH)
- Sprinkler main by others
- Beam edges and columns

KEY RESULTS

Item	Result (from the plugin's outputs)	Command
Ductwork	60 runs, 51 terminals, 2 units	DUCTUPDATE
Sheet metal	362.734 m2, 2293.83 kg (lengths 196.544 m)	DUCTSCHED
Supply index run	192.88 Pa: SA-01 > SA-10 > SA-27 > SA-28 > SA-29	DUCTPRESS
Leakage at 400 Pa, class B	162.36 l/s	DUCTLEAK
AHU-01 supply fan	2400.0 l/s at 597.2 Pa, SFP 1.00	DUCTFAN
AHU-01 extract fan	2250.0 l/s at 540.7 Pa, SFP 0.90	DUCTFAN
Design check	0 errors, 0 warnings, 0 notes (after the fixes)	DUCTCHECK
Condensation	0 of 60 runs at risk with 25 mm insulation	DUCTDEW
Balancing	0 far ends without a damper	DUCTBALANCE
Fire crossings	2, both with a damper (FSD-01 placed, FD inserted)	DUCTFIRE
Clashes, 25 mm	5, all with the sprinkler main by others	DUCTCLASH
Commissioning	51 of 51 terminals Pass (second reading)	DUCTCOMM
Cost (example rates)	61335.14 GBP	DUCTCOST

CLASHES (DUCTCLASH, 25 mm clearance)

Clash	What (DUCTCLASH)	X	Y	Level (mm)	Note
C1	SA-27 segment 2 and solid #32	33000.0	5500.0	3300	sprinkler main by others
C2	SA-02 segment 1 and solid #32	9000.0	5500.0	3300	sprinkler main by others
C3	SA-11 segment 1 and solid #32	15000.0	5500.0	3300	sprinkler main by others
C4	SA-19 segment 1 and solid #32	21000.0	5500.0	3300	sprinkler main by others
C5	SA-28 segment 1 and solid #32	27000.0	5500.0	3300	sprinkler main by others

FIRE-COMPARTMENT CROSSINGS (DUCTFIRE)

Run	Crossing	At (m)	X	Y	Damper
SA-01	1	6.05	6000.0	16800.0	FSD FSD-01
EA-01	1	5.85	6000.0	11000.0	FD

NOTES

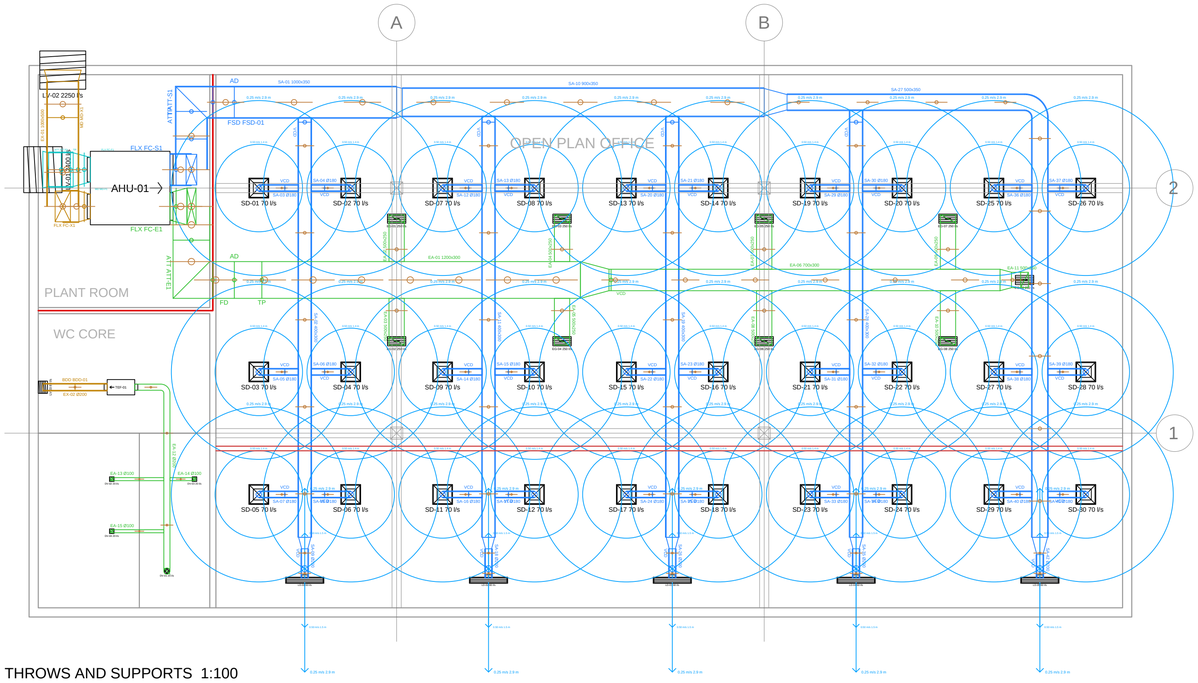
1. Fictional job, drawn for a product demonstration. Ducts, fittings, terminals, units, tags, accessory tags and clash marks are drawn by the HVAC Ductwork plugin; the tables repeat its own figures.
2. Levels (mm): FFL 0, ceiling 2700, soffit 4000, beams 3600. Centrelines: supply 3350 (25 mm insulation), extract 2950, WC extract 3225, fresh air at the AHU 900, AHU exhaust 3300.
3. AHU-01 draws fresh air through LV-01 (west wall, low) and exhausts through LV-02 (north wall, high).
4. Clashes C1 to C5: supply branches under the sprinkler main by others; for coordination.

Stratal CAD
cad.stratal.co.uk

TITLE
Fenwick House, Level 2 ductwork
General arrangement plan

PROJECT	DRAWN		
Fenwick House L2 (fictional)	Stratal CAD demo		
DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-001	1 of 8	1:50	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE



THROWS AND SUPPORTS 1:100

FAN DUTIES (DUCTFAN)

Unit	Fan	Flow (l/s)	Ductwork (Pa)	Unit (Pa)	Margin (Pa)	Fan (Pa)	Air power (W)	Input (W)	SFP (W/(l/s))	Check (limit typed)
AHU-01	Supply fan	2400.0	192.9	350.0	54.3	597.2	1433	2389	1.00	within 1.50
AHU-01	Extract fan	2250.0	141.6	350.0	49.2	540.7	1217	2028	0.90	within 1.50
TEF-01	Fan	80.0	161.4	60.0	22.1	243.6	19	49	0.61	above 0.50

FAN SELECTION (DUCTFANSEL)

Unit	Fan	Duty (l/s)	Duty (Pa)	Candidate	Op. (l/s)	Op. (Pa)	Flow/duty (%)	Eff. (%)	Speed (%)	Power (W)	Suitable
AHU-01	Supply fan	2400.0	597.2	PF-450	2524.8	660.9	105.2	71.3	95.1	2009	Yes
AHU-01	Supply fan	2400.0	597.2	PF-400	2206.9	505.0	92.0	64.7	108.7	2216	No (short)
AHU-01	Supply fan	2400.0	597.2	PF-500	2790.2	807.1	116.3	77.4	86.0	1853	No (oversized)
AHU-01	Supply fan	2400.0	597.2	PF-560	3045.6	961.7	126.9	84.8	78.8	1690	No (oversized)
AHU-01	Extract fan	2250.0	540.7	PF-450	2502.7	669.0	111.2	72.0	89.9	1691	Yes
AHU-01	Extract fan	2250.0	540.7	PF-400	2190.2	512.3	97.3	65.4	102.7	1861	No (short)
AHU-01	Extract fan	2250.0	540.7	PF-500	2765.2	816.7	122.9	78.0	81.4	1560	No (oversized)
AHU-01	Extract fan	2250.0	540.7	PF-560	3011.9	968.9	133.9	85.2	74.7	1428	No (oversized)
TEF-01	Fan	80.0	243.6	MF-200	89.8	307.1	112.3	32.9	89.1	59	Yes
TEF-01	Fan	80.0	243.6	MF-250	104.8	417.8	131.0	37.3	76.4	52	No (oversized)
TEF-01	Fan	80.0	243.6	PF-400	157.1	938.8	196.3	27.3	50.9	71	No (oversized)
TEF-01	Fan	80.0	243.6	PF-450	169.2	1089.4	211.5	26.1	47.3	75	No (oversized)
TEF-01	Fan	80.0	243.6	PF-500	176.9	1191.2	221.1	25.6	45.2	76	No (oversized)
TEF-01	Fan	80.0	243.6	PF-560	184.3	1292.3	230.3	22.9	43.4	85	No (oversized)

ALLOWED LEAKAGE AT 400 Pa (DUCTLEAK)

System	Surface (m2)	Flow (l/s)	Test (Pa)	Class	c (l/(s m2))	Allowed (l/s)	Of flow (%)
Exhaust	22.66	2250.0	400	B	0.0090	10.02	0.45
Extract	118.61	2250.0	400	B	0.0090	52.45	2.33
Fresh	4.84	2400.0	400	B	0.0090	2.14	0.09
Supply	221.07	2400.0	400	B	0.0090	97.75	4.07
Total	367.19					162.36	
Exhaust	22.66	2250.0	400	C	0.0030	3.34	0.15
Extract	118.61	2250.0	400	C	0.0030	17.48	0.78
Fresh	4.84	2400.0	400	C	0.0030	0.71	0.03
Supply	221.07	2400.0	400	C	0.0030	32.58	1.36
Total	367.19					54.12	

SUPPLY INDEX RUN, ITEM BY ITEM (DUCTPRESS)

Run	Item	Drop (Pa)
SA-01	Straight 12.05 m at 0.94 Pa/m	11.36
SA-01	Mitred bend 90° 1000x350 with vanes (in elevation)	9.87
SA-01	Mitred bend 90° 1000x350 with vanes (in elevation)	9.87
SA-01	Mitred bend 90° 1000x350 with vanes	9.87
SA-01	Flexible connection 1000x350 FC-S1	2.82
SA-01	Attenuator (silencer) 1000x350 ATT-S1	42.32
SA-01	Fire and smoke damper 1000x350 FSD-01	14.11
SA-01	Total	100.23
SA-10	Straight 12 m at 0.78 Pa/m	9.38
SA-10	Transition 1000x350 to 900x350, 187 mm	2.23
SA-10	Total	11.61
SA-27	Straight 23.2 m at 0.82 Pa/m	19.03
SA-27	Transition 900x350 to 500x350, 746 mm	1.81
SA-27	Bend 90° 500x350 R 500	5.42
SA-27	Total	26.26
SA-28	Straight 14.2 m at 0.57 Pa/m	8.09
SA-28	Branch 400x300 on 500x350	9.60
SA-28	Volume control damper 400x300	2.88
SA-28	Total	20.57
SA-29	Straight 1.85 m at 0.64 Pa/m	1.18
SA-29	Branch Ø180 on 400x300	4.54
SA-29	Bend 90° Ø180 R 180 (in elevation)	1.09
SA-29	Volume control damper Ø180	1.36
SA-29	Reducer Ø180 to Ø250, 150 mm	1.05
SA-29	Terminals	25.00
SA-29	Total	34.22
Index run	SA-01 > SA-10 > SA-27 > SA-28 > SA-29	192.88

SUPPORTS (DUCTHANGER)

Run	Hangers	Riser clamps	Floor stands	Rods
EA-01	10	1	1	M10
EA-02	1	0	0	M8
EA-03	1	0	0	M8
EA-04	1	0	0	M8
EA-05	1	0	0	M8
EA-06	6	0	0	M8
EA-07	1	0	0	M8
EA-08	1	0	0	M8
EA-09	1	0	0	M8
EA-10	1	0	0	M8
EA-11	1	0	0	M8
EA-12	3	0	0	M8
EA-13	1	0	0	M8
EA-14	1	0	0	M8
EA-15	1	0	0	M8
EX-01	2	1	1	M8
EX-02	1	0	0	M8
FA-01	0	0	1	-
SA-01	4	1	1	M8
SA-02	5	0	0	M8
SA-10	5	0	0	M8
SA-11	5	0	0	M8
SA-19	5	0	0	M8
SA-27	10	0	0	M8
SA-28	5	0	0	M8
35 spurs and tails	40	0	0	M8
Total	113 hangers	3 riser clamps	4 floor stands	
Rod M8	93.90 m			
Rod M10	18.00 m			

NOTES

1. Throws (DUCTTHROW, 0.5 and 0.25 m/s) and supports (DUCTHANGER, soffit 4000) as drawn by the plugin.
2. Fan duty: internal drops are the units' own (AHU-01 350 Pa, TEF-01 60 Pa, DUCTPROPS Internal); margin 10 %; efficiency 0.6 (AHU) and 0.4 (TEF); SFP limits typed 1.5 and 0.5 W/(l/s).
3. Fans from the demo's own fictional library (not a maker's data). Hanger spacings and rods are Stratal's defaults; follow the project specification.

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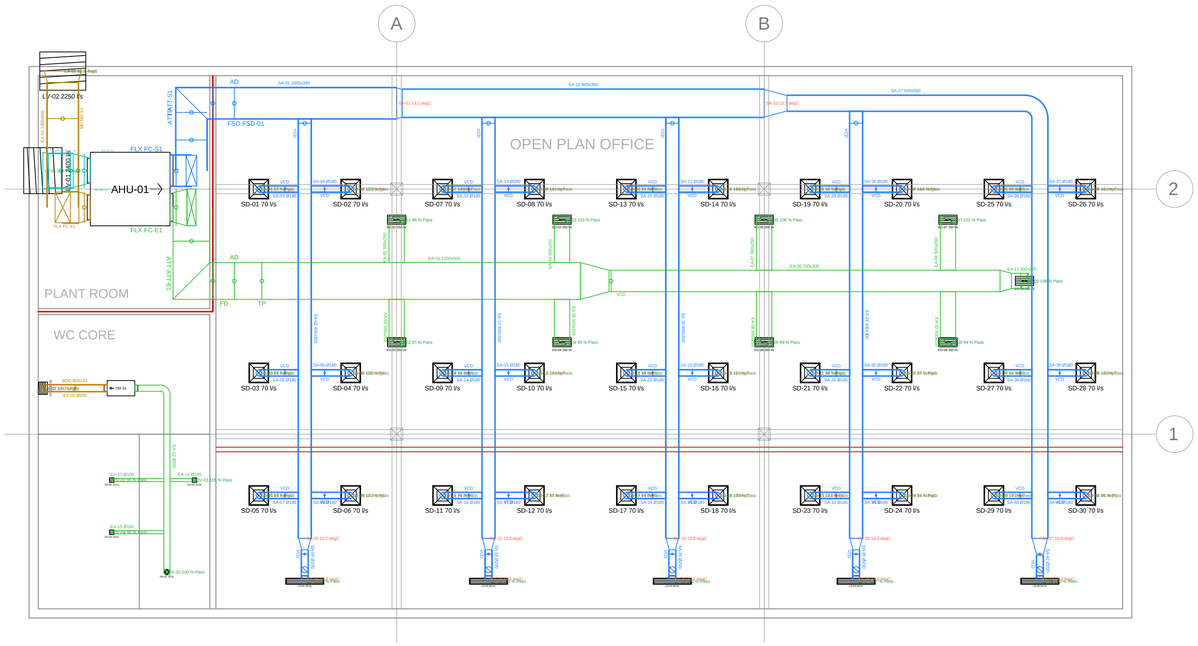
TITLE
Fenwick House, Level 2 ductwork
Throws, supports, fans and pressure

PROJECT	DRAWN
Fenwick House L2 (fictional)	Stratal CAD demo

DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-002	2 of 8	1:100	A1

SOFTWARE	DATE
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0	12 Nov 2026

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE



COMMISSIONING RESULTS AND AIR TEMPERATURES 1:100

DESIGN CHECK, FIRST PASS AND FINAL (DUCTCHECK 8 m/s, 1.5 Pa/m, 4:1, 4 m/s)

No.	Severity	Tag	Check	Value	Limit	Fixed by
1	Warning	EA-01	Velocity	10.59	8.00	mitred bends (vanes), DUCTSIZE 1200x300
2	Warning	EA-01	Pressure gradient	6.11	1.50	mitred bends (vanes), DUCTSIZE 1200x300
3	Warning	LV-01	Neck velocity	6.00	4.00	neck 1200x500 (DUCTPROPS Neck)
4	Warning	LV-02	Neck velocity	5.62	4.00	neck 1200x500 (DUCTPROPS Neck)
5	Warning	SA-01	Velocity	8.42	8.00	lining taken off (attenuator ATT-S1)
6	Warning	SA-01	Pressure gradient	3.11	1.50	lining taken off (attenuator ATT-S1)
Final			0 findings			

CONDENSATION (DUCTDEW, 24 degC 55 % RH; fresh air -4 degC)

Run	Air (degC)	Bare: surface (degC)	Needed (mm)	Insulated (mm)	Surface (degC)	Risk
SA-01	13.00	13.00	1	25	22.65	No
SA-10	13.16	14.17	1	25	22.67	No
SA-27	13.35	15.36	1	25	22.69	No
SA-02	13.16	14.17	1	25	22.67	No
SA-35	14.31	19.64	0	25	22.81	No
FA-01	-4.00	-4.00	8	25	20.56	No
EX-01	13.00	13.00	1	25	22.65	No
EX-02	13.00	13.00	1	25	22.65	No

AIR TEMPERATURES (DUCTHEAT)

Run	Air in (degC)	Air out (degC)	Gain (W)	U per m (W/(m K))
SA-01	13.00	13.16	469	3.56
SA-10	13.16	13.35	428	3.32
SA-27	13.35	13.83	563	2.33
SA-02	13.16	13.67	295	1.96
SA-11	13.35	13.85	290	1.96
SA-19	13.35	13.85	290	1.96
SA-28	13.83	14.31	277	1.96
SA-35	14.31	14.54	17	0.96
SA-42	13.83	14.08	18	0.96
EX-01	13.00	13.12	333	3.93
EX-02	13.00	13.23	22	0.96

COMMISSIONING RESULTS, SECOND READING (DUCTCOMM)

No.	Terminal	System	Design (l/s)	Measured (l/s)	%	Result	Damper
1	SD-01	Supply	70.0	68.0	97.1	Pass	VCD on SA-03
2	SD-02	Supply	70.0	72.0	102.9	Pass	VCD on SA-04
3	SD-03	Supply	70.0	66.0	94.3	Pass	VCD on SA-05
4	SD-04	Supply	70.0	74.0	105.7	Pass	VCD on SA-06
5	SD-05	Supply	70.0	69.0	98.6	Pass	VCD on SA-07
6	SD-06	Supply	70.0	71.0	101.4	Pass	VCD on SA-08
7	LD-01	Supply	60.0	56.0	93.3	Pass	VCD on SA-09
8	SD-07	Supply	70.0	76.0	108.6	Pass	VCD on SA-12
9	SD-08	Supply	70.0	71.0	101.4	Pass	VCD on SA-13
10	SD-09	Supply	70.0	67.0	95.7	Pass	VCD on SA-14
11	SD-10	Supply	70.0	73.0	104.3	Pass	VCD on SA-15
12	SD-11	Supply	70.0	69.0	98.6	Pass	VCD on SA-16
13	SD-12	Supply	70.0	68.0	97.1	Pass	VCD on SA-17
14	LD-02	Supply	60.0	62.0	103.3	Pass	VCD on SA-18
15	SD-13	Supply	70.0	66.0	94.3	Pass	VCD on SA-20
16	SD-14	Supply	70.0	74.0	105.7	Pass	VCD on SA-21
17	SD-15	Supply	70.0	69.0	98.6	Pass	VCD on SA-22
18	SD-16	Supply	70.0	71.0	101.4	Pass	VCD on SA-23
19	SD-17	Supply	70.0	66.0	94.3	Pass	VCD on SA-24
20	SD-18	Supply	70.0	76.0	108.6	Pass	VCD on SA-25
21	LD-03	Supply	60.0	61.0	101.7	Pass	VCD on SA-26
22	SD-19	Supply	70.0	67.0	95.7	Pass	VCD on SA-29
23	SD-20	Supply	70.0	73.0	104.3	Pass	VCD on SA-30
24	SD-21	Supply	70.0	69.0	98.6	Pass	VCD on SA-31
25	SD-22	Supply	70.0	68.0	97.1	Pass	VCD on SA-32
26	SD-23	Supply	70.0	72.0	102.9	Pass	VCD on SA-33
27	SD-24	Supply	70.0	66.0	94.3	Pass	VCD on SA-34
28	LD-04	Supply	60.0	64.0	106.7	Pass	VCD on SA-35
29	SD-25	Supply	70.0	69.0	98.6	Pass	VCD on SA-36
30	SD-26	Supply	70.0	71.0	101.4	Pass	VCD on SA-37
31	SD-27	Supply	70.0	66.0	94.3	Pass	VCD on SA-38
32	SD-28	Supply	70.0	76.0	108.6	Pass	VCD on SA-39
33	SD-29	Supply	70.0	71.0	101.4	Pass	VCD on SA-40
34	SD-30	Supply	70.0	67.0	95.7	Pass	VCD on SA-41
35	LD-05	Supply	60.0	62.0	103.3	Pass	VCD on SA-42
36	EG-01	Extract	250.0	245.0	98.0	Pass	own damper
37	EG-02	Extract	250.0	242.0	96.8	Pass	own damper
38	EG-03	Extract	250.0	258.0	103.2	Pass	own damper
39	EG-04	Extract	250.0	238.0	95.2	Pass	own damper
40	EG-05	Extract	250.0	265.0	106.0	Pass	own damper
41	EG-06	Extract	250.0	248.0	99.2	Pass	own damper
42	EG-07	Extract	250.0	255.0	102.0	Pass	own damper
43	EG-08	Extract	250.0	235.0	94.0	Pass	own damper
44	EG-09	Extract	250.0	270.0	108.0	Pass	own damper
45	LV-01	Fresh	2400.0	2424.0	101.0	Pass	MD on FA-01
46	LV-02	Exhaust	2250.0	2160.0	96.0	Pass	MD on EX-01
47	LV-03	Exhaust	80.0	83.0	103.8	Pass	
48	DV-01	Extract	20.0	20.0	100.0	Pass	own damper
49	DV-02	Extract	20.0	19.0	95.0	Pass	own damper
50	DV-03	Extract	20.0	21.0	105.0	Pass	own damper
51	DV-04	Extract	20.0	19.0	95.0	Pass	own damper

NOISE AT SELECTED TERMINALS (DUCTNOISE)

Terminal	Side	Lw (dB(A))	Lp (dB(A))	Check (40 dB(A) typed)
EG-01	Extract	64.4	56.2	above 40
EG-02	Extract	64.4	56.2	above 40
EG-03	Extract	64.4	56.2	above 40
EG-04	Extract	64.4	56.2	above 40
EG-05	Extract	62.7	54.5	above 40
EG-06	Extract	62.7	54.5	above 40
EG-07	Extract	62.7	54.5	above 40
EG-08	Extract	62.7	54.5	above 40
EG-09	Extract	65.5	57.2	above 40
LD-01	Supply	60.5	52.3	above 40
LD-05	Supply	57.4	49.2	above 40
SD-01	Supply	61.7	53.5	above 40
SD-02	Supply	61.7	53.5	above 40
SD-05	Supply	61.7	53.5	above 40
SD-06	Supply	61.7	53.5	above 40
SD-25	Supply	58.6	50.4	above 40
SD-30	Supply	58.6	50.4	above 40

FIRST READING: OUT OF TOLERANCE

Terminal	Design (l/s)	Measured (l/s)	%	Result	Damper
SD-17	70.0	59.0	84.3	Low	VCD on SA-24
EG-05	250.0	285.0	114.0	High	own damper

NOTES

1. Commissioning marks (DUCTCOMM Results, second reading) and supply air temperatures at the far ends (DUCTHEAT, 13 degC off the unit, 24 degC around) as drawn by the plugin.
2. Measured flows are EXAMPLE readings made up for the demo, not site measurements. Tolerance +/-10 %.
3. Noise: duct-borne fan noise only; DUCTNOISE does not yet take off the attenuators' insertion loss, so the levels are above the 40 dB(A) typed (see FINDINGS).

Stratal CAD

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TITLE
Fenwick House, Level 2 ductwork
Commissioning, checks and comfort

PROJECT	DRAWN		
Fenwick House L2 (fictional)	Stratal CAD demo		
DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-003	3 of 8	1:100	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

SUPPLY: AHU-01 SUPPLY SPIGOT

- SA-01 1000x350 2400 l/s [FLX,ATT,TP,FSD,AD]
  - SA-02 400x300 480 l/s [VCD]
    - SA-03 Ø180 70 l/s [VCD] > SD-01
    - SA-04 Ø180 70 l/s [VCD] > SD-02
    - SA-05 Ø180 70 l/s [VCD] > SD-03
    - SA-06 Ø180 70 l/s [VCD] > SD-04
    - SA-07 Ø180 70 l/s [VCD] > SD-05
    - SA-08 Ø180 70 l/s [VCD] > SD-06
    - SA-09 Ø200 60 l/s [VCD] > LD-01
  - SA-10 900x350 1920 l/s
    - SA-11 400x300 480 l/s [VCD]
      - SA-12 Ø180 70 l/s [VCD] > SD-07
      - SA-13 Ø180 70 l/s [VCD] > SD-08
      - SA-14 Ø180 70 l/s [VCD] > SD-09
      - SA-15 Ø180 70 l/s [VCD] > SD-10
      - SA-16 Ø180 70 l/s [VCD] > SD-11
      - SA-17 Ø180 70 l/s [VCD] > SD-12
      - SA-18 Ø200 60 l/s [VCD] > LD-02
    - SA-19 400x300 480 l/s [VCD]
      - SA-20 Ø180 70 l/s [VCD] > SD-13
      - SA-21 Ø180 70 l/s [VCD] > SD-14
      - SA-22 Ø180 70 l/s [VCD] > SD-15
      - SA-23 Ø180 70 l/s [VCD] > SD-16
      - SA-24 Ø180 70 l/s [VCD] > SD-17
      - SA-25 Ø180 70 l/s [VCD] > SD-18
      - SA-26 Ø200 60 l/s [VCD] > LD-03
    - SA-27 500x350 960 l/s
      - SA-28 400x300 480 l/s [VCD]
        - SA-29 Ø180 70 l/s [VCD] > SD-19
        - SA-30 Ø180 70 l/s [VCD] > SD-20
        - SA-31 Ø180 70 l/s [VCD] > SD-21
        - SA-32 Ø180 70 l/s [VCD] > SD-22
        - SA-33 Ø180 70 l/s [VCD] > SD-23
        - SA-34 Ø180 70 l/s [VCD] > SD-24
        - SA-35 Ø200 60 l/s [VCD] > LD-04
      - SA-36 Ø180 70 l/s [VCD] > SD-25
      - SA-37 Ø180 70 l/s [VCD] > SD-26
      - SA-38 Ø180 70 l/s [VCD] > SD-27
      - SA-39 Ø180 70 l/s [VCD] > SD-28
      - SA-40 Ø180 70 l/s [VCD] > SD-29
      - SA-41 Ø180 70 l/s [VCD] > SD-30
      - SA-42 Ø200 60 l/s [VCD] > LD-05

EXTRACT: AHU-01 RETURN SPIGOT

- EA-01 1200x300 2250 l/s [FLX,ATT,FD,AD,TP]
  - EA-02 500x250 250 l/s > EG-01
  - EA-03 500x250 250 l/s > EG-02
  - EA-04 500x250 250 l/s > EG-03
  - EA-05 500x250 250 l/s > EG-04
  - EA-06 700x300 1250 l/s [VCD]
    - EA-07 500x250 250 l/s > EG-05
    - EA-08 500x250 250 l/s > EG-06
    - EA-09 500x250 250 l/s > EG-07
    - EA-10 500x250 250 l/s > EG-08
    - EA-11 500x250 250 l/s > EG-09

FRESH AIR: AHU-01 INTAKE SPIGOT

- FA-01 1100x500 2400 l/s [FLX,MD,TP,ATT] > LV-01

EXHAUST: AHU-01 EXHAUST SPIGOT

- EX-01 1000x500 2250 l/s [FLX,MD] > LV-02

WC EXTRACT: TEF-01 RETURN SPIGOT

- EA-12 Ø200 80 l/s > DV-01
  - EA-13 Ø100 20 l/s > DV-02
  - EA-14 Ø100 20 l/s > DV-03
  - EA-15 Ø100 20 l/s > DV-04

WC EXHAUST: TEF-01 SUPPLY SPIGOT

- EX-02 Ø200 80 l/s [BDD] > LV-03

UNITS (DUCTSCHED)

Unit	Kind	Description	Size	Notes
AHU-01	AHU	Supply 1000x350, Return 900x300, Intake 800x500, Exhaust 800x500	2600x2400x1800	
TEF-01	Fan	Supply Ø200, Return Ø200	900x500x450	

ACCESSORY SCHEDULE (DUCTFIRE)

Code	Accessory	Tag	Run	System	Size	At (m)	Zeta	Fire rated
FSD	Fire and smoke damper	FSD-01	SA-01	Supply	1000x350	6.05	0.50	Yes
FD	Fire damper	-	EA-01	Extract	1200x300	5.85	0.40	Yes
AD	Access door	-	EA-01	Extract	1200x300	6.55	0.00	No
AD	Access door	-	SA-01	Supply	1000x350	6.75	0.00	No
ATT	Attenuator (silencer)	ATT-E1	EA-01	Extract	1200x300	3.85	1.50	No
ATT	Attenuator (silencer)	ATT-F1	FA-01	Fresh	1100x500	0.95	1.50	No
ATT	Attenuator (silencer)	ATT-S1	SA-01	Supply	1000x350	4.15	1.50	No
BDD	Backdraught damper	BDD-01	EX-02	Exhaust	Ø200	1.05	0.60	No
FLX	Flexible connection	FC-E1	EA-01	Extract	1200x300	0.20	0.10	No
FLX	Flexible connection	FC-X1	EX-01	Exhaust	1000x500	0.20	0.10	No
FLX	Flexible connection	FC-F1	FA-01	Fresh	1100x500	0.20	0.10	No
FLX	Flexible connection	FC-S1	SA-01	Supply	1000x350	0.20	0.10	No
MD	Motorised damper	MD-X1	EX-01	Exhaust	1000x500	6.20	0.30	No
MD	Motorised damper	MD-F1	FA-01	Fresh	1100x500	0.40	0.30	No
TP	Test point	-	EA-01	Extract	1200x300	7.45	0.00	No
TP	Test point	-	FA-01	Fresh	1100x500	0.65	0.00	No
TP	Test point	-	SA-01	Supply	1000x350	5.05	0.00	No
VCD	Volume control damper	-	EA-06	Extract	700x300	1.00	0.30	No
VCD	Volume control damper	-	SA-02	Supply	400x300	0.65	0.30	No
VCD	Volume control damper	-	SA-03	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-04	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-05	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-06	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-07	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-08	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-09	Supply	Ø200	0.51	0.30	No
VCD	Volume control damper	-	SA-11	Supply	400x300	0.65	0.30	No
VCD	Volume control damper	-	SA-12	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-13	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-14	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-15	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-16	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-17	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-18	Supply	Ø200	0.51	0.30	No
VCD	Volume control damper	-	SA-19	Supply	400x300	0.65	0.30	No
VCD	Volume control damper	-	SA-20	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-21	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-22	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-23	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-24	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-25	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-26	Supply	Ø200	0.51	0.30	No
VCD	Volume control damper	-	SA-28	Supply	400x300	0.65	0.30	No
VCD	Volume control damper	-	SA-29	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-30	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-31	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-32	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-33	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-34	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-35	Supply	Ø200	0.51	0.30	No
VCD	Volume control damper	-	SA-36	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-37	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-38	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-39	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-40	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-41	Supply	Ø180	0.65	0.30	No
VCD	Volume control damper	-	SA-42	Supply	Ø200	0.51	0.30	No

LOSS COEFFICIENTS IN THE DRAWING (DUCTCOEF)

Item	Value (zeta)
Radiused bends at 90 deg, by ratio	0.5: 0.9; 0.75: 0.45; 1: 0.3; 1.5: 0.22; 2: 0.2
Round bend factor	0.8
Mitred bend with vanes	0.35
Bend angle exponent	1
Contraction	0.1
Expansion factor	1
Tee branch	1
VCD Volume control damper	0.3
FD Fire damper	0.4
FSD Fire and smoke damper	0.5
MD Motorised damper	0.3
AD Access door	0
SD Smoke damper	0.4
BDD Backdraught damper	0.6
ATT Attenuator (silencer)	1.5
FLX Flexible connection	0.1
DH Duct heater battery	1.2
CC Duct cooling coil	2
FLT Duct filter section	3
TP Test point	0

NOTES

1. System schematic drawn by the demo script from the plugin's own run data: each run, its size, flow, accessories and the terminal at its end, in the order DUCTTAG All numbered them along each tree.
2. Accessory schedule from DUCTFIRE's damper schedule (every accessory on every run).

Stratal CAD

cad.stratal.co.uk

TITLE
Fenwick House, Level 2 ductwork
System schematic and accessories

PROJECT	DRAWN		
Fenwick House L2 (fictional)	Stratal CAD demo		
DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-004	4 of 8	1:1	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

DUCT SCHEDULE (DUCTSCHED, DUCTPRESS)

Run	System	Size	Thk	Length (m)	Sheet (m2)	Weight (kg)	Insul. (m2)	Lining (m2)	Flow (l/s)	Vel. (m/s)	Run drop (Pa)	From unit (Pa)
SA-01	Supply	1000x350	1.00	12.050	32.535	255.40	33.740	0.000	2400.0	6.86	100.23	100.23
SA-02	Supply	400x300	0.60	13.700	19.180	90.34	20.550	0.000	480.0	4.00	20.57	120.80
SA-03	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	155.02
SA-04	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	155.02
SA-05	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	155.02
SA-06	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	155.02
SA-07	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	155.02
SA-08	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	155.02
SA-09	Supply	Ø200	0.50	0.652	0.410	1.61	0.461	0.000	60.0	1.91	32.45	153.25
SA-10	Supply	900x350	1.00	11.813	29.533	231.84	30.715	0.000	1920.0	6.10	11.61	111.84
SA-11	Supply	400x300	0.60	13.750	19.250	90.67	20.625	0.000	480.0	4.00	20.57	132.41
SA-12	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-13	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-14	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-15	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-16	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-17	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-18	Supply	Ø200	0.50	0.652	0.410	1.61	0.461	0.000	60.0	1.91	32.45	164.85
SA-19	Supply	400x300	0.60	13.750	19.250	90.67	20.625	0.000	480.0	4.00	20.57	132.41
SA-20	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-21	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-22	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-23	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-24	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-25	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	166.63
SA-26	Supply	Ø200	0.50	0.652	0.410	1.61	0.461	0.000	60.0	1.91	32.45	164.85
SA-27	Supply	500x350	0.80	21.454	36.471	229.04	38.616	0.000	960.0	5.49	26.26	138.09
SA-28	Supply	400x300	0.60	13.950	19.530	91.99	20.925	0.000	480.0	4.00	20.57	158.66
SA-29	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	192.88
SA-30	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	192.88
SA-31	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	192.88
SA-32	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	192.88
SA-33	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	192.88
SA-34	Supply	Ø180	0.50	1.140	0.645	2.53	0.734	0.000	70.0	2.75	34.22	192.88
SA-35	Supply	Ø200	0.50	0.652	0.410	1.61	0.461	0.000	60.0	1.91	32.45	191.11
SA-36	Supply	Ø180	0.50	1.090	0.616	2.42	0.702	0.000	70.0	2.75	34.22	172.32
SA-37	Supply	Ø180	0.50	1.090	0.616	2.42	0.702	0.000	70.0	2.75	34.22	172.32
SA-38	Supply	Ø180	0.50	1.090	0.616	2.42	0.702	0.000	70.0	2.75	34.22	172.32
SA-39	Supply	Ø180	0.50	1.090	0.616	2.42	0.702	0.000	70.0	2.75	34.22	172.32
SA-40	Supply	Ø180	0.50	1.090	0.616	2.42	0.702	0.000	70.0	2.75	34.22	172.32
SA-41	Supply	Ø180	0.50	1.090	0.616	2.42	0.702	0.000	70.0	2.75	34.22	172.32
SA-42	Supply	Ø200	0.50	0.465	0.292	1.15	0.329	0.000	60.0	1.91	32.45	170.54
Subtotal	Supply			137.439	196.850	1162.75	209.801	0.000				
EA-01	Extract	1200x300	1.00	17.290	51.871	407.18	0.000	0.000	2250.0	6.25	91.17	91.17
EA-02	Extract	500x250	0.80	1.150	1.725	10.83	0.000	1.495	250.0	2.78	27.53	118.70
EA-03	Extract	500x250	0.80	1.150	1.725	10.83	0.000	1.495	250.0	2.78	27.53	118.70
EA-04	Extract	500x250	0.80	1.150	1.725	10.83	0.000	1.495	250.0	2.78	27.53	118.70
EA-05	Extract	500x250	0.80	1.150	1.725	10.83	0.000	1.495	250.0	2.78	27.53	118.70
EA-06	Extract	700x300	0.80	12.767	25.534	160.35	0.000	0.000	1250.0	5.95	22.86	114.03
EA-07	Extract	500x250	0.80	1.400	2.100	13.19	0.000	1.820	250.0	2.78	27.53	141.56
EA-08	Extract	500x250	0.80	1.400	2.100	13.19	0.000	1.820	250.0	2.78	27.53	141.56
EA-09	Extract	500x250	0.80	1.400	2.100	13.19	0.000	1.820	250.0	2.78	27.53	141.56
EA-10	Extract	500x250	0.80	1.400	2.100	13.19	0.000	1.820	250.0	2.78	27.53	141.56
EA-11	Extract	500x250	0.80	0.177	0.265	1.67	0.000	0.230	250.0	2.78	23.60	137.63
EA-12	Extract	Ø200	0.50	6.588	4.140	16.25	0.000	0.000	80.0	2.55	80.55	80.55
EA-13	Extract	Ø100	0.50	2.025	0.636	2.50	0.000	0.000	20.0	2.55	47.52	128.07
EA-14	Extract	Ø100	0.50	1.125	0.353	1.39	0.000	0.000	20.0	2.55	46.48	127.02
EA-15	Extract	Ø100	0.50	2.025	0.636	2.50	0.000	0.000	20.0	2.55	47.52	128.07
Subtotal	Extract			52.197	98.735	687.92	0.000	13.490				
FA-01	Fresh	1100x500	1.00	0.804	2.571	20.19	2.652	2.411	2400.0	5.08	74.28	74.28
Subtotal	Fresh			0.804	2.571	20.19	2.652	2.411				
EX-01	Exhaust	1000x500	1.00	4.004	12.011	94.28	12.411	11.210	2250.0	5.26	64.54	64.54
EX-02	Exhaust	Ø200	0.50	2.100	1.319	5.18	1.484	0.000	80.0	2.55	33.35	33.35
Subtotal	Exhaust			6.104	13.330	99.46	13.896	11.210				
Total	all systems			196.544	362.734	2293.83	226.348	27.111				

TERMINAL SCHEDULE (DUCTSCHED, DUCTTHROW)

Tag	Type	Face	Neck	Flow (l/s)	Drop (Pa)	Neck vel. (m/s)	Throw 0.5 / 0.25 m/s (m)
DV-01	Extract disc valve	150x150	Ø100	20.0	40.0	-	-
DV-02	Extract disc valve	150x150	Ø100	20.0	40.0	-	-
DV-03	Extract disc valve	150x150	Ø100	20.0	40.0	-	-
DV-04	Extract disc valve	150x150	Ø100	20.0	40.0	-	-
EG-01	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-02	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-03	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-04	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-05	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-06	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-07	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-08	Extract grille	600x300	500x250	250.0	20.0	-	-
EG-09	Extract grille	600x300	500x250	250.0	20.0	-	-
LD-01	Linear slot diffuser	1200x150, plenum 300	Ø200	60.0	30.0	1.91	1.46 / 2.92
LD-02	Linear slot diffuser	1200x150, plenum 300	Ø200	60.0	30.0	1.91	1.46 / 2.92
LD-03	Linear slot diffuser	1200x150, plenum 300	Ø200	60.0	30.0	1.91	1.46 / 2.92
LD-04	Linear slot diffuser	1200x150, plenum 300	Ø200	60.0	30.0	1.91	1.46 / 2.92
LD-05	Linear slot diffuser	1200x150, plenum 300	Ø200	60.0	30.0	1.91	1.46 / 2.92
LV-01	Weather louvre	1500x1250	1200x500	2400.0	40.0	-	-
LV-02	Weather louvre	1500x1250	1200x500	2250.0	40.0	-	-
LV-03	Weather louvre	400x300	Ø200	80.0	30.0	-	-
SD-01	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-02	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-03	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-04	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-05	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-06	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-07	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-08	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-09	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-10	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-11	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-12	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-13	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-14	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-15	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-16	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-17	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-18	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-19	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-20	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-21	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-22	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-23	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-24	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-25	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-26	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-27	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-28	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-29	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86
SD-30	Square ceiling diffuser	600x600, plenum 300	Ø250	70.0	25.0	1.43	1.43 / 2.86

SUPPLY INDEX RUN (DUCTPRESS)

Run	Item	Drop (Pa)
SA-01	Straight 12.05 m at 0.94 Pa/m	11.36
SA-01	Mitred bend 90° 1000x350 with vanes (in elevation)	9.87
SA-01	Mitred bend 90° 1000x350 with vanes (in elevation)	9.87
SA-01	Mitred bend 90° 1000x350 with vanes	9.87
SA-01	Flexible connection 1000x350 FC-S1	2.82
SA-01	Attenuator (silencer) 1000x350 ATT-S1	42.32
SA-01	Fire and smoke damper 1000x350 FSD-01	14.11
SA-01	Total	100.23
SA-10	Straight 12 m at 0.78 Pa/m	9.38
SA-10	Transition 1000x350 to 900x350, 187 mm	2.23
SA-10	Total	11.61
SA-27	Straight 23.2 m at 0.82 Pa/m	19.03
SA-27	Transition 900x350 to 500x350, 746 mm	1.81
SA-27	Bend 90° 500x350 R 500	5.42
SA-27	Total	26.26
SA-28	Straight 14.2 m at 0.57 Pa/m	8.09
SA-28	Branch 400x300 on 500x350	9.60
SA-28	Volume control damper 400x300	2.88
SA-28	Total	20.57
SA-29	Straight 1.85 m at 0.64 Pa/m	1.18
SA-29	Branch Ø180 on 400x300	4.54
SA-29	Bend 90° Ø180 R 180 (in elevation)	1.09
SA-29	Volume control damper Ø180	1.36
SA-29	Reducer Ø180 to Ø250, 150 mm	1.05
SA-29	Terminals	25.00
SA-29	Total	34.22
Index run	SA-01 > SA-10 > SA-27 > SA-28 > SA-29	192.88

NOTES

1. Schedules as the plugin wrote them (DUCTSCHED, DUCTPRESS, DUCTTHROW); sheet areas and weights from the flat patterns; insulation and lining on the straight lengths.

Stratal CAD
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TITLE
Fenwick House, Level 2 ductwork
Duct and terminal schedules

PROJECT	DRAWN		
Fenwick House L2 (fictional)	Stratal CAD demo		
DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-005	5 of 8	1:1	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

COST ESTIMATE FROM THE EXAMPLE RATES (DUCTCOST)

System	Item	Key	Qty	Unit	Rate (GBP)	Amount (GBP)
Exhaust	sheet	Galvanised steel	22.66	m2	48.00	1087.89
Exhaust	insulation	*	13.90	m2	22.00	305.70
Exhaust	lining	*	11.21	m2	31.00	347.51
Exhaust	fitting	bend	2	each	38.00	76.00
Exhaust	fitting	transition	2	each	45.00	90.00
Exhaust	accessory	BDD	1	each	95.00	95.00
Exhaust	accessory	FLX	1	each	65.00	65.00
Exhaust	accessory	MD	1	each	380.00	380.00
Exhaust	terminal	louvre	2	each	420.00	840.00
Exhaust	Subtotal					3287.10
Extract	sheet	Galvanised steel	118.61	m2	48.00	5693.52
Extract	lining	*	13.49	m2	31.00	418.18
Extract	fitting	bend	17	each	38.00	646.00
Extract	fitting	tee	11	each	34.00	374.00
Extract	fitting	transition	4	each	45.00	180.00
Extract	accessory	AD	1	each	28.00	28.00
Extract	accessory	ATT	1	each	890.00	890.00
Extract	accessory	FD	1	each	210.00	210.00
Extract	accessory	FLX	1	each	65.00	65.00
Extract	accessory	TP	1	each	9.00	9.00
Extract	accessory	VCD	1	each	46.00	46.00
Extract	terminal	disc-valve	4	each	18.00	72.00
Extract	terminal	extract-grille	9	each	74.00	666.00
Extract	Subtotal					9297.70
Fresh	sheet	Galvanised steel	4.84	m2	48.00	232.18
Fresh	insulation	*	2.65	m2	22.00	58.34
Fresh	lining	*	2.41	m2	31.00	74.73
Fresh	fitting	transition	2	each	45.00	90.00
Fresh	accessory	ATT	1	each	890.00	890.00
Fresh	accessory	FLX	1	each	65.00	65.00
Fresh	accessory	MD	1	each	380.00	380.00
Fresh	accessory	TP	1	each	9.00	9.00
Fresh	terminal	louvre	1	each	420.00	420.00
Fresh	Subtotal					2219.25
Supply	sheet	Galvanised steel	221.07	m2	48.00	10611.47
Supply	insulation	*	209.80	m2	22.00	4615.61
Supply	fitting	bend	34	each	38.00	1292.00
Supply	fitting	offset	5	each	52.00	260.00
Supply	fitting	tee	34	each	34.00	1156.00
Supply	fitting	transition	37	each	45.00	1665.00
Supply	accessory	AD	1	each	28.00	28.00
Supply	accessory	ATT	1	each	890.00	890.00
Supply	accessory	FLX	1	each	65.00	65.00
Supply	accessory	FSD	1	each	640.00	640.00
Supply	accessory	TP	1	each	9.00	9.00
Supply	accessory	VCD	39	each	46.00	1794.00
Supply	terminal	ceiling-diffuser	30	each	118.00	3540.00
Supply	terminal	slot-diffuser	5	each	165.00	825.00
Supply	Subtotal					27391.08
Units	unit	AHU	1	each	18500.00	18500.00
Units	unit	Fan	1	each	640.00	640.00
Units	Subtotal					19140.00
Total	example rates					61335.14

EXAMPLE RATES KEPT IN THE DRAWING

Item	Key	Rate (GBP)
sheet	Galvanised steel	48.00
sheet	*	52.00
insulation	*	22.00
lining	*	31.00
radial	*	9.50
fitting	bend	38.00
fitting	transition	45.00
fitting	tee	34.00
fitting	offset	52.00
fitting	*	40.00
accessory	FLX	65.00
accessory	ATT	890.00
accessory	TP	9.00
accessory	FSD	640.00
accessory	AD	28.00
accessory	VCD	46.00
accessory	FD	210.00
accessory	MD	380.00
accessory	BDD	95.00
accessory	*	50.00
terminal	ceiling-diffuser	118.00
terminal	slot-diffuser	165.00
terminal	extract-grille	74.00
terminal	disc-valve	18.00
terminal	louvre	420.00
terminal	*	90.00
unit	AHU	18500.00
unit	Fan	640.00
unit	*	1000.00

BALANCING (DUCTBALANCE, 10 Pa tolerance)

Tree	Far end	Path (Pa)	Index path (Pa)	To absorb (Pa)	Damper on its path	Action
EA-01	EA-02	118.7	141.6	22.9	EA-02 terminal	set the damper
EA-01	EA-03	118.7	141.6	22.9	EA-03 terminal	set the damper
EA-01	EA-04	118.7	141.6	22.9	EA-04 terminal	set the damper
EA-01	EA-05	118.7	141.6	22.9	EA-05 terminal	set the damper
EA-01	EA-11	137.6	141.6	3.9	EA-11 terminal	set the damper
EA-01	EA-07	141.6	141.6	0.0	EA-07 terminal	index path
EA-01	EA-08	141.6	141.6	0.0	EA-08 terminal	index path
EA-01	EA-09	141.6	141.6	0.0	EA-09 terminal	index path
EA-01	EA-10	141.6	141.6	0.0	EA-10 terminal	index path
EA-12	EA-12	80.5	128.1	47.5	EA-12 terminal	set the damper
EA-12	EA-14	127.0	128.1	1.0	EA-14 terminal	set the damper
EA-12	EA-13	128.1	128.1	0.0	EA-13 terminal	index path
EA-12	EA-15	128.1	128.1	0.0	EA-15 terminal	index path
EX-01	EX-01	64.5	64.5	0.0	EX-01	index path
EX-02	EX-02	33.4	33.4	0.0		index path
FA-01	FA-01	74.3	74.3	0.0	FA-01	index path
SA-01	SA-09	153.2	192.9	39.6	SA-09	set the damper
SA-01	SA-03	155.0	192.9	37.9	SA-03	set the damper
SA-01	SA-42	170.5	192.9	22.3	SA-42	set the damper
SA-01	SA-29	192.9	192.9	0.0	SA-29	index path

COST BY SYSTEM (DUCTCOST, EXAMPLE RATES)

System	Subtotal (GBP, example rates)
Exhaust	3287.10
Extract	9297.70
Fresh	2219.25
Supply	27391.08
Units	19140.00
Total	61335.14

NOTES

1. EXAMPLE RATES: the rates are made up for this demo (GBP, supply and fix); no prices ship with Stratal and these are not market prices or a quote.
2. Quantities are the plugin's (DUCTSCHED areas; insulation and lining on straight lengths; items each).

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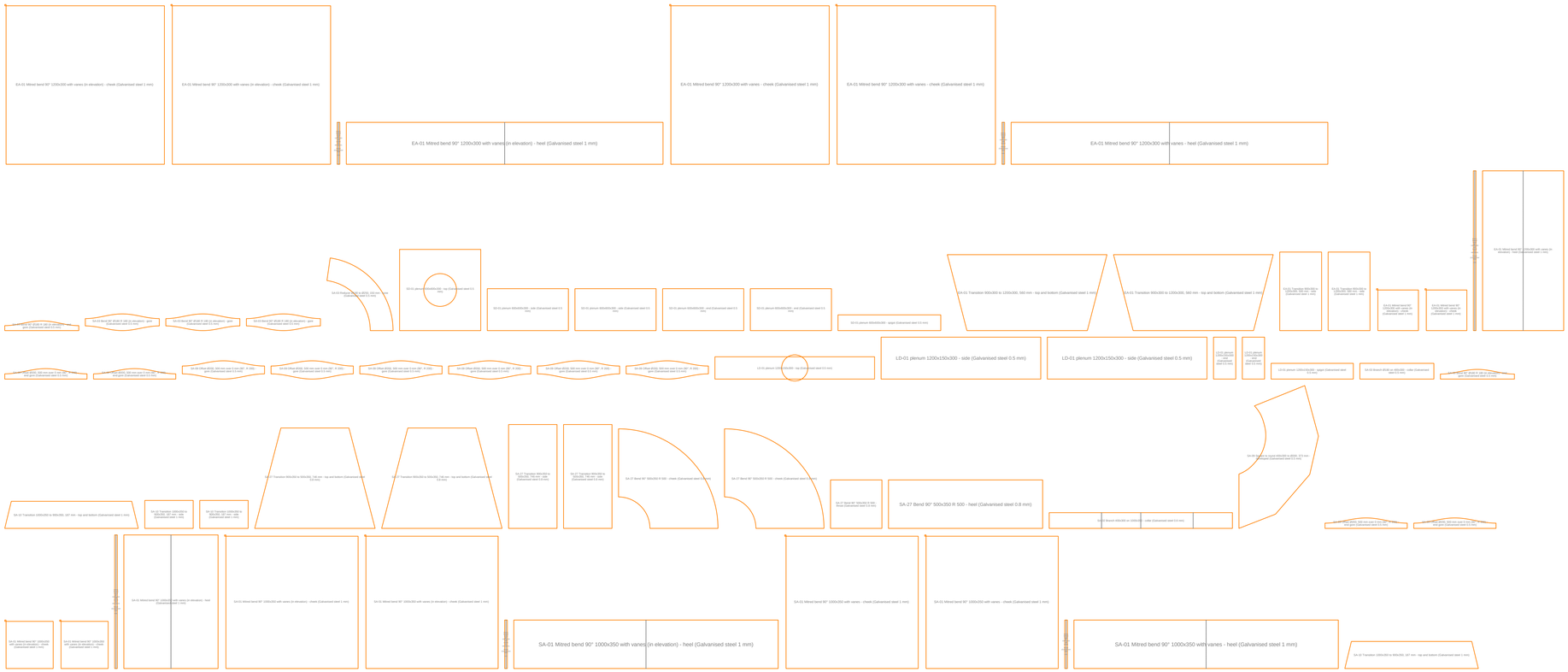
TITLE
Fenwick House, Level 2 ductwork
Cost estimate and balancing

PROJECT	DRAWN
Fenwick House L2 (fictional)	Stratal CAD demo

DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-006	6 of 8	1:1	A1

SOFTWARE	DATE
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0	12 Nov 2026

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE



FLAT PATTERNS 1:20

BLANKS (DUCTFLAT nesting job)

Part	Blank (DUCTFLAT's name)	Qty	W x H (mm)	Thk
P1	SA-01 Mitred bend 90° 1000x350 with vanes (in elevation) - cheek	2	370 x 370	1
P2	SA-01 Mitred bend 90° 1000x350 with vanes (in elevation) - throat	1	20 x 1020	1
P3	SA-01 Mitred bend 90° 1000x350 with vanes (in elevation) - heel	1	720 x 1020	1
P4	SA-01 Mitred bend 90° 1000x350 with vanes (in elevation) - cheek	2	1020 x 1020	1
P5	SA-01 Mitred bend 90° 1000x350 with vanes (in elevation) - throat	1	20 x 370	1
P6	SA-01 Mitred bend 90° 1000x350 with vanes (in elevation) - heel	1	2020 x 370	1
P7	SA-01 Mitred bend 90° 1000x350 with vanes - cheek	2	1020 x 1020	1
P8	SA-01 Mitred bend 90° 1000x350 with vanes - throat	1	20 x 370	1
P9	SA-01 Mitred bend 90° 1000x350 with vanes - heel	1	2020 x 370	1
P10	SA-10 Transition 1000x350 to 900x350, 187 mm - top and bottom	2	1020 x 206.603	1
P11	SA-10 Transition 1000x350 to 900x350, 187 mm - side	2	370 x 213.185	1
P12	SA-27 Transition 900x350 to 500x350, 746 mm - top and bottom	2	920 x 766.41	0.8
P13	SA-27 Transition 900x350 to 500x350, 746 mm - side	2	370 x 792.741	0.8
P14	SA-27 Bend 90° 500x350 R 500 - cheek	2	760 x 760	0.8
P15	SA-27 Bend 90° 500x350 R 500 - throat	1	392.699 x 370	0.8
P16	SA-27 Bend 90° 500x350 R 500 - heel	1	1178.1 x 370	0.8
P17	SA-02 Branch 400x300 on 1000x350 - collar	1	1400 x 120	0.6
P18	SA-09 Square to round 400x300 to Ø200, 373 mm - developed	1	607.56 x 1089.97	0.5
P19	SA-09 Offset Ø200, 500 mm over 0 mm (90°, R 200) - end gore	4	628.319 x 79.6737	0.5
P20	SA-09 Offset Ø200, 500 mm over 0 mm (90°, R 200) - gore	6	628.319 x 139.347	0.5
P21	LD-01 plenum 1200x150x300 - top	1	1220 x 170	0.5
P22	LD-01 plenum 1200x150x300 - side	2	1220 x 320	0.5
P23	LD-01 plenum 1200x150x300 - end	2	170 x 320	0.5
P24	LD-01 plenum 1200x150x300 - spigot	1	628.319 x 120	0.5
P25	SA-03 Branch Ø180 on 400x300 - collar	1	565.487 x 120	0.5
P26	SA-03 Bend 90° Ø180 R 180 (in elevation) - end gore	2	565.487 x 73.7063	0.5
P27	SA-03 Bend 90° Ø180 R 180 (in elevation) - gore	3	565.487 x 127.413	0.5
P28	SA-03 Reducer Ø180 to Ø250, 150 mm - cone	1	505.057 x 554.382	0.5
P29	SD-01 plenum 600x600x300 - top	1	620 x 620	0.5
P30	SD-01 plenum 600x600x300 - side	2	620 x 320	0.5
P31	SD-01 plenum 600x600x300 - end	2	620 x 320	0.5
P32	SD-01 plenum 600x600x300 - spigot	1	785.398 x 120	0.5
P33	EA-01 Transition 900x300 to 1200x300, 560 mm - top and bottom	2	1220 x 579.808	1
P34	EA-01 Transition 900x300 to 1200x300, 560 mm - side	2	320 x 599.555	1
P35	EA-01 Mitred bend 90° 1200x300 with vanes (in elevation) - cheek	2	320 x 320	1
P36	EA-01 Mitred bend 90° 1200x300 with vanes (in elevation) - throat	1	20 x 1220	1
P37	EA-01 Mitred bend 90° 1200x300 with vanes (in elevation) - heel	1	620 x 1220	1
P38	EA-01 Mitred bend 90° 1200x300 with vanes (in elevation) - cheek	2	1220 x 1220	1
P39	EA-01 Mitred bend 90° 1200x300 with vanes (in elevation) - throat	1	20 x 320	1
P40	EA-01 Mitred bend 90° 1200x300 with vanes (in elevation) - heel	1	2420 x 320	1
P41	EA-01 Mitred bend 90° 1200x300 with vanes - cheek	2	1220 x 1220	1
P42	EA-01 Mitred bend 90° 1200x300 with vanes - throat	1	20 x 320	1
P43	EA-01 Mitred bend 90° 1200x300 with vanes - heel	1	2420 x 320	1

NESTING STOCK (DUCTFLAT)

Stock	Material	Thk (mm)	Sheet (mm)	Parts	Blanks
S1	Galvanised steel	1	2500 x 1250	22	32
S2	Galvanised steel	0.8	2500 x 1250	5	8
S3	Galvanised steel	0.6	2500 x 1250	1	1
S4	Galvanised steel	0.5	2500 x 1250	15	30

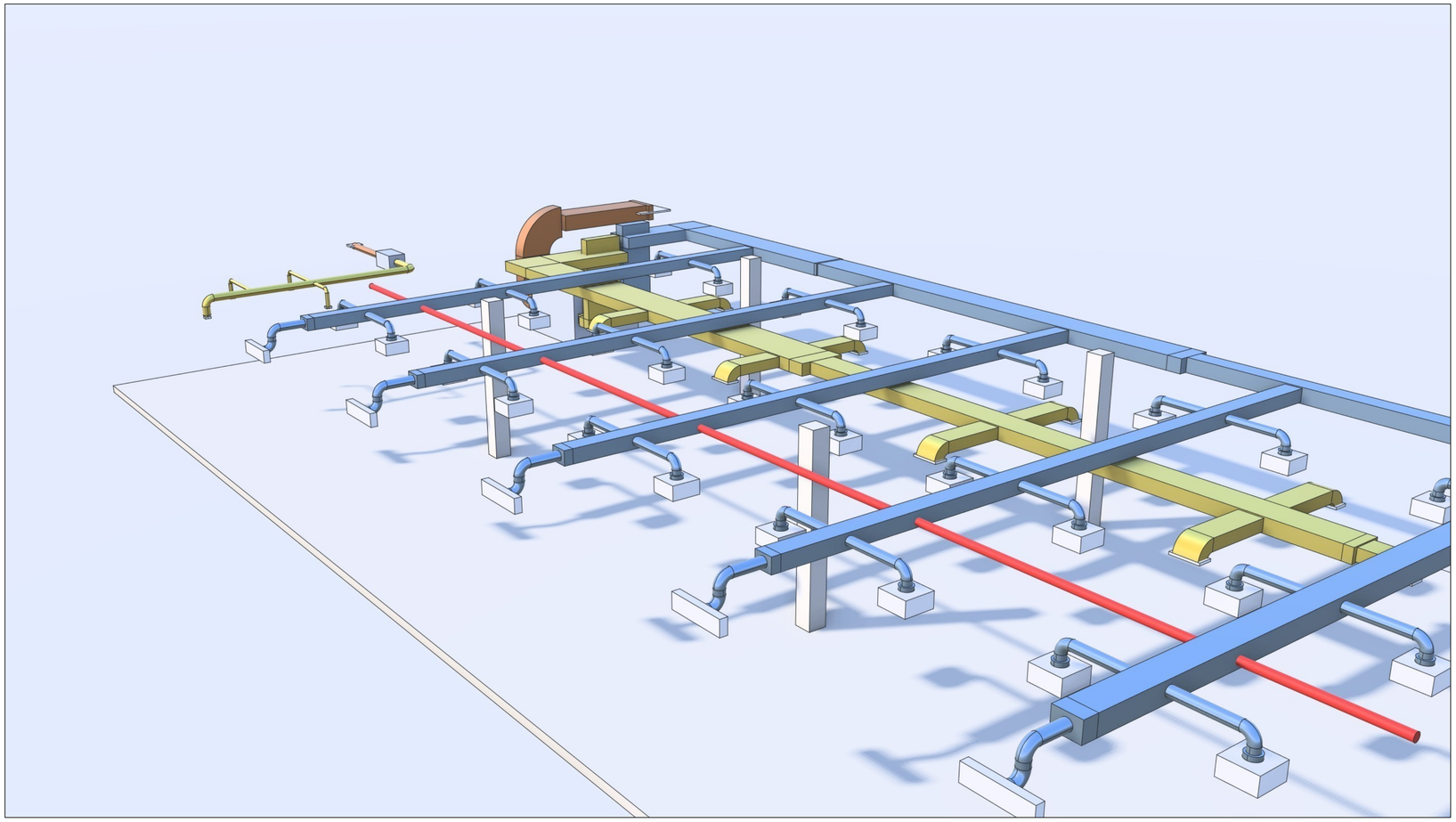
NOTES

1. DUCTFLAT's blanks for SA-01, SA-10, SA-27, SA-02, SA-03, SA-09 and EA-01, seam 10 mm, laid out by the plugin; its labels as drawn. A DXF per pattern and the stratal-nesting-job manifest were written.
2. Nesting stock 2500 x 1250 per gauge (the plugin's job file).

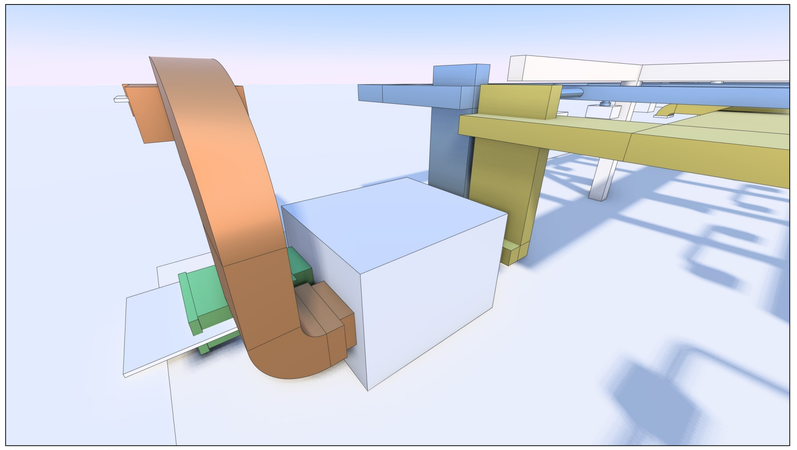
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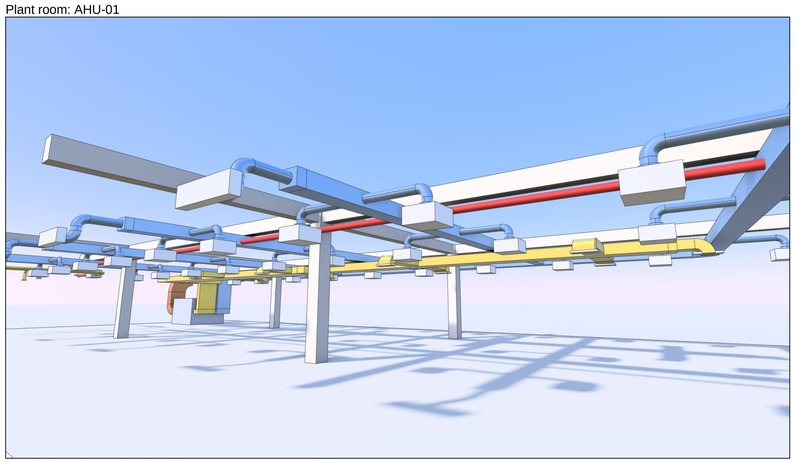
TITLE	Fenwick House, Level 2 ductwork Fabrication: flat patterns
PROJECT	Fenwick House L2 (fictional)
DRAWN	Stratal CAD demo
DRAWING NO.	STR-HVAC-007
SHEET	7 of 8
SCALE	1:20
SIZE	A1
SOFTWARE	Stratal CAD 0.1.8, HVAC Ductwork 0.7.0
DATE	12 Nov 2026
STATUS	DEMONSTRATION DRAWING - NOT FOR MANUFACTURE



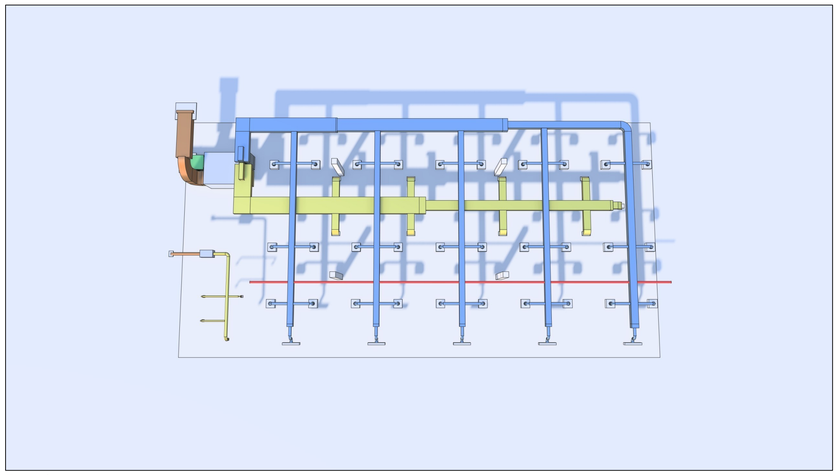
Overall from the south-east



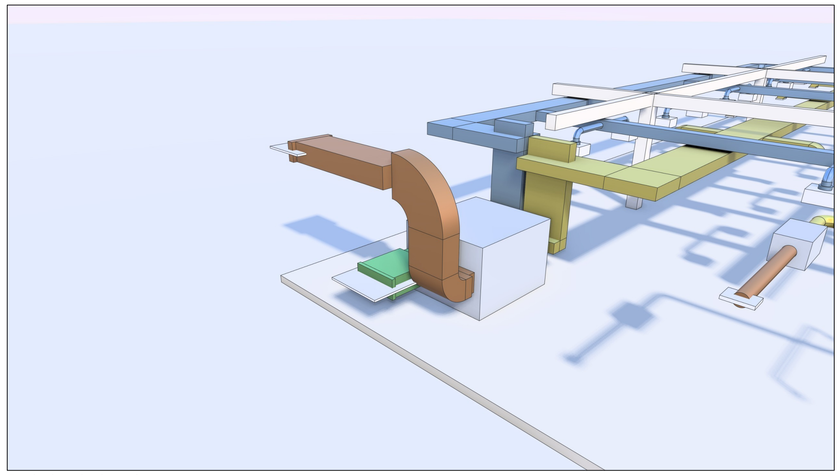
Plant room: AHU-01



Supply branches under the slab



From above



Fresh-air and exhaust louvres

NOTES

1. Renders by RENDERSTILL (2560 x 1440) from saved cameras; system looks by DUCTLOOK; beams hidden in the two overall views. Renders are linked images.

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TITLE
Fenwick House, Level 2 ductwork
3D views

PROJECT		DRAWN	
Fenwick House L2 (fictional)		Stratal CAD demo	
DRAWING NO.	SHEET	SCALE	SIZE
STR-HVAC-008	8 of 8	1:1	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, HVAC Ductwork 0.7.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE