

Figure 37: Location B2F1-32-11

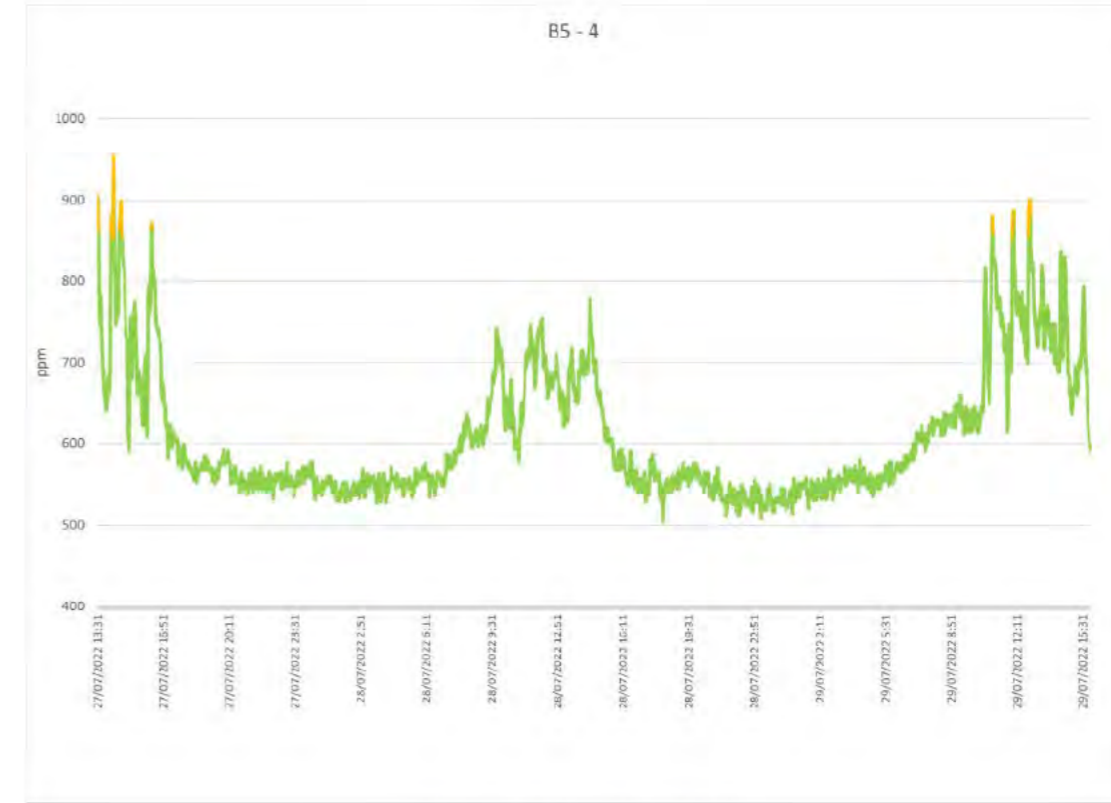


Figure 39: Location B5-4

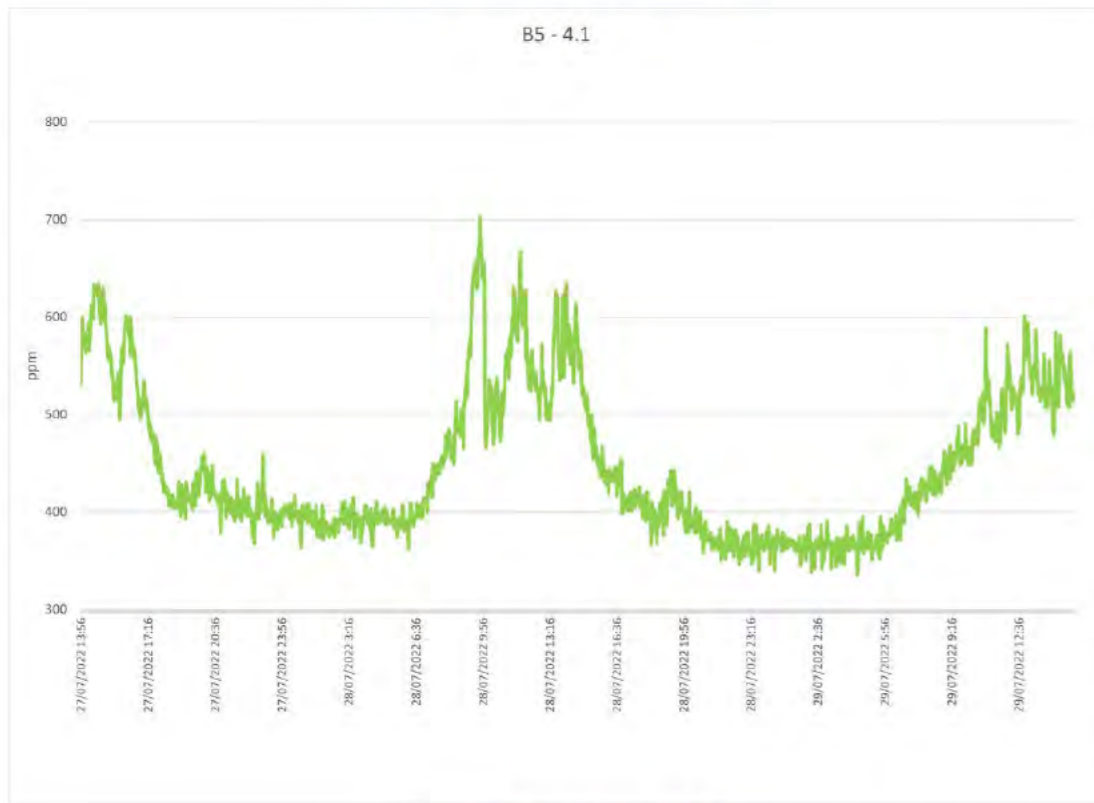


Figure 38: Location B5-4.1

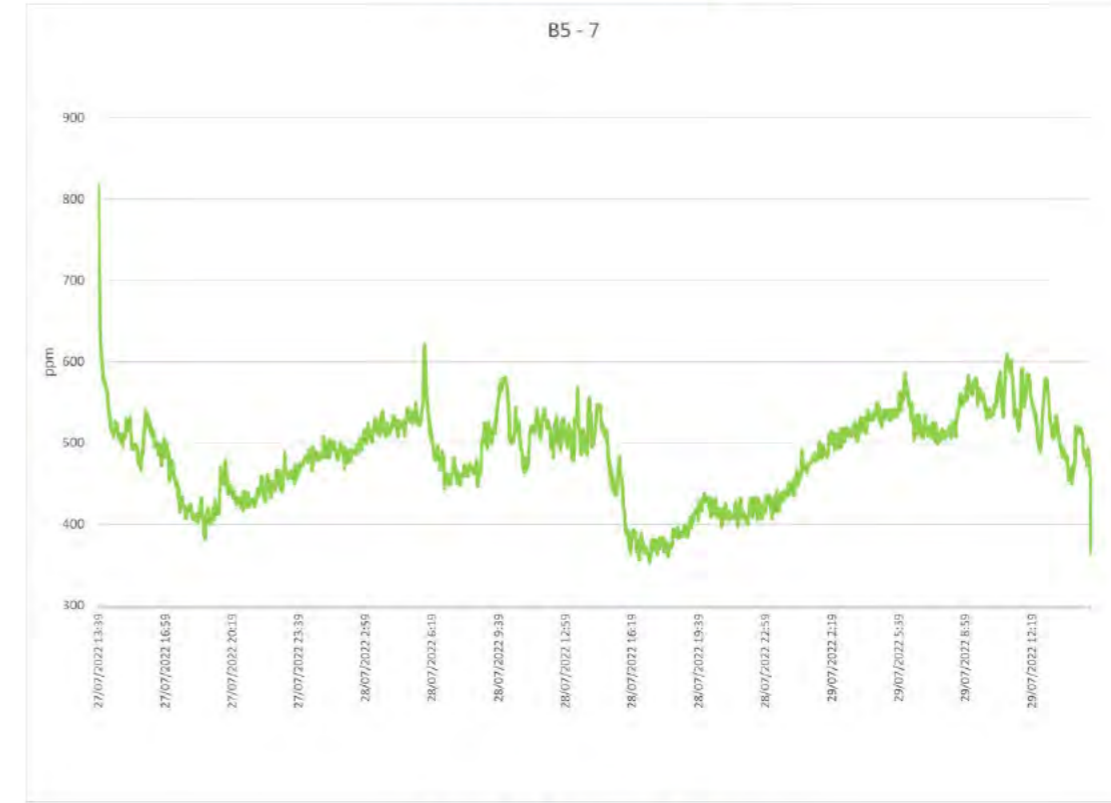


Figure 40: Location B5-7



Figure 41: Location B5-10

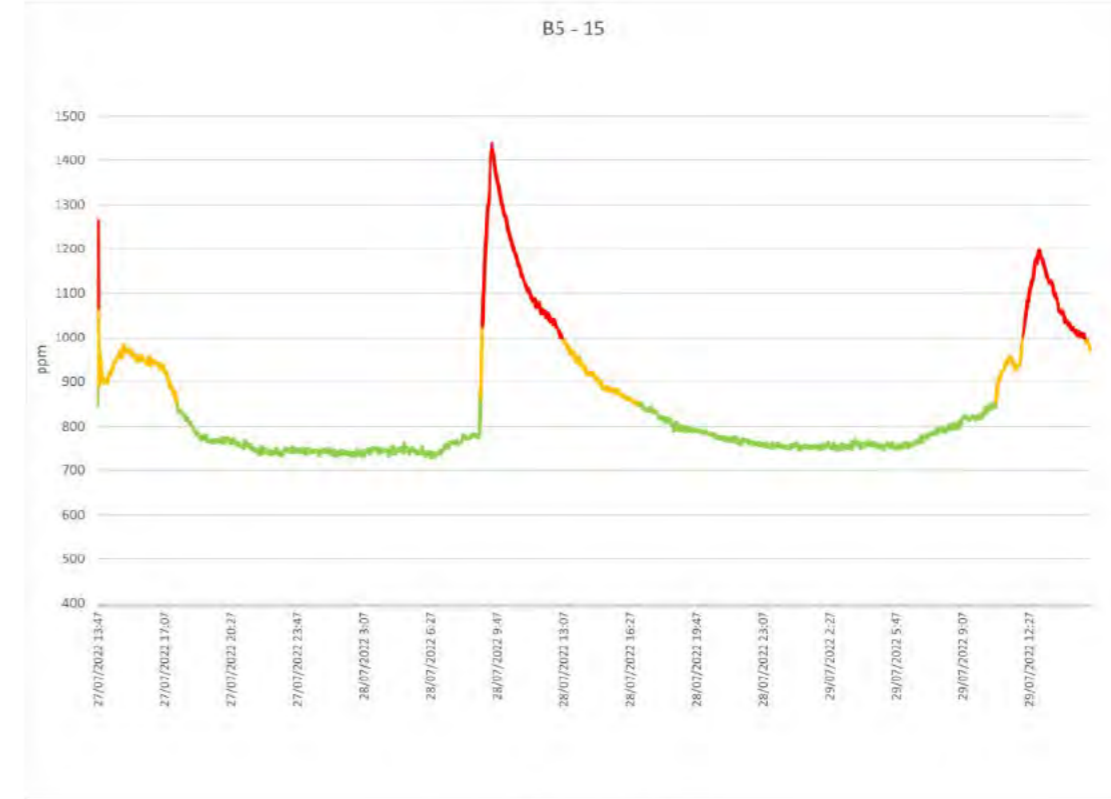


Figure 43: Location B5-15

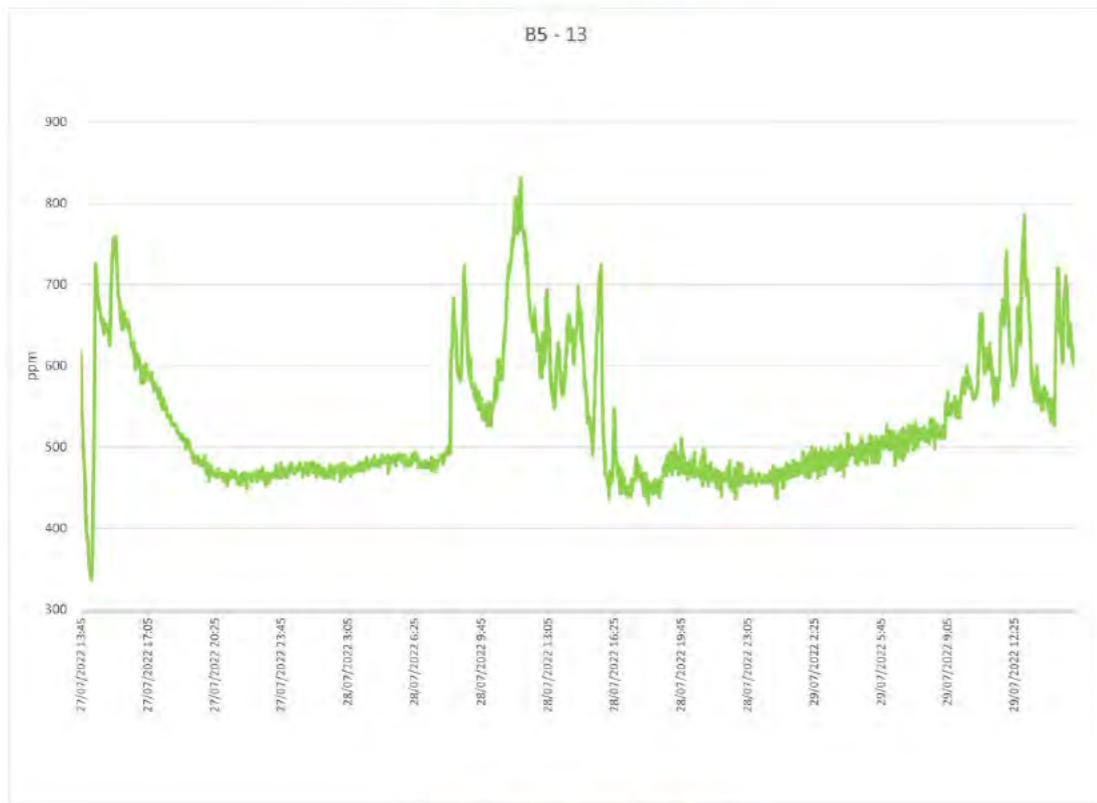


Figure 42: Location B5-13

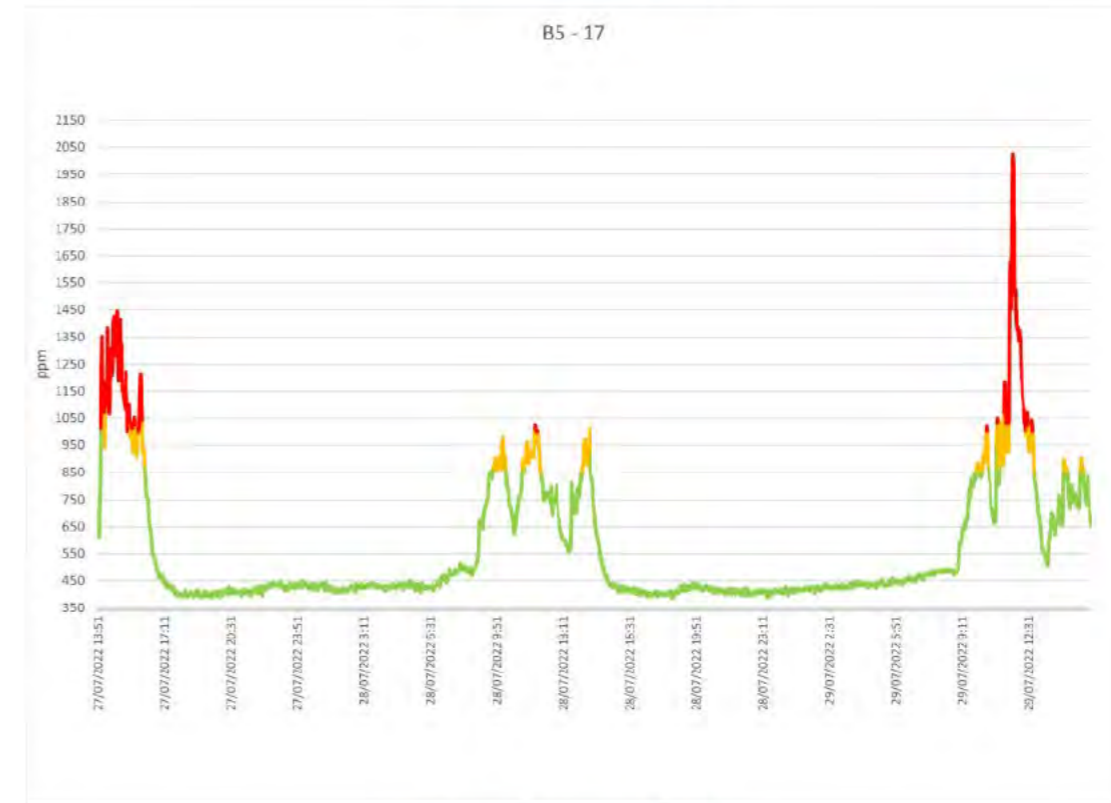


Figure 44: Location B5-17

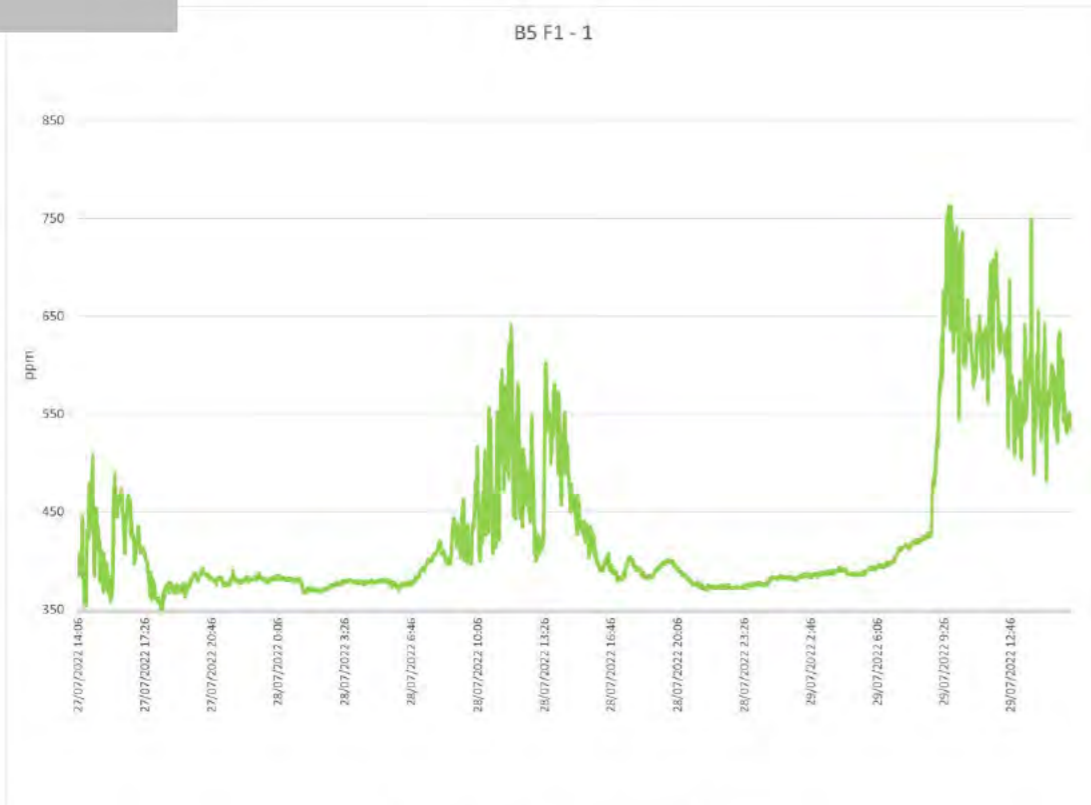


Figure 45: Location B5F1-1

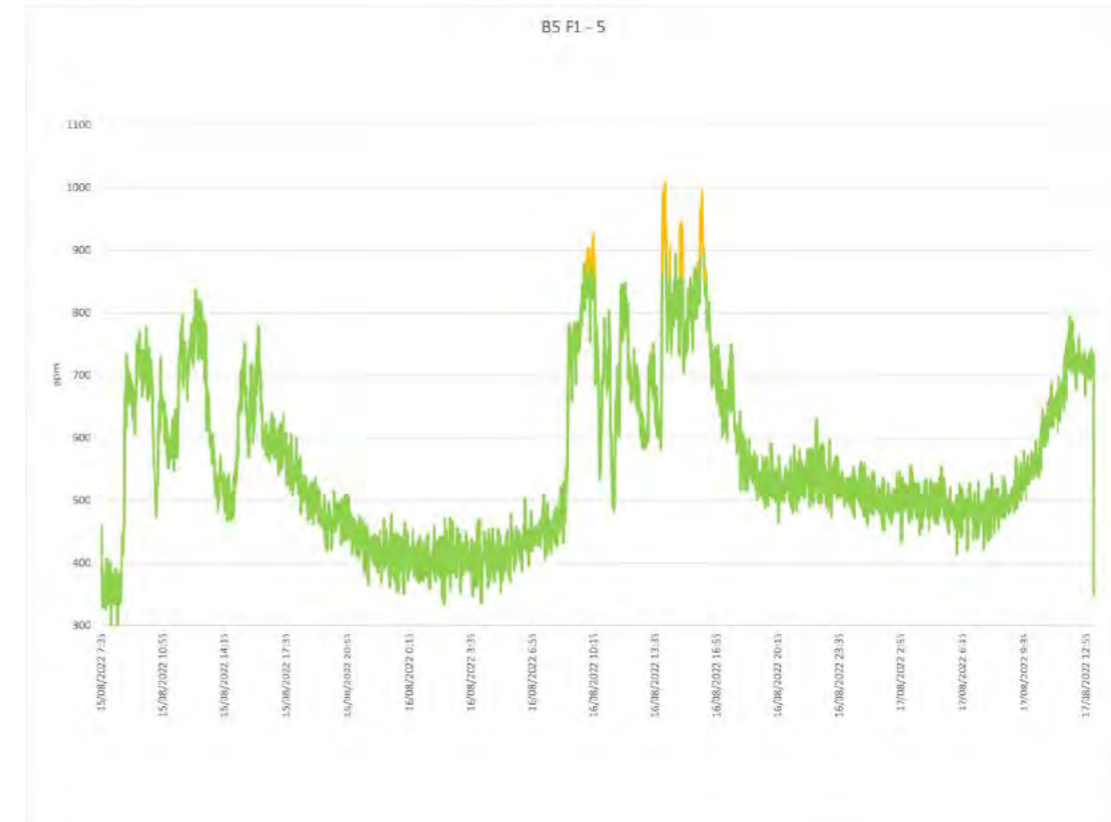


Figure 47: Location B5F1-5

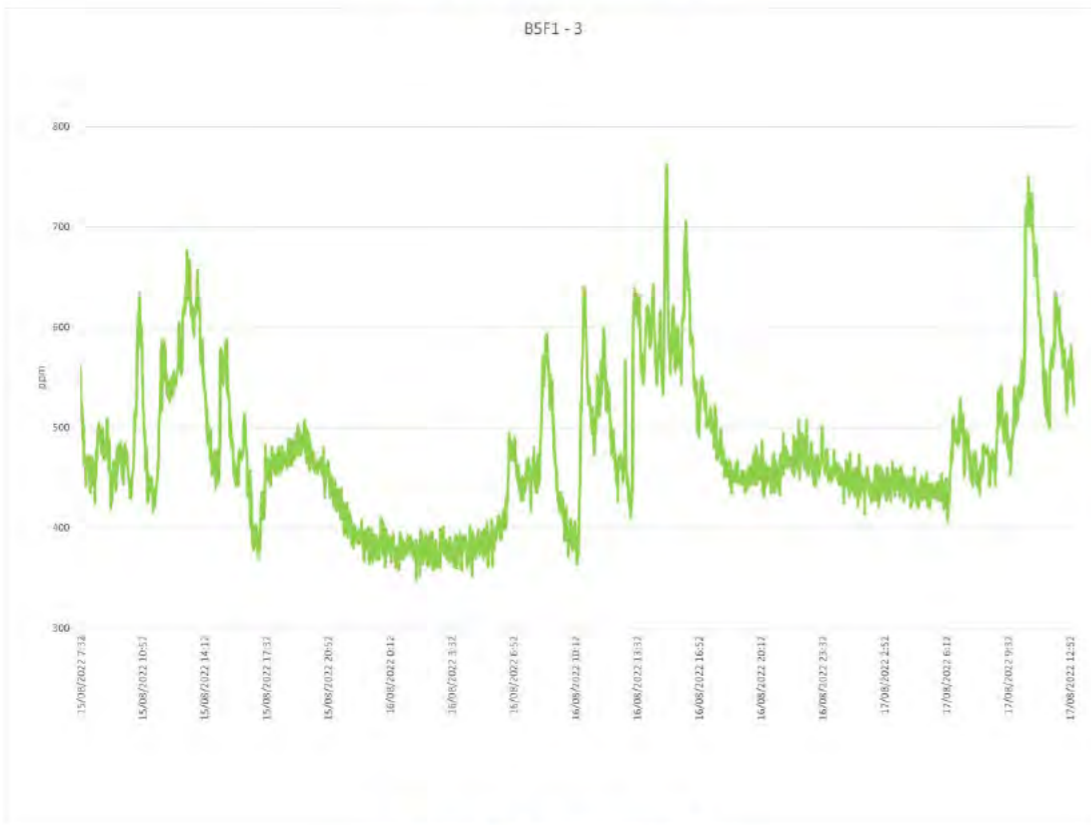


Figure 46: Location B5F1-3

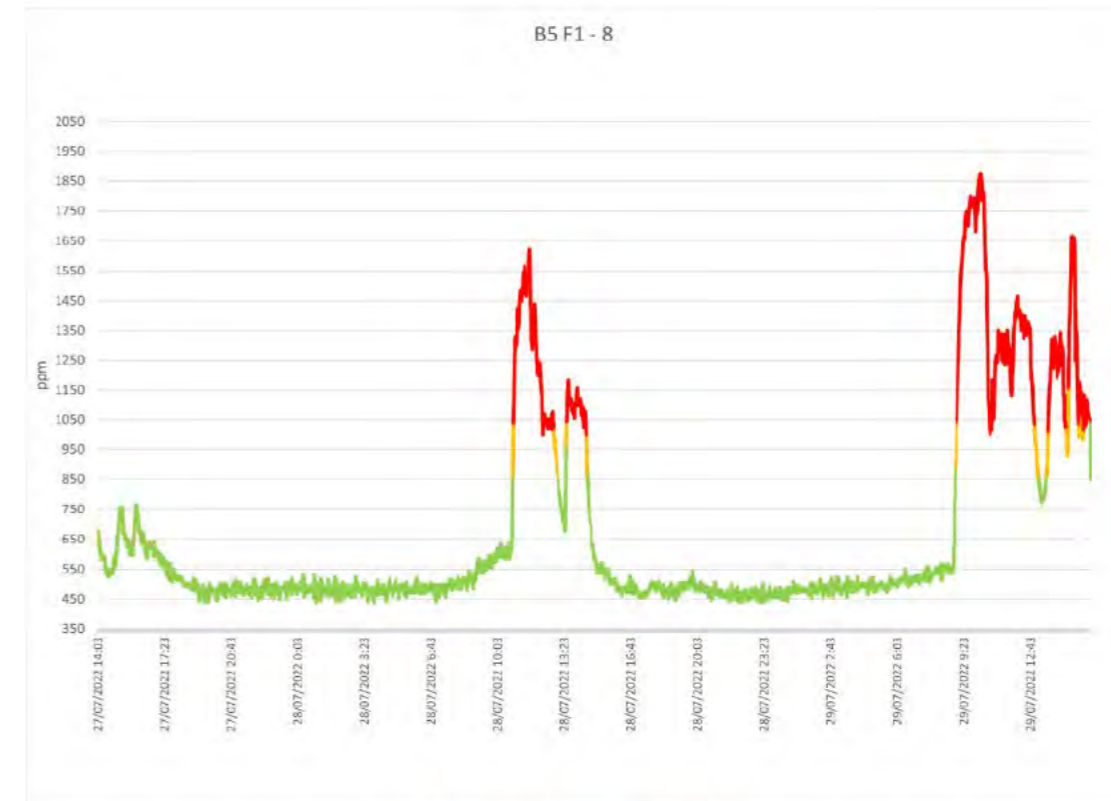


Figure 48: Location B5F1-8

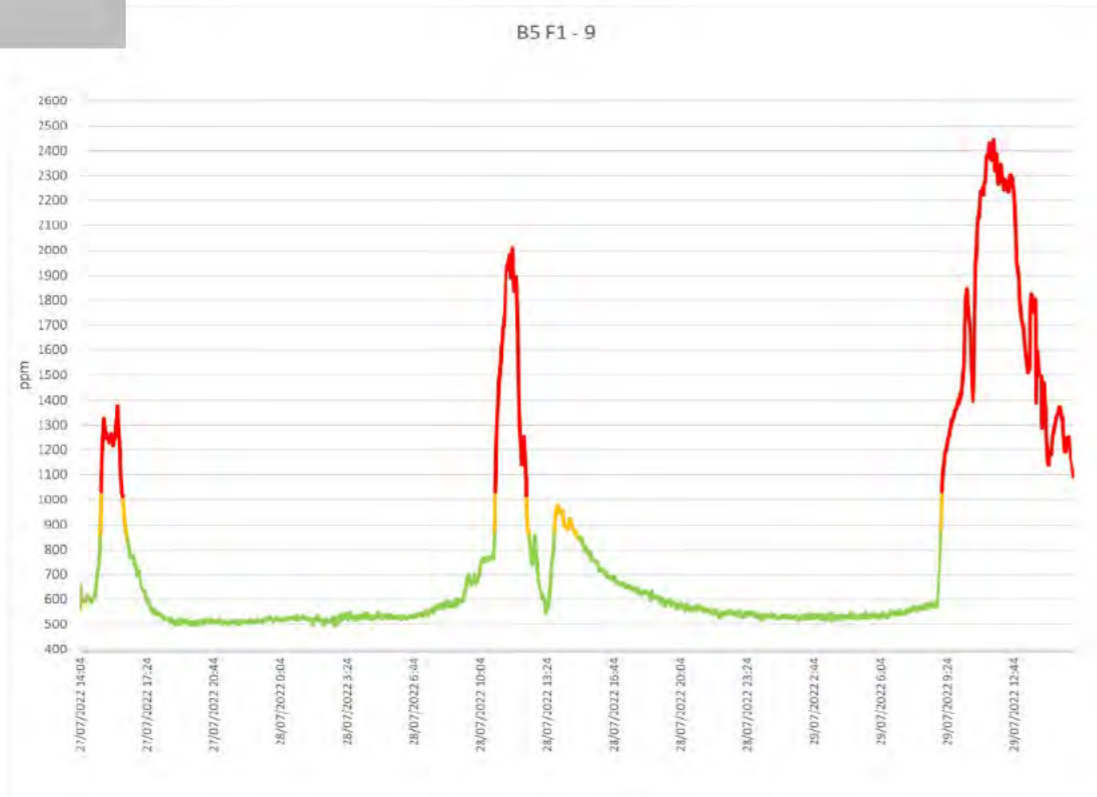


Figure 49: Location B5F1-9

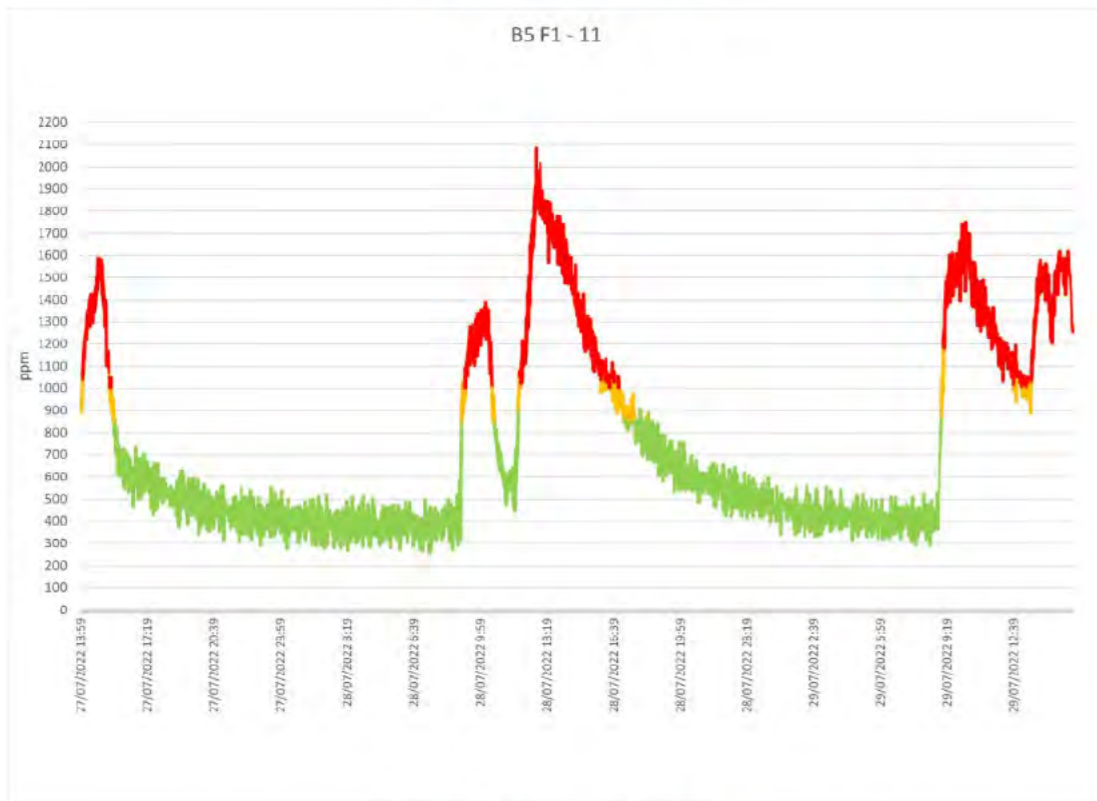


Figure 50: Location B5F1-11

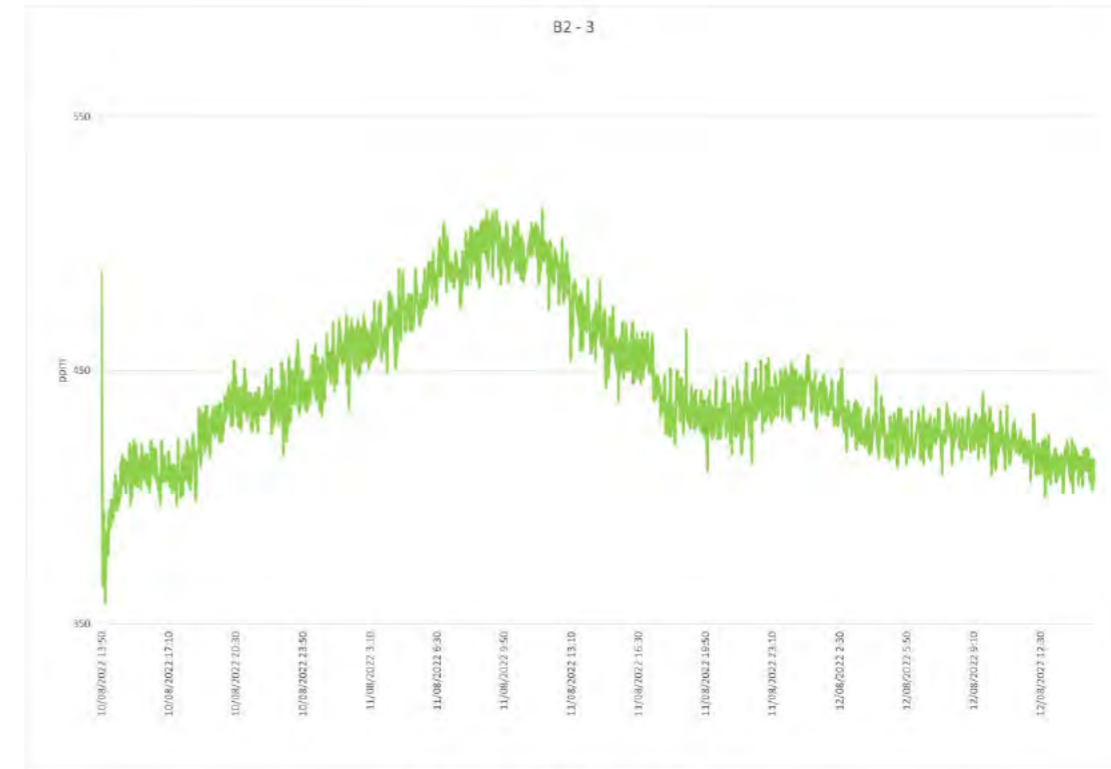


Figure 51: Location B2-3

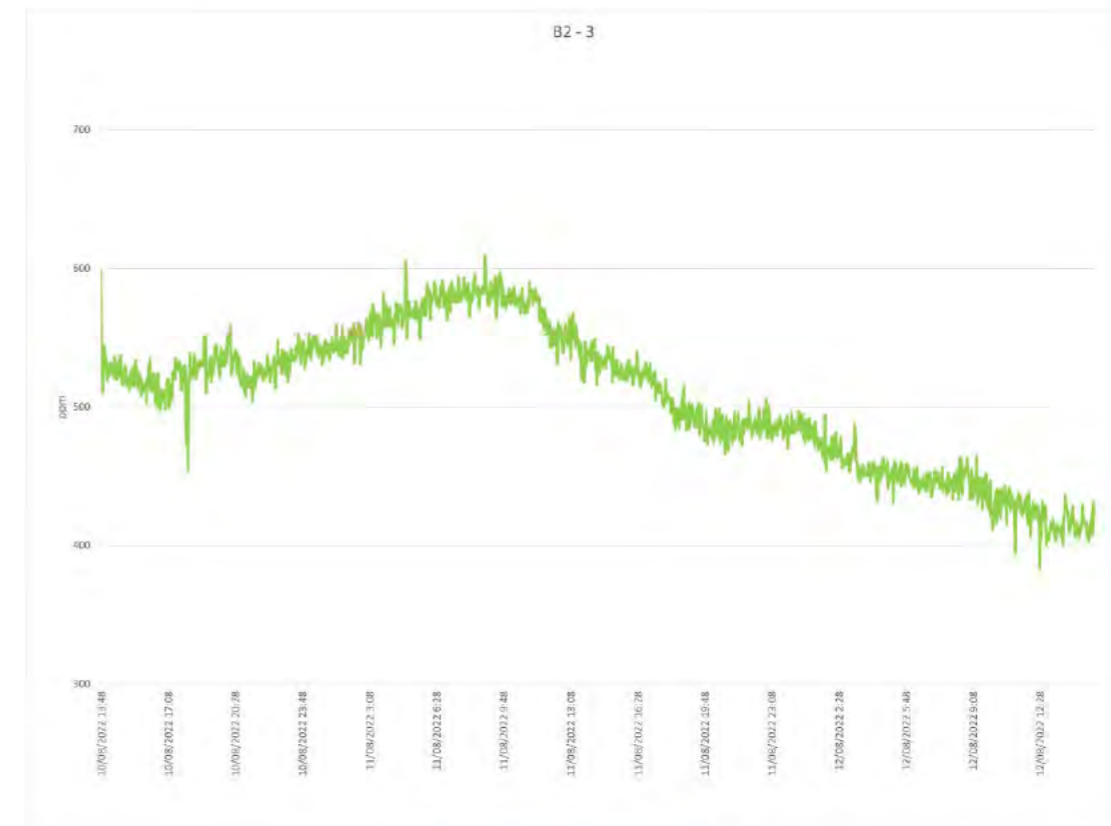


Figure 52: Location B2-3

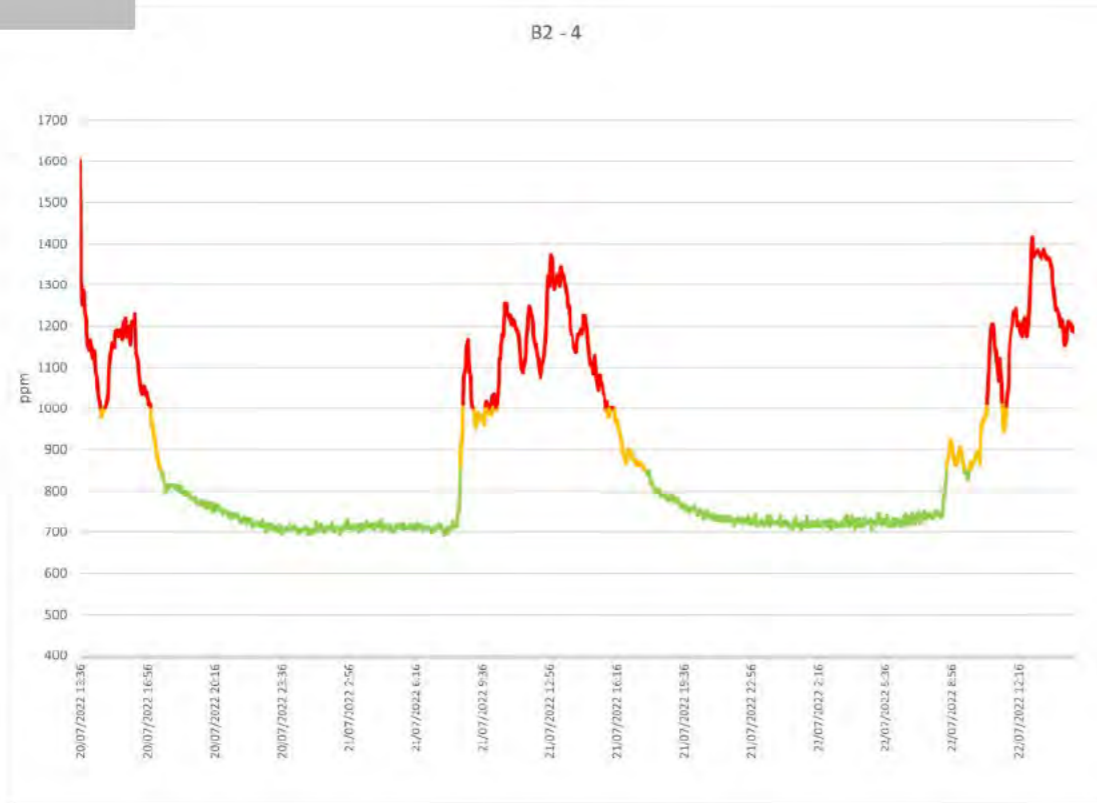


Figure 53: Location B2-4

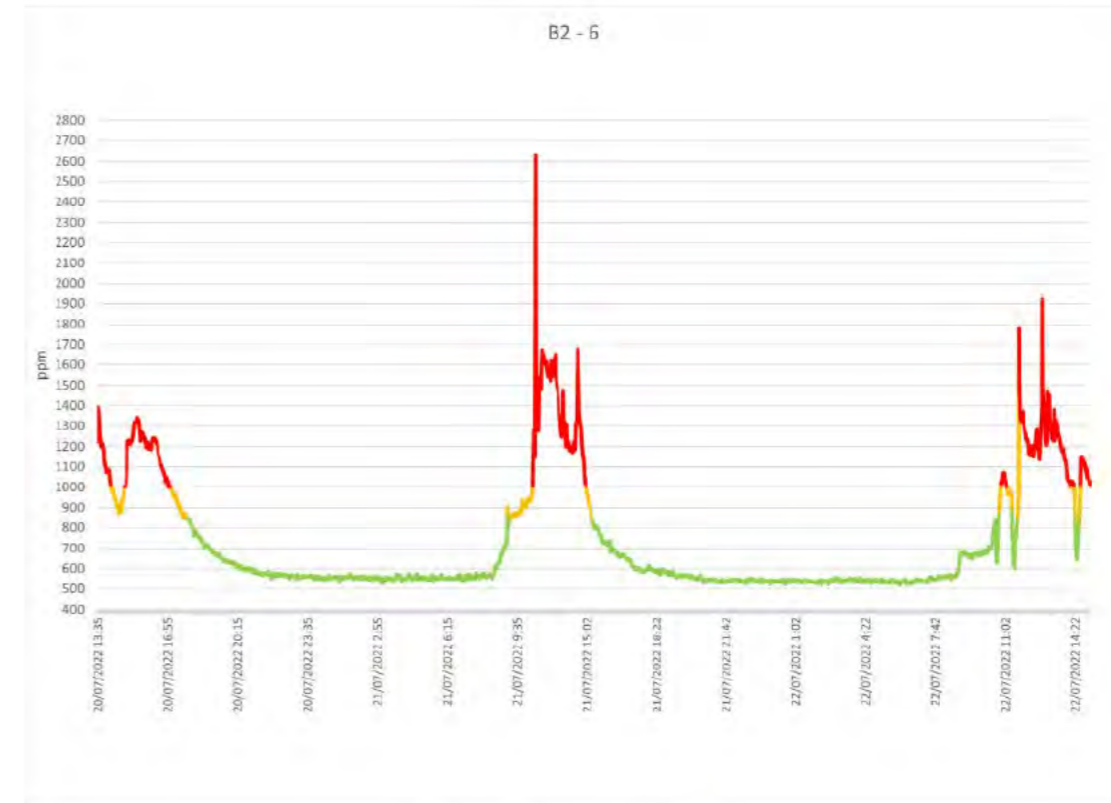


Figure 55: Location B2-6

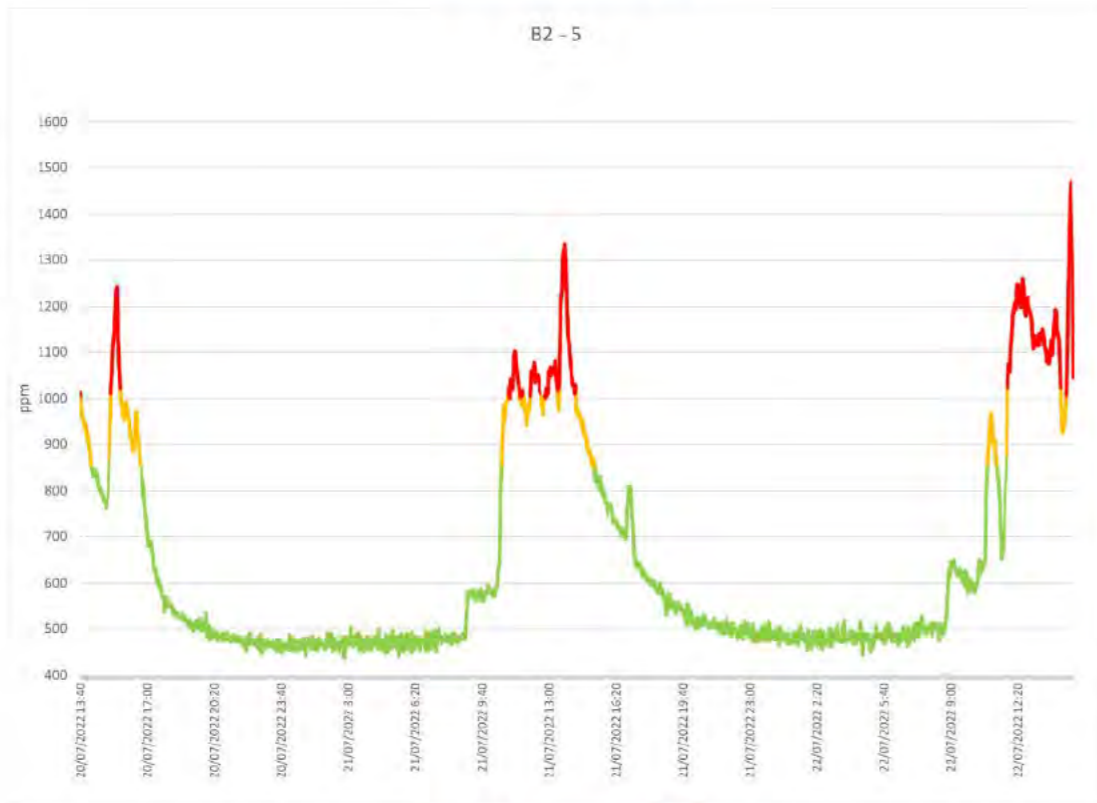


Figure 54: Location B2-5

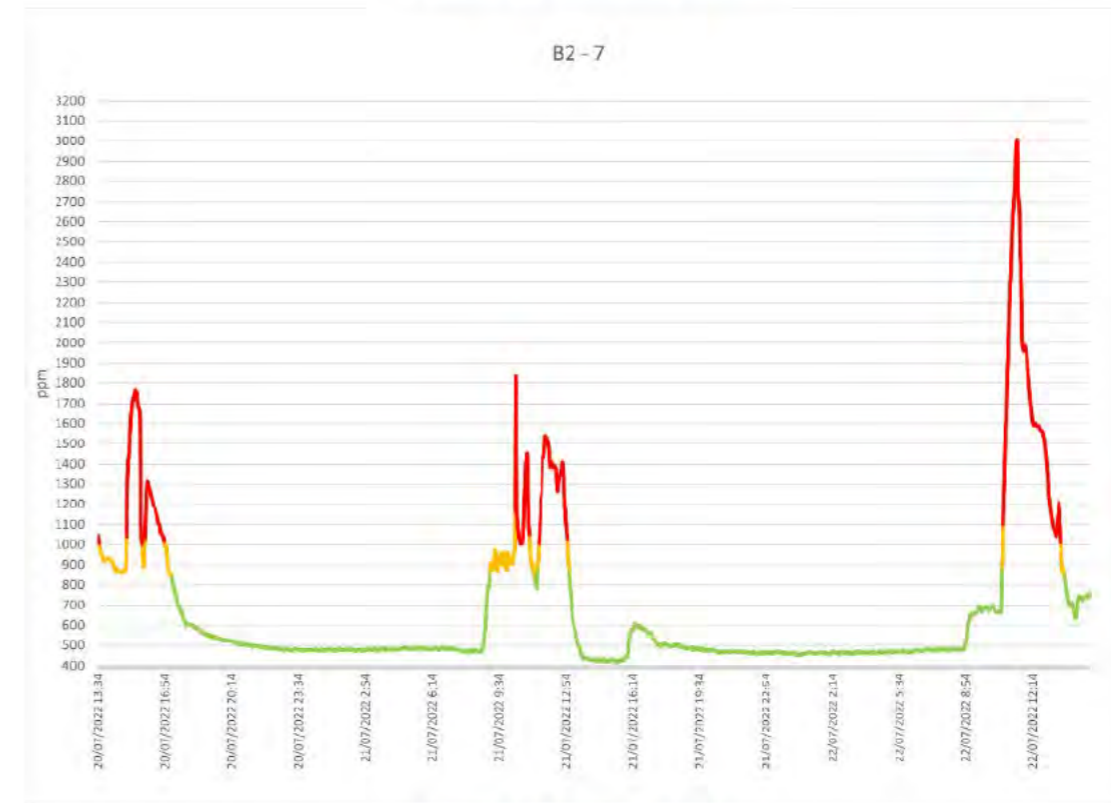


Figure 56: Location B2-7

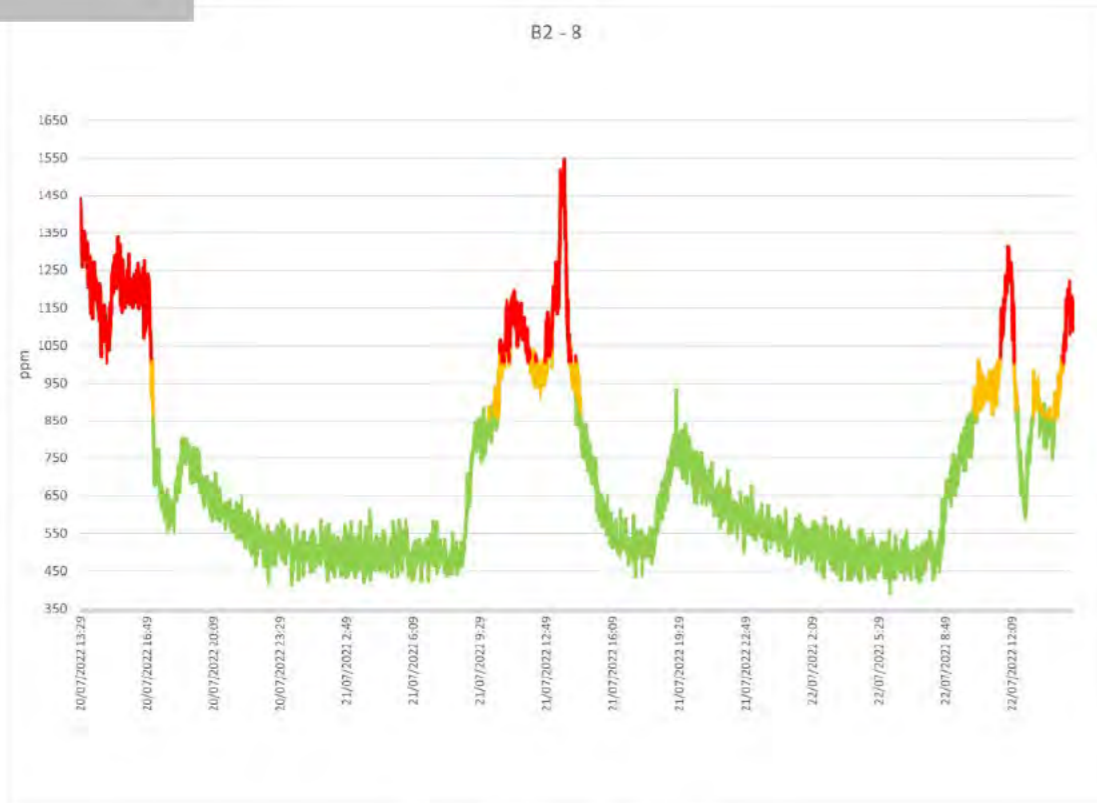


Figure 57: Location B2-8

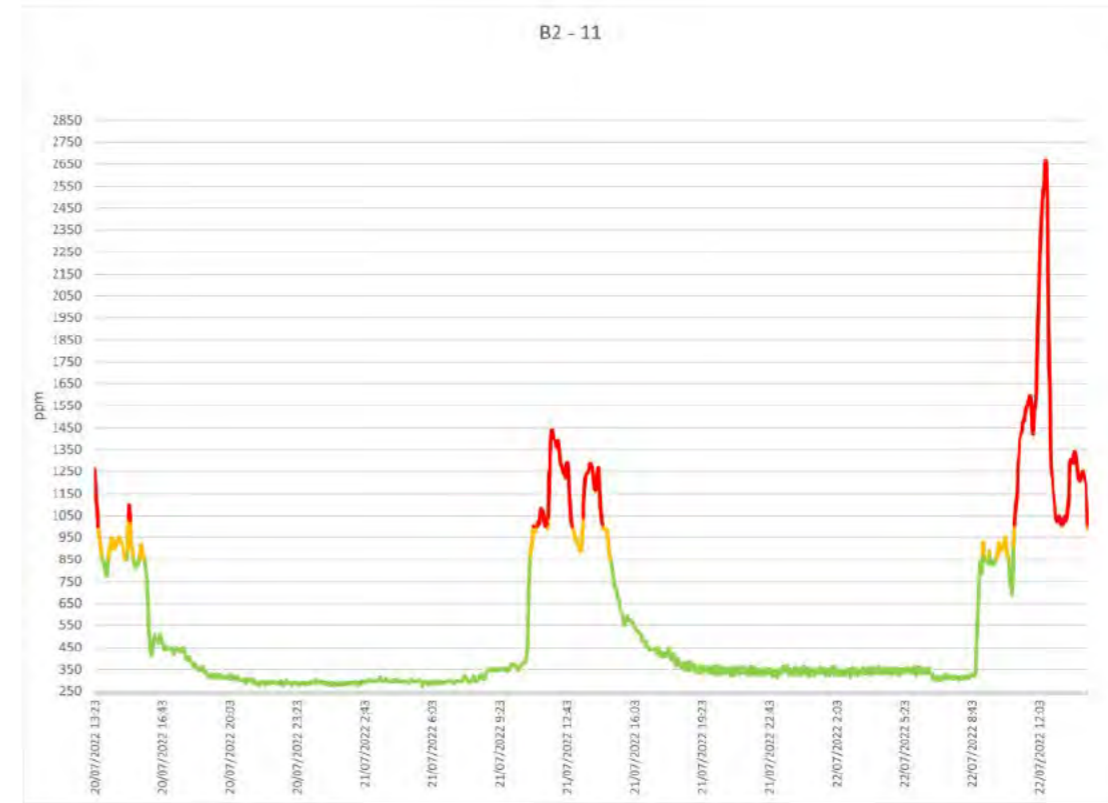


Figure 59: Location B2-11

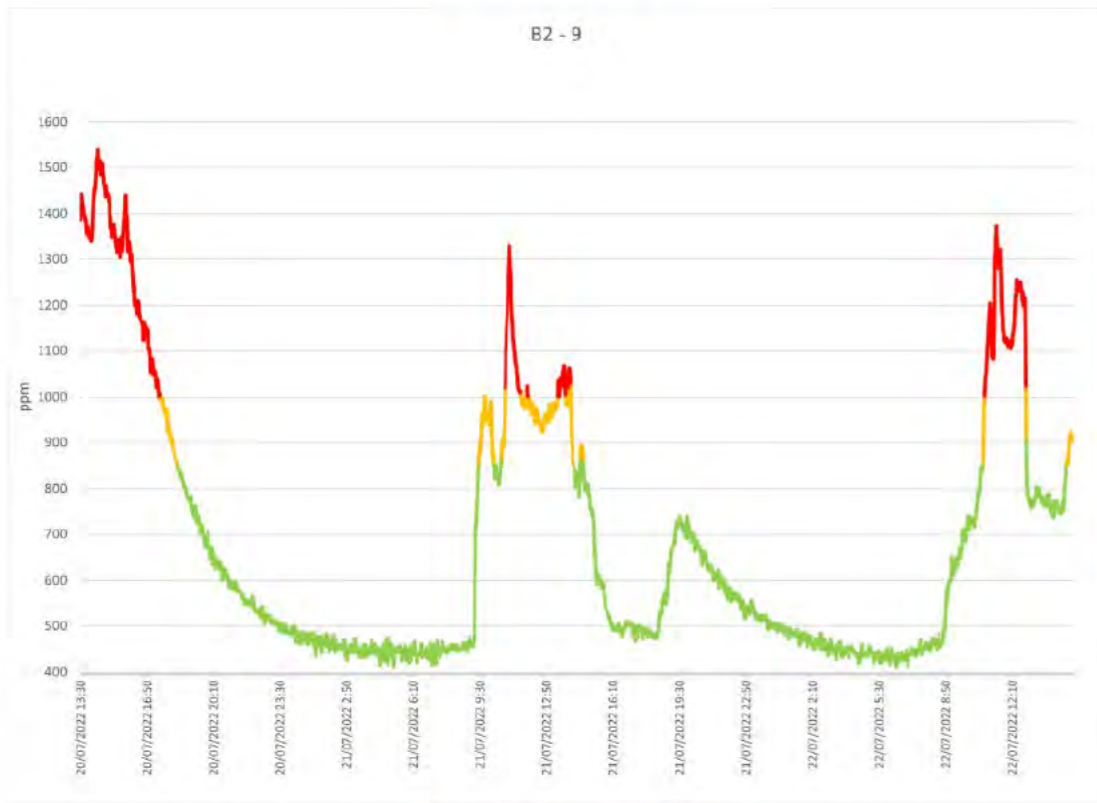


Figure 58: Location B2-9

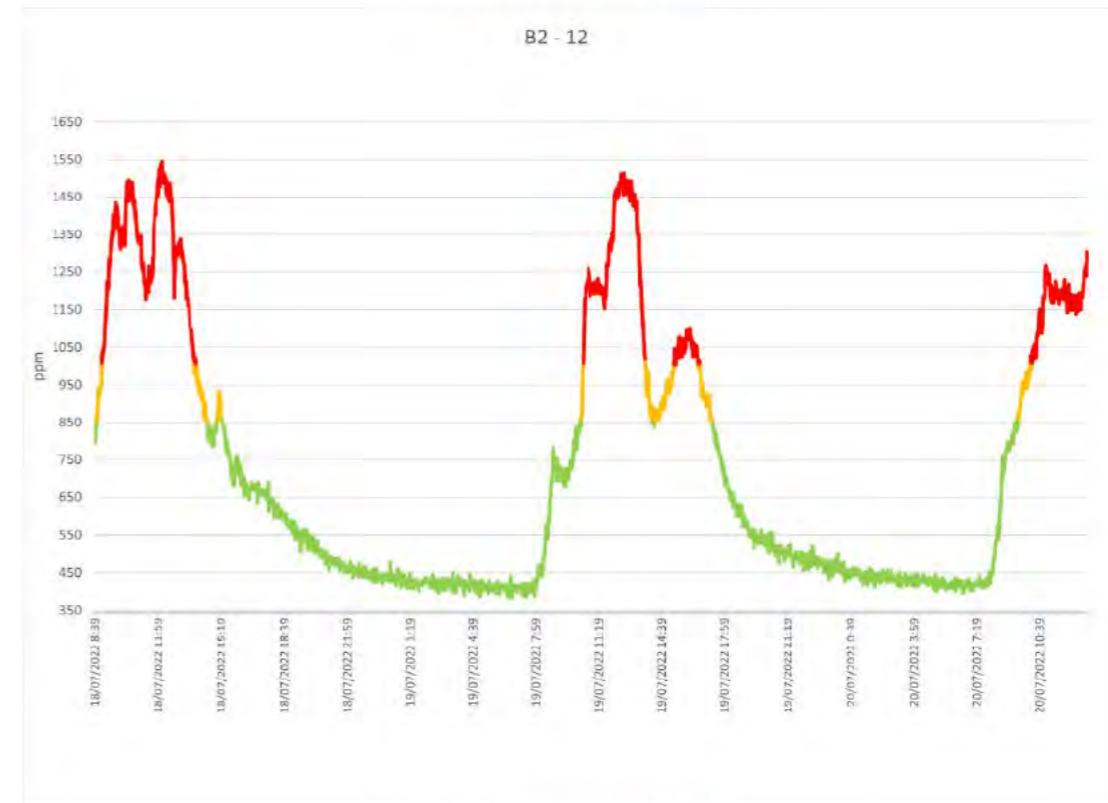


Figure 60: Location B2-12



Figure 61: Location B2-13

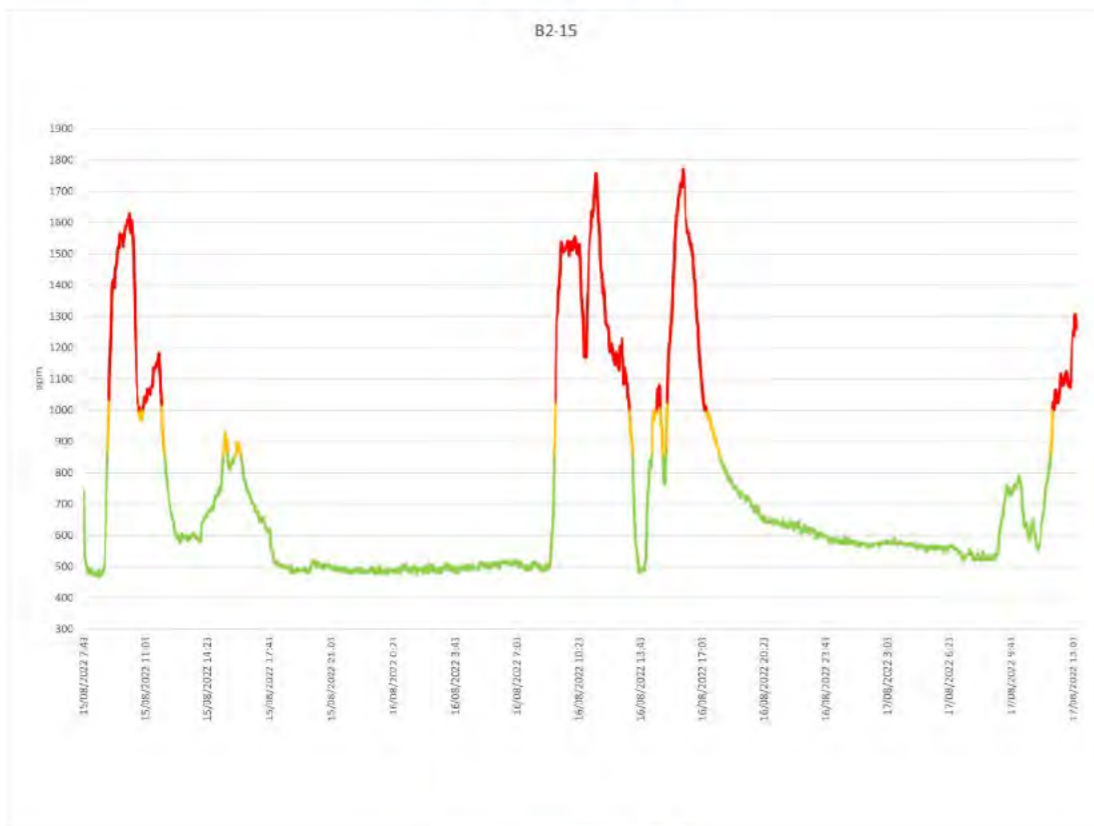


Figure 62: Location B2-15



Figure 63: Location B2-16

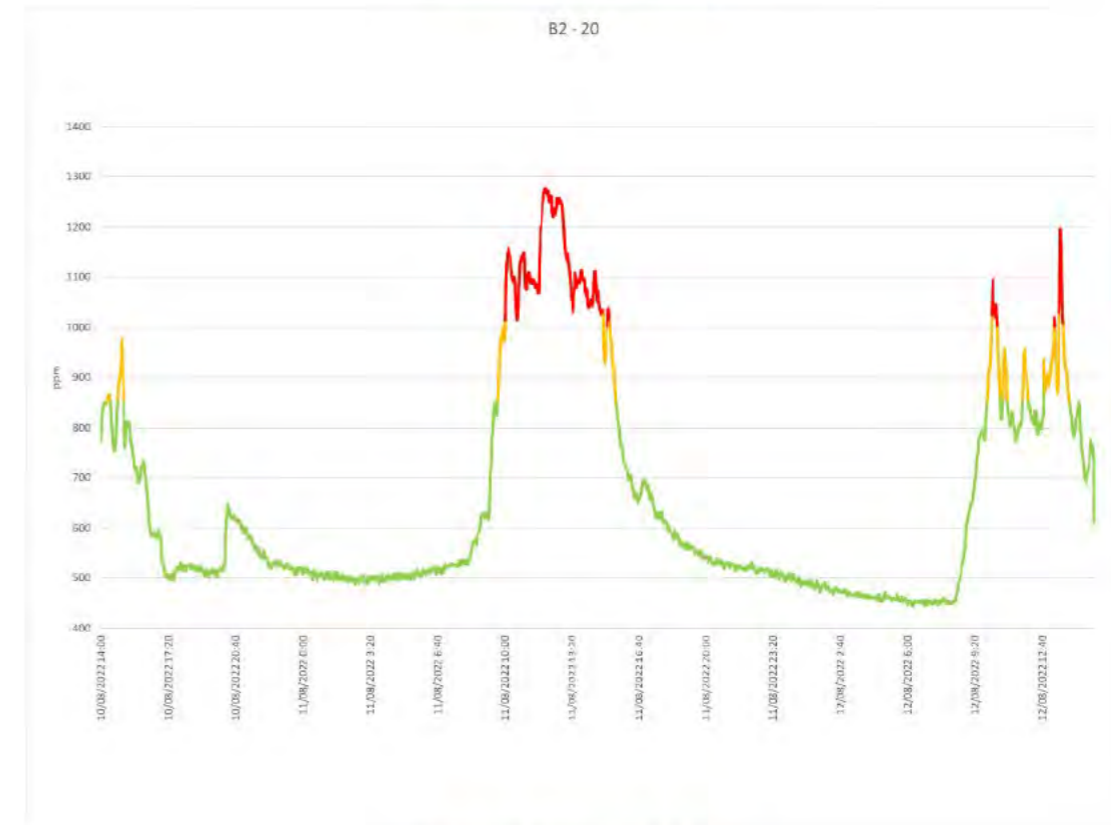


Figure 64: Location B2-20

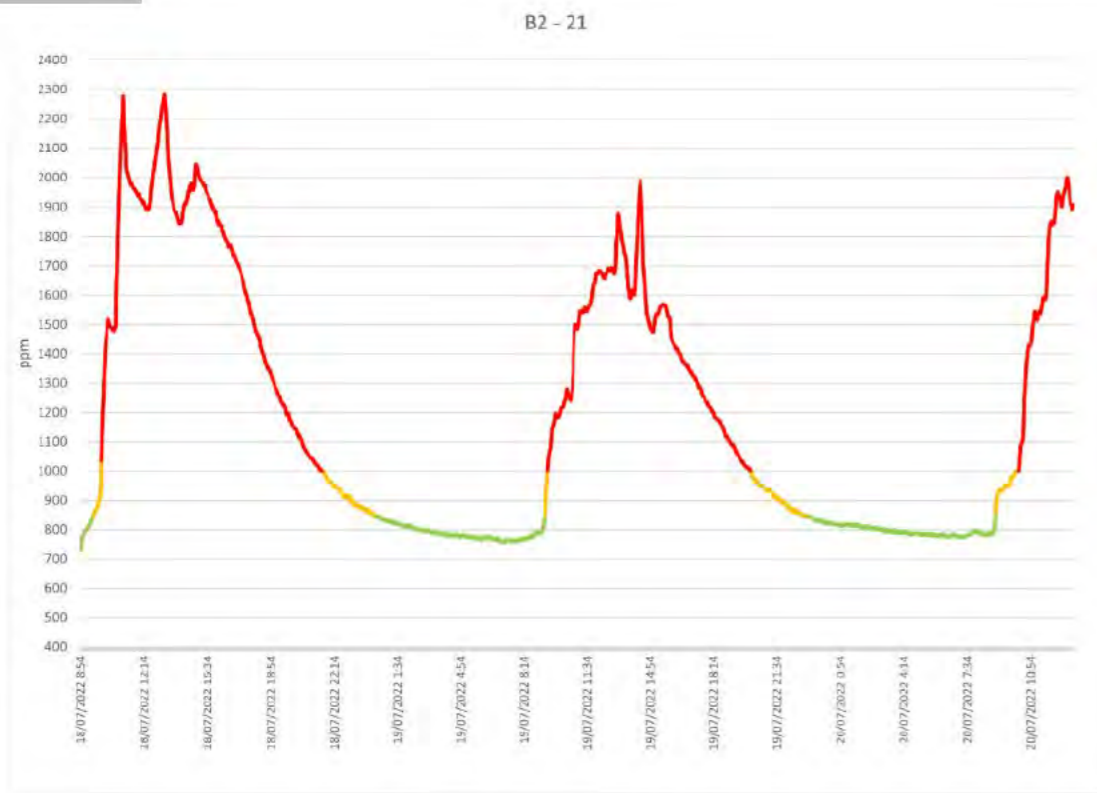


Figure 65: Location B2-21

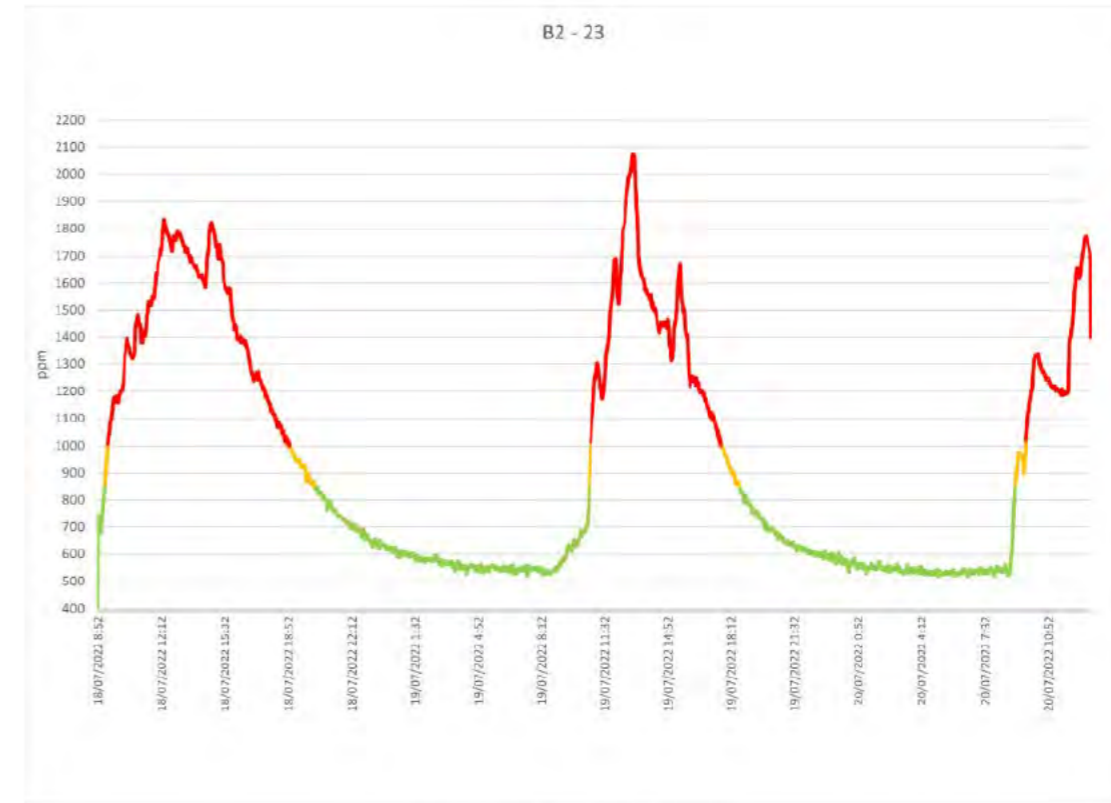


Figure 67: Location B2-23



Figure 66: Location B2-22

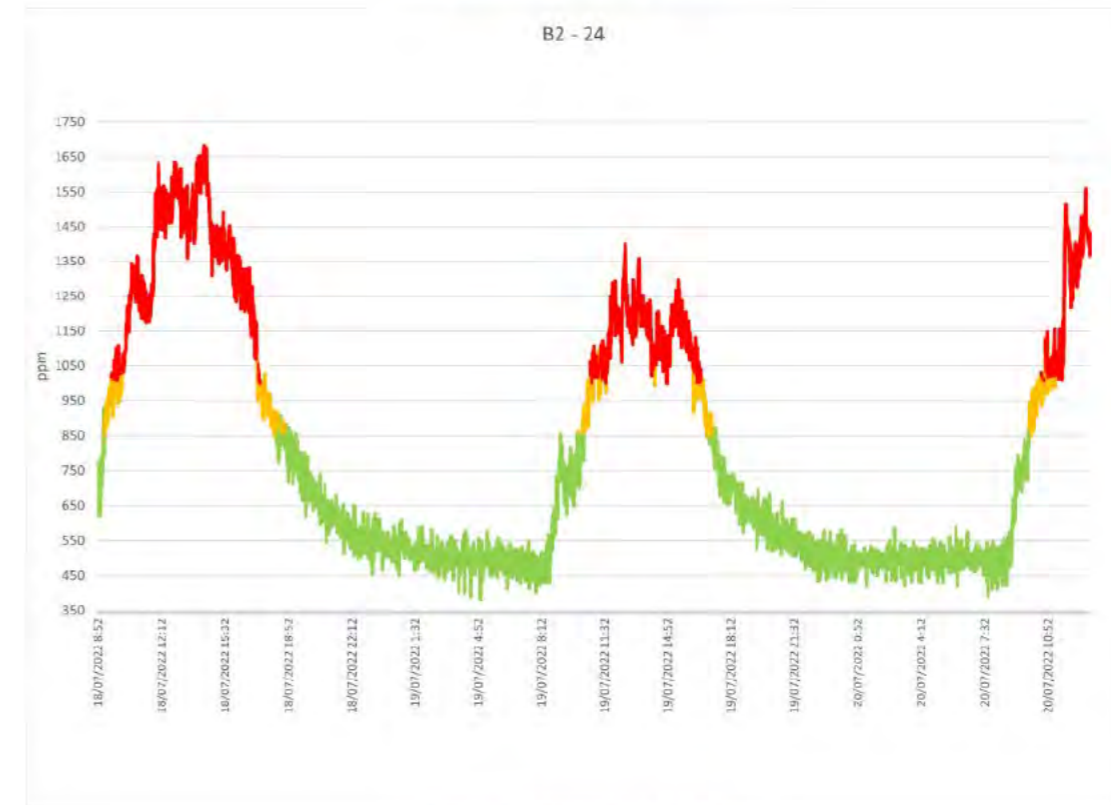


Figure 68: Location B2-24

B2 - 25

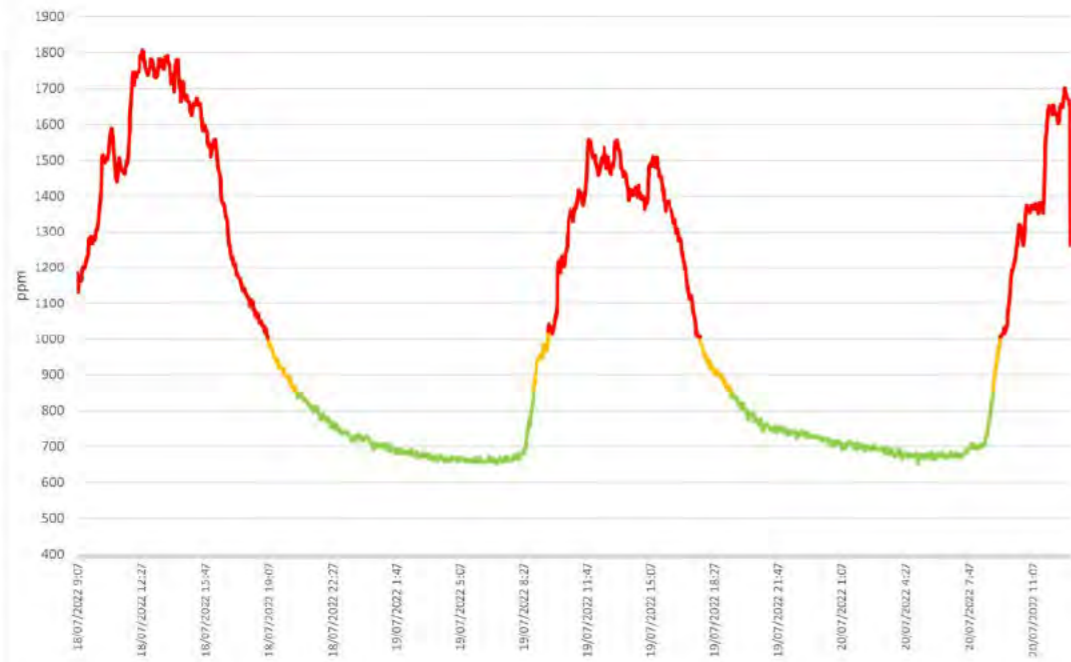


Figure 69: Location B2-25

B2 - 27

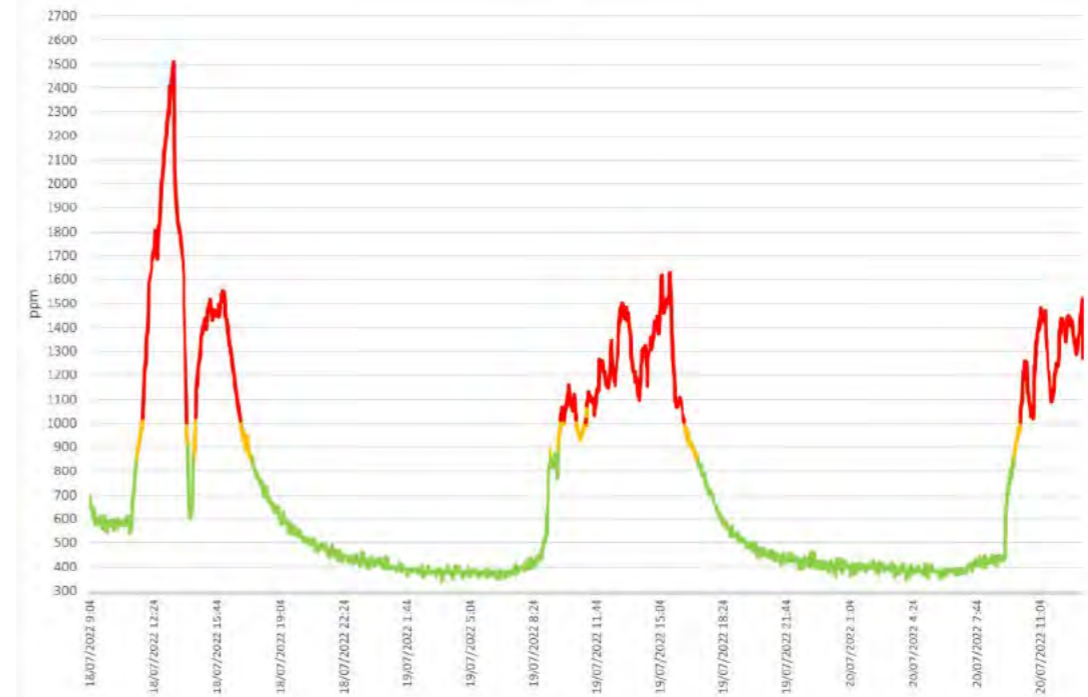


Figure 71: Location B2-27

B2 - 26

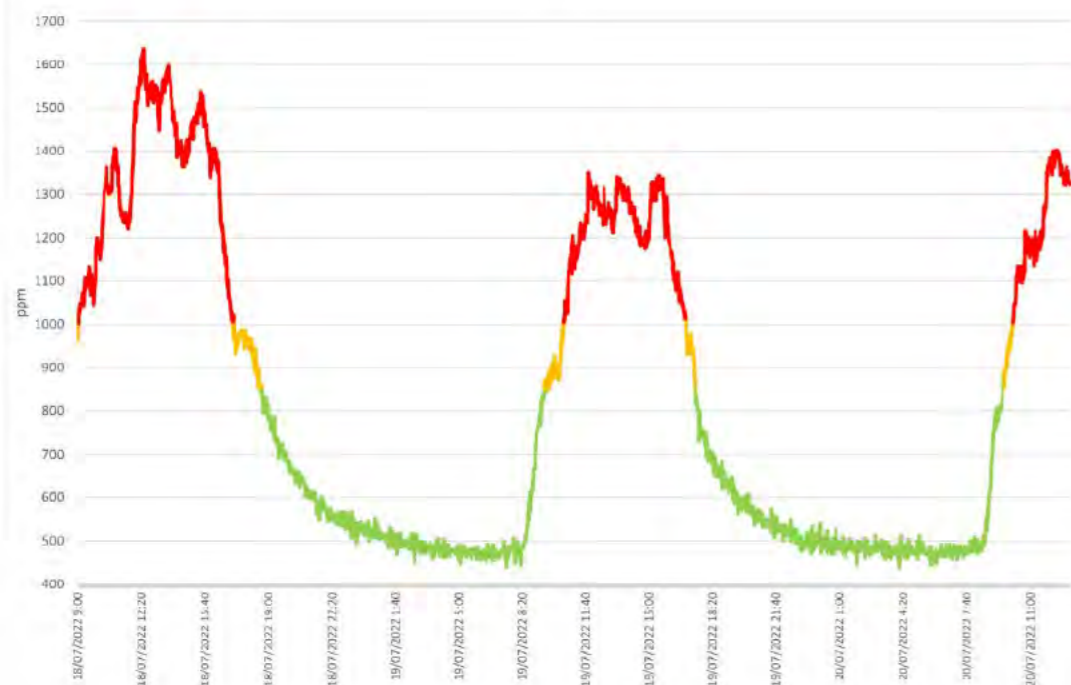


Figure 70: Location B2-26

B2 - 28

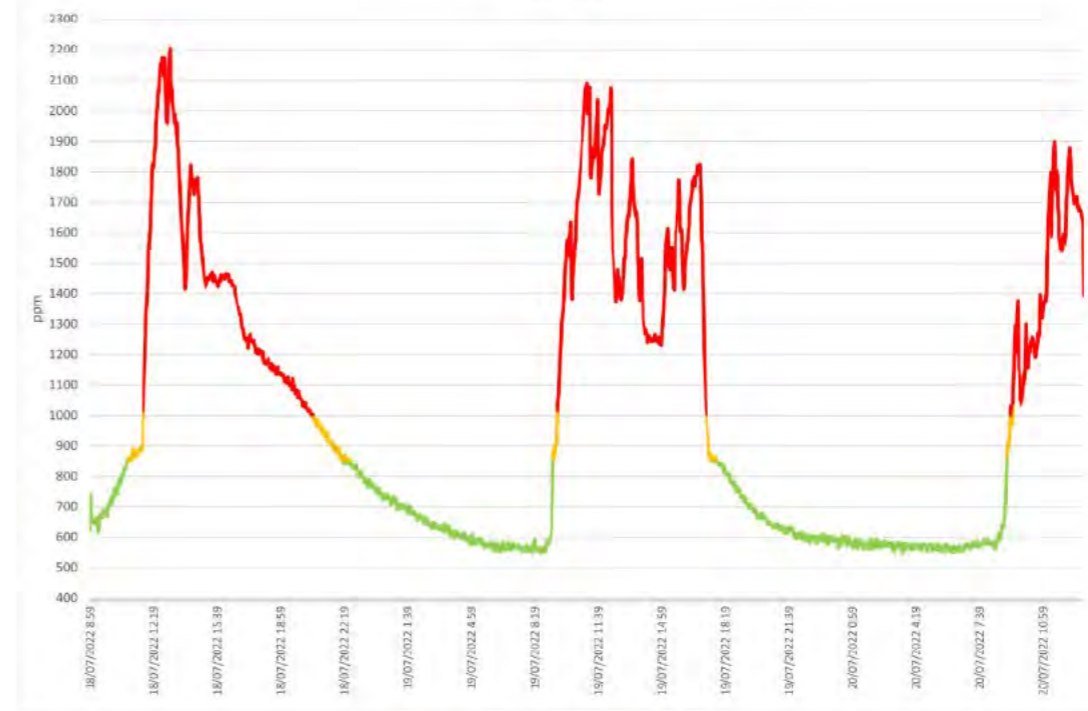


Figure 72: Location B2-28

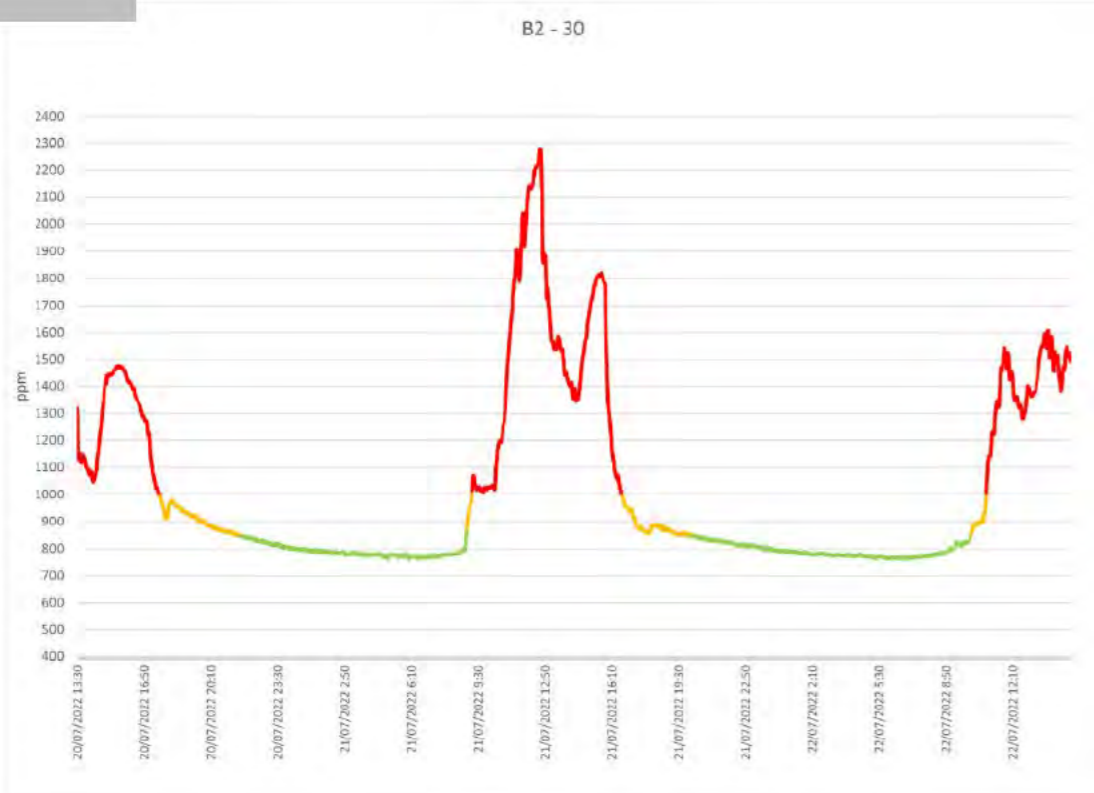


Figure 73: Location B2-30

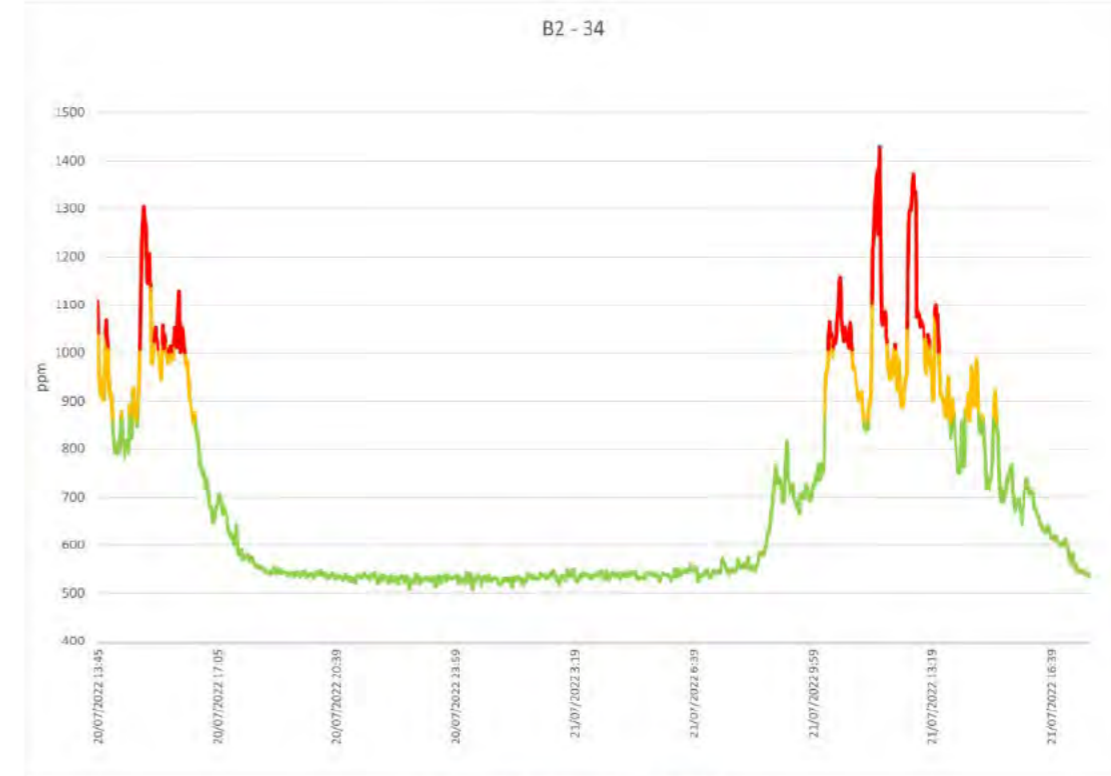


Figure 75: Location B2-34

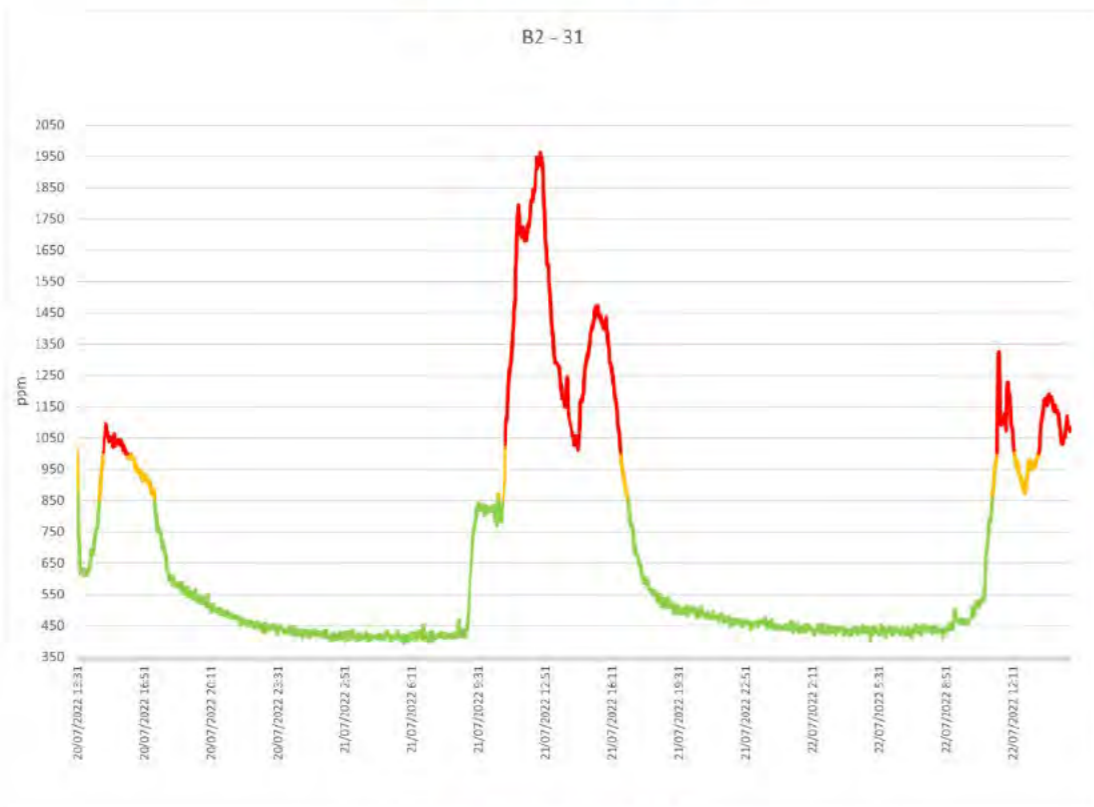


Figure 74: Location B2-31



Figure 76: Location B2F1-1

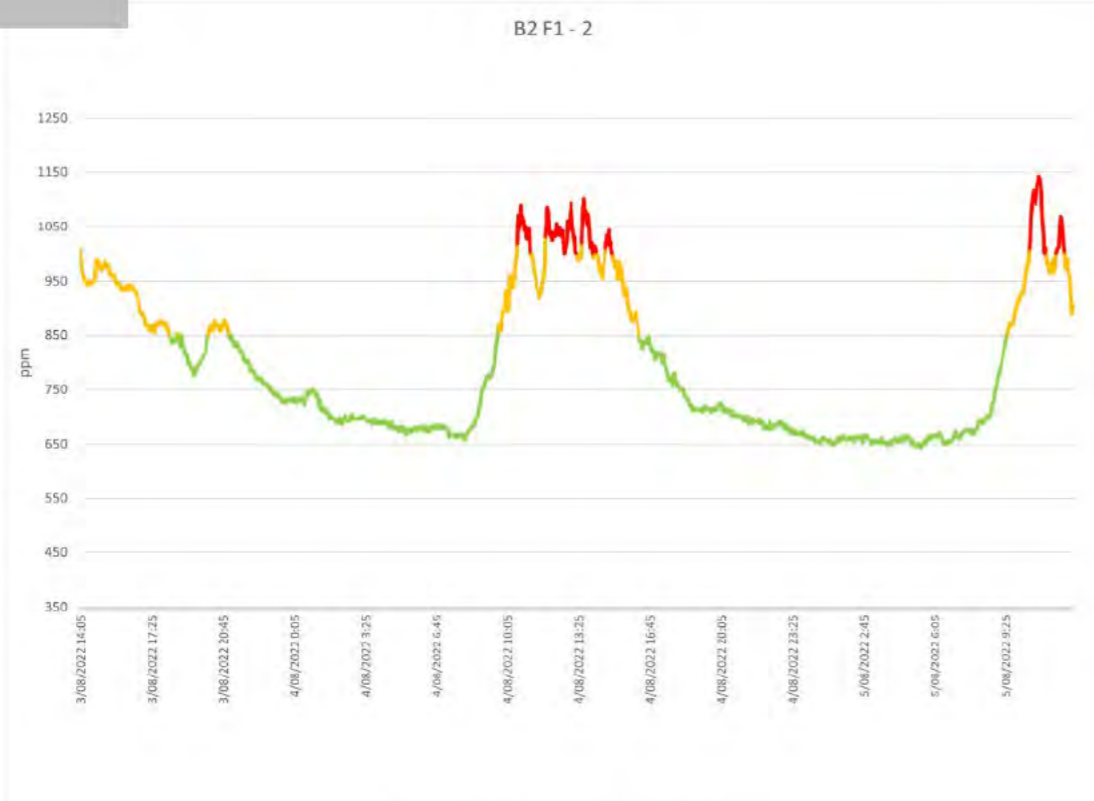


Figure 77: Location B2F1-2

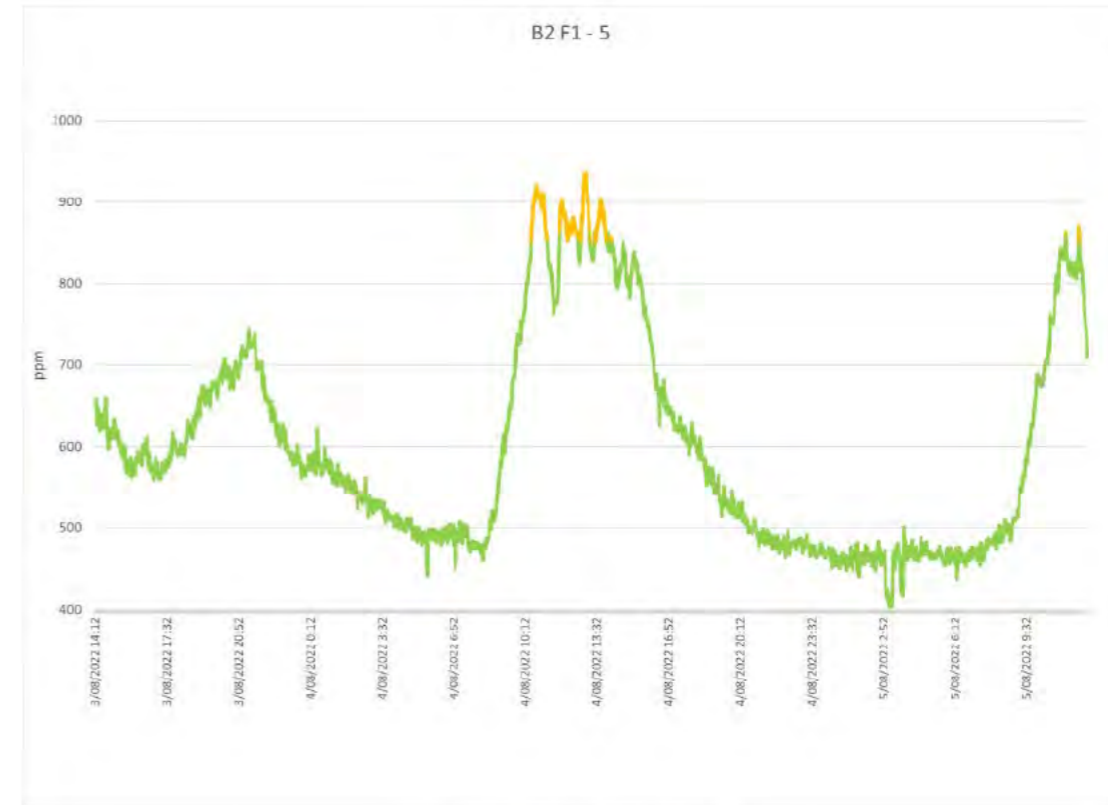


Figure 79: Location B2F1-5

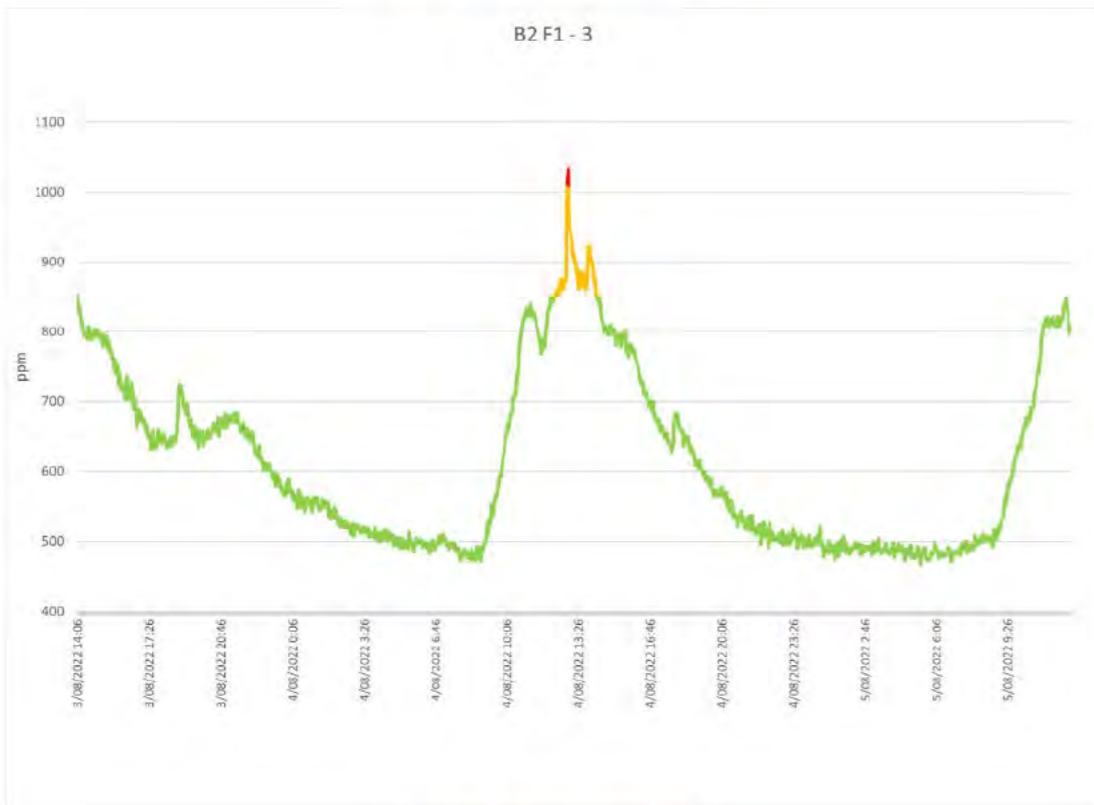


Figure 78: Location B2F1-3

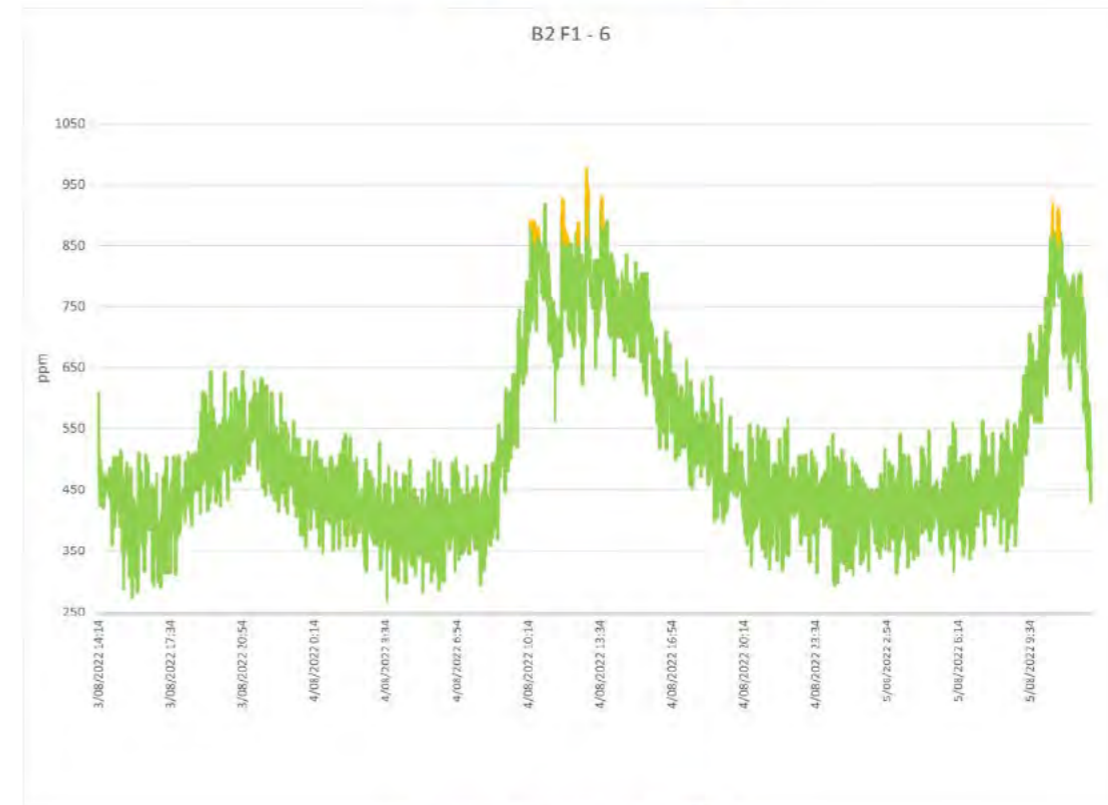


Figure 80: Location B2F1-6

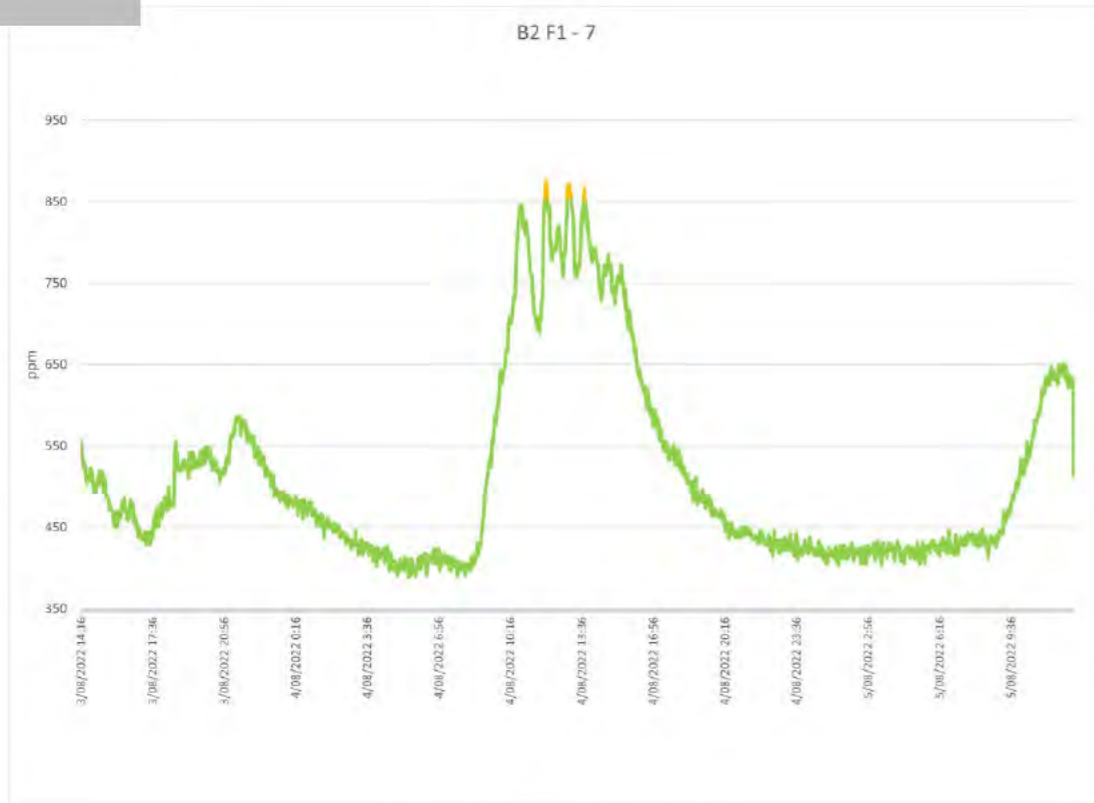


Figure 81: Location B2F1-7

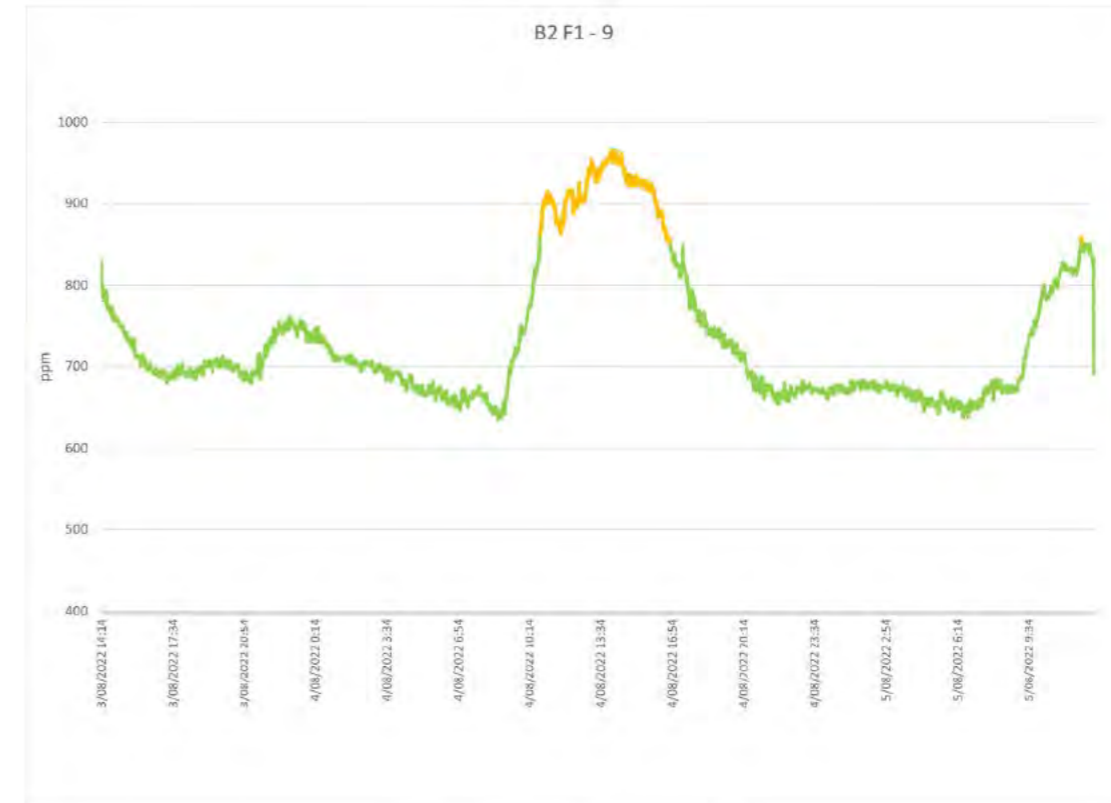


Figure 83: Location B2F1-9

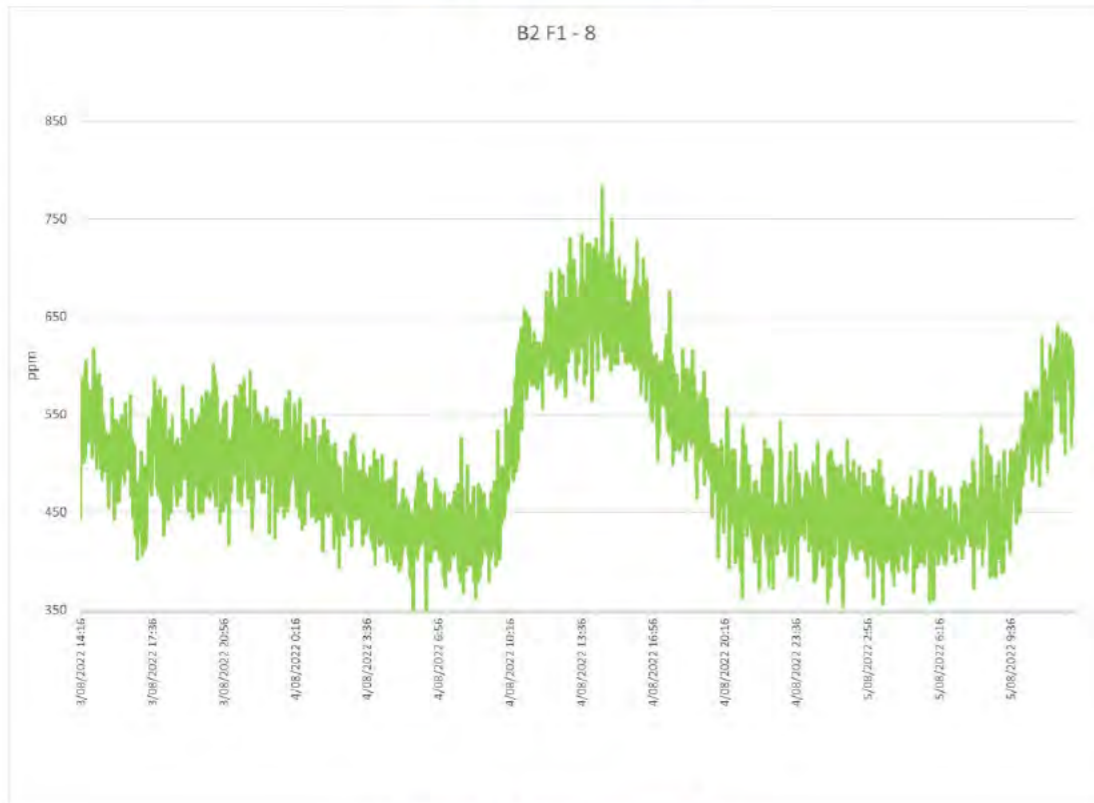


Figure 82: Location B2F1-8



Figure 84: Location B2F1-10

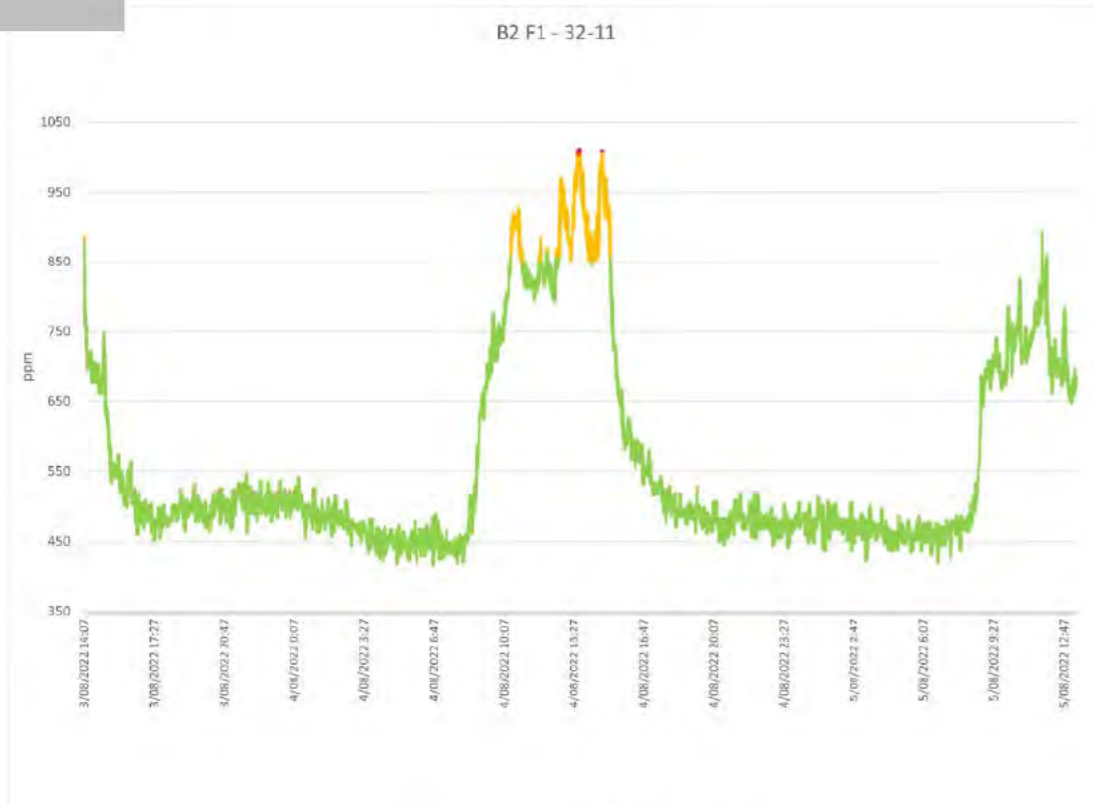


Figure 85: Location B2F1-32-11

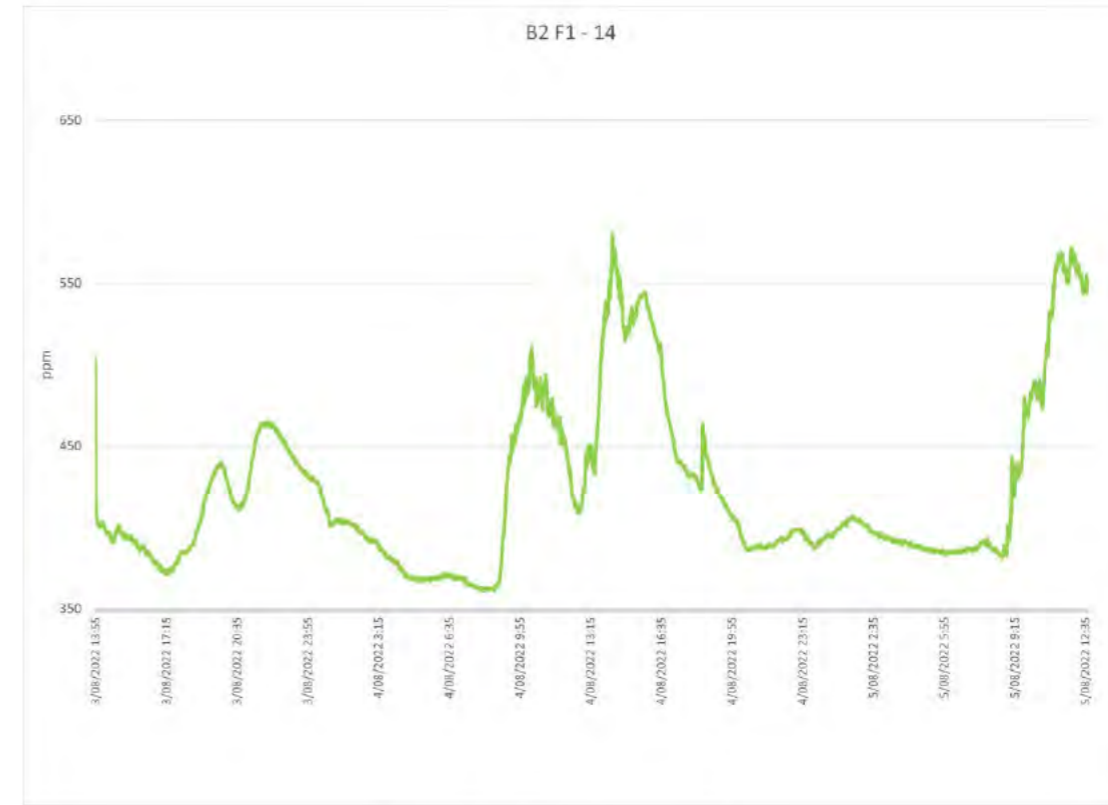


Figure 87: Location B2F1-14

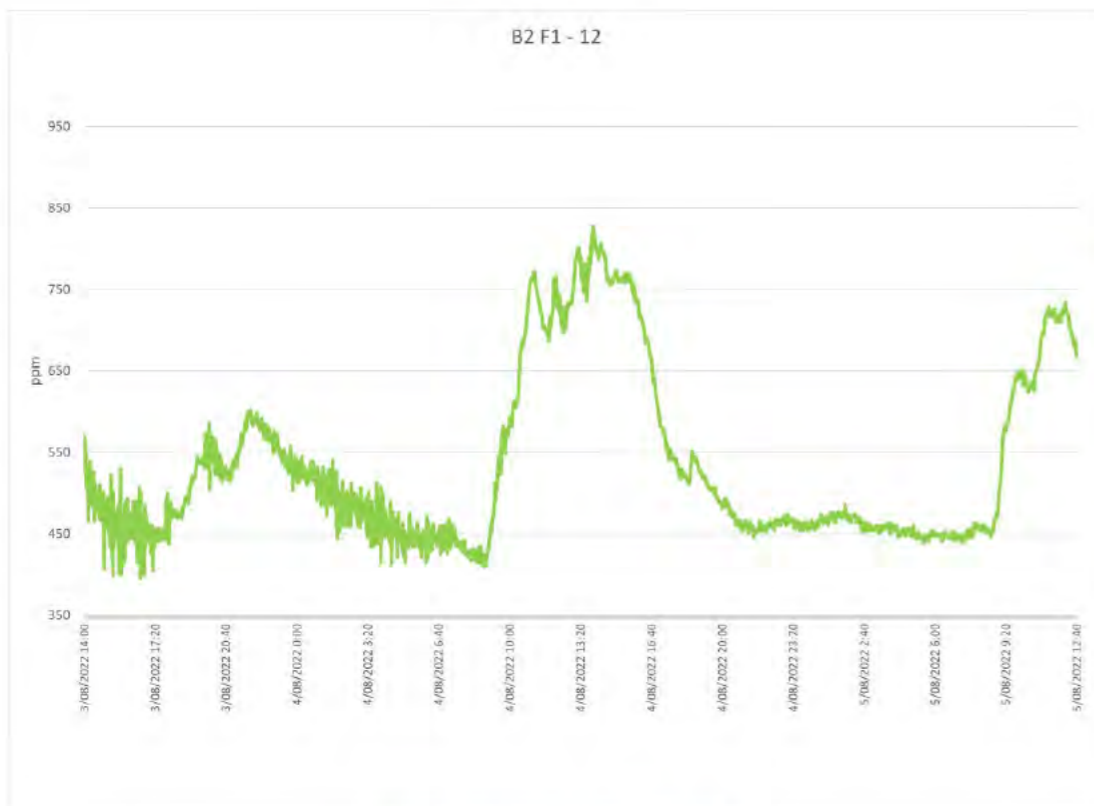


Figure 86: Location B2F1-12



Figure 88: Location B2F1-15

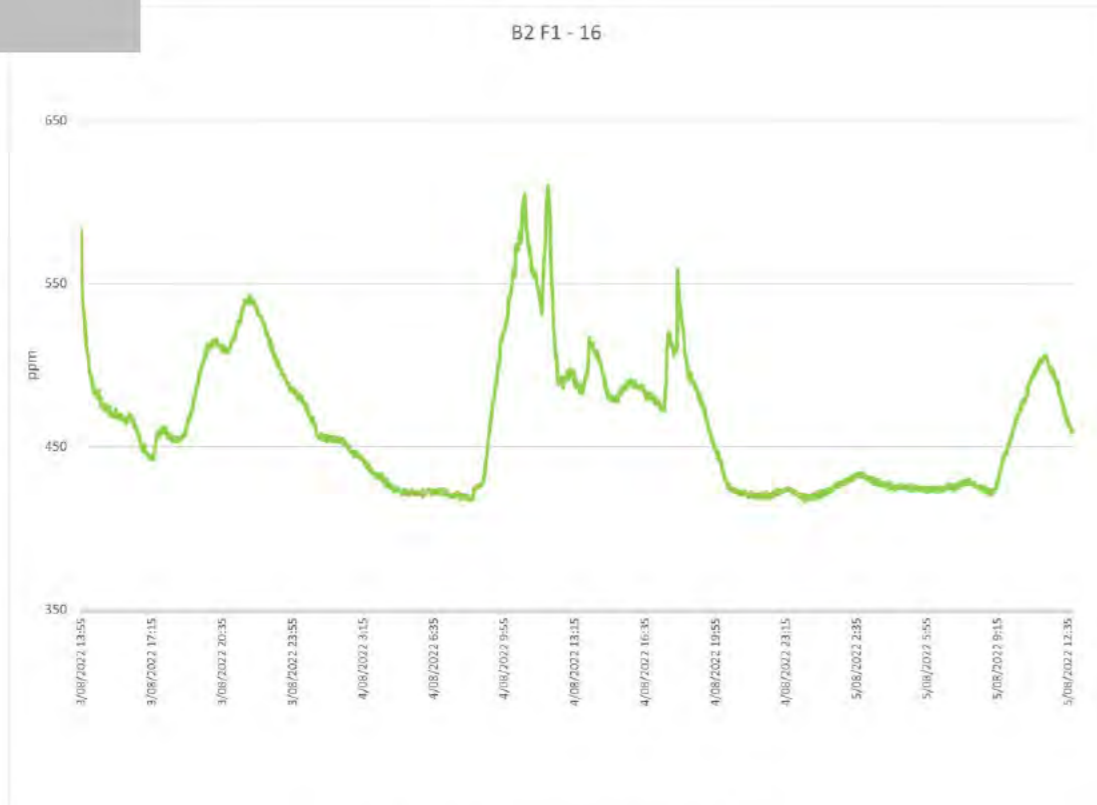


Figure 89: Location B2F1-16

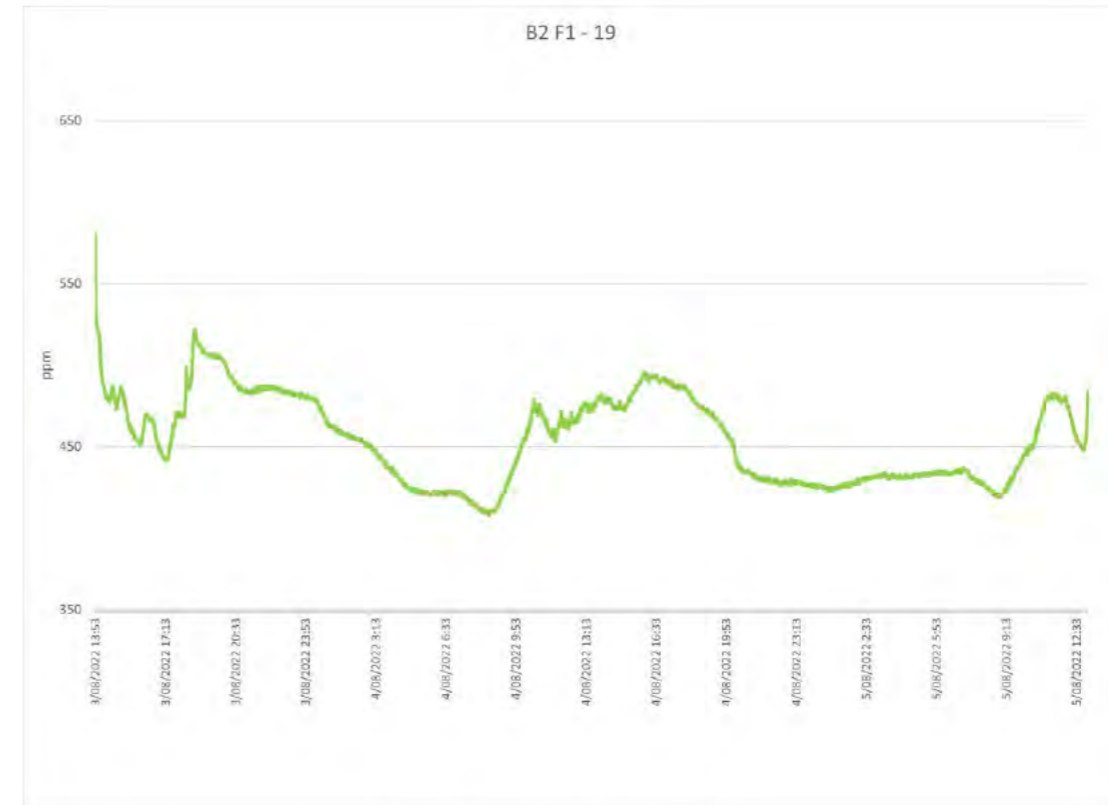


Figure 91: Location B2F1-19

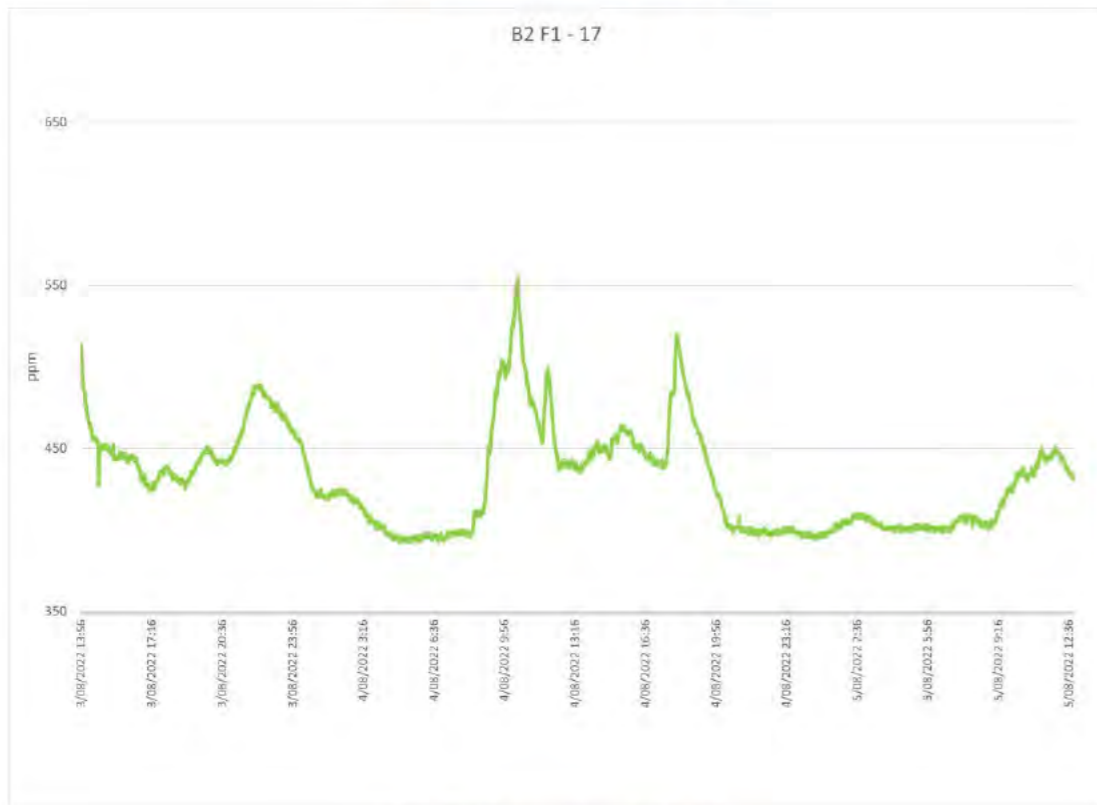


Figure 90: Location B2F1-17



Figure 92: Location B2F1-20

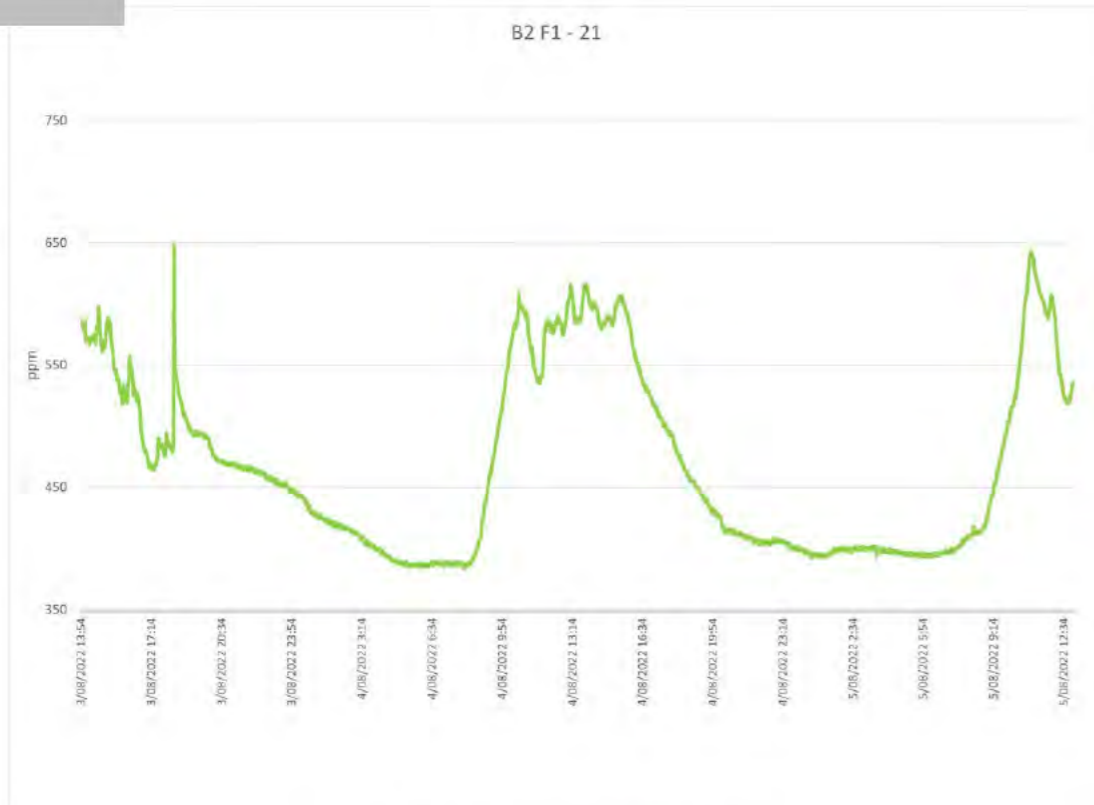


Figure 93: Location B2F1-21

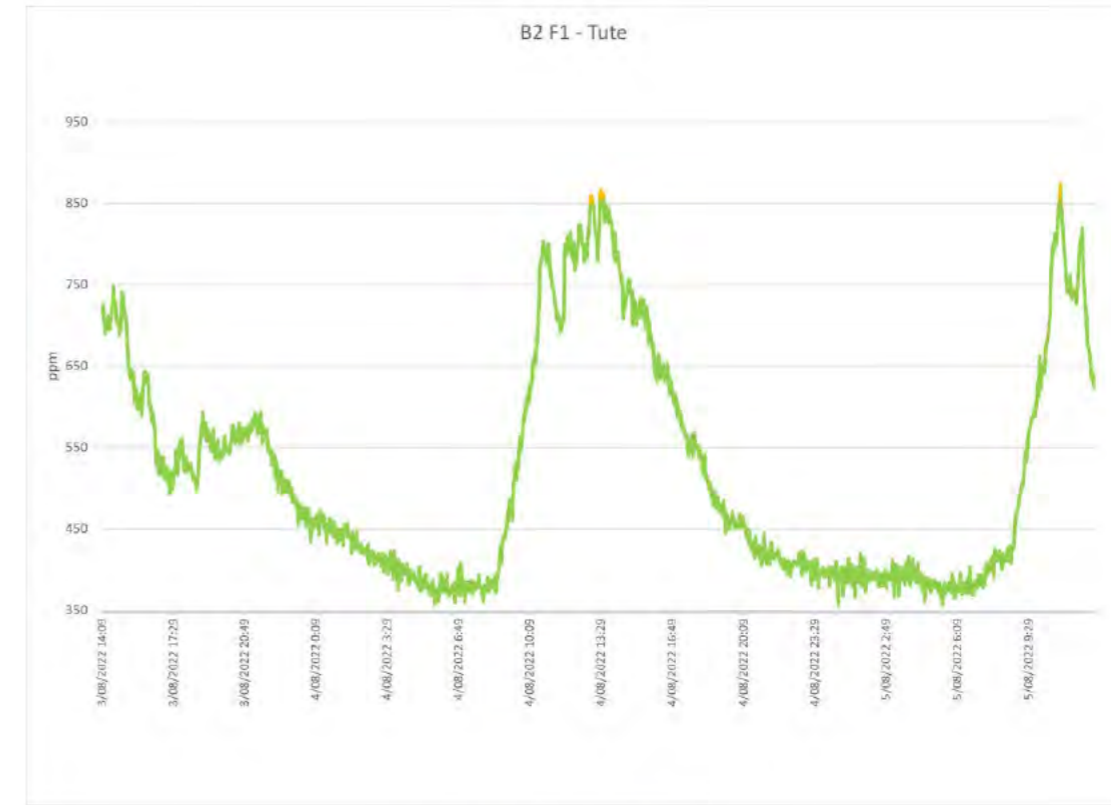


Figure 95: Location B2F1-Tute

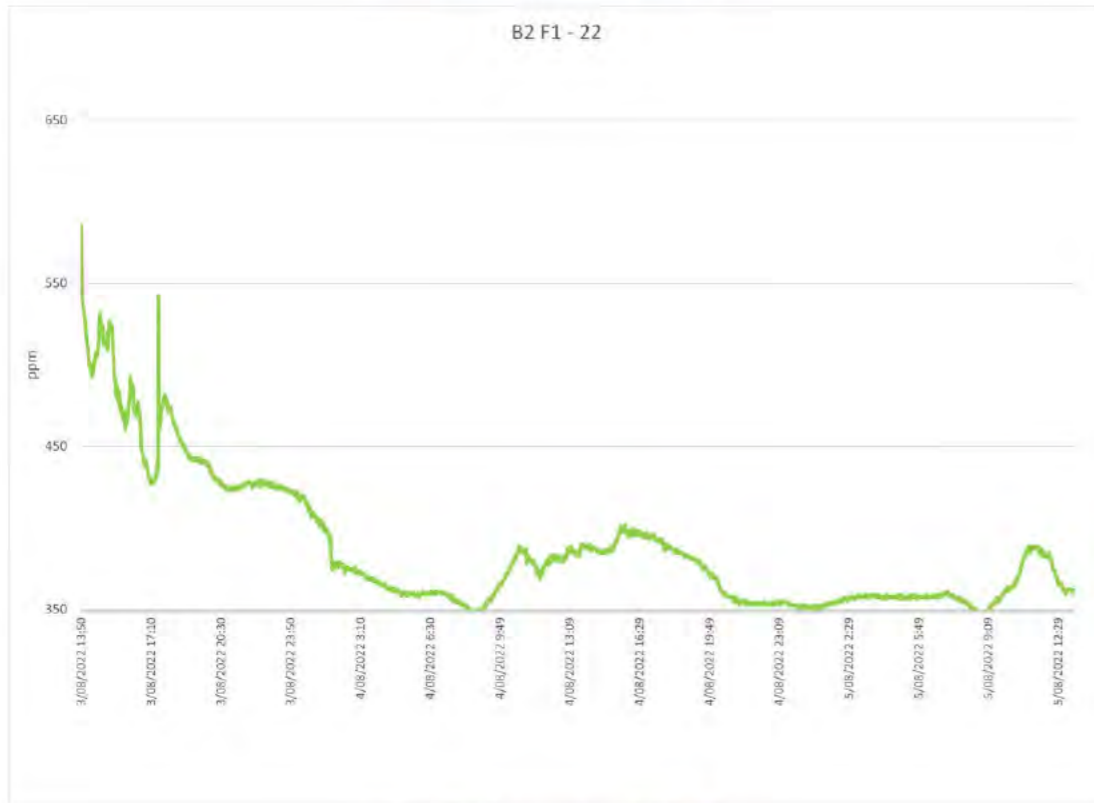


Figure 94: Location B2F1-22

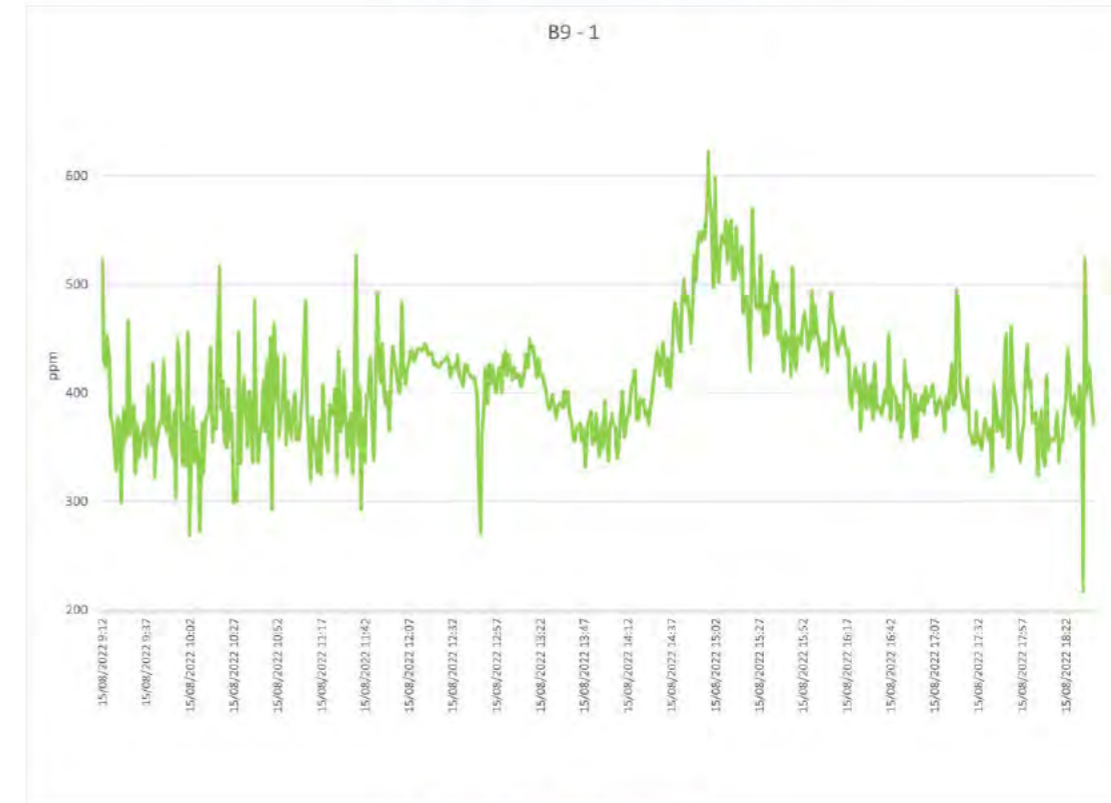


Figure 96: Location B9-1

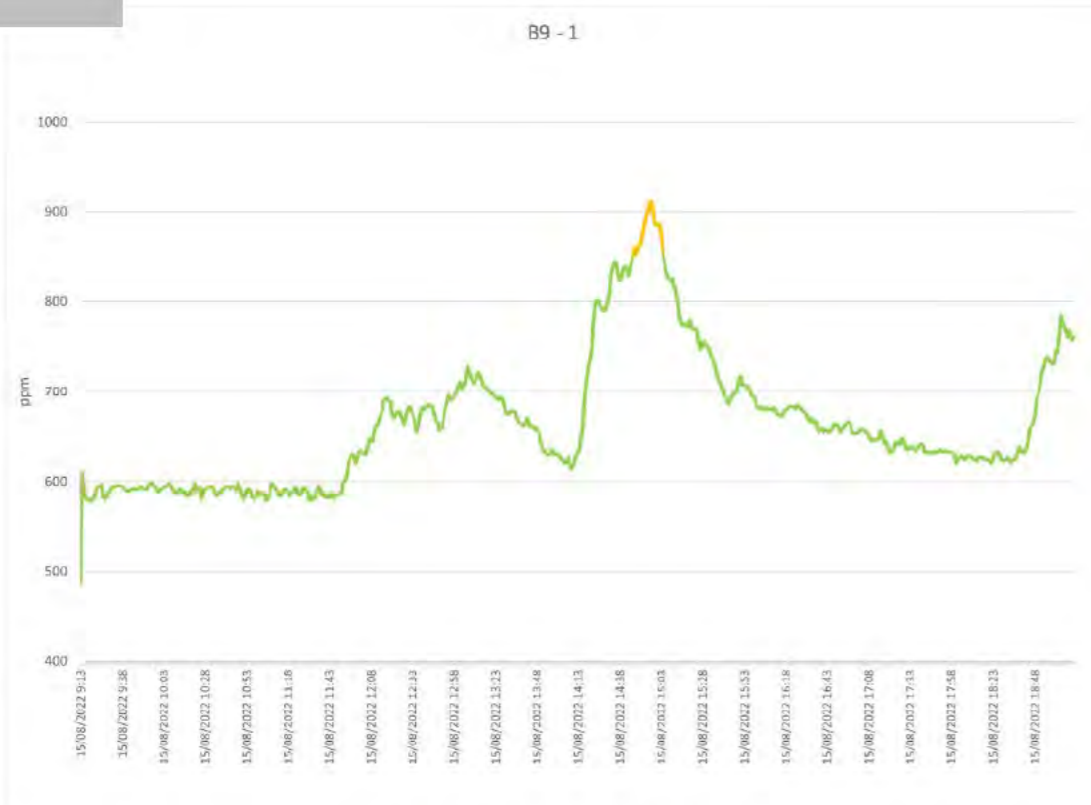


Figure 97: Location B9-1

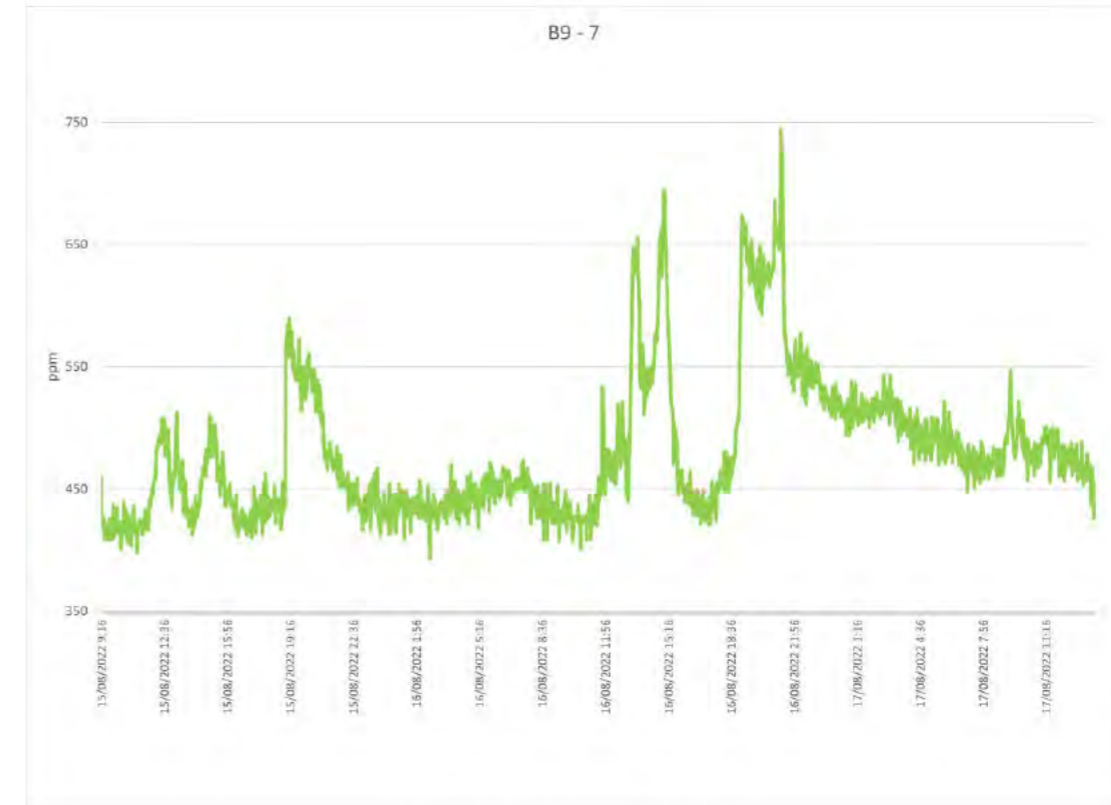


Figure 99: Location B9-7

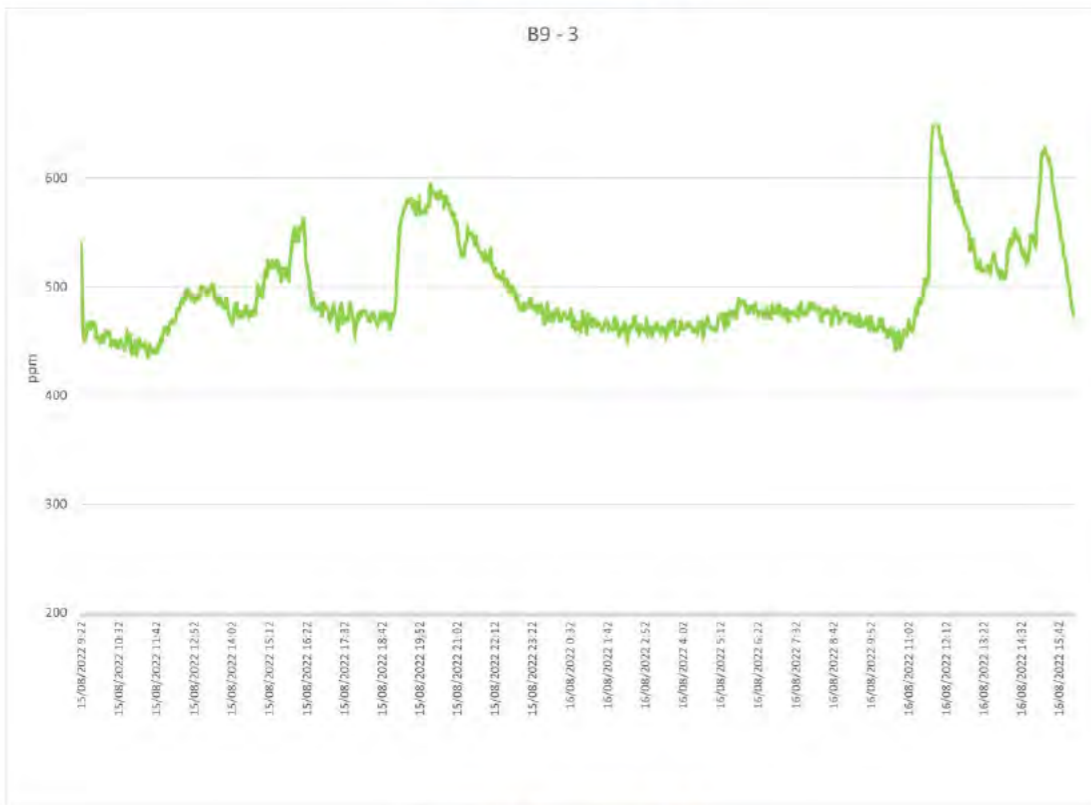


Figure 98: Location B9-3

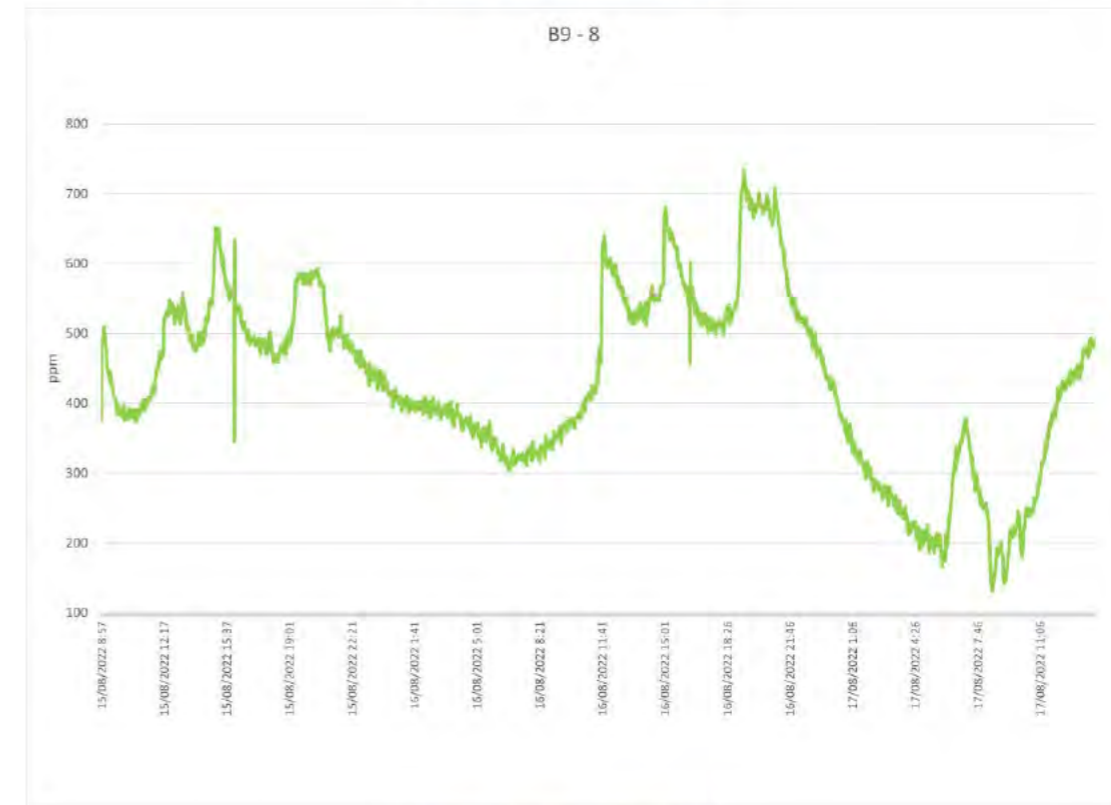


Figure 100: Location B9-8

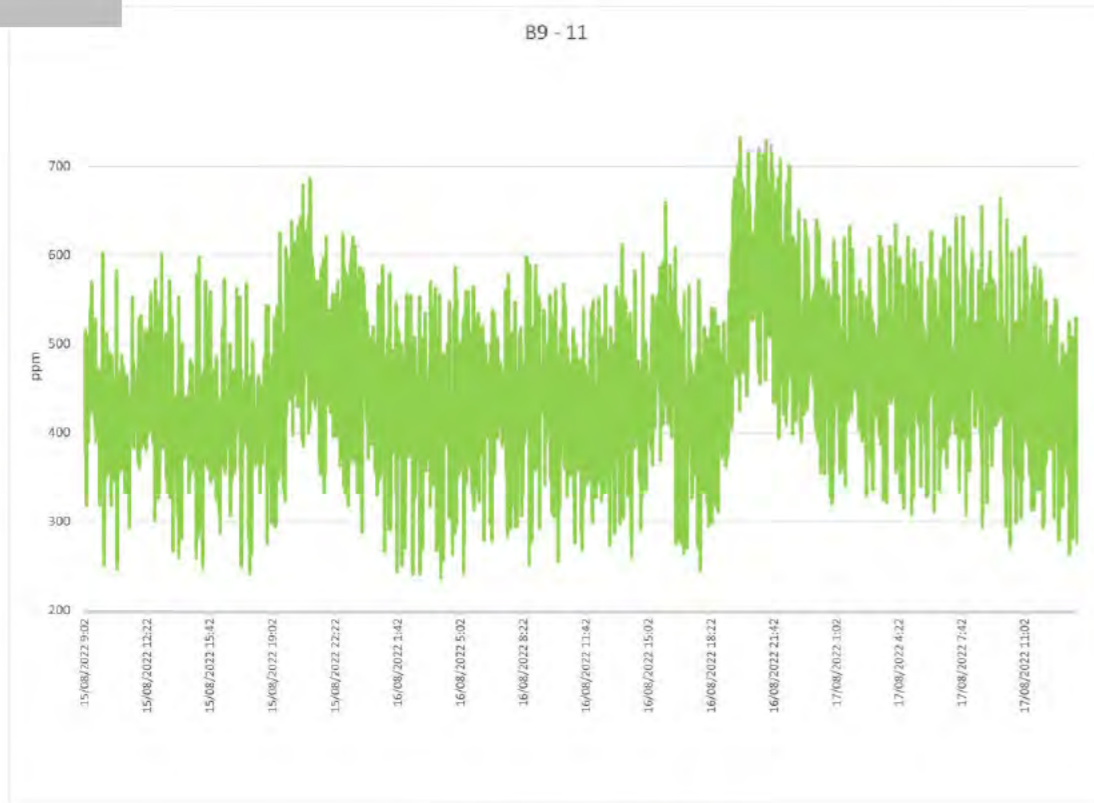


Figure 101: Location B9-11

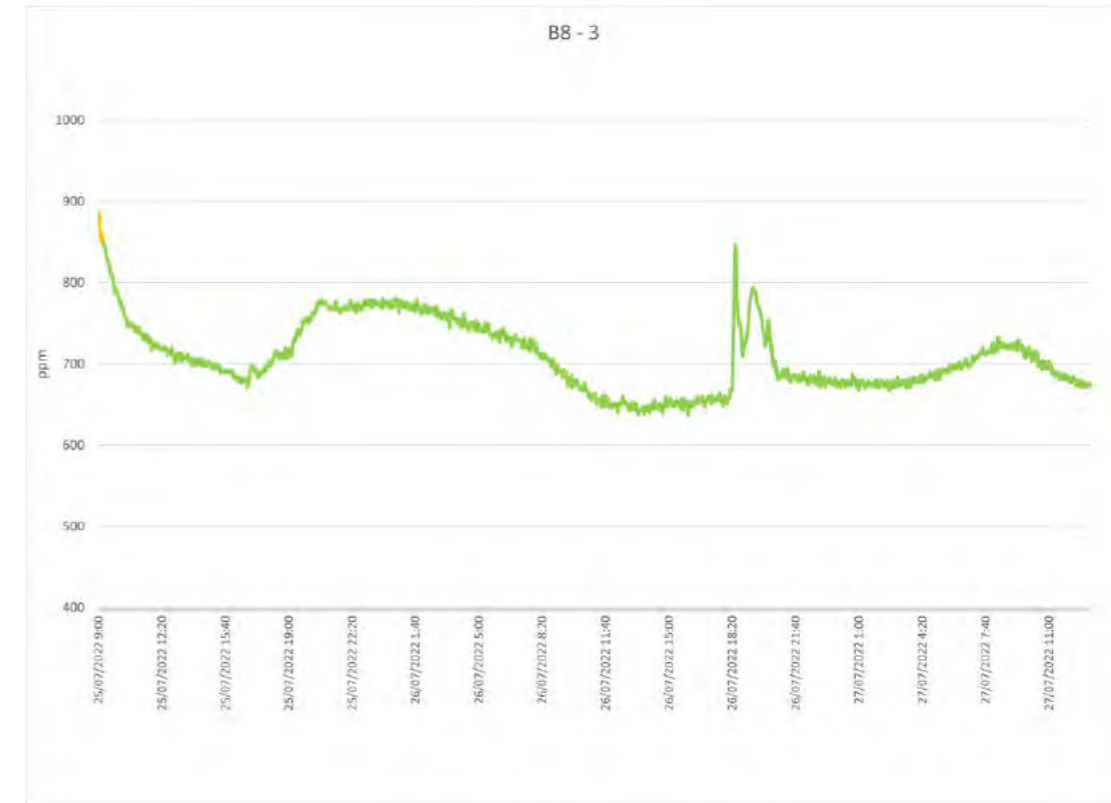


Figure 103: Location B8-3

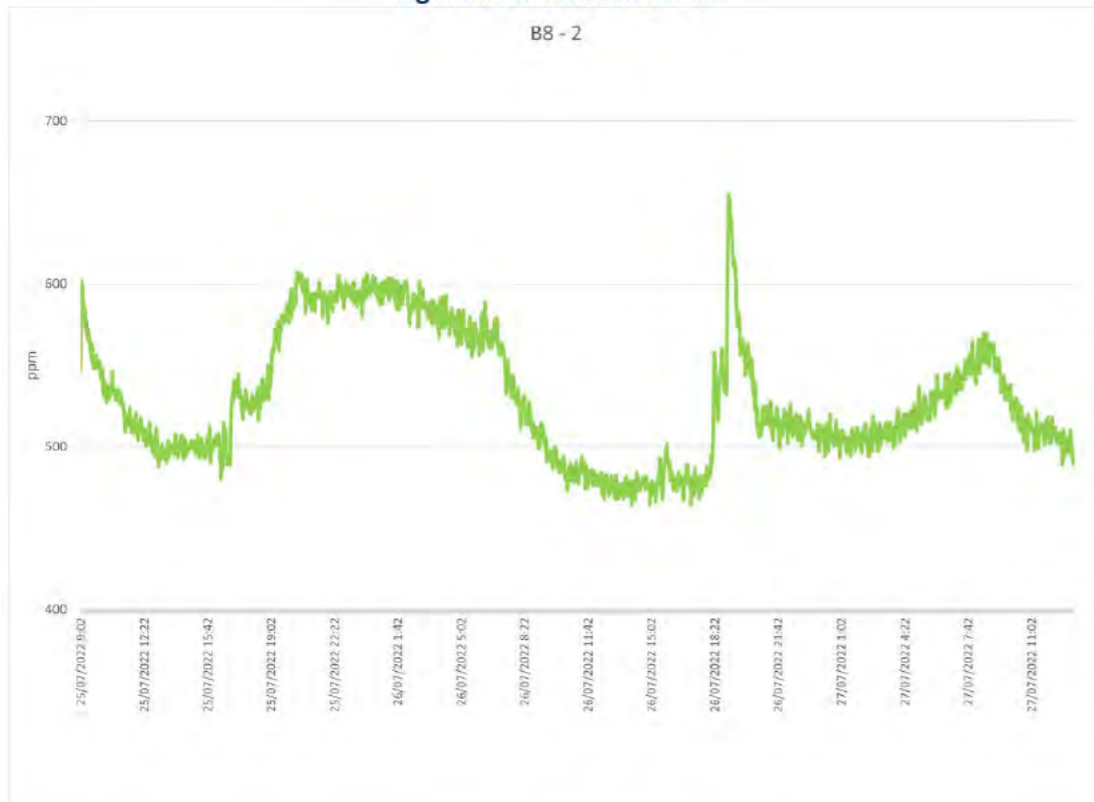


Figure 102: Location B8-2

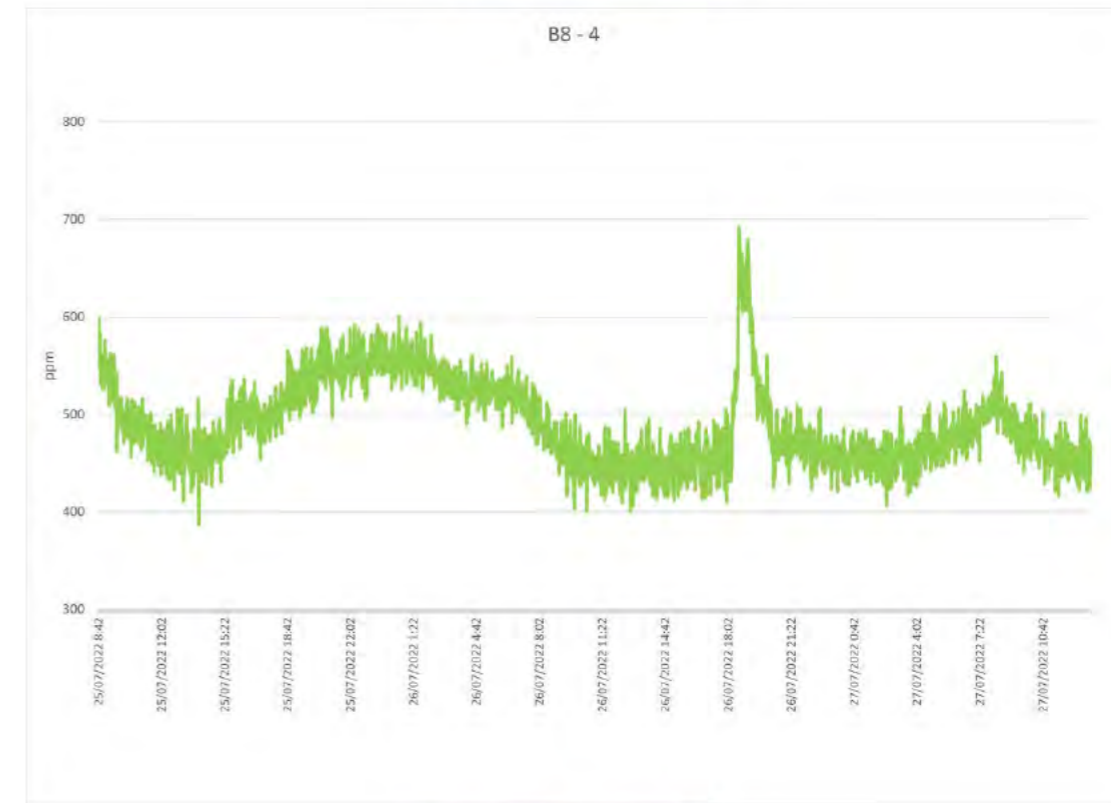


Figure 104: Location B8-4

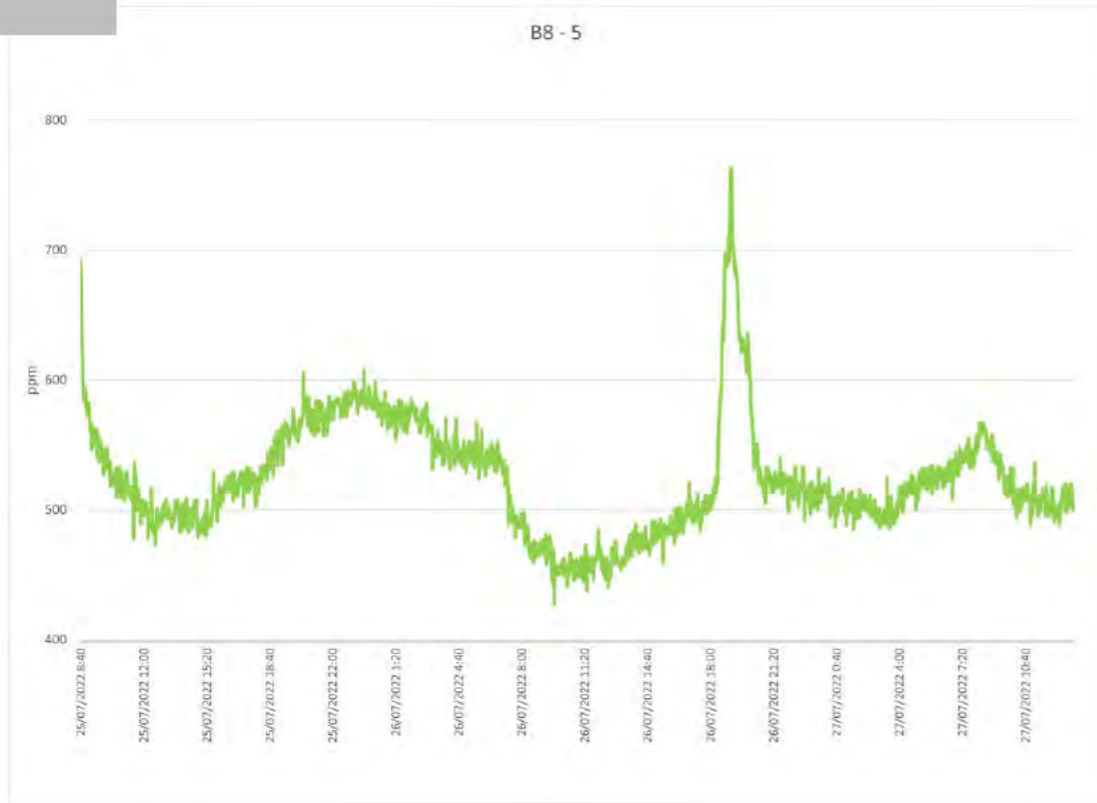


Figure 105: Location B8-5

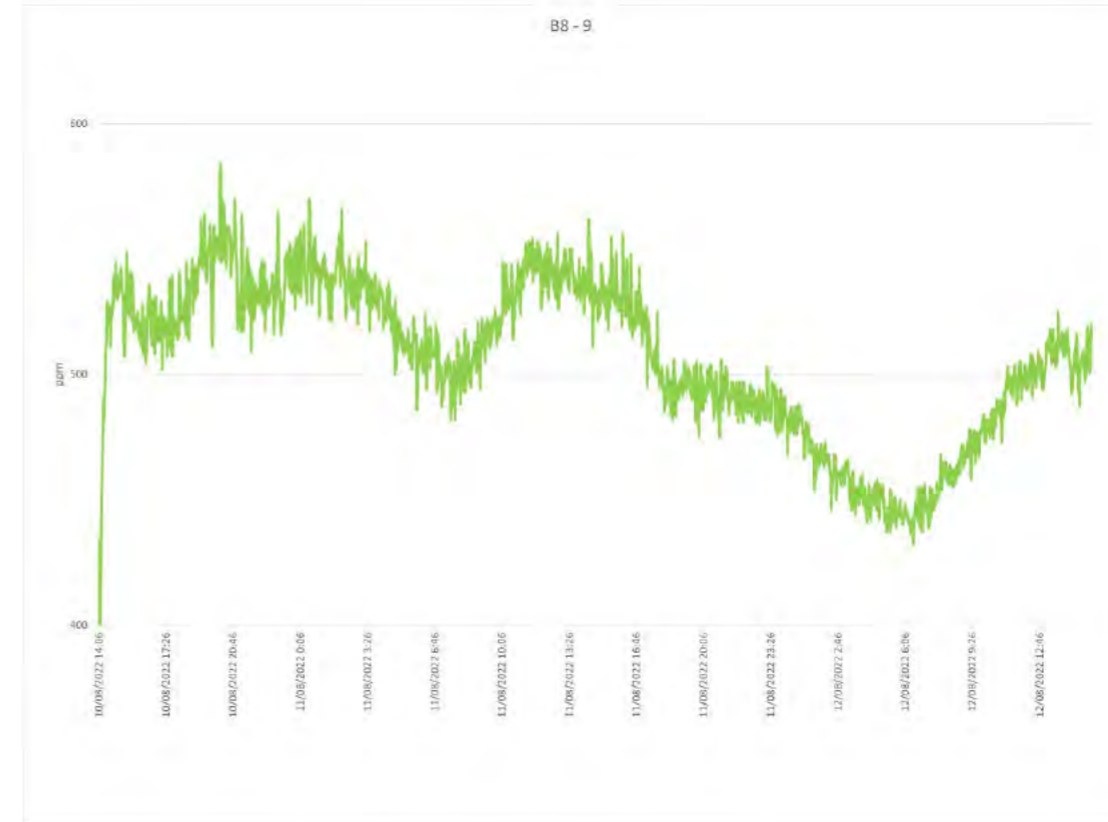


Figure 107: Location B8-9

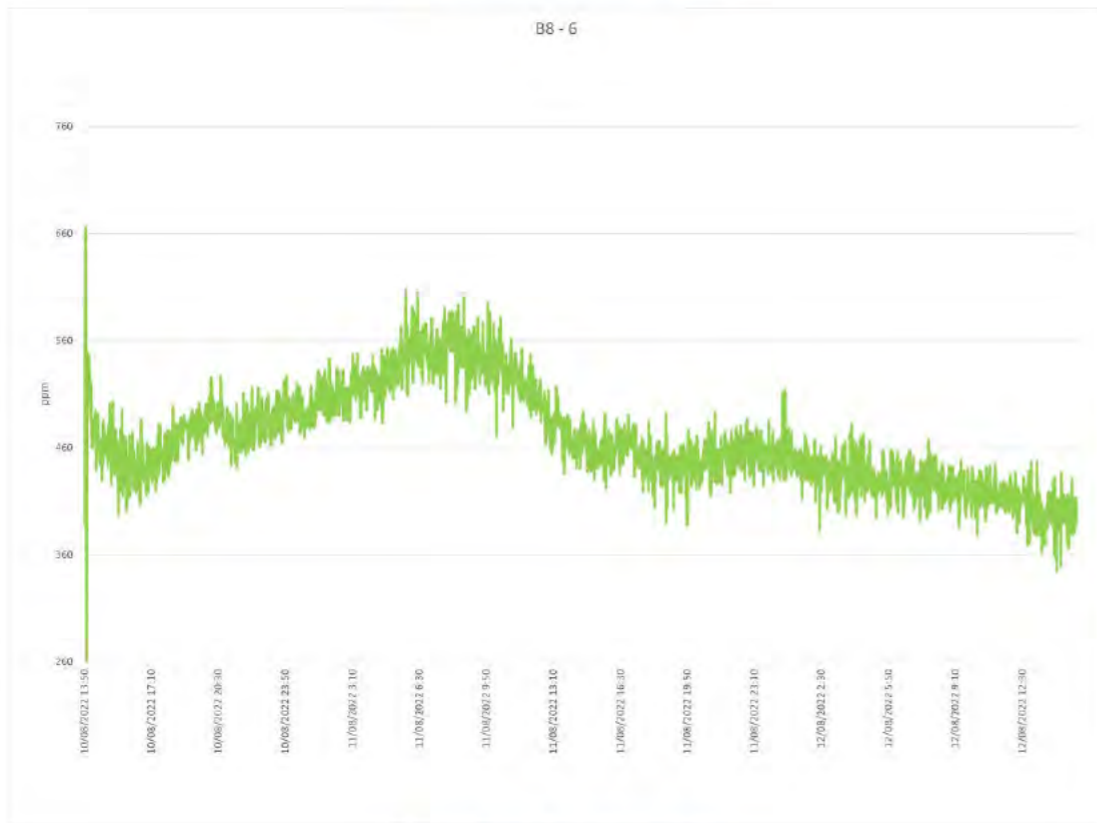


Figure 106: Location B8-6

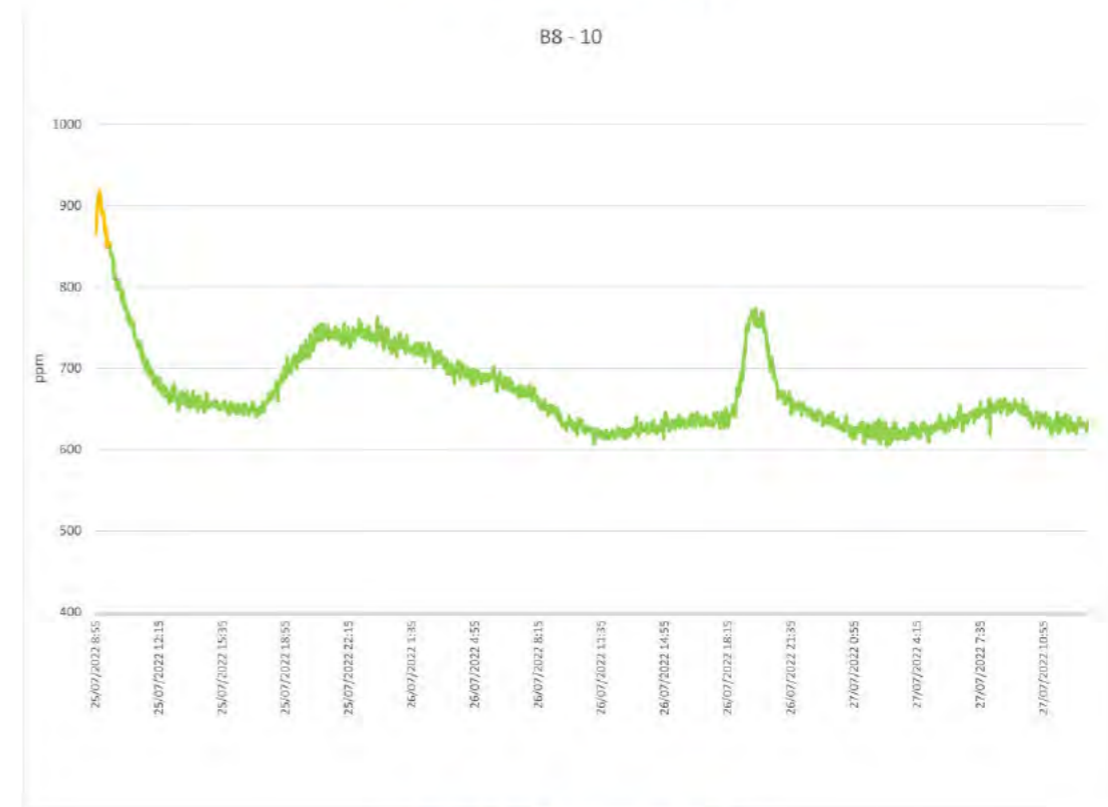


Figure 108: Location B8-10



Figure 109: Location B7-1.1

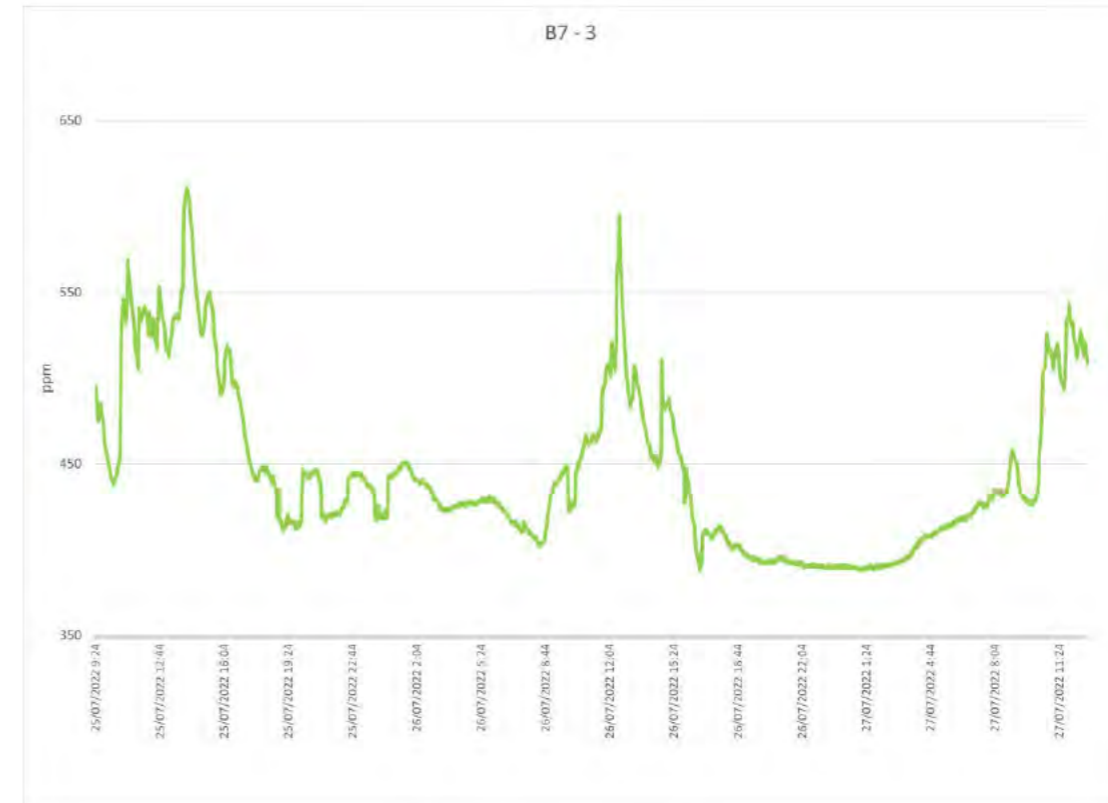


Figure 111: Location B7-3

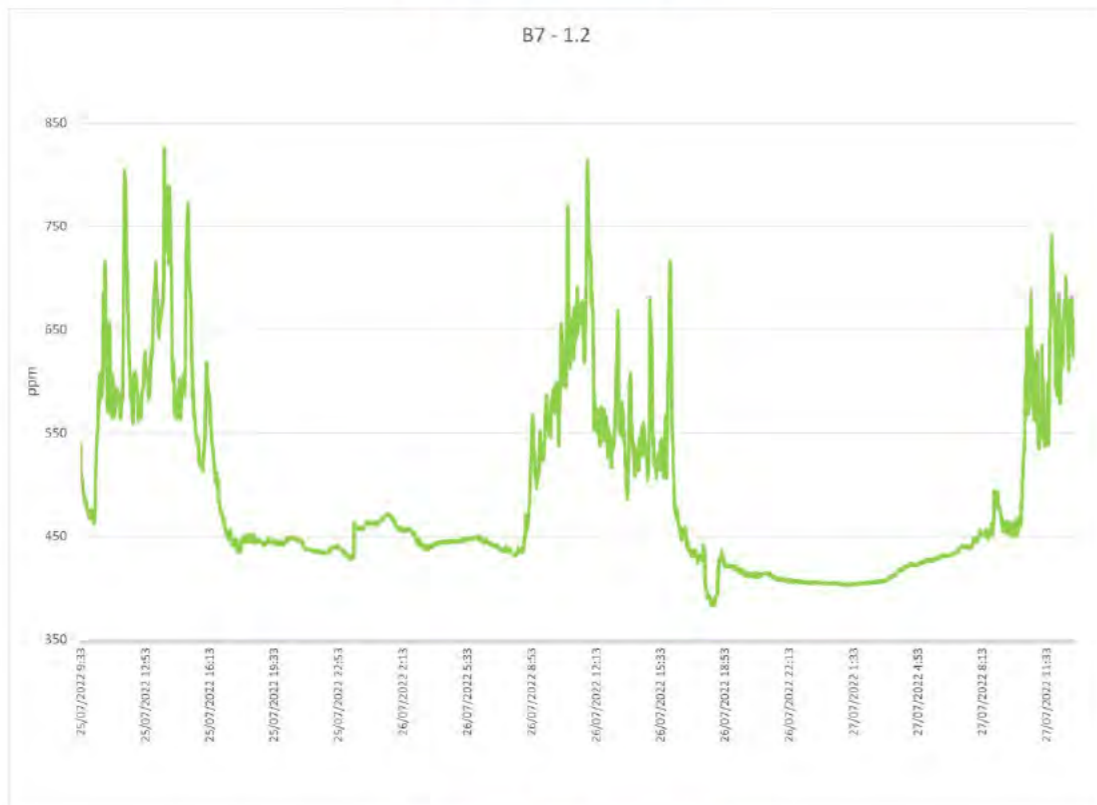


Figure 110: Location B7-1.2

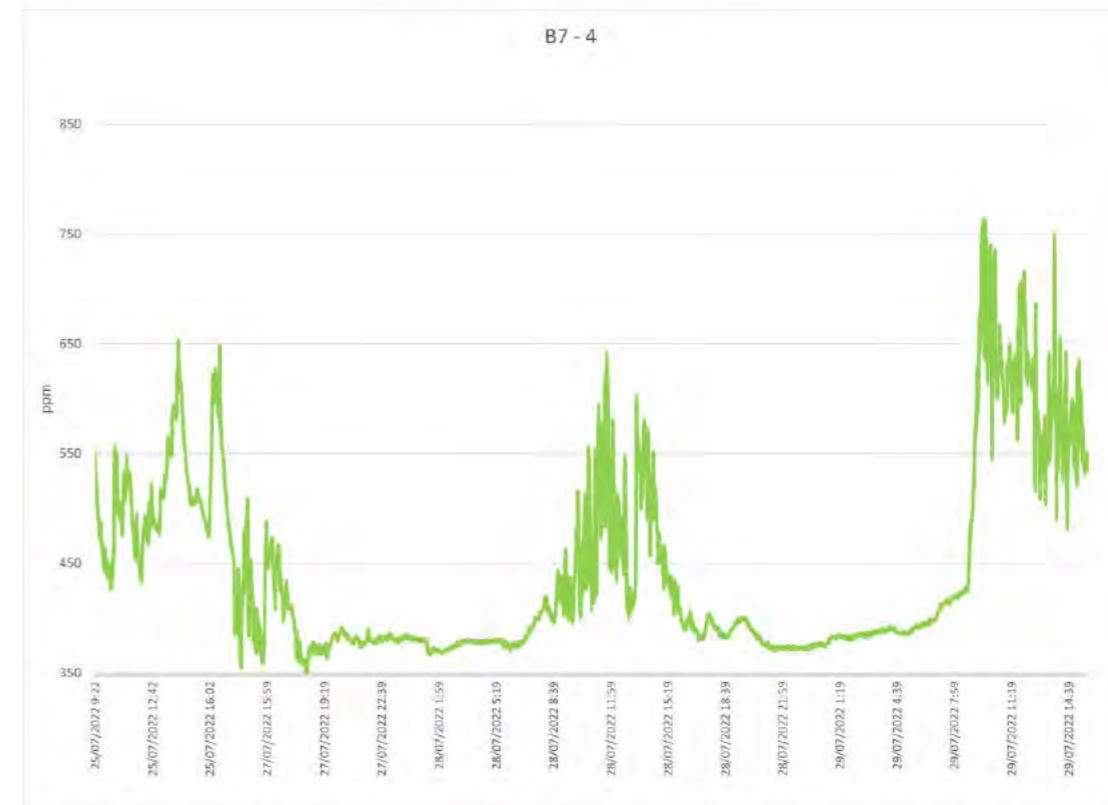


Figure 112: Location B7-4

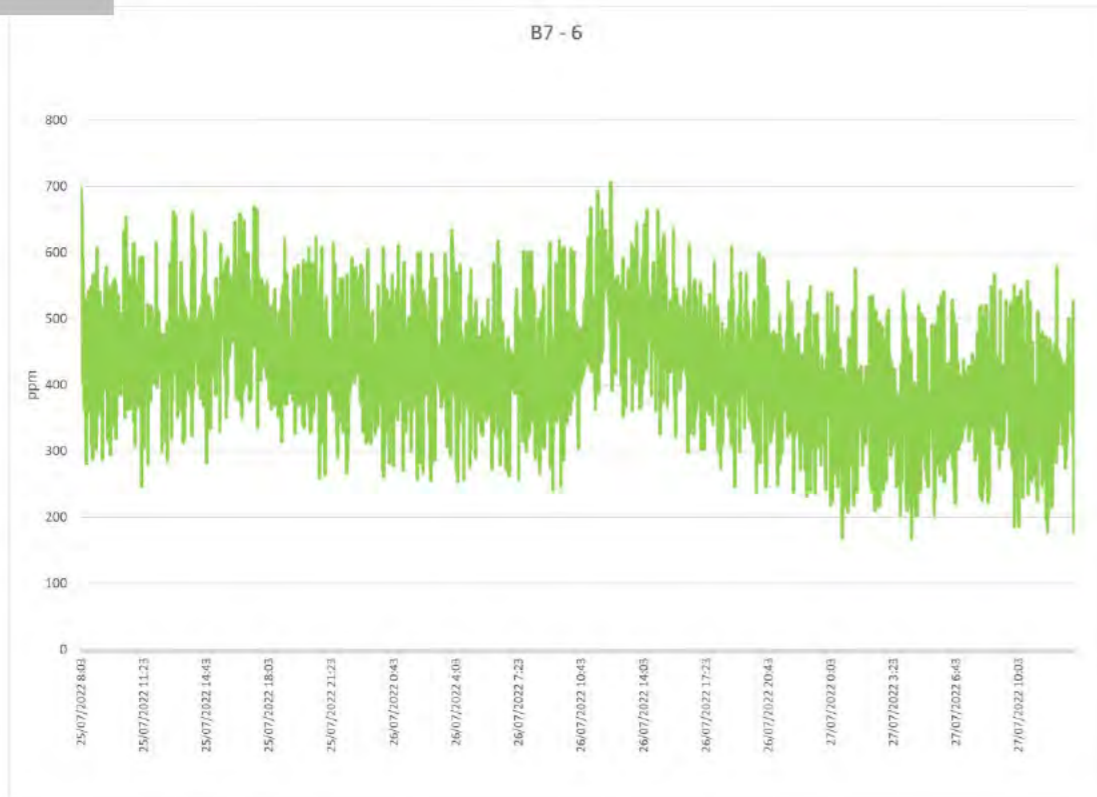


Figure 113: Location B7-6

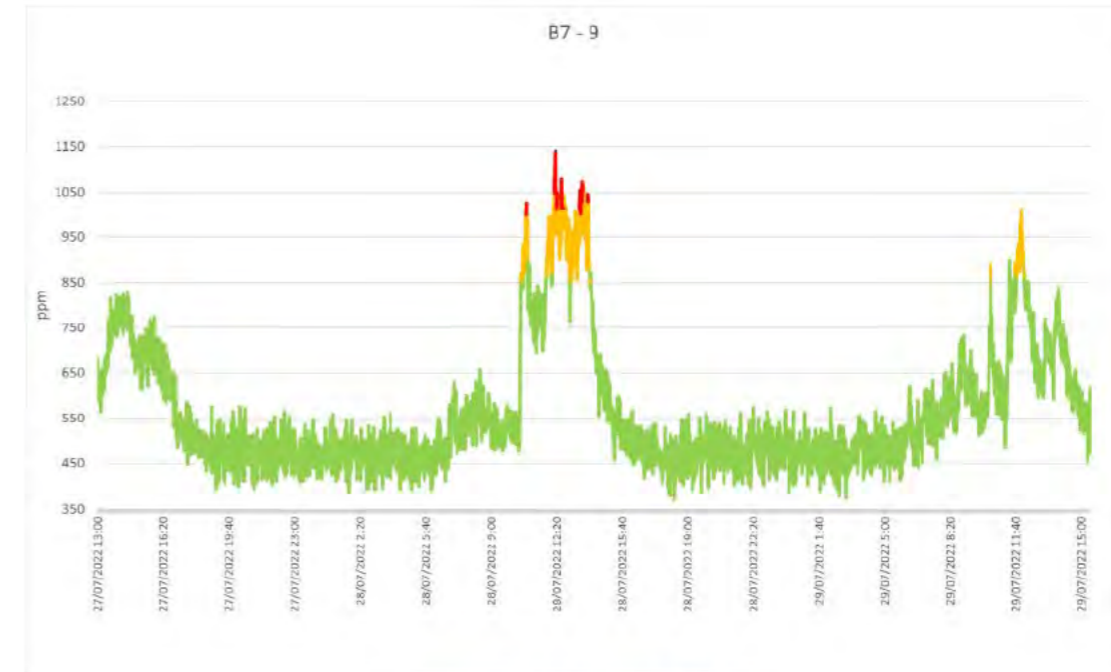


Figure 115: Location B7-9

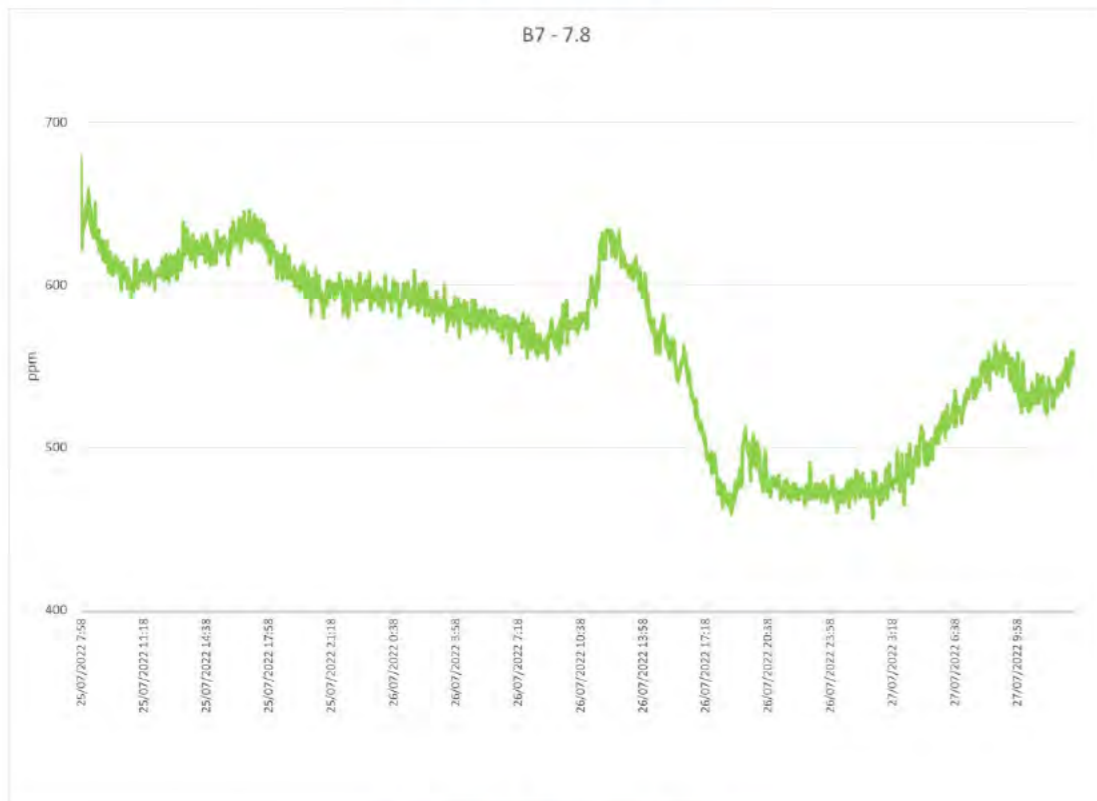


Figure 114: Location B7-7.8

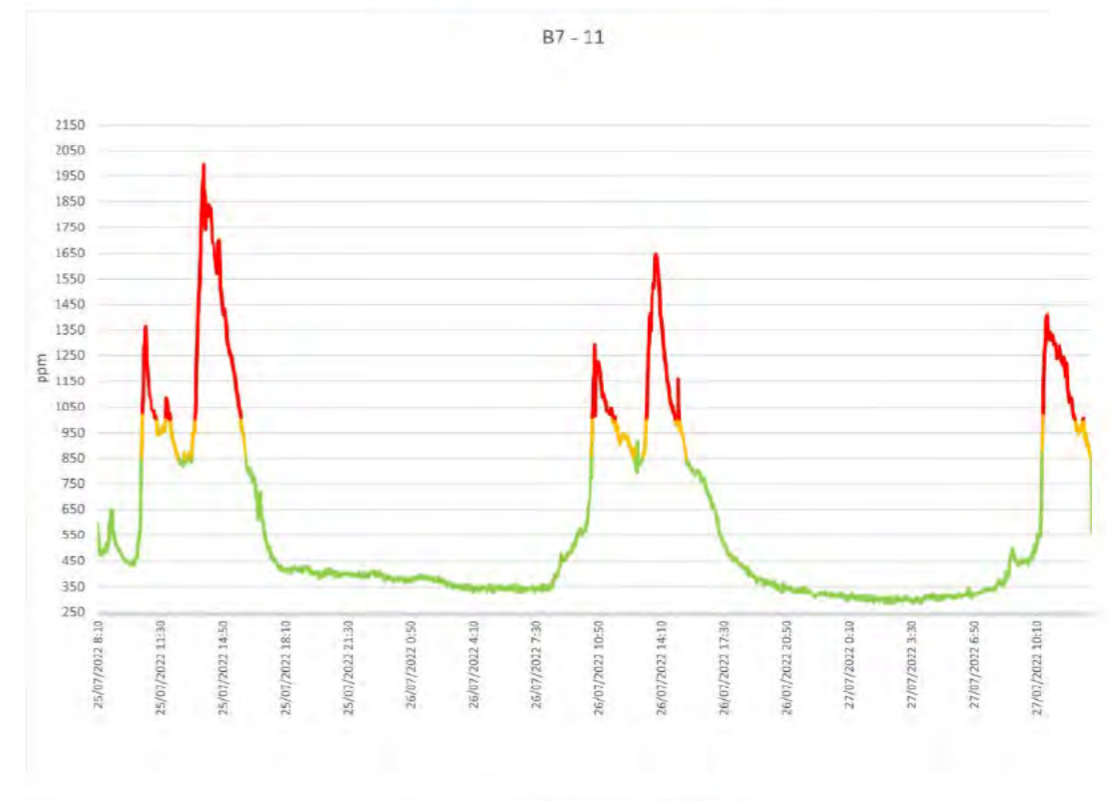


Figure 116: Location B7-11

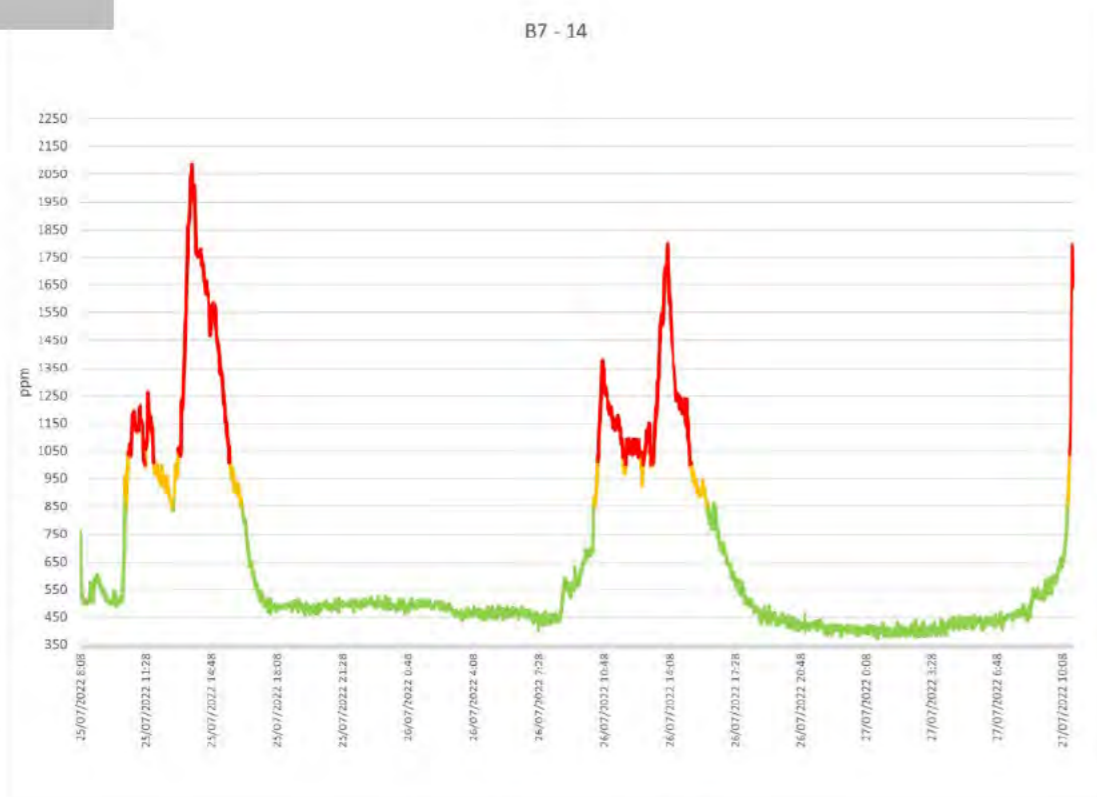


Figure 117: Location B7-14

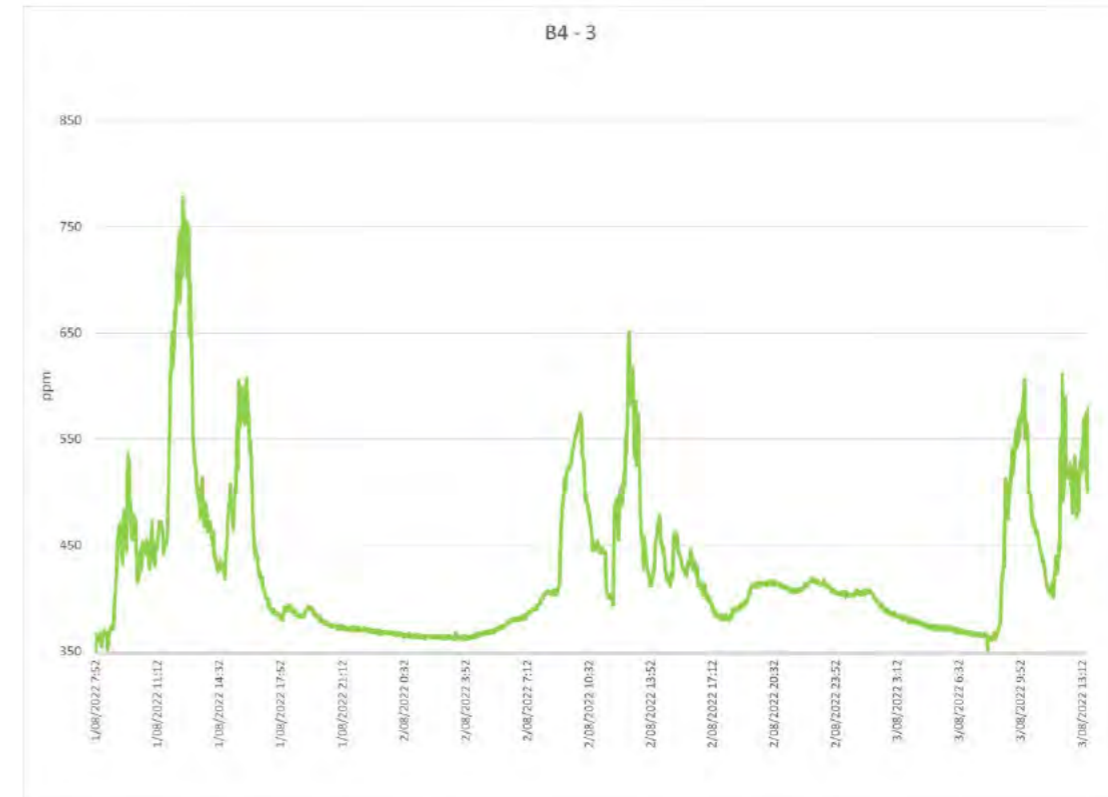


Figure 119: Location B4-3

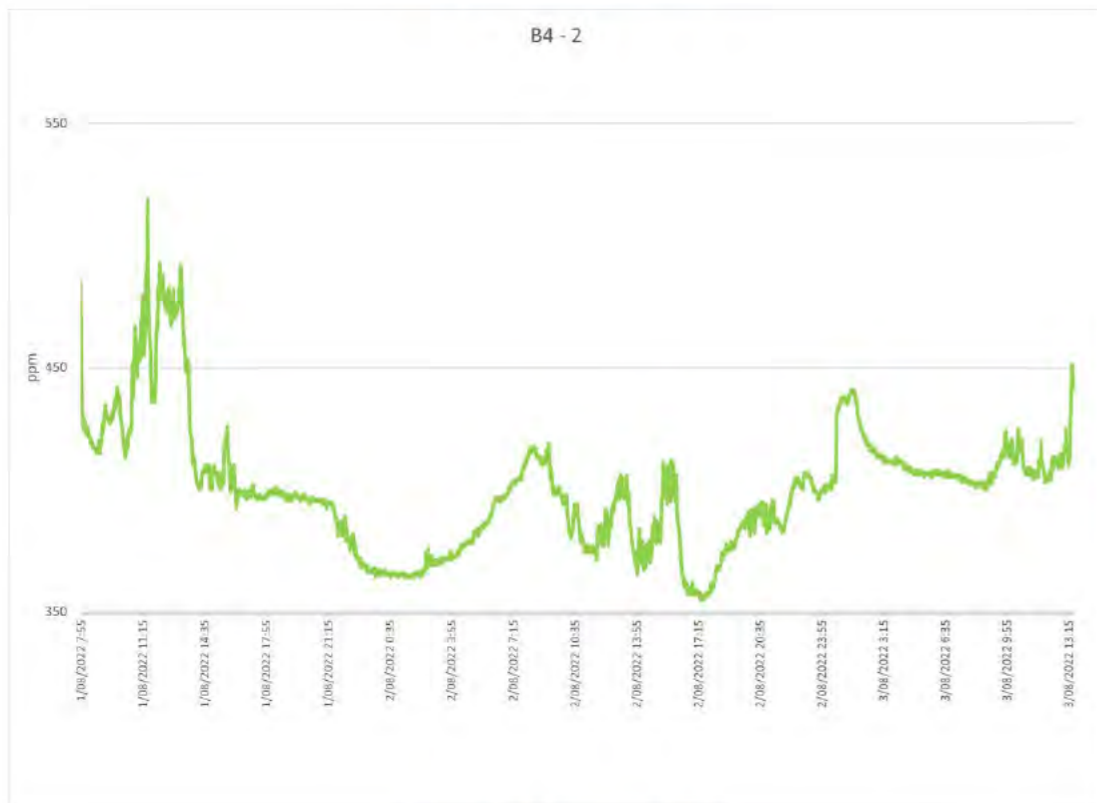


Figure 118: Location B4-2

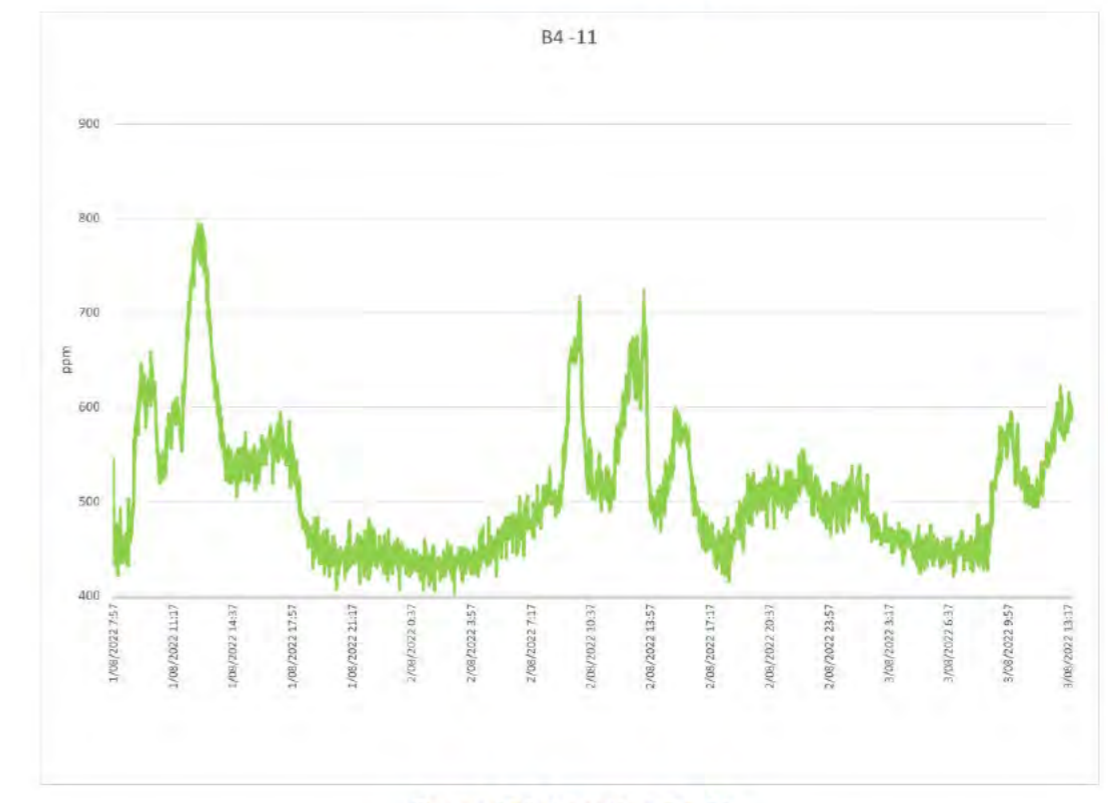


Figure 120: Location B4-11

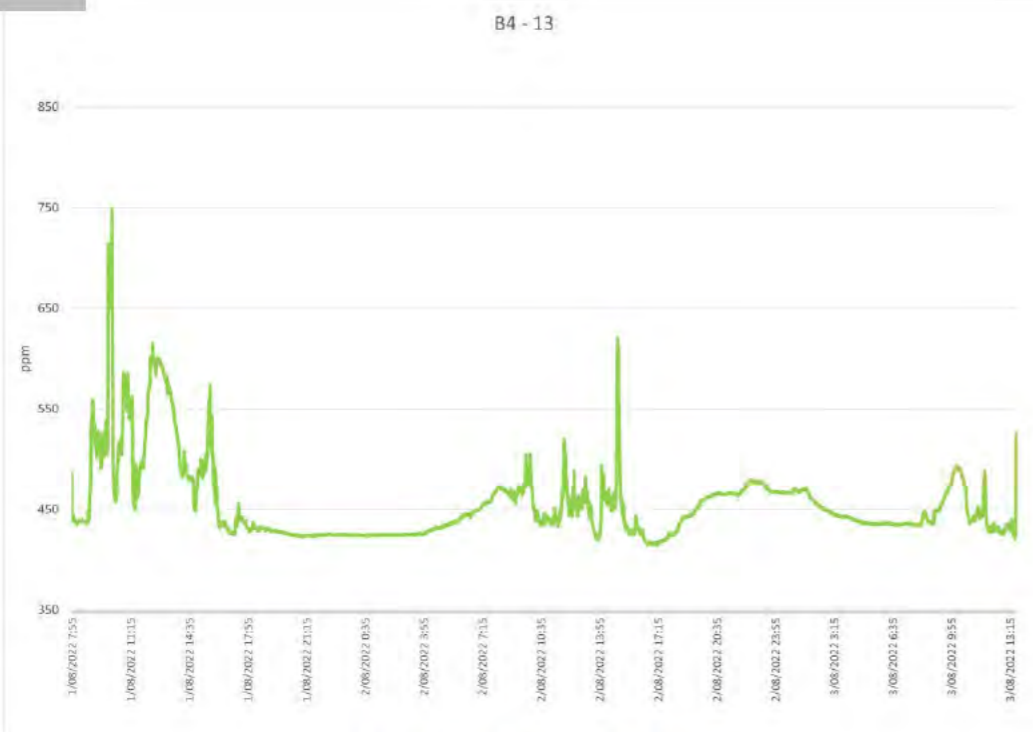


Figure 121: Location B4-13

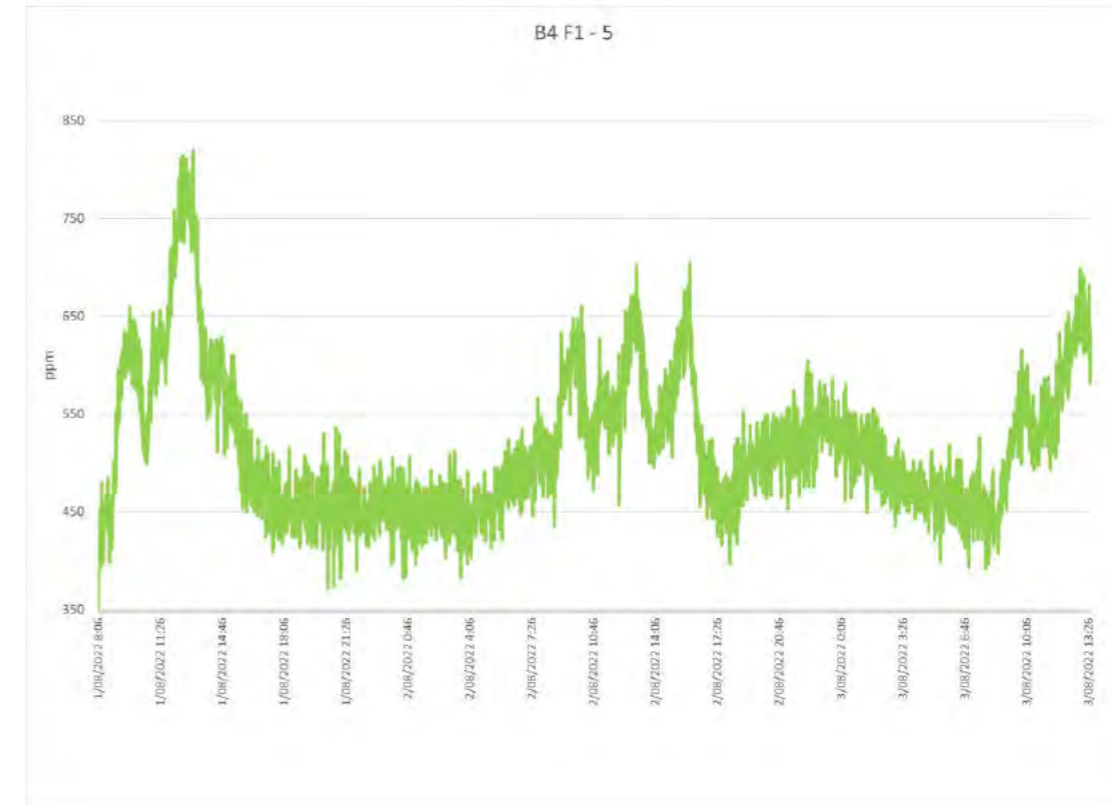


Figure 123: Location B4F1-5

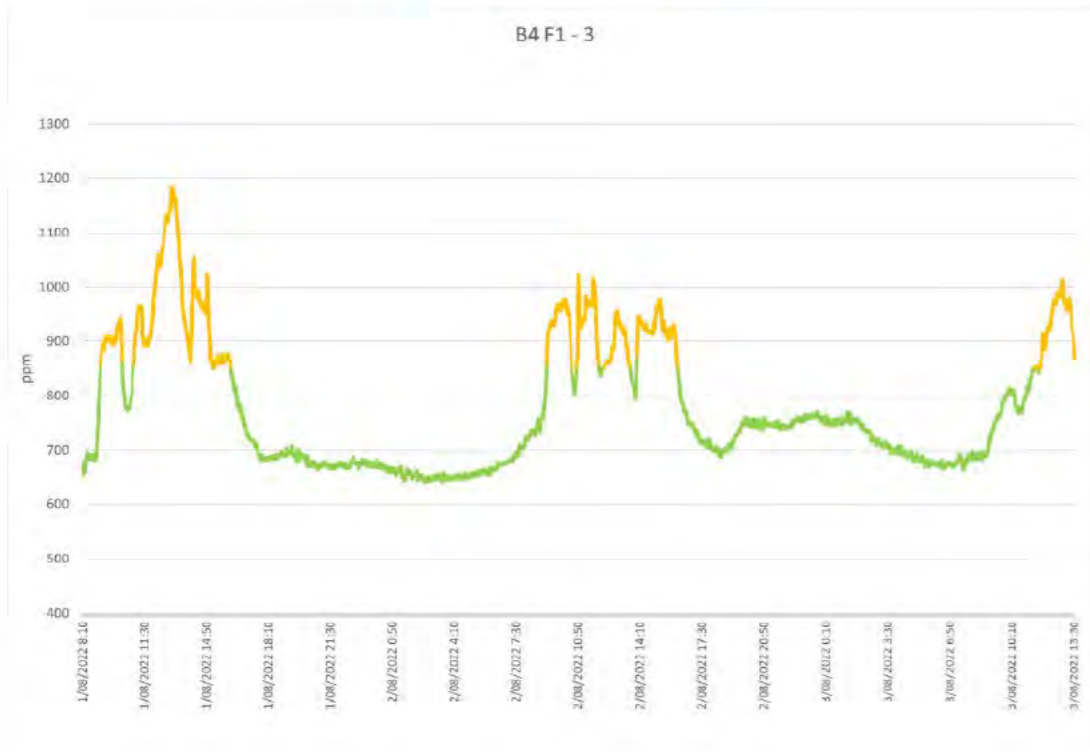


Figure 122: Location B4F1-3

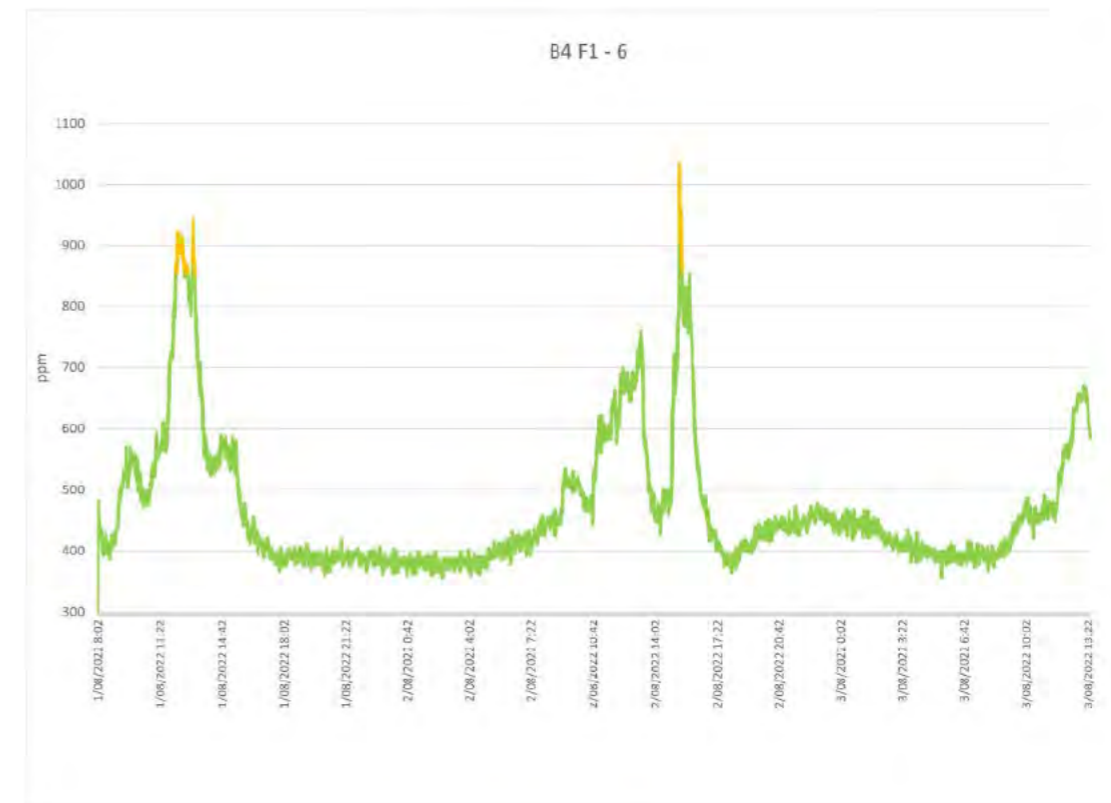


Figure 124: Location B4F1-6

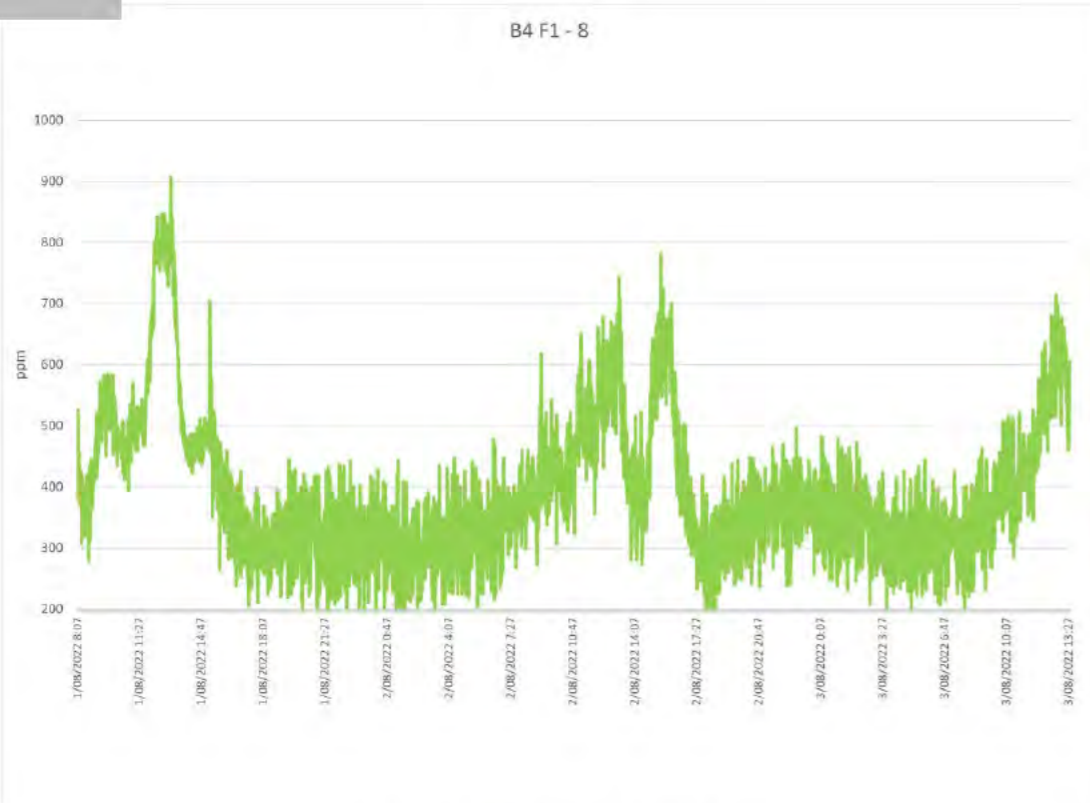


Figure 125: Location B4F1-8

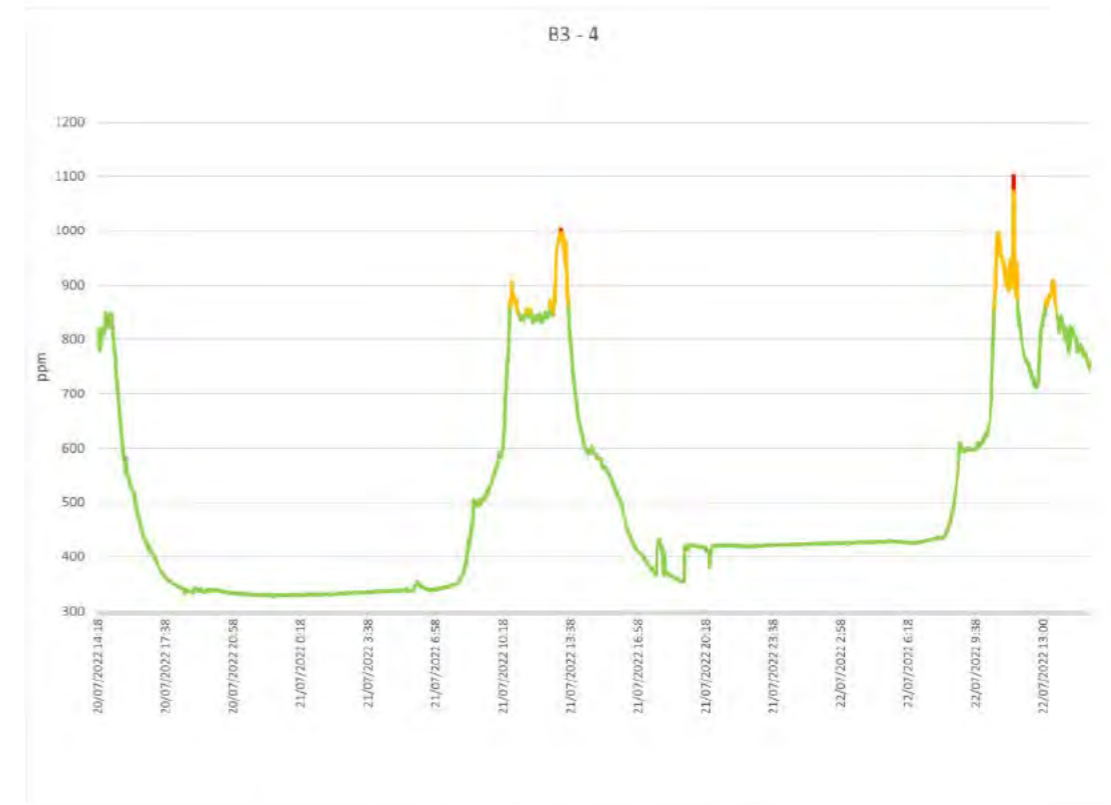


Figure 127: Location B3-4

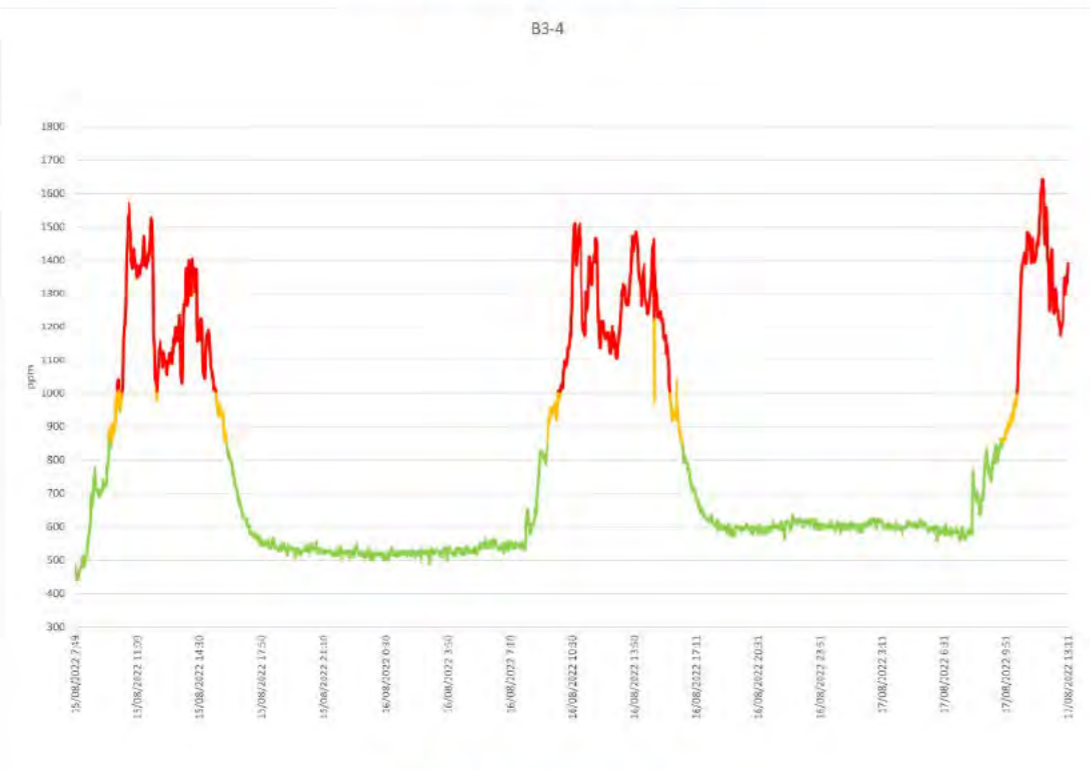


Figure 126: Location B3-4

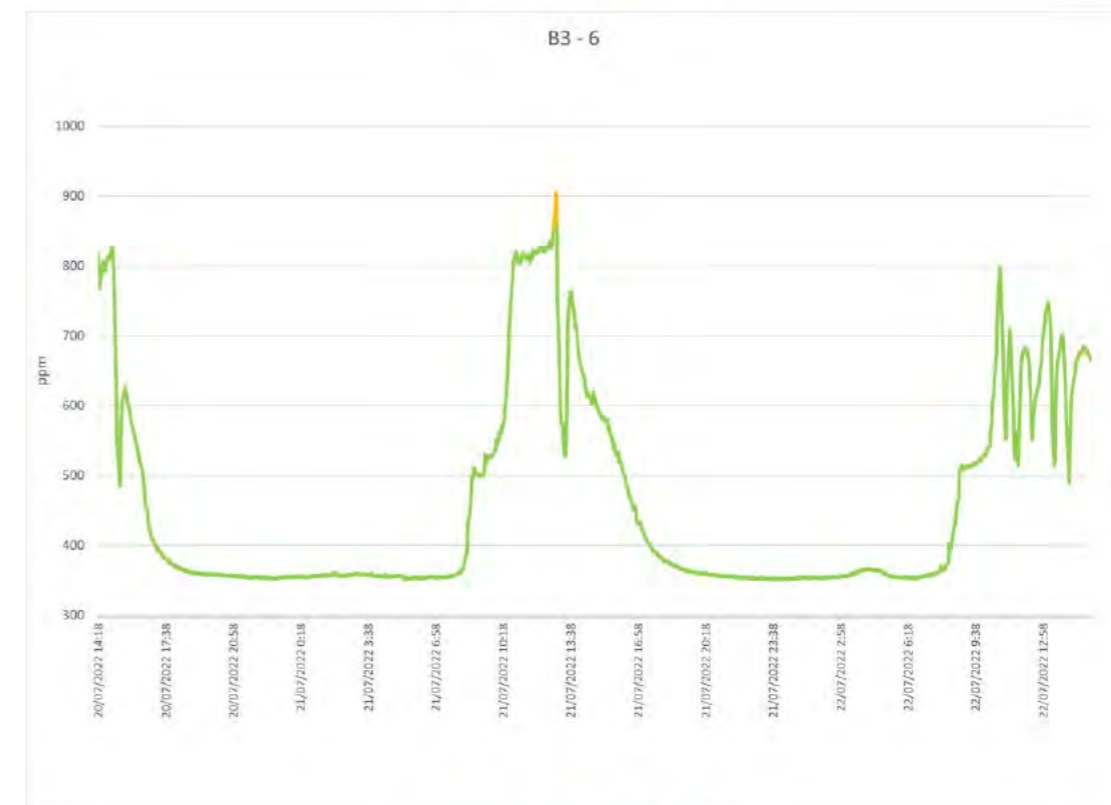


Figure 128: Location B3-6

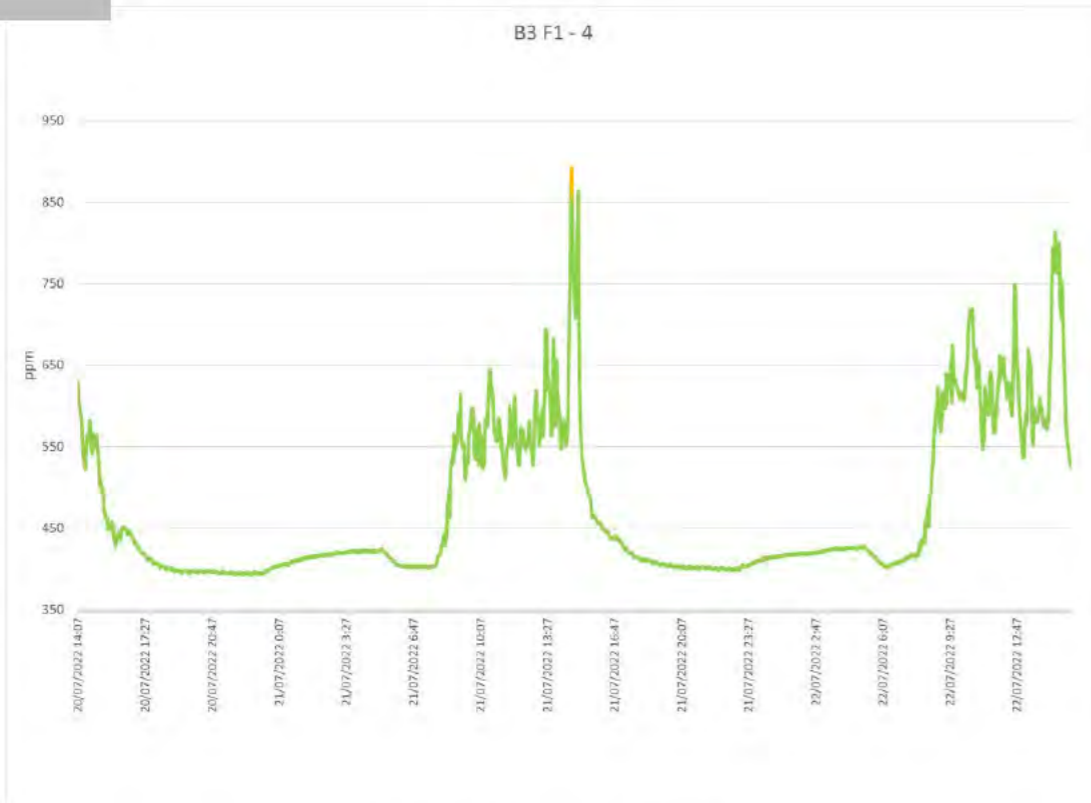


Figure 129: Location B3F1-4

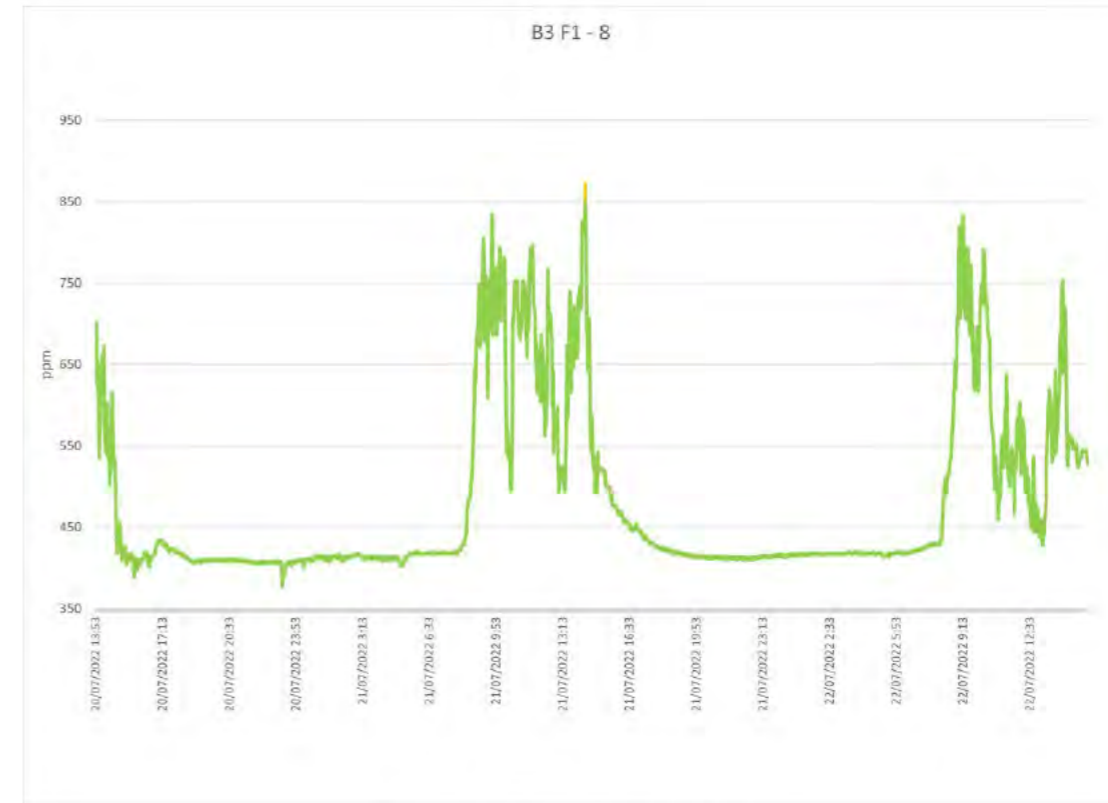


Figure 131: Location B3F1-8

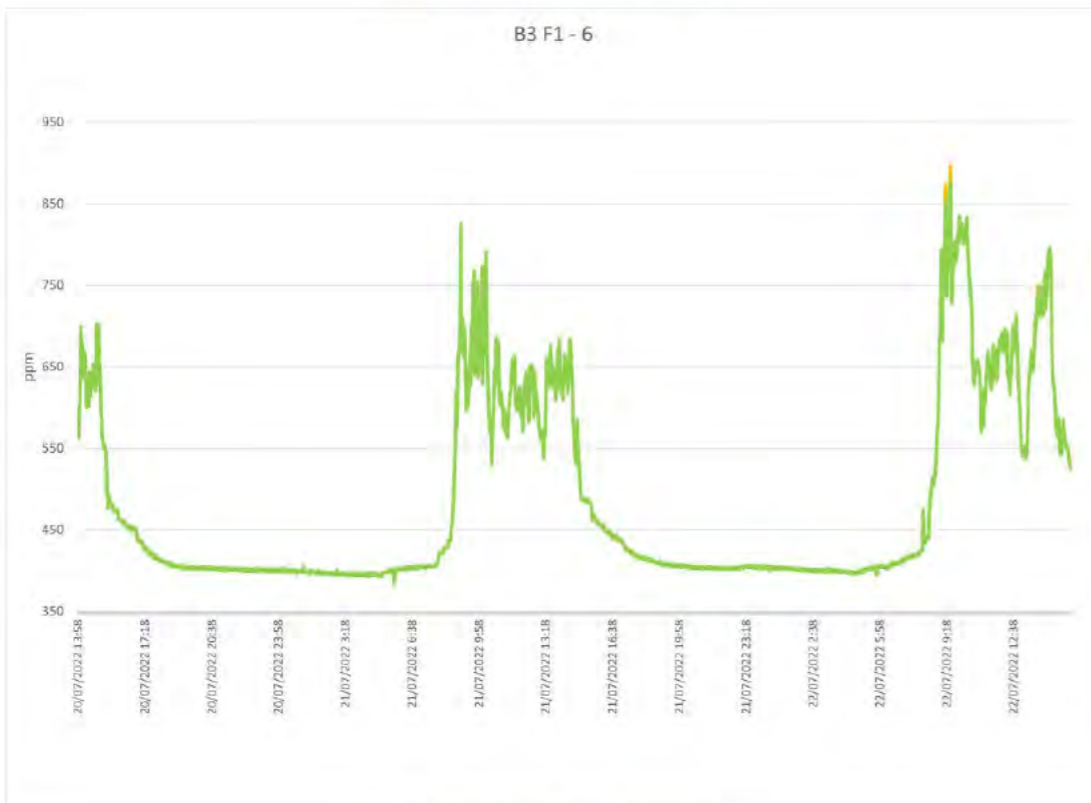


Figure 130: Location B3F1-6

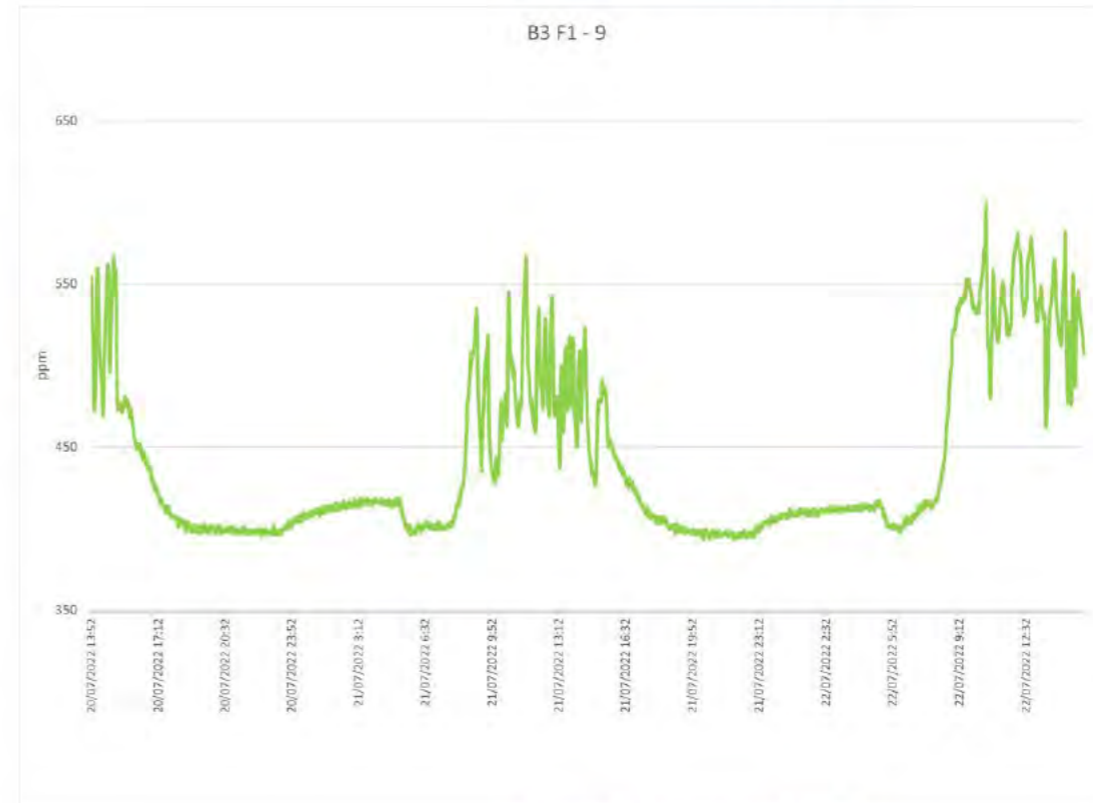


Figure 132: Location B3F1-9

Appendix 5 Average Carbon Dioxide concentration in each Sample Location



CLIENT	ACT PROPERTY GROUP	PROJECT	DICKSON COLLEGE 31 / BLOCK B GROUND FLOOR	TITLE	AIR MONITORING SURVEY	SCALE	mm	DRAWN	DATE	12/06/2022
					AIR MONITORING RESULTS		CLIENT SUPPLIED	CHECKED	PROJECT NO.	454001
								APPROVED	DATE	A

Figure 133: Block B (B1) Ground Floor Carbon Dioxide Averaged School Hour Levels



NOTES
 CO2 LOCATION AND CONCENTRATIONS ARE AT THEAFTER SCHOOL

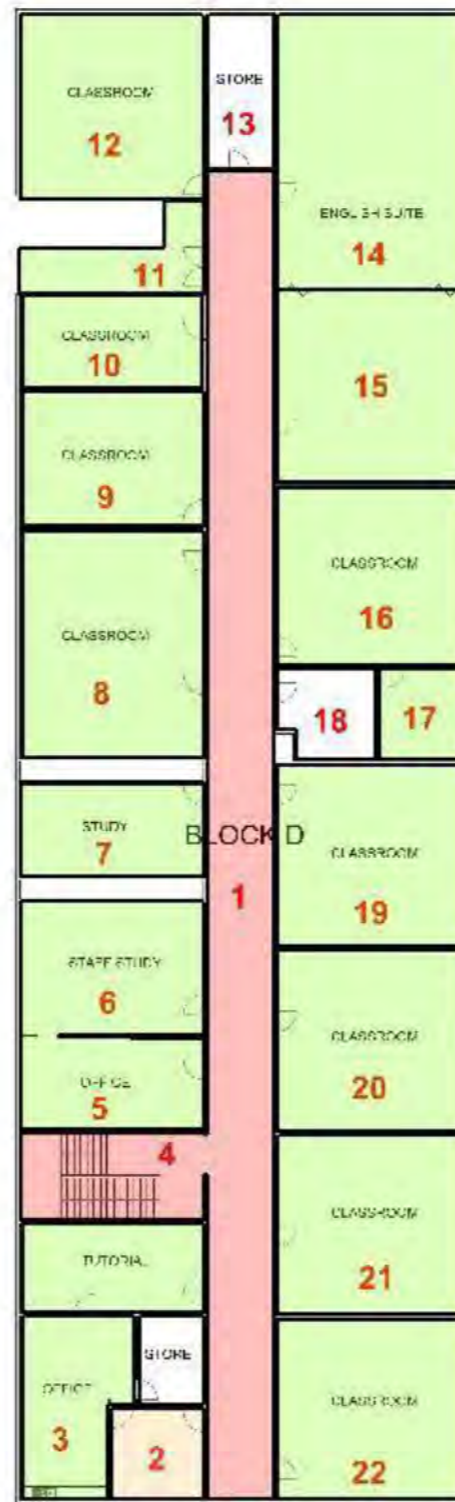
CLIENT:	SITE:	PROJECT:	SCALE (IN):	DRAWN:	FIGURE:	DATE:
ACT PROPERTY GROUP	DICKSON COLLEGE B1F1 / BLOCK B FIRST FLOOR	AIR MONITORING SURVEY			1	12/09/2022
		AIR MONITORING RESULTS	CLIENT SUPPLIED	CHECKED:	PROJECT:	REV:
					454001	A

Figure 134: Block B (B1F1) First Floor Carbon Dioxide Averaged School Hour Levels



CLIENT	SITE	PROJECT	SCALE	DRAWN	FIGURE	DATE
ACT PROPERTY GROUP	DICKSON COLLEGE B2 / BLOCK D GROUND FLOOR	AIR MONITORING SURVEY	1:100	[Signature]	1	12/08/2022
		TITLE	REF	CHECKED	PROJECT	REV
		AIR MONITORING RESULTS	CLIENT SUPPLIED	[Signature]	454001	A

Figure 135: Block D (B2) Ground Floor Carbon Dioxide Averaged School Hour Levels



LEGEND

- 100 - 250 ppm
- 250 - 500 ppm
- 500 - 1000 ppm
- 1000 - 2000 ppm
- 2000 - 5000 ppm

NOTES

SCALE: LOCAL AND JOINTS ARE AT 1/8"=1'-0" ONLY

DRAWN	FIGURE	DATE
	1	12/02/2022
CHECKED	PROJECT	REV
	454001	A

CLIENT: ACI PROPERTY GROUP

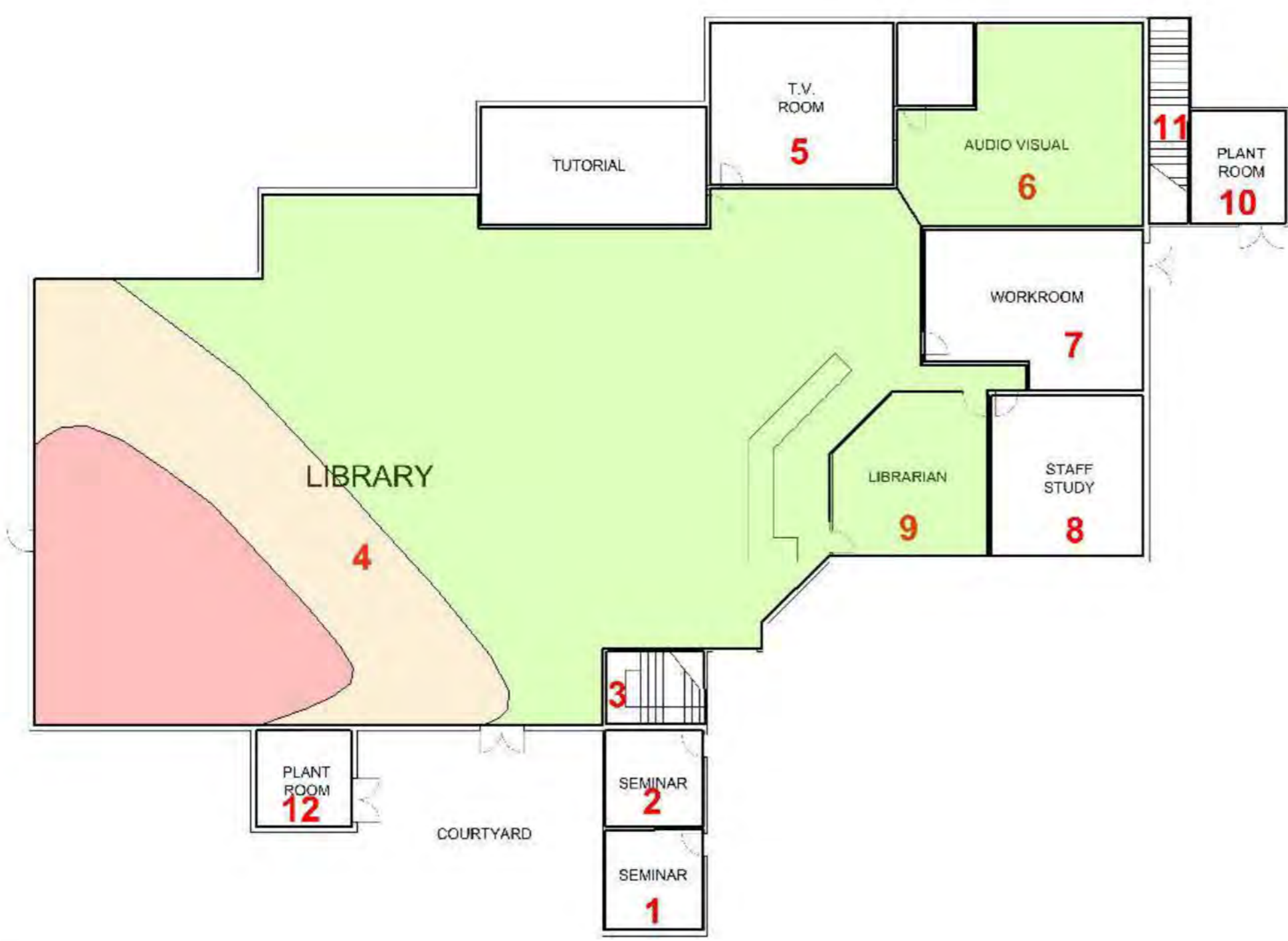
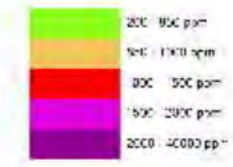
SITE: DICKSON COLLEGE
B2F-1, BLOCK D
FIRST FLOOR

PROJECT: AIR MONITORING SURVEY
TITLE: AIR MONITORING RESULTS

SCALE (in):
REF: CLIENT SUPPLIED

Figure 136: Block D (B2F1) First Floor Carbon Dioxide Averaged School Hour Levels

LEGEND



NOTES
NOTE: ALL AIR MONITORING RESULTS ARE IN PPM (PPM)

CLIENT	SITE	PROJECT	SCALE	DRAWN	FIGURE	DATE
ACT PROPERTY GROUP	DICKSON COLLEGE B5 / LIBRARY GROUND FLOOR	AIR MONITORING SURVEY	1/16"	[Redacted]	1	12/08/2022
		TITLE	REF	CHECKED	PROJECT	REV
		AIR MONITORING RESULTS	CLIENT SUPPLIED	[Redacted]	454001	A

Figure 137: Block Library (B3) Ground Floor Carbon Dioxide Averaged School Hour Levels

LIBRARY



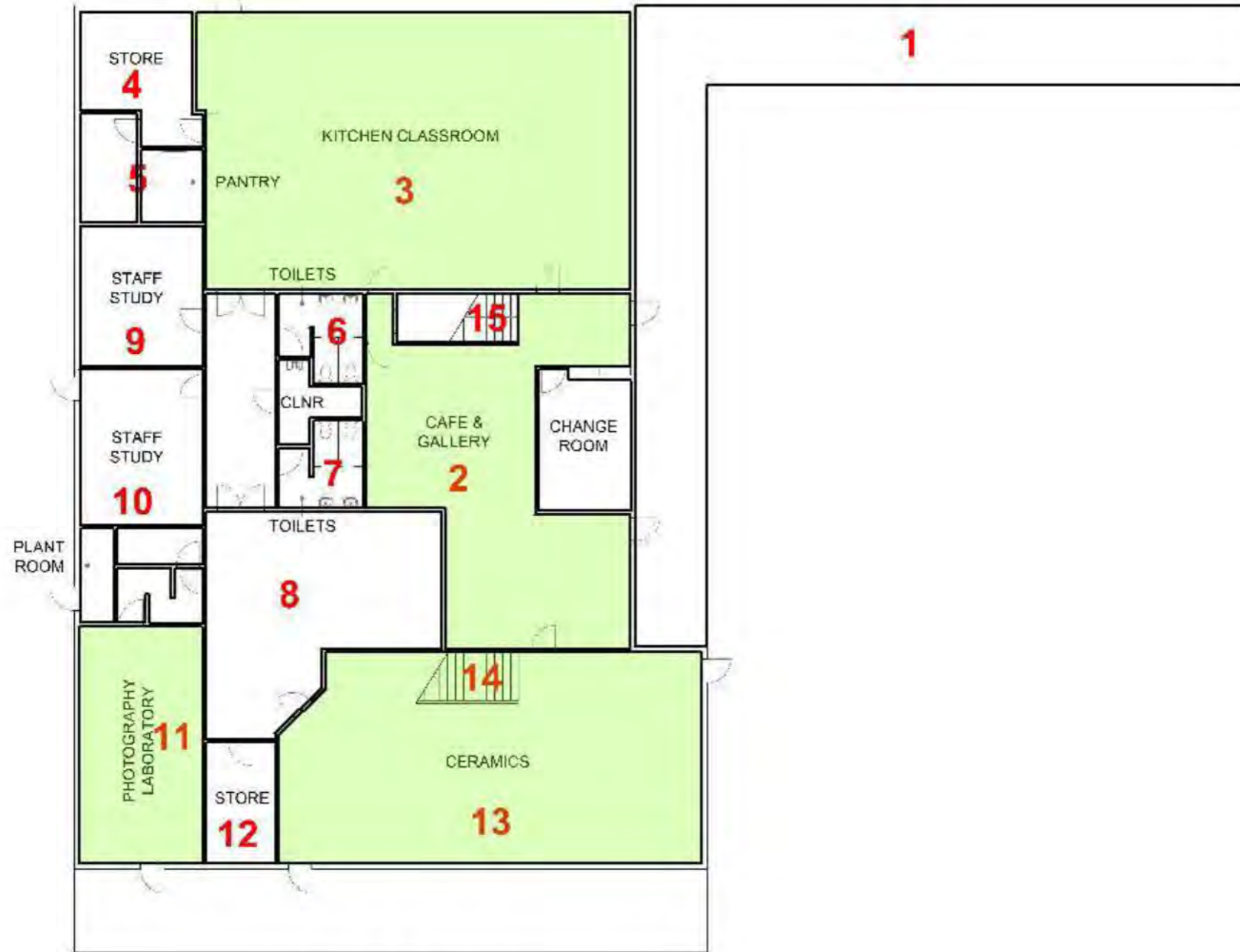
LEGEND



NOTES
 CONSULT WITH THE ARCHITECT FOR ROOM SIZES AND AIR FLOW PATTERNS.

CLIENT	SITE	PROJECT	SCALE	DRAWN	FIGURE	DATE
ACT PROPERTY GROUP	DICKSON COLLEGE B3 / LIBRARY FIRST FLOOR	AIR MONITORING SURVEY			1	12/08/2022
		TITLE	REF	CHECKED	PROJECT	REV
		AIR MONITORING RESULTS	CLIENT SUPPLIED		45-001	A

Figure 138: Block Library (B3) First Floor Carbon Dioxide Averaged School Hour Levels



LEGEND

- 230 - 850 ppm
- 850 - 1000 ppm
- 1000 - 1500 ppm
- 1500 - 2000 ppm
- 2000 - 4000 ppm

NOTES
 CO2, LOCAL B4 AND SUPPLIED BY CLIENT SUPPLIED

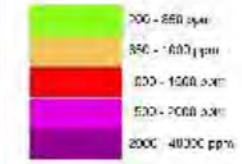
ARTS & CRAFTS

CLIENT:	SITE:	PROJECT:	SCALE:	DRAWN:	FIGURE:	DATE:
ACT PROPERTY GROUP	DICKSON COLLEGE B4 / ARTS & CRAFTS GROUND FLOOR	AIR MONITORING SURVEY			1	12/08/2022
		FILE:	REF:	CHECKED:	PROJECT:	REV:
		AIR MONITORING RESULTS	CLIENT SUPPLIED		454001	A

Figure 139: Block Arts & Crafts (B4) Ground Floor Carbon Dioxide Averaged School Hour Levels



LEGEND



NOTES
SCALE, LOCATION AND SURVEY ARE AT THE CLIENT'S RISK

CLIENT

ACI PROPERTY GROUP

SITE

DICKSON COLLEGE
B4F1 (ARTS & CRAFTS)
FIRST FLOOR

PROJECT

AIR MONITORING SURVEY

TITLE

AIR MONITORING RESULTS

SCALE (A)

REF

CLIENT SUPPLIED

DRAWN

FIGURE

1

DATE

12/05/2022

CHECKED

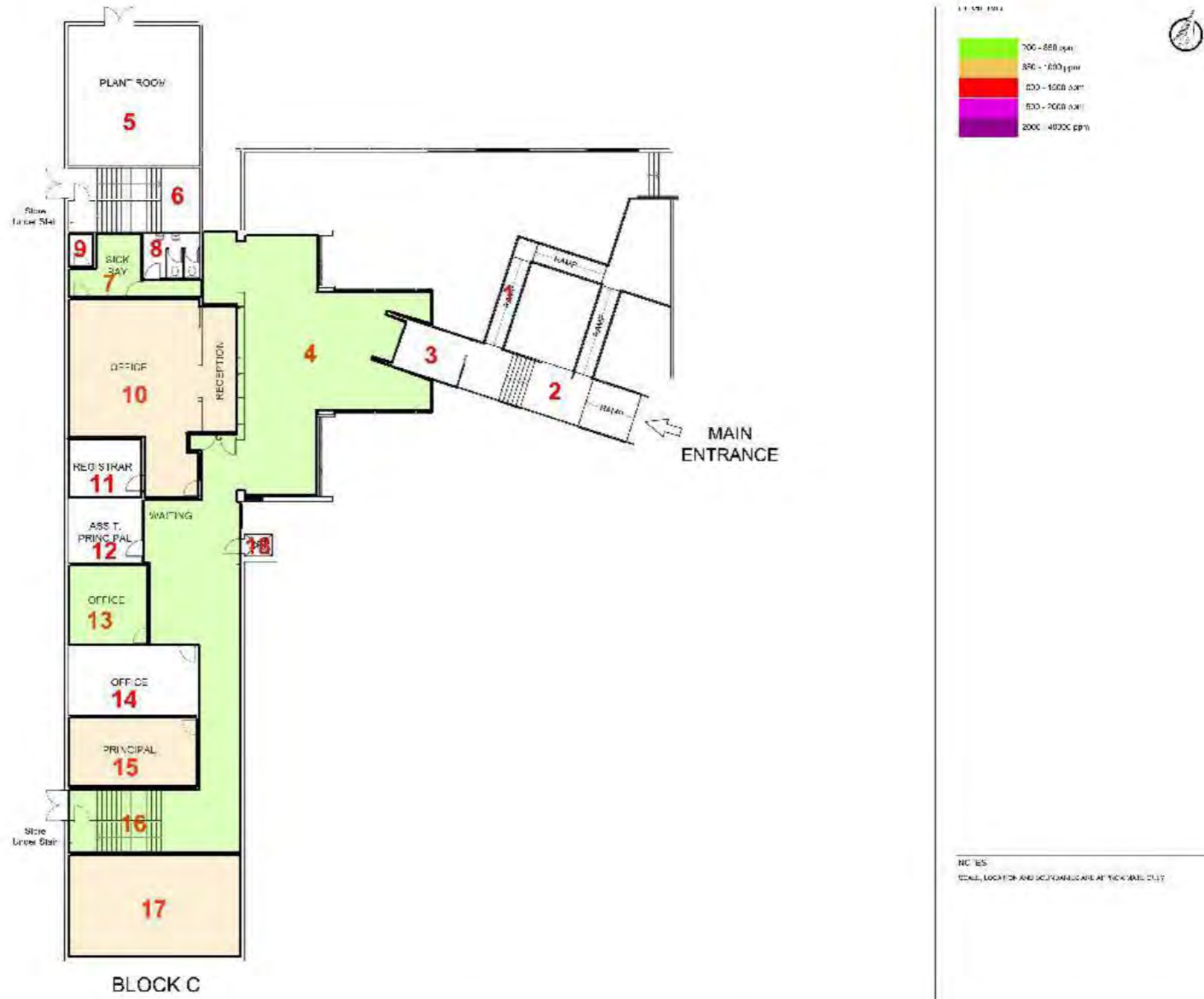
PROJECT

C54001

REV

A

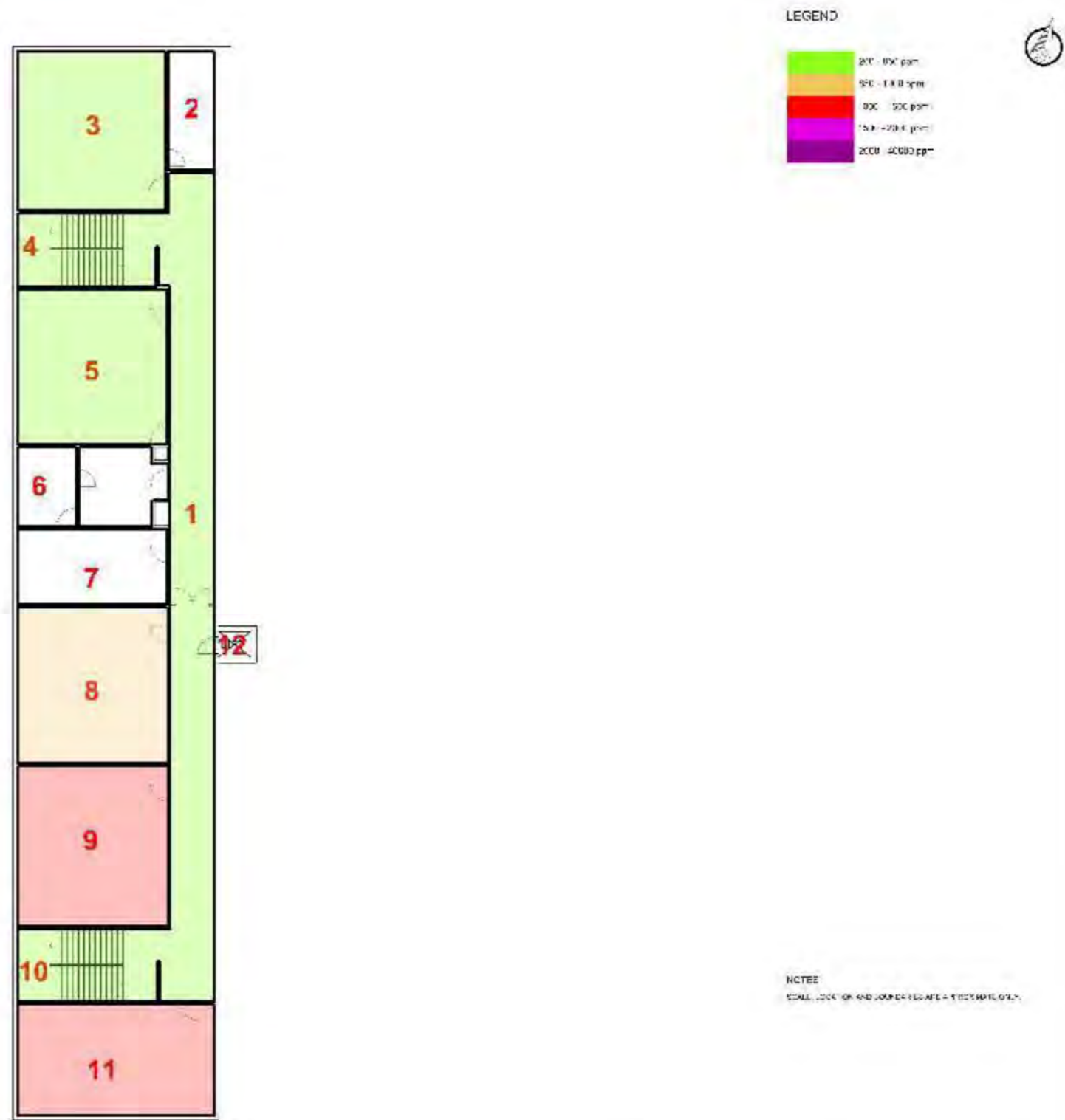
Figure 140: Block Arts & Crafts (B4F1) First Floor Carbon Dioxide Averaged School Hour Levels



NOTES
SCALE, LOCATION AND DESCRIPTION ARE AT YOUR OWN RISK

CLIENT	SITE	PROJECT	SCALE	DRAWN	FIGURE	DATE
ACT PROPERTY GROUP	DICKSON COLLEGE B5 / BLOCK C GROUND FLOOR	AIR MONITORING SURVEY	1/1		1	12/08/2022
		TITLE	REF	CHECKED	PROJECT	REV
		AIR MONITORING RESULTS	CLIENT SUPPLIED		454001	A

Figure 141: Block C (B5) Ground Floor Carbon Dioxide Averaged School Hour Levels

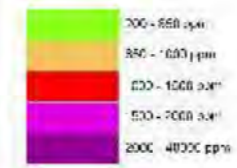


CLIENT	ACT PROPERTY GROUP	SITE	DICKSON COLLEGE B5F1 / BLOCK C FIRST FLOOR	PROJECT	AIR MONITORING SURVEY	SCALE (1:1)	DRAWN	FIGURE	DATE
				TITLE	AIR MONITORING RESULTS	REP	CLIENT SUPPLIED	PROJECT	REV
								454001	A
									12/08/2022

Figure 142: Block C (B5F1) First Floor Carbon Dioxide Averaged School Hour Levels



LEGEND



NOTES
SCALE: 1:500 (AS SHOWN ON DRAWING)

CLIENT

ACT PROPERTY GROUP

SITE

DICKSON COLLEGE
B6 / BLOCK A
GROUND FLOOR

PROJECT

AIR MONITORING SURVEY

TITLE

AIR MONITORING RESULTS

SCALE (1:500)

REF

CLIENT SUPPLIED

DATE

FIGURE

PROJECT

1

684001

DATE

12/06/2022

REV: A

Figure 143: Block A (B6) Ground Floor Carbon Dioxide Averaged School Hour Levels



Figure 144: Block R (B7) Ground Floor Carbon Dioxide Averaged School Hour Levels



CLIENT

ACT PROPERTY GROUP

SITE

DICKSON COLLEGE
B8 - BLOCK H
GROUND FLOOR

PROJECT:

AIR MONITORING SURVEY

SCALE (MM)

DRAWN

FIGURE:

1

DATE

12/08/2022

TITLE

AIR MONITORING SURVEY

REF

PROPERTY GROUP

CHECKED

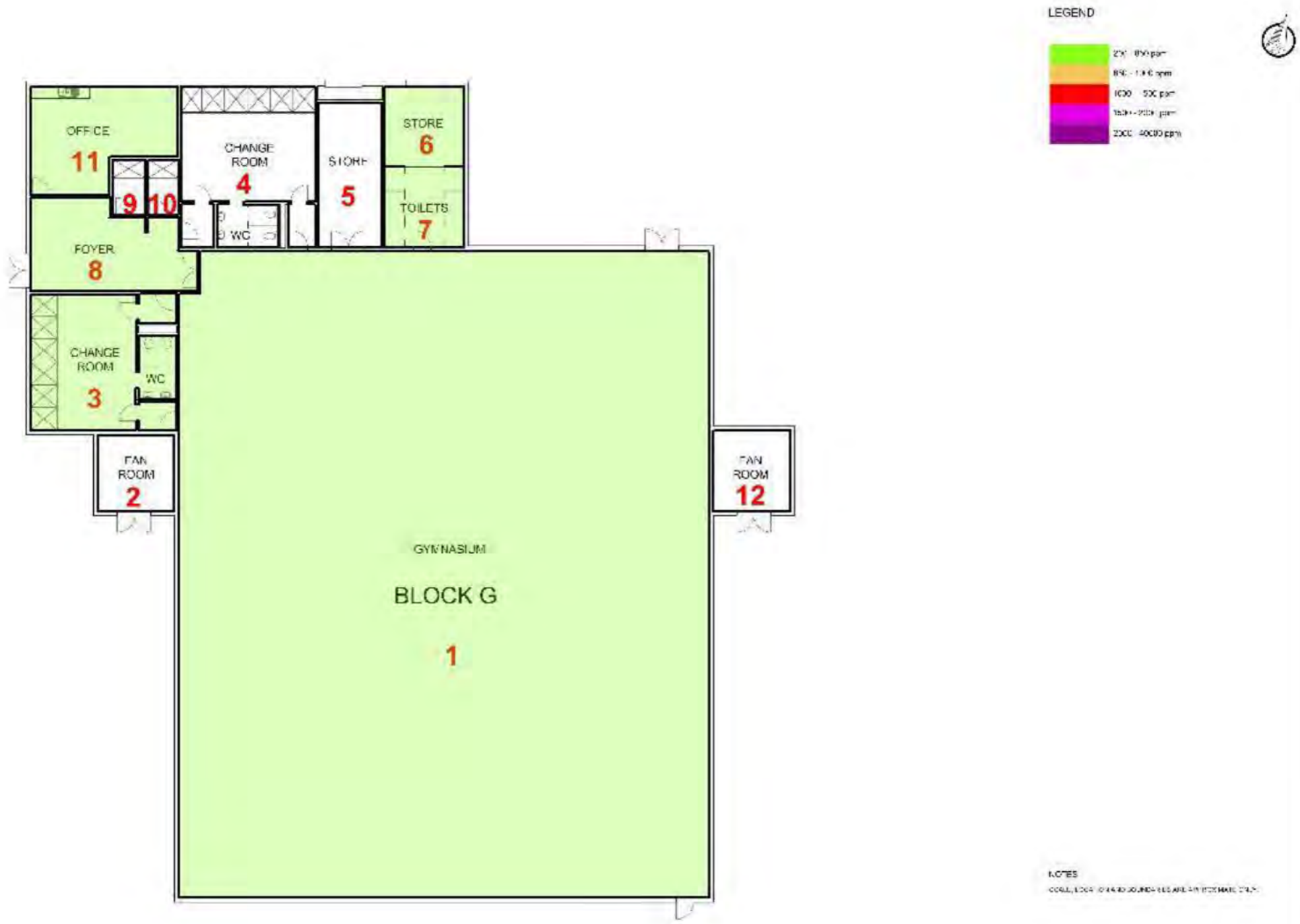
PROJECT

12/08/2022

REV

1

Figure 145: Block H (B8) Ground Floor Carbon Dioxide Averaged School Hour Levels



CLIENT:	SITE:	PROJECT:	SCALE (m):	DRAWN:	FIGURE:	DATE:
ACT PROPERTY GROUP	DICKSON COLLEGE B9 / BLOCK G GROUND FLOOR	AIR MONITORING SURVEY			1	12/08/2022
		TITLE:	REF:	CHECKED:	PROJECT:	REV:
		AIR MONITORING RESULTS	CLIENT SUPPLIED		BG-001	A

Figure 146: Block G (B9) Ground Floor Carbon Dioxide Averaged School Hour Levels

Appendix 6 Air Flow Measurements Contour Maps

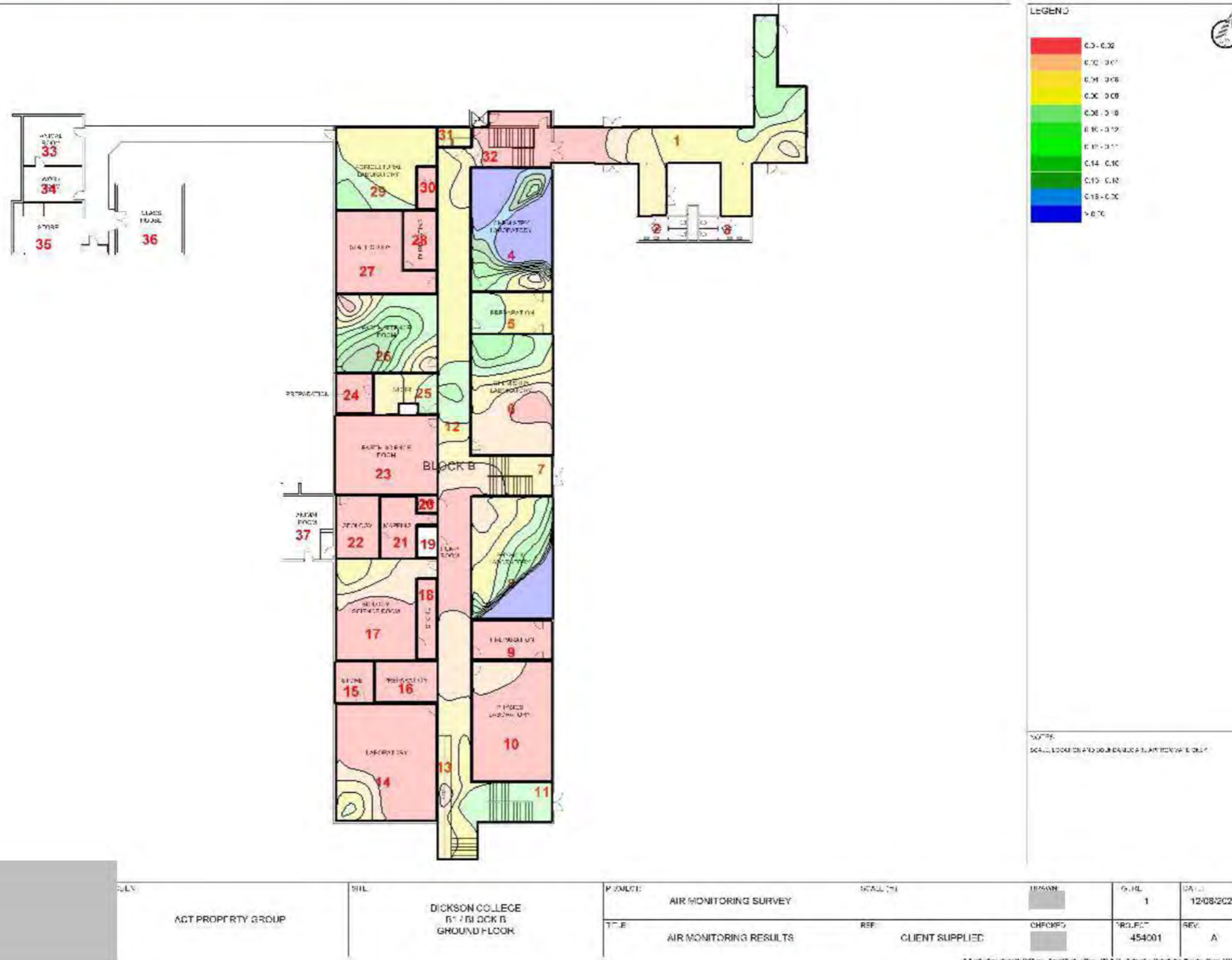


Figure 147: Block B (B1) Ground Floor Air Flow Measurements



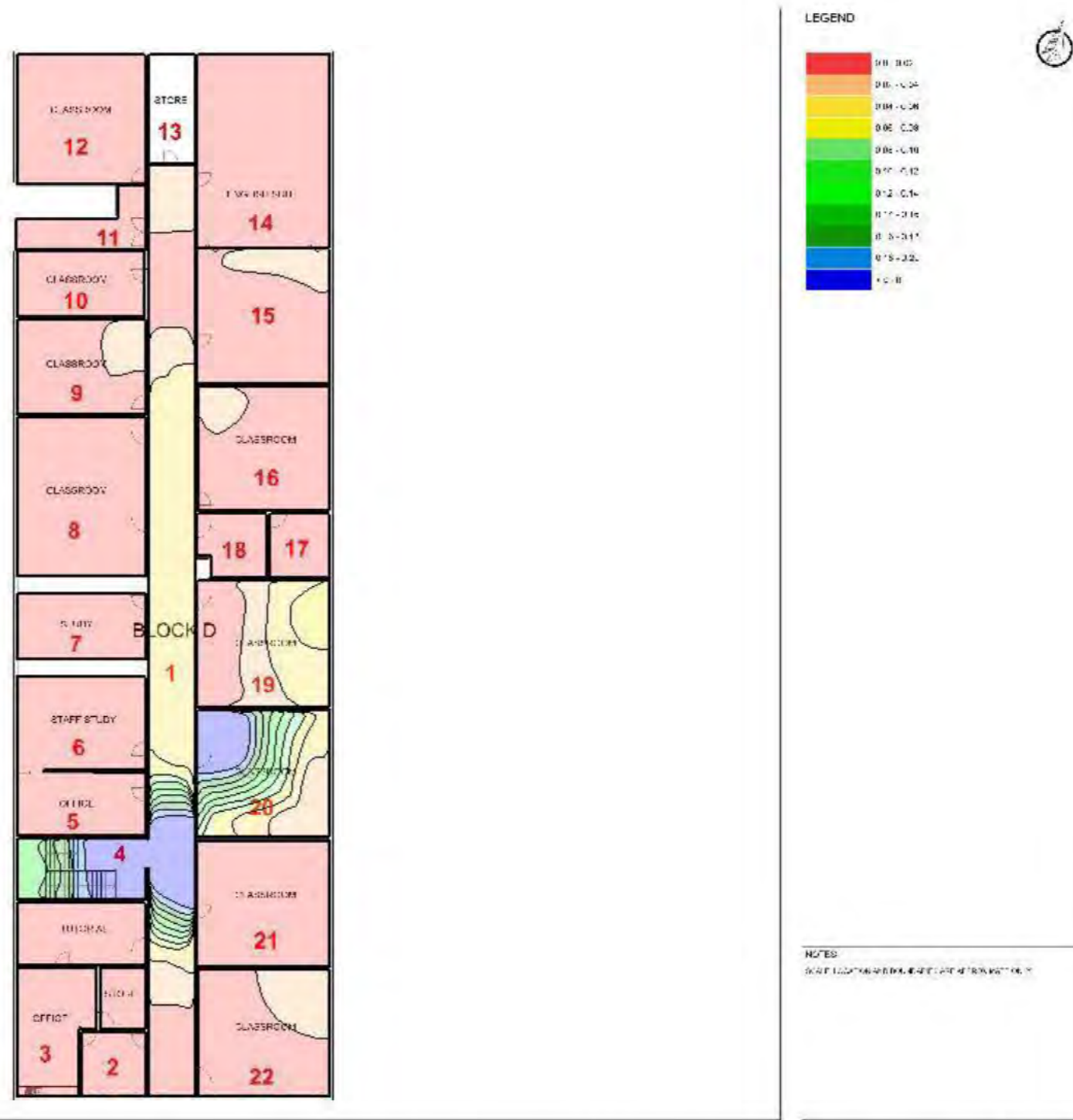
CLIENT: ACT PROPERTY GROUP	SITE: DICKSON COLLEGE B1 F1 / BLOCK B FIRST FLOOR	PROJECT: AIR MONITORING SURVEY	SCALE: AS SHOWN	DRAWN: [Redacted]	SHEET: 1	DATE: 12/08/2022
		TITLE: AIR MONITORING RESULTS	REF: CLIENT SUPPLIED	CHECKED: [Redacted]	PROJECT: 454001	REV: A

Figure 148: Block B (B1) First Floor Air Flow Measurements



CLIENT: ACT PROPERTY GROUP	SITE: DICKSON COLLEGE B2: BLOCK C GROUND FLOOR	PROJECT: AIR MONITORING SURVEY	SCALE: nil	DRAWN: []	FIGURE: 1	DATE: 12/08/2022
		TITLE: AIR MONITORING RESULTS	REF: CLIENT SUPPLIED	DATE: []	PROJECT: 454001	REV: A

Figure 149: Block D (B2) Ground Floor Air Flow Measurements



CLIENT: ACT PROPERTY GROUP	SITE: DICKSON COLLEGE B2F1 - BLOCK D FIRST FLOOR	PROJECT: AIR MONITORING SURVEY	SCALE: 1/8" = 1'-0"	DATE: 12/09/2022
		TITLE: AIR MONITORING RESULTS	CLIENT SUPPLIED	FIGURE: 454001

Figure 150: Block D (B2) First Floor Air Flow Measurements

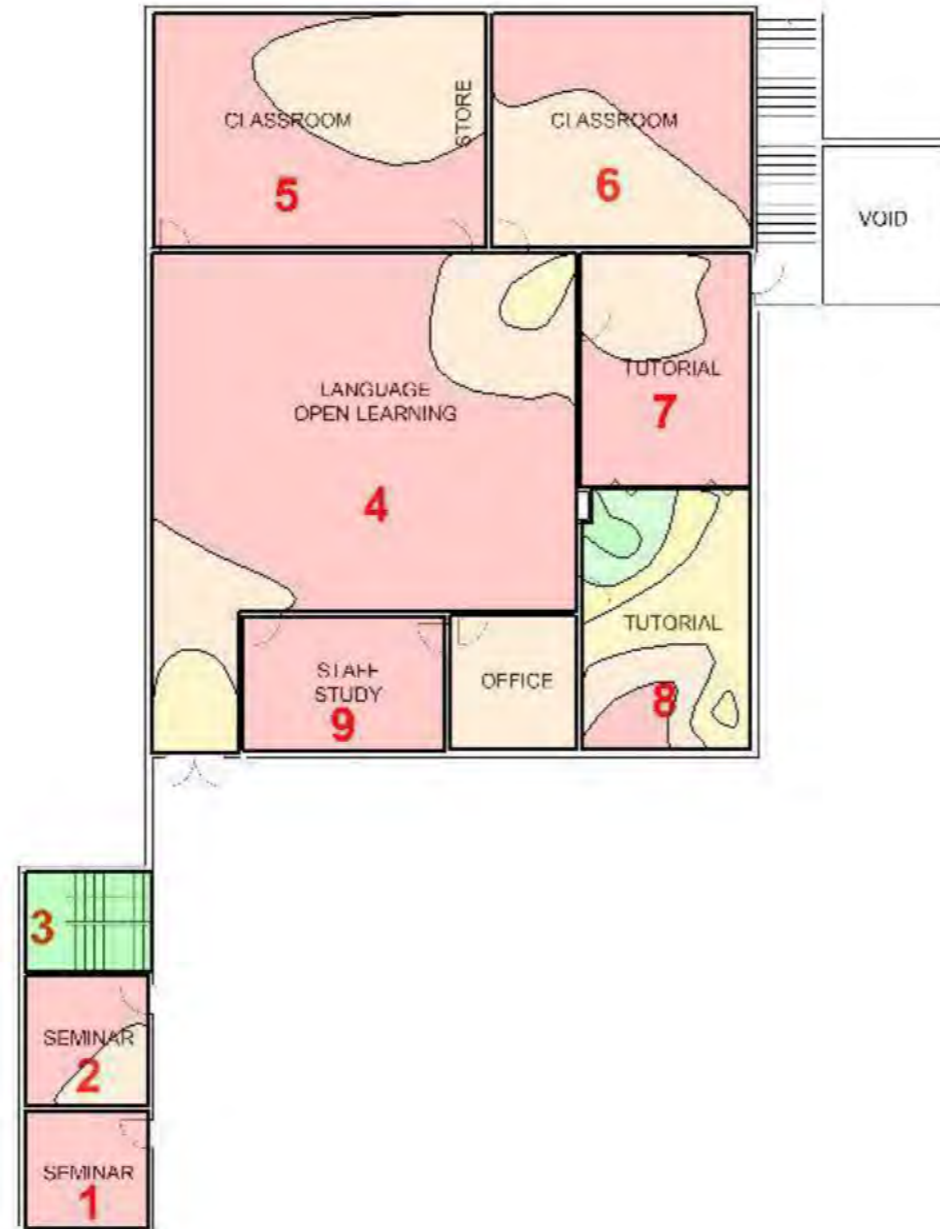


NOTE:
 1. ALL MEASUREMENTS WERE TAKEN AT 1.5M HEIGHT.

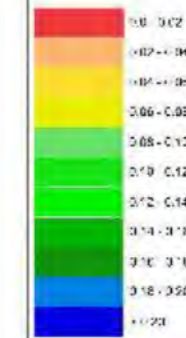
CLIENT:	SITE:	PROJECT:	SCALE (m):	DRAWN:	FIGURE:	DATE:
ACT PROPERTY GROUP	DICKSON COLLEGE B3 / LIBRARY GROUND FLOOR	AIR MONITORING SURVEY			1	12/05/2022
		TITLE:	REF:	CHECKED:	PROJECT:	REV:
		AIR MONITORING RESULTS	CLIENT SUPPLIED		/5100'	A

Figure 151: Block Library (B3) Ground Floor Air Flow Measurements

LIBRARY



LEGEND



NOTES

SCALE: LOCATION AND DIMENSIONS AS SHOWN ON DRAWING ONLY

CLIENT:

ACT PROPERTY GROUP

SITE:

DICKSON COLLEGE
B3F1 / LIBRARY
FIRST FLOOR

PROJECT:

AIR MONITORING SURVEY

SCALE (m):

DRAWN:

FIGURE:

DATE:

TITLE:

AIR MONITORING RESULTS

SCALE:

CLIENT SUPPLIED

DATE:

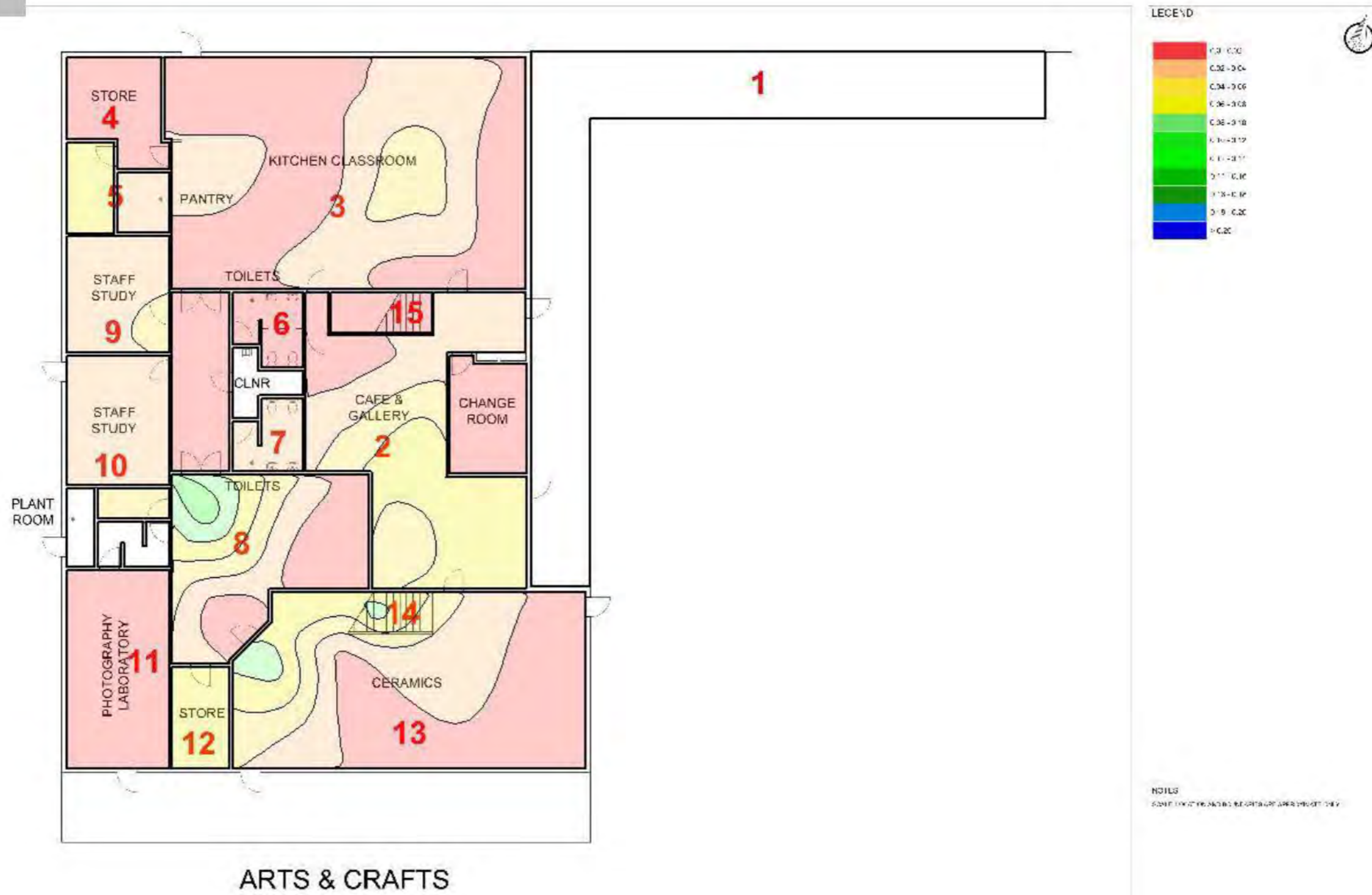
PROJECT:

REV:

454001

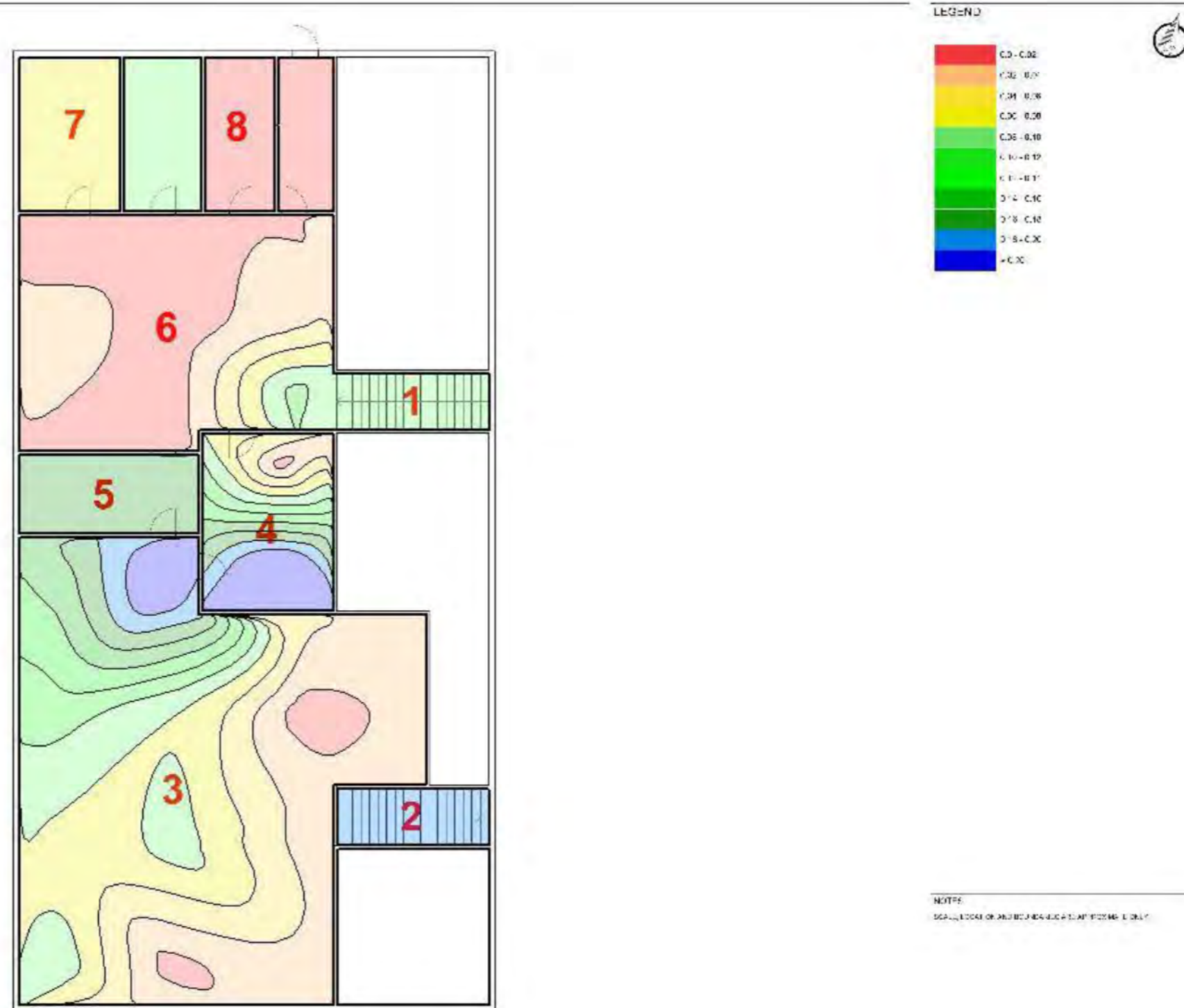
A

Figure 152: Block Library (B3) First Floor Air Flow Measurements



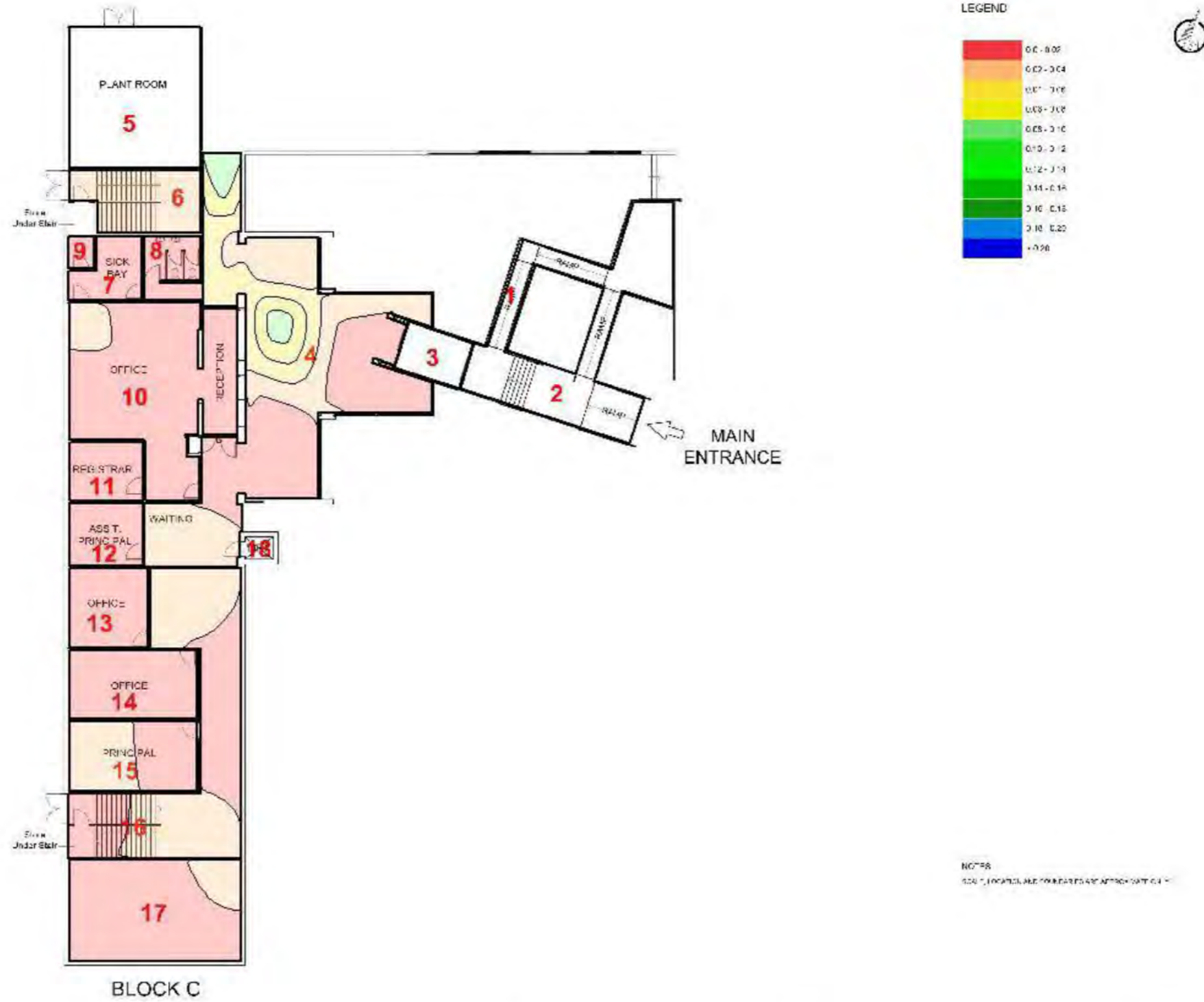
CLIENT	SITE	PROJECT	SCALE (mm)	DRAWN	FIG. NO.	DATE
ACT PROPERTY GROUP	DICKSON COLLEGE B4 / ARTS & CRAFTS GROUND FLOOR	AIR MONITORING SURVEY			1	12/08/2022
		TITLE	REF	DESIGNED BY	SCALE (mm)	REV
		AIR MONITORING RESULTS	CLIENT SUPPLIED		454001	A

Figure 153: Block Arts & Crafts (B4) Ground Floor Air Flow Measurements



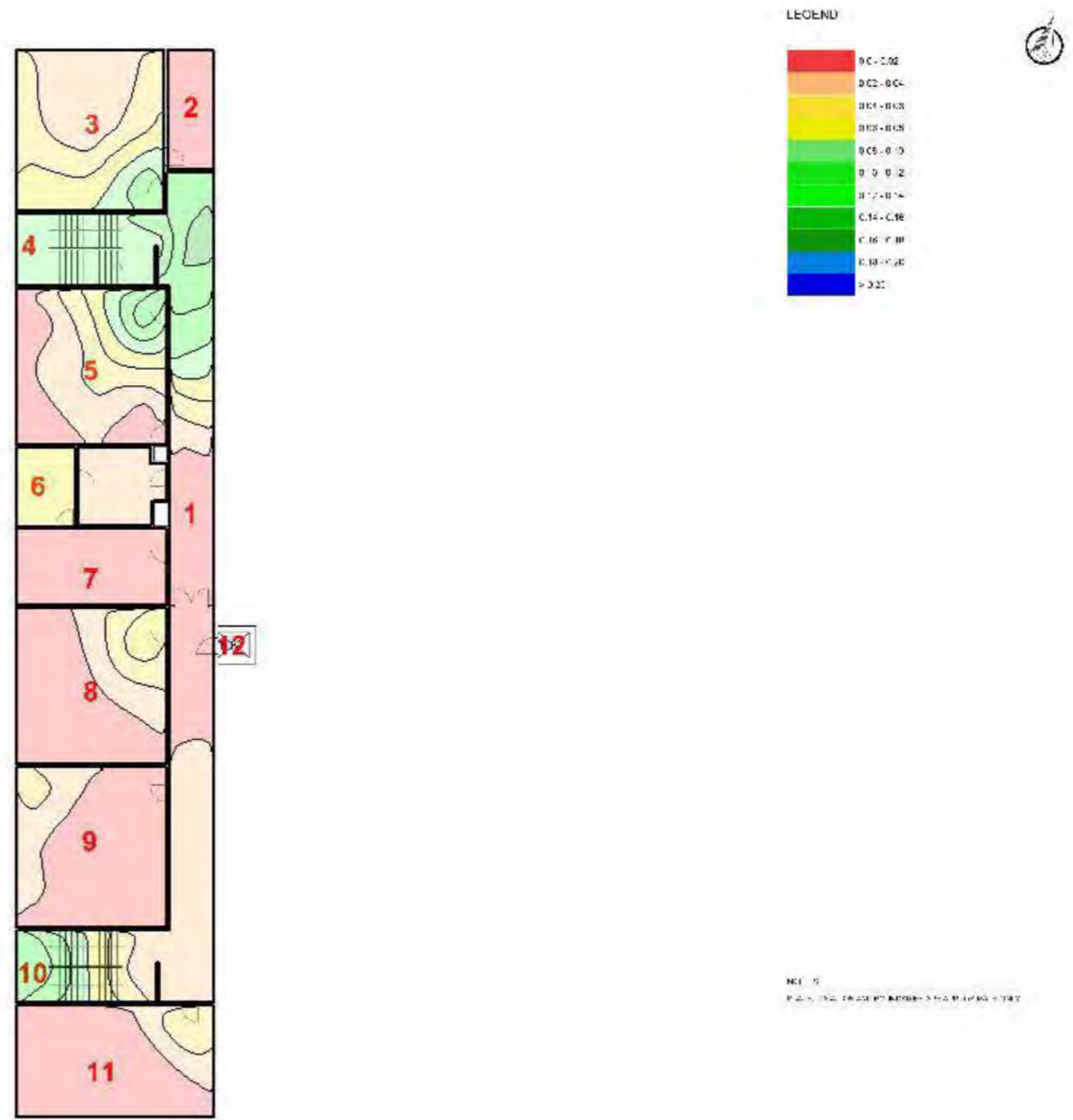
CLIENT: [REDACTED]	PROJECT: DICKSON COLLEGE B411 ARTS & CRAFTS FIRST FLOOR	PROJECT: AIR MONITORING SURVEY	DATE: 12/08/2022
CLIENT: [REDACTED]	PROJECT: DICKSON COLLEGE B411 ARTS & CRAFTS FIRST FLOOR	PROJECT: AIR MONITORING RESULTS	DATE: 12/08/2022
CLIENT: [REDACTED]	PROJECT: DICKSON COLLEGE B411 ARTS & CRAFTS FIRST FLOOR	PROJECT: CLIENT SUPPLIED	DATE: 12/08/2022

Figure 154: Block Arts & Crafts (B4) First Floor Air Flow Measurements



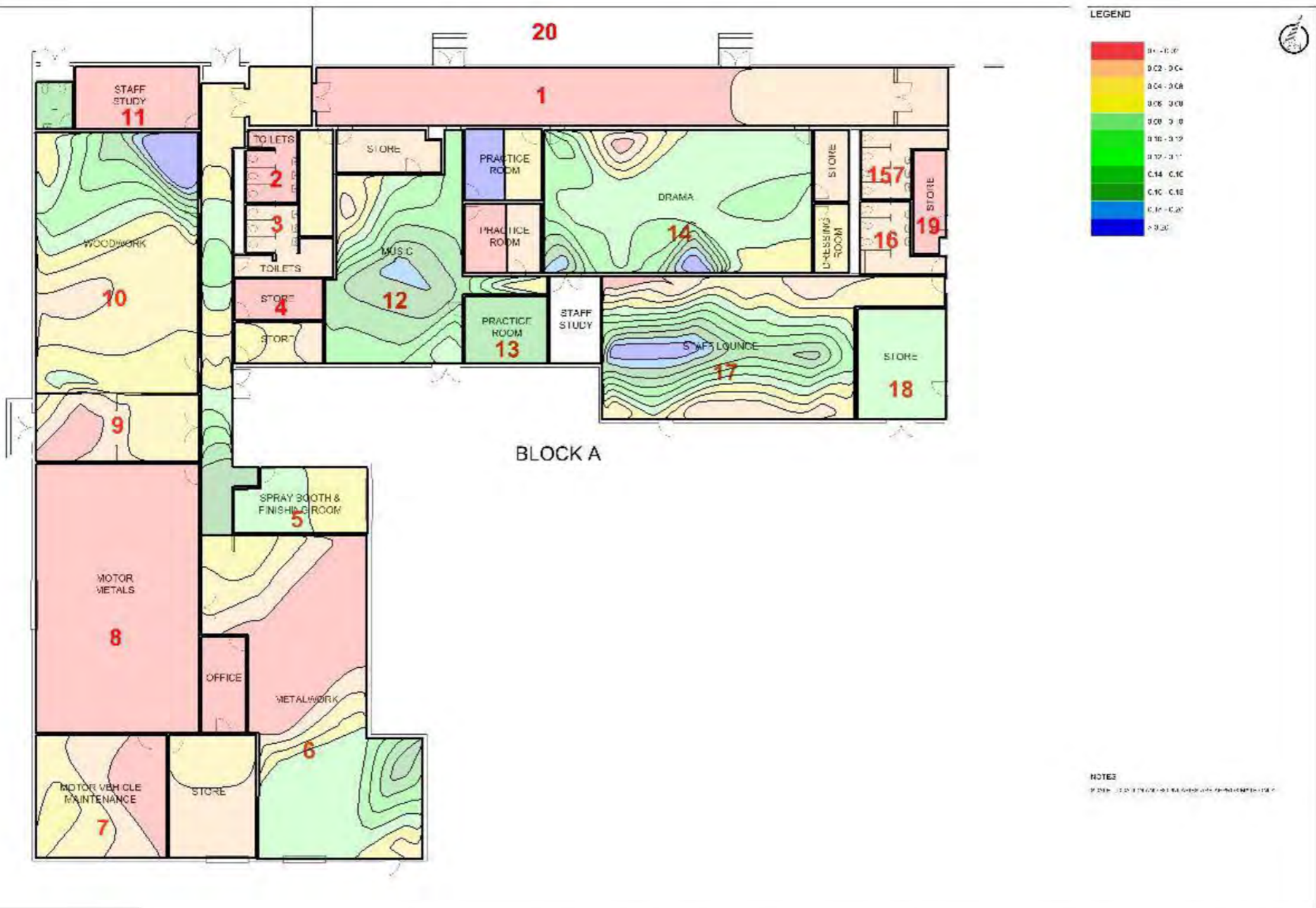
CLIENT:	ACT PROPERTY GROUP	SITE:	DICKSON COLLEGE B5 / BLOCK C GROUND FLOOR	PROJECT:	AIR MONITORING SURVEY	SCALE (m):	DRAWN:	FIGURE:	DATE:
				TITLE:	AIR MONITORING RESULTS	FILE:	CLIENT SUPPLIED	FIGURE NO:	12/08/2022
								454001	A

Figure 155: Block C (B5) Ground Floor Air Flow Measurements



CLIENT	PROJECT	TITLE	DATE	SCALE	PROJECT NO.	DATE
[REDACTED]	DICKSON COLLEGE B5B11 BLOCK C FIRST FLOOR	AIR MONITORING SURVEY AIR MONITORING RESULTS	20220829	AS SHOWN	454001	12/2022
ACI (PROPERTY GROUP)				CLIENT SUPPLIED	454001	A

Figure 156: Block C (B5) First Floor Air Flow Measurements



CLIENT	ACT PROPERTY GROUP	DATE	DICKSON COLLEGE B6: BLOCK A GROUND FLOOR	PROJECT	AIR MONITORING SURVEY	SCALE (mm)	1:1	DRAWN	1	DATE	12/06/2022
				TITLE	AIR MONITORING RESULTS	REV	CLIENT SUPPLIED	CHECKED	PROJECT	REV	A
									454001		

Figure 157: Block A (B6) Ground Floor Air Flow Measurements

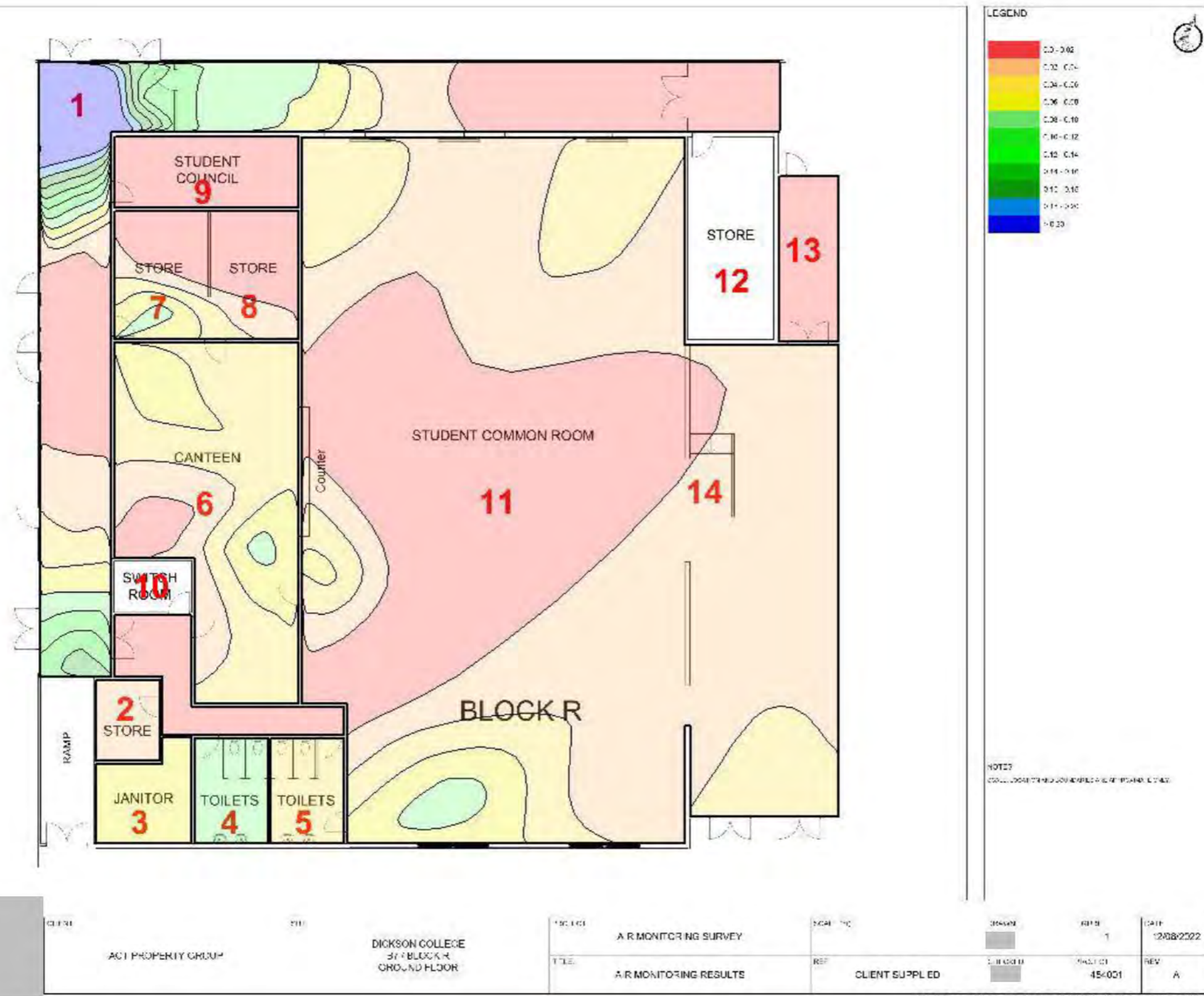
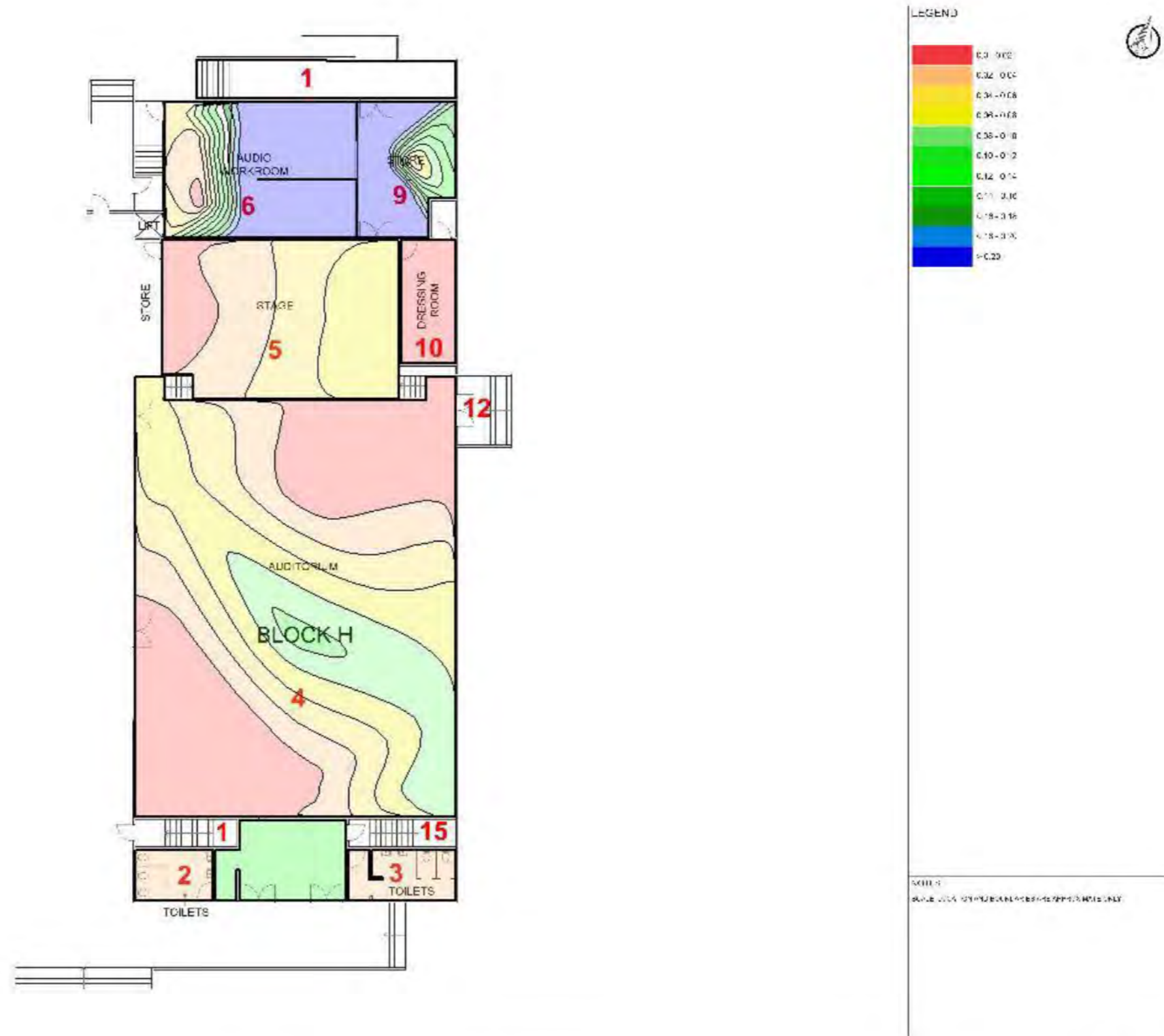
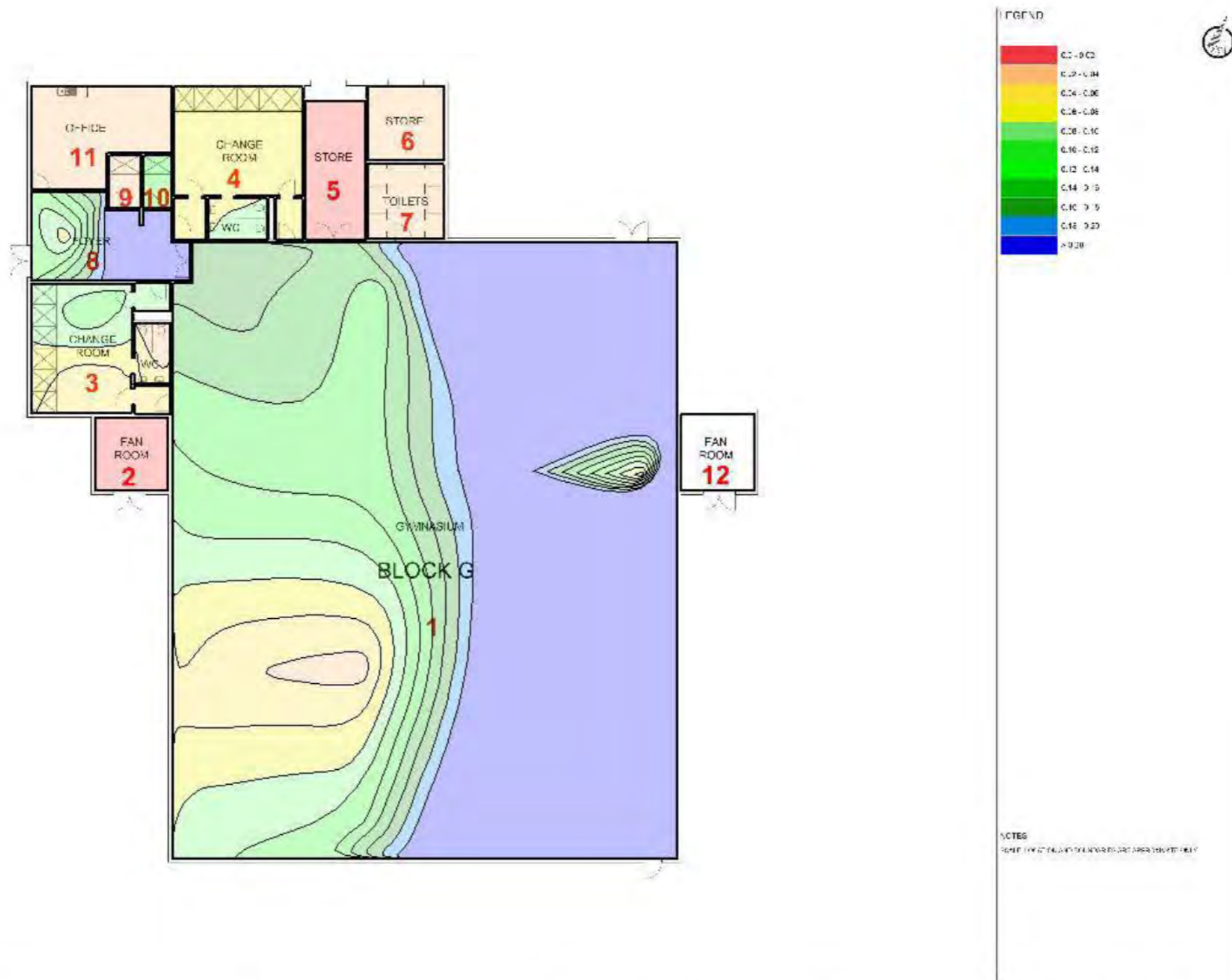


Figure 158: Block R (B7) Ground Floor Air Flow Measurements



CLIENT:	SITE:	PROJECT:	SCALE:	DRAWN:	SHEET:	DATE:
ACT PROPERTY GROUP	DICKSON COLLEGE B8 - BLOCK H GROUND FLOOR	AIR MONITORING SURVEY			1	12/08/2022
		TITLE:	REF:	CHECKED:	PROJECT:	REV:
		AIR MONITORING RESULTS	CLIENT SUPPLIED		454001	A

Figure 159: Block H (B8) Ground Floor Air Flow Measurements



CLIENT:	ACT PROPERTY GROUP	SITE:	DICKSON COLLEGE B9 / BLOCK G GROUND FLOOR	PROJECT:	AIR MONITORING SURVEY	SCALE:	1:1	DRAWN:	FIGURE:	DATE:
				TITLE:	AIR MONITORING RESULTS	REF:	CLIENT SUPPLIED	CHECKED:	1	12/08/2022
									PROJECT:	REV:
									454001	A

Figure 160: Block G (B9) Ground Floor Air Flow Measurements

Appendix 7 Air Flow Measurements

Table 19: Air flow measurements – Building A

Sample	Location	Comments	Average (m/s)
1	B6-6	Windows and Split system	0.05
2	B6-6	Windows and Split system	0.1
3	B6-6	Windows and Split system	0.09
4	B6-6	Windows and Split system	0.18
5	B6-6	Windows and Split system	0.07
6	B6-6	Windows and Split system	0
7	B6-6	Windows and Split system	0
8	B6-6	Windows and Split system	0.01
9	B6-6	Windows and Split system	0
10	B6-6	Windows and Split system	0.08
11	B6-6	Windows and Split system	0
12	B6-6	Windows and Split system	0
13	B6-6	Windows and Split system	0.02
14	B6-6	Windows and Split system	0.05
15	B6-7	Natural ventilation and fans	0
16	B6-7	Natural ventilation and fans	0.07
17	B6-8	Windows and heating	0
18	B6-8	Windows and heating	0.01
19	B6-8	Windows and heating	0
20	B6-8	Windows and heating	0
21	B6-8	Windows and heating	0
22	B6-8	Windows and heating	0.01
23	B6-5	Windows and extraction fans	0.07
24	B6-5	Windows and extraction fans	0.09
25	B6-9	Natural ventilation	0.06
26	B6-9	Natural ventilation	0
27	B6-10	Natural ventilation	0.08
28	B6-10	Natural ventilation	0.09
29	B6-10	Natural ventilation	0.03
30	B6-10	Natural ventilation	0.05
31	B6-10	Natural ventilation	0.05
32	B6-10	Natural ventilation	0.11
33	B6-10	Natural ventilation	0.06

Sample	Location	Comments	Average (m/s)
34	B6-10	Natural ventilation	0.3
35	B6-4	Windows and extraction fans	0.03
36	B6-4	Windows and extraction fans	0.07
37	B6-4	Windows and extraction fans	0
38	B6-3	Windows	0.03
39	B6-2	Windows	0.01
40	B6-11	Toilet extraction fans, windows and heating	0.01
41	B6-11	Toilet extraction fans, windows and heating	0.01
42	B6-11	Toilet extraction fans, windows and heating	0.15
43	B6-2	Windows	0.04
44	B6-12	Ducted HVAC - not on	0.02
45	B6-12	Ducted HVAC - not on	0
46	B6-12	Ducted HVAC - not on	0.01
47	B6-12	Ducted HVAC - not on	0.01
48	B6-12	Ducted HVAC - not on	0.02
49	B6-12	Ducted HVAC - not on	0.07
50	B6-12	Ducted HVAC - not on	0.08
51	B6-12	Ducted HVAC - not on	0.02
52	B6-12	Ducted HVAC - not on	0.01
53	B6-12	Ducted HVAC - not on	0
54	B6-12	Ducted HVAC - not on	0
55	B6-12	Ducted HVAC - not on	0.03
56	B6-12	Ducted HVAC - not on	0.14
57	B6-12	Ducted HVAC - not on	2.02
58	B6-12	Ducted HVAC - not on	0
59	B6-12	Ducted HVAC - not on	0.19
60	B6-12	Ducted HVAC - not on	0.05
61	B6-14	Independent vent	0.13
62	B6-14	Independent vent	0.09
63	B6-14	Independent vent	0.2
64	B6-14	Independent vent	0.08
65	B6-14	Independent vent	0.09
66	B6-14	Independent vent	0
67	B6-14	Independent vent	0.1
68	B6-14	Independent vent	0.1
69	B6-14	Independent vent	0.24

Sample	Location	Comments	Average (m/s)
70	B6-14	Independent vent	0.06
71	B6-14	Independent vent	0.11
72	B6-14	Independent vent	0.09
73	B6-14	Independent vent	0.02
74	B6-14	Independent vent	0.04
75	B6-15	Natural ventilation	0.02
76	B6-19	Natural ventilation	0
77	B6-16	Natural ventilation	0.03
78	B6-17	Natural ventilation	0
79	B6-17	Natural ventilation	0.02
80	B6-17	Natural ventilation	0.04
81	B6-17	Natural ventilation	0.02
82	B6-17	Natural ventilation	0.17
83	B6-17	Natural ventilation	0.15
84	B6-17	Natural ventilation	0.22
85	B6-17	Natural ventilation	0.22
86	B6-17	Natural ventilation	0.04
87	B6-17	Natural ventilation	0.02
88	B6-17	Natural ventilation	0.03
89	B6-17	Natural ventilation	0.03
90	B6-17	Natural ventilation	0.04
91	B6-18	Natural ventilation	0.09
92	B6-1	Natural ventilation	0.17
93	B6-1	Natural ventilation	0.05
94	B6-1	Natural ventilation	0.11
95	B6-1	Natural ventilation	0.05
96	B6-1	Natural ventilation	0.02
97	B6-1	Natural ventilation	0.01
98	B6-1	Natural ventilation	0
99	B6-1	Natural ventilation	0.03

Table 20: Air flow measurements – Building B Ground Floor

Sample	Location	Comments	Average (m/s)
1	B1-1	Windows	0.09
2	B1-1	Windows	0.12
3	B1-1	Windows	0.03
4	B1-1	Windows	0.06

Sample	Location	Comments	Average (m/s)
5	B1-1	Windows	0.01
6	B1-4	Windows, ducts and fans	0.02
7	B1-4	Windows, ducts and fans	0.51
8	B1-4	Windows, ducts and fans	0.12
9	B1-4	Windows, ducts and fans	0.33
10	B1-4	Windows, ducts and fans	0.2
11	B1-4	Windows, ducts and fans	0.12
12	B1-5	Windows and ducts	0.09
13	B1-5	Windows and ducts	0.06
14	B1-6	Windows, ducts and fans	0.04
15	B1-6	Windows, ducts and fans	0
16	B1-6	Windows, ducts and fans	0.1
17	B1-6	Windows, ducts and fans	0.14
18	B1-6	Windows, ducts and fans	0.05
19	B1-6	Windows, ducts and fans	0.03
20	B1-7	Windows	0.06
21	B1-8	Windows, ducts and fans	0.88
22	B1-8	Windows, ducts and fans	0.15
23	B1-8	Windows, ducts and fans	0.08
24	B1-8	Windows, ducts and fans	0.03
25	B1-8	Windows, ducts and fans	0.06
26	B1-8	Windows, ducts and fans	0.07
27	B1-9	Windows and ducts	0.01
28	B1-9	Windows and ducts	0.01
29	B1-10	Windows, ducts and fans	0.01
30	B1-10	Windows, ducts and fans	0.01
31	B1-10	Windows, ducts and fans	0.02
32	B1-10	Windows, ducts and fans	0
33	B1-10	Windows, ducts and fans	0
34	B1-10	Windows, ducts and fans	0.04
35	B1-11	Natural ventilation	0.08
36	B1-12	Extraction fans	0.1
37	B1-12	Extraction fans	0.06
38	B1-12	Extraction fans	0.03
39	B1-12	Extraction fans	0.02
40	B1-12	Extraction fans	0.01

Sample	Location	Comments	Average (m/s)
41	B1-12	Extraction fans	0.01
42	B1-12	Extraction fans	0.05
43	B1-12	Extraction fans	0.11
44	B1-12	Extraction fans	0.06
45	B1-12	Extraction fans	0.08
46	B1-12	Extraction fans	0.06
47	B1-12	Extraction fans	0.07
48	B1-13	Natural ventilation	0.02
49	B1-14	Windows and ducts	0.09
50	B1-14	Windows and ducts	0.01
51	B1-14	Windows and ducts	0
52	B1-14	Windows and ducts	0
53	B1-14	Windows and ducts	0
54	B1-14	Windows and ducts	0.01
55	B1-14	Windows and ducts	0.01
56	B1-14	Windows and ducts	0.01
57	B1-14	Windows and ducts	0
58	B1-15	Natural ventilation	0.01
59	B1-16	Natural ventilation	0.01
60	B1-16	Natural ventilation	0.01
61	B1-17	Windows, ducts and extraction fans	0.08
62	B1-17	Windows, ducts and extraction fans	0.01
63	B1-17	Windows, ducts and extraction fans	0.01
64	B1-17	Windows, ducts and extraction fans	0.02
65	B1-17	Windows, ducts and extraction fans	0.01
66	B1-17	Windows, ducts and extraction fans	0.03
67	B1-18	Natural ventilation	0.01
68	B1-20	Natural ventilation	0.01
69	B1-21	Natural ventilation	0
70	B1-22	Windows	0
71	B1-22	Windows	0.01
72	B1-23	Windows and ducts	0.02
73	B1-23	Windows and ducts	0.01
74	B1-23	Windows and ducts	0.01
75	B1-23	Windows and ducts	0.01
76	B1-23	Windows and ducts	0

Sample	Location	Comments	Average (m/s)
77	B1-24	Windows	0.01
78	B1-24	Windows	0.01
79	B1-25	Natural ventilation	0.04
80	B1-25	Natural ventilation	0.09
81	B1-26	Windows and ducts	0.1
82	B1-26	Windows and ducts	0
83	B1-26	Windows and ducts	0.17
84	B1-26	Windows and ducts	0.16
85	B1-26	Windows and ducts	0.02
86	B1-27	Windows	0
87	B1-27	Windows	0
88	B1-27	Windows	0
89	B1-27	Windows	0
90	B1-28	Natural ventilation	0
91	B1-28	Natural ventilation	0
92	B1-29	Windows and ducts	0.08
93	B1-29	Windows and ducts	0.12
94	B1-29	Windows and ducts	0.07
95	B1-29	Windows and ducts	0.06
96	B1-30	Natural ventilation	0.01
97	B1-31	Windows and extraction fans	0.06
98	B1-32	Natural ventilation	0.03

Table 21: Air flow measurements – Building B First Floor

Sample #	Location	Comments	Average (m/s)
1	B1 F1-1	Windows	0.03
2	B1 F1-1	Windows	0.02
3	B1 F1-2	Natural ventilation	0.05
4	B1 F1-3	Windows and fans	0
5	B1 F1-4	Windows	0.01
6	B1 F1-4	Windows	0.01
7	B1 F1-4	Windows	0.01
8	B1 F1-4	Windows	0.01
9	B1 F1-4	Windows	0
10	B1 F1-5	Natural ventilation	0.02
11	B1 F1-6	Natural ventilation	0.02

Sample #	Location	Comments	Average (m/s)
12	B1 F1-7	Windows, fans and ducts	0
13	B1 F1-7	Windows, fans and ducts	0.02
14	B1 F1-7	Windows, fans and ducts	0.06
15	B1 F1-7	Windows, fans and ducts	0.02
16	B1 F1-7	Windows, fans and ducts	0.07
17	B1 F1-7	Windows, fans and ducts	0.05
18	B1 F1-7	Windows, fans and ducts	0.06
19	B1 F1-7	Windows, fans and ducts	0.03
20	B1 F1-7	Windows, fans and ducts	0.04
21	B1 F1-8	Windows	0.04
22	B1 F1-8	Windows	0.02
23	B1 F1-9	Windows and fans	0.06
24	B1 F1-9	Windows and fans	0.03
25	B1 F1-9	Windows and fans	0.03
26	B1 F1-9	Windows and fans	0.01
27	B1 F1-9	Windows and fans	0.02
28	B1 F1-10	Natural ventilation	0
29	B1 F1-11	Natural ventilation	0.01
30	B1 F1-13	Windows	0
31	B1 F1-13	Windows	0
32	B1 F1-12	Extraction fans	0
33	B1 F1-14	Windows, fans and ducts	0.01
34	B1 F1-14	Windows, fans and ducts	0.04
35	B1 F1-14	Windows, fans and ducts	0.01
36	B1 F1-14	Windows, fans and ducts	0.01
37	B1 F1-14	Windows, fans and ducts	0.01
38	B1 F1-14	Windows, fans and ducts	0.03
39	B1 F1-14	Windows, fans and ducts	0.05
40	B1 F1-15	Windows, fans and ducts	0.01
41	B1 F1-15	Windows, fans and ducts	0.02
42	B1 F1-15	Windows, fans and ducts	0.02
43	B1 F1-15	Windows, fans and ducts	0
44	B1 F1-16	Split system, windows and fans	0
45	B1 F1-16	Split system, windows and fans	0.04
46	B1 F1-16	Split system, windows and fans	0
47	B1 F1-16	Split system, windows and fans	0.01

Sample #	Location	Comments	Average (m/s)
48	B1 F1-17	Natural ventilation	0.02
49	B1 F1-18	Natural ventilation	0.01
50	B1 F1-19	Windows	0.03
51	B1 F1-19	Windows	0.03
52	B1 F1-20	Windows and fans	0
53	B1 F1-20	Windows and fans	0.01
54	B1 F1-20	Windows and fans	0.01
55	B1 F1-20	Windows and fans	0.01
56	B1 F1-20	Windows and fans	0.01
57	B1 F1-21	Windows and fans	0.03
58	B1 F1-21	Windows and fans	0
59	B1 F1-21	Windows and fans	0.01
60	B1 F1-21	Windows and fans	0.01
61	B1 F1-21	Windows and fans	0.04
62	B1 F1-22	Windows and fans	0.03
63	B1 F1-22	Windows and fans	0
64	B1 F1-22	Windows and fans	0.01
65	B1 F1-22	Windows and fans	0.02
66	B1 F1-22	Windows and fans	0.04
67	B1 F1-23	Windows and fans	0.01
68	B1 F1-23	Windows and fans	0.01
69	B1 F1-23	Windows and fans	0.01
70	B1 F1-23	Windows and fans	0.02
71	B1 F1-23	Windows and fans	0.1
72	B1 F1-24	Natural ventilation	0.06
73	B1 F1-24	Natural ventilation	0.03
74	B1 F1-25	Windows and fans	0.1
75	B1 F1-25	Windows and fans	0.32
76	B1 F1-25	Windows and fans	0.14
77	B1 F1-25	Windows and fans	0.01
78	B1 F1-25	Windows and fans	0.03
79	B1 F1-25	Windows and fans	0.08
80	B1 F1-25	Windows and fans	0.01
81	B1 F1-25	Windows and fans	0.15
82	B1 F1-25	Windows and fans	0.12
83	B1 F1-26	Split system, windows and fans	0.01

Sample #	Location	Comments	Average (m/s)
84	B1 F1-26	Split system, windows and fans	0.02
85	B1 F1-26	Split system, windows and fans	0.01
86	B1 F1-26	Split system, windows and fans	0.01
87	B1 F1-26	Split system, windows and fans	0.01
88	B1 F1-26	Split system, windows and fans	0.01
89	B1 F1-27	Windows and fans	0.02
90	B1 F1-27	Windows and fans	0.02
91	B1 F1-27	Windows and fans	0.02
92	B1 F1-27	Windows and fans	0.01
93	B1 F1-27	Windows and fans	0
94	B1 F1-28	Windows	0.02
95	B1 F1-28	Windows	0.02
96	B1 F1-30	Extraction fans	0.02
97	B1 F1-30	Extraction fans	0
98	B1 F1-30	Extraction fans	0.01
99	B1 F1-30	Extraction fans	0.02
100	B1 F1-30	Extraction fans	0.02
101	B1 F1-30	Extraction fans	0.03
102	B1 F1-30	Extraction fans	0.01
103	B1 F1-30	Extraction fans	0.03
104	B1 F1-30	Extraction fans	0.07
105	B1 F1-31	Natural ventilation	0.12
106	B1 F1-31	Natural ventilation	0.11
107	B1 F1-33	Windows	0.1
108	B1 F1-33	Windows	0.02
109	B1 F1-33	Windows	0.08
110	B1 F1-33	Windows	0.01
111	B1 F1-33	Windows	0.05
112	B1 F1-32	Windows	0.04

Table 22: Air flow measurements – Building C Ground Floor

Sample	Location	Comments	Average (m/s)
1	B5-4	Natural ventilation	0.03
2	B5-4	Natural ventilation	0.01
3	B5-4	Natural ventilation	0.01
4	B5-4	Natural ventilation	0.03

Sample	Location	Comments	Average (m/s)
5	B5-4	Natural ventilation	0.03
6	B5-4	Natural ventilation	0.01
7	B5-4	Natural ventilation	0.01
8	B5-4	Natural ventilation	0.1
9	B5-4	Natural ventilation	0.01
10	B5-4	Natural ventilation	0.02
11	B5-4	Natural ventilation	0.09
12	B5-6	Natural ventilation	0.02
13	B5-7	Extraction fan and windows	0
14	B5-9	Extraction fan and windows	0
15	B5-8	Extraction fan and windows	0
16	B5-10	Split system and windows	0.04
17	B5-10	Split system and windows	0
18	B5-10	Split system and windows	0.01
19	B5-10	Split system and windows	0
20	B5-10	Split system and windows	0.01
21	B5-10	Split system and windows	0.01
22	B5-10	Split system and windows	0
23	B5-10	Split system and windows	0
24	B5-10	Split system and windows	0
25	B5-10	Split system and windows	0
26	B5-10	Split system and windows	0
27	B5-11	Windows	0
28	B5-11	Windows	0.01
29	B5-12	Windows	0
30	B5-12	Windows	0
31	B5-13	Windows	0
32	B5-13	Windows	0
33	B5-14	Windows	0.01
34	B5-14	Windows	0.02
35	B5-15	Windows	0.03
36	B5-15	Windows	0.01
37	B5-16	Natural ventilation	0.01
38	B5-17	Split system and windows	0.01
39	B5-17	Split system and windows	0
40	B5-17	Split system and windows	0.01

Sample	Location	Comments	Average (m/s)
41	B5-17	Split system and windows	0
42	B5-17	Split system and windows	0.03

Table 23: Air flow measurements – Building C First Floor

Sample	Location	Comments	Average (m/s)
1	B5 F1-1	Windows	0.02
2	B5 F1-1	Windows	0.04
3	B5 F1-1	Windows	0
4	B5 F1-1	Windows	0.01
5	B5 F1-1	Windows	0.01
6	B5 F1-1	Windows	0.11
7	B5 F1-1	Windows	0.15
8	B5 F1-2	Split system and windows	0
9	B5 F1-2	Split system and windows	0.01
10	B5 F1-3	Extraction fans and windows	0.07
11	B5 F1-3	Extraction fans and windows	0.04
12	B5 F1-3	Extraction fans and windows	0.04
13	B5 F1-3	Extraction fans and windows	0.02
14	B5 F1-3	Extraction fans and windows	0.12
15	B5 F1-4	Windows	0.1
16	B5 F1-4	Windows	0.08
17	B5 F1-5	Split system, fans and windows	0.01
18	B5 F1-5	Split system, fans and windows	0.01
19	B5 F1-5	Split system, fans and windows	0.01
20	B5 F1-5	Split system, fans and windows	0.05
21	B5 F1-5	Split system, fans and windows	0.14
22	B5 F1-6	Split system and windows	0.06
23	B5 F1-6	Split system and windows	0.03
24	B5 F1-7	Windows	0
25	B5 F1-7	Windows	0
26	B5 F1-8	Split system, fans and windows	0.01
27	B5 F1-8	Split system, fans and windows	0
28	B5 F1-8	Split system, fans and windows	0
29	B5 F1-8	Split system, fans and windows	0.02
30	B5 F1-8	Split system, fans and windows	0.08
31	B5 F1-9	Split system and windows	0
32	B5 F1-9	Split system and windows	0.02

Sample	Location	Comments	Average (m/s)
33	B5 F1-9	Split system and windows	0.05
34	B5 F1-9	Split system and windows	0
35	B5 F1-9	Split system and windows	0
36	B5 F1-10	Windows	0.14
37	B5 F1-10	Windows	0.03
38	B5 F1-11	Windows and fans	0.01
39	B5 F1-11	Windows and fans	0
40	B5 F1-11	Windows and fans	0
41	B5 F1-11	Windows and fans	0.01
42	B5 F1-11	Windows and fans	0
43	B5 F1-11	Windows and fans	0.06

Table 24: Air flow measurements – Building D Ground Floor

Sample	Location	Comments	Average (m/s)
1	B2-16	Split system, windows and heating	0.01
2	B2-16	Split system, windows and heating	0
3	B2-16	Split system, windows and heating	0
4	B2-16	Split system, windows and heating	0.01
5	B2-16	Split system, windows and heating	0
6	B2-16	Split system, windows and heating	0
7	B2-16	Split system, windows and heating	0
8	B2-16	Split system, windows and heating	0.03
9	B2-14	Natural ventilation	0
10	B2-13	Windows and heating	0.05
11	B2-13	Windows and heating	0
12	B2-15	Windows and fans	0.07
13	B2-15	Windows and fans	0
14	B2-15	Windows and fans	0
15	B2-15	Windows and fans	0.01
16	B2-15	Windows and fans	0.01
17	B2-15	Windows and fans	0.02
18	B2-15	Windows and fans	0.06
19	B2-15	Windows and fans	0
20	B2-15	Windows and fans	0.01
21	B2-12	Windows, ducts and extraction fans	0
22	B2-12	Windows, ducts and extraction fans	0
23	B2-12	Windows, ducts and extraction fans	0

Sample	Location	Comments	Average (m/s)
24	B2-12	Windows, ducts and extraction fans	0
25	B2-12	Windows, ducts and extraction fans	0
26	B2-12	Windows, ducts and extraction fans	0
27	B2-12	Windows, ducts and extraction fans	0.01
28	B2-12	Windows, ducts and extraction fans	0.01
29	B2-12	Windows, ducts and extraction fans	0
30	B2-11	Windows, ducts and extraction fans	0.01
31	B2-11	Windows, ducts and extraction fans	0
32	B2-11	Windows, ducts and extraction fans	0.01
33	B2-11	Windows, ducts and extraction fans	0.01
34	B2-11	Windows, ducts and extraction fans	0.03
35	B2-11	Windows, ducts and extraction fans	0
36	B2-11	Windows, ducts and extraction fans	0
37	B2-11	Windows, ducts and extraction fans	0
38	B2-11	Windows, ducts and extraction fans	0.01
39	B2-10	Natural ventilation	0
40	B2-9	Windows	0.08
41	B2-8	Windows, ducts and extraction fans	0
42	B2-8	Windows, ducts and extraction fans	0
43	B2-8	Windows, ducts and extraction fans	0.07
44	B2-8	Windows, ducts and extraction fans	0.01
45	B2-8	Windows, ducts and extraction fans	0
46	B2-8	Windows, ducts and extraction fans	0
47	B2-8	Windows, ducts and extraction fans	0
48	B2-8	Windows, ducts and extraction fans	0
49	B2-8	Windows, ducts and extraction fans	0.02
50	B2-7	Windows, ducts and extraction fans	0.01
51	B2-7	Windows, ducts and extraction fans	0
52	B2-7	Windows, ducts and extraction fans	0.07
53	B2-7	Windows, ducts and extraction fans	0
54	B2-7	Windows, ducts and extraction fans	0
55	B2-7	Windows, ducts and extraction fans	0.04
56	B2-7	Windows, ducts and extraction fans	0.01
57	B2-7	Windows, ducts and extraction fans	0.04
58	B2-7	Windows, ducts and extraction fans	0.01
59	B2-6	Windows, ducts and extraction fans	0.01

Sample	Location	Comments	Average (m/s)
60	B2-6	Windows, ducts and extraction fans	0.01
61	B2-6	Windows, ducts and extraction fans	0.06
62	B2-5	Windows, ducts and extraction fans	0.05
63	B2-5	Windows, ducts and extraction fans	0.03
64	B2-5	Windows, ducts and extraction fans	0.04
65	B2-4	Windows, ducts and extraction fans	0
66	B2-4	Windows, ducts and extraction fans	0
67	B2-4	Windows, ducts and extraction fans	0.02
68	B2-4	Windows, ducts and extraction fans	0
69	B2-4	Windows, ducts and extraction fans	0
70	B2-4	Windows, ducts and extraction fans	0
71	B2-4	Windows, ducts and extraction fans	0
72	B2-4	Windows, ducts and extraction fans	0.01
73	B2-4	Windows, ducts and extraction fans	0.01
74	B2-3	Ducts and extraction fans	0.01
75	B2-3	Ducts and extraction fans	0.01
76	B2-3	Ducts and extraction fans	0.01
77	B2-3	Ducts and extraction fans	0.06
78	B2-3	Ducts and extraction fans	0.05
79	B2-3	Ducts and extraction fans	0.02
80	B2-3	Ducts and extraction fans	0.01
81	B2-3	Ducts and extraction fans	0.02
82	B2-3	Ducts and extraction fans	0.02
83	B2-3	Ducts and extraction fans	0.01
84	B2-3	Ducts and extraction fans	0.01
85	B2-3	Ducts and extraction fans	0
86	B2-2	Natural ventilation	0.02
87	B2-33	Natural ventilation	0.01
88	B2-31	Windows	0
89	B2-30	Windows, ducts, fans and extraction fans	0
90	B2-30	Windows, ducts, fans and extraction fans	0
91	B2-30	Windows, ducts, fans and extraction fans	0
92	B2-30	Windows, ducts, fans and extraction fans	0
93	B2-30	Windows, ducts, fans and extraction fans	0
94	B2-29	Windows	0.02
95	B2-29	Windows	0.07

Sample	Location	Comments	Average (m/s)
96	B2-29	Windows	0.02
97	B2-28	Extraction fans	0
98	B2-27	Windows	0
99	B2-26	Windows and extraction fans	0.03
100	B2-26	Windows and extraction fans	0
101	B2-26	Windows and extraction fans	0
102	B2-25	Windows	0
103	B2-22	Windows	0.01
104	B2-21	Windows	0.01
105	B2-23	Extraction fans	0.01
106	B2-24	Windows and extraction fans	0.01
107	B2-24	Windows and extraction fans	0
108	B2-24	Windows and extraction fans	0.02
109	B2-19	Windows and extraction fans	0
110	B2-19	Windows and extraction fans	0.1
111	B2-20	Extraction fans	0
112	B2-18	Windows and extraction fans	0
113	B2-18	Windows and extraction fans	0
114	B2-17	Windows	0.31
115	B2-17	Windows	0.29
116	B2-17	Windows	0.05
117	B2-34	Natural ventilation	0.04
118	B2-34	Natural ventilation	0.02
119	B2-34	Natural ventilation	0.04
120	B2-34	Natural ventilation	0.07
121	B2-34	Natural ventilation	0.17
122	B2-34	Natural ventilation	0.13
123	B2-34	Natural ventilation	0
124	B2-34	Natural ventilation	0.02
125	B2-34	Natural ventilation	0.21
126	B2-1	Windows	0.19
127	B2-1	Windows	0.02
128	B2-1	Windows	0.1

Table 25: Air flow measurements – Building D First Floor

Sample	Location	Comments	Average (m/s)
1	B2F1-2	Fans	0
2	B2F1-3	Fans	0
3	B2F1-3	Fans	0
4	B2F1-3*store	Natural ventilation	0
5	B2F1-*tute	Windows and fans	0
6	B2F1-*tute	Windows and fans	0.01
7	B2F1-4	Natural ventilation	0.25
8	B2F1-4	Natural ventilation	0.12
9	B2F1-5	Fans	0
10	B2F1-5	Fans	0.02
11	B2F1-6	Fans	0
12	B2F1-6	Fans	0.02
13	B2F1-7	Split system and fans	0
14	B2F1-7	Split system and fans	0.01
15	B2F1-8	Fans	0
16	B2F1-8	Fans	0
17	B2F1-8	Fans	0
18	B2F1-8	Fans	0
19	B2F1-8	Fans	0
20	B2F1-8	Fans	0
21	B2F1-9	Fans	0
22	B2F1-9	Fans	0
23	B2F1-9	Fans	0
24	B2F1-9	Fans	0.03
25	B2F1-12	Fans	0.01
26	B2F1-12	Fans	0
27	B2F1-12	Fans	0.01
28	B2F1-12	Fans	0
29	B2F1-12	Fans	0.01
30	B2F1-12	Fans	0
31	B2F1-14	Fans and extraction fans	0
32	B2F1-14	Fans and extraction fans	0
33	B2F1-14	Fans and extraction fans	0
34	B2F1-14	Fans and extraction fans	0.01
35	B2F1-14	Fans and extraction fans	0.01

Sample	Location	Comments	Average (m/s)
36	B2F1-14	Fans and extraction fans	0
37	B2F1-15	Fans and extraction fans	0.02
38	B2F1-15	Fans and extraction fans	0.03
39	B2F1-15	Fans and extraction fans	0
40	B2F1-15	Fans and extraction fans	0
41	B2F1-16	Fans	0.03
42	B2F1-16	Fans	0
43	B2F1-16	Fans	0.02
44	B2F1-16	Fans	0
45	B2F1-17	Fans	0.01
46	B2F1-18	Natural ventilation	0.01
47	B2F1-20	Fans and extraction fans - top windows open	0.32
48	B2F1-20	Fans and extraction fans - top windows open	0.05
49	B2F1-20	Fans and extraction fans - top windows open	0.02
50	B2F1-20	Fans and extraction fans - top windows open	0.07
51	B2F1-21	Fans and extraction fans	0
52	B2F1-21	Fans and extraction fans	0.02
53	B2F1-21	Fans and extraction fans	0
54	B2F1-21	Fans and extraction fans	0
55	B2F1-19	Fans and extraction fans	0
56	B2F1-19	Fans and extraction fans	0.07
57	B2F1-19	Fans and extraction fans	0.05
58	B2F1-19	Fans and extraction fans	0.01
59	B2F1-22	Fans and extraction fans	0.01
60	B2F1-22	Fans and extraction fans	0.03
61	B2F1-22	Fans and extraction fans	0.01
62	B2F1-22	Fans and extraction fans	0
63	B2F1-10	Fans	0
64	B2F1-10	Fans	0
65	B2F1-1	Natural ventilation	0.03
66	B2F1-1	Natural ventilation	0
67	B2F1-1	Natural ventilation	0.04
68	B2F1-1	Natural ventilation	0.06
69	B2F1-1	Natural ventilation	0.04
70	B2F1-1	Natural ventilation	0.05
71	B2F1-1	Natural ventilation	0.05

Sample	Location	Comments	Average (m/s)
72	B2F1-1	Natural ventilation	0.3
73	B2F1-1	Natural ventilation	0.03
74	B2F1-1	Natural ventilation	0
75	B2F1-11	Natural ventilation	0

Table 26: Air flow measurements – Building G – Gymnasium

Sample	Location	Comments	Average (m/s)
1	B9-1	Right side ventilation supply fans running only	0.09
2	B9-1	Right side ventilation supply fans running only	0.1
3	B9-1	Right side ventilation supply fans running only	0.35
4	B9-1	Right side ventilation supply fans running only	1.32
5	B9-1	Right side ventilation supply fans running only	1.08
6	B9-1	Right side ventilation supply fans running only	0.3
7	B9-1	Right side ventilation supply fans running only	0.03
8	B9-1	Right side ventilation supply fans running only	0.04
9	B9-1	Right side ventilation supply fans running only	0.12
10	B9-1	Right side ventilation supply fans running only	0.13
11	B9-1	Right side ventilation supply fans running only	0.24
12	B9-1	Right side ventilation supply fans running only	0.05
13	B9-1	Right side ventilation supply fans running only	0.42
14	B9-1	Right side ventilation supply fans running only	0.38
15	B9-1	Right side ventilation supply fans running only	0.13
16	B9-1	Right side ventilation supply fans running only	0.17
17	B9-7	Natural ventilation	0.02
18	B9-6	Natural ventilation	0.02
19	B9-5	Natural ventilation	0.01
20	B9-3	Window extraction fan running	0.11
21	B9-3	Window extraction fan running	0.04
22	B9-3	Window extraction fan running	0.03
23	B9-4	Window extraction fan running	0.07
24	B9-4	Window extraction fan running	0.06
25	B9-4	Window extraction fan running	0.09
26	B9-10	Natural ventilation	0.1
27	B9-9	Natural ventilation	0.02
28	B9-11	Split system aircon - not running	0.04
29	B9-11	Split system aircon - not running	0.02
30	B9-8	Natural ventilation	0.31

Sample	Location	Comments	Average (m/s)
31	B9-8	Natural ventilation	0.07
32	B9-2	Natural ventilation	0.01

Table 27: Air flow measurements – Building H

Sample	Location	Comments	Average (m/s)
1	B8-4	Natural ventilation	0.1
2	B8-2	Extraction fan	0.03
3	B8-3	Extraction fan	0.03
4	B8-4	Window, High Duct HVAC - not on	0.02
5	B8-4	High extraction fan dcut -not on	0
6	B8-4	Fans and extraction fan - not on	0.1
7	B8-4	Natural ventilation	0.08
8	B8-4	Natural ventilation	0.11
9	B8-4	Fans and extraction fan - not on	0.01
10	B8-4	Natural ventilation	0.07
11	B8-4	Natural ventilation	0
12	B8-4	Natural ventilation	0.01
13	B8-5	Natural ventilation	0.08
14	B8-5	Natural ventilation	0.04
15	B8-5	Natural ventilation	0.01
16	B8-10	Natural ventilation	0.01
17	B8-6	Natural ventilation	0.03
18	B8-6	Natural ventilation	0.01
19	B8-6	With fan running	0.55
20	B8-6	With fan running	0.49
21	B8-9	Natural ventilation	0.04

Table 28: Air flow measurements – Building R

Sample	Location	Comments	Average (m/s)
1	B7-1	Natural ventilation	0.35
2	B7-1	Natural ventilation	0.01
3	B7-1	Natural ventilation	0.01
4	B7-1	Natural ventilation	0.03
5	B7-1	Natural ventilation	0.15
6	B7-1	Natural ventilation	0.11
7	B7-1	Natural ventilation	0.08
8	B7-1	Natural ventilation	0.02

Sample	Location	Comments	Average (m/s)
9	B7-1	Natural ventilation	0.01
10	B7-9	Natural ventilation	0.01
11	B7-9	Natural ventilation	0.02
12	B7-7	Natural ventilation and fans	0
13	B7-7	Natural ventilation and fans	0.01
14	B7-8	Natural ventilation and fans	0.09
15	B7-8	Natural ventilation and fans	0.02
16	B7-5	Windows and extraction fans	0.05
17	B7-5*	Windows and extraction fans	0
18	B7-5*	Windows and extraction fans	0.01
19	B7-4	Windows and extraction fans	0.08
20	B7-3	Natural ventilation	0.06
21	B7-2	Natural ventilation	0.03
22	B7-6	Natural ventilation	0
23	B7-6	Natural ventilation	0.07
24	B7-6	Natural ventilation	0.04
25	B7-6	Natural ventilation	0.09
26	B7-6	Natural ventilation	0.04
27	B7-11	Extraction fan and heating	0
28	B7-11	Extraction fan and heating	0.07
29	B7-11	Extraction fan and heating	0
30	B7-11	Extraction fan and heating	0.06
31	B7-11	Extraction fan and heating	0.02
32	B7-11	Extraction fan and heating	0.02
33	B7-11	Extraction fan and heating	0.01
34	B7-11	Extraction fan and heating	0.02
35	B7-11	Extraction fan and heating	0.1
36	B7-11	Extraction fan and heating	0.02
37	B7-11	Extraction fan and heating	0.03
38	B7-11	Extraction fan and heating	0.02
39	B7-11	Extraction fan and heating	0.01
40	B7-11	Extraction fan and heating	0.05
41	B7-11	Extraction fan and heating	0.02
42	B7-11	Extraction fan and heating	0.02
43	B7-11	Extraction fan and heating	0.05
44	B7-12	Natural ventilation	0.02

Sample	Location	Comments	Average (m/s)
45	B7-13	Natural ventilation	0

Table 29: Air flow measurements – Building Arts & Crafts Ground Floor

Sample	Location	Comments	Average (m/s)
1	B4-2	Split system, windows and ducts	0.08
2	B4-2	Split system, windows and ducts	0.05
3	B4-2	Split system, windows and ducts	0.08
4	B4-2	Split system, windows and ducts	0.01
5	B4-2	Split system, windows and ducts	0.01
6	B4-2	Split system, windows and ducts	0.02
7	B4-3	Extraction fans, windows and ducts	0.02
8	B4-3	Extraction fans, windows and ducts	0.01
9	B4-3	Extraction fans, windows and ducts	0.02
10	B4-3	Extraction fans, windows and ducts	0.03
11	B4-3	Extraction fans, windows and ducts	0.06
12	B4-3	Extraction fans, windows and ducts	0.01
13	B4-3	Extraction fans, windows and ducts	0.03
14	B4-3	Extraction fans, windows and ducts	0
15	B4-3	Extraction fans, windows and ducts	0.01
16	B4-3	Extraction fans, windows and ducts	0.01
17	B4-3	Extraction fans, windows and ducts	0.03
18	B4-3	Extraction fans, windows and ducts	0.01
19	B4-4	Natural ventilation	0.01
20	B4-5	Natural ventilation	0.03
21	B4-5	Natural ventilation	0.06
22	B4-6	Natural ventilation	0.01
23	B4-7	Natural ventilation	0.02
24	B4-7	Natural ventilation	0.01
25	B4-8	Split system and ducts	0.12
26	B4-8	Split system and ducts	0
27	B4-8	Split system and ducts	0.01
28	B4-9	Split system, ducts and windows	0.02
29	B4-9	Split system, ducts and windows	0.02
30	B4-9	Split system, ducts and windows	0.05
31	B4-10	Extraction fans, ducts and windows	0.02
32	B4-10	Extraction fans, ducts and windows	0.04
33	B4-11	Ducts	0.02

Sample	Location	Comments	Average (m/s)
34	B4-11	Ducts	0.01
35	B4-11	Ducts	0.01
36	B4-11	Ducts	0.04
37	B4-12	Natural ventilation	0.06
38	B4-13	Extraction fans and ducts	0.04
39	B4-13	Extraction fans and ducts	0.09
40	B4-13	Extraction fans and ducts	0.01
41	B4-13	Extraction fans and ducts	0.02
42	B4-13	Extraction fans and ducts	0.01
43	B4-13	Extraction fans and ducts	0.04
44	B4-13	Extraction fans and ducts	0
45	B4-13	Extraction fans and ducts	0.01
46	B4-14	Extraction fans and ducts	0.09
47	B4-15	Extraction fans and ducts	0.01

Table 30: Air flow measurements – Building Arts & Crafts First Floor

Sample	Location	Comments	Average (m/s)
1	B4 F1-1	Duct and fans	0.09
2	B4 F1-2	Duct and extraction fan	0.18
3	B4 F1-3	Windows, duct and fans	0.04
4	B4 F1-3	Windows, duct and fans	0.01
5	B4 F1-3	Windows, duct and fans	0.09
6	B4 F1-3	Windows, duct and fans	0.07
7	B4 F1-3	Windows, duct and fans	0.09
8	B4 F1-3	Windows, duct and fans	0.02
9	B4 F1-3	Windows, duct and fans	0.02
10	B4 F1-3	Windows, duct and fans	0.01
11	B4 F1-3	Windows, duct and fans	0.08
12	B4 F1-3	Windows, duct and fans	0.11
13	B4 F1-3	Windows, duct and fans	0.15
14	B4 F1-3	Windows, duct and fans	0.23
15	B4 F1-4	Extraction fans and ducts	0.01
16	B4 F1-4	Extraction fans and ducts	0.26
17	B4 F1-5	Windows and ducts	0.16
18	B4 F1-6	Windows, duct and fans	0.02
19	B4 F1-6	Windows, duct and fans	0.01
20	B4 F1-6	Windows, duct and fans	0.11

Sample	Location	Comments	Average (m/s)
21	B4 F1-6	Windows, duct and fans	0.03
22	B4 F1-6	Windows, duct and fans	0.01
23	B4 F1-6	Windows, duct and fans	0.03
24	B4 F1-6	Windows, duct and fans	0.01
25	B4 F1-6	Windows, duct and fans	0.01
26	B4 F1-6	Windows, duct and fans	0.02
27	B4 F1-8	Natural ventilation	0
28	B4 F1-7	Natural ventilation	0.08
29	B4 F1-7	Natural ventilation	0.06
30	B4 F1-8	Natural ventilation	0.01

Table 31: Air flow measurements – Library Ground Floor

Sample	Location	Comments	Average (m/s)
1	B3-1	Windows	0
2	B3-3	Natural ventilation	0.06
3	B3-5	Windows and ducts	0
4	B3-5	Windows and ducts	0
5	B3-5	Windows and ducts	0
6	B3-5	Windows and ducts	0
7	B3-6	Ducts	0
8	B3-6	Ducts	0.11
9	B3-6	Ducts	0.05
10	B3-6	Ducts	0.03
11	B3-6	Ducts	0.1
12	B3-7	Windows and ducts	0
13	B3-7	Windows and ducts	0
14	B3-7	Windows and ducts	0.08
15	B3-7	Windows and ducts	0.08
16	B3-8	Windows and ducts	0.05
17	B3-8	Windows and ducts	0.03
18	B3-8	Windows and ducts	0
19	B3-8	Windows and ducts	0.02
20	B3-9	Windows and ducts	0
21	B3-9	Windows and ducts	0
22	B3-9	Windows and ducts	0.06
23	B3-9	Windows and ducts	0.07
24	B3-10	Natural ventilation	0

Sample	Location	Comments	Average (m/s)
25	B3-12	Natural ventilation	0
26	B3-4	Windows, heating, ducts and extraction fans	0.02
27	B3-4	Windows, heating, ducts and extraction fans	0.1
28	B3-4	Windows, heating, ducts and extraction fans	0.02
29	B3-4	Windows, heating, ducts and extraction fans	0
30	B3-4	Windows, heating, ducts and extraction fans	0.08
31	B3-4	Windows, heating, ducts and extraction fans	0.01
32	B3-4	Windows, heating, ducts and extraction fans	0.04
33	B3-4	Windows, heating, ducts and extraction fans	0.01
34	B3-4	Windows, heating, ducts and extraction fans	0
35	B3-4	Windows, heating, ducts and extraction fans	0
36	B3-4	Windows, heating, ducts and extraction fans	0.05
37	B3-4	Windows, heating, ducts and extraction fans	0.1
38	B3-4	Windows, heating, ducts and extraction fans	0.12
39	B3-4	Windows, heating, ducts and extraction fans	0
40	B3-4	Windows, heating, ducts and extraction fans	0
41	B3-4	Windows, heating, ducts and extraction fans	0.03
42	B3-4	Windows, heating, ducts and extraction fans	0.04
43	B3-4	Windows, heating, ducts and extraction fans	0.09
44	B3-4	Windows, heating, ducts and extraction fans	0.11
45	B3-4	Windows, heating, ducts and extraction fans	0.1
46	B3-4	Windows, heating, ducts and extraction fans	0.06
47	B3-4	Windows, heating, ducts and extraction fans	0
48	B3-4	Windows, heating, ducts and extraction fans	0.04
49	B3-4	Windows, heating, ducts and extraction fans	0.01
50	B3-4	Windows, heating, ducts and extraction fans	0.06

Table 32: Air flow measurements – Building Library First Floor

Sample	Location	Comments	Average (m/s)
1	B3 F1-1	Windows	0.01
2	B3 F1-2	Windows	0.03
3	B3 F1-2	Windows	0
4	B3 F1-3	Natural ventilation	0.12
5	B3 F1-9	Windows and ducts	0.01
6	B3 F1-9	Windows and ducts	0.01
7	B3 F1-9	Windows and ducts	0.02
8	B3 F1-8	Windows and ducts	0.07

Sample	Location	Comments	Average (m/s)
9	B3 F1-8	Windows and ducts	0
10	B3 F1-8	Windows and ducts	0,04
11	B3 F1-8	Windows and ducts	0.11
12	B3 F1-7	Windows and ducts	0,01
13	B3 F1-7	Windows and ducts	0
14	B3 F1-7	Windows and ducts	0,01
15	B3 F1-7	Windows and ducts	0,04
16	B3 F1-6	Windows and ducts	0,02
17	B3 F1-6	Windows and ducts	0
18	B3 F1-6	Windows and ducts	0,01
19	B3 F1-6	Windows and ducts	0,04
20	B3 F1-5	Windows and ducts	0,02
21	B3 F1-5	Windows and ducts	0,02
22	B3 F1-5	Windows and ducts	0,02
23	B3 F1-5	Windows and ducts	0
24	B3 F1-4	Ducts	0,05
25	B3 F1-4	Ducts	0,01
26	B3 F1-4	Ducts	0,01
27	B3 F1-4	Ducts	0,01
28	B3 F1-4	Ducts	0,01
29	B3 F1-4	Ducts	0
30	B3 F1-4	Ducts	0
31	B3 F1-4	Ducts	0
32	B3 F1-4	Ducts	0,02
33	B3 F1-4	Ducts	0,05

Fitzgibbon, Breanna

From: School Operations
Sent: Monday, 5 September 2022 3:13 PM
To: Lipscombe, Lizabeth
Subject: FW: [REDACTED]
Attachments: CO2.pdf; CO2.png

OFFICIAL

Hi Liz

Can you please advise Jason? I don't know if Tim or Brooke are online?

-----Original Message-----

From: Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Sent: Monday, 5 September 2022 2:25 PM
To: School Operations <SchoolOperations@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Good afternoon,

I'm seeking advice as to whether I can (or should) ask a parent to not send their child with a CO2 monitor and how the staff member can reply to say thank you for the kind offer but that they won't be accepting the offer of the CO2 monitor?

Thanks,
Jason.

Jason Holmes

Principal
Telopea Park School/Lycée franco-australien de Canberra

-----Original Message-----

From: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>
Sent: Monday, 5 September 2022 11:36 AM
To: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>; McGown, Anna <Anna.McGown@ed.act.edu.au>
Cc: Llopis, Florence <Florence.Llopis@ed.act.edu.au>; Piche, Patrice <Patrice.Piche@ed.act.edu.au>; Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Subject: FW: [REDACTED]

Dear all,

I hope you had a wonderful weekend. I have received this email from [REDACTED]. As you know, this [REDACTED] about COVID. [REDACTED] gave a monitor to [REDACTED] in order to check remotely the air quality in the places where [REDACTED] has been spending time at school. I do not know if parents are allowed to do that that's why I forward you the email below. I do not plan to reply to the [REDACTED].

Thanks.
Best regards.

Sebastien LASSALVY
Year 1.3 Teacher

-----Original Message-----

From: [REDACTED] >
Sent: Monday, September 5, 2022 9:58 AM
To: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>
Subject: [REDACTED]

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Sébastien,

I would like to thank you very much for opening the window to maintain some ventilation in the classroom since [REDACTED] has been back at school, and for helping [REDACTED] to be able to go outside when [REDACTED] and has to take off [REDACTED] mask to eat. I'm very glad that there seems to be less COVID around in Canberra at present, but I think that this may change again later in the year, so I'm keen to maintain some precautions, especially when there will be a reduced requirement for people who are possibly still infectious to stay at home.

Since the most common way people become infected with COVID is by inhaling someone else's exhaled breath, I have been checking the air quality in the places where [REDACTED] has been spending time, by putting a CO2 monitor in [REDACTED] to see how much exhaled breath is in the air. I'd like to share the results with you in case you are interested.

I've attached a graph showing the variation during the day for some days when [REDACTED] has been attending.

Mostly the air quality is pretty good, but sometimes the CO2 concentration gets a bit high, indicating more exhaled breath in the room, maybe when there is no breeze outside. I think that any problems with the air quality are absolutely not your fault, but you might be the person with the most ability to do something about it, and in any case I feel that I should let you know because it may also affect your own health and that of all children in the room.

In the past the air quality was especially bad in the music room as you can see on the graph, but the ventilation of that room has been improved recently and now the CO2 reading there is much better.

In case you aren't already familiar with using CO2 monitors, here is a very good website about using them to maintain the recommended ventilation in French public buildings where there is a target of below 800ppm CO2, corresponding to about 1% of exhaled breath in the room:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnousaerons.fr%2F&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=3ptTJpOTry41pn%2BEc%2BAZB1nHP4B%2FbHTfA4BIOIo%2BVNI%3D&reserved=0>

I think that it might be helpful for you to be able to know the air quality in the classroom in real time, so that you have the best information to make decisions about how much and when to open the windows, especially when the weather is not very nice. When [REDACTED] is nearby you may be able to see the reading from [REDACTED] CO2 monitor via Bluetooth if you download the app "[REDACTED]" on your phone. I think that this might not be ideal, since depending on [REDACTED] [REDACTED] [REDACTED] may not [REDACTED] the CO2 monitor on some days. Therefore I would like to give you another CO2 monitor (but if that is not allowed, then you could just borrow it for as long as it is useful). [REDACTED] is [REDACTED] to give it to you, but I have put it in the very top pocket of [REDACTED] bag, [REDACTED] knows where it is and I think [REDACTED] would get it out if you mention it to [REDACTED]

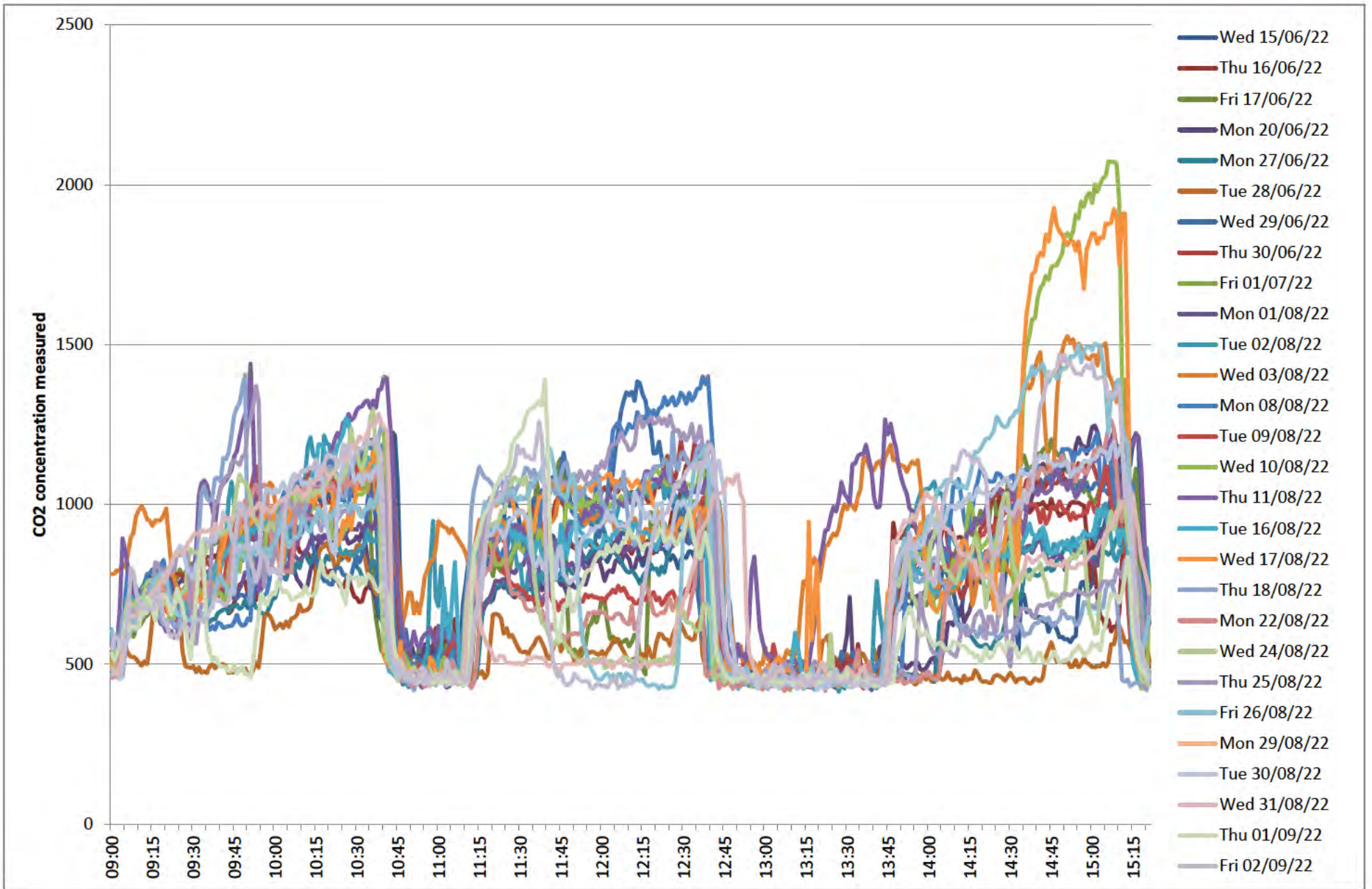
In New Zealand, there are also educational materials for children about monitoring air quality, for example:
<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLS4x8WGM-->

0&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6Ikl1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=YnE%2BLb4FJ3eCeBR07bGsJjt5LfTHyTQNxYhDxXQCP2U%3D&reserved=0

From my interactions with other people at the school, I suspect that you might not be allowed to reply to this email, so I will understand if you don't reply. In any case I would like you to know that [redacted] really enjoys being in your class and we are very happy that you are [redacted] teacher.

Best wishes,

[redacted]



Fitzgibbon, Breanna

From: Nagy, Alex
Sent: Wednesday, 7 September 2022 12:55 PM
To: School Operations
Subject: RE: [REDACTED]

Follow Up Flag: Follow up
Flag Status: Completed

Categories: COVID Queries

Nothing yet...

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Wednesday, 7 September 2022 12:44 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Alex

Did you have anything I can provide to Jason from ICW or CRT?

I'd like to update him.

Thanks.
Rach

-----Original Message-----

From: Nagy, Alex <Alex.Nagy@act.gov.au>
Sent: Monday, 5 September 2022 3:49 PM
To: School Operations <SchoolOperations@act.gov.au>
Subject: RE: [REDACTED]

Hi Rach

I may confer with my colleagues in the CMT. To see what they think.

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Monday, 5 September 2022 3:43 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Alex

I'm wondering if you might be best placed to assist Jason with this query or if you can advise me where I might forward him?

It's a but of an unusual one.

Rach

Rachelle Cridland | School Operations
Phone: +61 02 620 71555 Email: Rachelle.Cridland@act.gov.au School Improvement Branch | Education Directorate
| ACT Government Hedley Beare Centre for Teaching and Learning Stirling | GPO Box 158 Canberra ACT 2601
www.education.act.gov.au | Facebook | Twitter | Instagram | LinkedIn | Google+

-----Original Message-----

From: Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Sent: Monday, 5 September 2022 2:25 PM
To: School Operations <SchoolOperations@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Good afternoon,

I'm seeking advice as to whether I can (or should) ask a parent to not send their child with a CO2 monitor and how the staff member can reply to say thank you for the kind offer but that they won't be accepting the offer of the CO2 monitor?

Thanks,
Jason.

Jason Holmes

Principal
Telopea Park School/Lycée franco-australien de Canberra

-----Original Message-----

From: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>
Sent: Monday, 5 September 2022 11:36 AM

To: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>; McGown, Anna <Anna.McGown@ed.act.edu.au>
Cc: Llopis, Florence <Florence.Llopis@ed.act.edu.au>; Piche, Patrice <Patrice.Piche@ed.act.edu.au>; Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Subject: FW: [REDACTED]

Dear all,

I hope you had a wonderful weekend. I have received this email from [REDACTED]. As you know, this [REDACTED] is [REDACTED] about COVID. [REDACTED] gave a monitor to [REDACTED] in order to check remotely the air quality in the places where [REDACTED] has been spending time at school. I do not know if parents are allowed to do that that's why I forward you the email below. I do not plan to reply to the [REDACTED]

Thanks.
Best regards.

Sebastien LASSALVY
Year 1.3 Teacher

-----Original Message-----

From: [REDACTED]
Sent: Monday, September 5, 2022 9:58 AM
To: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>
Subject: [REDACTED]

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Sébastien,

I would like to thank you very much for opening the window to maintain some ventilation in the classroom since [REDACTED] has been back at school, and for helping [REDACTED] to be able to go outside when [REDACTED] and has to take off [REDACTED] mask to eat. I'm very glad that there seems to be less COVID around in Canberra at present, but I think that this may change again later in the year, so I'm keen to maintain some precautions, especially when there will be a reduced requirement for people who are possibly still infectious to stay at home.

Since the most common way people become infected with COVID is by inhaling someone else's exhaled breath, I have been checking the air quality in the places where [REDACTED] has been spending time, by putting a CO2 monitor in [REDACTED] to see how much exhaled breath is in the air. I'd like to share the results with you in case you are interested.

I've attached a graph showing the variation during the day for some days when [REDACTED] has been attending.

Mostly the air quality is pretty good, but sometimes the CO2 concentration gets a bit high, indicating more exhaled breath in the room, maybe when there is no breeze outside. I think that any problems with the air quality are absolutely not your fault, but you might be the person with the most ability to do something about it, and in any case I feel that I should let you know because it may also affect your own health and that of all children in the room.

In the past the air quality was especially bad in the music room as you can see on the graph, but the ventilation of that room has been improved recently and now the CO2 reading there is much better.

In case you aren't already familiar with using CO2 monitors, here is a very good website about using them to maintain the recommended ventilation in French public buildings where there is a target of below 800ppm CO2, corresponding to about 1% of exhaled breath in the room:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnousaerons.fr%2F&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=3ptTJpOTry41pn%2BEc%2BAZB1nHP4B%2FbHTfA4BIOIo%2BVNI%3D&reserved=0>

I think that it might be helpful for you to be able to know the air quality in the classroom in real time, so that you have the best information to make decisions about how much and when to open the windows, especially when the weather is not very nice. When [REDACTED] is nearby you may be able to see the reading from [REDACTED] CO2 monitor via Bluetooth if you download the app [REDACTED] " on your phone. I think that this might not be ideal, since depending on [REDACTED] [REDACTED] [REDACTED] may not [REDACTED] the CO2 monitor on some days. Therefore I would like to give you another CO2 monitor (but if that is not allowed, then you could just borrow it for as long as it is useful) [REDACTED] is [REDACTED] to give it to you, but I have put it in the very top pocket of [REDACTED] bag, [REDACTED] knows where it is and I think [REDACTED] would get it out if you mention it to [REDACTED]

In New Zealand, there are also educational materials for children about monitoring air quality, for example:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLS4x8WGM-->

[0&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=YnE%2BLb4FJ3eCeBR07bGsJjt5LfTHyTQNxYhDxXQCP2U%3D&reserved=0](https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLS4x8WGM--0&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=YnE%2BLb4FJ3eCeBR07bGsJjt5LfTHyTQNxYhDxXQCP2U%3D&reserved=0)

From my interactions with other people at the school, I suspect that you might not be allowed to reply to this email, so I will understand if you don't reply. In any case I would like you to know that [REDACTED] really enjoys being in your class and we are very happy that you are [REDACTED] teacher.

Best wishes,
[REDACTED]

Fitzgibbon, Breanna

From: Nagy, Alex
Sent: Wednesday, 7 September 2022 1:44 PM
To: School Operations
Subject: RE: [REDACTED]

Follow Up Flag: Follow up
Flag Status: Completed

Categories: COVID Queries

Yep . No worries

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Wednesday, 7 September 2022 1:43 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Cc: School Operations <SchoolOperations@act.gov.au>
Subject: RE: [REDACTED]

OFFICIAL

Hi Alex

I have just checked with Rach, she hasn't spoken with Jason yet. Are you happy to follow up with him?

Kind regards

Lisa Greig | School Operations
School Improvement Branch | Education Directorate | ACT Government
Phone: +61 02 620 50079 | Email: Lisa.Greig@act.gov.au Hedley Beare Centre for Teaching and Learning | GPO Box 158 Canberra ACT 2601 www.education.act.gov.au

I acknowledge the traditional custodians of the lands and waters where we live and work and pay my respects to elders past, present and future.

-----Original Message-----

From: Nagy, Alex <Alex.Nagy@act.gov.au>
Sent: Wednesday, 7 September 2022 1:39 PM
To: School Operations <SchoolOperations@act.gov.au>
Subject: RE: [REDACTED]

Hi Rach

About 30 minutes after your email I received advice from ICW.... Have you contacted Jason?

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Wednesday, 7 September 2022 12:44 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Alex

Did you have anything I can provide to Jason from ICW or CRT?

I'd like to update him.

Thanks.

Rach

-----Original Message-----

From: Nagy, Alex <Alex.Nagy@act.gov.au>
Sent: Monday, 5 September 2022 3:49 PM
To: School Operations <SchoolOperations@act.gov.au>
Subject: RE: [REDACTED]

Hi Rach

I may confer with my colleagues in the CMT. To see what they think.

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Monday, 5 September 2022 3:43 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Alex

I'm wondering if you might be best placed to assist Jason with this query or if you can advise me where I might forward him?

It's a but of an unusual one.

Rach

Rachelle Cridland | School Operations

Phone: +61 02 620 71555 Email: Rachelle.Cridland@act.gov.au School Improvement Branch | Education Directorate | ACT Government Hedley Beare Centre for Teaching and Learning Stirling | GPO Box 158 Canberra ACT 2601
www.education.act.gov.au | Facebook | Twitter | Instagram | LinkedIn | Google+

-----Original Message-----

From: Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Sent: Monday, 5 September 2022 2:25 PM
To: School Operations <SchoolOperations@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Good afternoon,

I'm seeking advice as to whether I can (or should) ask a parent to not send their child with a CO2 monitor and how the staff member can reply to say thank you for the kind offer but that they won't be accepting the offer of the CO2 monitor?

Thanks,
Jason.

Jason Holmes

Principal
Telopea Park School/Lycée franco-australien de Canberra

-----Original Message-----

From: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>
Sent: Monday, 5 September 2022 11:36 AM
To: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>; McGown, Anna <Anna.McGown@ed.act.edu.au>
Cc: Llopis, Florence <Florence.Llopis@ed.act.edu.au>; Piche, Patrice <Patrice.Piche@ed.act.edu.au>; Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Subject: FW: [REDACTED]

Dear all,

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Thanks.

Best regards.

Sebastien LASSALVY
Year 1.3 Teacher

-----Original Message-----

From: [REDACTED]
Sent: Monday, September 5, 2022 9:58 AM
To: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>
Subject: [REDACTED]

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Dear Sébastien,

I would like to thank you very much for opening the window to maintain some ventilation in the classroom since [REDACTED] has been back at school, and for helping [REDACTED] to be able to go outside when [REDACTED] and has to take off [REDACTED] mask to eat. I'm very glad that there seems to be less COVID around in Canberra at present, but I think that this may change again later in the year, so I'm keen to maintain some precautions, especially when there will be a reduced requirement for people who are possibly still infectious to stay at home.

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I've attached a graph showing the variation during the day for some days when [REDACTED] has been attending.

Mostly the air quality is pretty good, but sometimes the CO2 concentration gets a bit high, indicating more exhaled breath in the room, maybe when there is no breeze outside. I think that any problems with the air quality are absolutely not your fault, but you might be the person with the most ability to do something about it, and in any case I feel that I should let you know because it may also affect your own health and that of all children in the room.

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In case you aren't already familiar with using CO2 monitors, here is a very good website about using them to maintain the recommended ventilation in French public buildings where there is a target of below 800ppm CO2, corresponding to about 1% of exhaled breath in the room:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnousaerons.fr%2F&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljoImC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=3ptTJpOTry41pn%2BEc%2BAZB1nHP4B%2FbHTfA4BIOIo%2BVNI%3D&reserved=0>

I think that it might be helpful for you to be able to know the air quality in the classroom in real time, so that you have the best information to make decisions about how much and when to open the windows, especially when the weather is not very nice. When [REDACTED] is nearby you may be able to see the reading from [REDACTED] CO2 monitor via Bluetooth if you download the app "[REDACTED]" on your phone. I think that this might not be ideal, since depending on [REDACTED] [REDACTED] may not [REDACTED] the CO2 monitor on some days. Therefore I would like to give you another CO2 monitor (but if that is not allowed, then you could just borrow it for as long as it is useful). [REDACTED] is [REDACTED] to give it

to you, but I have put it in the very top pocket of [redacted] bag, [redacted] knows where it is and I think [redacted] would get it out if you mention it to [redacted]

In New Zealand, there are also educational materials for children about monitoring air quality, for example:
<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLS4x8WGM--0&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=YnE%2BLb4FJ3eCeBR07bGsJjt5LfTHyTQNxYhDxXQCP2U%3D&reserved=0>

From my interactions with other people at the school, I suspect that you might not be allowed to reply to this email, so I will understand if you don't reply. In any case I would like you to know that [redacted] really enjoys being in your class and we are very happy that you are [redacted] teacher.

Best wishes,
[redacted]

Fitzgibbon, Breanna

From: Nagy, Alex
Sent: Wednesday, 7 September 2022 1:56 PM
To: School Operations
Subject: FW: [REDACTED]

Follow Up Flag: Follow up
Flag Status: Completed

Categories: COVID Queries

Hi Rach

For your information.

I have sent this through to Jason and have spoken with him.

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: Blom, Dylan <Dylan.Blom@act.gov.au>
Sent: Wednesday, 7 September 2022 1:17 PM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>; Power, Meg <Meg.Power@act.gov.au>; Nagy, Alex <Alex.Nagy@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; EDU, Safe at School <safeatschool@act.gov.au>; Hucker, Penelope <Penelope.Hucker@act.gov.au>; McMahon, Kate <Kate.McMahon@act.gov.au>; Anderson, Damien <Damien.Anderson@act.gov.au>; Flint, Katrina <Katrina.Flint@act.gov.au>
Subject: RE: [REDACTED]

OFFICIAL

Thanks John,

Alex and Meg, please find current advice below received through a recent consultant report, this extract can be provided to Jason at Telopea for information only, not to be shared. Given the parent has not sought a response I would advise he say nothing. The school should continue to operate as per their existing plan. The broader advice on Co2 monitors will come through in due course, and as always Education will take direction from Health/CHO.

Happy to discuss.

Dylan Blom | Senior Director, Major Projects Infrastructure and Capital Works | Education | ACT Government
Mobile: 0466 313 607 | Email: dylan.blom@act.gov.au www.education.act.gov.au | Facebook | Twitter | Instagram
| LinkedIn

-----Original Message-----

From: Ryan, JohnW <JohnW.Ryan@act.gov.au>

Sent: Wednesday, 7 September 2022 10:20 AM

To: Blom, Dylan <Dylan.Blom@act.gov.au>

Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; EDU, Safe at School <safeatschool@act.gov.au>; Hucker, Penelope <Penelope.Hucker@act.gov.au>; McMahon, Kate <Kate.McMahon@act.gov.au>; Anderson, Damien <Damien.Anderson@act.gov.au>; Flint, Katrina <Katrina.Flint@act.gov.au>

Subject: RE: [REDACTED]

OFFICIAL

Hi Dylan,

My proposed response is below. I have used the findings of the [REDACTED] review in developing this response, especially regarding the efficacy of CO2 monitors to indicate the risk of transmission of pathogens.

Pen and Kate,

I've copied you in as I am not sure of the cross-over between the Safe at school team and the COVID management team on IAQ matters.

Cheers

John

As part of the suite of measures to minimise the transmission of COVID-19 in schools, the Education Directorate has developed specific indoor air quality (IAQ) plans for each school, including Telopea Park. Advice from the Chief Health Officer, the Australian Health Protection Principal Committee, World Health Organisation, OzSAGE and Safe Work Australia were considered in the development of these plans. The identified control measure to reduce the risk of COVID-19 transmission is to open windows to improve natural ventilation, while balancing thermal comfort.

The Directorate recently engaged specialist consultants to provide further advice on IAQ, including the measurement of CO2 as an indicator of the risk of COVID-19 transmission. The consultants reviewed national and international studies on COVID transmission and concluded that indoor carbon dioxide concentrations do not provide an indication of the risk of COVID-19 transmission. The consultants stated that:

" According to ASHRAE (2022), indoor air carbon dioxide concentrations can only be reliably used as an indicator of acceptable ventilation of body odour (ASHRAE, 2022).

There is little evidence that carbon dioxide levels reliably or accurately predict the risk of COVID-19 transmission (SAGE, 2020; PHAC, 2021; CDC, 2021; VICDH, 2022; ASHRAE, 2022).

The Victorian Department of Health (2022) advise that: Carbon dioxide monitors can be utilised as an indicator metric for poor ventilation and air quality in occupied indoor spaces, but may have limited benefit to predicting COVID-19 transmission risk.

There is no scientific basis for selection of criteria levels for carbon dioxide for assessment of ventilation (except for body odour/bioeffluents). Assessment against any selected criteria will only provide indication of adequacy of ventilation, and will not indicate any exposure risk."

Prior to the consultants review, the Directorate had supplied CO2 monitors to some schools and had found that they require regular calibration to ensure accurate and reliable measurement. This places an additional workload on teaching staff, for no reduction in the risk of COVID-19 transmission.

The consultant's report also highlighted this issue with uncalibrated CO2 monitors. It states "Caution must be used when reading the levels from CO2 monitors that are not calibrated, as they may not be reliable or accurate and may be measuring localised values at a single point in time".

For these reasons the Directorate does not intend to monitor CO2 levels within learning environments.

-----Original Message-----

From: Blom, Dylan <Dylan.Blom@act.gov.au>
Sent: Tuesday, 6 September 2022 10:00 AM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

John,

See the below email chain regarding personal CO2 monitoring in school by a parent/student. Are we able to provide a response or advice?

Dylan Blom | Senior Director, Major Projects Infrastructure and Capital Works | Education | ACT Government
Mobile: 0466 313 607 | Email: dylan.blom@act.gov.au www.education.act.gov.au | Facebook | Twitter | Instagram
| LinkedIn

-----Original Message-----

From: Power, Meg <Meg.Power@act.gov.au> On Behalf Of EDUCOVID
Sent: Tuesday, 6 September 2022 8:45 AM
To: Blom, Dylan <Dylan.Blom@act.gov.au>
Cc: EDUCOVID <EDUCOVID@act.gov.au>; Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Dylan,

I hope you are well.

Please see below enquiry in relation to CO2 monitors in schools, are you able to provide us with some advice?

Thanks,

Meg Power | Assistant Director COVID Management Team
T: (02) 6207 8767 | E: Meg.Power@act.gov.au Covid Management Team | Education | ACT Government
www.education.act.gov.au | Facebook | Twitter | Instagram | LinkedIn

This email, and any attachments, may be confidential and also privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

-----Original Message-----

From: Nagy, Alex <Alex.Nagy@act.gov.au>
Sent: Monday, 5 September 2022 3:56 PM
To: EDUCOVID <EDUCOVID@act.gov.au>
Subject: FW: [REDACTED]

Hi EDUCOVID

Please see the query from Jason at Telopea below. A parent wants to give a teacher a CO2 meter to monitor air quality in the class room so he is better able to take appropriate action and hence keep the parents kid safer from Covid.

Any ideas or advice for the school?

I think that saying "no thankyou" to the device and access to the meter placed on the student is a given....but asking for the device not to come to school....."what are the school hiding?" springs to mind. I would be interested in your take.

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Monday, 5 September 2022 3:43 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Alex

I'm wondering if you might be best placed to assist Jason with this query or if you can advise me where I might forward him?

It's a but of an unusual one.

Rach

Rachelle Cridland | School Operations
Phone: +61 02 620 71555 Email: Rachelle.Cridland@act.gov.au School Improvement Branch | Education Directorate
| ACT Government Hedley Beare Centre for Teaching and Learning Stirling | GPO Box 158 Canberra ACT 2601
www.education.act.gov.au | Facebook | Twitter | Instagram | LinkedIn | Google+

-----Original Message-----

From: Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Sent: Monday, 5 September 2022 2:25 PM
To: School Operations <SchoolOperations@act.gov.au>

Subject: FW: [REDACTED]

OFFICIAL

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Principal
Telopea Park School/Lycée franco-australien de Canberra

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Sent: Monday, 5 September 2022 11:36 AM

To: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>; McGown, Anna <Anna.McGown@ed.act.edu.au>

Cc: Llopis, Florence <Florence.Llopis@ed.act.edu.au>; Piche, Patrice <Patrice.Piche@ed.act.edu.au>; Holmes, Jason <Jason.Holmes@ed.act.edu.au>

Subject: FW: [REDACTED]

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Thanks.
Best regards.

Sebastien LASSALVY
Year 1.3 Teacher

-----Original Message-----

From: [REDACTED]

Sent: Monday, September 5, 2022 9:58 AM

To: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>

Subject: [REDACTED]

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eat. I'm very glad that there seems to be less COVID around in Canberra at present, but I think that this may change again later in the year, so I'm keen to maintain some precautions, especially when there will be a reduced requirement for people who are possibly still infectious to stay at home.

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Mostly the air quality is pretty good, but sometimes the CO2 concentration gets a bit high, indicating more exhaled breath in the room, maybe when there is no breeze outside. I think that any problems with the air quality are absolutely not your fault, but you might be the person with the most ability to do something about it, and in any case I feel that I should let you know because it may also affect your own health and that of all children in the room.

In the past the air quality was especially bad in the music room as you can see on the graph, but the ventilation of that room has been improved recently and now the CO2 reading there is much better.

In case you aren't already familiar with using CO2 monitors, here is a very good website about using them to maintain the recommended ventilation in French public buildings where there is a target of below 800ppm CO2, corresponding to about 1% of exhaled breath in the room:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnousaerons.fr%2F&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikl1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=3ptTjPOTry41pn%2BEc%2BAZB1nHP4B%2FbHTfA4BIOIo%2BVNI%3D&reserved=0>

I think that it might be helpful for you to be able to know the air quality in the classroom in real time, so that you have the best information to make decisions about how much and when to open the windows, especially when the weather is not very nice. When [REDACTED] is nearby you may be able to see the reading from [REDACTED] CO2 monitor via Bluetooth if you download the app "[REDACTED]" on your phone. I think that this might not be ideal, since depending on [REDACTED] [REDACTED] may not [REDACTED] the CO2 monitor on some days. Therefore I would like to give you another CO2 monitor (but if that is not allowed, then you could just borrow it for as long as it is useful). [REDACTED] is [REDACTED] to give it to you, but I have put it in the very top pocket of [REDACTED] bag, [REDACTED] knows where it is and I think [REDACTED] would get it out if you mention it to [REDACTED]


In New Zealand, there are also educational materials for children about monitoring air quality, for example:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLS4x8WGM--0&data=05%7C01%7C%7C85dda3260875440349c608da8ef6ad20%7Cb46c190803344236b978585ee88e4199%7C0%7C0%7C637979487544573161%7CUnknown%7CTWFpbGZsb3d8eyJWljojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikl1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=YnE%2BLb4FJ3eCeBR07bGsJjt5LfThyTQNxYhDxXQCP2U%3D&reserved=0>

From my interactions with other people at the school, I suspect that you might not be allowed to reply to this email, so I will understand if you don't reply. In any case I would like you to know that [REDACTED] really enjoys being in your class and we are very happy that you are [REDACTED] teacher.

Best wishes,
[REDACTED]





From: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>
Sent: Thursday, 15 September 2022 2:49 PM
To: Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Cc: McGown, Anna <Anna.McGown@ed.act.edu.au>; Louis, Kylie <Kylie.Louis@ed.act.edu.au>; Griffiths, Stacey <Stacey.Griffiths@ed.act.edu.au>; Ryan, Mary <Mary.Ryan@ed.act.edu.au>
Subject: RE: [REDACTED]

OFFICIAL

Hi Jason

Not the best conversation with [REDACTED] regarding this issue, however it was pretty much what [REDACTED] expected.

[REDACTED] was not rude and accepted the/my response.

[REDACTED] suggested the Act govt wouldn't win a noble prize for research in this area (also not for sharing).

Anyway [REDACTED] child is happy and attending school, they have much praise for Sebastien, so from my point of view all went well.

Robyn

From: Holmes, Jason <Jason.Holmes@ed.act.edu.au>

Sent: Wednesday, 14 September 2022 3:16 PM

To: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>

Subject: Fwd: [REDACTED]

OFFICIAL

Please note, not for sharing.

Jason Holmes

Principal

Teloepa Park School

ACT

From: Nagy, Alex <Alex.Nagy@act.gov.au>

Sent: Wednesday, September 7, 2022 1:54:39 PM

To: Holmes, Jason <Jason.Holmes@ed.act.edu.au>

Subject: FW: [REDACTED]

Hello Jason

Please see below for a response from ICW.

Note the response is for your information and "not to be shared".

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director

ACT Education COVID-19 Response Team

ACT Government, Ngunnawal Country

Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: Blom, Dylan <Dylan.Blom@act.gov.au>

Sent: Wednesday, 7 September 2022 1:17 PM

To: Ryan, JohnW <JohnW.Ryan@act.gov.au>; Power, Meg <Meg.Power@act.gov.au>;

Nagy, Alex <Alex.Nagy@act.gov.au>

Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; EDU, Safe at School

<safeatschool@act.gov.au>; Hucker, Penelope <Penelope.Hucker@act.gov.au>;

McMahon, Kate <Kate.McMahon@act.gov.au>; Anderson, Damien

<Damien.Anderson@act.gov.au>; Flint, Katrina <Katrina.Flint@act.gov.au>

Subject: RE: [REDACTED]

OFFICIAL

Thanks John,

Alex and Meg, please find current advice below received through a recent consultant report, this extract can be provided to Jason at Teloepa for information only, not to be shared. Given the parent has not sought a response I would advise he say nothing. The

school should continue to operate as per their existing plan. The broader advice on Co2 monitors will come through in due course, and as always Education will take direction from Health/CHO.

Happy to discuss.

Dylan Blom | Senior Director, Major Projects Infrastructure and Capital Works |
Education | ACT Government
Mobile: 0466 313 607 | Email: dylan.blom@act.gov.au www.education.act.gov.au |
Facebook | Twitter | Instagram | LinkedIn

-----Original Message-----

From: Ryan, JohnW <JohnW.Ryan@act.gov.au>

Sent: Wednesday, 7 September 2022 10:20 AM

To: Blom, Dylan <Dylan.Blom@act.gov.au>

Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; EDU, Safe at School
<safeatschool@act.gov.au>; Hucker, Penelope <Penelope.Hucker@act.gov.au>;
McMahon, Kate <Kate.McMahon@act.gov.au>; Anderson, Damien
<Damien.Anderson@act.gov.au>; Flint, Katrina <Katrina.Flint@act.gov.au>

Subject: RE: [REDACTED]

OFFICIAL

Hi Dylan,

My proposed response is below. I have used the findings of the [REDACTED] review in developing this response, especially regarding the efficacy of CO2 monitors to indicate the risk of transmission of pathogens.

Pen and Kate,

I've copied you in as I am not sure of the cross-over between the Safe at school team and the COVID management team on IAQ matters.

Cheers

John

As part of the suite of measures to minimise the transmission of COVID-19 in schools, the Education Directorate has developed specific indoor air quality (IAQ) plans for each school, including Telopea Park. Advice from the Chief Health Officer, the Australian Health Protection Principal Committee, World Health Organisation, OzSAGE and Safe Work Australia were considered in the development of these plans. The identified control measure to reduce the risk of COVID-19 transmission is to open windows to improve natural ventilation, while balancing thermal comfort.

The Directorate recently engaged specialist consultants to provide further advice on IAQ,

including the measurement of CO₂ as an indicator of the risk of COVID-19 transmission. The consultants reviewed national and international studies on COVID transmission and concluded that indoor carbon dioxide concentrations do not provide an indication of the risk of COVID-19 transmission. The consultants stated that:

" According to ASHRAE (2022), indoor air carbon dioxide concentrations can only be reliably used as an indicator of acceptable ventilation of body odour (ASHRAE, 2022).

There is little evidence that carbon dioxide levels reliably or accurately predict the risk of COVID-19 transmission (SAGE, 2020; PHAC, 2021; CDC, 2021; VICDH, 2022; ASHRAE, 2022).

The Victorian Department of Health (2022) advise that: Carbon dioxide monitors can be utilised as an indicator metric for poor ventilation and air quality in occupied indoor spaces, but may have limited benefit to predicting COVID-19 transmission risk.

There is no scientific basis for selection of criteria levels for carbon dioxide for assessment of ventilation (except for body odour/bioeffluents). Assessment against any selected criteria will only provide indication of adequacy of ventilation, and will not indicate any exposure risk."

Prior to the consultants review, the Directorate had supplied CO₂ monitors to some schools and had found that they require regular calibration to ensure accurate and reliable measurement. This places an additional workload on teaching staff, for no reduction in the risk of COVID-19 transmission.

The consultant's report also highlighted this issue with uncalibrated CO₂ monitors. It states "Caution must be used when reading the levels from CO₂ monitors that are not calibrated, as they may not be reliable or accurate and may be measuring localised values at a single point in time".

For these reasons the Directorate does not intend to monitor CO₂ levels within learning environments.

-----Original Message-----

From: Blom, Dylan <Dylan.Blom@act.gov.au>
Sent: Tuesday, 6 September 2022 10:00 AM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

John,

See the below email chain regarding personal CO₂ monitoring in school by a

parent/student. Are we able to provide a response or advice?

Dylan Blom | Senior Director, Major Projects Infrastructure and Capital Works |
Education | ACT Government
Mobile: 0466 313 607 | Email: dylan.blom@act.gov.au www.education.act.gov.au |
Facebook | Twitter | Instagram | LinkedIn

-----Original Message-----

From: Power, Meg <Meg.Power@act.gov.au> On Behalf Of EDUCOVID
Sent: Tuesday, 6 September 2022 8:45 AM
To: Blom, Dylan <Dylan.Blom@act.gov.au>
Cc: EDUCOVID <EDUCOVID@act.gov.au>; Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Dylan,

I hope you are well.

Please see below enquiry in relation to CO2 monitors in schools, are you able to provide us with some advice?

Thanks,

Meg Power | Assistant Director COVID Management Team
T: (02) 6207 8767 | E: Meg.Power@act.gov.au Covid Management Team | Education |
ACT Government www.education.act.gov.au | Facebook | Twitter | Instagram | LinkedIn

This email, and any attachments, may be confidential and also privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

-----Original Message-----

From: Nagy, Alex <Alex.Nagy@act.gov.au>
Sent: Monday, 5 September 2022 3:56 PM
To: EDUCOVID <EDUCOVID@act.gov.au>
Subject: FW: [REDACTED]

Hi EDUCOVID

Please see the query from Jason at Telopea below. A parent wants to give a teacher a CO2 meter to monitor air quality in the class room so he is better able to take

appropriate action and hence keep the parents kid safer from Covid.

Any ideas or advice for the school?

I think that saying "no thankyou" to the device and access to the meter placed on the student is a given....but asking for the device not to come to school....."what are the school hiding?" springs to mind. I would be interested in your take.

Please do not hesitate to get in touch if you require additional information or wish to discuss this matter further.

Best regards,

Alex Nagy | Senior Director
ACT Education COVID-19 Response Team
ACT Government, Ngunnawal Country
Phone: 62059290, 0402 040 917 | Email: alex.nagy@act.gov.au

-----Original Message-----

From: School Operations <SchoolOperations@act.gov.au>
Sent: Monday, 5 September 2022 3:43 PM
To: Nagy, Alex <Alex.Nagy@act.gov.au>
Subject: FW: [REDACTED]

OFFICIAL

Hi Alex

I'm wondering if you might be best placed to assist Jason with this query or if you can advise me where I might forward him?

It's a but of an unusual one.

Rach

Rachelle Cridland | School Operations
Phone: +61 02 620 71555 Email: Rachelle.Cridland@act.gov.au School Improvement
Branch | Education Directorate | ACT Government Hedley Beare Centre for Teaching
and Learning Stirling | GPO Box 158 Canberra ACT 2601 www.education.act.gov.au |
Facebook | Twitter | Instagram | LinkedIn | Google+

-----Original Message-----

From: Holmes, Jason <Jason.Holmes@ed.act.edu.au>
Sent: Monday, 5 September 2022 2:25 PM

To: School Operations <SchoolOperations@act.gov.au>

Subject: FW: [REDACTED]

OFFICIAL

Good afternoon,

I'm seeking advice as to whether I can (or should) ask a parent to not send their child with a CO2 monitor and how the staff member can reply to say thank you for the kind offer but that they won't be accepting the offer of the CO2 monitor?

Thanks,
Jason.

Jason Holmes

Principal
Telopea Park School/Lycée franco-australien de Canberra

-----Original Message-----

From: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>

Sent: Monday, 5 September 2022 11:36 AM

To: McEwin, Robyn <Robyn.McEwin@ed.act.edu.au>; McGown, Anna <Anna.McGown@ed.act.edu.au>

Cc: Llopis, Florence <Florence.Llopis@ed.act.edu.au>; Piche, Patrice <Patrice.Piche@ed.act.edu.au>; Holmes, Jason <Jason.Holmes@ed.act.edu.au>

Subject: FW: [REDACTED]

Dear all,

I hope you had a wonderful weekend. I have received this email from [REDACTED]. As you know, this [REDACTED] is totally anxious about COVID. [REDACTED] gave a monitor to [REDACTED] in order to check remotely the air quality in the places where [REDACTED] has been spending time at school. I do not know if parents are allowed to do that that's why I forward you the email below. I do not plan to reply to the [REDACTED]

Thanks.
Best regards.

Sebastien LASSALVY
Year 1.3 Teacher

-----Original Message-----

From: [REDACTED] >

Sent: Monday, September 5, 2022 9:58 AM

To: Lassalvy, Sebastien <Sebastien.Lassalvy@ed.act.edu.au>

Subject: [REDACTED]

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Sébastien,

I would like to thank you very much for opening the window to maintain some ventilation in the classroom since [REDACTED] has been back at school, and for helping [REDACTED] to be able to go outside when [REDACTED] and has to take off [REDACTED] mask to eat. I'm very glad that there seems to be less COVID around in Canberra at present, but I think that this may change again later in the year, so I'm keen to maintain some precautions, especially when there will be a reduced requirement for people who are possibly still infectious to stay at home.

Since the most common way people become infected with COVID is by inhaling someone else's exhaled breath, I have been checking the air quality in the places where [REDACTED] has been spending time, by putting a CO2 monitor in [REDACTED] to see how much exhaled breath is in the air. I'd like to share the results with you in case you are interested.

I've attached a graph showing the variation during the day for some days when [REDACTED] has been attending.

Mostly the air quality is pretty good, but sometimes the CO2 concentration gets a bit high, indicating more exhaled breath in the room, maybe when there is no breeze outside. I think that any problems with the air quality are absolutely not your fault, but you might be the person with the most ability to do something about it, and in any case I feel that I should let you know because it may also affect your own health and that of all children in the room.

In the past the air quality was especially bad in the music room as you can see on the graph, but the ventilation of that room has been improved recently and now the CO2 reading there is much better.

In case you aren't already familiar with using CO2 monitors, here is a very good website about using them to maintain the recommended ventilation in French public buildings where there is a target of below 800ppm CO2, corresponding to about 1% of exhaled breath in the room:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnousaerons.fr%2F&data=05%7C01%7C%7Cd6928cafe4874968f12808da9084b2ac%7Cf1d4a8326c2144759bf48cc7e9044a29%7C0%7C0%7C637981196865403713%7CUnknown%7CTWFpbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikl1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=x5sXYBgmyKNZJSSvmtVipomfGC4HLfKGzSbk%2Fxb98Zc%3D&reserved=0>

I think that it might be helpful for you to be able to know the air quality in the classroom

in real time, so that you have the best information to make decisions about how much and when to open the windows, especially when the weather is not very nice. When [redacted] is nearby you may be able to see the reading from [redacted] CO2 monitor via Bluetooth if you download the app "[redacted]" on your phone. I think that this might not be ideal, since depending on [redacted] [redacted] may not [redacted] the CO2 monitor on some days. Therefore I would like to give you another CO2 monitor (but if that is not allowed, then you could just borrow it for as long as it is useful). [redacted] is [redacted] to give it to you, but I have put it in the very top pocket of [redacted] bag, [redacted] knows where it is and I think [redacted] would get it out if you mention it to [redacted].

In New Zealand, there are also educational materials for children about monitoring air quality, for example:

<https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLS4x8WGM-0&data=05%7C01%7C%7Cd6928cafe4874968f12808da9084b2ac%7Cf1d4a8326c2144759bf48cc7e9044a29%7C0%7C0%7C637981196865403713%7CUnknown%7CTWfpbGZsb3d8eyjWljoimC4wLjAwMDAiLCIQljoiv2luMzliLCJBTil6lk1haWwiLCjXVCI6Mn0%3D%7C3000%7C%7C%7C&data=e5%2FZdrza6z4OmTg%2BOsOkN%2Fr5zal7AlUpuVs2xNYjI9M%3D&reserved=0>

From my interactions with other people at the school, I suspect that you might not be allowed to reply to this email, so I will understand if you don't reply. In any case I would like you to know that [redacted] really enjoys being in your class and we are very happy that you are [redacted] teacher.

Best wishes,

[redacted]

Robyn McEwin
Executive Teacher K-2/
REDCO / STAFF WELFARE K-10
Telopea Park School
Lycée Franco-Australien de Canberra
NSW Crescent
BARTON ACT 2600
+61 2 6142 3369
Robyn.mcewin@ed.act.edu.au



From: [Richard Egan](#)
To: [Education Ministers](#)
Cc: [Education Ministers](#), [John, John](#), [John](#)
Sent: Wednesday, 10 September 2022 1:12 PM
Date: Monday, 19 September 2022 1:12 PM AEST

Hi James
Obviously the meeting did not go as well as I had you believe.
What next?
Thanks
Richard

-----Original Message-----
From: [Richard Egan](#)
Sent: Monday, 19 September 2022 1:12 PM
To: [John, John](#), [John](#), [Education Ministers](#), [Education Ministers](#)
Subject: CO2 monitors in schools

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Dear Richard,

Further to your phone call last week, I found some relevant articles that I hope will be of interest to you.

Whilst I understand that you are not in a position to change the attitude of the education directors on the provision of optional CO2 monitors in schools, I would like to share with you some of the research that supports the use of CO2 monitors in classrooms. I hope that this will help you to make up your own mind about what might be the motivation of the education directors when they state that teachers should not have CO2 monitors that would give them the ability to make their own measurement of air quality. (The world has to be a better place for teachers who develop long-term illness in their workers' compensation.)

Here is an excellent article from the ABC on open: "An expert has suggested all Australian classrooms should have CO2 monitoring"

<https://www.abc.net.au/news/2022-09-15/australian-classrooms-should-have-co2-monitors/10144444>
<https://www.abc.net.au/news/2022-09-15/australian-classrooms-should-have-co2-monitors/10144444>

If you are keen to read some more scientific papers, I found these ones interesting and the abstracts are quite readable.

<https://www.abc.net.au/news/2022-09-15/australian-classrooms-should-have-co2-monitors/10144444>
<https://www.abc.net.au/news/2022-09-15/australian-classrooms-should-have-co2-monitors/10144444>

Unfortunately I think that COVID-19 case numbers are not likely to stay low all the way to the end of the school year, and it is better to be prepared. Nobody wants the children or staff to be off sick, especially with the possibility of serious long-term illness (which children of my friends are experiencing), and based on measurements of the air quality, I think it would be quite feasible to cut the risk of transmission in the school to less than half of what it is presently.

I am still keen to meet you to discuss this, if you are available. I would like to lead you a CO2 monitor for your own evaluation, (perhaps over the school holidays), even if you never intend to take it inside any classroom. I have found that once a person has used carrying one around (in shops, offices, in a car, at home for example) one develops a much better understanding of which places are well ventilated and which ones are likely not to be, and how to fix it. I recently learned a bit about ventilation by doing this, and I think you may find it interesting.

Best regards,
