

RBCAA Technical Feedback – June 2025

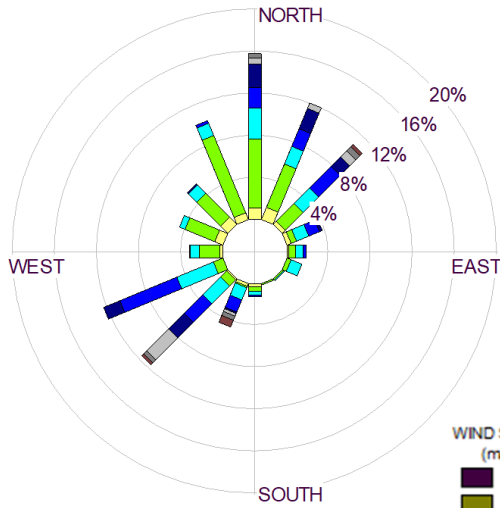


Meteorology

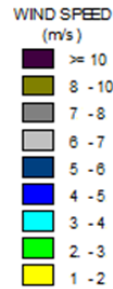
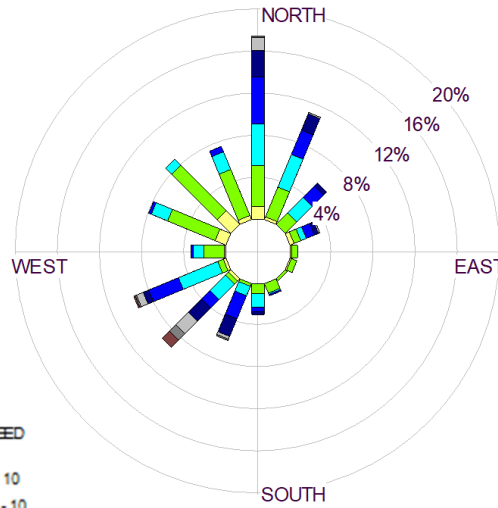
WIND



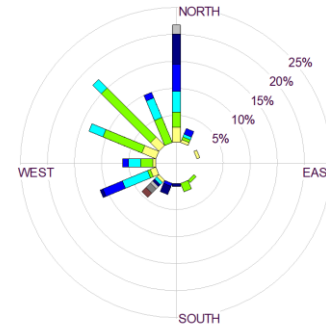
June 2024 Wind Rose



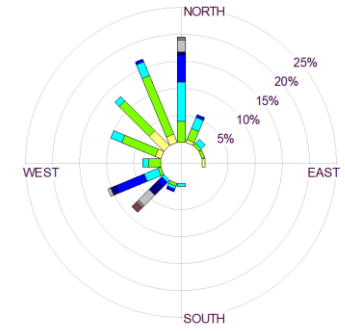
June 2025 Wind Rose



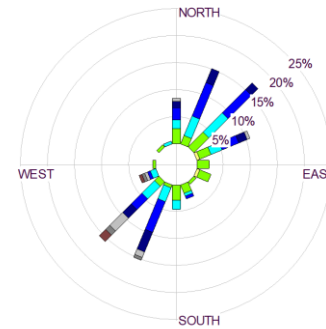
00:00 – 05:59



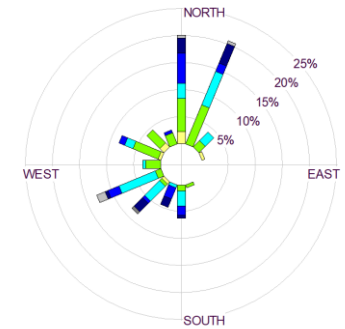
06:00 – 11:59



12:00 – 17:59



18:00 – 23:59

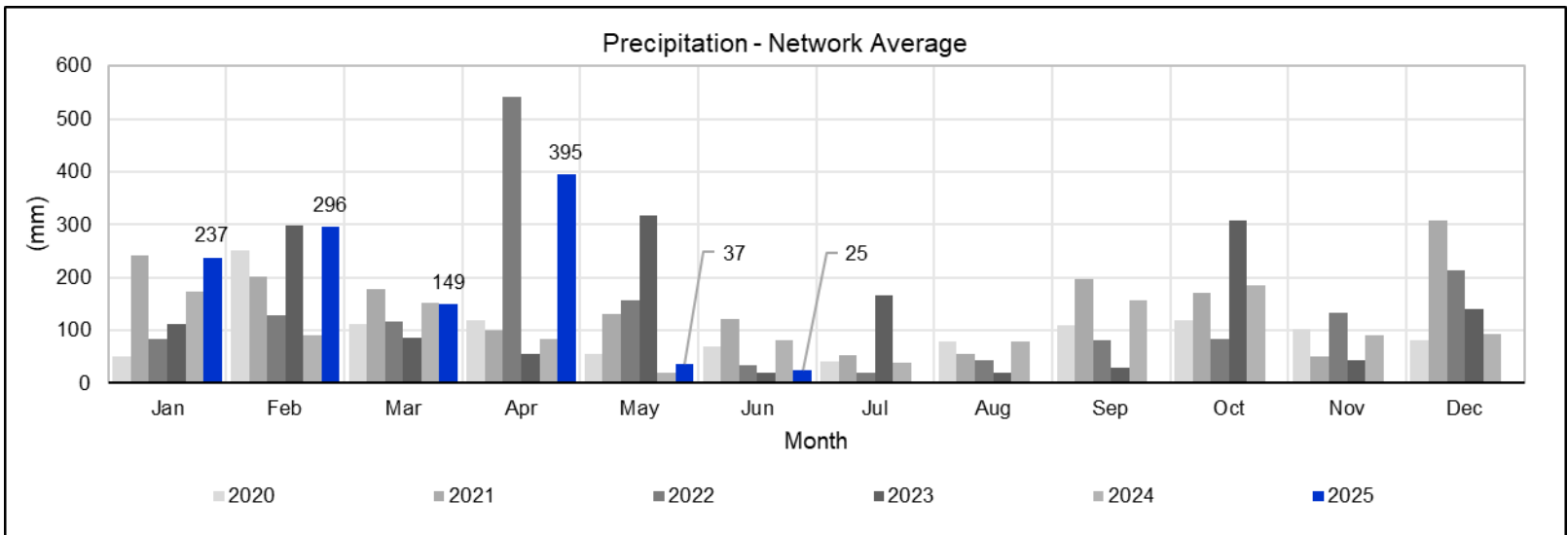
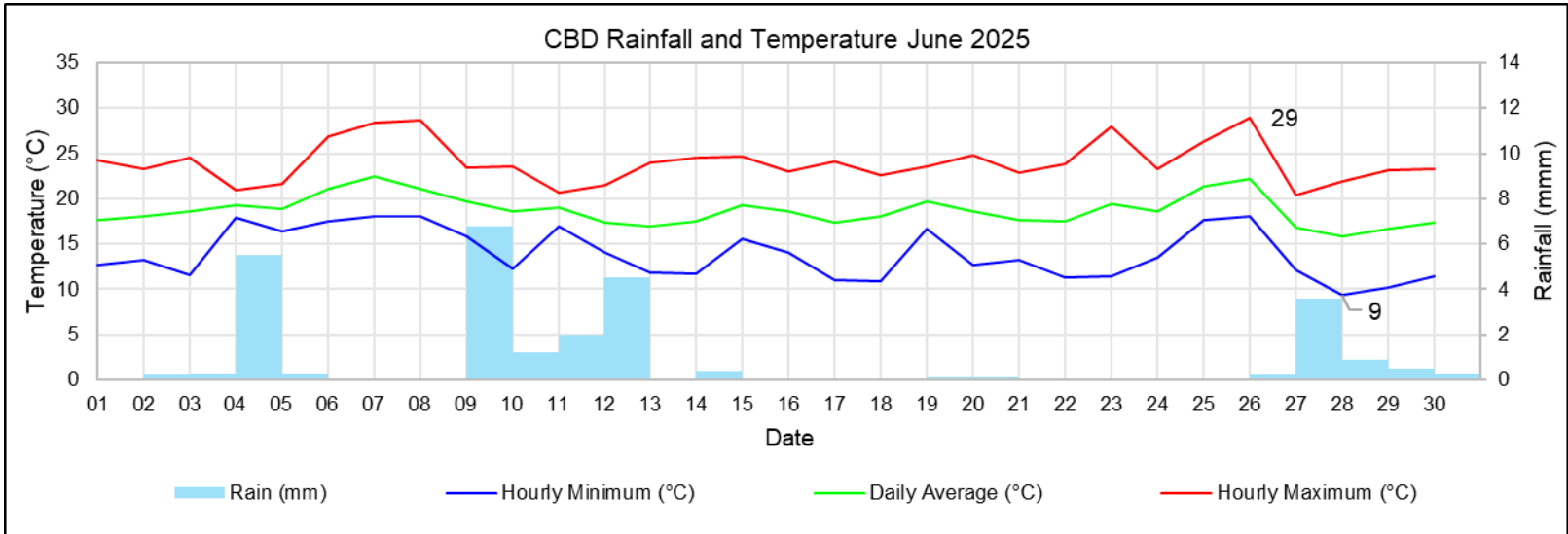


Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
June 2024	3.2 m/s	NNW-NE	49%	SW-WSW	24%	0%	98%
June 2025	3.2 m/s	WNW-NNE	55%	SW-WSW	20%	0%	95%
00:00-05:59	2.9 m/s	WSW-N	86%	-	-	0%	92%
06:00-11:59	3.0 m/s	WNW-N	64%	SW-WSW	21%	0%	92%
12:00-17:59	3.7 m/s	N-ENE	51%	SSW-SW	31%	0%	99%
18:00-23:59	3.1 m/s	N-NNE	42%	S-WNW	45%	0%	96%

Meteorology

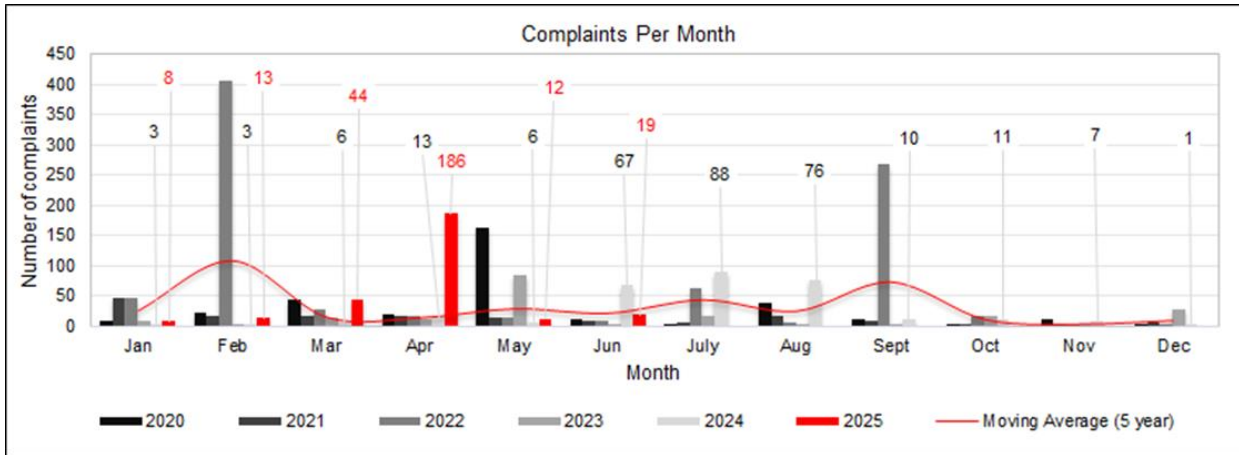
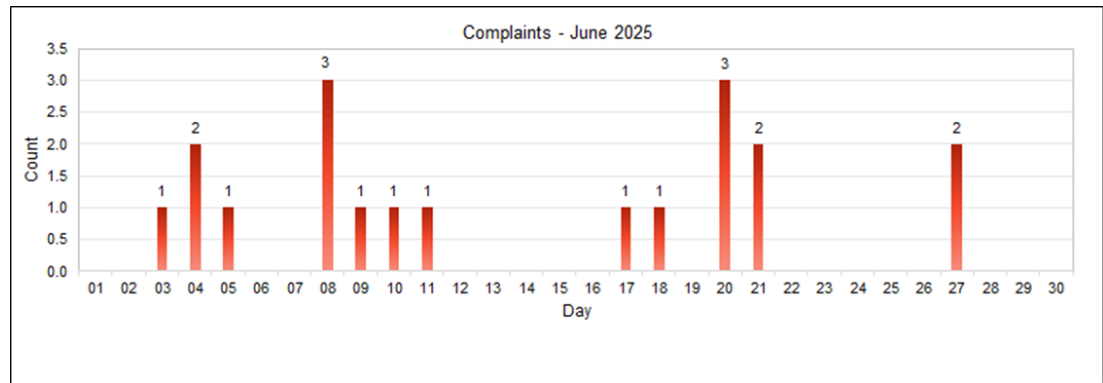
Month	Richards Bay (mm)	Felixton (mm)	RBCT (mm)	South32 (mm)	Average (mm)
June 2025	27	29	27	16	25

RAINFALL AND TEMPERATURE

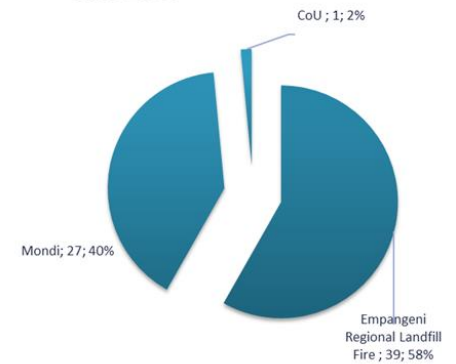


Complaints

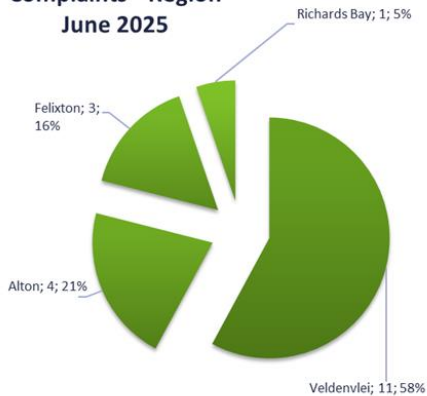
DISTRIBUTION



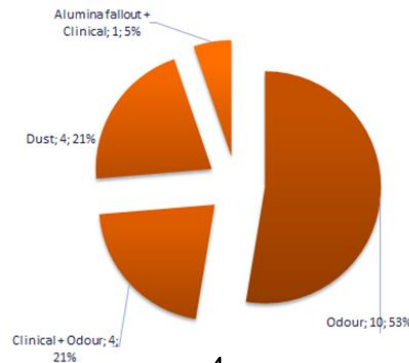
Complaints - Source June 2024



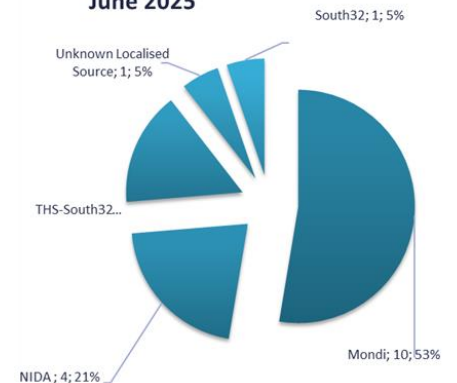
Complaints - Region June 2025



Complaints - Type June 2025

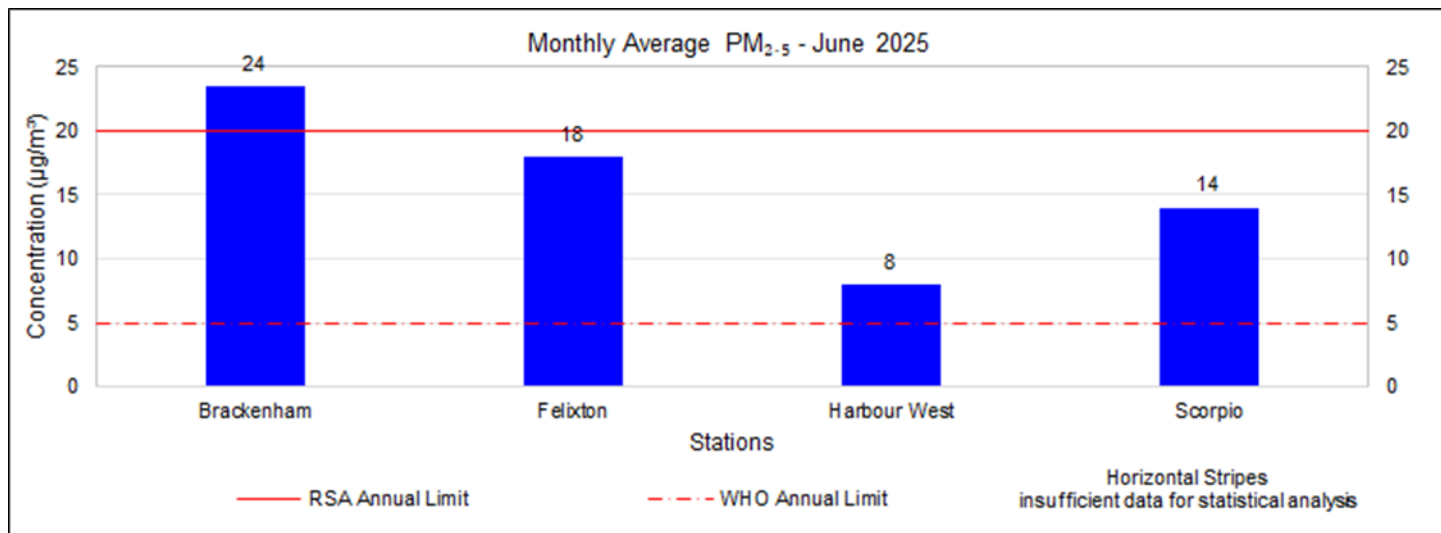
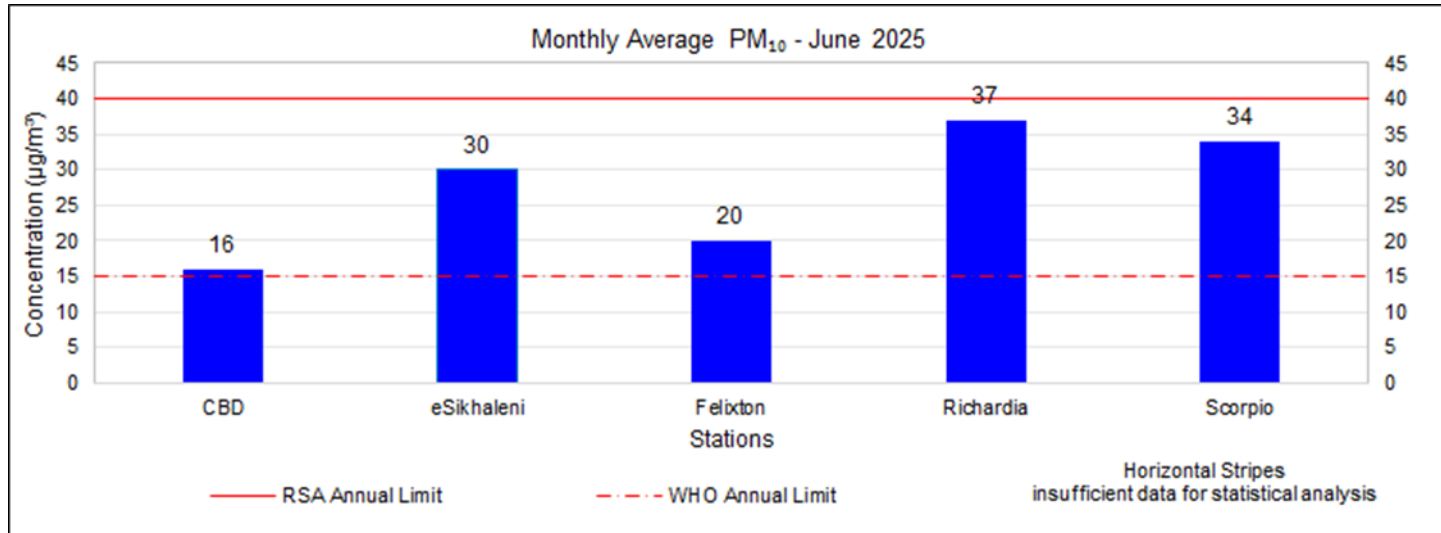


Complaints - Source June 2025



PM

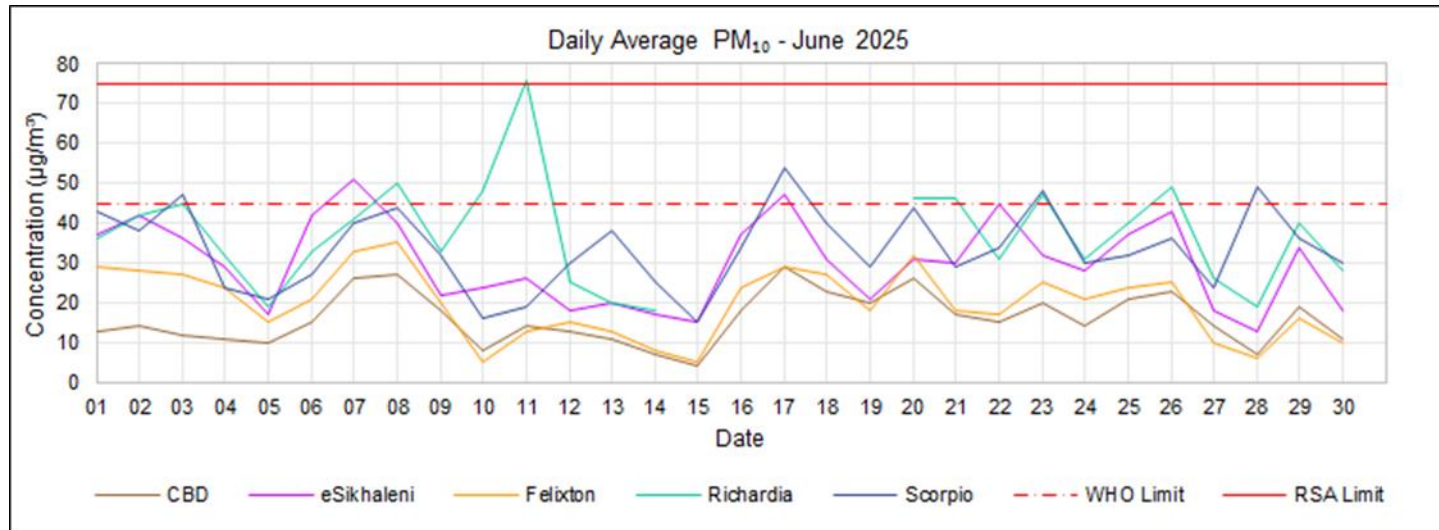
MONTHLY



PM₁₀

24-HOUR

PM ₁₀ Daily RSA Limit (75 µg/m ³)		1
Industry response required		1
Richardia		1
Responded: Mondi		1
PM ₁₀ Daily WHO Limit (45 µg/m ³)		15
No response required		15
eSikhaleni		2
None		2
Richardia		9
None		9
Scorpio		4
None		4



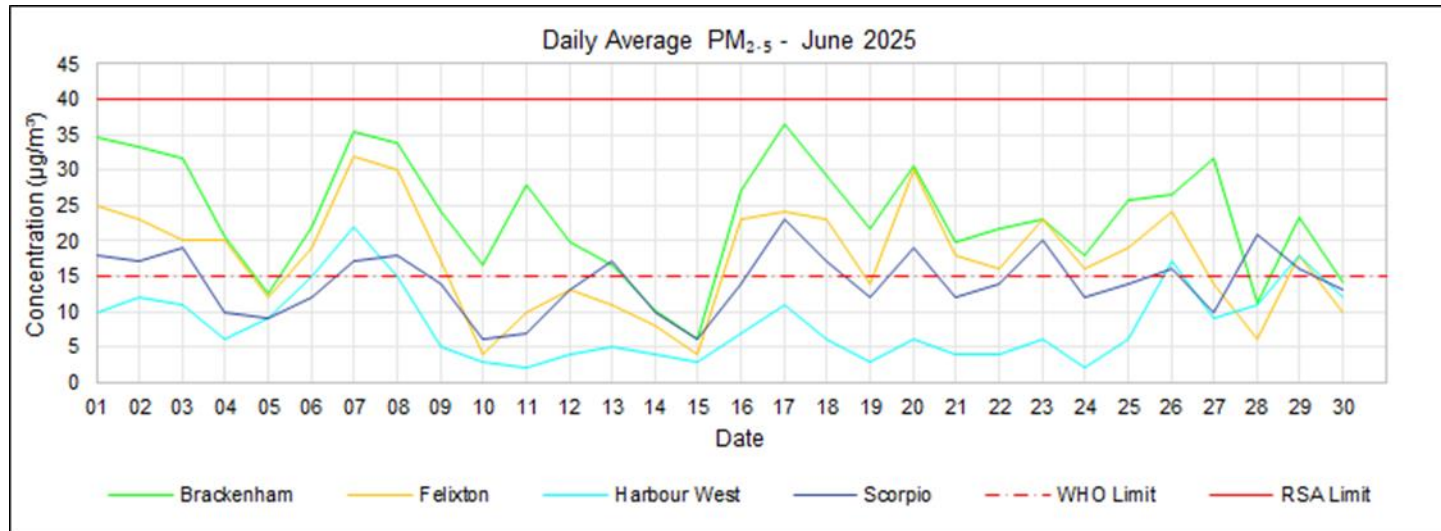
Missing Data (PM₁₀)

- Richardia – Power failures, TEOM filter change, data invalidation (3 days with <80% data capture, 15, 17, 19 June 2025).

PM_{2.5}

24-HOUR

PM _{2.5} Daily WHO Limit (15 µg/m ³)		61
No response required		61
Brackenheim	None	25
Felixton	None	19
Scorpio	None	14
Harbour West	None	3



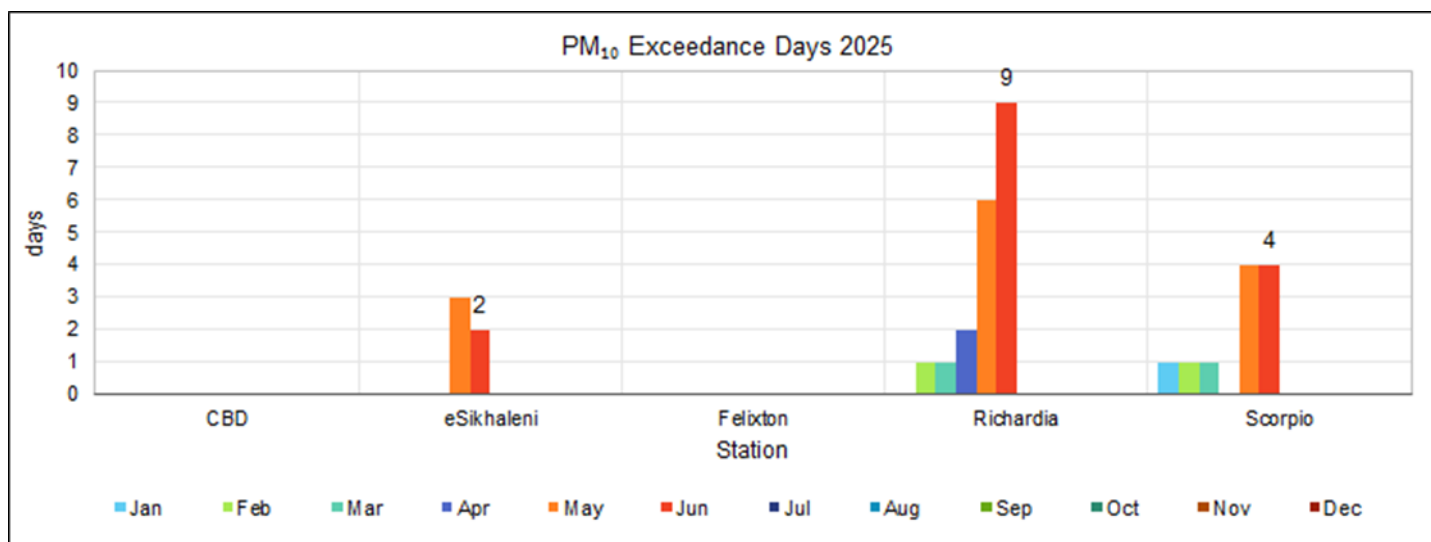
Missing Data (PM_{2.5}):

- None.

PM₁₀

EXCEEDANCE SUMMARY

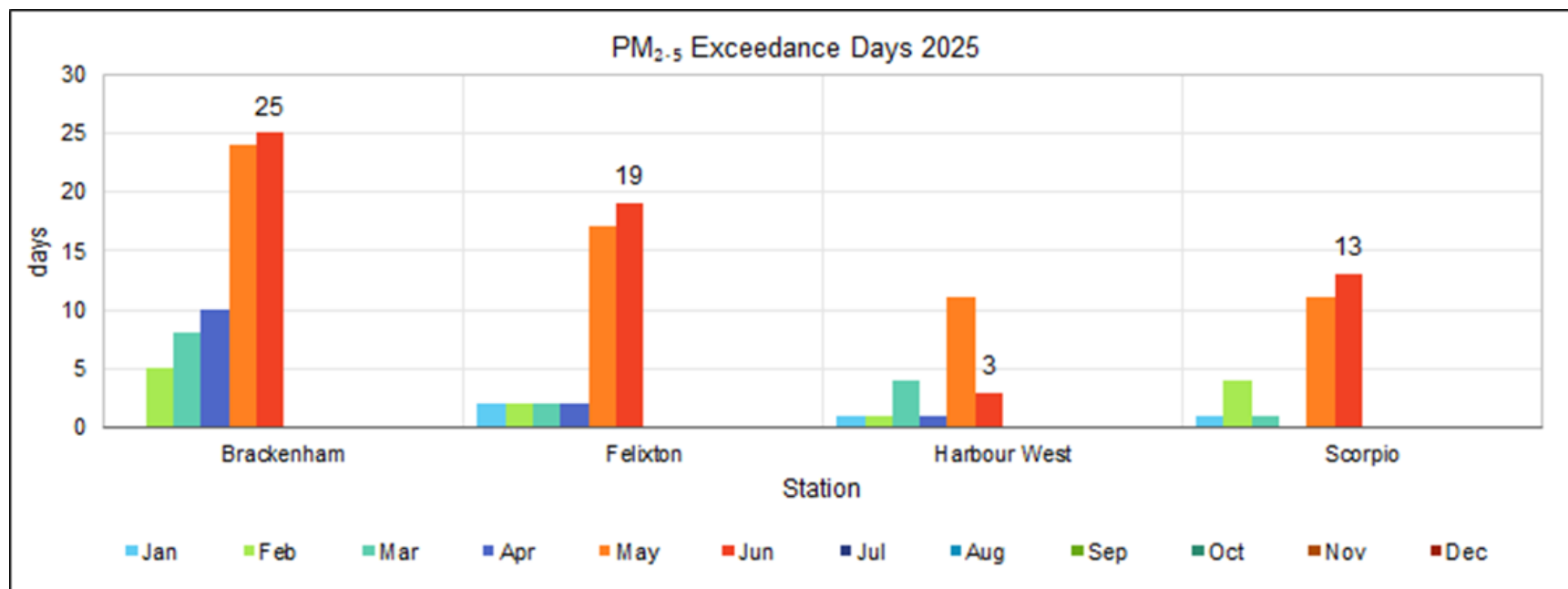
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM₁₀ Daily RSA Limit (75 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	1	-	-	-	-	-	-	1
Scorpio	-	-	-	-	-	-	-	-	-	-	-	-	0
PM₁₀ Daily WHO Limit (45 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	3	2	-	-	-	-	-	-	5
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	1	1	2	6	9	-	-	-	-	-	-	19
Scorpio	1	1	1	-	4	4	-	-	-	-	-	-	11



PM_{2.5}

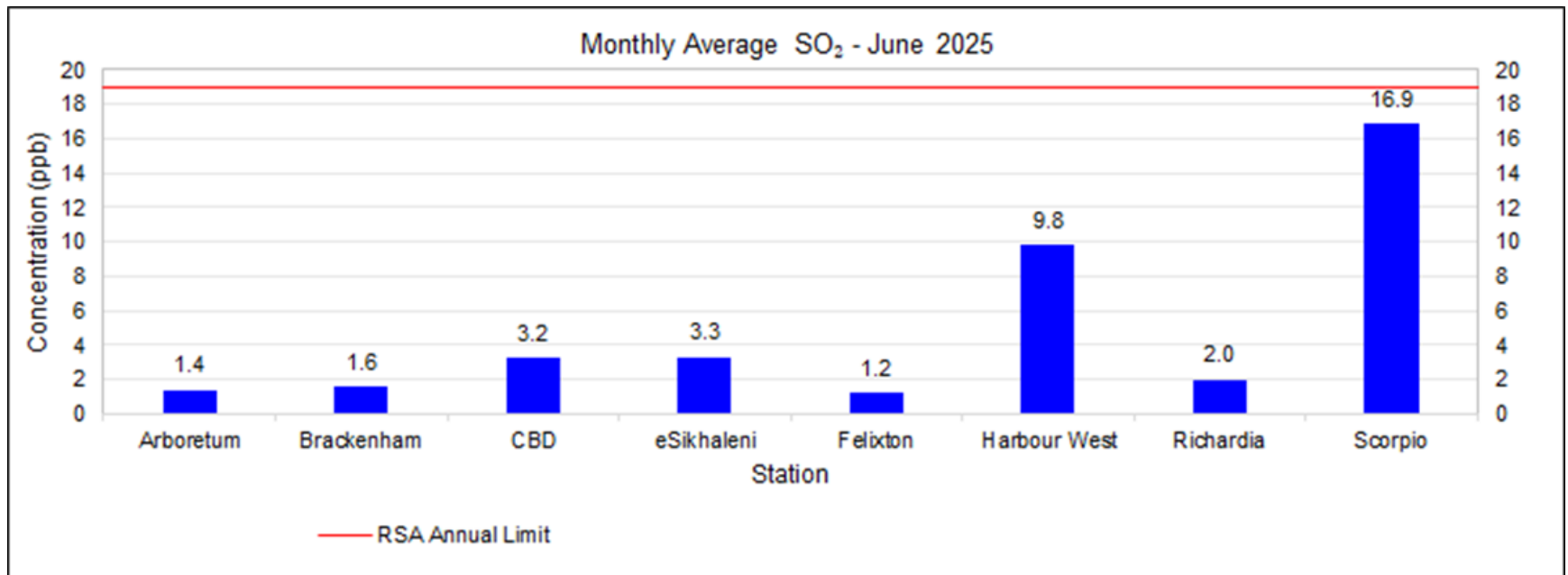
EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM_{2.5} Daily RSA Limit (40 µg/m³)													
Brackenhams	-	-	-	-	2	-	-	-	-	-	-	-	2
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	-	-	-	-	-	-	-	-	-	-	0
PM_{2.5} Daily WHO Limit (15 µg/m³)													
Brackenhams	-	5	8	10	24	25	-	-	-	-	-	-	72
Felixton	2	2	2	2	17	19	-	-	-	-	-	-	44
Harbour West	1	1	4	1	11	3	-	-	-	-	-	-	21
Scorpio	1	4	1	-	11	14	-	-	-	-	-	-	31



SO₂

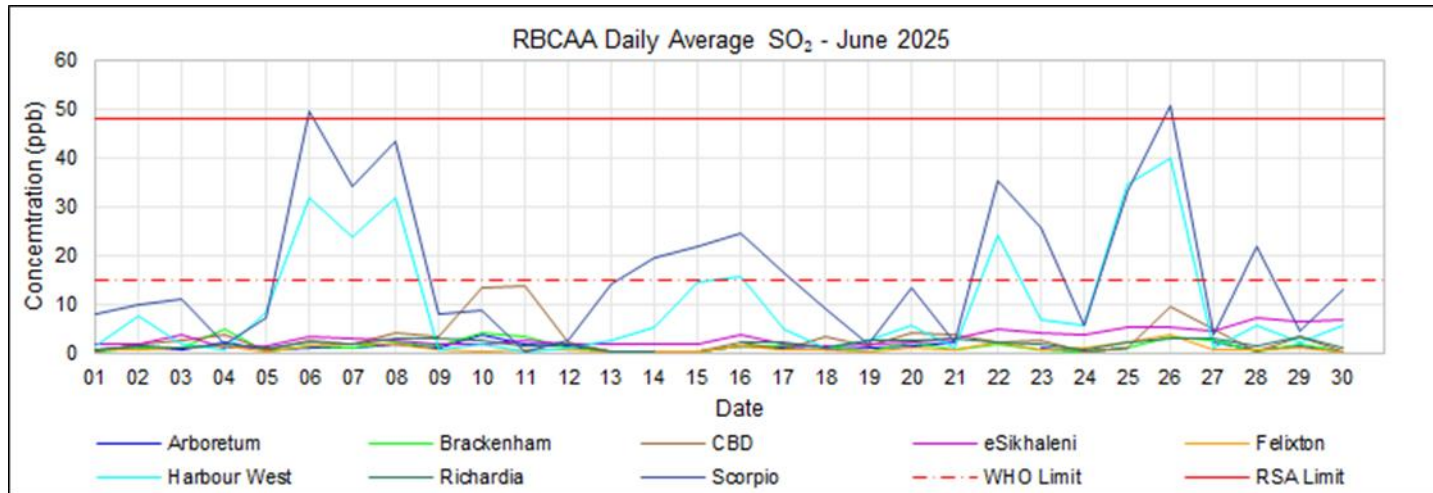
MONTHLY



SO₂

24-HOUR

SO ₂ Daily RSA Limit (48 ppb)		2
Foskor (meteorology)		1
Scorpio		1
Responded: Mondri, Foskor		1
Mondi (meteorology)		1
Scorpio		1
Responded: Mondri		1
SO ₂ Daily WHO Limit (15 ppb)		17
Foskor (meteorology)		1
Scorpio		1
Responded: Mondri, Foskor		1
No response required		15
Harbour West		6
None		6
Scorpio		9
None		9
Mondi (meteorology)		1
Scorpio		1
Responded: Mondri		1



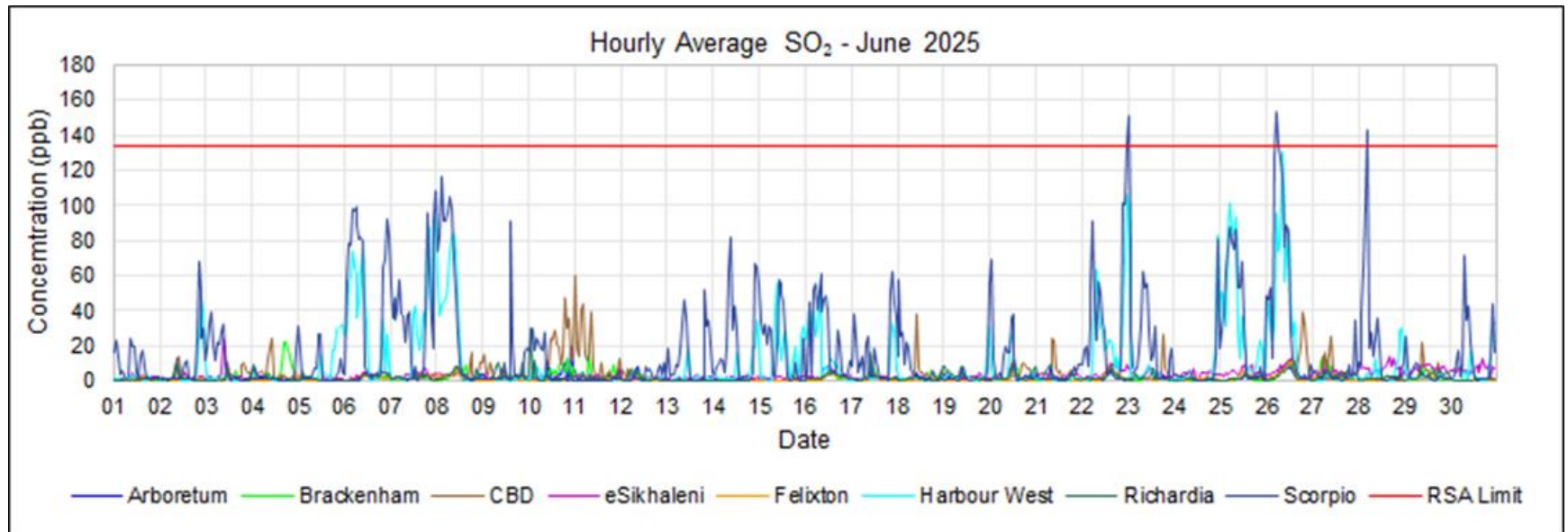
Missing Data (SO₂):

- Arboretum (Station) – PC datalogger frozen (2 day/s with <80% data capture, 22, 26 June 2025).
- Richardia – Power failures, data invalidation (3 days with <80% data capture, 15, 17, 19 June 2025).

SO₂

1-HOUR

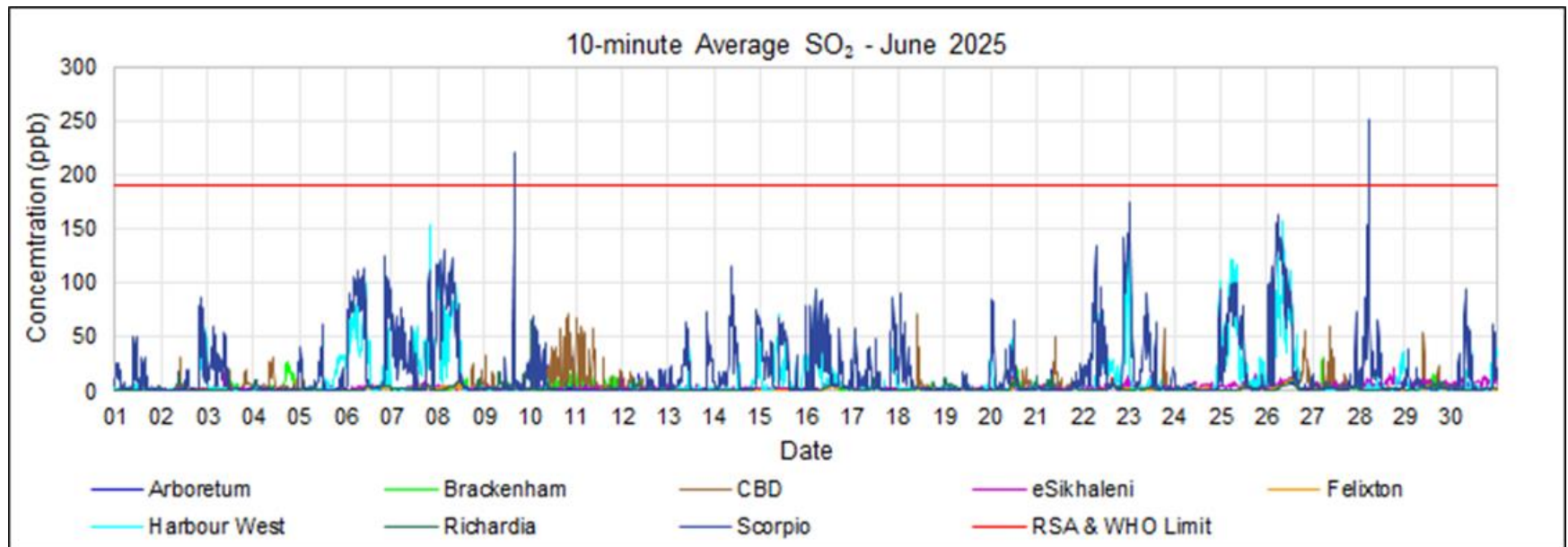
SO₂ Hourly RSA Limit (134 ppb)	4
Industry response required	3
Scorpio	3
Responded: Foskor & Mondi	3
Mondi (meteorology)	1
Scorpio	1
Mondi	1



SO₂

10-MINUTE

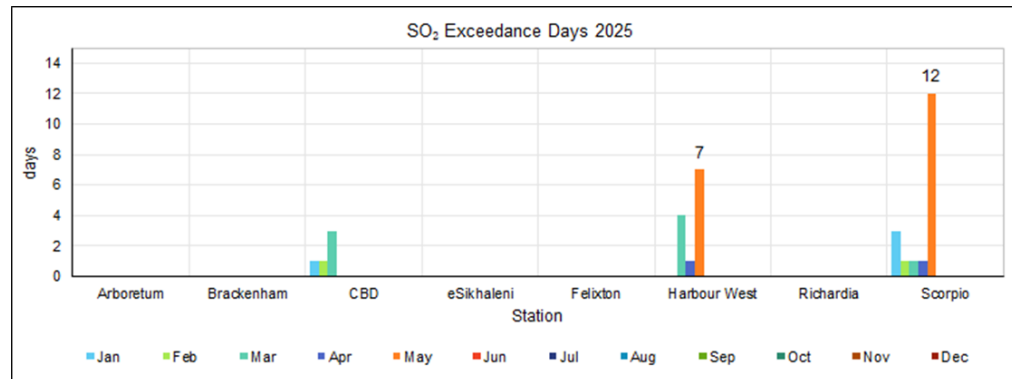
SO ₂ 10-minute RSA & WHO Limit (191 ppb)		3
Foskor		1
Scorpio		1
Acidic mist was experienced on B Plant.		1
Industry response required		2
Scorpio		2
Responded: Foskor & Mondi		2



SO₂

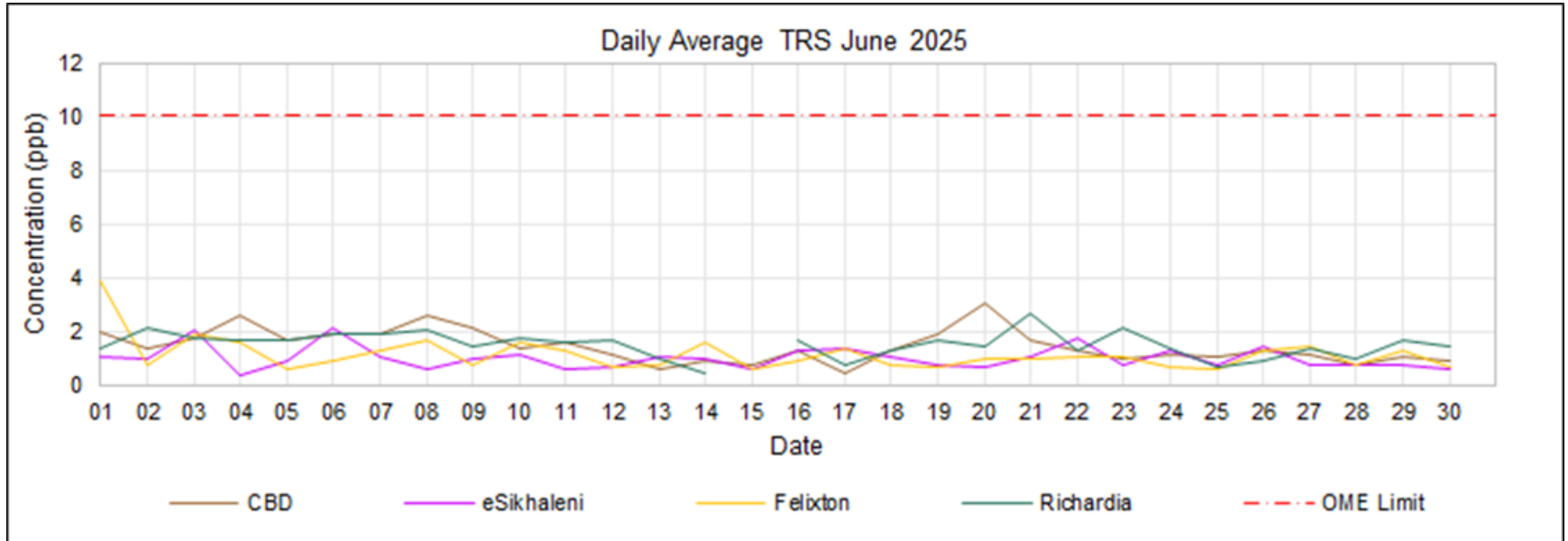
EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SO₂ Daily WHO Limit (15 ppb)													
CBD	1	1	3	-	-	-	-	-	-	-	-	-	5
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	4	1	7	-	-	-	-	-	-	-	12
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	3	-	1	1	12	-	-	-	-	-	-	-	17
SO₂ Hourly RSA Limit (134 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	4	-	-	-	-	-	-	-	-	-	-	-	4
SO₂ 10-minute RSA & WHO Limit (191 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	18	1	-	-	-	-	-	-	-	-	-	-	19



TRS

24-HOUR



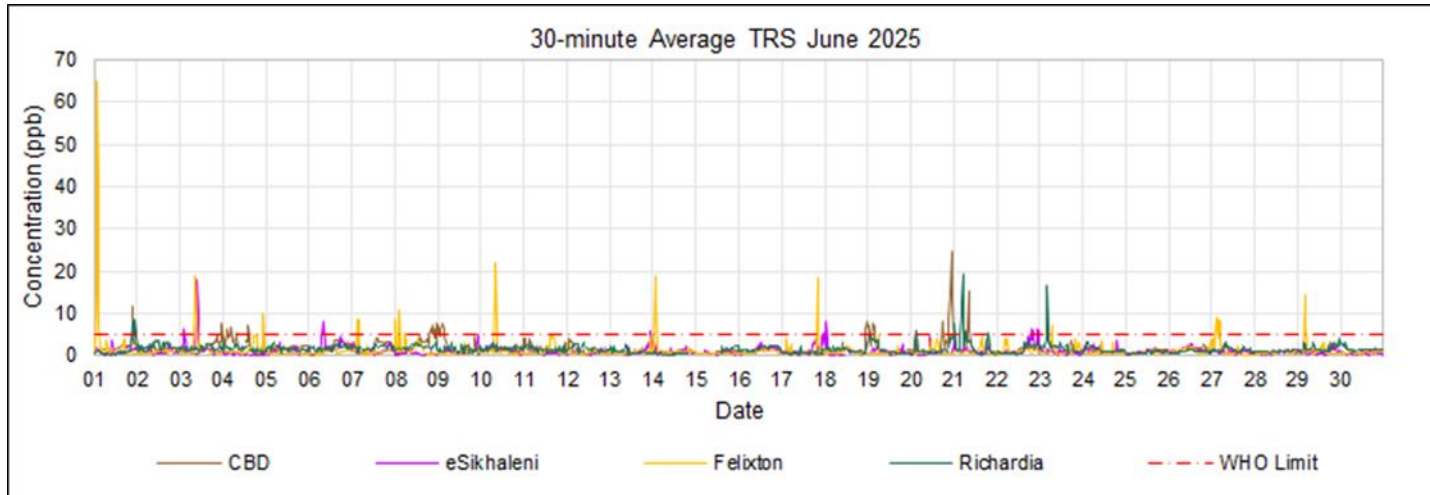
Missing Data (TRS):

- Richardia – Power failures, data invalidation (3 days with <80% data capture, 15, 17, 19 June 2025).

TRS

30-MINUTE

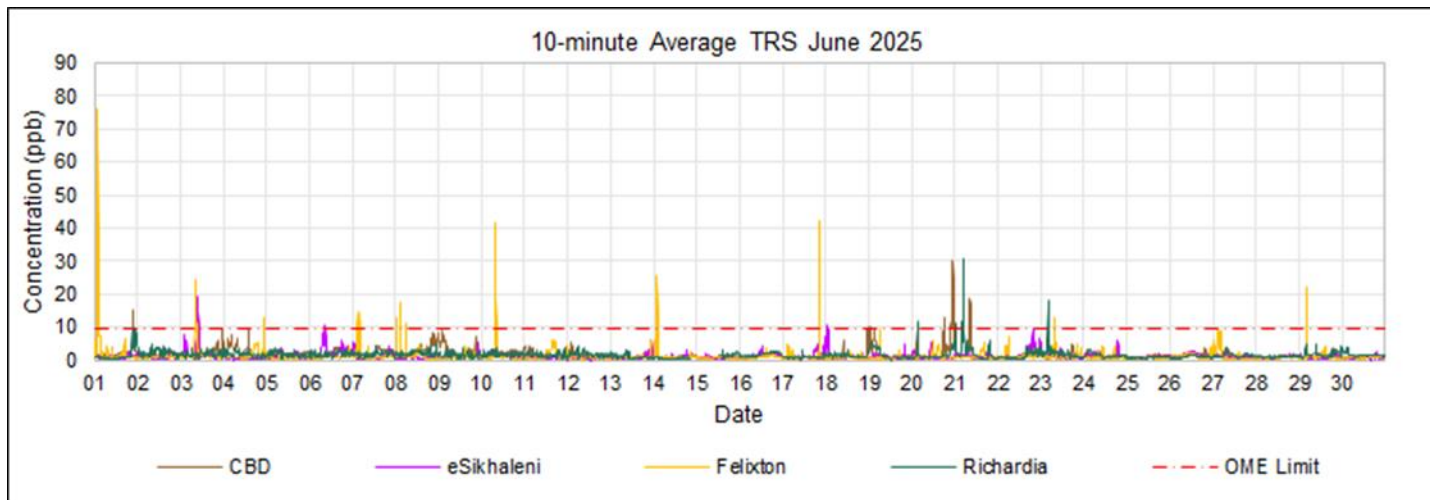
TRS 30-minute WHO H ₂ S Limit (5.0 ppb)		107
Mondi		74
CBD		41
The root cause has not yet been confirmed		2
Mondi meteorology + Mill unstable operational conditions		7
Methanol leak		13
CPX tank		19
eSikhaleni		11
Mondi meteorology		7
CPX tank		4
Felixton		6
Methanol leak		6
Richardia		16
The root cause has not yet been confirmed		4
CPX tank		10
Secondary Effluent Treatment Plant		2
THS		32
eSikhaleni		8
Smut plant		4
B5 conveyor		4
Felixton		24
Boilers-coal operated.		11
Smuts reticulation system		13
THS -Mondi		1
Felixton		1
Smuts' reticulation system +SETP		1



TRS

10-MINUTE

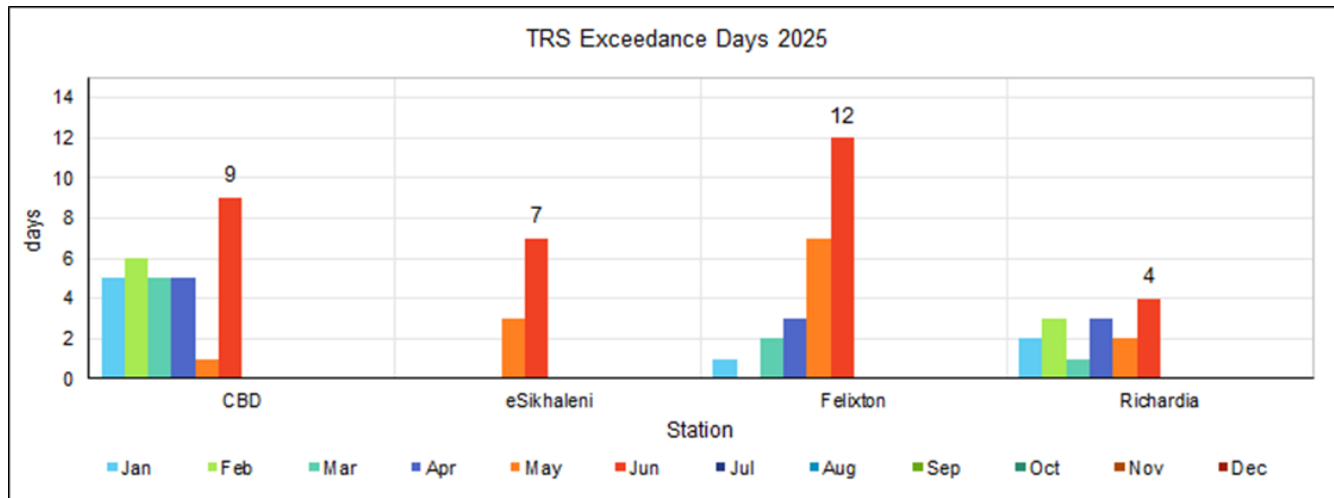
TRS 10-minute OME Limit (9.3 ppb)		94
Mondi		51
CBD		27
The root cause has not yet been confirmed		3
Mondi meteorology + Mill unstable operational conditions		2
CPX tank		22
eSikhaleni		2
Mondi meteorology		2
Felixton		9
Methanol leak		9
Richardia		13
The root cause has not yet been confirmed		2
CPX tank		7
Secondary Effluent Treatment Plant		4
THS		42
eSikhaleni		9
Smut plant		3
B5 conveyor		6
Felixton		33
Boilers-coal operated.		17
Smuts reticulation system		16
THS -Mondi		1
Felixton		1
Smuts' reticulation system +SETP		1



TRS

EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
TRS 24-hr-OME Limit (10.1 ppb)													
CBD	1	-	-	-	-	-	-	-	-	-	-	-	1
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
TRS 30-minute WHO H₂S Limit (5.0 ppb)													
CBD	34	25	15	10	2	41	-	-	-	-	-	-	127
eSikhaleni	-	-	-	-	4	19	-	-	-	-	-	-	23
Felixton	1	-	8	7	11	31	-	-	-	-	-	-	58
Richardia	5	7	3	7	3	16	-	-	-	-	-	-	41
TRS 10-minute OME Limit (9.3 ppb)													
CBD	53	10	8	7	-	27	-	-	-	-	-	-	105
eSikhaleni	-	-	-	-	4	11	-	-	-	-	-	-	15
Felixton	2	-	4	10	10	43	-	-	-	-	-	-	69
Richardia	3	1	-	9	-	13	-	-	-	-	-	-	26



Air Quality

SUMMARY

Determining air quality concerning pollutants measured and impacts simulated is based on comparison to and exceedances of short-term (10-minute, 30-minute, 1-hour and 24-hour averages) and long-term (monthly and annual averages) targets, guidelines, and standards.

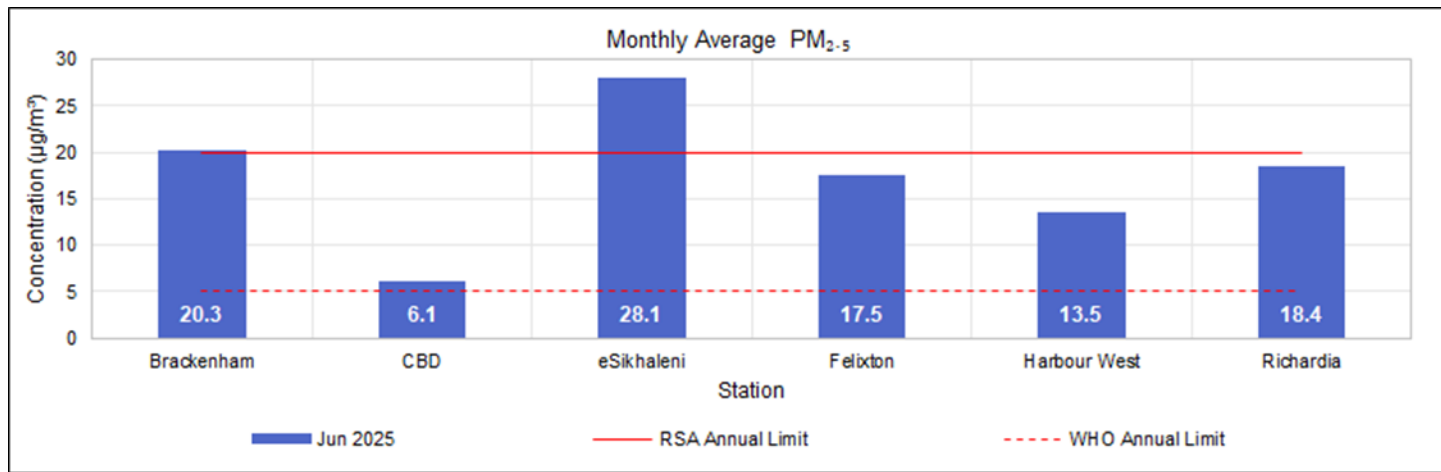
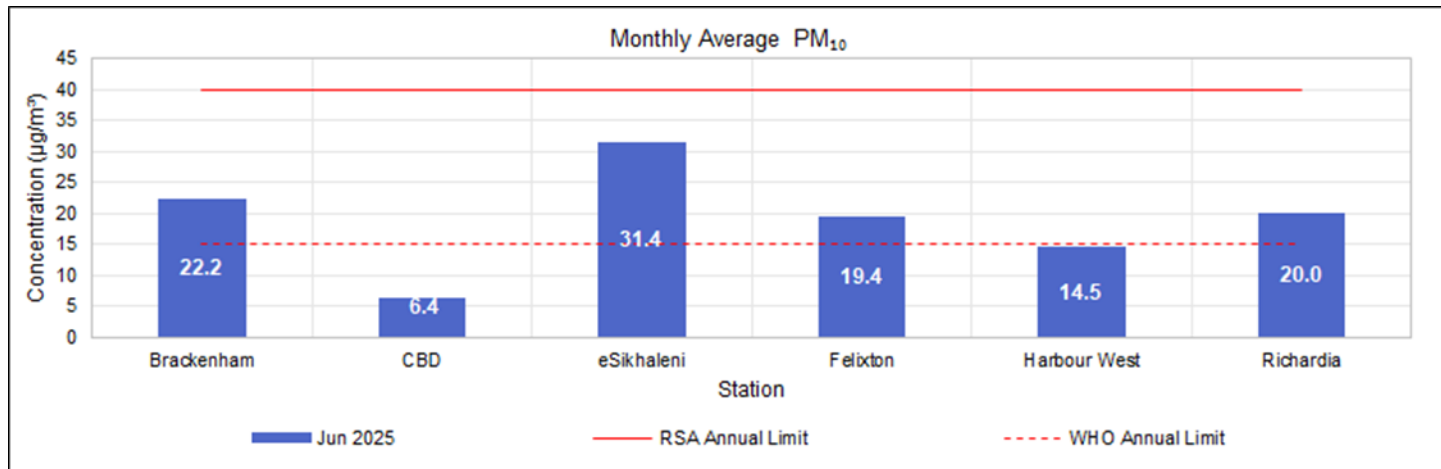
AIMS concludes that during June 2025, based on the following:

- ▶ Measured long-term average concentrations (chronic exposure) and WHO health guidelines of concern are:
 - PM₁₀ at CBD, eSikhaleni, Felixton, Richardia and Scorpio - all points monitored;
 - PM_{2.5} at Brackenham, Felixton, Harbour West and Scorpio - all points monitored.

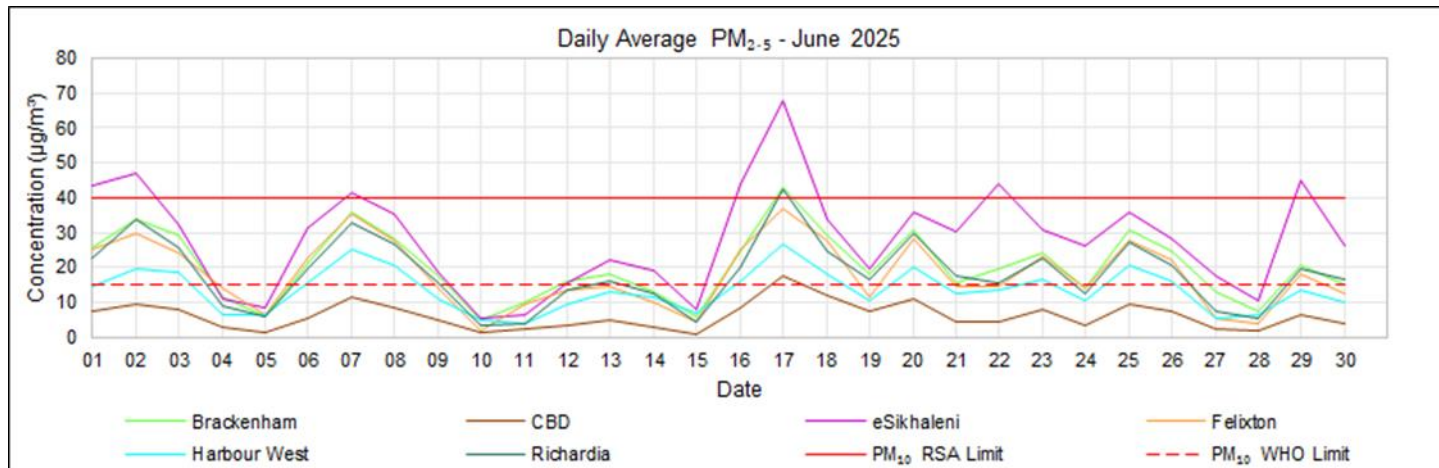
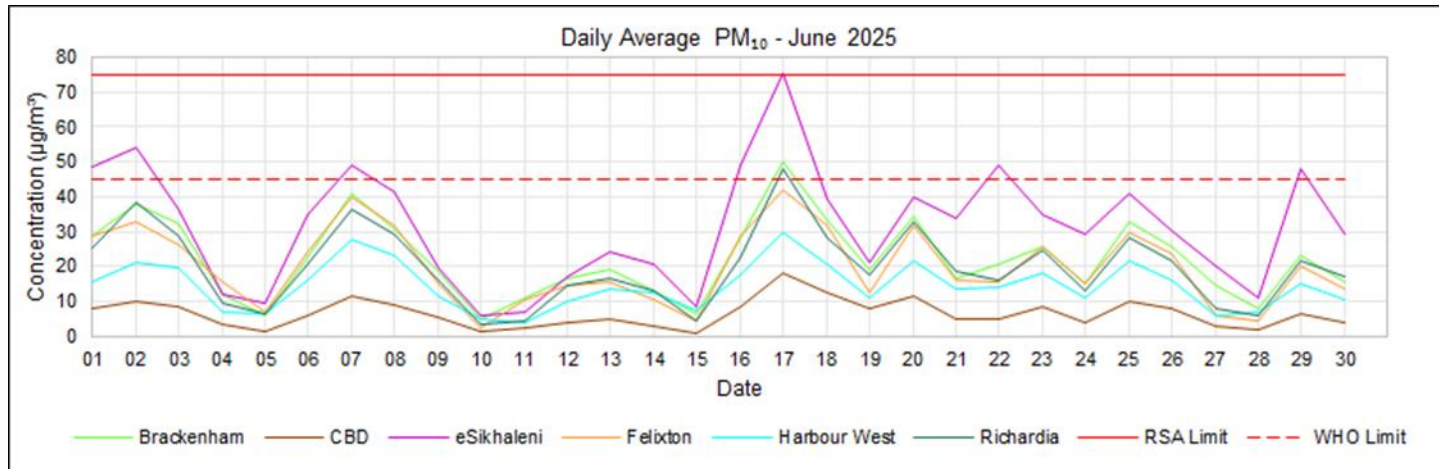
- ▶ Measured short-term average concentrations (acute exposure) and the WHO health guidelines, ambient air quality was compromised by:
 - PM₁₀ at eSikhaleni, Richardia and Scorpio;
 - PM_{2.5} at Brackenham, Felixton, Scorpio and Harbour West - all points monitored;
 - SO₂ at Harbour West and Scorpio; and
 - TRS at CBD, eSikhaleni, Felixton and Richardia - all points monitored.

AirGradient PM

MONTHLY

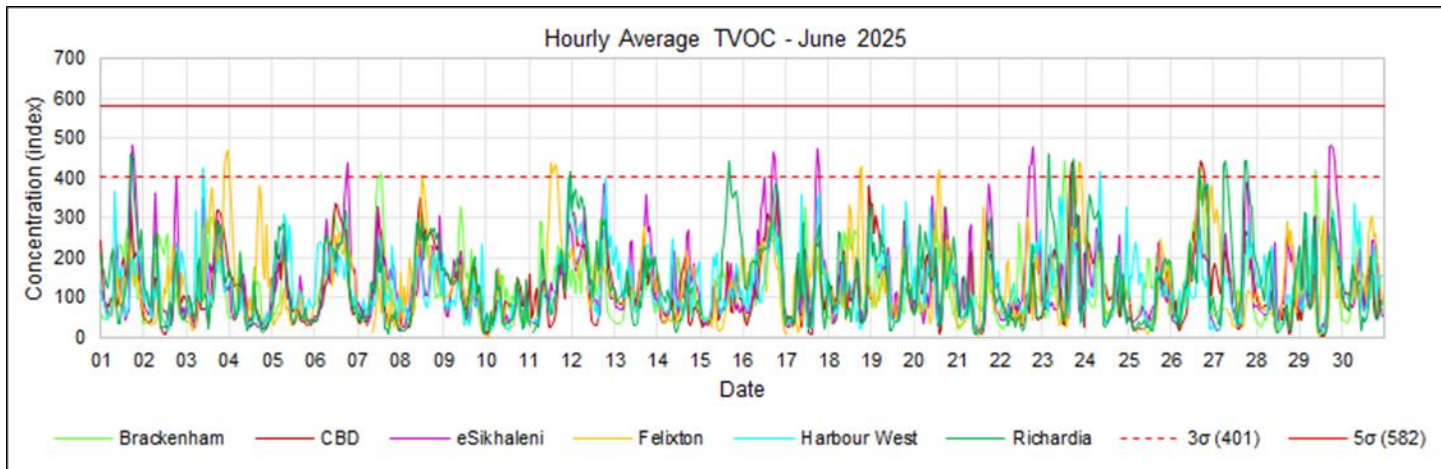
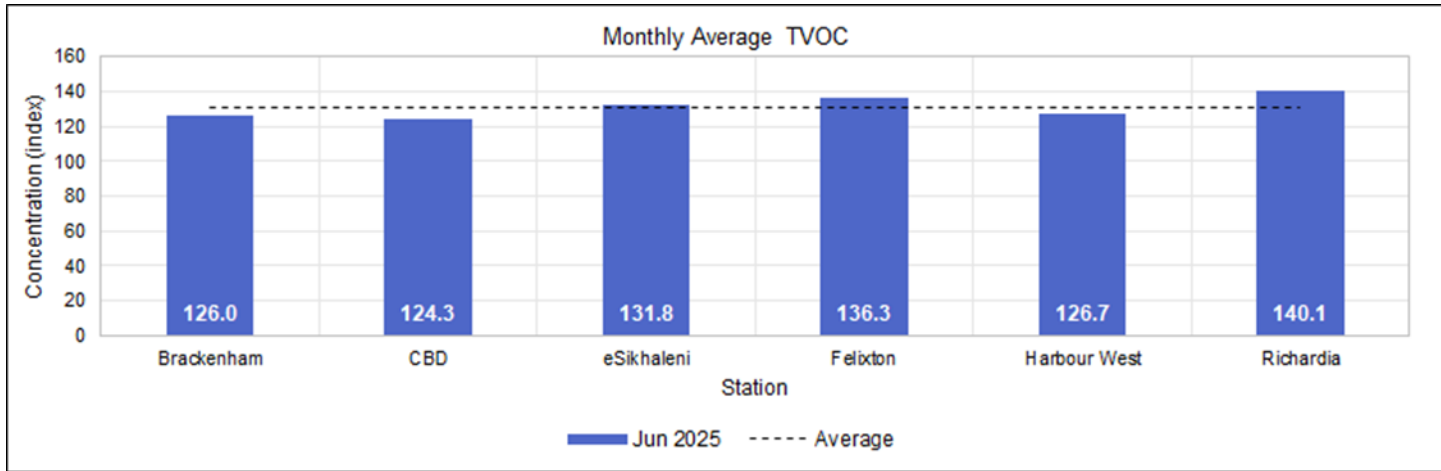


AirGradient PM DAILY



AirGradient TVOC

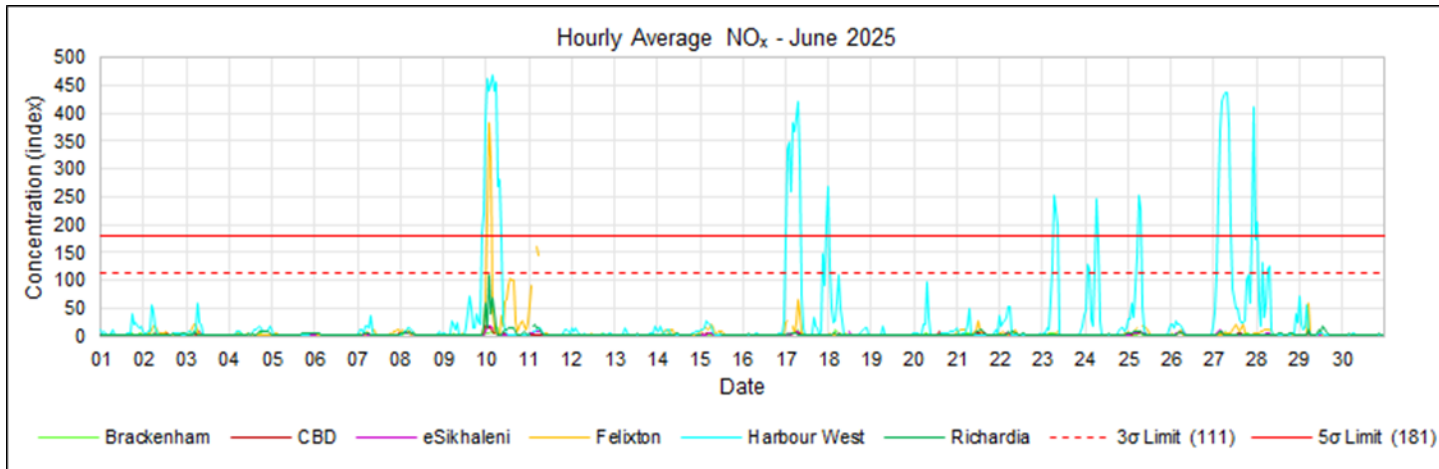
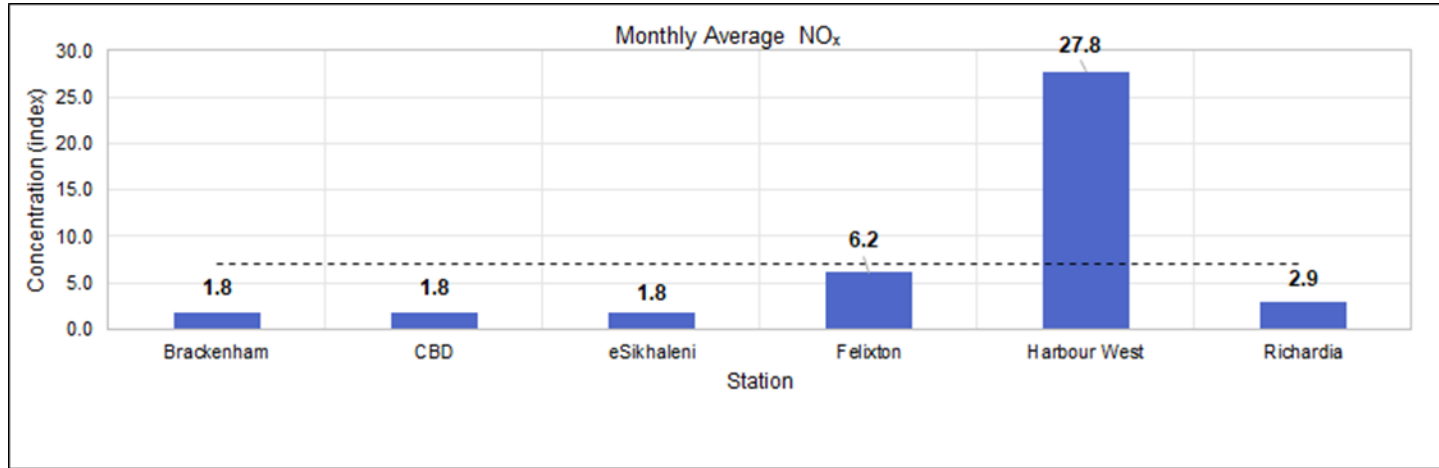
MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia
3σ	7	6	16	15	3	13
5σ	0	0	0	0	0	0

AirGradient NO_x

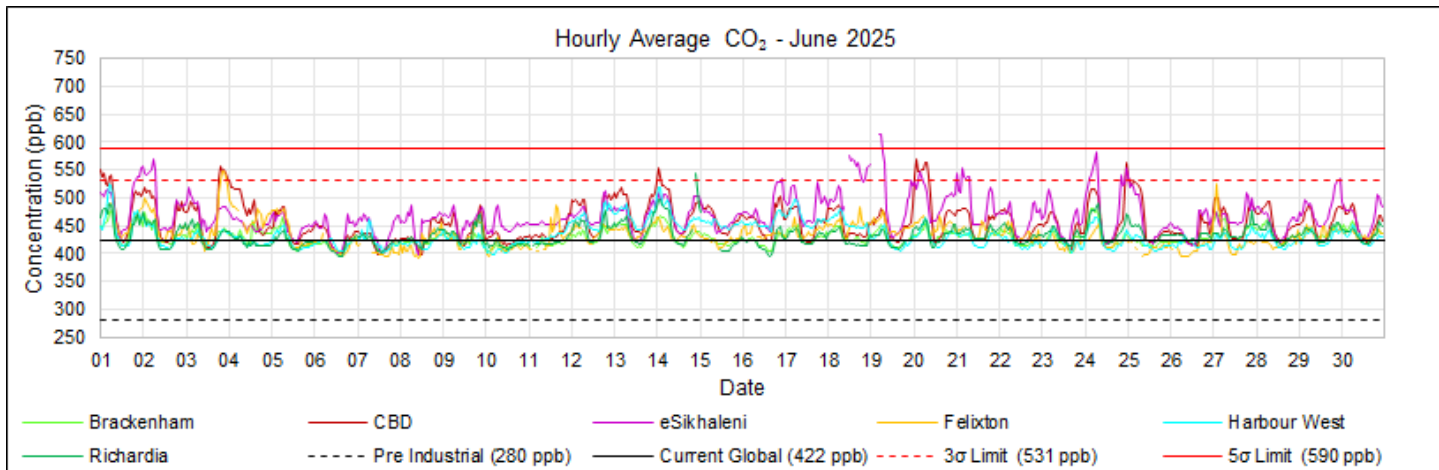
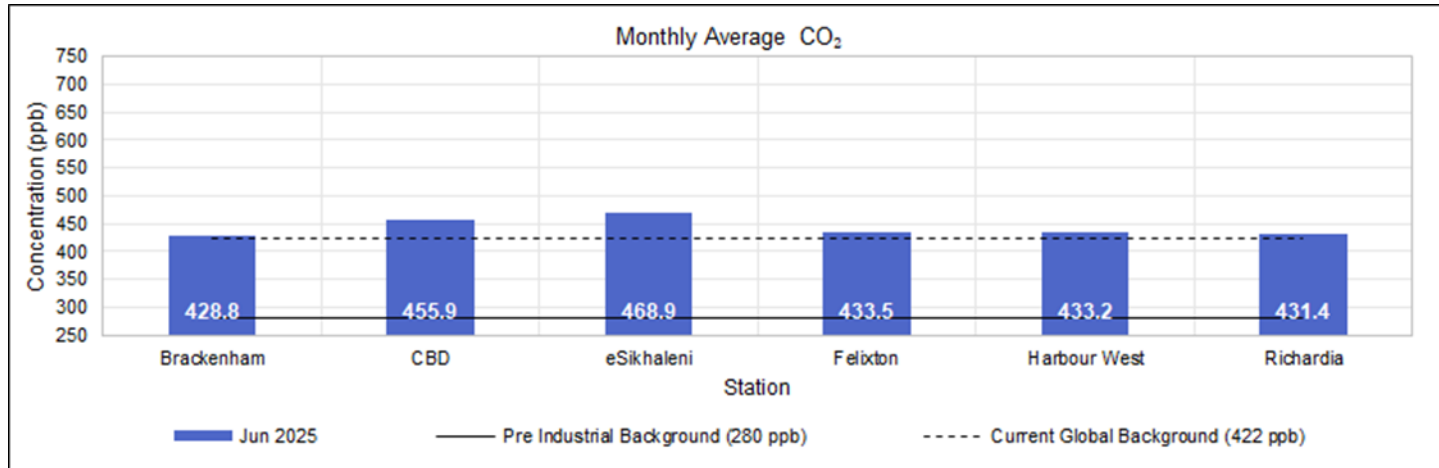
MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia
3σ	0	0	0	5	53	0
5σ	0	0	0	3	37	0

AirGradient CO₂

MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia
3σ	0	24	48	4	0	1
5σ	0	0	2	0	0	0

Thank you

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- alicia@airimpact.co.za

