

RBCAA Technical Feedback – April 2024

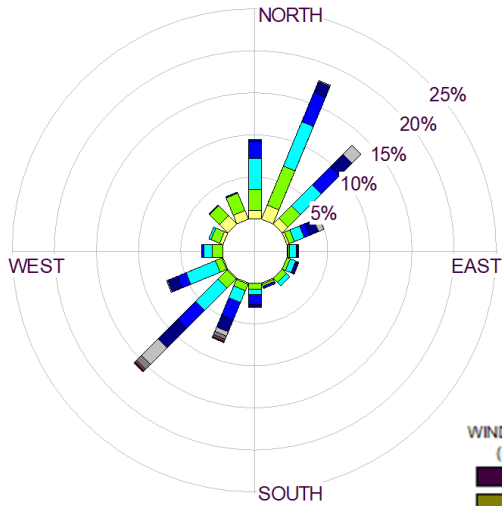


Meteorology

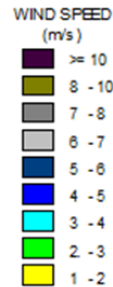
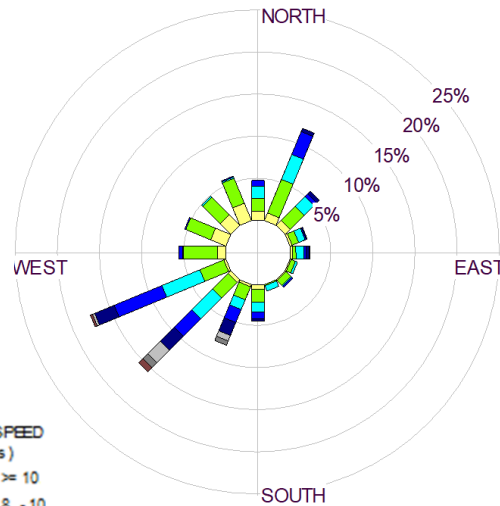
WIND



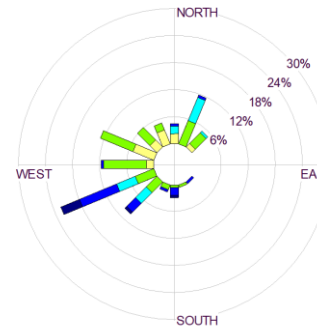
April 2024 Wind Rose



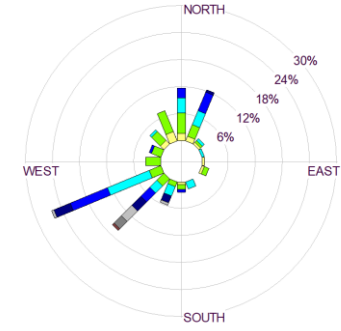
April 2025 Wind Rose



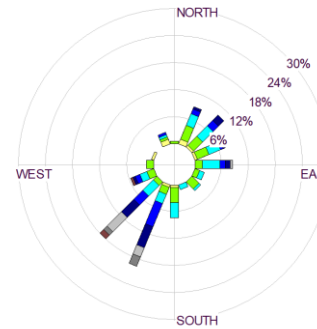
00:00 – 05:59



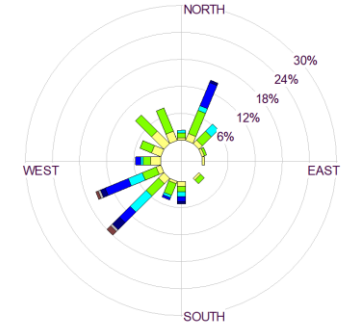
06:00 – 11:59



12:00 – 17:59



18:00 – 23:59

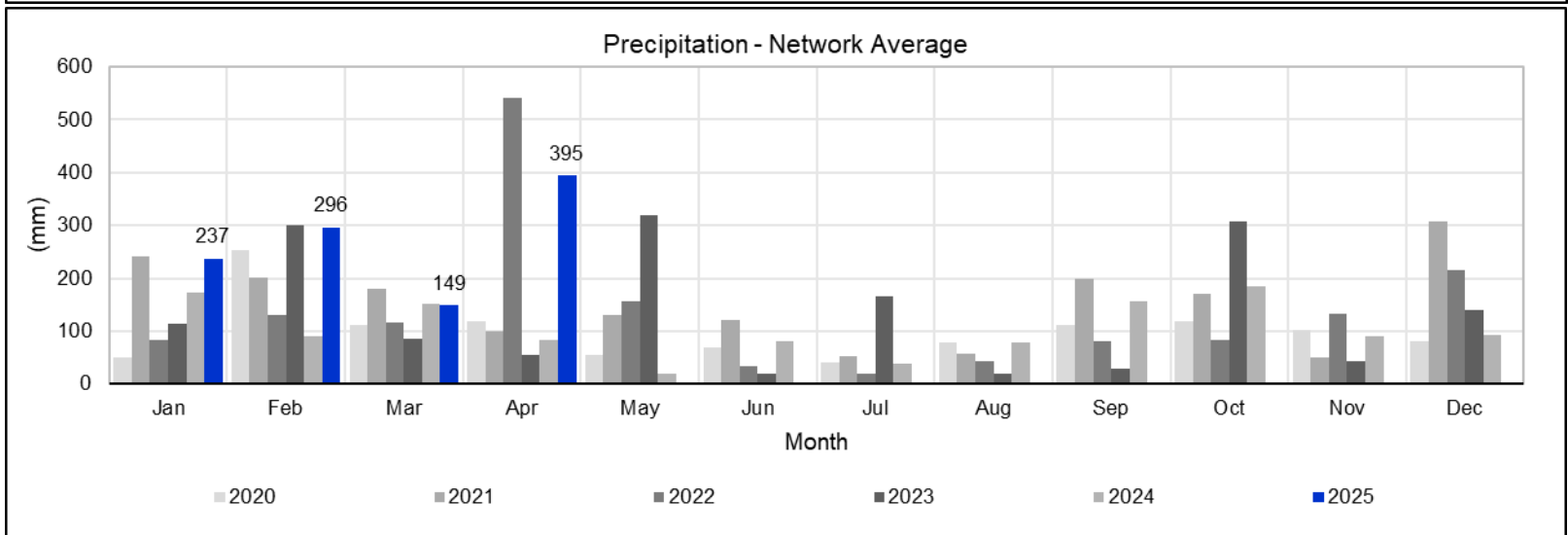
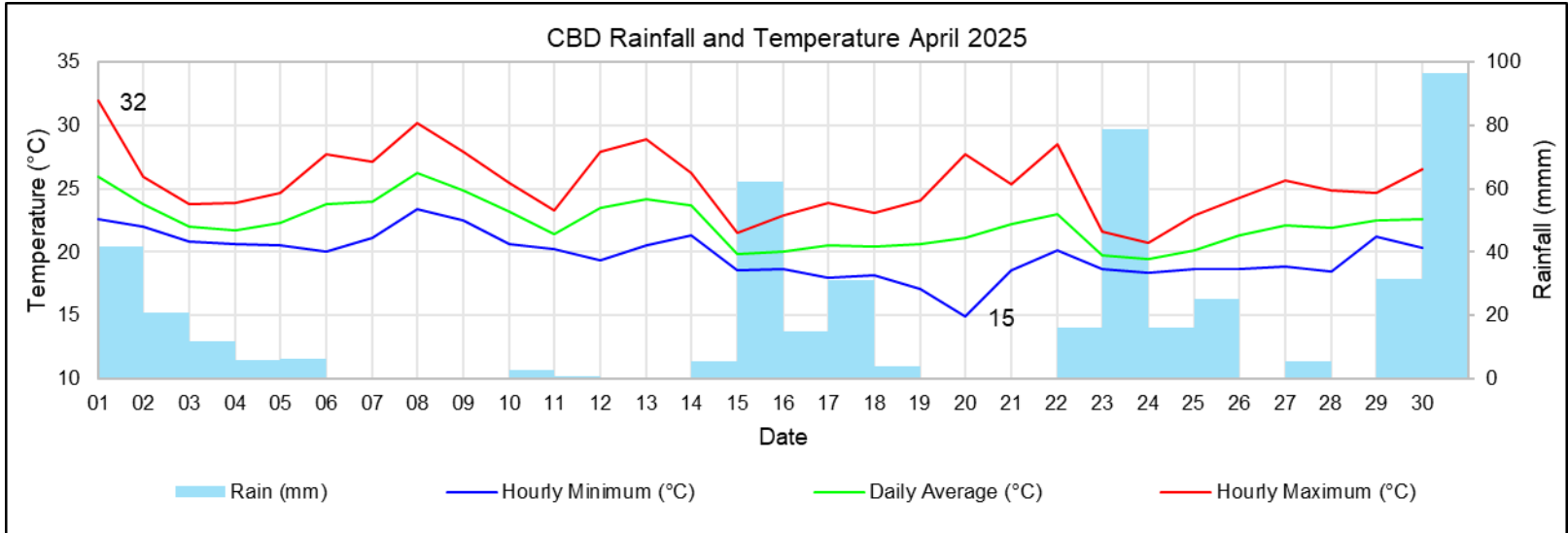


Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
April 2024	3.3 m/s	N-NE	43%	SSW-WSW	32%	0%	94%
April 2025	3.0 m/s	NNE	12%	SSW-WSW	42%	0%	96%
00:00-05:59	2.5 m/s	NNE	12%	SW-NW	66%	0%	94%
06:00-11:59	3.2 m/s	NNW-NNE	32%	SW-WSW	43%	0%	98%
12:00-17:59	3.5 m/s	NNE-E	36%	S-SW	46%	0%	96%
18:00-23:59	2.6 m/s	NW-NNW & NNE-NE	39%	SW-WSW	35%	0%	96%

Meteorology

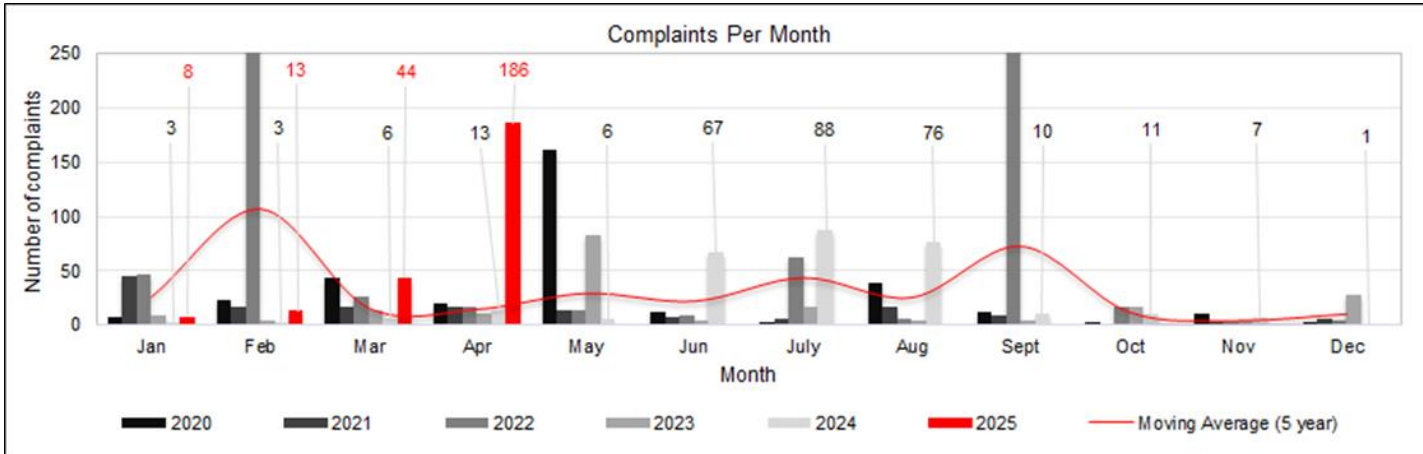
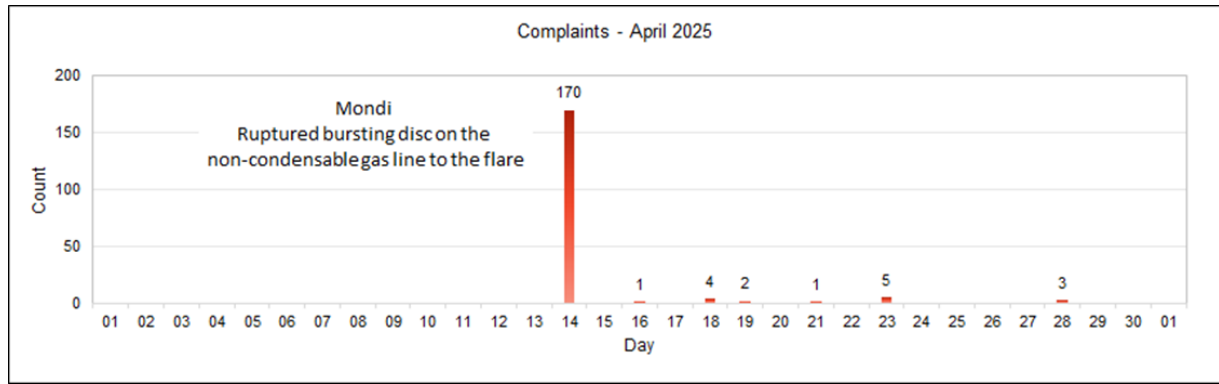
Month	Richards Bay (mm)	Felixton (mm)	RBCT (mm)	South32 (mm)	Average (mm)
April 2025	479	287	450	363	395

RAINFALL AND TEMPERATURE

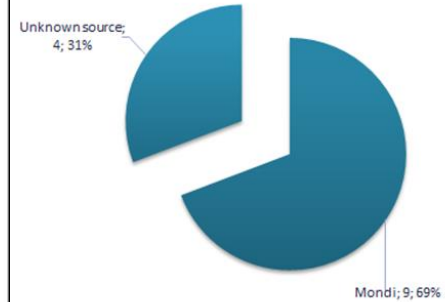


Complaints

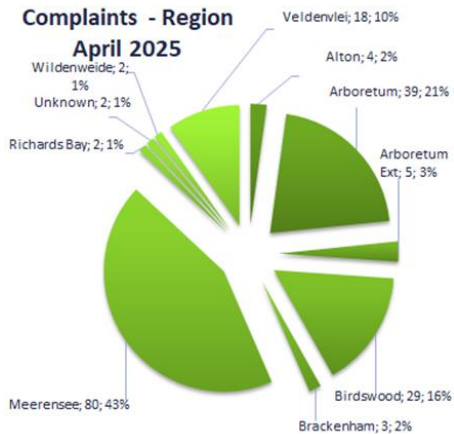
DISTRIBUTION



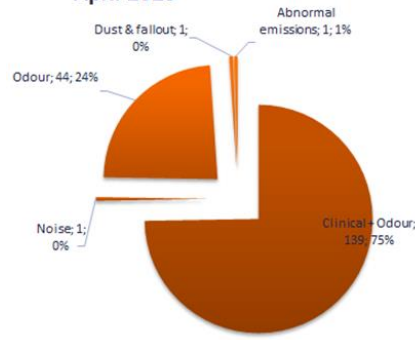
Complaints - Source April 2024



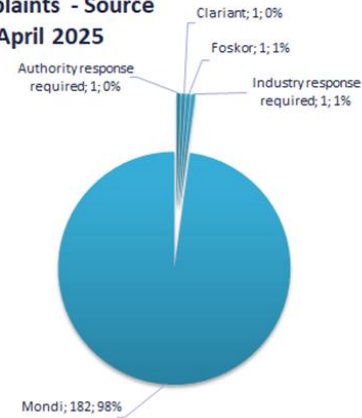
Complaints - Region April 2025



Complaints - Type April 2025

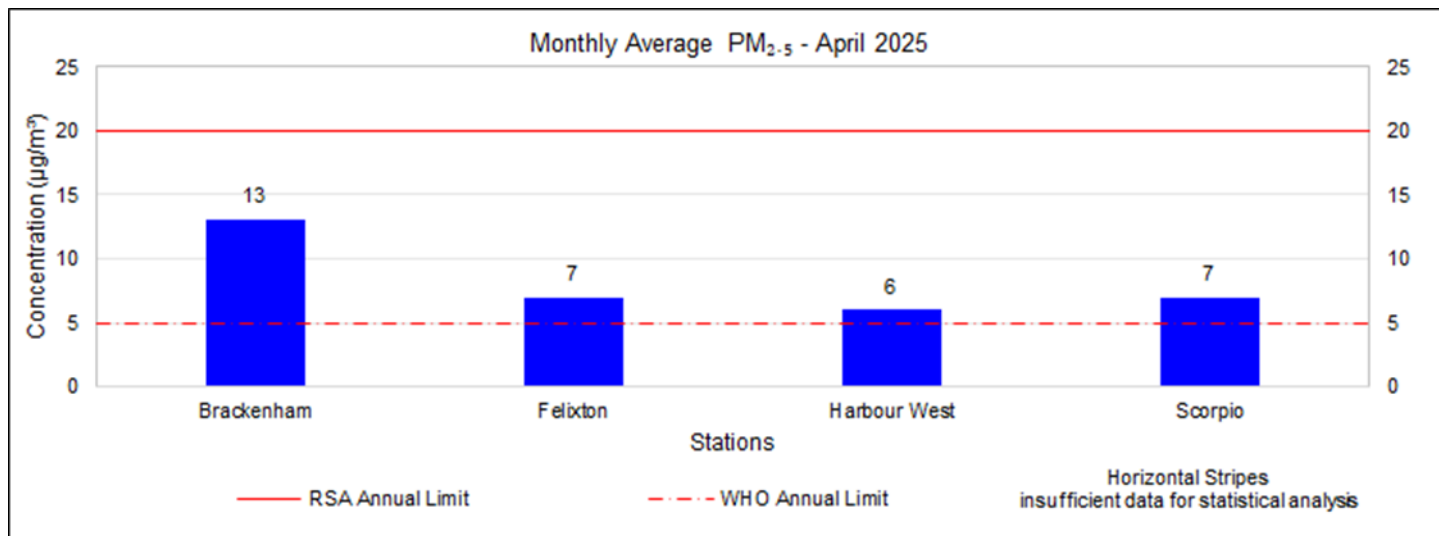
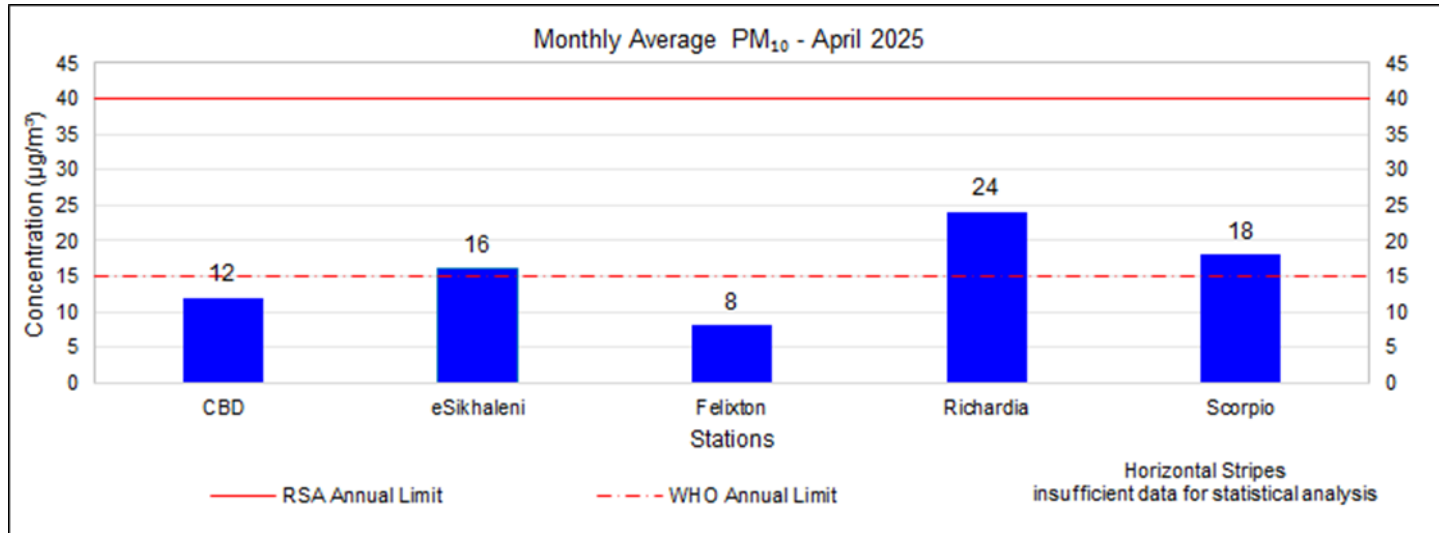


Complaints - Source April 2025



PM

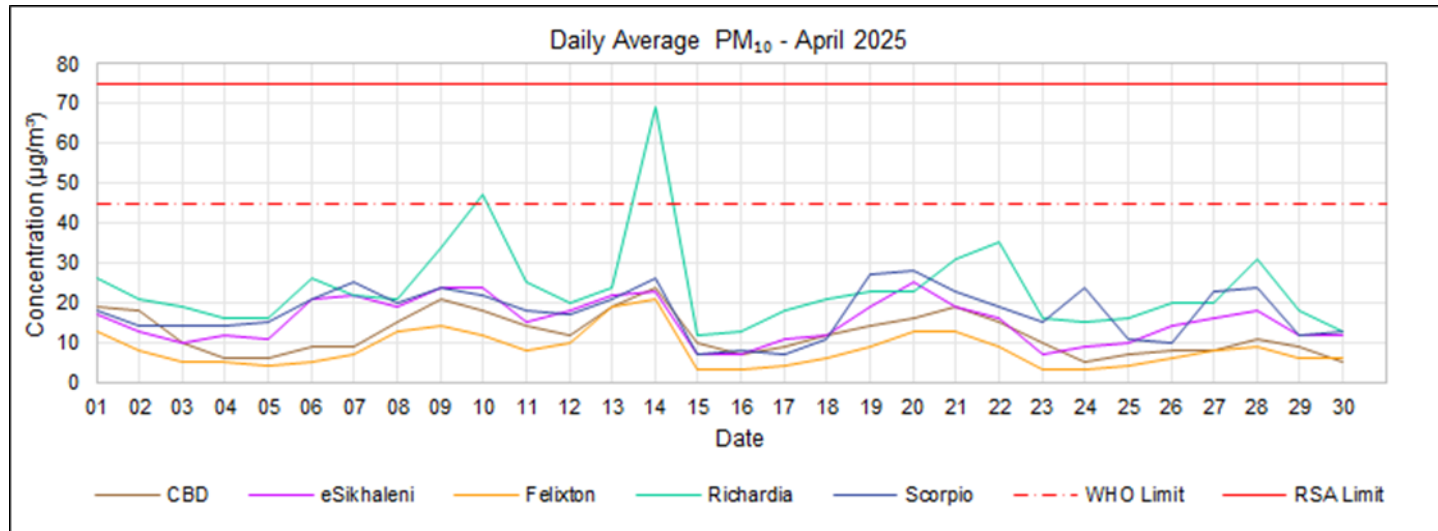
MONTHLY



PM₁₀

24-HOUR

PM ₁₀ Daily WHO Limit (45 µg/m ³)	2
No response required	2
Richardia	2
No additional comments.	2



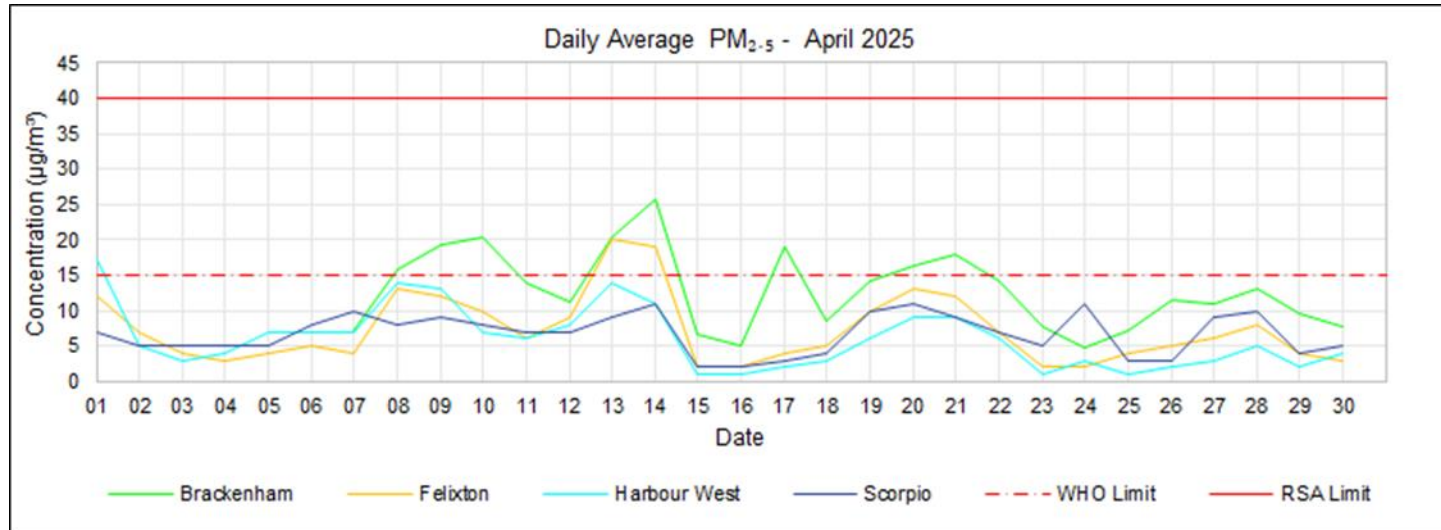
Missing Data (PM₁₀)

- None.

PM_{2.5}

24-HOUR

PM _{2.5} Daily WHO Limit (15 µg/m ³)	13
No response required	13
Brackenham	10
No additional comments.	10
Felixton	2
No additional comments.	2
Harbour West	1
No additional comments.	1



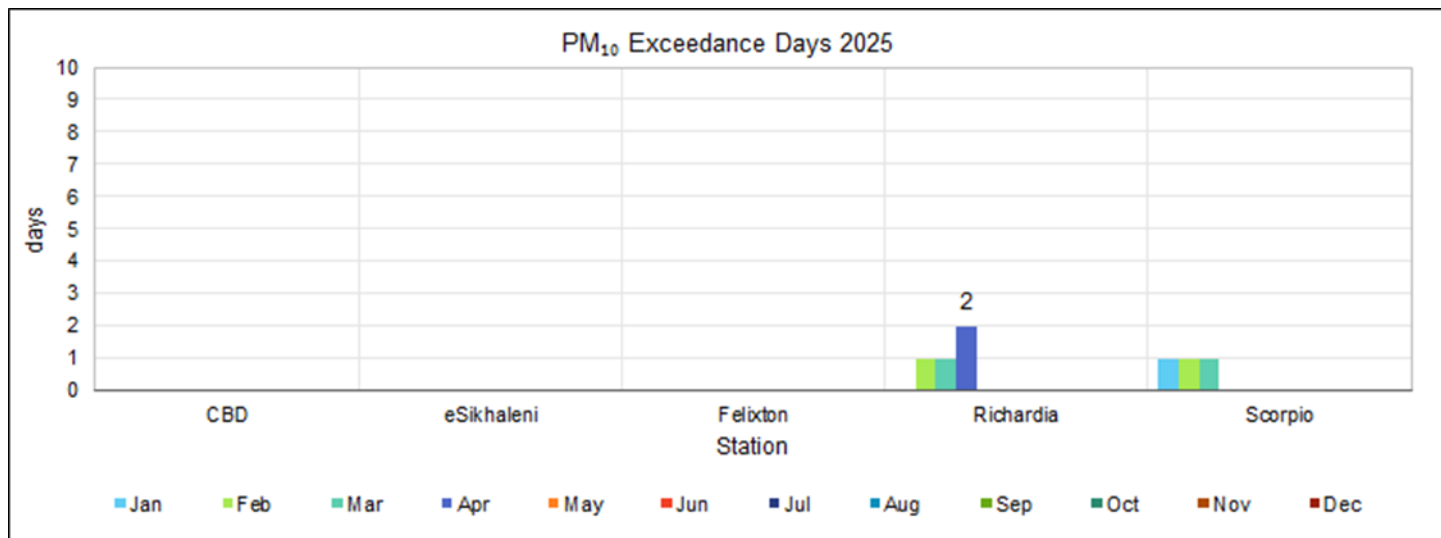
Missing Data (PM_{2.5}):

- Brackenham ES2 - power outages, data invalidation (5 days with <80% data capture, 2-6 April 2025).

PM₁₀

EXCEEDANCE SUMMARY

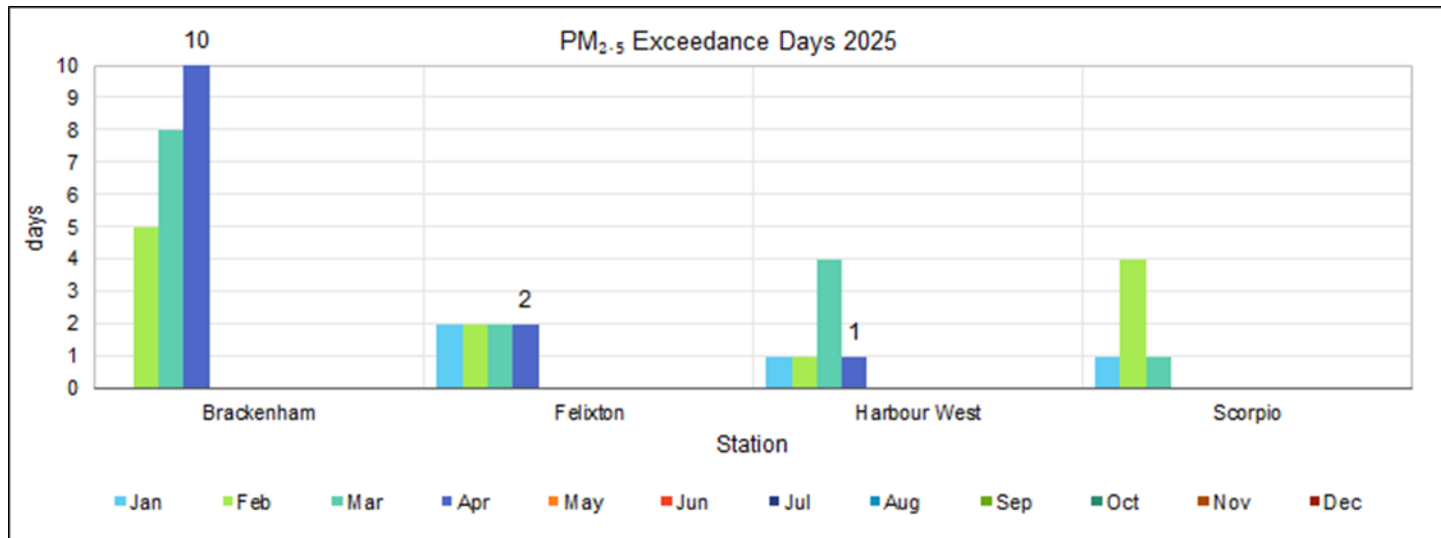
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM₁₀ Daily RSA Limit (75 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	-	-	-	-	-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



PM_{2.5}

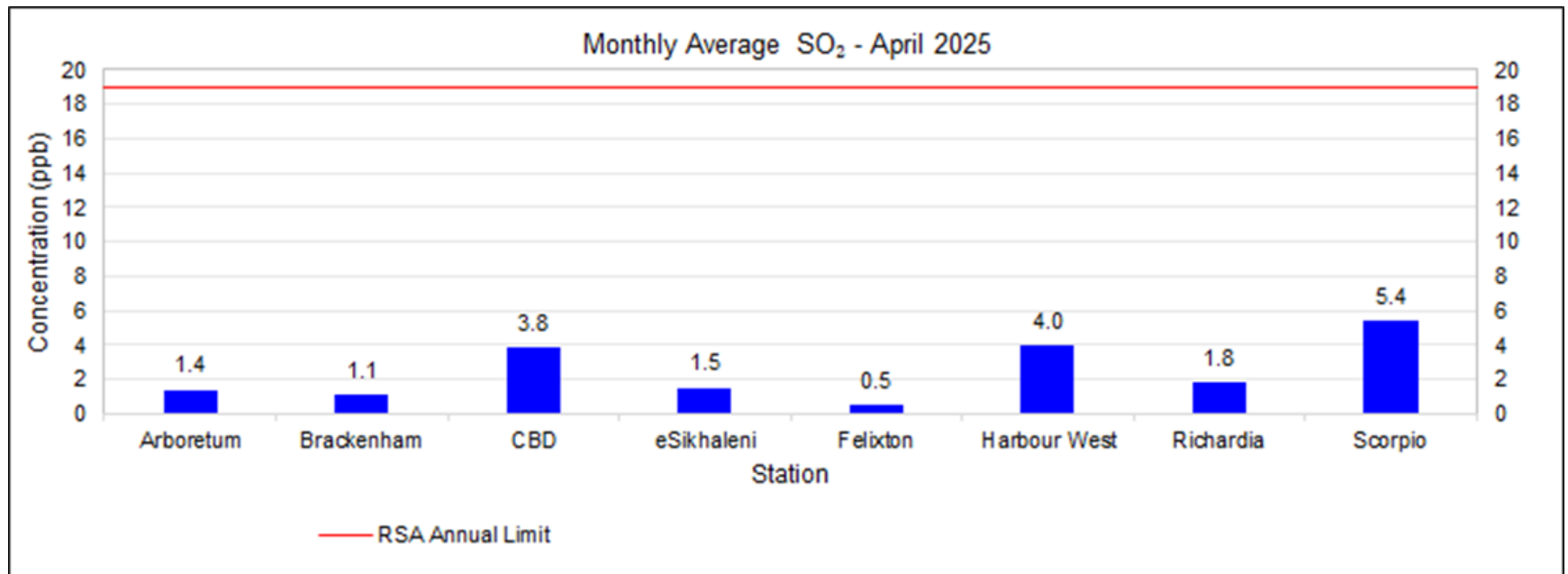
EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM_{2.5} Daily RSA Limit (40 µg/m³)													
Brackenheim	-	-	-	-	-	-	-	-	-	-	-	-	-
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	-
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	-
Scorpio	-	-	-	-	-	-	-	-	-	-	-	-	-
PM_{2.5} Daily WHO Limit (15 µg/m³)													
Brackenheim	-	5	8	10	-	-	-	-	-	-	-	-	23
Felixton	2	2	2	2	-	-	-	-	-	-	-	-	8
Harbour West	1	1	4	1	-	-	-	-	-	-	-	-	7
Scorpio	1	4	1	-	-	-	-	-	-	-	-	-	6



SO₂

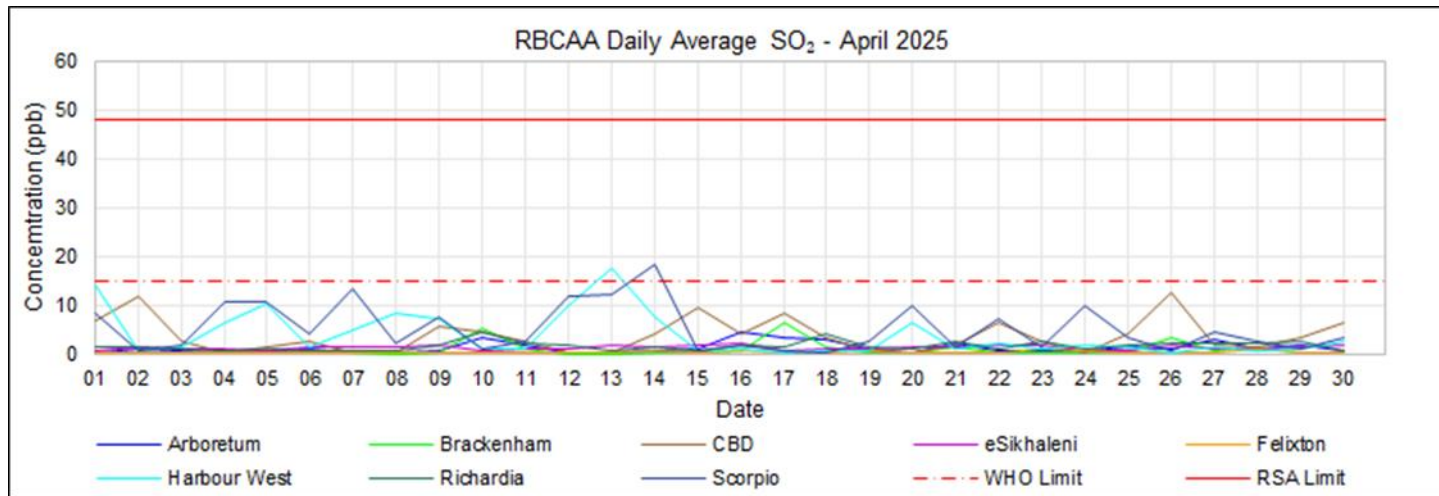
MONTHLY



SO₂

24-HOUR

SO ₂ Daily WHO Limit (15 ppb)		2
No response required		2
Harbour West		1
No additional comments		1
Scorpio		1
No additional comments		1

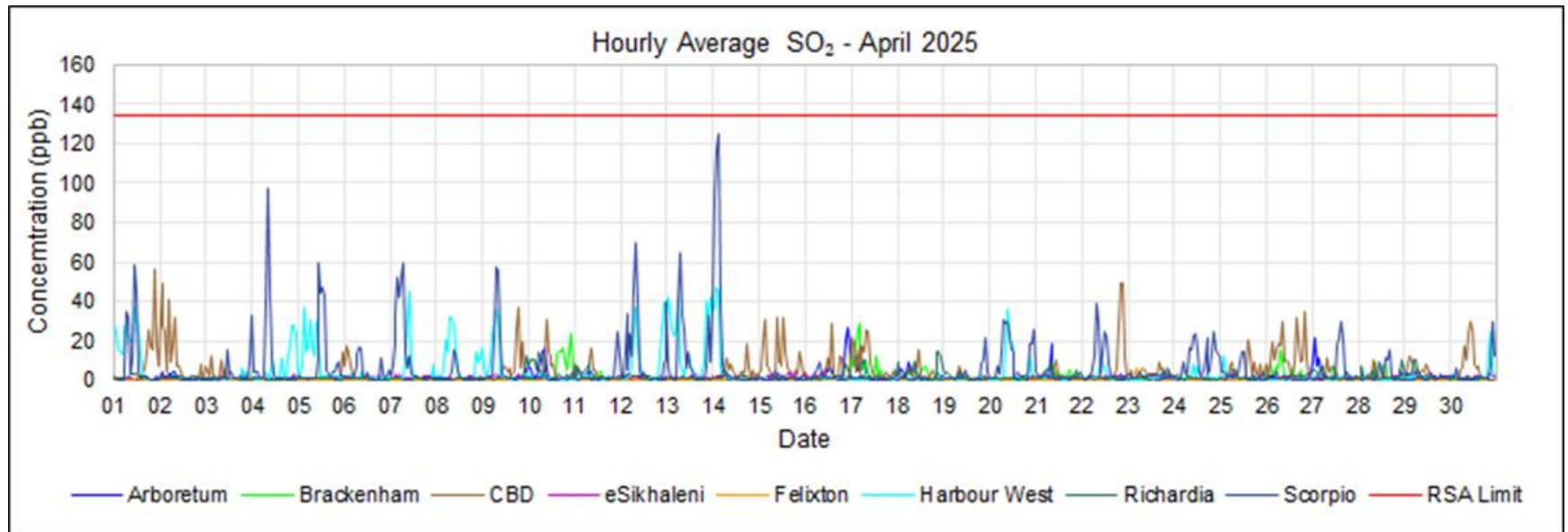


Missing Data (SO₂):

- *Brackenhams – power outages, data invalidation (4 days with <80% data capture, 2-5 April 2025).*

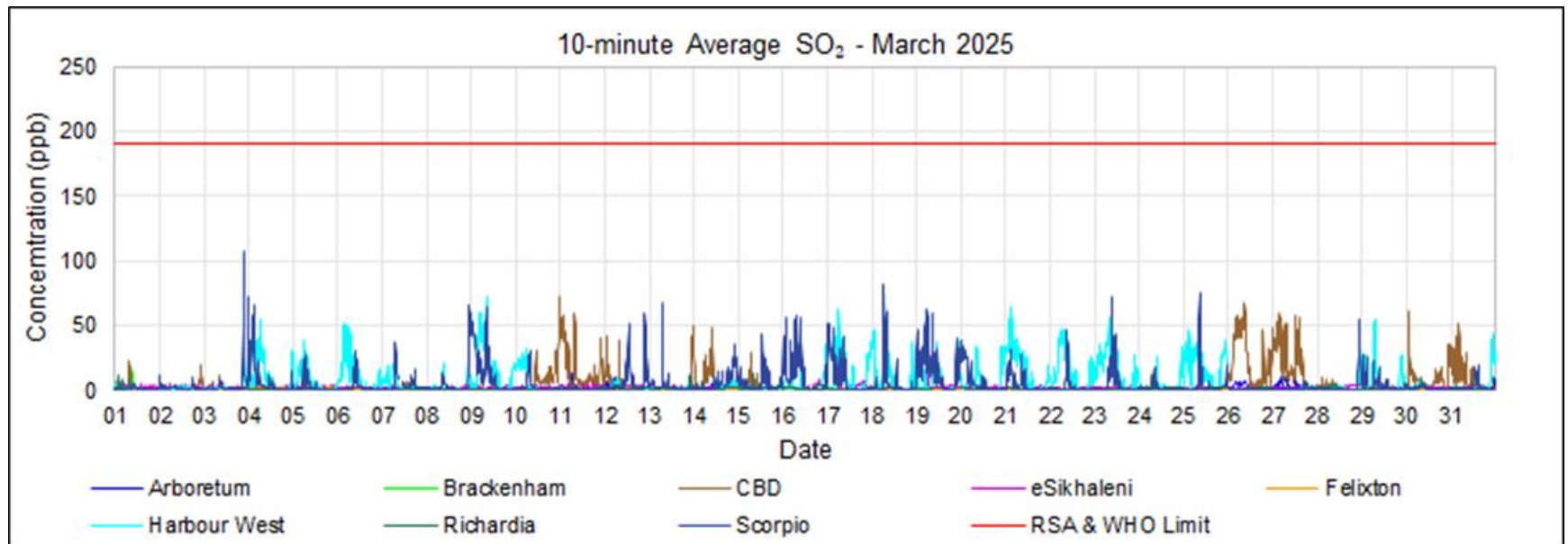
SO₂

1-HOUR



SO₂

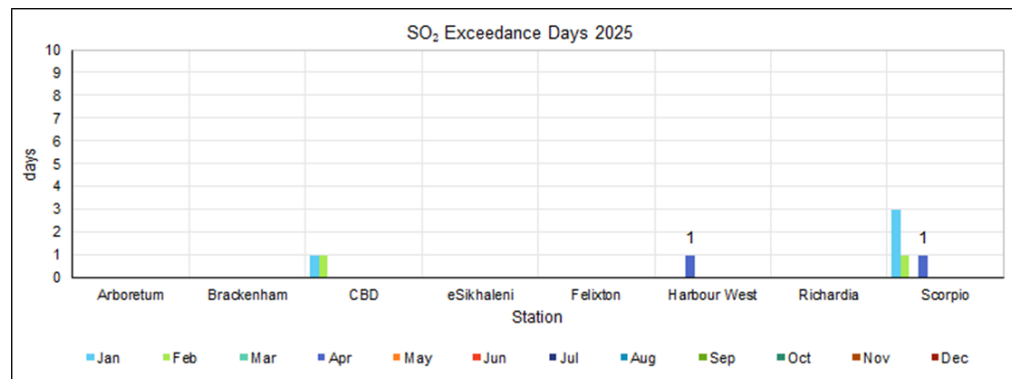
10-MINUTE



SO₂

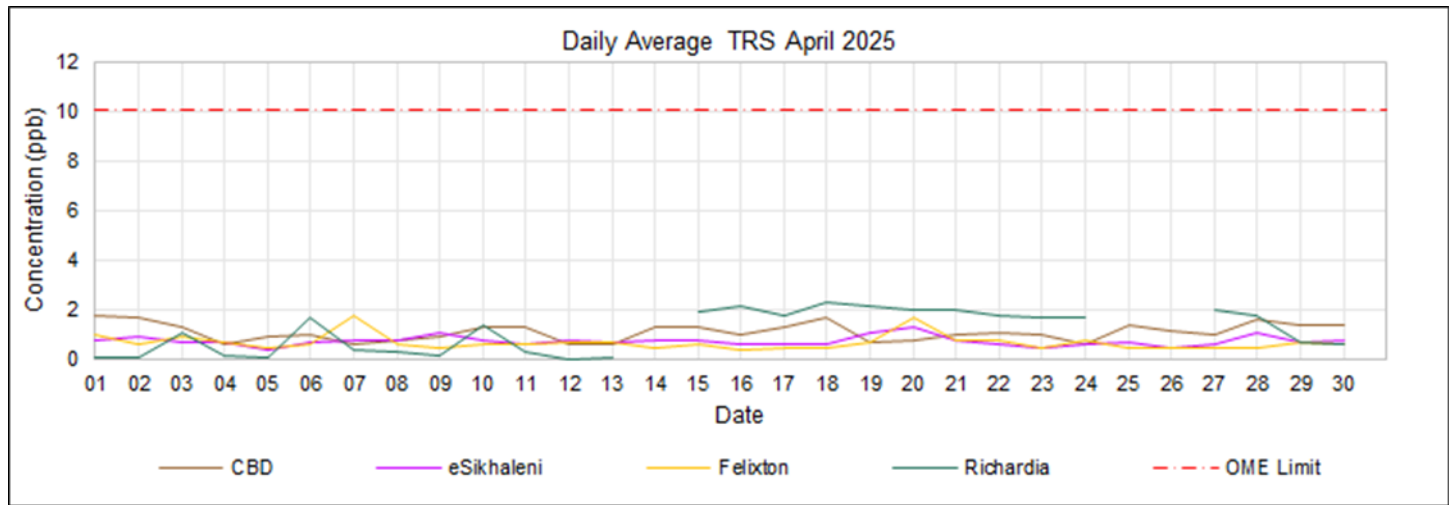
EXCEEDANCE SUMMARY

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	-	-	-	-	-	-	-	-	5
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	3	-	1	1	-	-	-	-	-	-	-	-	5
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



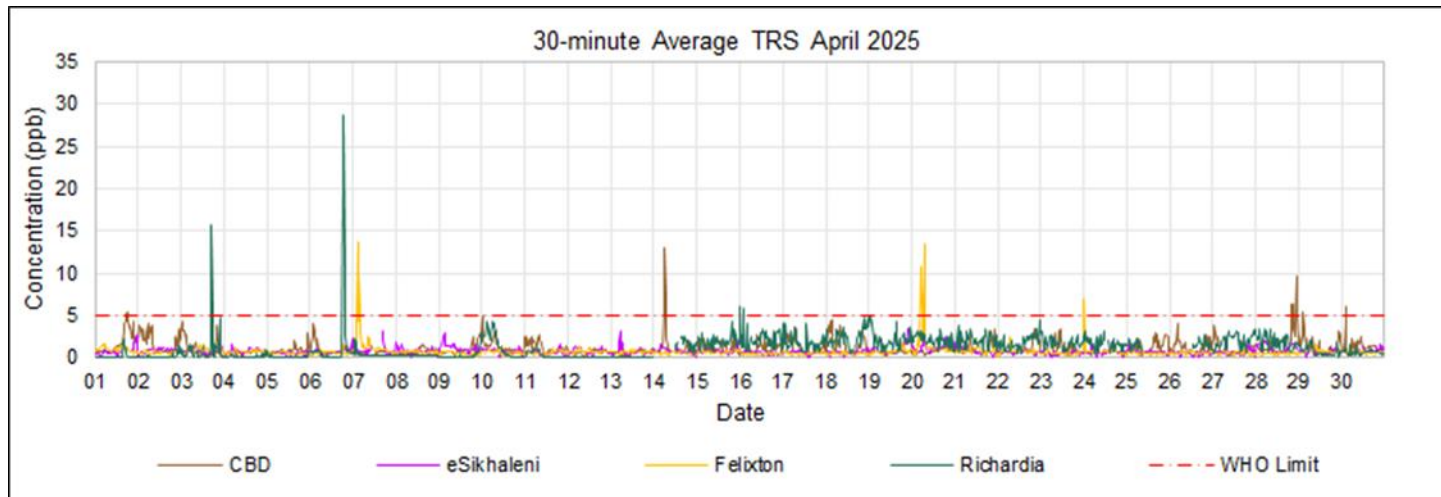
Missing Data (TRS):

- *Richardia – power outages, data invalidation (3 days with <80% data capture 14, 25-26 April 2025).*

TRS

30-MINUTE

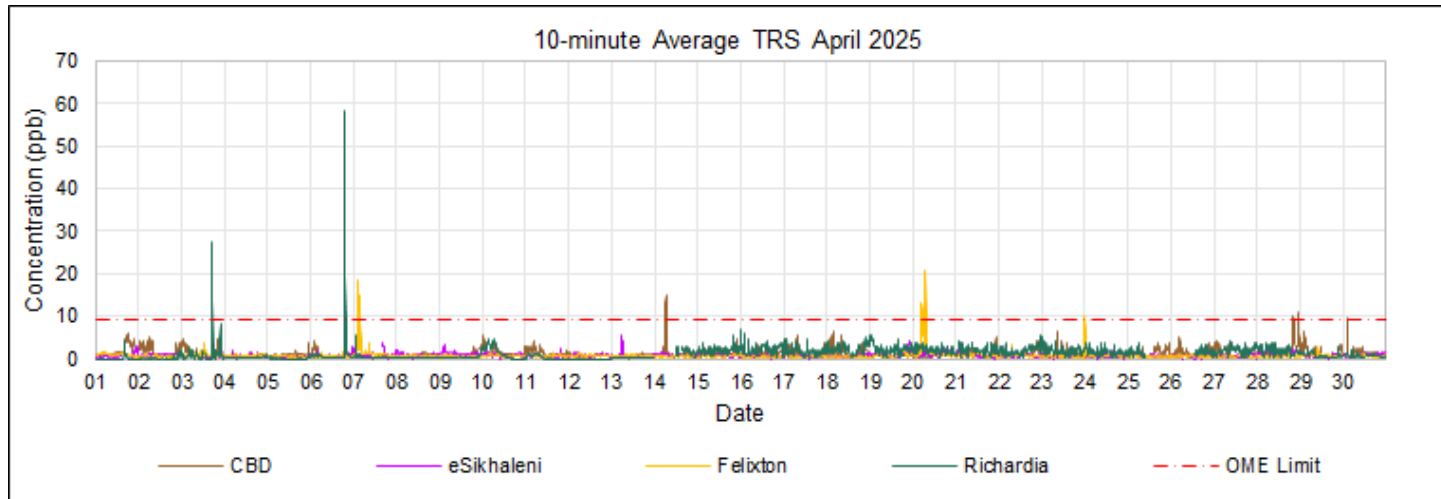
TRS 30-minute WHO H ₂ S Limit (5.0 ppb)		24
Industry response required		14
CBD		4
No responses,		4
Felixton		7
Responded: Mondi, Mpact and THS		3
Responded: Mpact		1
Responded: Mpact, Mondi		3
Richardia		3
Responded: Mondi		3



TRS

10-MINUTE

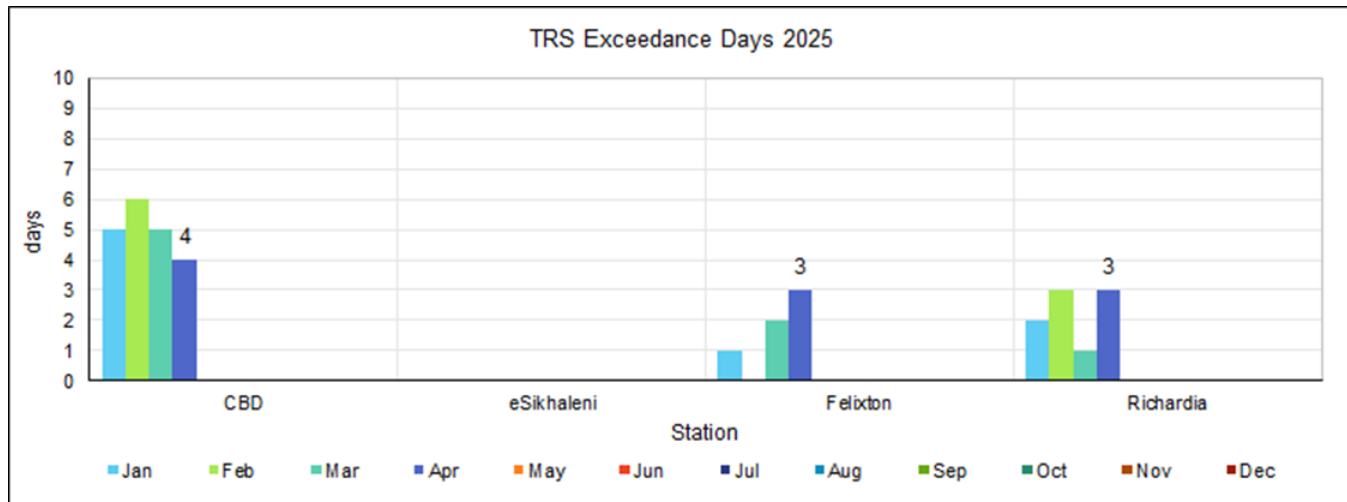
TRS 10-minute OME Limit (9.3 ppb)	26
Industry response required	19
CBD	3
No responses.	3
Felixton	10
Responded: Mondi, Mpact and THS	4
Responded: Mpact	1
Responded: Mpact, Mondi	5
Richardia	6
Responded: Mondi	6
Mondi	7
CBD	4
Ruptured bursting disc on the non-condensable gas line to the flare	4
Richardia	3
Elevated H ₂ S levels	3



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	9	-	-	-	-	-	-	-	-	83
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	1	-	8	7	-	-	-	-	-	-	-	-	16
Richardia	5	7	3	7	-	-	-	-	-	-	-	-	22
TRS 10-minute OME Limit (9.3 ppb)													
CBD	53	10	8	7	-	-	-	-	-	-	-	-	78
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	2	-	4	10	-	-	-	-	-	-	-	-	16
Richardia	3	1	-	9	-	-	-	-	-	-	-	-	13



Air Quality

SUMMARY

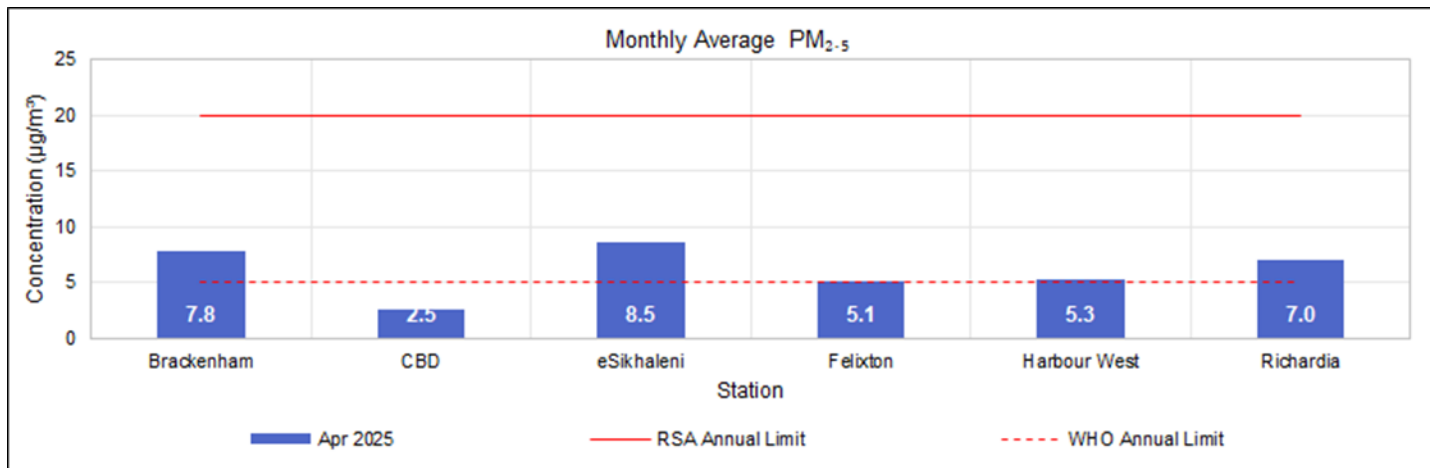
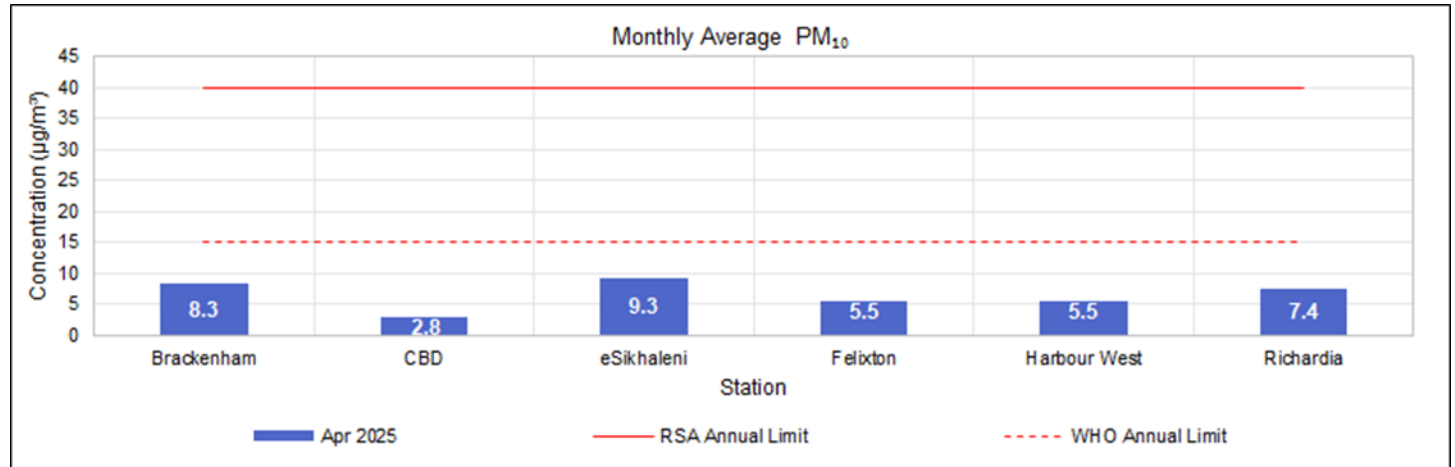
AIMS concludes that during April 2025, based on the following:

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

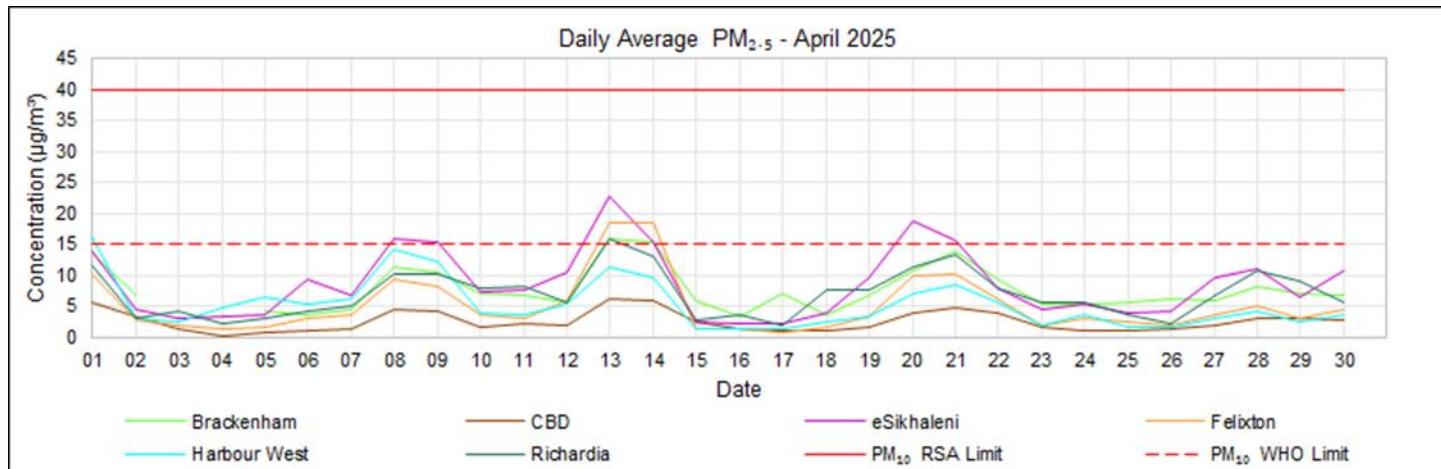
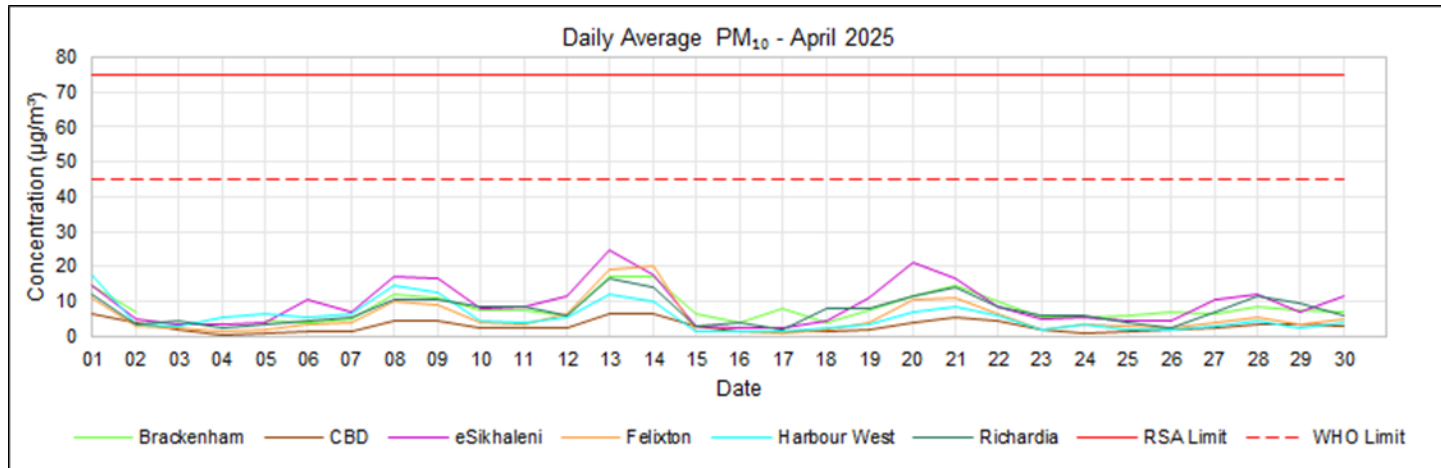
- ▶ Measured short-term average concentrations (acute exposure) and WHO health guidelines ambient air quality was compromised by:
 - PM₁₀ at Richardia;
 - PM_{2.5} at Brackenhams, Felixton, and Harbour West; and
 - TRS at CBD, Felixton and Richardia.

AirGradient PM

MONTHLY

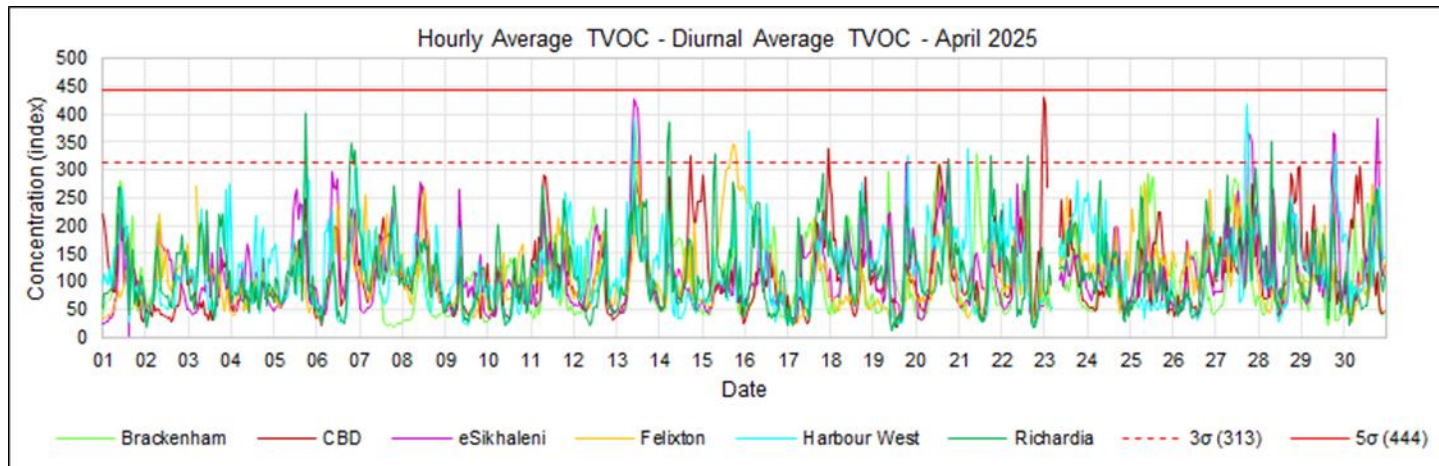
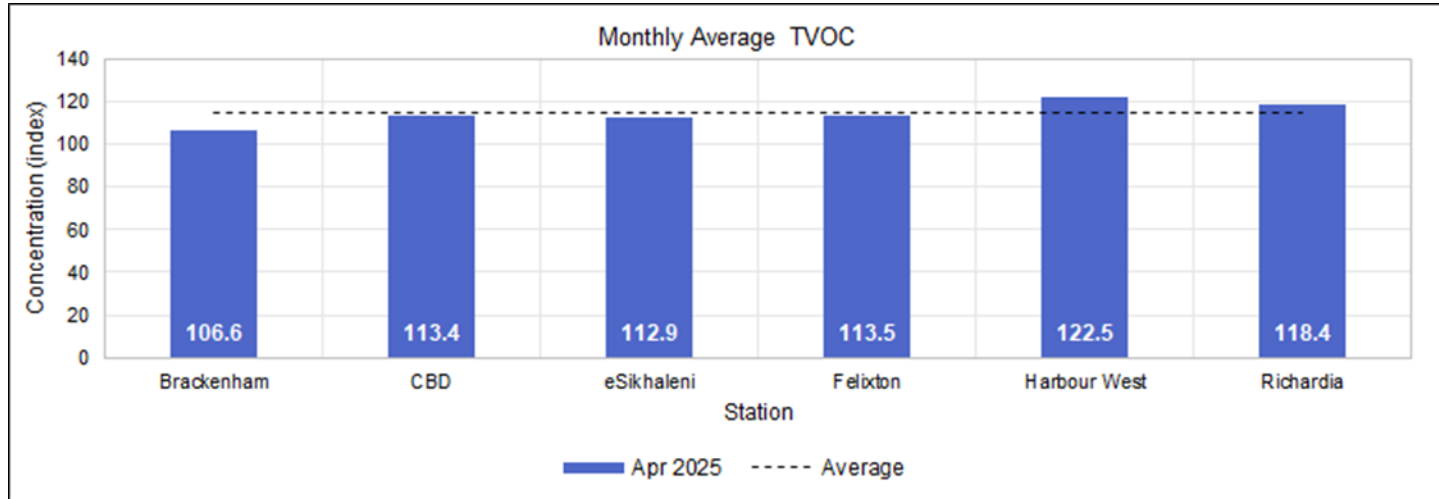


AirGradient PM DAILY



AirGradient TVOC

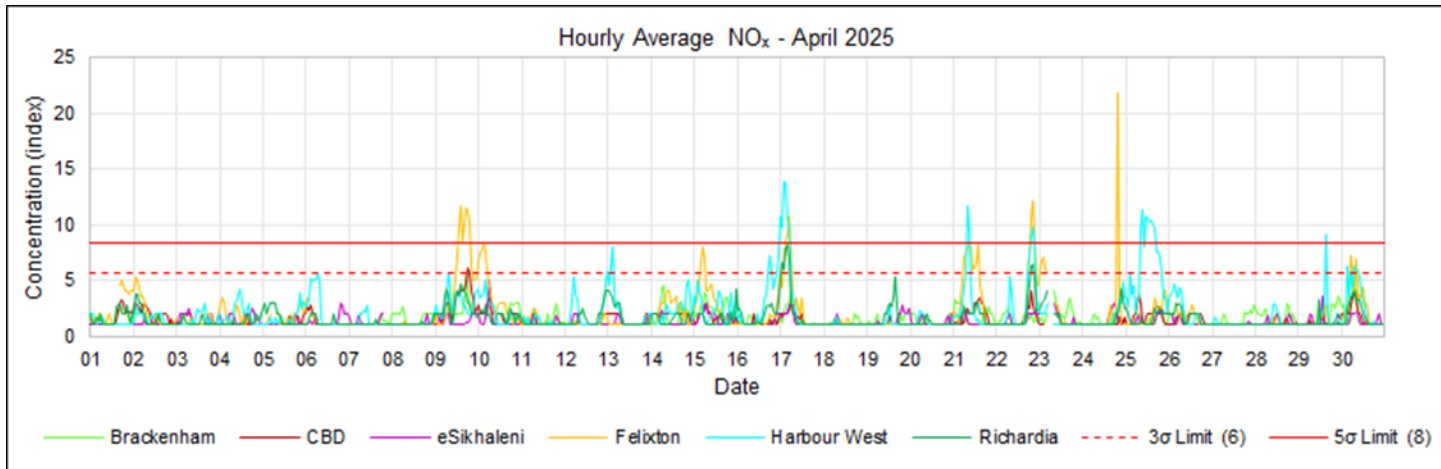
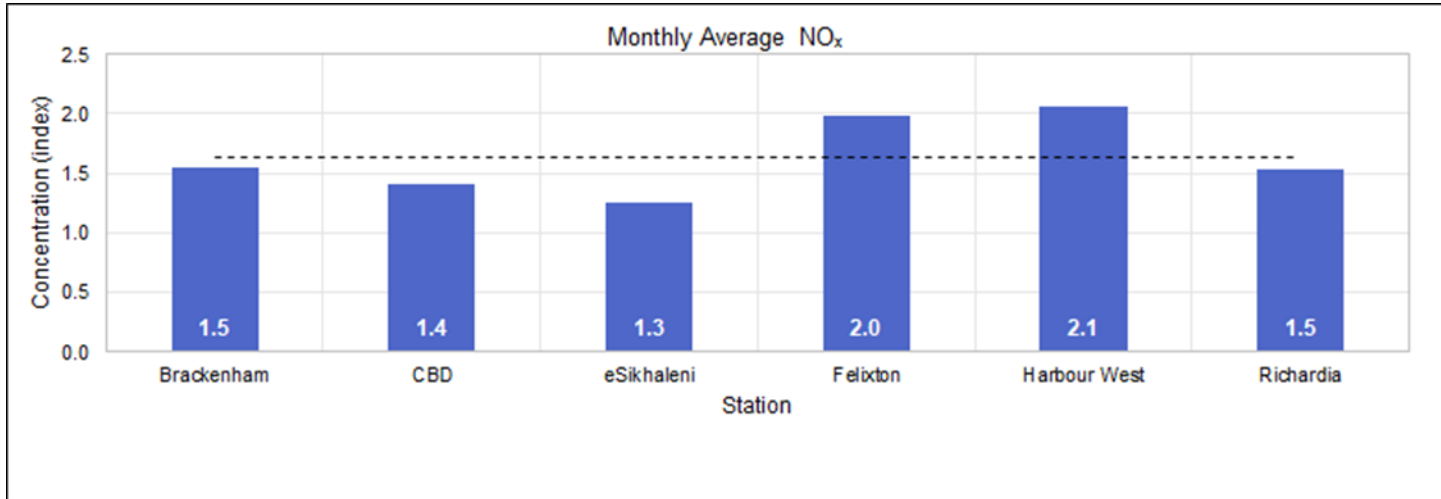
MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia
3σ	5	5	13	5	8	10
5σ	0	0	0	0	0	0

AirGradient NO_x

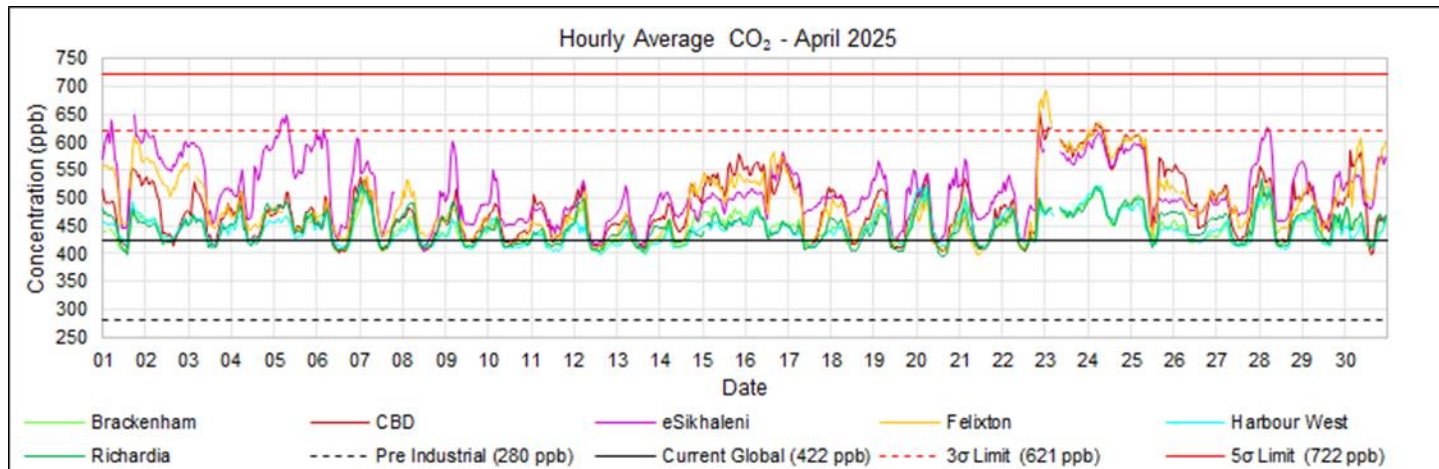
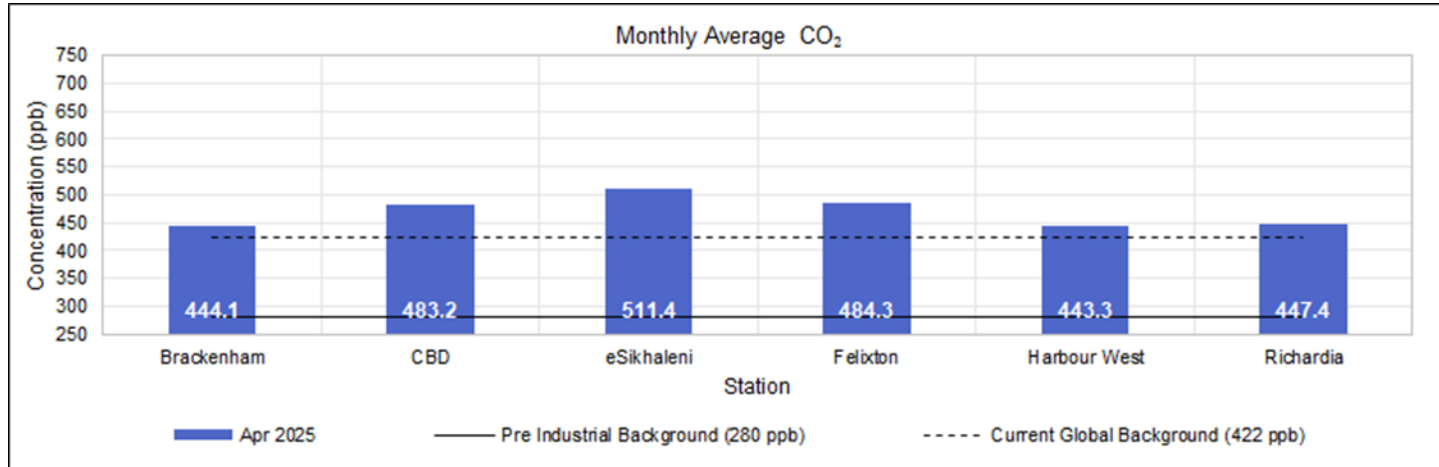
MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia
3σ	0	1	0	45	36	7
5σ	0	0	0	16	19	0

AirGradient CO₂

MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia
3 σ	0	9	12	16	0	0
5 σ	0	0	0	0	0	0

Thank you

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- francois@airimpact.co.za

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- alicia@airimpact.co.za

