

Monthly Air Quality Report

July
2026

Richards Bay Clean Air Association (RBCAA)

Technical report update



Seventeen PM_{2.5} daily NAAQS exceedances were recorded in July; Brackenham, Scorio and Felixton exceed the four-day annual allowance YTD. PM₁₀ and SO₂ had no NAAQS exceedances.

Signal	July outcome	Why it matters
Complaints	30 received	Down from 45 in June and up from 17 in July 2025; allocations: Mondri 8, South32 7, NIDA 5.
Rainfall	52 mm average	Felixton highest at 78 mm; South32 lowest at 25 mm; CBD record partial (26 of 31 days).
PM ₁₀	0 daily NAAQS	No RSA events; 11 WHO guideline days: CBD 5, Felixton 4, Scorio 2.
PM _{2.5}	17 daily NAAQS	Brackenham 7, Scorio 6, Felixton 3, Harbour West 1.
SO ₂	0 NAAQS	No RSA 24-hour, 1-hour or 10-minute events; 9 WHO guidance days at Scorio, Harbour West and CBD.
TRS/H ₂ S	0 OME 24h; 86 WHO 30m; 62 OME 10m	No RSA ambient standard; guidance events indicate odour potential and source-control need.

Priority follow-up

Prioritise Brackenham, Scorio and Felixton PM_{2.5}; verify the Scorio PM_{2.5} instrument; close the CBD, Harbour West, Felixton and Richardia outage gaps.

Network coverage

11 primary stations + 10 AirGradient screening monitors.
Stream capture ranged 87–100%; PM_{2.5} was 99–100%.

11

primary stations
RBCAA network

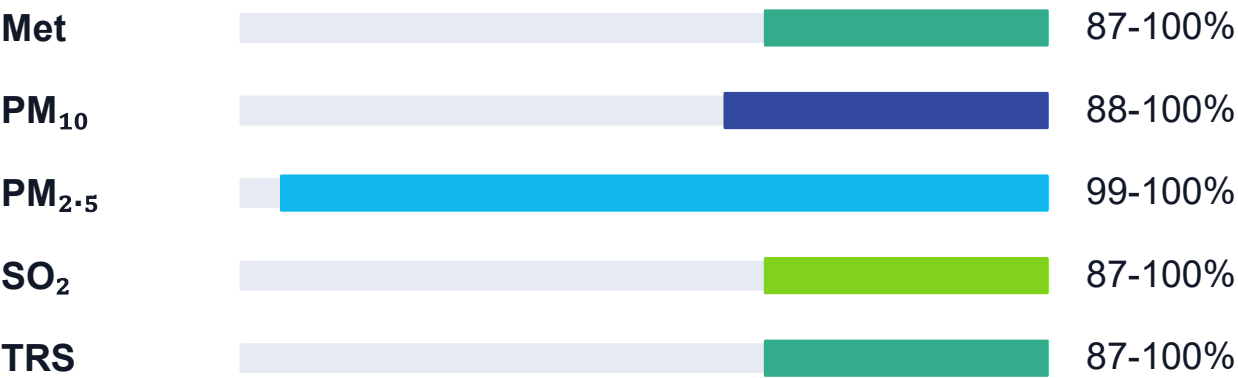
10

AirGradient monitors
screening network

Data caveats

CBD 1–5 July (all streams); Harbour West wind direction 2–7 July; Felixton SO₂ 30–31 July; Richardia TRS 15–16 July.

Capture range by stream (fill scaled 80–100%)



Review note

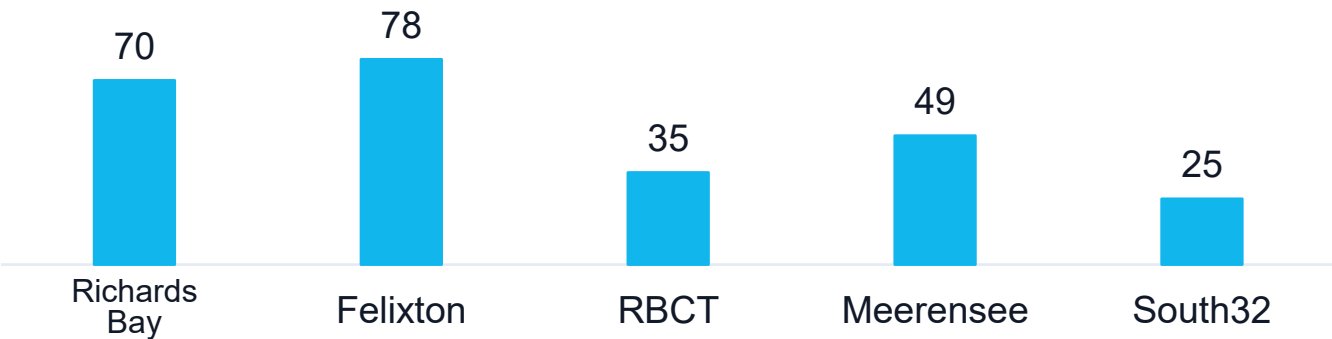
July data are suitable for monthly review, subject to the CBD partial record and the Scorpio PM_{2.5} instrument qualification.

Arboretum wind regime

Predominant axis: WNW–NE; mean speed: 3.2 m/s.
Valid wind data: 99%; calms: 1%.

Period	Dominant sector	Sector 2	Calms
July 2025	N-NE & NW 56%	SSW-WSW 25%	0%
July 2026	WNW-NE 52%	SSW-WSW 32%	1%

Rainfall totals by reporting location, July 2026 (mm)



Rainfall

Average 52 mm; Felixton highest at 78 mm. The four complete gauges average 47 mm.

Use in review

Use dominant wind axes for source-to-receptor screening.

Source screening

Review wind, rainfall and complaint timing together.

Complaints fell to 30 in July, up from 17 a year earlier

July 2026 complaint signal

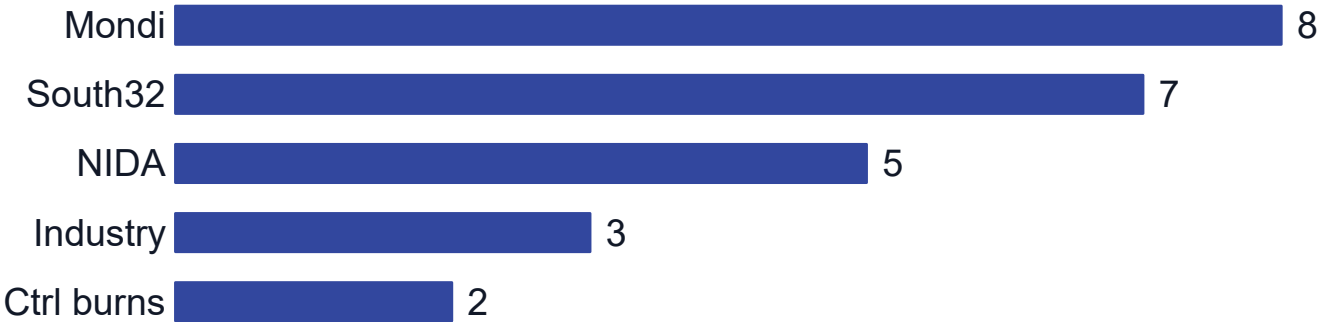
30 complaints versus 17 in July 2025.
Top allocations: Mondi, South32 and NIDA.
Main type: clinical + odour. Top region:
Veldenvlei.

30
complaints

+13
vs July 2025

12
odour-related

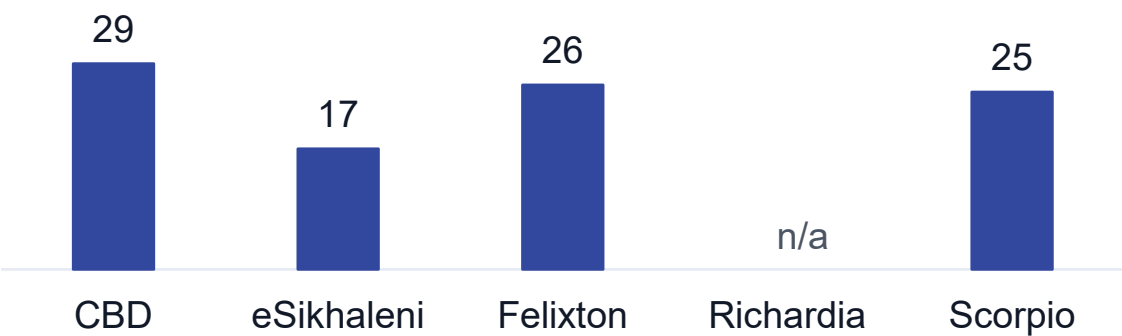
Source allocations by complaint count



Distribution lens

Veldenvlei 8, Alton 7, Arboretum 3. Clinical + odour 10; alumina fallout 6 (7 including combined); coal dust 5. Industry = industry response required; Ctrl burns = controlled burns.

Monthly average PM₁₀ (µg/m³)



July outcome

Capture was 88–100%. No RSA 24-hour exceedances; 11 WHO guideline days: CBD 5, Felixton 4, Scorpio 2.

Review refinement

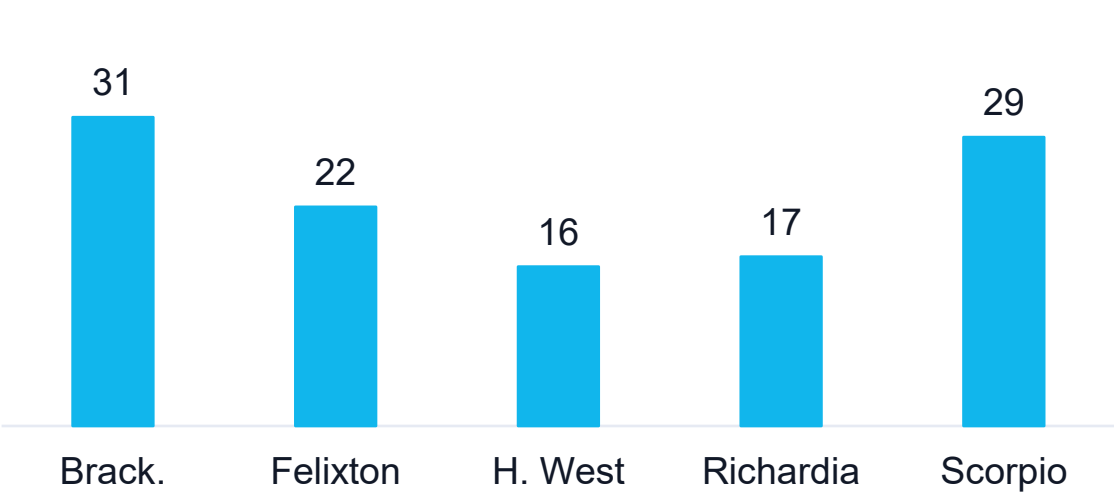
Richardia PM₁₀ ceased on or about 15 March 2026 and Brackenheim has no PM₁₀ channel; neither is assessed.

Assessment

July means were below the RSA annual standard. CBD, eSikhaleni, Felixton and Scorpio were above the WHO annual guideline as a screening comparison.

PM_{2.5}: seventeen NAAQS exceedance days in July

Monthly average PM_{2.5} (µg/m³)



WHO PM_{2.5} exceedance-days



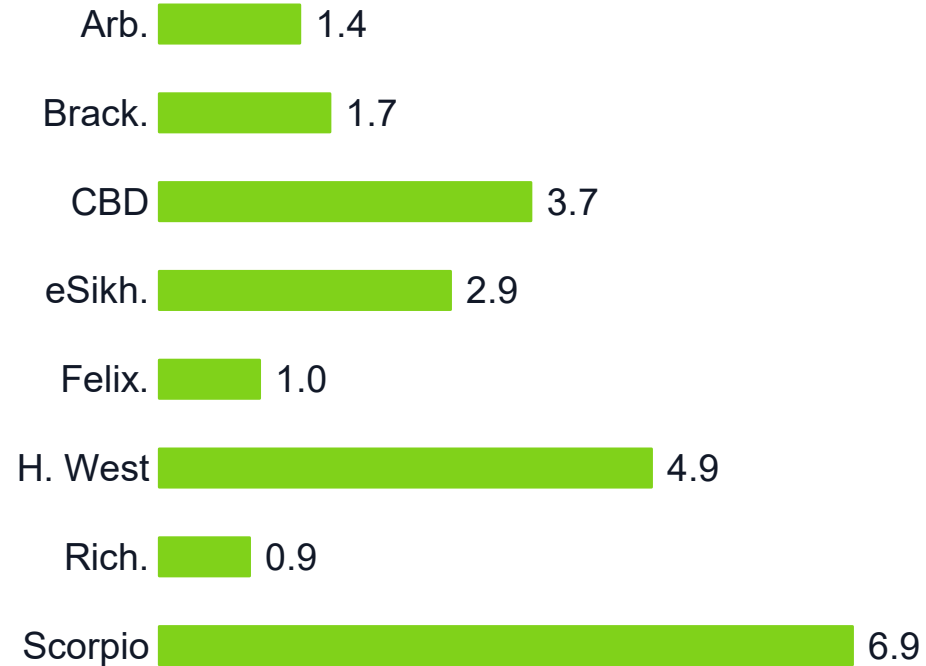
July outcome

Seventeen NAAQS days: Brackenham 7, Scorio 6, Felixton 3, Harbour West 1; 98 WHO exceedance-days.
Attribution: 13 days to ZFPA-authorized controlled burns; 4 to regional influence with inversion conditions.
Scorio PM_{2.5} exceeded co-located PM₁₀ on 24 of 31 days; counts are provisional pending recalibration.

SO₂: no NAAQS exceedances in July

08

Monthly average SO₂ (ppb)



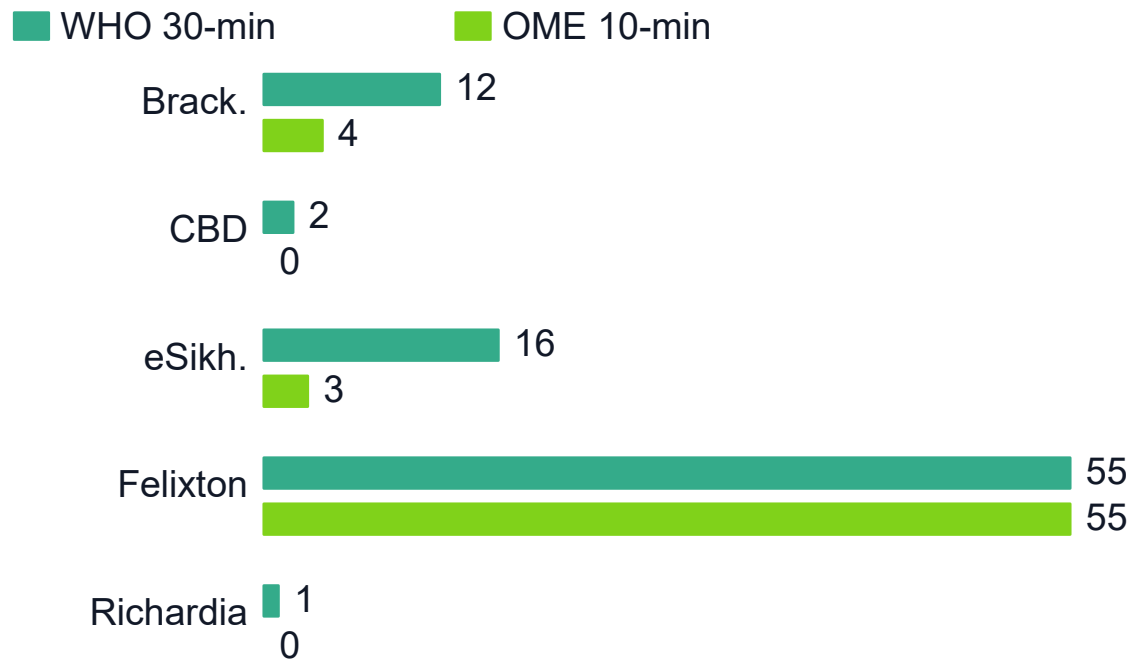
July outcome

Capture: 87–100%. No RSA 24-hour, 1-hour or 10-minute exceedances.

WHO 24-hour guidance

9 WHO guidance days: Scorpio 5, Harbour West 3, CBD 1.

TRS/H₂S exceedances by station, July 2026



July outcome

OME 24-hour events: 0;
WHO 30-minute: 86;
OME 10-minute: 62;
(mainly Felixton, eSikhaleni and Brackenham)

Interpretation

No South African NAAQS applies. These events signal odour-annoyance and source-control needs.

Operational implication

CoU municipal sewage overflow accounted for 42 of 86 WHO 30-minute and 54 of 62 OME 10-minute events, all at Felixton.

PM₁₀

NAAQS (max 4 days/yr): within the allowance; 1 exceedance at eSikhaleni.

WHO 24-hour days: CBD 7, Felixton 5, Scorpio 3, eSikhaleni 1.

PM_{2.5}

NAAQS (max 4 days/yr): Scorpio 13, Brackenheim 12 and Felixton 5 exceed the allowance; Harbour West 1 within it.

WHO 24-hour days: Scorpio 128, Brackenheim 107, Felixton 69, Harbour West 46, Richardia 26.

SO₂

NAAQS: within all frequencies. Scorpio 3/4 daily, 8/88 hourly, 8/526 10-minute; Harbour West 1/88 hourly, 3/526 10-minute.

WHO 24-hour days: Scorpio 53, Harbour West 23, CBD 2.

TRS / H₂S

No South African ambient standard; no compliance determination.

OME 24-hour: 0. WHO 30-minute: Felixton 103, eSikhaleni 74, Brackenheim 64, Richardia 32, CBD 31.

OME 10-minute: Felixton 137, Brackenheim 42, eSikhaleni 35, CBD 8, Richardia 4.

Implication

Focus regulatory follow-up on Scorpio, Brackenheim and Felixton PM_{2.5}, and verify the Scorpio PM_{2.5} instrument. Guidance exceedances flag exposure or odour-annoyance; they are not NAAQS non-compliance.