RBCAA MANCO BRIEFING

Monthly Air Quality Report

August 2026

Richards Bay Clean Air Association (RBCAA)

Technical report update



Project 2026001 | Report 022 | September 2026

AIMS

Executive snapshot

Five $PM_{2.5}$ daily NAAQS exceedances were recorded in August; Brackenham, Scorpio and Felixton exceed the four-day annual allowance YTD. PM_{10} and SO_2 had no NAAQS exceedances.

Signal	August outcome	Why it matters
Complaints	**68 received**	Up from 30 in July and 13 in August 2025; allocations: Mondi 66, CoU-Sewerage 1, IDZ 1.
Rainfall	**83 mm average**	RBCT highest at 100 mm; South32 lowest at 43 mm; CBD and Meerensee gauges lost 31 August.
PM_{10}	**0 daily NAAQS**	No RSA events and no WHO 24-hour guideline days.
$PM_{2.5}$	**5 daily NAAQS**	Brackenham 3, Scorpio 2; 60 WHO guideline days.
SO_2	**0 NAAQS**	No RSA 24-hour, 1-hour or 10-minute events; 4 WHO guidance days at Scorpio and CBD.
TRS/H_2S	**0 OME 24h; 56 WHO 30m; 38 OME 10m**	No RSA ambient standard; guidance events indicate odour potential and source-control need.

Priority follow-up

Prioritise Brackenham and Scorpio $PM_{2.5}$; verify the Scorpio $PM_{2.5}$ instrument; close the Harbour West SO_2 and Felixton TRS outage gaps.

Source: RBCAA Monthly Air Quality Report - August 2026

August capture 86.7–100.0%; outages recorded at five sites

Network coverage

11 primary stations + 11 AirGradient screening monitors.
Stream capture ranged 86.7–100.0%; PM_{10} and $PM_{2.5}$ were 98.7–100.0%.

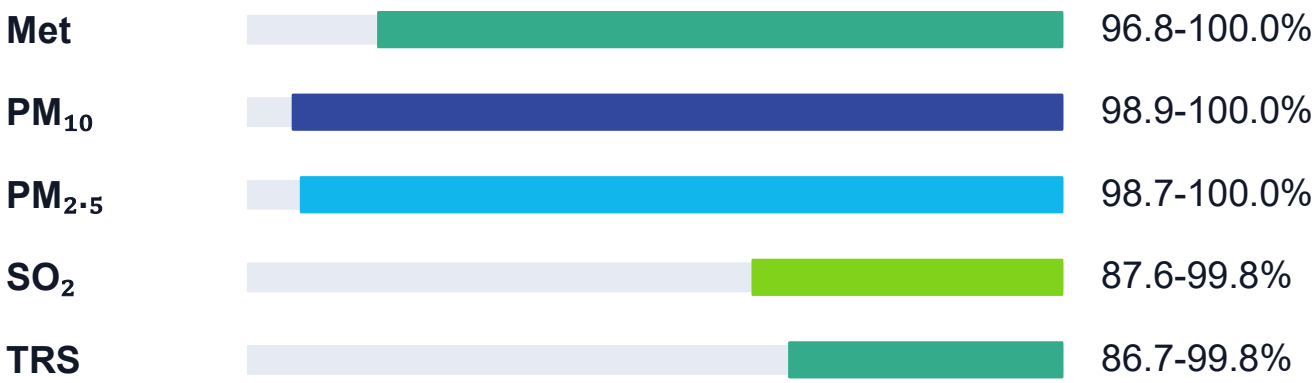
11
primary stations
RBCAA network

11
AirGradient monitors
screening network

Data caveats

eSikhaleni 31 August (all streams); Harbour West SO_2 20–24 August; Felixton TRS 27–30 August; CBD and Meerensee rain gauges 31 August.

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



Review note

August data are suitable for monthly review, subject to the Scorpio $PM_{2.5}$ instrument qualification and the Harbour West SO_2 and Felixton TRS outages.

Source: RBCAA Monthly Air Quality Report - August 2026

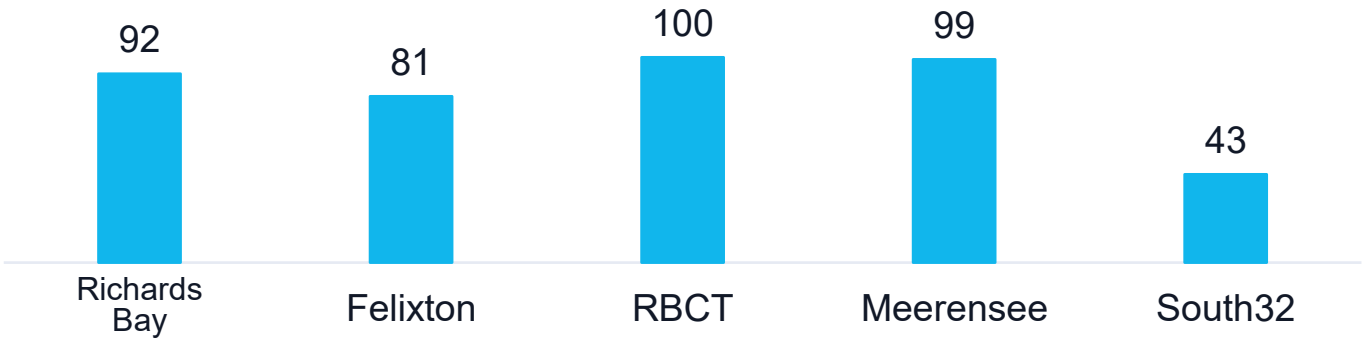
August winds favoured N–NE; rainfall averaged 83 mm

Arboretum wind regime

Predominant axis: N–NE; mean speed: 3.7 m/s.
Valid wind data: 99%; calms: 2%.

Period	Dominant sector	Sector 2	Calms
August 2025	N-NE 50%	SW-WSW 22%	0%
August 2026	N-NE 34%	SSW-WSW 33%	2%

Rainfall totals by reporting location, August 2026 (mm)



Rainfall

Average 83 mm across five gauges; RBCT highest at 100 mm and South32 lowest at 43 mm.

Use in review

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

Source screening

Review wind, rainfall and complaint timing together.

Source: RBCAA Monthly Air Quality Report - August 2026

Complaints rose to 68 in August, up from 13 a year earlier

August 2026 complaint signal

68 complaints versus 13 in August 2025. Allocations: Mondi 66, CoU-Sewerage 1, IDZ 1. Main type: clinical + odour. Top region: Meerensee.

68
complaints

+55
vs August 2025

67
odour-related

Source allocations by complaint count



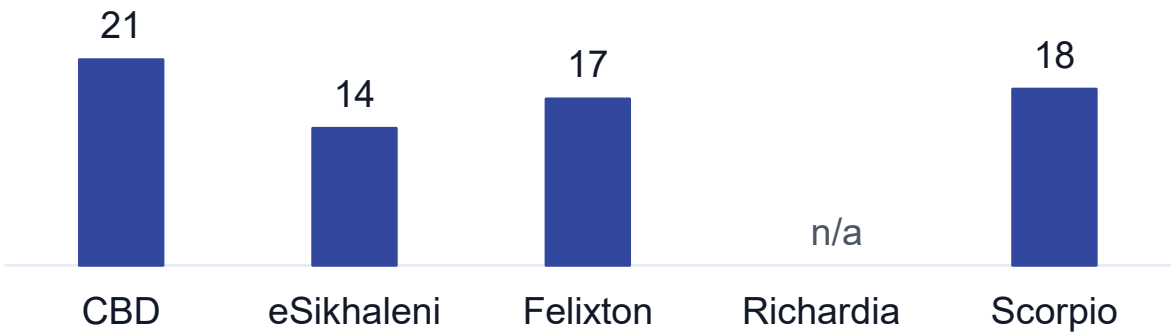
Distribution lens

Meerensee 24, Arboretum 23, Alton 6, Arboretum Ext 4. Clinical + odour 51; odour 16; dust 1. Two days carried 58 of the 68 complaints: 43 on 13 August and 15 on 18 August.

Source: RBCAA Monthly Air Quality Report - August 2026

PM_{10}: no NAAQS exceedances in August

Monthly average PM_{10} (µg/m³)



August outcome

Capture was 98.9–100.0%. No RSA 24-hour exceedances and no WHO 24-hour guideline exceedance-days.

Review refinement

Richardia PM_{10} ceased on 2 March 2026 (last valid record 10:40) and Brackenham has no PM_{10} channel; neither is assessed.

Assessment

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

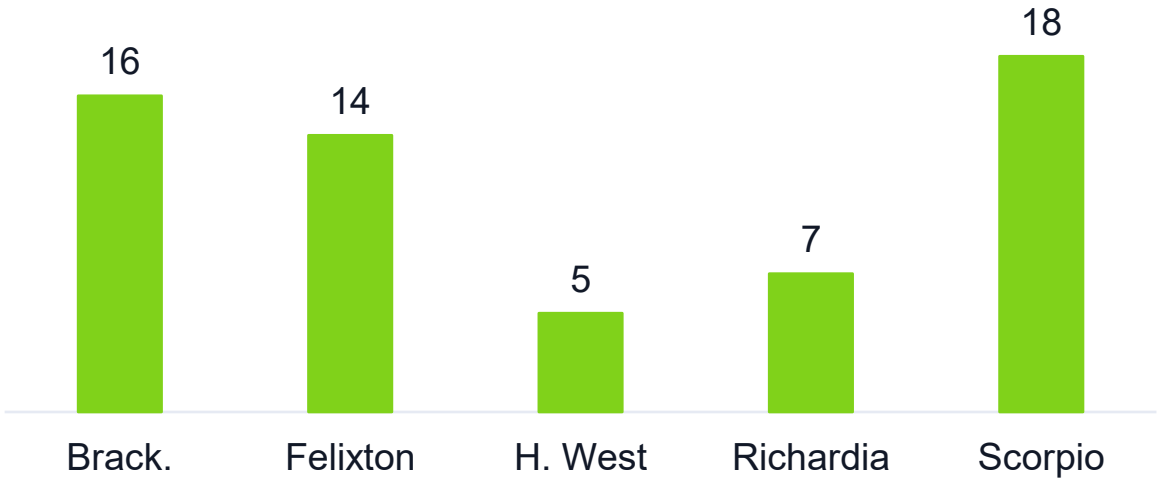
Source: RBCAA Monthly Air Quality Report - August 2026

$PM_{2.5}$: five NAAQS exceedances in August

Monthly average $PM_{2.5}$ (µg/m³)



WHO $PM_{2.5}$ exceedance-days



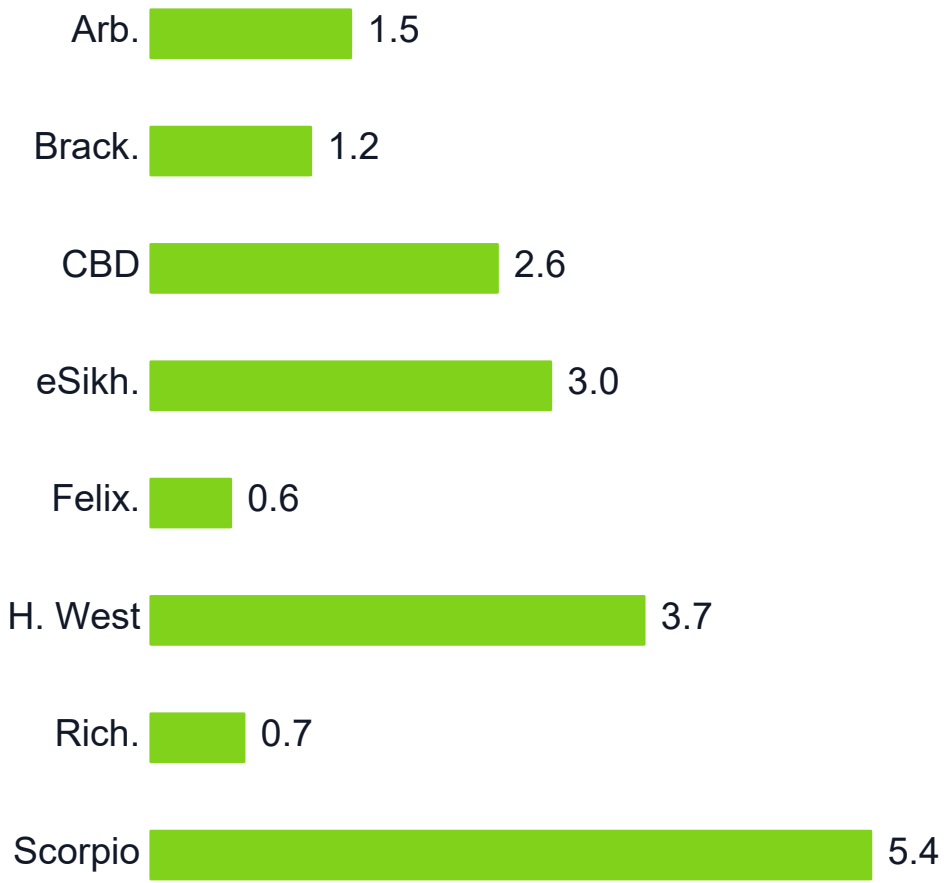
August outcome

Five NAAQS exceedances: Brackenham 3, Scorpio 2; 60 WHO exceedance-days.
Attribution: two Brackenham days to a municipal (CoU) wildfire; three days require industry response.
Scorpio $PM_{2.5}$ exceeded co-located PM_{10} on 22 of 31 days; counts are provisional pending recalibration.

Source: RBCAA Monthly Air Quality Report - August 2026

SO_2: no NAAQS exceedances in August

Monthly average SO_2 (ppb)



August outcome

Capture: 87.6–99.8%. No RSA 24-hour, 1-hour or 10-minute exceedances.

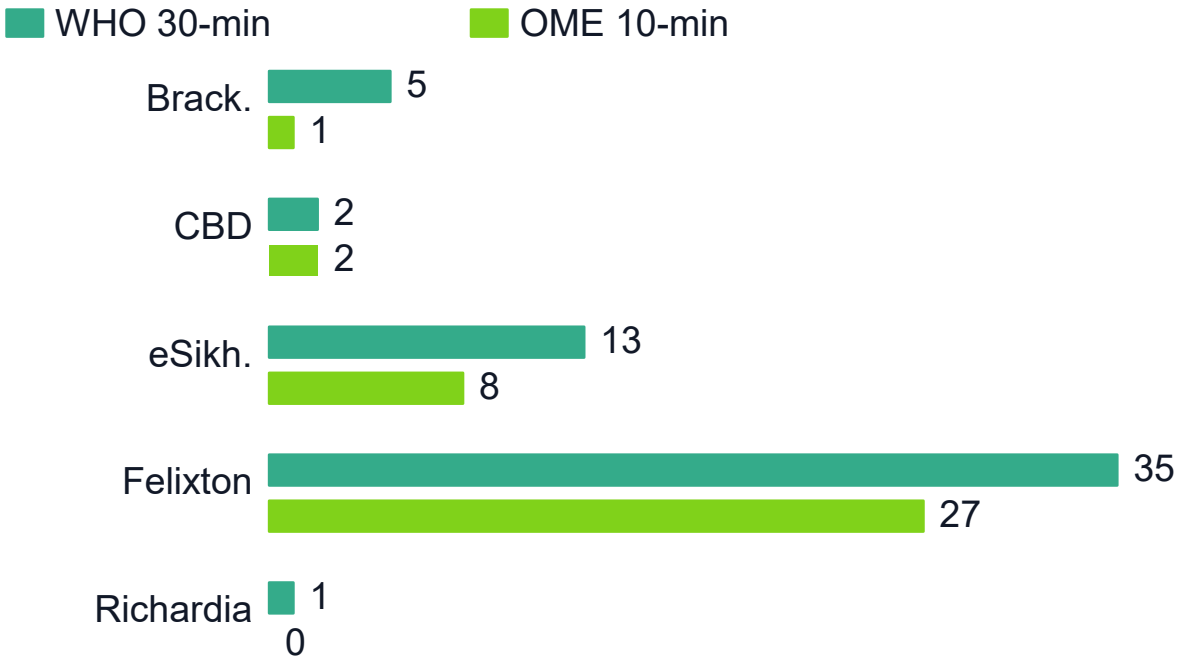
WHO 24-hour guidance

4 WHO guidance days: Scorpio 3, CBD 1.

Source: RBCAA Monthly Air Quality Report - August 2026

TRS/H_2S: short-term odour events, not non-compliance

TRS/H_2S exceedances by station, August 2026



August outcome

OME 24-hour events: 0;
WHO 30-minute: 56;
OME 10-minute: 38;
(mainly Felixton, eSikhaleni and Brackenham)

Interpretation

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

Operational implication

THS smut-plant and clarifier events accounted for 33 of 56 WHO 30-minute and 25 of 38 OME 10-minute exceedances, all at Felixton.

Source: RBCAA Monthly Air Quality Report - August 2026

2026 year-to-date status

PM_{10}

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): Brackenham 15, Scorpio 15 and Felixton 5 exceed the allowance; Harbour West 1 and Richardia 0 within it.
WHO 24-hour days: Scorpio 145, Brackenham 127, Felixton 83, Harbour West 51, Richardia 34.

SO_2

NAAQS: within all frequencies. Scorpio 3/4 daily, 8/88 hourly, 8/526 10-minute; Harbour West 1/88 hourly, 3/526 10-minute; CBD 1/526 10-minute.
WHO 24-hour days: Scorpio 53, Harbour West 23, CBD 4.

TRS / H_2S

No South African ambient standard; no compliance determination.
OME 24-hour: 0. WHO 30-minute: Felixton 137, eSikhaleni 87, Brackenham 67, CBD 33, Richardia 33.
OME 10-minute: Felixton 164, Brackenham 43, eSikhaleni 43, CBD 10, Richardia 4.

Implication

Focus regulatory follow-up on Brackenham, Scorpio 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.

Source: RBCAA Monthly Air Quality Report - August 2026