dialysistrackR

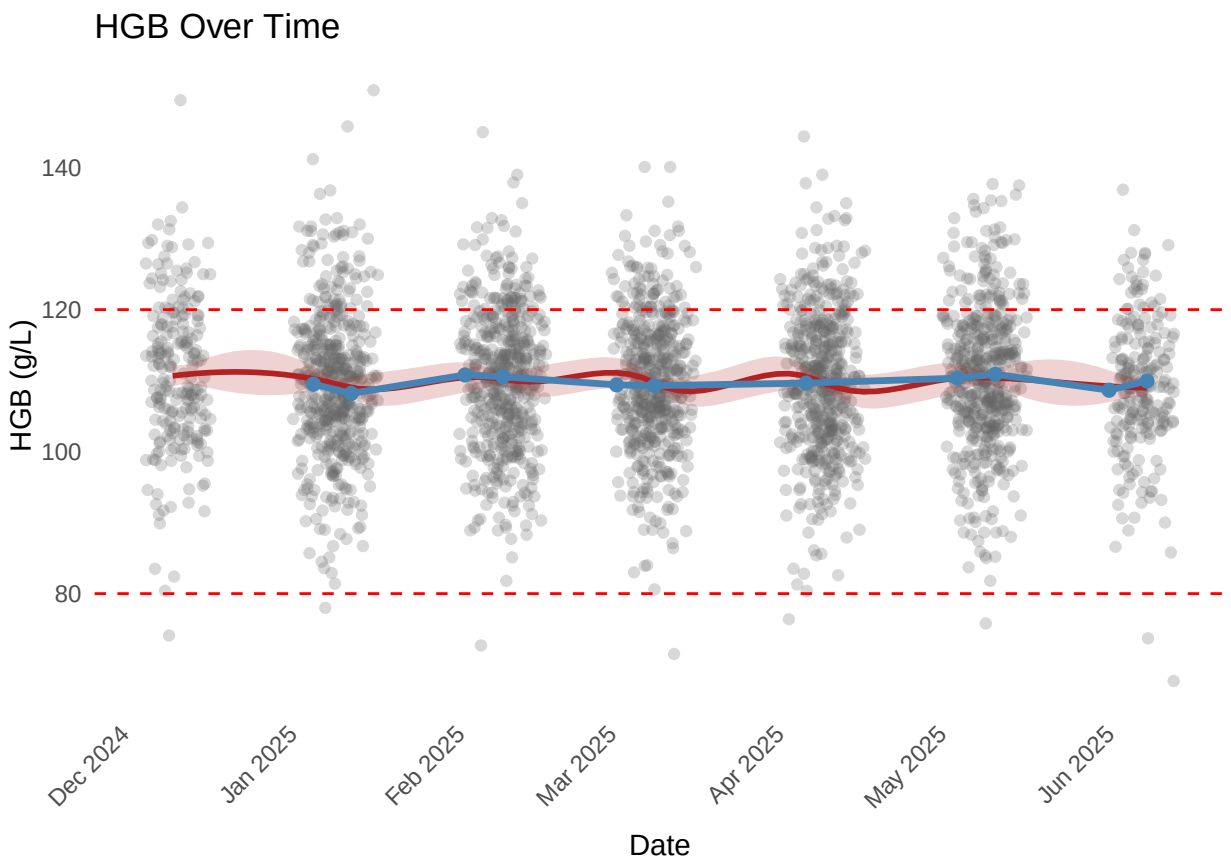
2025-06-10

Introduction

This report was generated using a collaborative R Markdown workflow designed to support transparent, reproducible analysis across sites. The project is maintained in a shared GitHub repository, with version tracking, package management, and rendering controlled programmatically to ensure consistency across contributors and outputs.

The content that follows represents the current state of shared analysis, with outputs suitable for team review, audit and integration into clinical workflows.

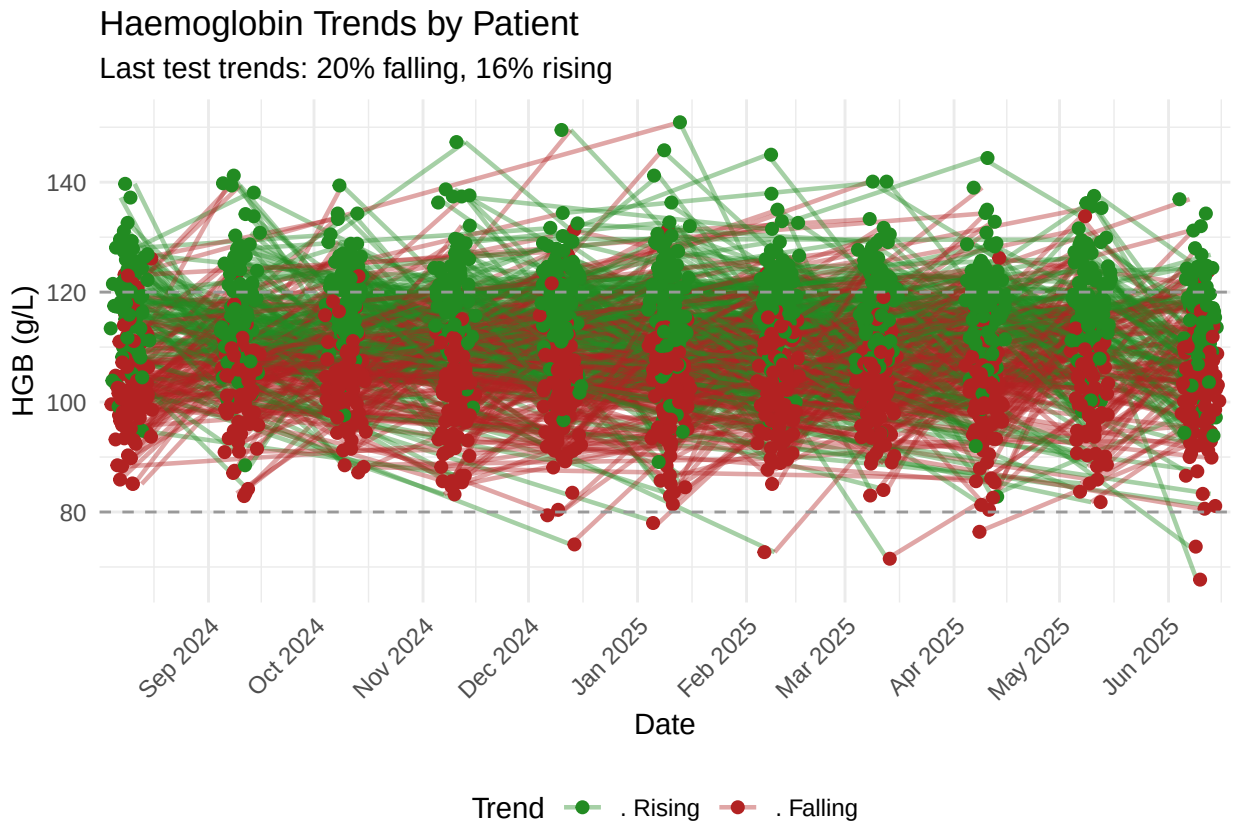
Haemoglobin

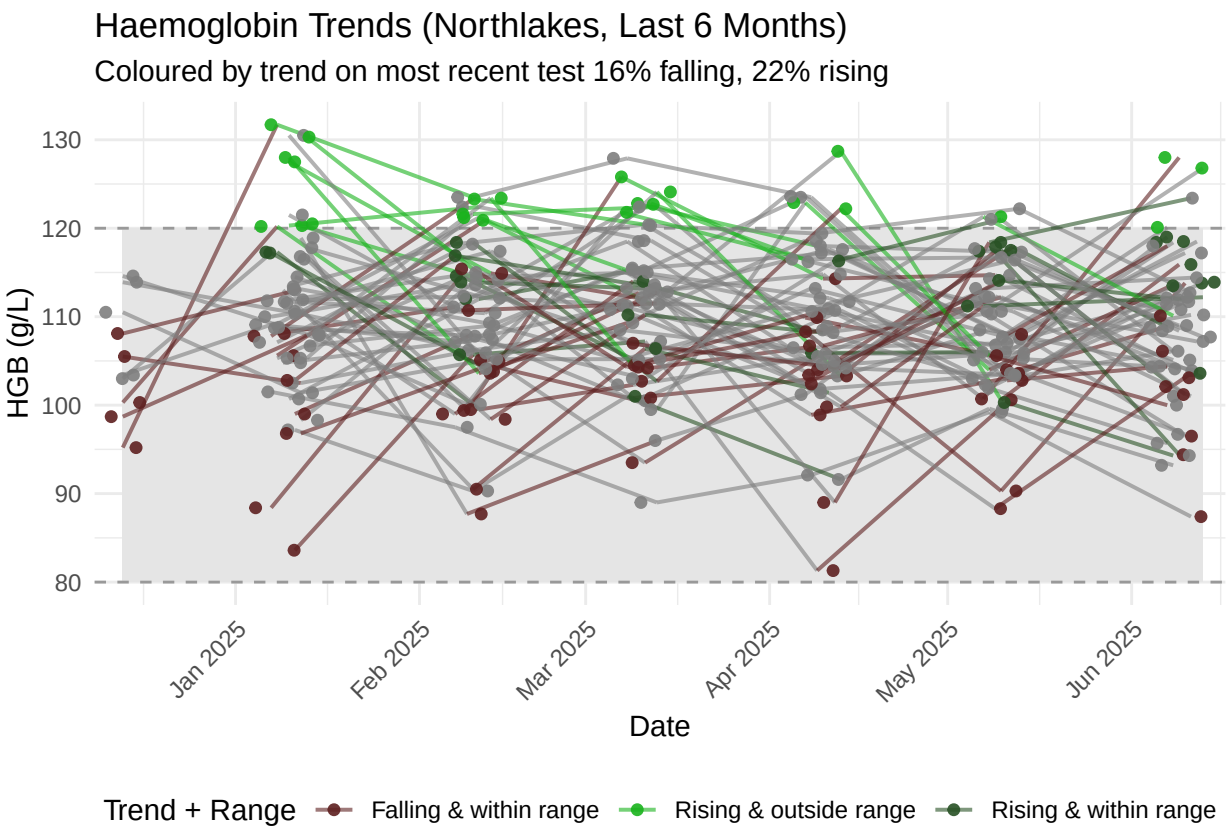


Interpretation

This plot visualises haemoglobin (HGB) levels across the unit over time. Unit-level trends can help identify systemic issues affecting multiple patients — such as inconsistent access to erythropoiesis-stimulating agents (ESAs), delays in blood draws, or problems with iron management.

- Raw data (grey dots): Each point represents a single HGB result from an individual patient on a specific date, imported directly from AUSLAB.
- Red line (LOESS curve): A smoothed estimate of the trend in HGB values over time. LOESS (Locally Estimated Scatterplot Smoothing) is a nonparametric method that fits multiple small, local regressions to the data. It's particularly useful for visualising subtle shifts and inflection points without assuming a linear or fixed relationship.
- Pale red area (confidence interval): A 95% confidence interval around the LOESS curve. It gives a visual indication of uncertainty in the smoothed trend — wider areas imply more variability or fewer observations at that timepoint.
- Blue line (weekly median): The weekly median HGB, calculated across all patients tested in that week. It provides a robust, point-in-time summary less sensitive to extreme values than the mean.
- Red dashed lines: The Kidney Health Service's target haemoglobin range (80–120 g/L). Values falling persistently outside this band may indicate a need for clinical review at the unit or system level.





Patient level Hb interpretation

This plot displays haemoglobin (HGB) levels over time for individual patients, each represented by a connected line. Colours reflect the direction of change based on their most recent result: - Red indicates a downward trend (↓ Falling) - Green indicates an upward trend (↑ Rising)

The dashed grey lines represent target HGB thresholds (80–120 g/L). The background band highlights the target range. Most patients remain within or near target, but as of the most recent test: 16% show a falling trend, 22% show a rising trend, and 0% are stable. , This plot displays haemoglobin (HGB) levels over time for individual patients, each represented by a connected line. Colours reflect the direction of change based on their most recent result: - Red indicates a downward trend (↓ Falling) - Green indicates an upward trend (↑ Rising)

The dashed grey lines represent target HGB thresholds (80–120 g/L). The background band highlights the target range. Most patients remain within or near target, but as of the most recent test: NA show a falling trend, NA show a rising trend, and NA are stable.

This figure shows longitudinal haemoglobin (HGB) results for 50 patients at the Northlakes unit over the past six months. Each line represents an individual patient trajectory, coloured by both the direction of trend and whether the most recent result was within the target range.

- Green: Rising HGB
- Red: Falling HGB
- Grey: Stable HGB
- Brighter colours indicate a most recent value outside the 80–120 g/L target range; muted colours indicate values within range.

As of the most recent measurement: - 16% of patients were trending downward - 22% were trending upward - 0% were stable

The shaded region indicates the HGB target range (80–120 g/L). This visual supports identification of patients who may benefit from anaemia review or intervention.

Haemoglobin Results tabulated

```
## Above Target    |  66 patients |  13.2%
## Below Target    |   2 patients |   0.4%
## Within Target   | 432 patients |  86.4%

## Patients who dropped from  80 to <80 g/L within 30 days:  2

## Patients with  10 g/L HGB drop within 30 days:  45
```

Table 3: Most Recent Flagged Haemoglobin Event per Patientm within 30 days

Ur Number	CollectedDate	HGB	prev_HGB	delta_HGB	delta_days	Event
RB100562	2025-06-07	100.1	124.4	-24.3	28	Drop ≥10 g/L in ≤30 days
RB113934	2025-06-07	97.3	115.3	-18.0	26	Drop ≥10 g/L in ≤30 days
RB194355	2025-06-11	107.3	118.9	-11.6	29	Drop ≥10 g/L in ≤30 days
RB243348	2025-06-08	102.7	117.1	-14.4	27	Drop ≥10 g/L in ≤30 days
RB274978	2025-06-08	102.6	115.7	-13.1	26	Drop ≥10 g/L in ≤30 days
RB280510	2025-06-07	101.4	128.9	-27.5	29	Drop ≥10 g/L in ≤30 days
RB286230	2025-05-13	103.0	113.0	-10.0	30	Drop ≥10 g/L in ≤30 days
RB319594	2025-06-07	92.5	115.8	-23.3	28	Drop ≥10 g/L in ≤30 days
RB340449	2025-06-10	107.9	123.6	-15.7	28	Drop ≥10 g/L in ≤30 days
RB366988	2025-06-09	116.7	127.5	-10.8	29	Drop ≥10 g/L in ≤30 days
RB382387	2025-06-08	90.7	114.0	-23.3	27	Drop ≥10 g/L in ≤30 days
RB383059	2025-05-11	110.5	125.7	-15.2	30	Drop ≥10 g/L in ≤30 days
RB407159	2025-06-08	109.0	122.0	-13.0	28	Drop ≥10 g/L in ≤30 days
RB413543	2025-05-12	88.6	100.1	-11.5	29	Drop ≥10 g/L in ≤30 days
RB422330	2025-06-10	105.8	121.5	-15.7	28	Drop ≥10 g/L in ≤30 days
RB434193	2025-06-07	105.5	122.3	-16.8	25	Drop ≥10 g/L in ≤30 days
RB482545	2025-06-07	101.5	115.9	-14.4	26	Drop ≥10 g/L in ≤30 days
RB489894	2025-06-11	123.8	137.5	-13.7	30	Drop ≥10 g/L in ≤30 days
RB494805	2025-06-09	113.0	135.4	-22.4	30	Drop ≥10 g/L in ≤30 days
RB495643	2025-06-10	92.1	111.2	-19.1	28	Drop ≥10 g/L in ≤30 days
RB497573	2025-06-08	99.4	117.2	-17.8	30	Drop ≥10 g/L in ≤30 days
RB507757	2025-06-09	101.9	116.8	-14.9	27	Drop ≥10 g/L in ≤30 days
RB539531	2025-06-08	96.4	113.6	-17.2	26	Drop ≥10 g/L in ≤30 days
RB548924	2025-05-11	102.5	114.0	-11.5	29	Drop ≥10 g/L in ≤30 days
RB557080	2025-06-09	106.0	121.5	-15.5	29	Drop ≥10 g/L in ≤30 days
RB570329	2025-06-08	97.5	118.0	-20.5	27	Drop ≥10 g/L in ≤30 days
RB650813	2025-06-08	102.1	117.5	-15.4	29	Drop ≥10 g/L in ≤30 days
RB656182	2025-06-09	67.7	117.5	-49.8	29	Drop from ≥80 to <80 g/L
RB659205	2025-06-11	105.3	122.0	-16.7	30	Drop ≥10 g/L in ≤30 days

RB692286	2025-06-09	101.8	113.0	-11.2	28	Drop ≥10 g/L in ≤30 days
RB693593	2025-06-07	104.0	115.8	-11.8	28	Drop ≥10 g/L in ≤30 days
RB702000	2025-06-10	110.9	129.1	-18.2	28	Drop ≥10 g/L in ≤30 days
RB721953	2025-06-11	94.5	113.7	-19.2	29	Drop ≥10 g/L in ≤30 days
RB733965	2025-06-10	97.1	109.8	-12.7	28	Drop ≥10 g/L in ≤30 days
RB743987	2025-06-08	95.4	106.8	-11.4	27	Drop ≥10 g/L in ≤30 days
RB747230	2025-06-12	92.3	108.5	-16.2	30	Drop ≥10 g/L in ≤30 days
RB873405	2025-06-07	106.9	135.3	-28.4	27	Drop ≥10 g/L in ≤30 days
RB875307	2025-05-11	106.3	119.6	-13.3	30	Drop ≥10 g/L in ≤30 days
RB888483	2025-06-12	94.0	112.0	-18.0	30	Drop ≥10 g/L in ≤30 days
RB889034	2025-06-11	107.6	118.5	-10.9	30	Drop ≥10 g/L in ≤30 days
RB899808	2025-06-07	73.7	95.4	-21.7	26	Drop from ≥80 to <80 g/L
RB914660	2025-06-12	109.1	122.4	-13.3	30	Drop ≥10 g/L in ≤30 days
RB925979	2025-06-11	107.6	122.1	-14.5	29	Drop ≥10 g/L in ≤30 days
RB930533	2025-06-09	116.6	129.5	-12.9	30	Drop ≥10 g/L in ≤30 days
RB957782	2025-06-10	101.2	116.4	-15.2	29	Drop ≥10 g/L in ≤30 days
RB985173	2025-06-07	103.4	122.3	-18.9	26	Drop ≥10 g/L in ≤30 days
RB986113	2025-06-08	106.1	121.0	-14.9	29	Drop ≥10 g/L in ≤30 days

Target Summary

```
## HGB
## no. of pts >= 80: 1
## no. of pts <= 115: 1
## TRFSAT
## no. of pts >= 20: 1
## no. of pts <= 50: 1
## K
## no. of pts >= 3: 1
## no. of pts <= 5.5: 1
## PTHR
## no. of pts >= 18: 1
## no. of pts <= 90: 1
## PHOS
## no. of pts >= 1.5: 1
## no. of pts <= 4: 1
## CAL
## no. of pts >= 2: 1
## no. of pts <= 2.6: 1
## ALB
## no. of pts >= 20: 1
## no. of pts <= 40: 1
```

Transferrin Saturation

Serum Potassium

Serum Parathyroid Hormone

Serum Phosphate

Serum Calcium

Serum Albumin

Hepatitis B Serum Antibodies

Table 1: Most Recent Haemoglobin Results Outside Target Range

Patient UR	Date	HGB (g/L)	Flag	Trend
RB114617	08-Jun-2025	129.1	High	NA
RB139157	08-Jun-2025	120.7	High	NA
RB143705	12-Jun-2025	122.2	High	NA
RB164651	11-Jun-2025	122.6	High	NA
RB190135	13-Jun-2025	136.2	High	NA
RB229963	10-Jun-2025	134.3	High	↑ Rising
RB237595	09-Jun-2025	124.8	High	↑ Rising
RB239151	10-Jun-2025	126.9	High	NA
RB240331	10-Jun-2025	126.0	High	NA
RB241413	12-Jun-2025	122.6	High	↑ Rising
RB266875	08-Jun-2025	131.2	High	↑ Rising
RB286230	08-Jun-2025	120.5	High	↑ Rising
RB303077	12-Jun-2025	130.7	High	NA
RB308989	12-Jun-2025	122.0	High	NA
RB315176	12-Jun-2025	124.8	High	↑ Rising
RB323851	09-Jun-2025	127.8	High	NA
RB331216	10-Jun-2025	133.4	High	NA
RB344272	13-Jun-2025	121.1	High	NA
RB350844	07-Jun-2025	123.5	High	NA
RB355256	11-Jun-2025	126.3	High	NA
RB355875	11-Jun-2025	122.7	High	NA
RB414403	13-Jun-2025	131.2	High	NA
RB439547	07-Jun-2025	124.6	High	↑ Rising
RB456797	12-Jun-2025	129.8	High	NA
RB473714	08-Jun-2025	121.5	High	↓ Falling
RB477107	09-Jun-2025	122.9	High	NA
RB489894	11-Jun-2025	123.8	High	↓ Falling
RB497147	07-Jun-2025	120.3	High	NA
RB515474	11-Jun-2025	122.7	High	NA
RB539953	12-Jun-2025	124.4	High	↑ Rising
RB540899	08-Jun-2025	128.0	High	NA
RB567203	09-Jun-2025	128.0	High	↑ Rising
RB569096	08-Jun-2025	127.0	High	NA
RB578001	10-Jun-2025	124.1	High	NA
RB580563	09-Jun-2025	127.0	High	NA
RB584475	13-Jun-2025	120.9	High	NA
RB601923	07-Jun-2025	124.0	High	↑ Rising
RB626085	09-Jun-2025	120.1	High	NA
RB638926	08-Jun-2025	125.3	High	NA
RB656182	09-Jun-2025	67.7	Low	↓ Falling
RB683839	08-Jun-2025	124.3	High	↑ Rising
RB716617	10-Jun-2025	120.6	High	NA
RB725105	11-Jun-2025	124.4	High	↑ Rising
RB729679	07-Jun-2025	136.9	High	↑ Rising
RB751053	10-Jun-2025	129.9	High	NA
RB751056	11-Jun-2025	126.4	High	NA
RB752587	11-Jun-2025	121.8	High	NA
RB770513	10-Jun-2025	124.3	High	NA
RB776159	10-Jun-2025	123.4	High	NA
RB803272	07-Jun-2025	123.4	High	↑ Rising
RB820613	08-Jun-2025	122.5	High	NA
RB828708	13-Jun-2025	127.1	High	NA

Table 2: Summary of Most Recent Haemoglobin Results for Subset Patients

Patient UR	Date	HGB (g/L)	Trend	Trend + Range
RB481103	13-Jun-2025	103.1	↓ Falling	Falling & within range
RB822054	13-Jun-2025	113.9	↑ Rising	Rising & within range
RB870085	13-Jun-2025	126.8	↑ Rising	Rising & outside range
RB961797	13-Jun-2025	112.2	NA	Other
RB998806	13-Jun-2025	107.7	NA	Other
RB244397	12-Jun-2025	103.9	NA	Other
RB413346	12-Jun-2025	118.5	↑ Rising	Rising & within range
RB501377	12-Jun-2025	107.2	NA	Other
RB297793	11-Jun-2025	87.4	↓ Falling	Falling & within range
RB319348	11-Jun-2025	101.0	NA	Other
RB390654	11-Jun-2025	110.2	NA	Other
RB603040	11-Jun-2025	114.4	NA	Other
RB640405	11-Jun-2025	112.7	NA	Other
RB934681	11-Jun-2025	103.6	↑ Rising	Rising & within range
RB957703	11-Jun-2025	123.4	NA	Other
RB168582	10-Jun-2025	113.8	↑ Rising	Rising & within range
RB327568	10-Jun-2025	96.5	↓ Falling	Falling & within range
RB698384	10-Jun-2025	96.7	NA	Other
RB791855	10-Jun-2025	117.2	NA	Other
RB854246	10-Jun-2025	111.9	NA	Other
RB957782	10-Jun-2025	101.2	↓ Falling	Falling & within range
RB227191	09-Jun-2025	115.9	↑ Rising	Rising & within range
RB363765	09-Jun-2025	108.4	NA	Other
RB567203	09-Jun-2025	128.0	↑ Rising	Rising & outside range
RB631378	09-Jun-2025	104.1	NA	Other
RB689835	09-Jun-2025	94.4	↓ Falling	Falling & within range
RB693898	09-Jun-2025	111.7	NA	Other
RB765436	09-Jun-2025	111.4	NA	Other
RB930049	09-Jun-2025	109.0	NA	Other
RB130759	08-Jun-2025	112.1	NA	Other
RB380638	08-Jun-2025	118.4	↑ Rising	Rising & within range
RB644601	08-Jun-2025	106.1	NA	Other
RB645747	08-Jun-2025	93.2	NA	Other
RB650813	08-Jun-2025	102.1	↓ Falling	Falling & within range
RB677480	08-Jun-2025	105.1	NA	Other
RB750127	08-Jun-2025	94.3	NA	Other
RB833880	08-Jun-2025	113.5	↑ Rising	Rising & within range
RB936631	08-Jun-2025	110.1	↓ Falling	Falling & within range
RB986113	08-Jun-2025	106.1	↓ Falling	Falling & within range
RB100887	07-Jun-2025	108.9	NA	Other
RB104146	07-Jun-2025	110.8	NA	Other
RB125094	07-Jun-2025	95.7	NA	Other
RB295892	07-Jun-2025	113.3	NA	Other
RB346794	07-Jun-2025	104.3	NA	Other
RB455582	07-Jun-2025	108.8	NA	Other
RB505468	07-Jun-2025	104.4	NA	Other
RB758417	07-Jun-2025	119.0	↑ Rising	Rising & within range
RB800576	07-Jun-2025	118.0	NA	Other
RB841991	07-Jun-2025	120.18	↑ Rising	Rising & outside range
RB870419	07-Jun-2025	100.0	NA	Other