



Sussex Annual Air Quality Alert Service Report 2023

Sussex Air Quality Partnership / East Sussex County Council

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Shaping a World of Trust



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Executive Summary

Bureau Veritas UK Ltd has been commissioned by East Sussex County Council on behalf of the Sussex local authorities (who collectively form the Sussex Air Quality Partnership) to provide and manage the Air Quality Alert service for Sussex. This service forms part of the wider management role for the Sussex air quality network. This report provides an overview of the Alert Service during 2023.

The Sussex Air Pollution Alert Service

Sussex has been operating an air pollution alert service for over a decade. The Alert service was established to provide air pollution alerts direct to vulnerable people and the public to inform those people (and their carers where relevant) of air pollution episodes that may impact on their health due to any pre-disposition to conditions linked to respiratory health and/or wider air pollution linked conditions.

2023 Sussex Alert Service

The Alert Service continued to provide a detailed forecasting service to over 30 local areas across Sussex as well as 3 regional location forecasts for East Sussex, West Sussex and Brighton.

2023 Service Users and Alerts

During 2023, the service provided alerts to over 642 users. The enhanced Alert service commenced in October 2022, and by the end of 2022 there were 558 registered users, therefore there has been an increase of 84 users or 13% registered to the Alert service. During 2023 the service issued 3,319 email alerts, 2,481 text alerts and 44 voice message alerts over the year.

2023 Air Pollution Forecasts

During 2023 there were 30 days when air pollution was forecast as 'moderate', with 1 further day forecast above 'high' and 2 further days when 'very high' pollution levels were forecasted across Sussex.

The air pollution forecast data, which is sourced from the Met Office, was compared to measured data from the Sussex network to ascertain the accuracy of the forecasts. The service provided Alerts to 31 locations across Sussex. Each location was provided with an individual forecast which varied from site to site. Overall, 91% of the forecast days in 2023 were for 'low' air pollution with 8% of forecasts provided at 'moderate' levels with 0.3% (or 1-2 forecast days) were at 'high' and 1% of the days were forecast at 'very high' during 2023.

Measurement data Intercomparisons

A comparison of two Sussex sites (Eastbourne and Brighton) was undertaken to compare the forecasted results and measured data. This review provides a comparison of how the Alert service has operated against real-world measurements. Eastbourne and Brighton data showed good correlation with forecasted Daily Air Quality Index (DAQI) 'low' and 'moderate' days. There was only 1 day in 2023 where a forecast for "High" pollution was produced and this was only in 2 locations (Horsham and Billingshurst).

The analysis of the DAQI forecasts values and measured DAQI values for Eastbourne and Brighton showed that the service was within 1 – 2 DAQI values of accuracy which cover 96% to 98% of the forecasts produced.

Summary

In summary the Sussex Alert service has continued to be shown to be reliable with forecasts operational for 364 (99%) days in 2023. The service data analysis has shown that the forecasts and measured data continue to be well aligned. Thus it continues to provide confidence in the service and shows it can provide practical and reliable health protection service for subscribers and the general public.

1. Sussex Air Quality Alert Service

The Sussex Air Quality Alert service was developed by the Sussex Air Quality Partnership (“Sussex-air”), which is made up from the Sussex local authorities and Public Health bodies. The members of Sussex Air Quality Partnership are:

- Adur District Council
- Arun District Council
- Brighton and Hove City Council
- Chichester District Council
- Crawley Borough Council
- Eastbourne Borough Council
- East Sussex County Council
- Hastings Borough Council
- Horsham District Council
- Mid Sussex District Council
- Lewes District Council
- Rother District Council
- Wealden District Council
- West Sussex County Council
- Worthing Borough Council

Bureau Veritas provides this service on behalf of the Sussex Air Quality Partnership, as part of its wider service offering for the data management and website hosting for the dissemination of air quality data through the Sussex-air portal.

The Sussex Air Quality Alert service was established over 15 years ago to provide a Sussex-wide air pollution forecasting and alert service to support vulnerable persons such as those with respiratory and heart conditions and the public.

- The service provides pollution alerts direct to subscribers for “FREE” via different delivery methods such as text/SMS, email, or telephone message to landlines.
- The Alerts are sent to subscribers 24 to 48 hours prior to an episode of elevated air pollution.
- Subscribers can select either the general area alerts for East or West Sussex or to specific areas more representative of where they live or work.
- Subscribers can cancel the service at any time.

Further details on the service and live pollution forecasts are shown on the homepage <https://sussex-air.net/>

1.1 How the Alert Service works

Air quality is measured for a variety of pollutants and can have a variety of effects on different people in society. The UK Air Quality Banding system is used to inform the public about the levels of pollution that they may be exposed to and are based on health advice approved by the Committee on Medical Effects of Air Pollution Episodes (COMEAP).

The system uses an index divided into four bands to provide more detail about air pollution levels in a simple way; these bandings range from Low, Moderate, High to Very High. The overall air pollution index is calculated from the highest index value of five pollutants: nitrogen dioxide, sulphur dioxide, ozone, carbon monoxide and particles < 10µm (PM₁₀). The bandings, pollutant concentrations and periods of exposure are provided in Appendix A.

Using the national UK Met Office air pollution service we check and send out air pollution alerts only when pollution levels are likely to affect people’s health. Forecasts of air quality are generated daily and cover a 5-day period and are available 365 days of the year.

Alerts are only sent if:

- air quality is forecast to be “Moderate” or above on the day of the forecast; or
- on any of the other 4 days within the 5-day forecast period.

Alerts are sent;

- in the morning and sent by mid-day each day; and
- cover a 5-day period.

Subscribers will be sent the alert if:

- there is an alert for an area they are subscribed to is “Moderate” or above; and
- an alert is forecast for the present day or one day over the following 4 days.

We will not resend alerts if:

- the air pollution levels stay the same or goes back down to “Low”.

We will only send alerts if:

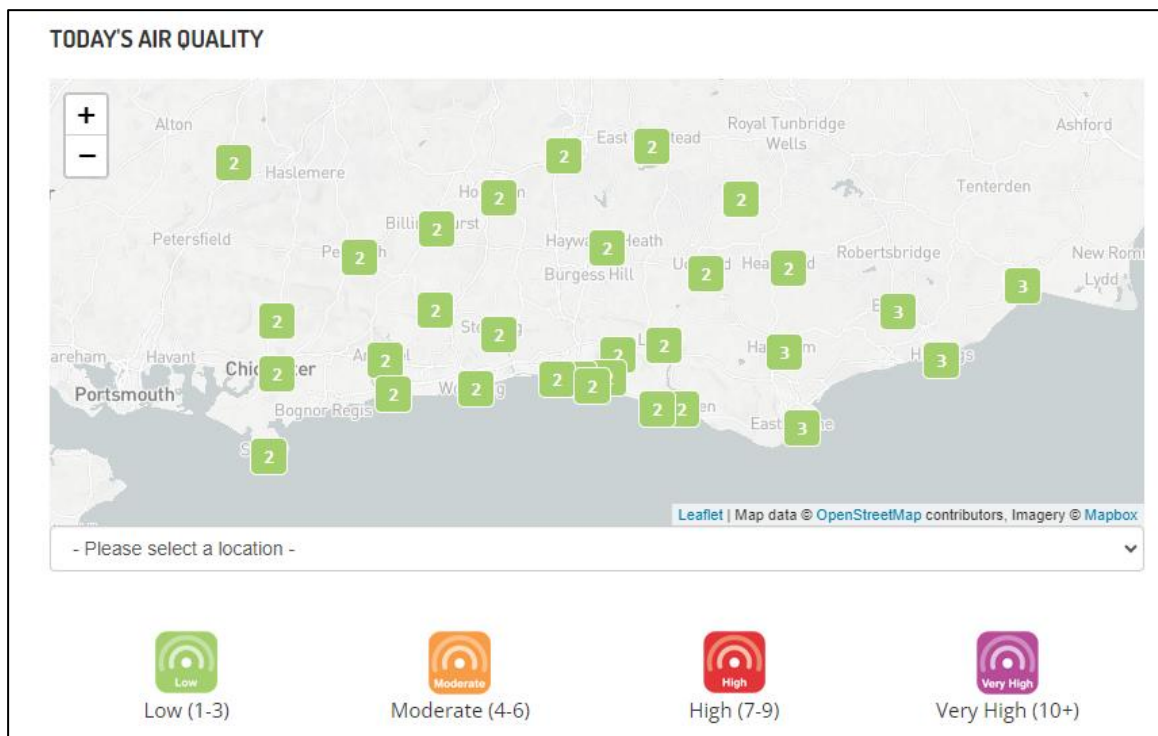
- the level changes to “High” or “Very High” in that period.

1.2 Air Quality forecasts and alerts

Air quality forecasts are produced daily, with alerts are only issued when above the “moderate” DAQI level.

There are 31 area forecasts produced daily, which can vary slightly dependent on conditions, locations and other model forecast factors the Met Office determines. The locations of the forecast locations are shown below in Figure 1-1 and listed in Appendix B.

Figure 1-1: Alert forecast locations in Sussex.



2. 2023 Air Quality Alert Service

2.1 Sussex Alert Service

The Sussex Alert service was operational from March of 2022; however, the service was updated in October 2022 with a new service and all users invited to re-register. The service was enhanced to provide more localised air quality forecasts instead of the general “West” and “East Sussex” and “Brighton only” forecasts and alerts. There are now 33 different areas across Sussex that have specific forecasts.

2.2 Service users in 2023.

The service users reported here are those that have been subscribed since the 1st January 2023. Table 2-1 shows the subscribers and delivery method type for the service for 2023.

The registered service user numbers are provided for each month with a final total for 2023. The total number of subscribers can vary from month to month, with some leaving as well as new users subscribing. The total at the end of the year includes all those who stayed with the service plus new recruits and leavers, hence the variation in the totals.

Table 2-1: Alert Subscribers 2023.

Service type	Email	Text/SMS	Voice message
Pre 2023	307	246	5
January	7	2	0
February	6	2	0
March	3	2	0
April	2	3	0
May	4	3	0
June	15	10	0
July	9	4	0
August	6	4	0
September	1	1	0
October	4	1	0
November	2	3	0
December	0	0	0
Total Subscribers to date	357	280	5

Note: The total number of subscribers can vary from month to month, with some leaving as well as new people subscribing. The total at the end of the period includes all those who stayed with the service plus new recruits and leavers, hence the difference in the totals.

The alert service is delivered mainly by email (357 users) and text/SMS (280 users) services, these account for 55.6% and 43.6% of the users respectively. The remaining (5) 0.8% of users still prefer to receive alerts via land-line telephone voice messages.

Table 2-2 Total Subscribers

Total Number of Subscribers as of end of December 2023 by all Communication Methods	642
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The enhanced Alert service commenced in October 2022, and by the end of 2022 there were 558 registered users, therefore there has been an increase of 84 users or 13% registered to the Alert service.

Table 2-3 shows the number of alerts sent via the three main service distribution routes. The number of alerts sent are relative the number of service users, the areas they have selected and the number of 'moderate' or above forecasts produced in a month.

Table 2-3: Alerts sent (January to December 2023)

Period	Service type		
	Email	Text/SMS	Voice message
January	50	50	1
February	1	0	0
March	61	63	0
April	494	382	7
May	75	66	1
June	1,453	1,130	20
July	0	0	0
August	208	151	3
September	895	692	10
October	82	47	2
November	0	0	0
December	0	0	0
Total (2023)	3,319	2,481	44

2.3 Sussex Alert statistics 2023

5-day Forecast statistics 2023

The Sussex alert service from the Met Office provides a 5-day DAQI forecast for each day covering the 33 different locations across the region. The forecasts look at the predicted maximum DAQI over the following 5 days and provides a forecast DAQI value for those days, it is this maximum value that is used to Alert vulnerable individuals. These are the data that is issued in monthly reports.

Table 2-4 shows a sample of Sussex locations and the number of forecasted DAQI banding days, demonstrating that there is some variation in forecast days across Sussex. The full list of 5-day DAQI days for all 33 sites is provided in Appendix B Table B-1.

Table 2-4: Number of 5-day DAQI forecast days in 2023 at selected sites.

Alert location	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
Brighton	333	29	0	3
Chichester	333	29	0	3
Eastbourne	327	34	1	3
East Grinstead	334	27	1	3
Hastings	327	34	1	3
Haywards Heath	333	27	2	3
Horsham	332	27	3	3
Worthing	332	30	0	3
Average	331	30	1	3
Percentage of period	91%	8%	0.3%	1%

The data identified that most 5-day forecasted days were 'low' air pollution days over this period accounting for on average 330 days (94%). There were on average 30 days across the region that were forecasted as 'moderate' air pollution days, which accounted for 8% of days during this period. On average there was only 1 day (0.3%) in each location where 'high' days of pollution were being forecast. Whereas there were 3 days (1%) that were forecasted at 'very high' pollution during 2023.

Daily DAQI Forecast statistics 2023.

The actual DAQI forecast on a specific day is presented in this section and can differ from the max. 5-day DAQI forecast as described in the previous section. This is due to the 5-day DAQI forecast using the maximum predicted forecast value on the date it is distributed, whereas the actual DAQI value is only for that specific date.

Table 2-5 shows a sample of Sussex locations and the number of actual forecasted DAQI days. The full list of actual DAQI days for all 33 sites is provided in Appendix B Table B-2.

Table 2-5: Number of actual DAQI forecast days in 2023 at selected sites.

Alert location	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
Brighton	352	12	0	0
Chichester	352	12	0	0
Eastbourne	351	12	0	0
East Grinstead	354	10	0	0
Hastings	351	13	0	0
Haywards Heath	353	11	0	0
Horsham	352	11	1	0
Worthing	351	13	0	0
Average	352	12	0	0
Percentage of period	96%	3%	0.0%	0%

The full set of 33 sites data identifies that most of the actual forecasted days were 'low' air pollution days over this period accounting for on average 352 days (96%). There were on average 12 days across the region that were forecasted as 'moderate' air pollution days, which accounted for 3% of days during this period. There 1 day (0.3%) in 2023 where a 'high' DAQI day was forecast, however this was only in 2 locations (Horsham and Billingshurst). There were no days where 'very high' pollution was forecasted during 2023.

A more detailed distribution of forecasts is provided in Table 2-7 for Eastbourne and in Table 2-7 for Brighton, to demonstrate the spread of alerts over the period of the service in 2023.

Table 2-6: Number of forecast DAQI days for Eastbourne in 2023.

Month	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
January	29	0	0	0
February	28	0	0	0
March	31	0	0	0
April	29	1	0	0
May	31	0	0	0
June	25	5	0	0
July	31	0	0	0
August	30	1	0	0
September	25	5	0	0
October	31	0	0	0
November	30	0	0	0
December	31	0	0	0
Total	351	12	0	0

Note: Data was not available for all days in 2023.

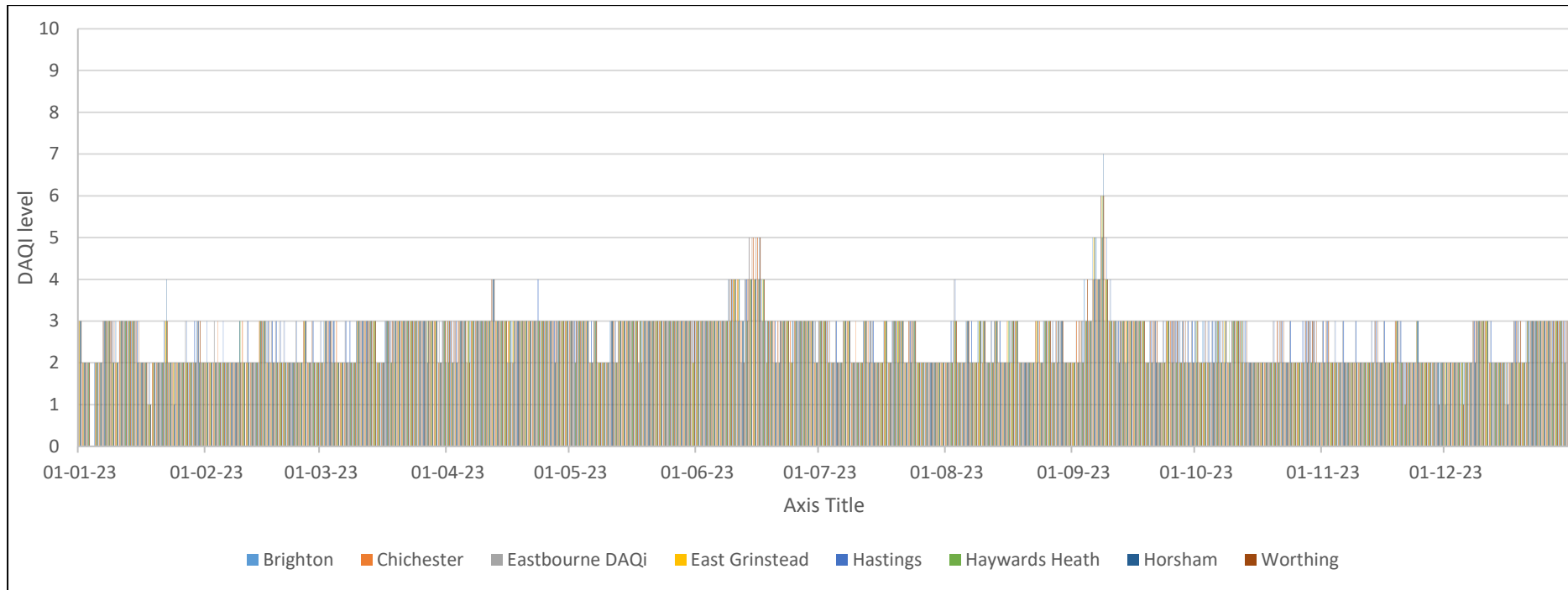
Table 2-7: Number of forecast DAQI days for Brighton in 2023.

Month	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
January	30	0	0	0
February	28	0	0	0
March	31	0	0	0
April	29	1	0	0
May	31	0	0	0
June	23	7	0	0
July	31	0	0	0
August	31	0	0	0
September	26	4	0	0
October	31	0	0	0
November	30	0	0	0
December	31	0	0	0
Total	352	12	0	0

Note: Data was not available for all days in 2023.

Figure 2-1 presents the timeline of DAQI forecast days across Sussex in 2023. This shows the profile of forecast days over the period for the eight selected sites. A peak period of 'high' and 'very high' DAQI forecasts occurred in October, which is reviewed further in following sub-sections.

Figure 2-1: Daily DAQI forecast days across Sussex 2023.



3. 2023 Forecast and Measurement Data Intercomparisons

3.1 DAQI forecasts and measurement data inter-comparison

There are two main pollutants of interest; ozone (O₃) and particulate matter (PM₁₀ and PM_{2.5}). O₃ is the pollutant that most commonly exceeds the “moderate” threshold in Sussex as it is higher in rural and background locations and is influenced by long range transport from the nearby continent. O₃ exceedances tend to occur more in the warmer periods such as spring and summer. Particulate matter exceeds the ‘moderate’ threshold less frequently and this tends to occur during still, settled weather conditions which lead to poor dispersal. It is also influenced by long range transport from the continent which adds to local emissions. Particulate exceedances tend to occur more in the colder more settled periods such as in the winter.

Two sites in the Sussex Air Quality Network were selected for the inter-comparison of the DAQI forecasts and measured data, namely Eastbourne Devonshire Park (EB1) and AURN Brighton Preston Park (BH0). These sites were selected as these are the only locations where DAQI Forecast Alerts were available, and where the key pollutants of interest were monitored i.e., O₃, PM₁₀, PM_{2.5} and NO₂ during 2023.

3.2 Eastbourne Devonshire Park inter-comparison

Eastbourne Devonshire Park (EB1) was selected for inter-comparison of DAQI forecasts and measured data, as this location monitored O₃ as well as NO₂ and PM₁₀ during 2023. Table 3-1 shows the number of days measured at the DAQI levels for Eastbourne Devonshire Park.

Table 3-1: Number of measured DAQI days in 2023 by pollutant.

Eastbourne (EB1)	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
O ₃	354	2	0	0
PM ₁₀	326	0	0	0
NO ₂	355	0	0	0

Note: Data was not available for all days in 2023 for every pollutant.

Table 3-1 shows that during 2023 the measured data at Eastbourne only breach the “Low” DAQI value twice. The 2 days that breached the “Moderate” DAQI days were from O₃ measurements. Over the period there were 274 days where O₃ provided the highest DAQI value, whereas there were only 8 days where PM₁₀ provided the highest DAQI value. There were no days where NO₂ was higher than either O₃ or PM₁₀. O₃ was therefore the more dominant pollutant which produced the highest DAQI values during 2023.

Table 3-2: Number of forecasted actual DAQI days in 2023 for Eastbourne.

	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
Eastbourne	351	12	0	0
	96%	3%	0%	0%

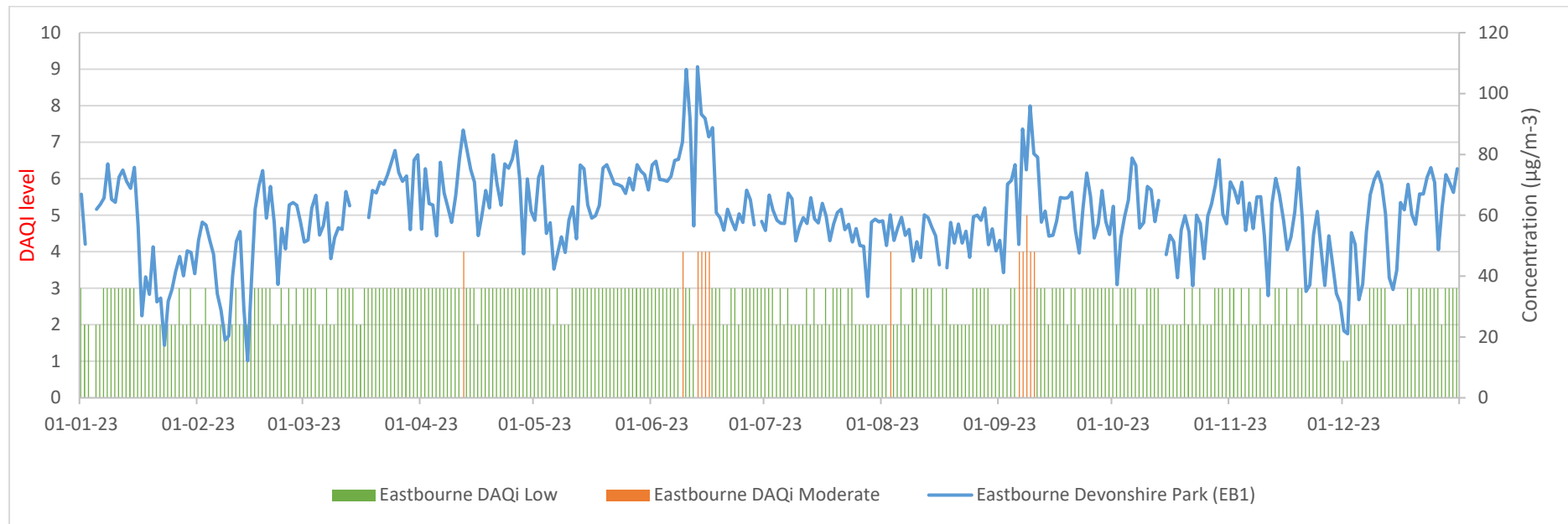
Note: Forecast data were not available for 2 days in 2023.

Table 3-3 shows that there were a similar number of days that were forecast as low when compared to the measured data at Eastbourne Devonshire Park. However, the forecasts show an over prediction when compared to the measured data, as there were 10 more forecasted “Moderate” days in 2023.

To analyse the effectiveness of the forecasts we have compared the O₃ measured data (max 8-hour running average for each day) with the DAQI data for the Eastbourne Devonshire Park (EB1) Air Quality Monitoring Station (AQMS).

Figure 3-1 provides the profile of DAQI forecast days for the Eastbourne area and overlays the O₃ data (based on the max. 8-hour running mean) from Eastbourne AQMS. This overlay indicates that the DAQI forecasts corresponded reasonably well with measured O₃ peaks through the period of 2023

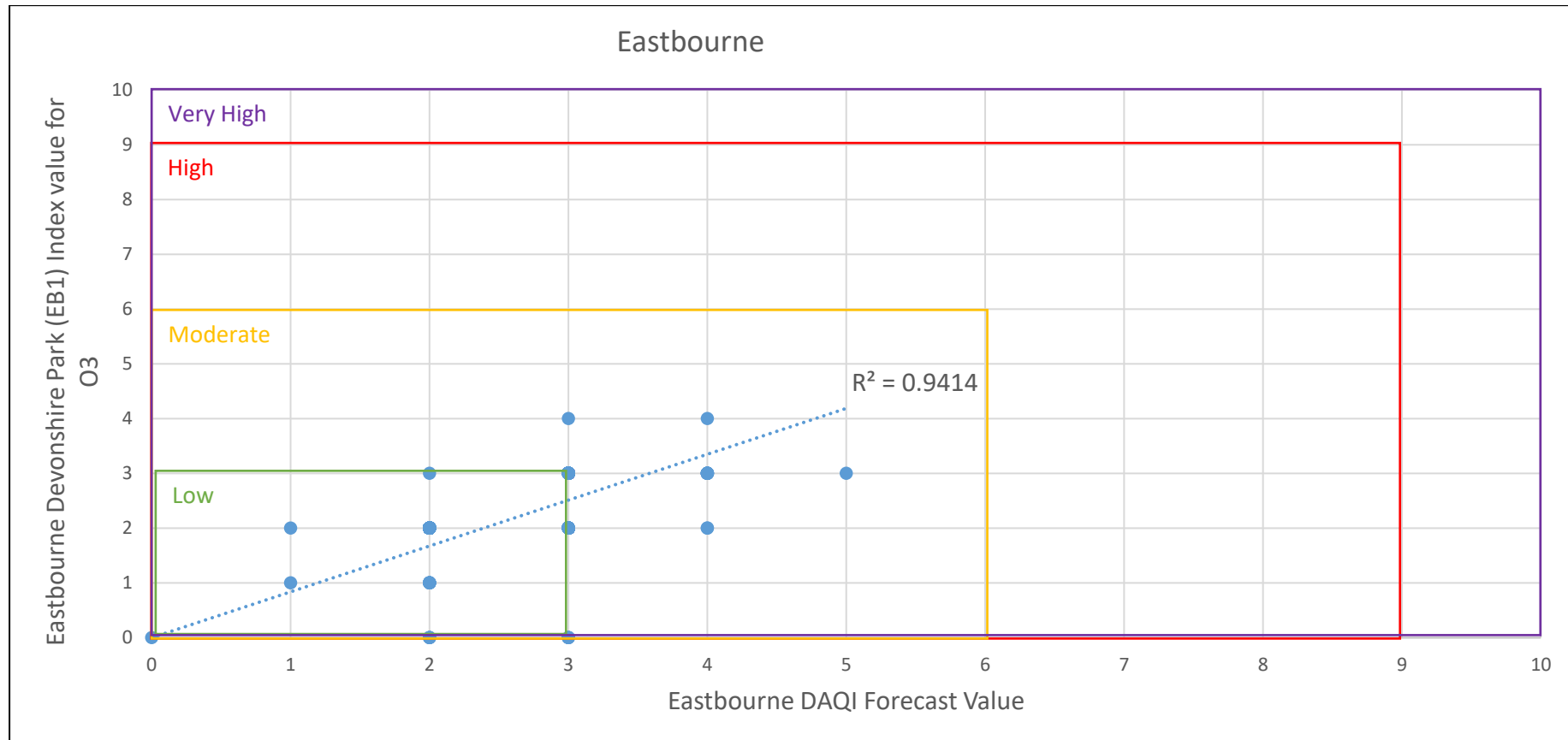
Figure 3-2: DAQI forecast days and O₃ measured data (max 8-hour running average for each day) for Eastbourne in 2023.



Note: Data was not available for all days in 2023 at Eastbourne Devonshire Park (EB1).

Figure 3-3 shows the calculated DAQI values from the Eastbourne Devonshire Park (EB1) measurement site, on the y-axis, versus the forecasted DAQI value for the Eastbourne area on the x-axis. The value for each is plotted on each axis and provides a statistical value to show how close each day's value are during the period, the calculation showing how close the values are is provided as the R-squared (R^2) value, out of a value of 1. The intercomparison data show a strong correlation in the low and moderate DAQI forecasts and measured data. Overall, statistically the R^2 value of 0.9414 shows strong correlation of DAQI forecasts and measured data.

Figure 3-3: Inter-comparison of DAQI forecast days and DAQI days calculated from Eastbourne Devonshire Park data in 2023.



Forecast Accuracy

The forecasts analysis shown in Table 3-4 compares the 2023 and 2022 (in brackets) data for Eastbourne. Note that 2022 was not a complete year, therefore the percentage difference is the best comparator. In comparison 2023 had a significant improvement in under-predictions moving from 34% in 2022 to 1%. There was an increase in over-predictions from 23% in 2022 to 36% in 2023. However, aligned predictions or correct DAQI forecasts increased from 43% in 2022 to 63% in 2023.

Table 3-4: Number of forecasted DAQI days in 2023 and 2022

Forecast	Number (2022)	% (% 2022)
Under-predictions	3 (103)	1% (34%)
Over-predictions	131 (70)	36% (23%)
Aligned predictions	231 (133)	63% (43%)

Table 3-5 shows that the difference in the DAQI values where a forecast predicted a value and the measured DAQI values were not significant. Most forecasts (96%) were within 1 DAQI value, with a further 2% within 2 DAQI values for this period. The number of days where the forecast over-predicted a DAQI by more than 3 DAQI values was 1 day.

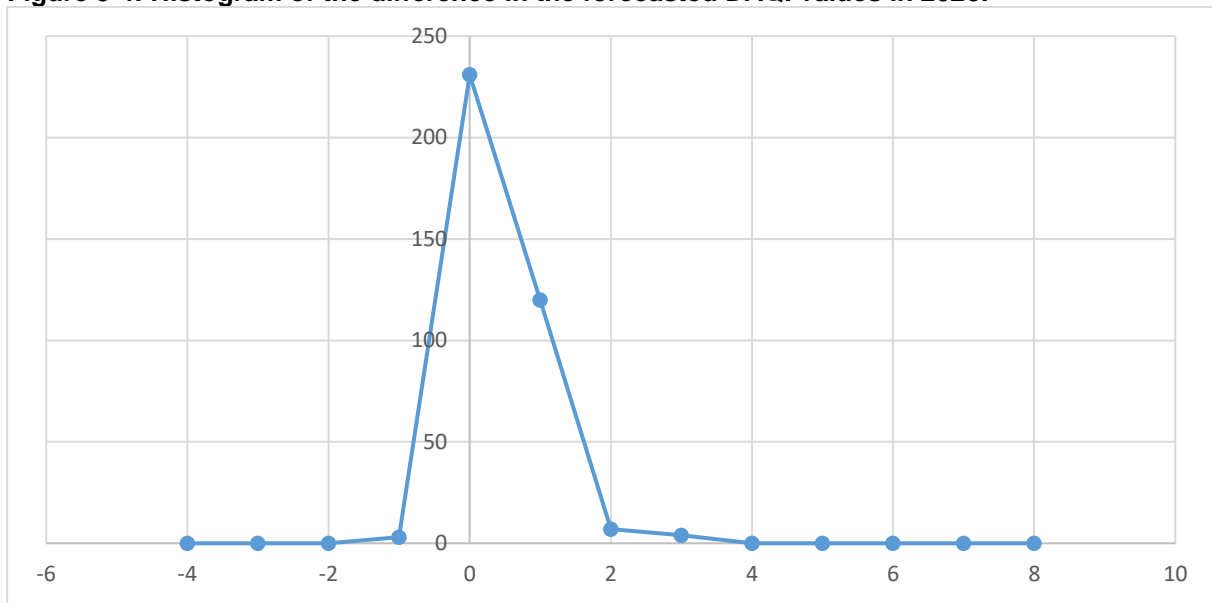
Table 3-5: Difference in the forecasted DAQI values in 2023.

Difference in forecasted and measured DAQI (DAQI value difference)	Number	%
8	0	0%
7	0	0%
6	0	0%
5	0	0%
4	0	0%
3	1	0%
2	8	2%
1	122	33%
0	231	63%
-1	3	1%
-2	0	0%
-3	0	0%
-4	0	0%
-5	0	0%

A histogram showing the profile of the difference in the forecasted DAQI values in 2023 is shown in Figure 3-4.

The x-axis shows the difference in forecasted and measured values, with the number of over-predicted forecasts shown as positive numbers and under-predictions shown as negative numbers.

Figure 3-4: Histogram of the difference in the forecasted DAQI values in 2023.



3.3 Brighton Preston Park DAQI inter-comparison

AURN Brighton Preston Park was selected for inter-comparison of DAQI forecasts for Brighton and measured data, as this location monitored O₃ as well as NO₂ and PM₁₀ during 2023

In Brighton there were 5 days above the Moderate (4-6) DAQI level during 2023. Table 3-6 shows the number of days measured at the DAQI levels for AURN Brighton Preston Park.

Table 3-6: Number of measured DAQI days in 2023 by pollutant at AURN Brighton

Brighton Preston Park	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
O ₃	324	5	0	0
PM _{2.5}	330	0	0	0
NO ₂	327	0	0	0

Note: Data was not available for all days in 2023 for every pollutant.

Table 3-6 shows that during 2023 of the 330 days available, the measured data at Brighton Preston Park only breach the “Low” DAQI value five times. The 5 days that were “Moderate” DAQI days were from O₃ measurements. Over the period there were 225 days where O₃ provided the highest DAQI value, whereas there were only 17 days where PM₁₀ provided the highest DAQI value. There were no days where NO₂ was higher than either O₃ or PM₁₀. O₃ was therefore the more dominant pollutant which produced the highest DAQI values during 2023.

Table 3-7: Number of forecasted DAQI days in 2023 for Brighton

Alert location	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
Brighton	352	12	0	0
	96%	3%	0%	0%

Table 3-7 in comparison to Table 3-6 shows that there were more days that were forecasted (364) than measured (330). The majority (96%) of days were forecast as “Low” DAQI days and only 12 days were forecast as “Moderate” DAQI days over 2023.

The Met Office service also provides national and regional forecasts which are published each year on the UK-AIR website¹, these data provide the local statistics on the number days for each DAQI category. shows the DAQI for each day for Brighton over 2023 with the measured O₃ and PM_{2.5} from AURN Brighton Preston Park. Data from the Met Office service does not specify the pollutant type, however when overlaying the AURN Brighton Preston Park O₃ data for 2023, it is evident the DAQI moderate days were influenced by elevated concentrations of O₃, as shown in Figure 3-5.

¹ <https://uk-air.defra.gov.uk/data/DAQI-regional-data>

Figure 3-5: 2022 DAQI forecast and measured data for Brighton.

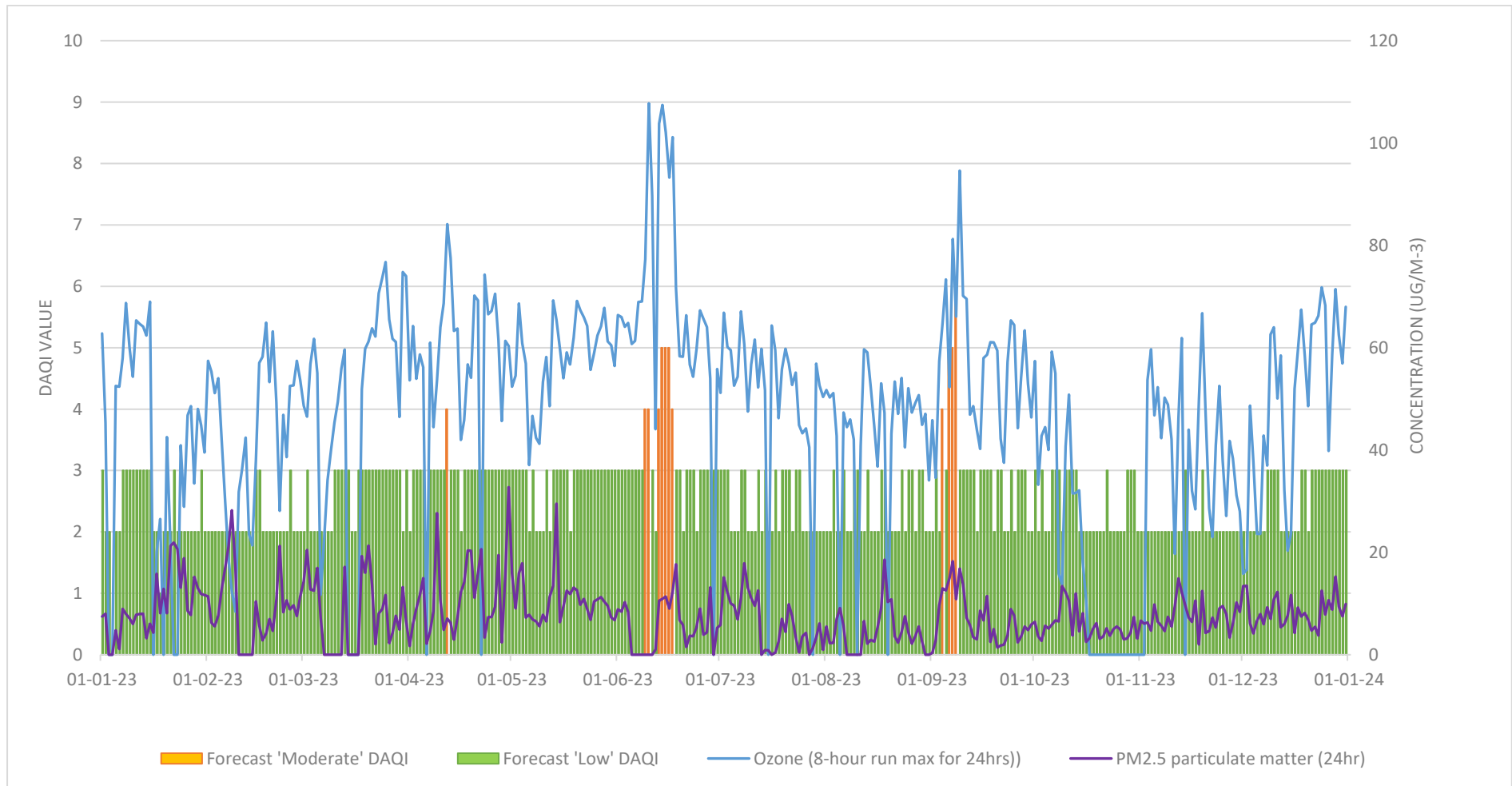
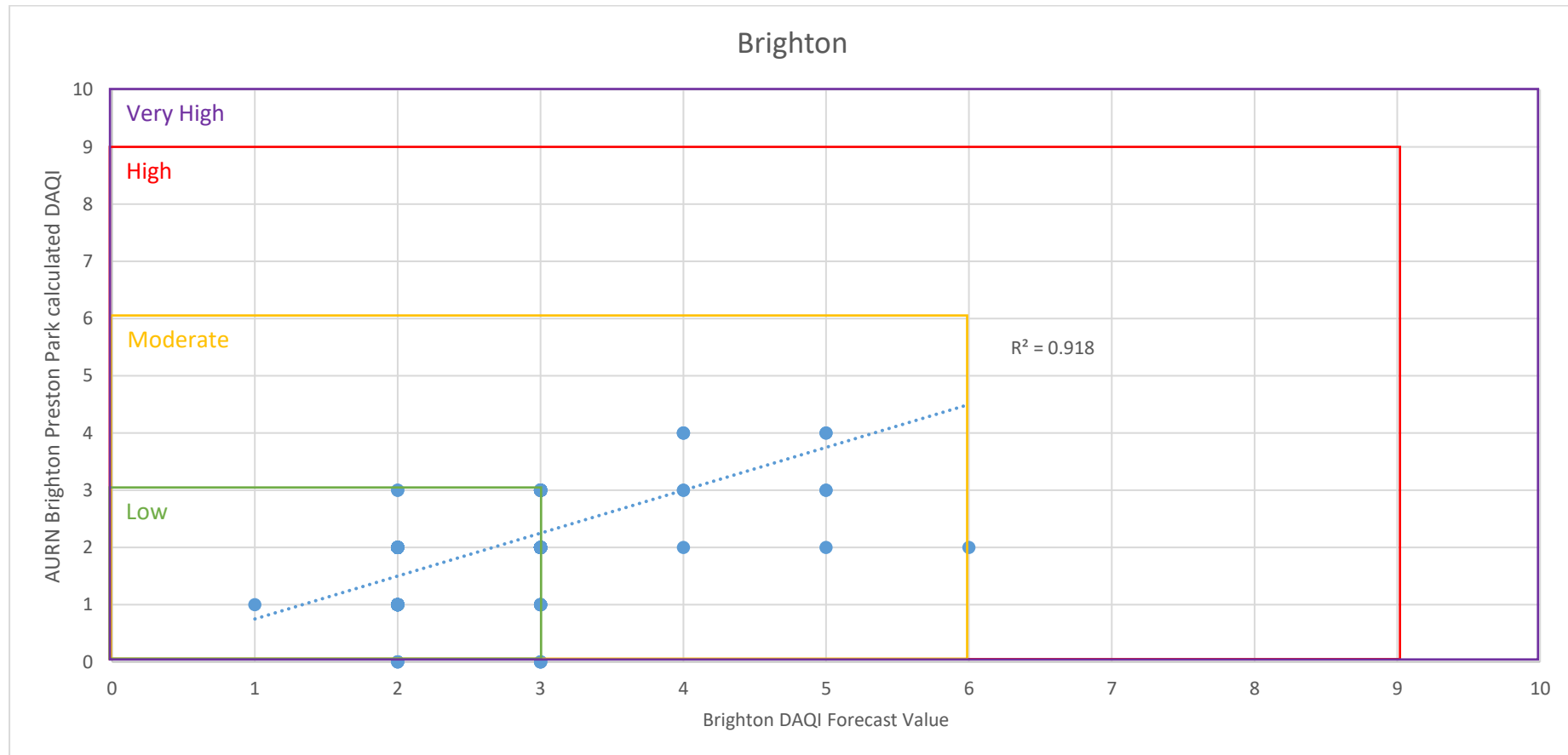


Figure 3-6 shows the calculated DAQI values from the AURN Brighton Preston Park measurement site, on the y-axis, versus the forecasted DAQI value for the Brighton area on the x-axis. The value for each is plotted on each axis and provides a statistical value to show how close each day's value are during the period, the calculation showing how close the values are is provided as the R-squared (R^2) value, out of a value of 1. The intercomparison data show a strong correlation in the low and moderate DAQI forecasts and measured data. Overall, statistically the R^2 value of 0.918 shows strong correlation of DAQI forecasts and measured data.

Figure 3-6: Inter-comparison of DAQI forecast days and DAQI days calculated from AURN Brighton Preston Park in 2023.



Forecast Accuracy

The forecasts analysis shown in Table 3-8 provides the 2023 data for Brighton. There was 1% under-prediction in forecasts when compared to measured data during 2023. 51% of the forecasts were over predicting forecasts against Preston Park with 46% of the forecasts aligned or correct in 2023.

Table 3-8: Number of forecasted DAQI days in 2023

Forecast	Number (2022)	% (% 2022)
Under-predictions	2	1%
Over-predictions	186	51%
Aligned predictions	168	46%

Table 3-9 shows that the difference in the DAQI values where a forecast predicted a value and the measured DAQI values were not significant. Most forecasts (98%) were within 1 DAQI value, with a further 3% within 2 DAQI values for this period. The number of days where the forecast over-predicted a DAQI by more than 3 DAQI values was 2 days.

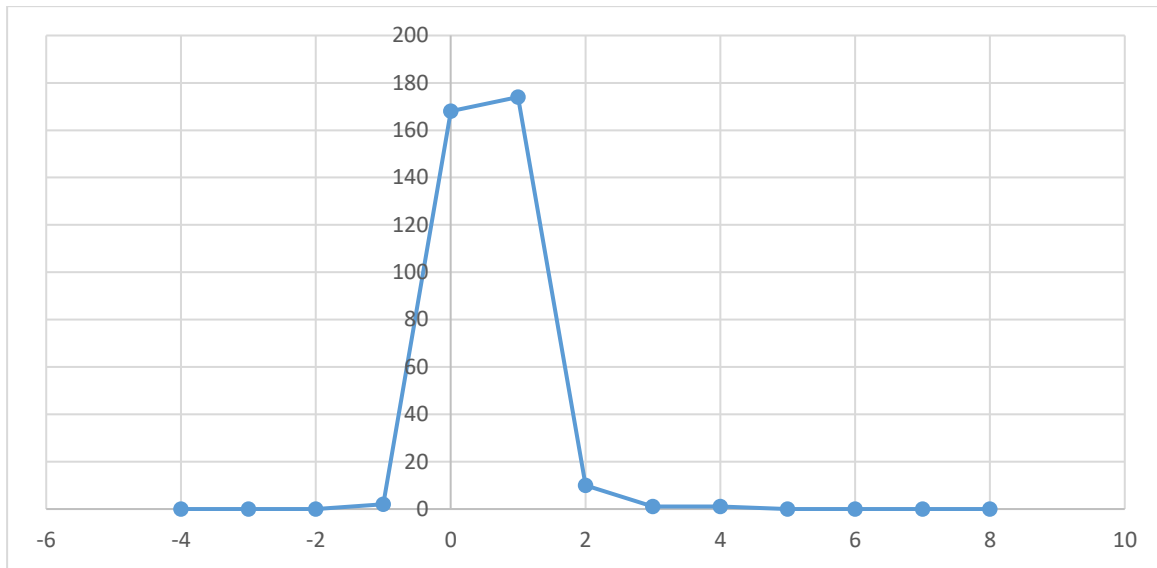
Table 3-9: Difference in the forecasted DAQI values in 2023.

Difference in forecasted and measured DAQI (DAQI value difference)	Number	%
8	0	0%
7	0	0%
6	0	0%
5	0	0%
4	1	0%
3	1	0%
2	10	3%
1	174	48%
0	168	46%
-1	2	1%
-2	0	0%
-3	0	0%
-4	0	0%
-5	0	0%

A histogram showing the profile of the difference in the forecasted DAQI values in 2023 is shown in Figure 3-4.

The x-axis shows the difference in forecasted and measured values, with the number of over-predicted forecasts shown as positive numbers and under-predictions shown a negative numbers.

Figure 3-4
Figure 3-7: Histogram of the difference in the forecasted DAQI values in 2023.



3.4 Summary

The air quality forecasts produced for the Sussex Alert service have shown to have strong correlations with measured data at Eastbourne and Brighton. The analysis of the DAQI forecasts values and measured values for Eastbourne and Brighton showed that the service was within 1 – 2 DAQI values of accuracy for over 96% to 98% of the forecasts produced. Some false positives were identified but these were only for 1% of the period's forecasts.

The forecasts have been shown to correlate well in the 'low' to 'moderate' bandings during 2023. There were no 'high' or 'very high' forecasts during the year.

In summary the Sussex Alert service has been shown to be reliable with forecasts operational for 364 (99%) days in 2023. The data analysis has shown that the forecasts and measured data continue to be well aligned. This provides confidence in the service and shows it can provide practical and reliable health protection service for subscribers and the general public.

Appendices

Appendix A: Air Quality Bandings

Table A -1– UK Air Quality Bandings

Band	Index	Ozone	Nitrogen Dioxide	Sulphur Dioxide	PM2.5 Particles	PM10 Particles
		Running 8 hourly mean	Hourly mean	15 minute mean	24 hour mean	24 hour mean
		µg m-3	µg m-3	µg m-3	µg m-3	µg m-3
Low						
	1	0-33	0-67	0-88	0-11	0-16
	2	34-66	68-134	89-177	12-23	17-33
	3	67-100	135-200	178-266	24-35	34-50
Moderate						
	4	101-120	201-267	267-354	36-41	51-58
	5	121-140	268-334	355-443	42-47	59-66
	6	141-160	335-400	444-532	48-53	67-75
High						
	7	161-187	401-467	533-710	54-58	76-83
	8	188-213	468-534	711-887	59-64	84-91
	9	214-240	535-600	888-1064	65-70	92-100
Very High						
	10	241 or more	601 or more	1065 or more	71 or more	101 or more

Appendix B: Number of forecast DAQI days in 2023

Table B -1: Number of 5-day DAQI forecast days in 2023

Alert location	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
Arundel	332	29	1	3
Battle	322	39	1	3
Bexhill	328	33	1	3
Billingshurst	331	28	3	3
Bognor Regis	334	28	0	3
Burgess Hill	332	28	2	3
Brighton	333	29	0	3
Chichester	333	29	0	3
Crowborough	331	30	1	3
Eastbourne	327	34	1	3
East Grinstead	334	27	1	3
Goodwood	331	31	0	3
Hailsham	324	37	1	3
Hastings	327	34	1	3
Haywards Heath	333	27	2	3
Heathfield	327	34	1	3
Horsham	332	27	3	3
Hove	334	27	1	3
Lewes	329	32	1	3
Littlehampton	331	31	0	3
Newhaven	331	30	1	3
Petworth	331	30	1	3
Portslade by Sea	334	27	1	3
Rye	327	34	1	3
Seaford	328	33	1	3
Selsey	333	27	2	3
Shoreham	334	28	0	3
Steyning	330	30	2	3
Storrington	328	32	2	3
Uckfield	332	29	1	3
Worthing	332	30	0	3
Average	330	30	1	3
Maximum	334	39	3	3

Table B-2:– Number of Actual DAQI forecast days in 2023

Alert location	Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)
Arundel	351	13	0	0
Battle	350	14	0	0
Bexhill	351	13	0	0
Billingshurst	351	12	1	0
Bognor Regis	352	12	0	0
Burgess Hill	352	12	0	0
Brighton	352	12	0	0
Chichester	352	12	0	0
Crowborough	353	11	0	0
Eastbourne	352	12	0	0
East Grinstead	354	10	0	0
Goodwood	351	13	0	0
Hailsham	349	15	0	0
Hastings	351	13	0	0
Haywards Heath	353	11	0	0
Heathfield	352	12	0	0
Horsham	352	11	1	0
Hove	352	12	0	0
Lewes	351	13	0	0
Littlehampton	350	14	0	0
Newhaven	353	11	0	0
Petworth	351	13	0	0
Portslade by Sea	352	12	0	0
Rye	352	12	0	0
Seaford	352	12	0	0
Selsey	353	11	0	0
Shoreham	352	12	0	0
Steyning	352	12	0	0
Storrington	349	15	0	0
Uckfield	352	12	0	0
Worthing	351	13	0	0
Average	352	12	0	0
Maximum	354	15	1	0

Appendix C: Alert Service subscriber registrations 2022/23

Table C-1: – Email subscribers by location and month in 2022/23

2022	Oct	Nov	Dec	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Email (totals)	147	98	20		6	6	3	2	4	15	8	6	1	4	2	0
Arundel		1	1													
Battle	2	2														
Billingshurst	1	1														
Brighton Centre		1														
Brighton East	2															
Brighton_and_Hove	4	3	1									1				
Chichester	5	4	1		6	1			1		1	1		1	1	
Crawley	3	2														
Crowborough	1	1								1						
East Grinstead	6															
East Sussex	33	18	2			1	1			3		1				
Eastbourne	15	5								1	2	2			1	
Hailsham	5	3										1				
Hastings Bexhill	17	12	3							3	2					
Haywards Heath Burgess Hill	2	2	1													
Heathfield	3		1													
Horsham	4	2						2		1						
Hove	2	1														
Lewes	10	2	3						1							
Littlehampton Bognor Regis	4	4								1		1		1		
Newhaven Seaford	2	3	2											1		
Portslade Shoreham	1	3								1			1			
Rottingdean Saltdean	1	2														



	2022	Oct	Nov	Dec	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rye		2	3												1		
Selsey Whitterings		1															
Steyning		1	2					1									
Storrington		2	2				2			1							
Uckfield		2	1	1								1					
West Sussex		9	13	3			2				2						
Worthing		8	5	1				1		1	2	1					

Table C -3: Mobile text subscribers by location and month in 2022/23

	2022	Oct	Nov	Dec	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mobile Text (totals)	129	89	13			2	2	2	3	3	10	4	4	1	1	3	0
Arundel		1															
Battle			1														
Billingshurst		1	1														
Brighton Centre		1	1														
Brighton East		2	1														
Brighton Falmer		1	1														
Brighton_and_Hove		3	2	1													
Chichester			1														
Crawley		5	3	2		1				1							
Crowborough			2													1	
East Grinstead		2	1	1													
East Sussex		17	15	1					1		2						
Eastbourne		16	9			1				1			1				
Hailsham		3	3														
Hastings Bexhill		18	13	1						1			2			1	
Haywards Heath Burgess Hill		5	1	1							1						



	2022	Oct	Nov	Dec	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Heathfield		3	3	1													
Horsham		2	3						1					1			
Hove		1		1				1			1						
Lewes		3	5				1	1				1	1			1	
Littlehampton Bognor Regis		8		2													
Newhaven Seaford		5	1				1								1		
Petworth		1															
Portslade Shoreham			1						1		2						
Rottingdean Saltdean		1															
Rye		2	1									1					
Selsey Whitterings											1						
Steyning			1														
Storrington		1															
Uckfield		5	1														
West Dean Goodwood		1															
West Sussex		13	8	2							2	1					
Worthing		8	6								1	1					

Table C-4: Voice text subscribers by location and month in 2022/23

	2022	Oct	Nov	Dec	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Voice Text (totals)		3	2	0		0	0	0	0	0	0	0	0	0	0	0	0
Brighton Falmer			1														
Brighton_and_Hove		1															
East Sussex		2															
West Sussex			1														