

ST NICHOLAS WEATHER

Weather and Temperature Report 2021–2026

A local weather record for St Nicholas, Vale of Glamorgan

Data through 1 October 2026

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Executive summary

The St Nicholas Weather archive now provides almost five years of local observations, beginning on 1 November 2021. The record captures substantial year-to-year variability, but summer 2026 is the clearest standout. Its June–August mean temperature was 18.89°C, making it the warmest of the five summers observed at St Nicholas and 1.20°C warmer than summer 2022, the next-warmest in the local series.

The exceptional character of summer 2026 was not created by one isolated hot day. Warmth persisted across the season: 43 days reached at least 25°C and 14 reached at least 30°C. The highest measured temperature was 35.7°C on 25 June. July remained particularly warm, with a completed monthly mean of 20.22°C, while August continued the warm pattern at a lower intensity. This persistence is important because it explains why the seasonal mean rose so far above the previous St Nicholas summers.

The local pattern closely matches the wider regional picture. The Met Office reports that Wales had its warmest summer on record in 2026, with a mean temperature of 16.9°C, 2.2°C above the 1991–2020 average. The UK as a whole also recorded its warmest summer in the series beginning in 1884. Across the Met Office region covering Southwest England and South Wales, mean-temperature anomalies were +2.5°C in June, +3.1°C in July and +2.1°C in August (Met Office, 2026a–d).

Winter conditions show a different form of variability. The 2022–23 frost season was the frostiest well-covered season in the local record, with 25 air-frost days, compared with 13 in 2023–24, 15 in 2024–25 and 12 in 2025–26. The measured temperature range of the archive extends from –4.5°C on 15 December 2022 to 35.7°C on 25 June 2026.

Every year at a glance

A concise comparison of each calendar year is shown below. 2021 covers November–December only; 2026 runs through 1 October. The short record already contains several contrasting years. The table below summarises the most distinctive features of each calendar year; 2021 covers November–December only, and 2026 covers observations through 1 October.

Year	At-a-glance character	Highest measured	Lowest measured	Summer mean
2021*	Archive begins in November; early-winter conditions.	14.5°C 10 Nov	–2.0°C 29 Nov	—
2022	Hot summer; start of the frostiest season in the record.	34.6°C 14 Aug	–4.5°C 15 Dec	17.69°C
2023	Cooler summer; repeated winter snow, including March.	29.3°C 15 Jun	–3.5°C 2 Dec	16.54°C
2024	Coolest summer in the five-summer comparison.	30.1°C 29 Jul	–4.3°C 18 Jan	16.10°C
2025	Warmer summer returned, with several hot spells.	32.8°C 11 Jul	–2.6°C 9 Jan	17.46°C
2026†	Exceptional summer warmth and the station-record maximum.	35.7°C 25 Jun	–3.5°C 6 Jan	18.89°C

* 2021 is a partial year. † 2026 is reported through 1 October. Summer means refer to June–August.

1. The St Nicholas Weather record

The record begins in late 2021 and is already long enough to show how differently individual seasons can behave at one location. The most obvious feature of the full daily series is the regular annual temperature cycle, but superimposed on that cycle are pronounced warm spells, cold spells and differences in the character of successive summers and winters.

The five summers provide a particularly clear example. Summer 2024 was the coolest in the available series, with a mean temperature of 16.10°C, whereas 2022 and 2025 were considerably warmer at 17.69°C and 17.46°C respectively. Summer 2026 then moved well beyond that range at 18.89°C. Because the local series is short, these differences are best understood as a description of recent local weather rather than a stand-alone measure of long-term climate change.

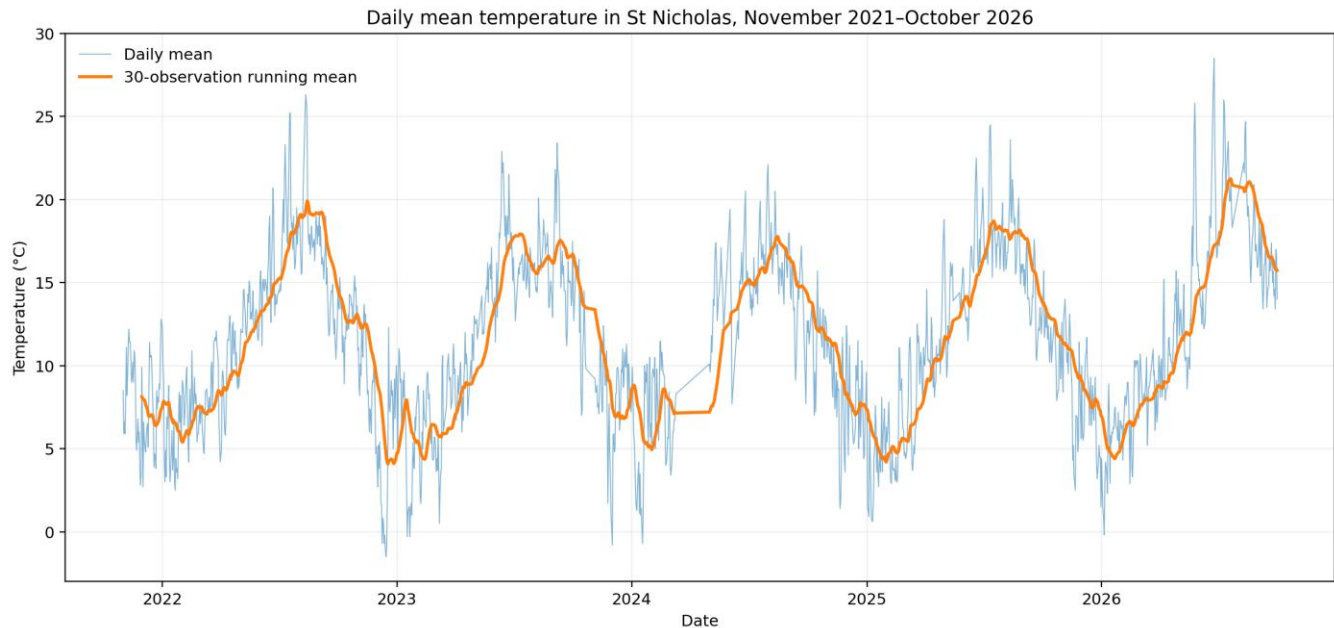


Figure 1. Daily mean temperature in St Nicholas from November 2021 to October 2026, with a 30-observation running mean.

The smoothed line helps separate the seasonal cycle from day-to-day noise. Winter minima are punctuated by relatively brief cold episodes, whereas the summer peaks vary more noticeably from year to year. The 2026 warm season forms the highest and most sustained summer peak in the record, rather than simply a narrow spike associated with the hottest day.

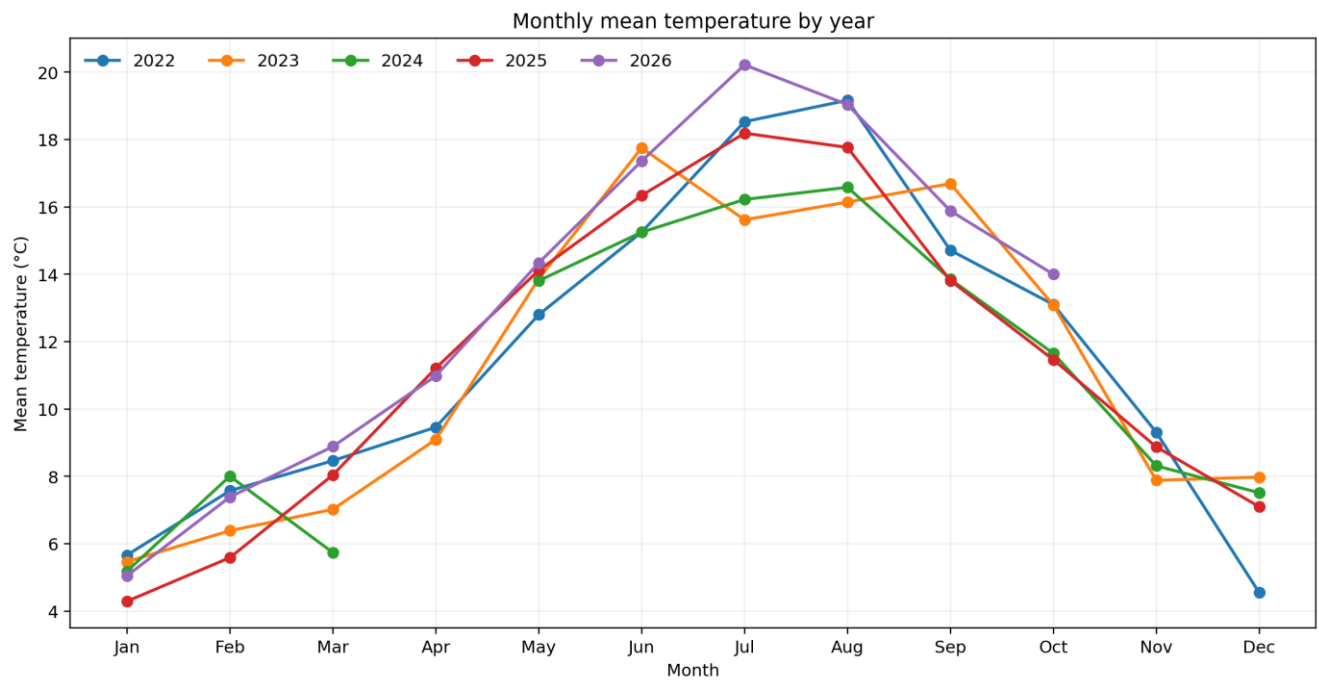
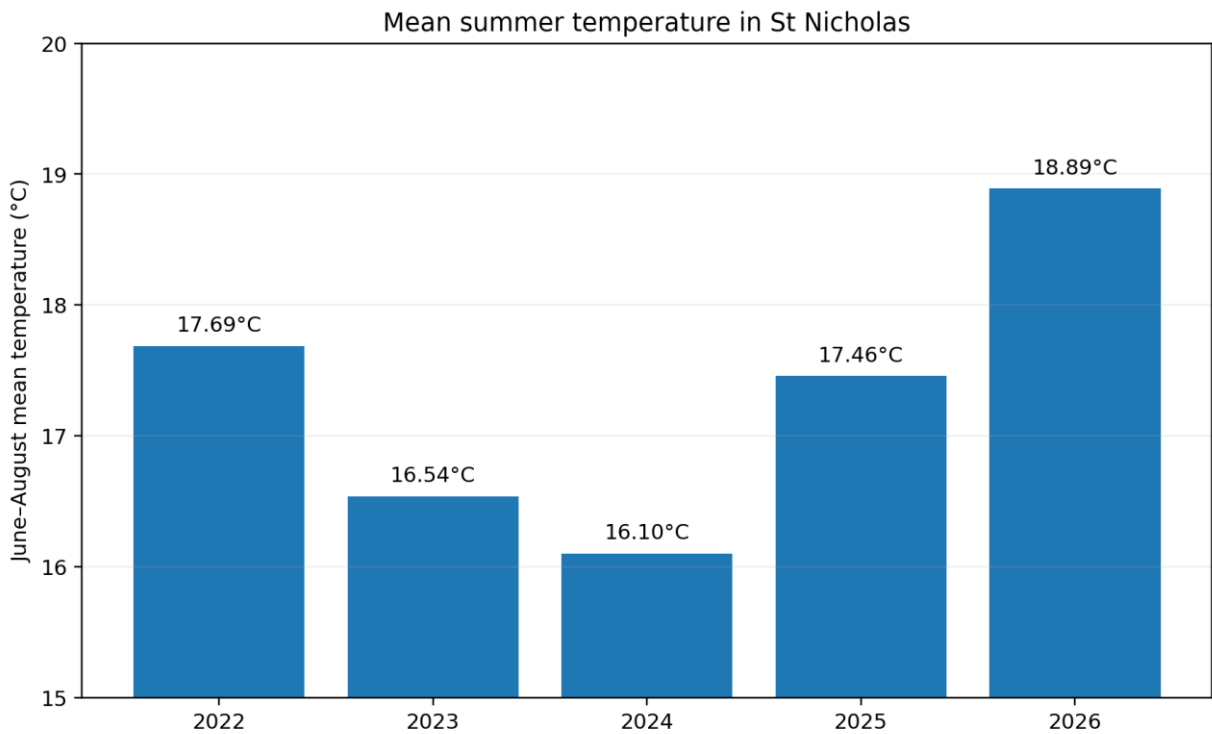


Figure 2. Monthly mean temperature by year, showing the seasonal cycle and interannual differences.

2. Summer 2026: the outstanding season

Summer 2026 stands apart from the other summers recorded at St Nicholas. Its mean temperature of 18.89°C was 1.20°C above 2022, the next-warmest summer in the series, and 2.79°C above the relatively cool summer of 2024. The difference is large enough to be visually obvious even within a record containing only five complete summers.



2026 includes 17 reconstructed summer temperature days; earlier years use available station observations.

Figure 3. Mean June–August temperature at St Nicholas, 2022–2026. The 2026 value uses the completed measured/reconstructed temperature series.

The warmth was also frequent. Forty-three summer days reached at least 25°C and 14 reached at least 30°C. These counts show that the high seasonal mean resulted from repeated warm and hot conditions, not solely from the late-June extreme. In practical terms, 2026 combined persistence with intensity: many days were warm enough to lift the seasonal average, while several episodes reached genuinely hot levels.

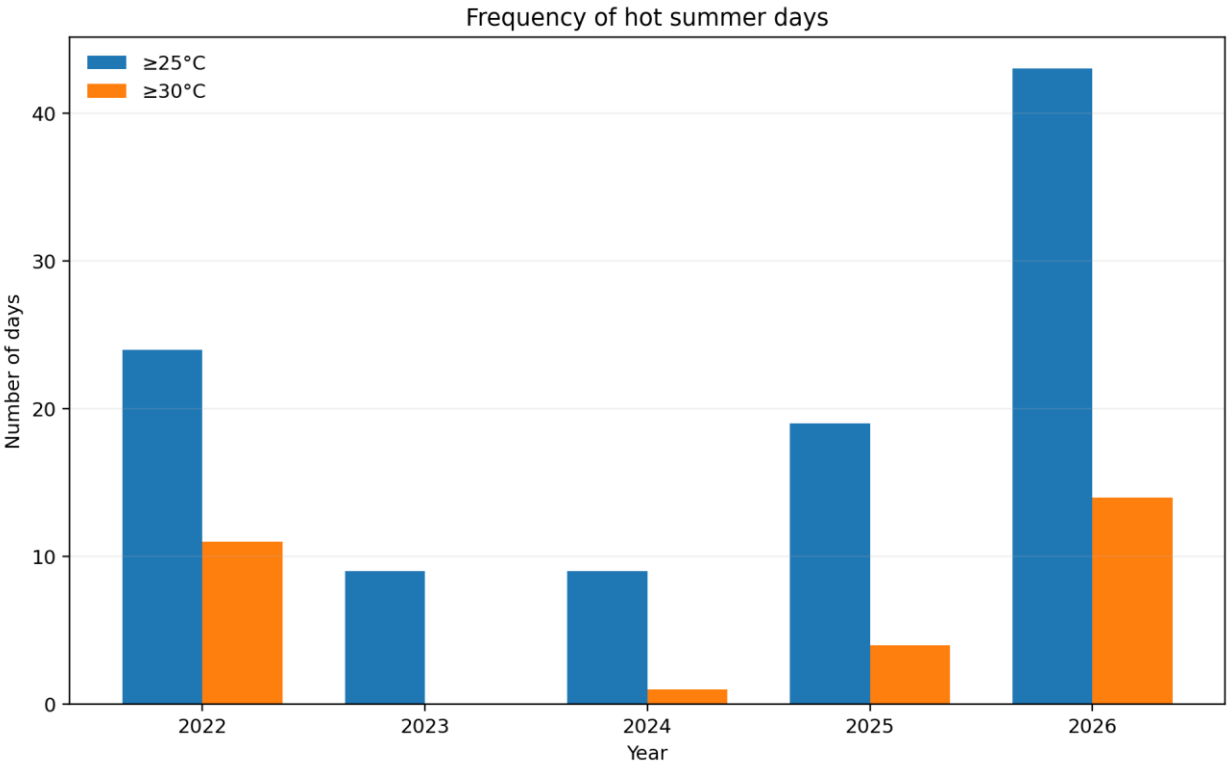


Figure 4. Frequency of summer days reaching at least 25°C and 30°C.

The daily maximum and minimum series shows the development of the season in more detail. The most intense heat arrived in late June, culminating in 35.7°C on 25 June. July then maintained a high thermal baseline for much of the month. August remained warm but was less continuously exceptional, allowing the seasonal temperature to ease without reversing the overall summer signal.

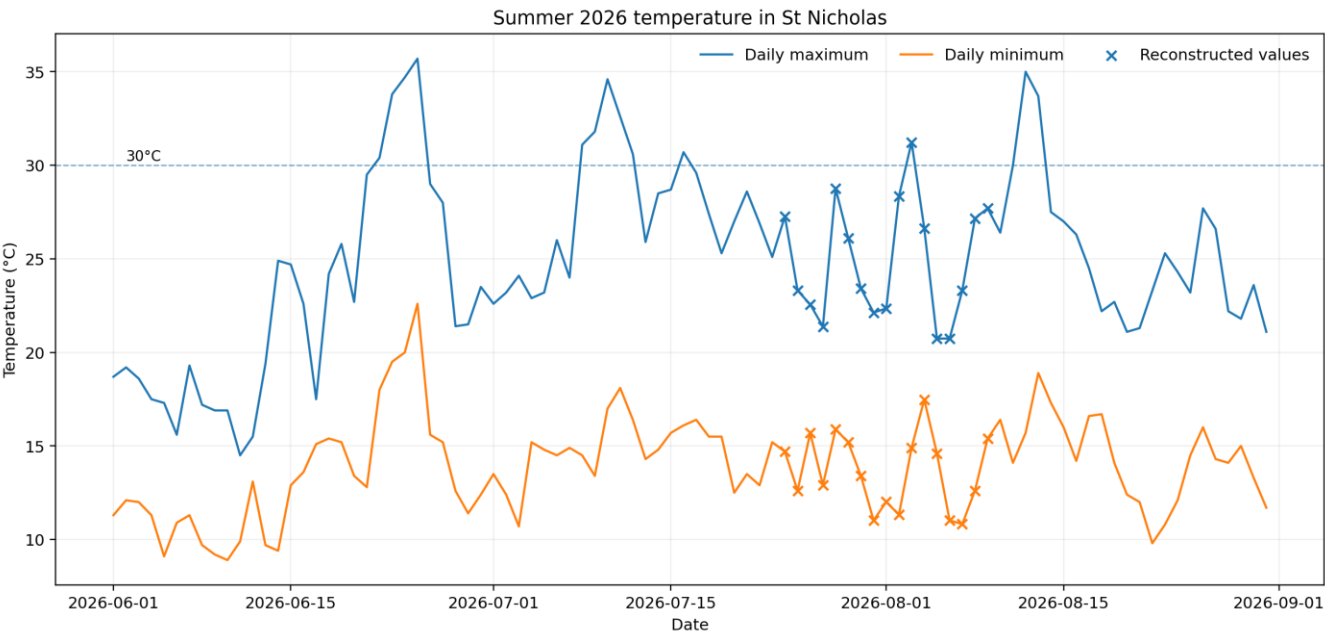
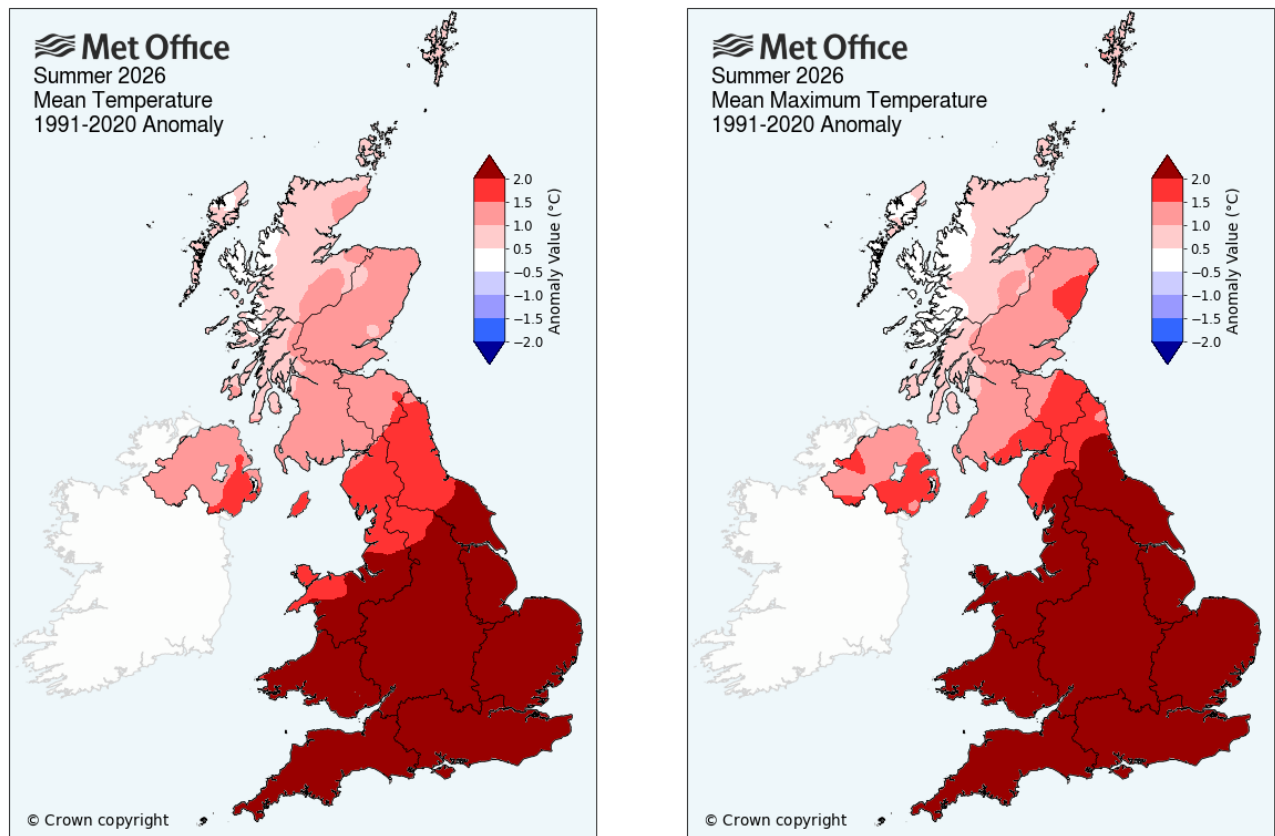


Figure 5. Daily maximum and minimum temperature during summer 2026. Reconstructed observations are marked separately; the highest measured temperature was 35.7°C on 25 June.

3. Summer 2026 in Welsh and UK context

The St Nicholas observations were part of a much wider episode of exceptional warmth. Provisional Met Office statistics place summer 2026 as the warmest summer on record for Wales and for the UK. Wales recorded a summer mean temperature of 16.9°C, 2.2°C above the 1991–2020 average, while the UK mean reached 16.5°C, 1.9°C above average. England, Wales and Northern Ireland all set new summer mean-temperature records (Met Office, 2026a).

The anomaly maps reinforce the geographical pattern. Positive anomalies covered the whole UK, but the strongest departures were concentrated across southern Britain. South Wales lies within the zone of particularly large summer anomalies, and the mean-maximum-temperature map shows an especially pronounced southern signal. This provides a regional context for the high daytime maxima observed at St Nicholas; it does not imply that the gridded regional values and the single station should be numerically identical.



Figures 6–7. Met Office summer 2026 anomalies relative to 1991–2020: mean temperature (left) and mean maximum temperature (right). Source: Met Office (2026e), based on HadUK-Grid observations. © Crown copyright.

3.1 June: from unsettled weather to exceptional heat

June was a month of two contrasting halves. The Met Office describes an initially westerly and unsettled pattern, followed from mid-month by strengthening high pressure over continental Europe and a much warmer southerly influence. Wales ultimately recorded its second-warmest June in the series beginning in 1884, with a national mean of 15.9°C, 2.5°C above the 1991–2020 average (Met Office, 2026b).

The late-June heatwave provides an unusually strong comparison with the local record. On 25 June, St Nicholas reached 35.7°C. On the same day, Cardiff Bute Park provisionally reached 35.9°C, exceeding the previous Welsh June record. The close timing and magnitude of the two observations indicate that the St Nicholas extreme occurred during a major regional heat event rather than an isolated local spike (Met Office, 2026f).

3.2 July: sustained warmth under high pressure

July was less about a single peak and more about persistence. High pressure dominated much of the month, producing settled weather, prolonged warmth and exceptional sunshine. The Met Office reports that the Southwest England and South Wales region was 3.1°C above its 1991–2020 mean temperature, while Wales recorded its joint-warmest July at 17.8°C. Wales also experienced its driest July and sunniest July on record (Met Office, 2026c, 2026d).

This regional pattern helps explain why the completed St Nicholas July mean remained as high as 20.22°C. Repeated warm days and strong daytime heating kept temperatures elevated across the month. The St Nicholas record therefore captures locally the same sustained southern-Britain warmth that is evident in the national climate statistics.

3.3 August: warmth persists but moderates

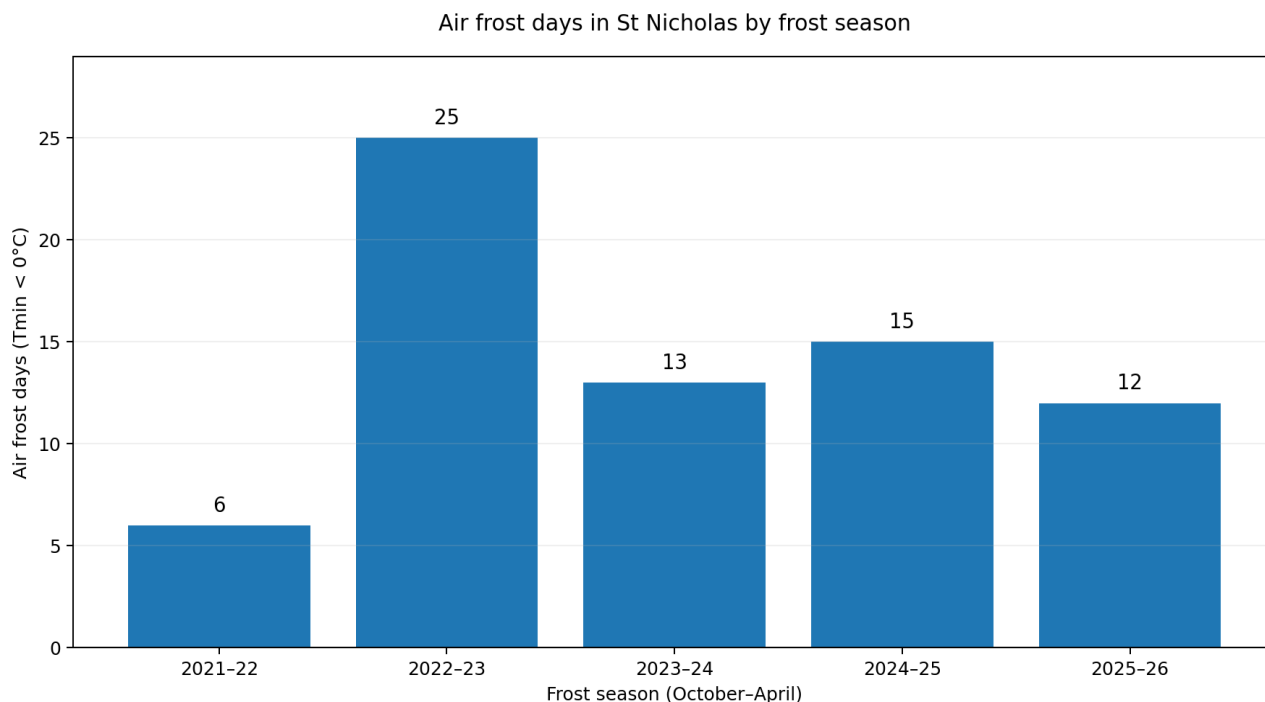
August continued warmer than average, although the anomaly was smaller than in July. The Southwest England and South Wales regional mean was 17.9°C, 2.1°C above average, and Wales as a whole averaged 16.8°C, 1.7°C above average. Southern areas also retained unusually high sunshine totals (Met Office, 2026g). At St Nicholas, August averaged 19.04°C: still warm, but no longer at July's level.

Taken together, the three months show why the season set records. June supplied the most dramatic heat; July supplied sustained, settled warmth; and August prolonged the positive anomaly. The seasonal record was therefore produced by the continuity of warmth across all three months as much as by any individual extreme.

4. Frost and winter weather

Winter variability is evident in the number of air-frost days, defined here as days when the minimum air temperature falls below 0°C. The 2022–23 frost season is the clearest cold-season standout, with 25 frost days. The following three seasons were less frosty: 13 days in 2023–24, 15 in 2024–25 and 12 in 2025–26.

The contrast between these winters is useful because frost frequency reflects more than the single lowest temperature. A season can contain one sharp cold spell but relatively few frosts overall, or repeated marginal frosts without an exceptionally low minimum. Counting frost days therefore complements the absolute minimum-temperature record and gives a better sense of how persistent sub-zero nights were.



Estimated values are used only where St Nicholas observations are missing and a calibrated neighbouring-station observation is available.

Figure 8. Air-frost days (Tmin < 0°C) by October–April frost season. The 2021–22 season begins with the station record in November 2021 and is therefore incomplete.

The lowest measured temperature in the archive, –4.5°C on 15 December 2022, occurred during the same 2022–23 season that produced the largest frost count. That combination indicates that winter 2022–23 was notable both for the depth of its coldest episode and for the recurrence of freezing nights. By contrast, subsequent winters produced fewer frost days despite continuing to experience occasional sub-zero temperatures.

Winter 2022–23: repeated cold and snow

Winter 2022–23 was the standout cold season within the St Nicholas Weather record. A total of 25 air-frost days were observed during the October–April frost season, considerably more than in the three subsequent substantially complete seasons, which recorded between 12 and 15 frost days. The frost count alone does not fully convey the character of the season: photographs from December, January and March document three separate episodes of snowfall or lying snow in St Nicholas, showing that wintry conditions returned repeatedly rather than being confined to a single event.

The first photographed episode, on 11 December 2022, occurred during the prolonged UK cold spell of 8–18 December. The Met Office describes this as one of the most significant spells of low winter temperatures in the UK since December 2010, with an Arctic maritime air mass, hard frosts and snow in many areas. Wales as a whole finished December 1.4°C below its 1991–2020 mean temperature (Met Office, 2022a; 2022b).

Wintry weather returned in January. On 18 January 2023, when the second photograph was taken, cold air was pushing south across the UK and Met Office snow-and-ice warnings covered parts of Wales and western Britain (Met Office, 2023a). A further Arctic outbreak followed in early March. During 7–8 March the boundary of the Arctic air stalled across southern Britain and snow developed across South Wales as well as southern England; Bristol Airport temporarily closed for snow clearance on the morning of 8 March (Met Office, 2023b).

Within a record of fewer than five complete years, this makes 2022–23 an important local counterpoint to the exceptional warmth of summer 2026. The contrast should not be interpreted as a long-term local climate trend: the St Nicholas series is too short for that. It does, however, demonstrate the substantial range of weather experienced at the site during the first years of observation, from repeated frost and snow to prolonged summer heat.



Figure 9. Extensive lying snow near St Nicholas on 8 March 2023 during an early-March Arctic outbreak. Photograph: St Nicholas Weather.



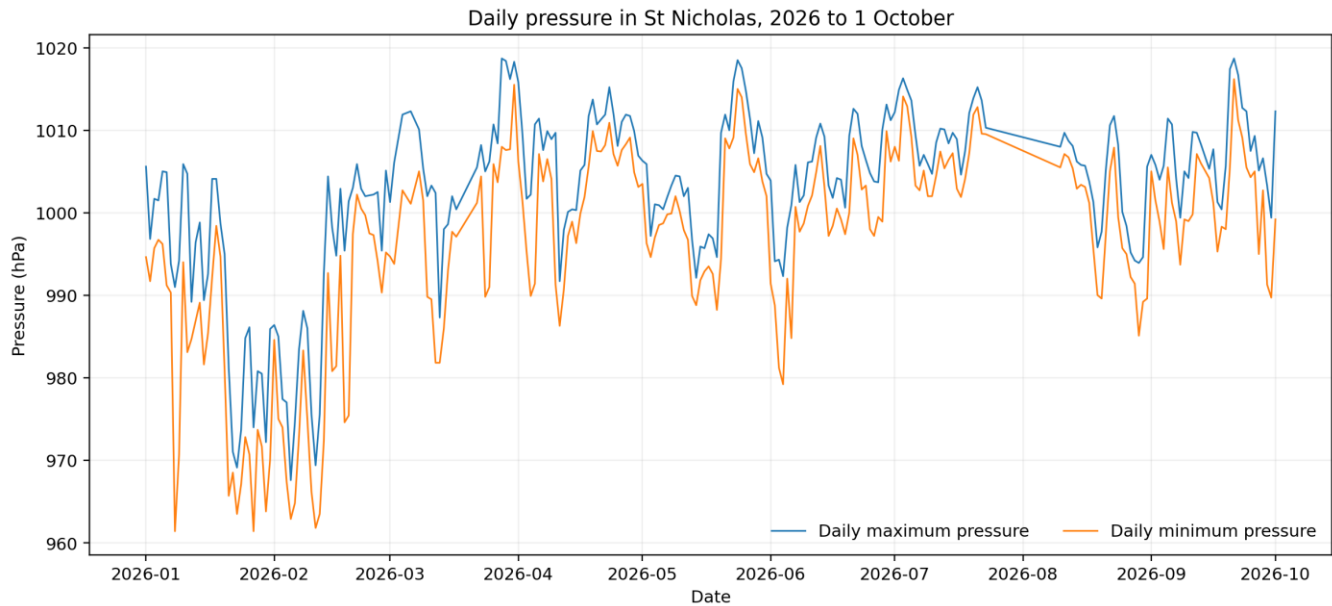
11 December 2022 — snow and ice in St Nicholas during the prolonged December cold spell. Photograph: St Nicholas Weather.



18 January 2023 — falling and settling snow in St Nicholas during the January cold spell. Photograph: St Nicholas Weather.

5. Atmospheric pressure and the character of 2026

Pressure provides a useful view of the changing synoptic background to the local weather. The 2026 series shows repeated transitions between higher-pressure settled spells and lower-pressure unsettled periods. These variations help explain why temperature alone cannot describe the character of the year: similar temperatures can occur under very different combinations of cloud, wind and frontal activity.



2026 station pressure series. Historical years are not combined here because the archive appears to contain different pressure conventions/calibrations.

Figure 9. Daily maximum and minimum station pressure in St Nicholas during 2026 to 1 October.

The summer narrative is particularly consistent with the pressure context described by the Met Office. June began with Atlantic low-pressure systems before high pressure became more influential later in the month. High pressure then dominated much of July, encouraging settled conditions, strong sunshine and repeated warm days across southern Britain (Met Office, 2026b, 2026d). The pressure record is therefore most useful when read alongside the temperature series as an indicator of the changing weather regime.

6. Data quality, reconstruction and limitations

The preceding sections deliberately focus on the weather story. This section brings together the qualifications needed to interpret the record responsibly.

6.1 Record length and coverage

The master archive runs from 1 November 2021 to 1 October 2026. Calendar-year observation coverage is approximately 98.6% for 2022, 90.4% for 2023, 80.6% for 2024, 94.8% for 2025 and 90.9% from 1 January to 1 October 2026. A five-year local record is valuable for documenting recent weather but is too short on its own to establish a long-term local climate trend.

6.2 Date quality control

Weather Underground-style dates required normalisation because ambiguous US month/day dates can be transposed when interpreted by spreadsheet software. The archive was audited using a consistent chronology rule before seasonal statistics were calculated. Two duplicate dates, 29 and 30 March 2026, were identified and resolved in the publication layer without altering the raw archive.

6.3 Reconstructed temperature observations

Twenty-five missing St Nicholas temperature dates in 2026 were estimated from a neighbouring station using regression relationships calibrated on paired observations. Agreement was very strong: correlations were 0.992 for daily maximum, 0.995 for daily mean and 0.989 for daily minimum temperature. Reconstructed values are retained as a separate publication layer and are not presented as measured station observations. Completing the 17 missing summer dates changed the summer mean by only about +0.03°C, so the exceptional 2026 result is not an artefact of gap filling.

For frost validation, 132 paired winter minimum-temperature observations produced a correlation of 0.978 and a mean absolute difference of about 0.51°C. The major March–April 2024 gap was assessed using neighbouring-station observations; the coldest reconstructed St Nicholas minimum was approximately +0.09°C, so no additional frost day was introduced. The 2021–22 frost season remains incomplete because the station record begins on 1 November 2021.

6.4 Variables not used for long-term quantitative comparison

Rainfall is excluded from quantitative publication because the historical rain-gauge record contains implausible totals and periods of inconsistent behaviour. Wind is strongly exposure-dependent and has not been reconstructed from the neighbouring station. Pressure is shown for 2026 only because the older archive appears to contain changes in pressure convention or calibration; combining those values into a single long-term pressure trend could therefore be misleading.

6.5 Regional comparison

Met Office maps and regional values are based on HadUK-Grid, which interpolates station observations onto a 1 km grid and produces area averages for countries and regions. These regional statistics provide robust wider context but are not expected to match a single St Nicholas station exactly. The 2026 Met Office values used here are provisional and may be revised as the observational dataset is updated (Met Office, 2026e, 2026h).

7. Conclusions

The St Nicholas Weather record shows a varied sequence of recent seasons, but summer 2026 is the dominant feature of the five-year temperature series. At 18.89°C, it was substantially warmer than the previous four local summers, and its exceptional mean was supported by both a high frequency of warm days and several episodes of more intense heat.

The local observations fit closely within the wider meteorological picture. Wales and the UK both experienced record-breaking summer warmth in 2026, with the strongest anomalies concentrated across southern Britain. The St Nicholas maximum of 35.7°C on 25 June occurred during the same regional heatwave that produced a provisional 35.9°C at Cardiff Bute Park. July then sustained the seasonal warmth under dominant high pressure, while August remained anomalously warm even as conditions became less extreme.

The winter record adds an important counterpoint. Frost remains a recurring part of the local climate, with marked differences between seasons: 2022–23 recorded 25 frost days and the archive minimum of –4.5°C, whereas the three following frost seasons produced lower totals. This variability reinforces the value of maintaining a continuous local station record through both warm and cold seasons.

As the archive lengthens, its value will increase. Future reports will be able to compare a growing number of complete seasons, assess whether recent extremes remain exceptional within the local series, and place St Nicholas more confidently within the longer official climate record for Wales.

Authorship and acknowledgements

This report was prepared by Benjamin Raisanen for St Nicholas Weather. The weather observations, photographic record, project direction, interpretation and final editorial responsibility are those of the author and St Nicholas Weather.

OpenAI ChatGPT (GPT-5.6 Sol) was used as a supporting tool for data analysis, graph preparation, research assistance, drafting and document production. AI-assisted material was reviewed and incorporated under the author's editorial direction. Met Office data, maps and publications are credited separately in figure captions and references.

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Appendix A. Publication status of station variables

Variable	Status	Use in this report
Temperature	Primary	Full record; missing 2026 temperatures reconstructed only where validated.
Air frost	Primary with coverage note	October–April counts; 2021–22 incomplete because the archive begins in November 2021.
Pressure	Restricted	2026 only; historical pressure conventions appear inconsistent.
Rainfall	Excluded	Historical gauge inconsistencies prevent reliable quantitative comparison.
Wind	Descriptive only	Not reconstructed because local exposure strongly affects wind observations.
Solar radiation	Not assessed	Not present in the compiled master archive used for this report.