

# 2023 METEOROLOGICAL REPORT

#### **ABSTRACT**

A summary of the meteorological observations taken in 2023 by the Hastings weather volunteers.

#### HASTINGS METEOROLOGICAL STATION

(Established 1875)

**Geographical position:** Latitude 50°51′ N

> Longitude 0°34′ E

Height above sea level: 45.11m (148')

The principal part of the station is situated in the north-west corner of White Rock Gardens, Hastings and consists of a standard fenced enclosure 9m x 6m containing the following instruments:

- In a Stevenson screen:
  - Dry bulb thermometer
  - Wet bulb thermometer
  - Maximum thermometer
  - Minimum thermometer
- Grass minimum thermometer,
- Concrete minimum thermometer,
- Rain gauge 5" diameter,
- Universal Sunshine Recorder (on the roof of the Hastings museum),
- Sea surface thermometer (taken from Hastings pier).

The wind vane which was situated in the above enclosure was felled by strong wind in 2019 and has not been replaced.

In the kiosk at Eversfield Place there is an aneroid barometer, mercury in steel dial thermometer and a barograph<sup>1</sup>. In addition, there are dials and indicators for sunshine, rainfall, temperature and high tide. Here is also displayed the Meteorological Office's daily bulletin, weekly, monthly and annual summaries, the Met Office weather forecast for the South East, the previous day's sun record, the barograph chart for the previous week and other details of long term trends in the local weather. There is also a humorous pictogram illustrating the weather day ahead.

Daily observations have been carried out by:

Bill Montgomery, Brian Gould, Jonathan Lindars, Judy Gorrie, Mark Hammond, Simon Scott and Bill Butler

<sup>&</sup>lt;sup>1</sup> The barograph was returned at the start of the year but has proved unreliable. At the time of writing, we are using a loan machine and, as before, the replacement does not fit the shelf in the window and we are able only to display the completed sheets. We hope to get the go ahead to get our machine repaired.

### **Summary of Weather Observations 2023**

#### Introduction

With the exception of our recalcitrant barograph (still not working despite expensive repairs), the Hastings Volunteer Weather Service has had a successful year of collecting and reporting weather data. We submitted records to the Met Office WOW system on 365 days out of 365 in 2023 – a fine achievement and credit to Bill Montgomery our lead volunteer.

2023 also saw the retirement of Kevin Boorman, our lead contact at Hastings Borough Council for many years and, on behalf of the team, I would like to thank Kevin for his steadfast support and interest in the Weather Service. We wish him a happy retirement and look forward to working with Aaron Woods and Sarah Crosby as we move forwards.

#### Annual

The Met Office published their provisional assessment of the weather experienced across the UK during 2023<sup>2</sup> on 4<sup>th</sup> January 2024 and the following few paragraphs describe how closely, or not, Hastings followed the national pattern. To be consistent with Met Office best practice, comparisons of the weather variables is made against 1991 to 2020 averages – the text will say '30ya' unless comparison is made against the long-term average, 'LTA'.

The Met Office describes 2023 as 'a very warm and rather wet year across the UK.' Our weather observations show that Hastings matched this experience. The UK mean temperature of 10.0°C was 0.8°C above the 30ya, Hastings with 12.1°C was 0.8°C above, so identical. The UK had its 2<sup>nd</sup> warmest year after 2022; Hastings, its 4<sup>th</sup> warmest after 2014, 2020 & 2022. Like the UK, June and September were the warmest on record in Hastings and only April, July and August temperatures were below the 30ya.

The UK was wetter than average with 111% of the 30ya. Hastings at 135% of the 30ya was even wetter with the  $4^{th}$  highest total since records began in 1875. October was the wettest on record, remarkable given that there were only 17 wet days in the month. The rain continued into November and the six weeks from  $11^{th}$  October saw the town receive over half its average annual rainfall.

Sunshine was near average across the UK with 102% of the 30ya. Hastings on the other hand was notably dull with 91.3% of the 30ya and only May and June experiencing more sun than average. December was undoubtedly the gloomiest with only 36% of the 30ya for sunshine.

-

<sup>&</sup>lt;sup>2</sup> All the Met Office summaries for 2023 can be found at <u>Climate summaries - Met Office</u>

#### HASTINGS VOLUNTEER WEATHER SERVICE

Summar	y of observa	ations for t	he year of		2023				
SUNSH	INE							Long Term Av	verages
	Total bright	t sunshine		1702.9	hours			1799.4	hours
	Daily Avera	ge		5.5	hours			5.4	hours
	Most in one	day		14.8	hours	on	07 July 2023		
	Number of		/S	58	days			59	days
	Mean cloud	amount		5	oktas			5	oktas
TEMPE	RATURE								
	Mean maxir	mum		15.0	°C			13.4	°C
	Mean minin	num		9.3	°C			7.6	°C
	Mean air te	mperature	@ 09:00 UTC	12.5	°C			11.0	°C
	Mean air te	mperature	over 24hours	12.1	*C			10.5	°C
	Highest ma	ximum		28.5	°C	on	10 June 2023		
	Lowest min	imum		-2.3	*C	on	17 January 2023		
	Lowest max	ximum		3.0	*C	on	17 January 2023		
	Highest mir	nimum		20.3	*C	on	10 September 2023		
	Lowest gra	ss minimun	1	-6.4	°C	on	11 March 2023		
	Lowest con			-4.9	°C	on	17 January 2023		
	Mean sea to			13.2	°C			11.7	°C
	Highest sea			20.2	°C	on	12 September 2023		
	Lowest sea			6.5	°C	on	22 January 2023		
						•			
RAINFA			(ended 09:						
	Total fall			1037.6	mm			751.3	mm
	0.2mm or n			168	days			159	days
	1.0mm or n			134	days			114	days
	5.0mm or n		lays)	68	days			48	days
	Most rain in	1 24 hours		57.5	mm	on	27 October 2023		
	Dry days			189	days				
PRESSU	RE at 09:00	)	(1000mb e	quivalent 1	to 29.531°	of mercur	y)		
	Mean press	ure		1015	mb			1015	mb
	Highest pre			1045	mb	on	05 February 2023		
	Lowest pre			950	mb	on	08 March 2023		
WITHID									
MIND 8	t 09:00	0	1-3	Force 4-5	6-7	>=8			
	Calm	2	1-3	4-3	0-7	/-0			
	N	•	42	15	0	0	57		
	NE		11	8	3	ŏ	22		
-	_		19	12	0	ŏ	31		
	SE		9	2	ő	1	12		
2	S		-	9	8	ō	36		
Direction	5		19						
			50	27	19	0	96		
	w		60	21	8	0	89		
	NW		17	3	0	0	20		
MICCELL	LANEOUS	2	227	97	38	1	365		
MISCEL	Snow or sle	ant.		1	dave			12	days
	Snow lying			ō	days days			6	days
	Hail, ice etc			6	days			6	days
	Thunder	-		9	days			13	days
	Fog at 09:0	n		6	days			9	days
	Air frost	-		10	days			21	days
	Ground from	st		43	days			60	days
	Gale			12	days			10	days
	Heating 're	guired"		321	days				
	Cooling 'rec			29	days				
	Mean relati		,	84.3	%			81.7	%
	Mean dew	point		9.1	°C			7.3	°C

02/01/2024

#### **January**

Nationally, the first half of January continued with the mild unsettled weather experienced in the last two weeks of December 2022 with some areas having around their average January rainfall in the first fortnight. The second half of the month was much drier and colder although temperatures did edge up to around average at the end of the month. And, for the second year in a row, this was a particularly sunny January.

Locally, Hastings certainly matched the wet start with 144% of the average January rainfall falling by the 15<sup>th</sup> of the month rising to 150% by the 31<sup>st</sup>. The wettest day, 15<sup>th</sup> January, saw 40.0mm (1.6") of rain, the highest daily January rainfall since 42.4mm in 1943 and caused severe flooding in Hastings town centre, particularly around the Priory Meadow shopping centre. Over the whole month the number of wet days was bang on the long-term average, but as with the UK this statistic hides the real picture where the first 15 days were wet with only three wet days in the last 16. The Hastings sunshine total at 59.7 hours was 92% of the average, contrasting with the UK figure of 133%.

The Hastings mean maximum temperature was  $1.7^{\circ}\text{C}$  ( $3.0^{\circ}\text{F}$ ) above average and the mean minimum  $1.3^{\circ}\text{C}$  ( $2.3^{\circ}\text{F}$ ) above. The local mean temperature over 24 hours (m24hr) of  $6.3^{\circ}\text{C}$  ( $43.3^{\circ}\text{F}$ ) was  $0.5^{\circ}\text{C}$  ( $0.9^{\circ}\text{F}$ ) above the local 30ya figure, commensurate with the UK where the anomaly was  $0.4^{\circ}\text{C}$ . The warmest day was  $12.3^{\circ}\text{C}$  ( $54.1^{\circ}\text{F}$ ) on the  $4^{th}$  and the coldest night  $-2.3^{\circ}\text{C}$  ( $27.9^{\circ}\text{F}$ ) on the  $17^{th}$ . The coldest night on the grass was  $-5.1^{\circ}\text{C}$  ( $22.9^{\circ}\text{F}$ ) on the  $19^{th}$ . There was six days of air frost and 12 days of ground frost.

#### **February**

Across the UK, February weather was milder and drier than average. There were unsettled periods at the beginning and mid-month but February was remarkably dry being the driest since 1993. And, despite a couple of cold spells, it was a mild month.

Locally, February matched the above with only a handful of days cooler than the 30ya temperature and was certainly drier than average. The rainfall total 9.4mm (0.4") was only 16% of the 30ya (nationally it was 45%). Rain fell on only seven days with a wettest day of 4.5mm (0.2") on the 22<sup>nd</sup>. The sunshine total of 78.8hrs was 87% of the 30ya (nationally 98%) with the sunniest day being 7.8hrs on the 14<sup>th</sup> and six sunless days in total.

The mean maximum and minimum temperatures were 2.2°C (4.0°F) and 2.0°C (3.6°F) above average respectively. The m24hr temp of 7.0°C (44.6°F) was 1.3°C (2.3°F) above the local 30ya figure cf. the overall UK figure of 1.7°C. The warmest day was 14.0°C (57.2°F) on the  $19^{th}$  and the coldest night 0.7°C (33.3°F) on the  $8^{th}$ . The coldest night on the grass was -4.0°C (24.8°F) on the  $8^{th}$ . There were no air frosts and 15 days of ground frost.

#### March

Nationally, March started cold and dry but from the  $8^{th}$  it was largely unsettled with moist, milder air pushing up from the south. There was a brief bright spell on the  $27^{th}$  followed by a westerly pattern bringing dull and wet weather.

In Hastings, March followed the UK pattern with dry, cool days until the  $5^{th}$  and then the wet – there were only two more dry days in the month. Sunshine was well down, the 78.4hrs was 59% of the 30ya with the sunniest day being 8.4hrs on the  $2^{nd}$  and seven sunless days. Like the UK overall, the town had a wet month with a rainfall accumulation of 116.5mm (4.6") which was 253% of the 30ya (nationally 155%) with a wettest day of 21.4mm (0.8") on the  $23^{rd}$  and 24 wet days in total. The UK had the sixth wettest March since 1836, Hastings the fifth wettest since 1875.

The mean maximum and minimum temperatures were 0.5°C (0.9°F) and 1.5°C (2.7°F) above average respectively. The m24hr temperature was 7.4°C (45.3°F), bang on the 30ya whereas

the UK figure was  $5.7^{\circ}$ C also equal to the national 30ya. The warmest day was  $12.5^{\circ}$ C (54.5°F) on the  $29^{th}$  and the coldest night -0.3°C (31.5°F) on the  $11^{th}$ . The coldest night on the grass was -6.4°C (20.5°F) also on the  $11^{th}$ . There was one day of air frost and seven days of ground frost.

#### **April**

Nationally, the weather during April was unsettled, with little consistent warmth. There was a more settled period mid-month when things warmed up, especially in Scotland.

Locally, Hastings followed the above pattern, though the settled period did not impact temperatures much. The rainfall total of 70.8mm (2.8") was 160% of the 30ya (nationally 97%) with a wettest day of 12.2mm (0.5") on the  $27^{th}$  with 15 wet days overall. The local sunshine total of 180.2hrs was 90% of the 30ya (nationally 102%) with a sunniest day of 10.8hrs on the  $4^{th}$  and only one sunless day.

The mean maximum and minimum temperatures were -0.8°C (-1.4°F) and -0.1°C (-0.2°F) below the 30ya. The m24hr temperature was 9.2°C (48.6°F), also -0.8°C (-1.4°F) below contrasting with UK figures of 7.8°C and -0.1°C respectively. The warmest day was 16.4°C (61.5°F) on the 19<sup>th</sup> and the coldest night 2.2°C (36.0°F) on the 4<sup>th</sup>. The coldest night on the grass was 0.1°C (32.2°F) on the 25<sup>th</sup>. There were no days of air or ground frost.

#### May

For the UK overall the first few days of May were settled and fine but this changed with unsettled weather moving in from the south-west. The 9<sup>th</sup> saw heavy thunderstorms and torrential rain causing flooding in the south and east of the country. Thereafter, things calmed down with lower, localised, rainfall and some fine sunny weather to see the month out. Temperatures were above average for the majority of the time, rainfall was above average in a band from Devon to Norfolk and below to the north-west and south-east of this strip. Sunshine totals varied around the country and were slightly above average across the UK as a whole.

Hastings was pretty dry with 17.8mm of rainfall which is 39% of the 30ya cf. the UK figure of 55%. The wettest day was the  $8^{th}$  with 8.8mm (0.3") of rain with only six wet days in total. The 227.8hrs of sun in Hastings was 100% of the 30yas whereas it was 108% overall. There were 13.6hrs on the sunniest day which fell on the  $8^{th}$  and only two sunless days.

The mean maximum and minimum temperatures were  $0.1^{\circ}\text{C}$  ( $0.2^{\circ}\text{F}$ ) above and  $-0.3^{\circ}\text{C}$  ( $-0.5^{\circ}\text{F}$ ) below average respectively. The m24hr temperature of  $12.8^{\circ}\text{C}$  ( $55.0^{\circ}\text{F}$ ) was bang on the 30ya whilst the UK figure was  $1.0^{\circ}\text{C}$  above. The warmest day was  $20.7^{\circ}\text{C}$  ( $69.3^{\circ}\text{F}$ ) on the  $28^{th}$  and the coldest night  $5.5^{\circ}\text{C}$  ( $41.9^{\circ}\text{F}$ ) on the  $3^{rd}$ . The coldest night on the grass was  $2.7^{\circ}\text{C}$  ( $36.9^{\circ}\text{F}$ ) also on the  $3^{rd}$ . There were no frost days.

#### June

Nationally, the weather at the start of June was fine and settled with temperatures around average. Mid-month it became warm and humid with thunderstorms in many areas and remained very warm or hot for the rest of the month. It did cool down in the last few days becoming more unsettled generally.

Hastings was similar to the above. Local rainfall was 31.6mm (1.2"), 63% of the 30ya while the UK was 68% overall. The wettest day was the 18th with 14.3mm (0.6") and there were eight wet days in total. The Hastings sunshine figure of 312.4hrs was 130% of the average whereas the UK overall was 144%. The sunniest recorded day was the 25th with 14.7hrs.

The mean maximum and minimum temperatures were  $2.8^{\circ}\text{C}$  ( $5.0^{\circ}\text{F}$ ) and  $1.4^{\circ}\text{C}$  ( $2.5^{\circ}\text{F}$ ) above average. The m24hr temperature of  $17.5^{\circ}\text{C}$  ( $63.5^{\circ}\text{F}$ ) was  $2.1^{\circ}\text{C}$  ( $3.4^{\circ}\text{F}$ ) above the 30ya,

similar to the UK figure which was  $2.5^{\circ}$ C above. The warmest day was  $28.5^{\circ}$ C ( $83.3^{\circ}$ F) on the  $10^{th}$  and the coldest night  $8.9^{\circ}$ C ( $48.0^{\circ}$ F) on the  $6^{th}$ . The coldest night on the grass was  $4.4^{\circ}$ C ( $39.9^{\circ}$ F) on the  $6^{th}$ .

#### July

Nationally, the weather during July was unsettled throughout. The jet stream shifted further south than in June resulting in a cool, dull windy month with a succession of frontal systems moving from west to east. There was a brief warm spell round the 8<sup>th</sup> July though this soon passed.

Hastings broadly followed the above, there being plenty of cloud about and around or slightly below average temperatures. The local rainfall figure of 71.5 mm (2.8'') was 158% of the 30ya, not that unusual compared with the national figure of 170% - the sixth wettest on record. The wettest day was 16.4 mm (0.6'') on the  $25^{\text{th}}$  with 17 wet days in total. The UK recorded 81% of the average sunshine, locally we recorded 221.7 hrs which is 87% of the 30 ya. The sunniest day was the  $7^{\text{th}}$  July with 14.8 hrs and there were two sunless days.

The mean maximum and minimum temperatures were -1.0°C (-1.8°F) below and 0.3°C (0.5°F) above average. The m24hr temperature of 17.2°C (63.0°F) was -0.3°C (-0.5°F) below the 30ya. The warmest day was 27.8°C (82.0°F) on the  $7^{th}$ . The coldest night was 10.4°C (50.7°F) on the  $5^{th}$  with the coldest night on the grass being 8.5°C (47.3°F) on the same night.

#### **August**

Nationally, August continued the unsettled weather pattern experienced in July, though to a slightly lesser extent. Low pressure systems dominated with any periods of high pressure being short-lived, plus there were two named storms, Antoni and Betty that brought unseasonably wet and windy weather to much of the UK.

Locally, Hastings was comparably wetter than the UK overall with 83.6mm (3.3") of rain which is 133% up on the 30ya compared with 89% for the UK overall. The wettest day of 19.5mm (0.8") on the  $18^{th}$  was nothing exceptional and there were 13 wet days in total. The local sunshine total of 211.3hrs was 89% of the mean (similar to the national figure of 92%) with a sunniest day of 13.4hrs on the  $20^{th}$  and only two sunless days.

The mean maximum and minimum temperatures were -1.0°C (-1.8°F) and -0.3°C (-0.5°F) below average with a relatively low high of 23.7°C (74.7°F) on the  $17^{th}$ . The m24hr temperature of 17.2°C (63.0°F) was -0.6°C (-1.0°F) below the 30ya, compared with the UK figure which was 0.2°C above. The coldest night was 10.5°C (50.9°F) on the  $27^{th}$  while that on the grass was 9.0°C (48.2°F) on the  $6^{th}$ .

#### September

Nationally, the high pressure was in control for the first half of September bringing fine, sunny and dry conditions for the first time since June with temperatures above 30°C somewhere in the UK for seven consecutive days, a September record. The second half of the month saw a change to more autumnal weather with westerly winds bringing Atlantic low pressure systems and significant rain.

Locally, the sunshine total of 158.7 hours was 92% of the mean (nationally it was 112%) with the sunniest day being 9.4hrs on the  $4^{th}$  and no sunless days. The rainfall accumulation of 42.8mm (1.7") was 71% of the mean (nationally 131%) with a wettest day of 12.4mm (0.5") on the  $7^{th}$  and only six wet days in total. In Hastings 95% of the rainfall total fell over the five days from the  $17^{th}$ .

The mean maximum and minimum temperatures were both  $2.6^{\circ}\text{C}$  ( $4.3^{\circ}\text{F}$ ) above 30ya with the mean max. of  $21.6^{\circ}\text{C}$  only bettered by  $0.1^{\circ}\text{C}$  in 1949. The m24hr temperature of  $18.3^{\circ}\text{C}$  ( $64.9^{\circ}\text{F}$ ) was  $2.6^{\circ}\text{C}$  ( $4.3^{\circ}\text{F}$ ) above the 30ya, higher than the UK figure which was  $2.2^{\circ}\text{C}$  above. The warmest day was  $26.6^{\circ}\text{C}$  ( $79.9^{\circ}\text{F}$ ) on the  $5^{\text{th}}$  and the coldest night  $8.2^{\circ}\text{C}$  ( $46.8^{\circ}\text{F}$ ) on the  $23^{\text{rd}}$ . The coldest night on the grass was  $7.0^{\circ}\text{C}$  ( $44.6^{\circ}\text{F}$ ) on the  $22^{\text{nd}}$ .

#### **October**

Nationally, the first half of October saw a marked contrast between the north and south. While England and Wales enjoyed the most significant spell of October warmth since 2011, Scotland bore the brunt of successive Atlantic systems along with the associated rainfall. The weather broke on the 12<sup>th</sup> and unsettled weather returned to the whole country with cooler temperatures and heavy rainfall, resulting in the equal-sixth wettest October in a series from 1836. Sunshine was below average for most of the country, particularly in northern England with 78% of the 30ya.

Locally, Hastings was similar to the above with the mean max. temperature being  $4.7^{\circ}$ C (7.4°F) above the 30ya and no recorded rainfall until the  $11^{th}$ . Thereafter, temperatures dropped, but still finished  $2.1^{\circ}$ C (3.4°F) above the average. The rainfall accumulation of 240.9mm (9.5") was the wettest October on record, 274% of the mean with a wettest day of 57.5mm (2.3") on the  $27^{th}$  and this on only 17 wet days in total! This again resulted in flooding in Hastings town centre with Priory Meadow and its environs bearing the brunt yet again.

The mean maximum and minimum temperatures were  $2.3^{\circ}\text{C}$  ( $4.1^{\circ}\text{F}$ ) and  $2.0^{\circ}\text{C}$  ( $3.6^{\circ}\text{F}$ ) above average respectively. The m24hr temperature of  $14.7^{\circ}\text{C}$  ( $58.5^{\circ}\text{F}$ ) was  $2.1^{\circ}\text{C}$  ( $3.8^{\circ}\text{F}$ ) above the 30ya. The warmest day was  $23.0^{\circ}\text{C}$  ( $73.4^{\circ}\text{F}$ ) on the  $8^{th}$  and the coldest night  $4.6^{\circ}\text{C}$  ( $40.3^{\circ}\text{F}$ ) on the  $16^{th}$ . The coldest night on the grass was  $0.2^{\circ}\text{C}$  ( $32.4^{\circ}\text{F}$ ) also on the  $16^{th}$ . There were no ground frost days.

#### **November**

Nationally, the first half of November was unsettled and stormy with Atlantic weather systems bringing high winds and wet weather. Notably, storm Ciaran on the  $1^{st}/2^{nd}$  and storm Debi on the  $13^{th}$ . Despite this, sunshine overall was above average at 112% of the 30ya across the country, except in the west which was dull. Temperatures were near average across the country with an anomaly of  $-0.1^{\circ}$ C ( $-0.2^{\circ}$ F) though it did get cooler from the  $24^{th}$  with some hard frosts in northern areas.

Locally, Hastings was duller and wetter than across the UK. The sunshine total of 51.6hrs was 63% of the mean (nationally it was 112%) with nine sunless days. The rainfall accumulation of 151.0mm (5.9") was 162% of the mean with a wettest day of 26.0mm (1.0") on the 4th and 22 wet days in total.

The mean maximum and minimum temperatures were  $0.3^{\circ}\text{C}$  ( $0.5^{\circ}\text{F}$ ) and  $0.4^{\circ}\text{C}$  ( $0.7^{\circ}\text{F}$ ) above average, the m24hr temperature of  $9.4^{\circ}\text{C}$  ( $48.9^{\circ}\text{F}$ ) was  $0.3^{\circ}\text{C}$  ( $0.5^{\circ}\text{F}$ ) above the 30ya cf. the UK figure of  $-0.1^{\circ}\text{C}$ . The warmest day was  $15.8^{\circ}\text{C}$  ( $60.4^{\circ}\text{F}$ ) on the  $13^{th}$  and the coldest night  $0.6^{\circ}\text{C}$  ( $33.1^{\circ}\text{F}$ ) on the  $26^{th}$ . The coldest night on the grass was  $-2.3^{\circ}\text{C}$  ( $27.9^{\circ}\text{F}$ ). There were four days of ground frost cf. an LTA of six.

#### December

Nationally, December saw the cold snap extend through the first week with hard frosts and disruption across northern England caused by snow. Thereafter storms Elin and Fergus brought wet, windy but much milder weather. The month stayed mild with the UK recording a record high minimum temperature on Christmas Day. The last storm of the year, Gerrit, on the 27<sup>th</sup> to 29<sup>th</sup> brought strong winds, heavy rain and significant snowfall over Scotland.

Temperatures across the UK were above average with anomalies around 1.5°C to 2.0°C and December was the 5<sup>th</sup> equal warmest December in England and Wales. Hastings followed suit with a mean variance across temperatures of 2.0°C and was the 3<sup>rd</sup> equal warmest December with 1953 after 1934 and 2015. Whilst rainfall across the country was up, the 8<sup>th</sup> equal wettest since 1836, Hastings with 89.9mm had only 95% of the 30ya (though it felt like more!) With only 23.0hrs of sun the town was well down on the 30ya at only 36%.

The mean maximum and minimum temperatures were  $1.8^{\circ}\text{C}$  ( $3.2^{\circ}\text{F}$ ) and  $2.3^{\circ}\text{C}$  ( $4.1^{\circ}\text{F}$ ) above average, respectively. The m24hr temperature of  $8.5^{\circ}\text{C}$  ( $47.3^{\circ}\text{F}$ ) was also  $2.0^{\circ}\text{C}$  ( $3.6^{\circ}\text{F}$ ) above the 30ya. The warmest day was  $13.8^{\circ}\text{C}$  ( $56.8^{\circ}\text{F}$ ) on the  $21^{\text{st}}$  and the coldest night –  $1.5^{\circ}\text{C}$  ( $29.3^{\circ}\text{F}$ ) on the  $2^{\text{nd}}$ . The coldest night on the grass was  $-4.1^{\circ}\text{C}$  ( $24.6^{\circ}\text{F}$ ) also on the  $2^{\text{nd}}$ . There were five days of ground frost and the three of air frost.

#### **Detailed Tables and Graphs**

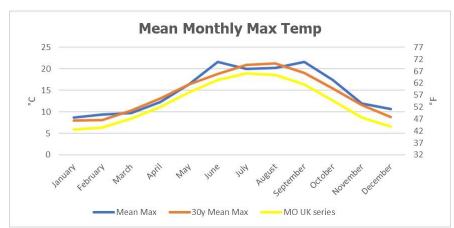
The tables and graphs below are comprehensive given we have managed to record complete data sets this year. The graphs and bar charts compare the Hastings recordings for 2023 with the Hastings 30yr averages for 1991 to 2020 and the Met Office series for the UK.

- **Temperature** a table showing mean Maximum, Minimum, Low Grass & Concrete temperatures by month along with Max. and Min. extremes. The 'Dev'n' values show the variance from the local long-term averages. The final two columns show counts of air and ground frosts.
- **Temperature 2** a table showing mean and highest for Air Temp. @ 09:00, Mean Air Temp. over 24 hours and Sea temperature.
- **Sunshine and Rain** a table showing the Sun, Rain, Snow and Hail totals by month. The 'Dev'n' values show the variance from the local long-term averages.
- **Wind Direction and Speed** a table showing Wind Direction and Speed (Beaufort scale) by month with an annual total. The chart following the table is known as a 'Wind Rose' and plots speed and direction together. The plotlines are cumulative on each of the main eight compass points, i.e. the red line intersect to the North point has a value of 66.
- **Pressure and Relative Humidity** a table showing mean, high and low barometric readings by month with annual figures.
- **Visibility** a table showing visibility readings by month with annual figures.

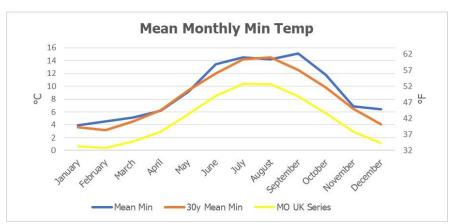
## Temperature (°C)

#### **Results of Observations 2023**

	Mean		High		Mean		Low		Low		Low		Mean		High		Air	G'nd
Month	Max.	Dev'n	Max.	On	Min.	Dev'n	Min.	On	Grass	On	Conc.	On	Sea	Dev'n	Sea	On	Frost	Frost
January	8.7	1.7	12.3	04/01/2023	3.9	1.3	-2.3	17/01/2023	-5.1	19/01/2023	-4.9	17/01/2023	8.3	1.9	10.1	02/01/2023	6	12
February	9.4	2.2	14.0	19/02/2023	4.5	2.0	0.7	08/02/2023	-4.0	08/02/2023	-3.4	08/02/2023	8.0	2.2	8.6	18/02/2023	0	15
March	9.7	0.5	12.5	29/03/2023	5.1	1.5	-0.3	11/03/2023	-6.4	11/03/2023	-3.2	02/03/2023	8.0	1.3	9.8	30/03/2023	1	7
April	12.3	0.3	16.4	19/04/2023	6.2	0.8	2.2	04/04/2023	0.1	25/04/2023	0.6	04/04/2023	10.7	1.8	11.4	30/04/2023	0	0
May	16.4	1.0	20.7	28/05/2023	9.1	0.6	5.5	03/05/2023	2.7	03/05/2023	4.9	03/05/2023	13.2	1.1	14.5	28/05/2023	0	0
June	21.6	3.4	28.5	10/06/2023	13.4	2.2	8.9	06/06/2023	4.4	06/06/2023	8.1	06/06/2023	16.5	1.3	18.5	24/06/2023	0	0
July	19.9	-0.2	27.8	07/07/2023	14.5	1.2	10.4	05/07/2023	8.5	05/07/2023	10.0	05/07/2023	18.6	1.2	19.4	20/07/2023	0	0
August	20.2	-0.1	23.7	17/08/2023	14.2	0.6	10.5	27/08/2023	9.0	06/08/2023	9.8	06/08/2023	18.9	0.7	20.0	20/08/2023	0	0
September	21.6	3.2	26.6	05/09/2023	15.1	3.3	8.2	23/09/2023	7.0	23/09/2023	7.6	23/09/2023	19.2	2.5	20.2	12/09/2023	0	0
October	17.5	2.8	23.0	08/10/2023	11.8	2.8	4.6	16/10/2023	0.2	16/10/2023	3.6	16/10/2023	16.2	2.2	17.5	08/10/2023	0	0
November	11.9	1.3	15.8	13/11/2023	6.9	1.3	0.6	26/11/2023	-2.3	26/11/2023	-1.2	26/11/2023	11.8	1.0	13.1	09/11/2023	0	4
December	10.6	2.6	13.8	21/12/2023	6.4	2.9	-1.5	02/12/2023	-4.1	02/12/2023	-3.2	03/12/2023	9.3	1.3	10.1	12/12/2023	3	5
Annual	15.0	1.5	28.5	10/06/2023	9.3	1.7	-2.3	17/01/2023	-6.4	11/03/2023	-4.9	17/01/2023	13.2	1.5	20.2	12/09/2023	10	43



Hastings mean max. temperature graphed against the local 30ya and the Met Office mean max. for the UK in 2023.

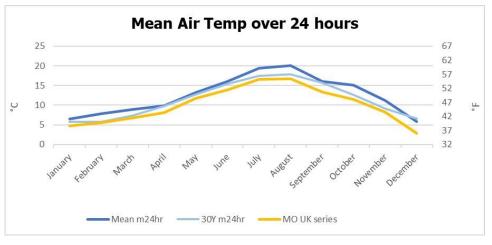


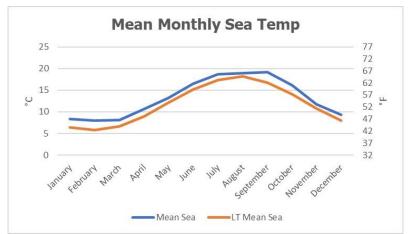
Hastings mean min. temperature graphed against the local 30ya and the Met Office mean min. for the UK in 2023.

# Temperature (°C) sheet 2

#### **Results of Observations 2023**

	Mean air temp		High air		Mean over 24		High over 24		Mean		High	
Month	@ 09:00	Dev'n	09:00	On	hours	Dev'n		On	Sea	Dev'n	Sea	On
January	6.1	1.1	11.5	04 January 2023	6.3	1.5	11.1	01 January 2023	8.3	1.9	10.1	02 January 2023
February	6.6	1.9	10.5	18 February 2023	7.0	2.2	10.3	03 February 2023	8.0	2.3	8.6	18 February 2023
March	7.3	0.7	10.7	23 March 2023	7.4	1.0	10.6	30 March 2023	8.0	1.4	9.8	30 March 2023
April	9.9	0.8	13.2	30 April 2023	9.2	0.5	12.2	28 April 2023	10.7	2.0	11.4	30 April 2023
May	14.0	1.5	17.3	28 May 2023	12.8	0.9	14.9	07 May 2023	13.2	1.2	14.5	28 May 2023
June	18.5	3.1	24.5	10 June 2023	17.5	2.8	22.2	10 June 2023	16.5	1.4	18.5	24 June 2023
July	18.0	0.7	20.6	08 July 2023	17.2	0.5	21.6	08 July 2023	18.6	1.3	19.4	20 July 2023
August	18.2	0.6	21.0	24 August 2023	17.2	0.3	20.4	24 August 2023	18.9	0.8	20.0	20 August 2023
September	19.4	3.8	25.2	10 September 2023	18.3	3.2	23.1	10 September 2023	19.2	2.5	20.2	12 September 2023
October	14.7	2.2	19.6	13 October 2023	14.7	2.9	19.1	10 October 2023	16.2	2.2	17.5	08 October 2023
November	9.2	0.8	14.3	13 November 2023	9.4	1.3	13.5	01 November 2023	11.8	1.1	13.1	09 November 2023
December	8.6	2.6	11.8	24 December 2023	8.5	2.8	11.4	25 December 2023	9.3	1.3	10.1	12 December 2023
Annual	12.5	1.6	25.2	10 September 2023	12.1	1.7	23.1	10 September 2023	13.2	1.6	20.2	12 September 2023





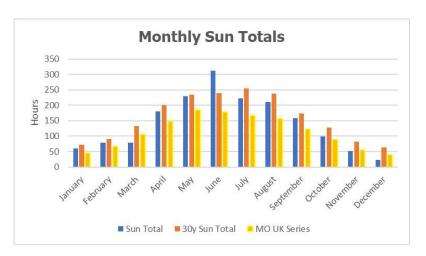
Hastings mean air temp over 24 hours graphed against the local 30ya and the Met Office mean temp for the UK in 2023.

Hastings mean sea temp graphed against the local long-term average.

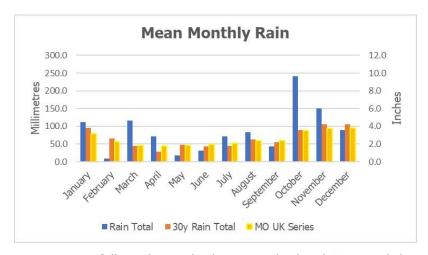
#### **Sunshine and Rain**

#### **Results of Observations 2023**

	Sun (h	ours)					3	Rain (ı	mm)									Snow /	Hail (d	ays)	
	(A)	% of	Daily	High		Sunless		333	% of	Most		0.2		1.0		5.0		Snow /		Hail /	
Month	Total	LTV	Mean	Sun	On	Days	Dev'n	Total	LTV	Rain	On	mm	Dev'n	mm	Dev'n	mm	Dev'n	Sleet	Dev'n	Ice	Dev'n
January	59.7	93%	2.1	6.0	20/01/2023	10	-1	111.8	154%	40.0	15/01/2023	17	0	13	0	5	0	0	-3	1	0
February	78.8	92%	2.9	7.8	14/02/2023	6	-1	9.4	18%	4.5	22/02/2023	6	-8	3	-7	0	-4	1	-3	1	0
March	78.4	59%	2.5	8.4	02/03/2023	7	2	116.5	233%	21.4	23/03/2023	23	9	17	8	7	4	0	-2	1	0
April	180.2	100%	6.0	10.8	04/04/2023	1	-2	70.8	155%	12.2	27/04/2023	13	1	12	4	6	3	0	-1	1	0
May	228.7	100%	8.5	14.2	27/05/2023	2	0	17.8	40%	8.8	08/05/2023	6	-6	4	-5	1	-2	0	0	0	-1
June	312.4	134%	10.4	14.7	25/06/2023	0	-2	31.6	68%	14.9	18/06/2023	8	-2	4	-4	3	0	0	0	0	0
July	221.7	96%	7.2	14.8	07/07/2023	2	1	71.5	134%	16.4	25/07/2023	17	7	12	4	5	2	0	0	0	0
August	211.3	97%	6.8	13.4	20/08/2023	2	1	83.6	141%	19.5	18/08/2023	13	1	10	2	8	5	0	0	1	1
September	158.7	95%	5.3	9.4	04/09/2023	0	-2	42.8	69%	12.4	21/09/2023	6	-6	6	-3	4	0	0	0	0	0
October	98.4	80%	3.2	7.2	03/10/2023	4	-1	240.9	271%	57.5	27/10/2023	17	4	16	6	13	8	0	0	0	0
November	51.6	68%	1.8	5.5	25/11/2023	9	1	151.0	165%	26.0	04/11/2023	21	5	19	7	10	4	0	-1	0	-1
December	23.0	40%	0.8	4.7	06/12/2023	15	3	89.8	109%	15.0	03/12/2023	21	5	18	6	6	0	0	-2	1	0
Annual	1702.9	95%	5.5	14.8	07/07/2023	58	-1	1037.6	138%	57.5	27/10/2023	168	9	134	20	68	20	1	-12	6	0



Hastings sun totals graphed against the local 30ya and the Met Office sun totals for the UK in 2023.



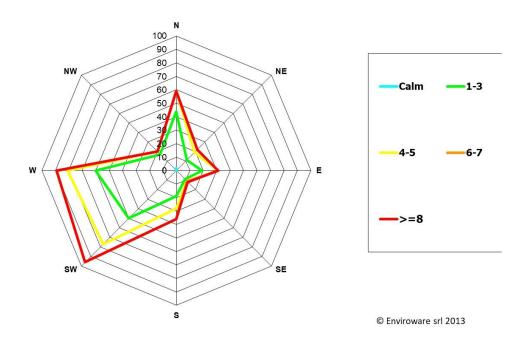
Hastings rainfall totals graphed against the local 30ya and the Met Office rainfall totals for the UK in 2023.

#### Wind Direction and Speed at 09:00 GMT

#### **Results of Observations 2023**

	Direc	Direction (days)										Speed - Beaufort (days)						
Month	Calm	North	North	East	South East	South	South West	West	North West	Calm	Force 1 to 3	Force 4 or 5	Force 5 or 6	Force 8 or >				
January	0	10	2	0	0	3	6	8	2	0	18	6	7	0				
February	1	5	2	4	2	0	4	9	1	1	23	4	0	0				
March	0	4	2	1	1	5	11	3	4	0	16	8	7	0				
April	0	5	1	9	0	5	5	3	2	0	15	15	0	0				
May	0	9	5	5	1	2	7	1	1	0	21	9	1	0				
June	0	5	8	1	2	3	8	2	1	0	21	7	2	0				
July	0	1	0	0	2	2	16	9	1	0	17	10	4	0				
August	0	2	1	2	0	4	11	8	3	0	27	3	1	0				
September	0	3	1	6	1	5	8	5	1	0	22	6	2	0				
October	1	4	0	3	0	3	6	14	0	1	17	11	2	0				
November	0	7	0	0	3	0	6	13	1	0	16	7	6	1				
December	0	2	0	0	0	4	8	14	3	0	14	11	6	0				
Annual	2	57	22	31	12	36	96	89	20	2	227	97	38	1				

#### Wind Rose for Hastings 2023



The above chart shows that, in 2023, the bulk of Hastings wind came from the Southwest quadrant and that, whilst we didn't get many calm days, most winds were light. Also, as the data points are cumulative and we have only one record of force 8 or above, the orange force 6-7 line is overlaid by the red force  $\geq 8$  line.

# **Barometric Pressure and Relative Humidity at 09:00 GMT**

#### **Results of Observations 2023**

Month	Mean	Mean "		Uiah "	0-	Low	Low	0=	Mean
Month	mb	100000000000000000000000000000000000000	mb	High "		mb	00 article (coese)	On	rh
January	1017.3	30.0	1040	30.7	24/01/2023	983	29.0	16/01/2023	88.3
February	1028.0	30.4	1045	30.9	05/02/2023	1006	29.7	22/02/2023	89.3
March	1008.4	29.8	1029	30.4	01/03/2023	950	28.1	08/03/2023	87.9
April	1016.5	30.0	1032	30.5	03/04/2023	997	29.4	12/04/2023	79.3
May	1022.9	30.2	1032	30.5	26/05/2023	1013	29.9	09/05/2023	75.3
June	1017.8	30.1	1026	30.3	27/06/2023	1007	29.7	20/06/2023	73.9
July	1012.4	29.9	1021	30.2	10/07/2023	1002	29.6	24/07/2023	78.2
August	1013.9	29.9	1023	30.2	20/08/2023	989	29.2	02/08/2023	80.4
September	1018.3	30.1	1029	30.4	04/09/2023	1000	29.5	21/09/2023	80.0
October	1009.1	29.8	1032	30.5	04/10/2023	974	28.8	20/10/2023	87.4
November	1004.4	29.7	1032	30.5	22/11/2023	956	28.2	02/11/2023	95.9
December	1011.8	29.9	1040	30.7	16/12/2023	990	29.2	31/12/2023	95.6
Annual	1015.1	30.0	1045	30.9	05/02/2023	950	28.1	08/03/2023	84.3

Table showing mean, high and low barometric readings by month with annual figures.

## Visibility at 09:00 GMT

#### **Results of Observations 2023**

	Dense Fog	Thic	k Fog	Fog	Mod'te Fog	Very Poor	Poor	Mod'te	Good	Very Good	Excel't
Month	40m	100m	200m	400m	1km	2km	4km	10km	20km	40km	>40Km
January	0	0	0	1	0	4	2	5	4	13	2
February	0	0	0	1	1	2	2	6	3	8	5
March	0	0	0	1	1	4	8	5	2	4	6
April	0	0	0	0	0	4	3	3	5	13	2
May	0	0	0	0	0	1	0	4	7	18	1
June	0	0	0	0	1	2	3	4	2	14	4
July	0	0	0	0	0	1	2	6	3	13	6
August	0	0	0	0	0	1	2	6	3	13	6
September	0	0	0	0	0	1	2	5	6	12	4
October	0	0	0	0	0	2	0	3	4	14	8
November	0	0	0	0	0	7	2	3	1	11	6
December	0	0	0	0	0	4	5	5	6	11	0
Annual	0	0	0	3	3	33	31	55	46	144	50

Table showing visibility readings by month with annual figures.