

## September 2023

Fog, rain, mist and drizzle greeted the new month as fronts in association with a low pressure system off the west coast of Ireland marched eastward across the UK, clearing the islands around dawn to leave us with a bright day with light west to northwest winds. Cloud returned that evening but cleared overnight in to the 2<sup>nd</sup> leading to some patchy shallow fog which burnt off quite readily around sunrise. Pressure began to build from the Azores thereafter, stretching up in to the North Sea and as our winds veered in to the east so air temperatures started to rise with this warmer continental feed across the Bailiwick.

As that high drifted eastward to be centred over Berlin by noon on the 4<sup>th</sup> our winds veered in to the southeast allowing air temperatures to climb still further, still with mostly clear skies. By the 6<sup>th</sup> however, low pressure out in Biscay was introducing an extensive shield of high cloud in to the Western Approaches making sunshine hazy at times and with increasing instability and upper level moisture levels, a few showers started to track up from the south. High level winds up from North Africa also brought significant amounts of Sahara Dust to the Channel later that day and the few isolated showers that evening and overnight left the island under a widespread film of brown dust by the next morning.



Sahara Dust in the lower atmosphere lending a brown haze mid morning on the 6<sup>th</sup> at L'Ancrese. *Alto cumulus* at 15,000' sets the contrast nicely. Photo credit Laura Johns

That dominant high had slowed to a near halt over Scandinavia by the 7<sup>th</sup>, so we continued in this very warm southerly flow as advancing low pressure stalled out in Biscay, with a scattering of showers drifting north into southern parts of England. Sunshine was made hazy for the 7<sup>th</sup> & 8<sup>th</sup> with extensive medium and high level cloud spilling in from the west but temperatures still made around 27°C both days, dropping in to the high teens overnight. Humidity levels remained high too, lending a very 'close' feel to the air.

The 9<sup>th</sup> dawned brighter and fresher with lower humidity values and under clear skies with light southeasterly winds temperatures peaked at 29.5°C just before 2.00pm, that's the second highest September air temperature recorded at the airport and the highest for this month since 1961.

This warm plume stretching up from the continent started to bring in some more unsettled conditions later in the day with thundery showers breaking away from the French coast later that evening. The first of these tracked past the islands out to the west but by dawn on the 10<sup>th</sup> one of those storms rolled over us with a few rumbles and flashes but not too much in the way of rainfall. Cloudy and misty conditions prevailed thereafter until late afternoon when our winds veered in to the west resulting in a drop in temperature and with that mist thickening in to fog for a time.

A slack pressure gradient across most of the nearby continent kept our weather fairly quiet over the next few days with light winds and temperatures continuing to be well above the average for September. Whilst warm with light winds, sunshine wasn't too plentiful however as a weak Atlantic system cleared slowly eastward across southern England resulting in the occasional light shower locally. Ridge conditions followed with clearer skies leading to extensive shallow fog by dawn on the 14<sup>th</sup>.

By the 15<sup>th</sup> low pressure was forming over Biscay as another warm plume stretched up across France in to the Channel. Temperatures picked up in to the low 20's once more but this airflow also carried a heightened risk of heavy showers. The first of these arrived overnight in to the 16<sup>th</sup> before easing off around mid morning before returning with more vigour that afternoon. Lightning was observed overnight in to the 17<sup>th</sup> with the first few rumbles of thunder just before dawn. Violent rain fell for a time shortly after, before this cell cleared slowly away northward. Further showers later that afternoon became heavy and thundery that evening. Some spectacular lightning was observed after dark with frequent and powerful thunder heard. Just after 2130L that low pressure's cold front cleared through the Bailiwick with the light southeasterly flow at 19°C being replaced with a fresh southwesterly at 16°C in a little under an hour. The thundery trough continued its progress northward to affect the UK south coast while our skies cleared temporarily before further showers swept in off the Atlantic by daybreak on the 18<sup>th</sup>. Some 34.5mm of rainfall was recorded over that weekend.

Fresh to strong southwest winds pegged temperatures back to the high teens for the 18<sup>th</sup> but the showers eased off through the day as we saw a more traditional autumn look to the weather charts, with low pressure out in the North Atlantic with associated fronts straddling the UK. Cloudy and breezy conditions continued in to the 19<sup>th</sup> as well but rain and drizzle at times brought murkier conditions to our shores, particularly later in the day. The next deep low maintained this unsettled run with an active front dropping down in to the Channel for the afternoon of the 20<sup>th</sup>. The day started cloudy with a few showers but that cloud thickened and lowered after midday as that front stalled over the islands. Periods of rain, heavy and persistent at times finally cleared late evening adding a further 13.4mm of rain to our totals.

Low pressure was still the main driver of our weather, centred just off the north coast of Scotland with bands of showers or longer periods of rain within the general circulation. Temperatures were noticeably cooler than of late too as our airflow became more northerly sourced, dipping to just 12.1°C by dawn on the 23<sup>rd</sup>. We enjoyed a pleasant day thereafter as a brief ridge covered the Channel ahead of the next Atlantic system sweeping in from the west. This low slowed its progress some way south of Iceland but the associated fronts brought rain together with strong winds across all parts of the UK for the 24<sup>th</sup>.

The 25<sup>th</sup> saw some residual rain and drizzle as that front cleared the islands but the bulk of the day was clear and dry with plenty of sunshine. That front waved back in to the western Channel early on the 26<sup>th</sup> however, as pressure built over Russia, with any eastward progress of those Atlantic systems stalling over the UK. We saw a scattering of light showers early and again later in the day, but all eyes were now looking out to the mid-Atlantic as a powerful low deepened and swept in towards the British Isles. Storm '*Agnes*' was the first named storm of this season and barrelled its way northeast across Ireland before weakening as it made landfall over northern England. Strong winds and heavy rain affected many parts of the country but aside from a brief spell of rain and fresh to strong southwesterly winds late afternoon on the 27<sup>th</sup>, we managed to escape the worst of it. We remained in a moderate to fresh southwesterly flow following this storm's departure but another minor low with further fronts assailed our shores late on the 28<sup>th</sup> overnight in to the 29<sup>th</sup> with rain, drizzle, mist and fog for a time before clearing by dawn. Pressure then built rapidly following this clearance, leaving us with a pleasant couple of days to finish off the month.

Following a very warm start to the month this ended up being the warmest September since our records began in 1843 with a mean monthly temperature of 18.3°C, some 1.2°C warmer than either July or August this year. A maximum temperature of 29.5°C on the 9<sup>th</sup> was also the highest recorded this year and the highest for this month since 1961. An overnight minimum of 19.3°C gave us the warmest September night since 2005. Some 88% of the month's rainfall fell over just 3 days but both rainfall and sunshine were very close in total to the long term averages for September. We also noted Sahara Dust on the 6<sup>th</sup>, some very lively thunderstorms on the 10<sup>th</sup> and 17<sup>th</sup> and storm '*Agnes*' on the 27<sup>th</sup>. The 16<sup>th</sup> saw 27.2mm of rainfall, the wettest September day for 11 years.

DAY	DATE	TEMPERATURE deg C							WIND				RAIN mm	SUN hrs	WEATHER		
		BAROMETER	AIR			GRASS	SOIL		DIR'N	SPEED(knots)							
		hPa	MAX	MIN	MEAN	MIN	30cm	100cm	9a.m.	9a.m.	MEAN	MAX					
		at 9a.m.															
Fri	1	1011.9	19.4	14.4	16.9	15.2	17.8	17.4	270	09	6.9	20	NIL	9.2	Cldy w ith early drz soon bec fair, cldy from late pm		
Sat	2	1019.0	20.4	13.1	16.8	11.9	17.8	17.3	360	05	4.8	12	NIL	11.5	Cldy bec fine am		
Sun	3	1025.5	23.6	15.2	19.4	13.4	18.3	17.3	080	08	9.5	20	NIL	9.0	Fine w ith early mist, fair/cldy eve		
Mon	4	1019.5	25.3	19.3	22.3	17.8	19.3	17.4	080	13	11.9	23	NIL	11.6	Fine		
Tue	5	1014.0	27.1	18.2	22.7	16.7	19.5	17.5	140	09	6.4	15	NIL	10.2	Fine		
Wed	6	1019.0	28.3	17.1	22.7	14.3	20.4	17.6	290	03	4.4	11	TR	8.5	Early am mist/haze bec fair. Light shw r late eve w ith Sahara Dust		
Thu	7	1015.8	27.2	19.1	23.2	18.0	20.5	17.8	120	09	4.7	13	NIL	3.9	Fair to cldy w ith haze am. Light shw r am		
Fri	8	1017.0	26.9	18.9	22.9	16.9	20.6	18.0	040	05	4.2	09	NIL	4.6	Cldy occn fair w ith haze early am and late pm		
Sat	9	1015.5	29.5	18.7	24.1	15.2	20.6	18.2	100	08	5.5	16	0.5	10.0	Fine occn fair. Lightning to W late eve		
Sun	10	1015.0	23.8	17.1	20.5	18.2	20.9	18.3	140	11	8.8	18	NIL	3.1	Cldy occn fair. Early shw rs am. T/storm @ 0600. Fog ptchs late pm		
Mon	11	1016.1	22.1	16.9	19.5	15.2	20.8	18.4	220	07	5.0	11	TR	3.7	Cloudy occn fair pm. Isol shw rs eve		
Tue	12	1015.5	20.1	15.9	18.0	16.1	20.1	18.5	260	06	7.8	18	NIL	4.5	Cldy & misty w ith early drz bec fair pm		
Wed	13	1021.7	17.9	13.2	15.6	13.9	19.3	18.4	030	10	6.2	18	TR	0.7	Cldy w ith isol shw r late am		
Thu	14	1022.7	19.4	12.1	15.8	6.4	17.9	18.4	360	01	3.6	14	NIL	8.8	Early shallow fog. Fine w ith xlint viz pm		
Fri	15	1014.2	23.5	13.9	18.7	10.3	18.0	18.2	140	09	8.8	19	3.0	11.6	Fine. High/medium level cloud late eve. Dry air pm		
Sat	16	1010.3	23.0	17.0	20.0	16.2	19.1	18.1	050	08	6.1	16	27.2	1.1	Cldy w ith sct shw rs, occn hvy late pm. Lightning eve		
Sun	17	1008.5	22.1	17.0	19.6	16.3	18.7	18.0	120	09	8.6	29	7.3	2.8	Cldy w ith T/storms & hvy shw rs @ daw n, late pm & eve		
Mon	18	1004.9	18.0	14.4	16.2	13.2	18.5	18.0	250	18	15.5	35	0.3	4.4	Cldy occn fair w ith sct shw rs clrng late pm		
Tue	19	1011.3	17.6	14.8	16.2	12.8	17.7	18.0	230	23	18.3	34	0.5	NIL	Cldy w ith isol shw rs am. Rain & drz late pm & eve		
Wed	20	1001.9	19.6	13.7	16.7	15.0	17.5	17.8	200	18	16.0	36	13.7	0.8	Cldy w ith occn shw rs early am. Rain prstnt & occn hvy pm & eve		
Thu	21	997.0	17.5	11.7	14.6	8.7	17.5	17.8	230	12	10.0	21	0.7	6.9	Fair am & eve, cldy pm w ith shw rs		
Fri	22	1003.7	17.0	12.6	14.8	9.8	16.3	17.5	310	11	11.5	25	TR	10.7	Fine occn fair		
Sat	23	1017.9	17.5	12.1	14.8	8.0	16.0	17.4	260	07	8.8	20	TR	4.7	Fair/cldy w ith shw rs am. Dry air & xlint viz pm		
Sun	24	1019.2	20.0	15.6	17.8	12.1	16.4	17.2	180	14	14.7	27	0.2	7.9	Cldy w ith rain early am, bec fair/fine. Cldy w ith rain by late eve		
Mon	25	1020.7	19.3	13.8	16.6	11.4	16.9	17.0	240	08	7.5	20	0.7	9.0	Cldy w ith early rain & drz bec fair/fine. Cld inc pm & eve		
Tue	26	1017.1	19.8	15.2	17.5	12.0	17.4	17.0	210	07	8.1	18	TR	5.9	Fair/cldy w ith isol shw rs am & late eve		
Wed	27	1014.3	19.7	15.9	17.8	14.1	17.4	17.0	150	13	13.8	33	0.2	1.1	Cldy w ith period of rain late pm bec fine eve		
Thu	28	1016.1	18.7	15.0	16.9	12.9	16.9	17.0	190	10	12.4	26	0.7	1.2	Cldy w ith isol ptchy rain or shw rs		
Fri	29	1022.1	18.5	12.4	15.5	12.5	17.2	17.0	300	10	10.2	33	NIL	8.1	Cldy w ith rain, drz + fog early am. Clrng fine pm, high cld at times		
Sat	30	1026.0	19.0	11.7	15.4	7.0	16.4	17.0	170	11	7.6	19	NIL	9.2	Cldy bec fair by daw n, fine pm		
MEAN 30 YEAR AVG 1991-2020		1015.1 1017.4	21.4 18.2	15.2 13.1	18.3 15.7	13.4 10.2	18.4 16.4	17.7 16.5	SE SW	9.7 10.6	8.9 10.3	TOTAL ////	55.0 55.2	184.7 183.9	27th - Storm 'Agnes'		
EXTREMES ARE IN BOLD TYPE	NUMBER OF DAYS WITH	RAIN ≥0.2mm 12	WET ≥1.0mm 4	SNOW/ SLEET 0	HAIL 0	THNDER 2	LGHTNG 4	AIR FROST 0	GROUND FROST 0	FOG 3	FOG 9a.m. 0	GALE 0	NO SUN 1	TOTALS FOR YEAR TO DATE			
RECORDS FROM JANUARY 1947														RAINFALL	553.7 mm	SUNSHINE	1578.9 hrs
WETTEST DAY DAY/YEAR	43.7mm 20th/1949	DRIEST MONTH YEAR	6.9mm 1997	LOWEST MIN DAY/YEAR	5.8°C 28th/1974	WARMEST MNTH YEAR	18.3°C 2023	SUNNIEST MNTH YEAR	266.5hrs 1959	RAIN DAYS	123	SUNLESS I	30	WET DAYS	81		
WETTEST MNTH YEAR	194.5mm 1952	HIGHEST MAX DAY/YEAR	30.6°C 2nd/1961	LOWEST GRASS DAY/YEAR	-1.0°C 23rd/1979	COLDEST MNTH YEAR	12.8°C 1986	DULLEST MNTH YEAR	104.5hrs 1956								