

December 2021

An unsettled start to the month with low pressure very much the driving force of much of Europe's weather, centred just off the east coast of Scotland tracking slowly east across the North Sea. Strong northwesterly winds and blustery showers, occasionally heavy and with hail mixed in, were the order of the day on the 1st as that low started to pull in cooler air from the north. By mid afternoon on the 2nd the winds had eased somewhat and veered more northerly but temperatures were falling away to just 5°C by evening.

High pressure over the Azores started to extend a ridge up from the southwest towards the end of the day with milder Atlantic air feeding in from the west to replace that cooler flow. Cloud and rain in association with Atlantic weather fronts spilled in overnight and by dawn on the 3rd the islands were covered in a thick blanket of low cloud with outbreaks of rain & drizzle, together with mist and hill fog patches. That rain turned heavier and more persistent through the afternoon before the cold front arrived in the small hours of the 3rd, with clearer and brighter but breezy conditions greeting the new day.

The next low pressure was already to the north of the UK, tracking southeast across the North Sea with a rash of blustery showers packing in across the country. Strong northwesterly winds ensured a rapid transit of these showers locally, but they started to merge together through the afternoon of the 4th to become frequent and heavy and lasting in to the evening. A temporary ridge nudged in from the south later on the 5th allowing those showers to become more isolated, but it was a short respite as another frontal system swept in overnight with rain, drizzle, mist and hill fog arriving in the islands just before dawn on the 6th. A clearance to showers followed around noon as the associated cold front cleared eastward, with a few brighter spells that afternoon.

Out in the mid Atlantic a further low pressure centre was about to deepen and sweep in to be lying off the west coast of Ireland by dawn on the 7th. Storm '*Barra*' underwent explosive cyclogenesis in the 24 hours up to this point, with its central pressure dropping some 50mb to be just 957mb by noon with severe gales across Ireland and many western parts of the UK. Locally we experienced strengthening winds from the south during the morning with rain arriving around 0830hrs, becoming heavy for a time before clearing to showers early that afternoon. We didn't quite manage a full gale at the airport with a highest mean speed recorded of 31 knots at 1002hrs, gusting to 41 knots.

The storm moved only slowly across northern England with squally rain & hail showers locally until the early hours of the 9th, we even noted a brief thunderstorm in the small hours of the 8th.

Following the eventual departure of '*Barra*' eastward, yet another low rolled in from the west with rain, drizzle, mist and fog through the afternoon of the 9th, again clearing to showers later that evening. The unsettled theme continued in to the 10th with more blustery rain and hail showers, cool air temperatures and strong northwesterly winds. Those showers became more isolated through the afternoon though, with the winds easing off as well. Overnight saw cloud thickening ahead of the next Atlantic warm front as yet another deep low, this time centred just southwest of Iceland, swept in from the west with outbreaks of rain by noon on the 11th, mixing in with drizzle through the afternoon with mist and hill fog patches.

High pressure to the south was just starting to have an influence locally by now, ushering the worst of these frontal systems to the north, with a mild southwesterly flow becoming established across northern France and the Channel. High moisture levels associated with this air mass lead to mostly cloudy conditions with some mist or patchy drizzle at times, but the winds continued to moderate and temperatures stayed up just above the average.

This pattern continued for a few more days as we enjoyed a rather benign spell of weather, although sunshine levels were disappointing. Gradually though, that high to the south started to edge northward to centre over the UK by the 16th and as a result our winds backed in to the east and air temperatures fell away over the next few days, despite increased sunshine totals. This dry, settled anticyclonic pattern continued until late on the

19th when a slow moving cold front dropped down across the UK bringing cloudier conditions to our shores with patchy drizzle overnight in to the 20th.



Spectacular *Altocumulus* at 16,000ft with lower level *Cumulus* late afternoon on the 10th. Photo: Adam Heaume

Gradually though, that high displaced eastward to allow low pressure to move in from the near Atlantic bringing milder air together with outbreaks of rain, drizzle, mist and hill fog. The first of the rain arrived during the morning of the 23rd with air temperatures reaching double figures for the first time in 5 days as the whole country moved into a much more unsettled run of weather.

Christmas Eve and Christmas Day were both cloudy & mild with outbreaks of rain or drizzle and that afternoon sunshine on Boxing Day was the first glimpse of any brightness following 4 consecutive sunless days.

Low pressure out in the Atlantic continued to steer a conveyor belt of systems across Europe for the rest of the month, with a succession of mostly cloudy days with rain, drizzle, mist and fog clearing at times to showers. Temperatures held up nicely in this very mild flow with daily means through the last week of the month well above average in double figures, and the last 3 days of the month recording the highest maximum temperatures for those particular dates at the airport.

December was a very mixed month of weather with a cool, dry spell of 5 days from the 18th, a very mild final week, 7 days with hail noted, 2 days with lightning observed and a thunderstorm on the 8th. Overall the month was warmer, drier but duller than average though.

The year itself was exactly on the average with a mean temperature of 11.7°C and it was slightly drier than average with only 89.9% of the average rainfall with January's 188.4mm making up nearly a quarter of that total. Sunshine was marginally above average with a record breaking total of 285.4 hours in April being the sunniest month.

July 21st saw the highest air temperature of the year at 28.1°C and 11th February recording the lowest minimum temperature at -1.9°C. The wettest day of the year was October 2nd with 25.1mm.

An unusually warm September (8th warmest since records began in 1843) recorded a mean monthly temperature of 17.0°C, making it the 2nd warmest month of the year after July with 17.1°C.

DAY	DATE	TEMPERATURE deg C							WIND				RAIN	SUN	WEATHER		
		BAROMETER		AIR		GRASS			DIR'N	SPEED(knots)							
		mb	at 9a.m.	MAX	MIN	MEAN	MIN	30cm		100cm	9a.m.	9a.m.				MEAN	MAX
Wed	1	1004.7	12.0	7.2	9.6	7.3	9.6	11.3	310	21	18.5	40	0.7	3.0	Fair to cldy with sct rain shw rs, occn hvy with hail early am		
Thu	2	1013.4	8.4	4.4	6.4	0.8	9.0	11.3	320	13	9.6	26	12.2	5.3	Cldy w ith occn shw rs am, occn fair pm w ith xint viz		
Fri	3	1008.0	12.5	3.8	8.2	-2.7	8.4	11.2	270	13	14.6	34	16.3	NIL	Cloudy w ith persistent rain. Occasional hill fog		
Sat	4	1004.2	12.4	5.5	9.0	6.9	9.2	11.1	310	18	17.7	36	2.0	2.8	Drz & fog early, bec fair w ith sct rain/hail shw rs, frqnt pm & eve		
Sun	5	1009.6	9.2	5.9	7.6	1.3	8.8	10.9	320	21	16.0	34	TR	3.1	Fair to cldy w ith occn shw rs am & late eve		
Mon	6	1012.8	11.6	5.4	8.5	-0.5	8.6	10.9	200	15	13.6	36	2.3	1.5	Cldy w ith rain, drz and fog ptches, clrng @ noon to fair w ith isol shw rs		
Tue	7	1000.6	10.5	5.0	7.8	0.1	8.6	10.8	170	22	19.2	41	9.3	0.5	Fair bec cldy w ith rain clrng early pm, to fair w ith rain/hail shw rs		
Wed	8	995.3	8.6	5.2	6.9	2.4	8.3	10.7	300	14	16.3	38	0.4	0.3	Cldy w ith frqnt rain/hail shw rs. T/storm 0119hrs		
Thu	9	1006.8	11.9	6.4	9.2	2.3	7.9	10.6	260	11	14.5	39	10.9	0.6	Cldy w ith rain/hail shw rs am. Rain, drz, mist & fog pm clrng eve		
Fri	10	1003.3	10.8	6.7	8.8	2.7	8.4	10.5	320	17	17.4	45	TR	0.7	Cldy am w ith frq rain/hail shw rs, fair/cldy pm. Cldy eve		
Sat	11	1018.5	12.1	8.1	10.1	5.1	8.2	10.4	250	07	10.3	23	0.5	NIL	Cloudy. Rain, drizzle, mist arriving late am w ith occ hill fog		
Sun	12	1023.3	12.5	11.2	11.9	10.1	9.2	10.3	220	13	12.6	24	0.1	0.3	Rain and drizzle in early hours otherwise mostly cloudy		
Mon	13	1024.2	11.5	9.5	10.5	9.1	9.7	10.3	180	14	11.4	21	NIL	1.2	Cloudy slight drizzle am, some sun pm		
Tue	14	1029.3	11.9	9.8	10.9	8.9	9.9	10.4	200	06	6.8	13	TR	NIL	Cloudy, mist late pm & eve		
Wed	15	1032.6	11.2	5.9	8.6	9.2	10.1	10.6	170	08	6.9	14	TR(dew)	1.0	Cldy w ith light drz early am bec fair/fine late pm. Shallow fog eve		
Thu	16	1036.9	9.5	5.9	7.7	0.7	9.5	10.6	120	13	12.3	23	NIL	0.5	Fair, becoming cloudy by midday		
Fri	17	1037.8	11.0	8.1	9.6	5.1	9.2	10.7	070	12	14.1	31	NIL	7.0	Fine bec cloudy pm		
Sat	18	1034.9	9.4	6.7	8.1	4.5	9.0	10.6	080	16	13.4	26	NIL	7.3	Fine w ith occn low cloud at times		
Sun	19	1032.4	9.2	7.7	8.5	5.4	8.8	10.5	070	11	12.8	26	TR	1.6	Dew early. Mainly cloudy but w ith sunny intervals		
Mon	20	1026.0	8.1	4.7	6.4	6.6	9.0	10.4	090	14	13.4	26	NIL	NIL	Cloudy w ith occasional drizzle early morning		
Tue	21	1023.7	6.1	3.8	5.0	2.2	8.4	10.4	110	12	13.2	22	NIL	5.5	Mainly fine w ith odd cloudier spell		
Wed	22	1018.2	6.1	3.1	4.6	1.1	7.5	10.3	140	18	17.2	26	0.2	NIL	Fair bec cloudy by daw n, low cloud by evening		
Thu	23	1010.1	11.9	5.6	8.8	4.2	7.6	10.2	160	14	12.0	23	1.0	NIL	Fog & rain at first, bec fair by late pm w ith shallow fog by eve		
Fri	24	1004.7	10.6	8.8	9.7	4.7	8.4	10.0	180	12	10.2	22	3.7	NIL	Cloudy w ith occasional rain or show ers pm		
Sat	25	1001.4	10.6	9.7	10.2	7.1	8.8	10.0	160	10	10.4	20	12.1	NIL	Rain, mist and hill fog am & again late pm. Some drier spells		
Sun	26	1001.6	11.8	9.0	10.4	8.9	9.3	10.0	240	10	8.6	19	7.8	1.8	Cldy, occn fair w ith early shw rs		
Mon	27	991.8	12.6	9.4	11.0	4.5	9.5	10.1	240	20	16.3	37	6.2	0.9	Mainly cloudy, w ith rain, heavy at times		
Tue	28	998.1	12.3	9.5	10.9	8.0	9.9	10.1	260	26	21.0	43	14.6	4.2	Cloudy w ith occn show ers. Fine pm, bec cloudy eve w ith rain		
Wed	29	1006.8	13.3	9.5	11.4	8.8	10.1	10.2	240	23	18.8	34	1.0	NIL	Overcast w ith rain, drizzle, mist & hill fog		
Thu	30	1017.5	13.5	11.8	12.7	11.5	10.8	10.4	220	16	14.8	28	0.2	0.4	Mainly cldy w ith rain & drz am bec fair eve		
Fri	31	1019.2	13.5	11.2	12.4	9.3	10.8	10.5	220	13	12.4	26	TR	0.6	Mainly cloudy, a little rain/drizzle, became misty/foggy late eve		
MEAN	30 YEAR AVG	1014.4	10.9	7.2	9.1	5.0	9.0	10.5	S	14.6	13.8	TOTAL	101.5	50.1	7th - Storm 'Barra'		
	1991-2020	1016.3	9.9	6.3	8.1	3.6	8.4	10.0	SW	13.3	13.6	////	119.3	58.3			
Diff from prev Avg		-0.1mb	+0.4°C	+0.3°C	+0.4°C	+0.2°C	+0.4°C	+0.4°C	SW	-0.2Kt	-0.1Kt		+6.4mm	+0.1hrs			
EXTREMES	NUMBER	RAIN	WET	SNOW/	HAIL	THNDER	LGHTNG	AIR	GROUND	FOG	FOG	GALE	NO				
ARE IN	OF DAYS	≥0.2mm	≥1.0mm	SLEET				FROST	FROST		9a.m.		SUN				
BOLD TYPE	WITH	18	13	0	7	1	2	0	2	10	1	0	9		TOTALS FOR YEAR TO DATE		
RECORDS FROM JANUARY 1947														RAINFALL	773.2 mm	SUNSHINE	1916.2 hrs
WETTEST DAY	42.9	DRIEST MONTH	27.5mm	LOWEST MIN	-3.8°C	WARMEST MNTH	11.6°C	SUNNIEST MNTH	108.9hrs	RAIN DAYS	167	SUNLESS I	33				
DAY/YEAR	4th/2010	YEAR	2016	DAY/YEAR	24th/1963	YEAR	2015	YEAR	2001	YEAR	124						
WETTEST MNTH	249.6mm	HIGHEST MAX	15.6°C	LOWEST GRASS	-8.9°C	COLDEST MNTH	4.4°C	DULLEST MNTH	26.6hrs								
YEAR	1999	DAY/YEAR	6th/1953		29th/1964, 27th/1995	YEAR	2010	YEAR	1966								