

**JANUARY STATISTICS RECORDED  
AT LERWICK OBSERVATORY**

	<b>January 2010</b>	<b>Averages 1971-2000</b>
Mean maximum temperature	3.9°C	5.6°C
Mean minimum temperature	1.3°C	1.5°C
Daily mean temperature	2.5°C	3.6°C
Mean sea-level pressure	1016.4 hPa (mb)	1006.7 hPa
Total rainfall	113.7 mm	135.4 mm
Wet days => 1 mm	24 days	21.3 days
Sunshine (Digital/Analogue)	36.6 hours	22.6 hours
Air frosts	13 days	8.4 days
Ground frosts	17 days	15.0 days
Snow/sleet	17 days	12.9 days
Days with gale	7 days	9 days
Maximum daily mean temp.	6.4°C on 16 <sup>th</sup>	
Minimum daily mean temp.	-2.1°C on 10 <sup>th</sup>	
Highest maximum	8.6°C on 27 <sup>th</sup>	
Lowest day maximum	-0.2°C on 6 <sup>th</sup>	
Highest night minimum	6.7°C on 27 <sup>th</sup>	
Lowest minimum	-5.6°C on 10 <sup>th</sup>	
Lowest grass minimum	-11.3°C on 10 <sup>th</sup>	
Wettest day	15.0 mm on 31 <sup>st</sup>	
Sunniest day	5.8 hours on 10 <sup>th</sup>	
Highest hourly mean wind	42 knots on 16 <sup>th</sup>	Direction S'yly
Highest gust	60 knots on 16 <sup>th</sup>	Direction S'yly

**COLDEST JANUARY SINCE 1987, BUT ALSO SUNNY**

The first week of January in Shetland was cold and cyclonic, with low pressure over the North Sea or eastern UK bringing mainly NE'yly winds. The 8<sup>th</sup> and 9<sup>th</sup> were briefly very cold anticyclonic, as high pressure drifted across northern Scotland into Scandinavia. The 10<sup>th</sup> to the 22<sup>nd</sup> saw frequent strong S to SE'yly winds, as Shetland became the battle-ground between milder Atlantic air and the cold continental air circulating around an intense anticyclone centred over Western Russia. The 23<sup>rd</sup> to 25<sup>th</sup> was quieter, as a ridge extended over the Northern Isles. From the 26<sup>th</sup> to 31<sup>st</sup> strong cyclonic N'lies brought a return of winter.

Overall winds were predominantly (75%) between SE and N in direction.

Across Scotland - as well as the UK as a whole - it was provisionally the coldest January since 1987. For Lerwick this was also the coldest January since the 2.4° Celsius mean of 1987, though well short of earlier January means: 1.6°C 1984, 0.8°C 1979 and 0.5°C 1959.

Snow, which had lain since the 18<sup>th</sup> December, still covered the ground to a depth of 7cms at the beginning of January. On the 1<sup>st</sup>, with low pressure to the east of Shetland slipping south into the North Sea, a strong to gale-force N to NE'yly wind brought cloudy conditions with further scattered wintry showers. As the low continued south into the Low Countries on the 2<sup>nd</sup>, pressure built to the northwest and NE'yly winds brought further wintry showers. These became more frequent and turned more readily to snow later, as winds backed N'yly behind a cold front sinking south over the Northern Isles.

With low pressure over Scandinavia and the East Greenland anticyclone intensifying, cold N'yly winds brought further heavy and prolonged snow showers on the 3<sup>rd</sup> and 4<sup>th</sup>. High pressure - slipping south over Iceland - extended a ridge into the Norwegian Sea on the 5<sup>th</sup>. The resulting 'squeeze' between this and a shallow low over the North Sea, gave strong to locally gale-force NE'yly winds, with gusts to over 50mph bringing 'blizzard-like' conditions at times in heavy showers and blowing snow. Between the 5<sup>th</sup> and 8<sup>th</sup> there were 10cms of snow at the Observatory, probably deeper elsewhere, with significant drifts in the country areas.

By the 6<sup>th</sup>, high pressure had slipped south to a position west of the British Isles and, as pressure also built over northern Scotland, wintry showers mainly died out, skies cleared and winds fell light and variable. A ridge of high pressure brought fine days with a moderate or light E to NE'yly wind on the 7<sup>th</sup> and 8<sup>th</sup>. Apart from an isolated wintry shower it was mostly dry, with sunny spells by day and clear intervals at night. It remained cold

or very cold, with daytime temperatures a degree or so above freezing, but falling to between -5° and -6° Celsius overnight, with snow-surface temperatures down to -11.3° Celsius at the Lerwick Observatory.

While pressure fell across southern Britain on the 9<sup>th</sup> - as the main centre of high pressure transferred east into southern Scandinavia - a ridge maintained relatively settled conditions over northern Scotland. After a bright start cloud thickened later, bringing a few wintry showers as SE'ly winds freshened.

On the 10<sup>th</sup> the Northern Isles remained under the influence of high pressure, extending from Iceland across southern Scandinavia to east of the Baltic, resulting in a sunny day but with a cold E'ly breeze. Though the 11<sup>th</sup> remained mainly sunny, E'ly winds veered SE'ly and strengthened, as the anticyclone over southern Scandinavia weakened a little and a deep Atlantic depression swung in towards Ireland. Temperatures were a degree or so milder, and a thaw of the lying snow began.

Pressure remained low and complex across the northeast Atlantic on the 12<sup>th</sup>, though an anticyclone - slow-moving to the northeast of Shetland - while maintaining a fresh to strong SE'ly wind, also gave a mainly dry day with some brighter spells. The 13<sup>th</sup> was rather cloudier, with strong SE'ly winds as fronts approached from the west. This, together with some mainly light and patchy rain or drizzle, finally reduced to less than 50% the snow-cover that had persisted for 26 days. Strong SE'ly winds and outbreaks of rain - preceded by sleet - affected the Northern Isles on the 14<sup>th</sup>, as high pressure over Scandinavia moved east into Russia and a deepening Icelandic depression pushed fronts east towards Shetland. On the 15<sup>th</sup> and 16<sup>th</sup> an intense anticyclone over Western Russia extended its influence as far west as the Norwegian coast, holding fronts close to Shetland and bringing cloudy conditions with outbreaks of heavy rain or drizzle, accompanied by strong to gale or severe S to SE'ly winds, gusting to almost 70mph.

Drier and brighter conditions followed on the 17<sup>th</sup>, as fronts cleared east and strong SE'ly winds became moderate to fresh SSW'ly. Mild SW to W'ly winds brought a mainly dry day with sunny periods on the 18<sup>th</sup>. The 19<sup>th</sup> was also mostly dry but, after a bright start, cloud thickened later as a trailing warm front approached from the west. Again, the strong anticyclone over northwest Russia - its influence extending to northeast Scotland - kept Atlantic fronts to the west on the 20<sup>th</sup>. However, as strong SE'ly winds blew from a cold Continent across a relatively mild North Sea, it was a cloudy, raw day with wintry showers developing later.

Little changed during the next two days: an intense anticyclone over western Russia maintained the raw, strong to near gale-force SE'ly winds, bringing cloudy conditions with further mainly light wintry showers on the 21<sup>st</sup>. Outbreaks of occasionally heavy rain or drizzle with strong to gale-force S to SE'ly winds followed on the 22<sup>nd</sup>, as Atlantic fronts made slow progress eastwards.

Strong to gale S or SE'ly winds eased moderate on the 23<sup>rd</sup>, as a front finally moved east over Shetland. However the day remained cloudy with patchy light rain or drizzle, as the front - a weak affair by now - was pushed back west, as the Russian high drifted towards the Baltic. With a ridge extending west from the Baltic high, moderate or fresh SE'ly winds brought cloudy but mostly dry days on the 24<sup>th</sup> and 25<sup>th</sup>.

As the ridge declined south overnight and a warm front trailed east over northern Scotland, strong to gale-force SW'ly winds brought mild, damp conditions with outbreaks of rain or drizzle to the Northern Isles for the 26<sup>th</sup> and start of the 27<sup>th</sup>. During the day an anticyclone - building strongly to the southwest of the UK - extended into mid-Atlantic, and strong winds in the north veered W'ly and later NW to N'ly. Colder, clearer air then flooded south behind a cold front sinking into the Scottish mainland. By evening showers had turned to snow in Shetland.

With a depression moving south over the Baltic and pressure high to the west, cold N to NW'ly winds brought wintry showers on the 28<sup>th</sup>. A trough of low pressure - developing along the Norwegian coast - maintained the flow south of frequent and at times heavy and prolonged snow showers on the 29<sup>th</sup>. The 30<sup>th</sup> was a somewhat brighter day and the showers less frequent, with strong N'ly winds easing and backing NW'ly as high pressure to the west began to sink south. Further heavy snow showers followed on the 31<sup>st</sup> as a frontal trough slipped south across Shetland.

## **Dave Wheeler**

### **Initial Statistical details for Scotland as a whole (1961-1990 average) for January:**

**Mean Temperature:** 0.1°C (-2.2°C below average)

**Rainfall:** 89.5 mm (52% of average)

**Sunshine:** 44.8 hours (130% of average)

### **Data from the UK Met Office**

