

**DECEMBER STATISTICS RECORDED
AT LERWICK OBSERVATORY**

	December 2008	Averages 1971-2000
Mean maximum temperature	6.2°C	6.2°C
Mean minimum temperature	3.4°C	2.0°C
Daily mean temperature	4.8°C	4.1°C
Mean sea-level pressure	1010.9 hPa (mb)	1006.2 hPa (mb)
Total rainfall	133.4 mm	150.0 mm
Wet days => 1 mm	24 days	22.2 days
Sunshine	17.5 hours	14.9 hours
Air frosts	5 days	6.8 days
Ground frosts	13 days	14.3 days
Snow/sleet	9 days	11.3 days
Days with gale	9 days	7.4 days
Maximum daily mean temp.	7.9°C on 23rd	
Minimum daily mean temp.	0.9°C on 2nd	
Highest maximum	10.3°C on 16th	
Lowest day maximum	2.0°C on 1st	
Highest night minimum	7.7°C on 23rd	
Lowest minimum	-1.8°C on 2nd	
Lowest grass minimum	-7.7°C on 2nd	
Wettest day	19.2 mm on 7th	
Sunniest day	2.8 hours on 3rd	
Highest mean hourly wind	45 knots on 21st	
Highest gust	75 knots on 21st	

COOL AND WINDY, BUT A LITTLE SUNNIER AND DRIER THAN AVERAGE

Though the focus of low pressure was in its normal December position over Iceland, it was considerably deeper than usual. Despite this, mean atmospheric pressure was above average at Lerwick. As a consequence of the increased pressure gradient, for much of the month the Northern Isles experienced rather windy and cyclonic conditions, as a sequence of lows - separated by brief ridges - tracked either northeast or east close to Shetland. The last week - from Christmas Eve until Hogmanay - was much more settled, as an anticyclone drifted north across the UK, to become slow-moving over Scandinavia and the northern North Sea.

It was provisionally the coldest December since 1999 for Scotland as a whole. However, for Lerwick, December 2003 was marginally colder, with a daily mean of 4.7° Celsius. While cold anticyclonic conditions brought average temperatures below the long-term mean for much of mainland Britain, on the maritime periphery of the high, Shetland was still significantly milder than normal. For England and Wales it was the coldest December since 2001.

Rainfall was below or well-below average in most areas, only around 50% of normal over parts of England and Wales, but locally wet with 150% in eastern Scotland. Sunshine was above normal virtually everywhere, approaching 200% in some parts of England.

During the first three days, slack low pressure over the Norwegian Sea and North Sea brought cool N'ly winds with wintry showers of sleet and snow and an early gale on the 1st. Winds quickly eased, days were often sunny and nights - with clear skies - rather cold and frosty,

SE to E'ly winds then strengthened, ahead of fronts driven east into Scotland by an Atlantic depression, bringing rain - preceded by sleet - on the 4th. Winds gradually backed NE'ly and rain turned showery as the depression tracked east to the south of Orkney. On the 5th the showers died out, as easing NE'ly winds backed further to become light NW'ly, as the depression moved away over the North Sea and pressure built to the west.

A ridge swung east over Shetland bringing a reasonably fine day on the 6th. However, the next three days were unsettled, as the next depression - tracking east through the Iceland region - drove its fronts across northern Scotland. Rain on the 7th cleared to showers by the 8th as strong SW'ly winds veered W'ly. Showers turned wintry overnight, as the depression moved into the Norwegian Sea and winds veered to a cooler NW'ly

direction. These resulted in a thin covering of snow or ice, and the month's only 'snow-cover' at Lerwick early on the 9th. The 10th was a better day as another ridge, moving east across the area, brought drier conditions with lighter winds.

With an anticyclone over Scandinavia supporting a ridge across Scotland, the 11th started fine, but showers soon spread across the Isles as SE'ly winds freshened. As a deep depression near Iceland pushed fronts east towards Scotland, SE'ly winds increased severe gale-force on the 12th, Slowing down as they came up against high pressure to the east, the fronts lingered near Shetland for the next 24 hours, bringing heavy overnight rain which - accompanied by strong to gale-force SE'ly winds - persisted through much of the 13th. The rain turned lighter and patchy overnight as fronts eventually cleared eastwards, with the winds easing markedly by the 14th, as the filling depression slipped southeast over northern Scotland. Though mainly dry conditions followed overnight as winds veered SW'ly, a depression near Iceland pushed an occluding front east over the area on the 15th, bringing more rain later in the day.

With a large, complex area of low pressure to the northwest, the next three days saw unsettled conditions with outbreaks of rain or showers. Mild SW'ly winds increased gale-force from the 17th. Showers turned more frequent, heavier and wintry with hail on the 18th, with thunder reported from Fair Isle.

After a bright start on the 19th, a deep low centre moving towards Faeroe brought heavy rain, with S'ly gales increasing severe gale, gusting to 77 mph on Fair Isle and 86 mph in Kirkwall. As the low moved east to the north of Shetland on the 20th, rain gave way to wintry showers, as gales - temporarily moderating - veered W'ly. Showers continued for much of the 21st - Lerwick having a thunderstorm and hail - as the main centre moved east from Iceland and winds, veering NW to N'ly, increased gale to severe gale and locally storm-force, with Lerwick reporting a gust of 86 mph. A ridge swung east across Shetland and winds eased early on the 22nd, but more rain followed later in the day, and again on the 23rd as a new depression, moving into the Iceland region, pushed fronts east over Shetland.

As an offshoot of the Azores high moved over southern Britain and extended a ridge north across Scotland, the three days over Christmas were mainly dry, though a mild SW'ly breeze brought rather cloudy conditions. . As the high drifted across the UK into southern Scandinavia weak fronts, associated with low pressure to the northwest, brought some mainly light showers and freshening S'ly winds on the 28th and 29th. The 30th was dry though rather cloudy but, as the high drifted closer to Shetland, the 31st was dry and bright with light winds.

Dave Wheeler

Initial Statistical details for Scotland as a whole (1961-1990 average) for December 2008:

Mean Temperature: 2.3°C (0.6°C below average)

Rainfall: 133.5 mm (86% of average).

Sunshine: 54.3 hours (154% of average).

Data from the UK Met Office