Visibility

Visibility is the code figure for the lowest horizontal visibility observed in any direction. The table below lists the applicable codes and distances

Code for observing and reporting visibility			
Coded entry (1)	**General description (2)**	**Visibility range inclusive (3)**	**Standard distance (5)**
X	DENSE FOG	0 – 19 m	20 m
E		20 – 39 m	
0	THICK FOG	40 – 99 m	40 m
1		100 – 199 m	100 m
2	FOG	200 – 399 m	200 m
3	MODERATE FOG	400 – 999 m	400 m
FOG LIMIT			
4	VERY POOR VISIBILTY	1000 – 1999 m	1000 m
5	POOR VISIBILTY	2000 – 3999 m	2000 m
6	MODERATE VISIBILTY	Kilometres 4 – 9 km	4 km
			7 km
7	GOOD VISIBILTY	10 – 19 km	10 km
8	VERY GOOD VISIBILTY	20 – 39 km	20 km
			30 km
9	EXCELLENT VISIBILITY	40 km or over	40 km

Temperatures

A number of temperatures are recorded these include the thermometers contained within the Stevenson Screen and at ground level and below ground level.

Dry Bulb Temperature

This is the normal temperature reading as recorded in most domestic situations, care is taken to keep the thermometer dry and clean, this improves accuracy. The reading is the temperature at the time of observation.

Wet Bulb Temperature

The wet bulb is identical to the dry bulb, the difference being it is covered in a muslin cap which is kept moist by water travelling up a cotton wick, the lower end of which dips into a reservoir of distilled water. Unless the weather is foggy or a mist is present the wet bulb temperature is usually less than the dry bulb.

A difference between the dry bulb and wet bulb temperature enable the relative humidity to be calculated. When the air is saturated, no evaporation takes place from the wet bulb and it reads the same as the dry. The lower the humidity the greater the difference between the bulbs. Normally the wet bulb temperature lies between the dry bulb and the dew point.

Maximum Temperature
This reads the maximum temperature since it was last reset, as it is read at 0900 in the morning it usually relates to the temperature present the previous afternoon (traditionally the hottest part of the day). For this reason it is attributed to the day before, this is known as throwback.

Minimum Temperature
The minimum thermometer records the lowest temperature since last reset. This usually occurs in the early hours and so is attributed to the day of reading.

Grass Minimum Temperature
This is a minimum thermometer with a black anti-condensation shield and records the minimum temperature at night on the grass. The thermometer is placed on the ground in a frame so that the thermometer just touches the tops of the blades of grass.

Concrete Minimum Temperature
This is a minimum thermometer identical to the one that measures the grass minimum. It is placed lying on a piece of concrete and records the minimum temperature of the concrete.

Soil Temperature (100cm)
This thermometer is attached to a chain and sits at the bottom of a tube which is 1m deep. The thermometer is read at 0900 and the present temperature recorded.

State of Ground
A patch of bare earth is maintained within the weather station and its condition compared with one of the two tables reproduced below. One without snow and one with snow. One or other is used never the two on the same day.

CODED FOR STATE OF GROUND WITHOUT SNOW	CODED ENTRY	CODED FOR STATE OF GROUND WITH SNOW
Surface of ground dry (without cracks and no appreciable amount of dust or loose sand)	0	Ground predominantly covered by ice
Surface of ground moist	1	Compact or wet snow (with or without ice) covering less than one-half of the ground
Surface of ground wet (standing water in small or large pools on the surface)	2	Compact or wet snow (with or without ice) covering at least one-half of the ground but ground not completely covered

Ground flooded	3	Even layer of compact or wet snow covering the ground completely
Surface of ground frozen	4	Uneven layer of compact or wet snow covering the ground completely
Glaze on ground	5	Loose snow covering at least one-half of the ground
Loose dry dust or sand not covering the ground completely	6	Loose snow covering at least one-half of the ground (but not completely)
Thin cover of loose or dry dust or sand covering the ground completely	7	Even layer of loose dry snow covering the ground completely
Moderate or thick cover of loose dry dust or sand covering the ground completely	8	Uneven layer of loose dry snow covering the ground completely
Extremely dry with cracks	9	Snow covering the ground completely, deep drifts

Snow Depth
Snow depth is only measured and entered if snow grains, hail or ice pellets are covering half the ground or more. It is measured to the nearest whole centimetre with any measurement of 0.5 centimetres being thrown up. (2.5 centimetres is entered as 3).

Rainfall
Rainfall is the total amount of precipitation measured at 0900 GMT in millimetres and tenths. The rainfall total covers a 24 hour period, from 0900 ‘yesterday’ to 0900 ‘today’. As more of the rainfall is recorded prior to midnight the reading is applied to the previous day.

Sunshine
Sunshine is entered in hours and tenths. This figure will be for the period sunrise to sunset and should be entered against the date on which it occurred. As the card is changed in the afternoon at 1600 the sunshine record will be on two cards, yesterday’s card between dawn and 1600 and today’s card 1600 to dusk.