

# State of ground and snow depth

Ideally, you report state of ground for a 2 m square of representative bare ground (e.g. 'bare patch/plot') within the enclosure. Its surface should be flat and level with the surrounding ground. The top 15 cm of soil, at least, should be representative of the whole site.

When there is snow or measurable ice cover, you must report state of ground for the 'open representative area' around and similar to your observing site.

The open representative area should be fairly flat, easily visible from your site, not more than 30 m in height difference and free of artificial surfaces such as concrete or tarmac. It should not include a valley floor, a hilltop, woodland or open water.

- ✓ You do not need to note hoar frost and dew when you observe state of ground. If they occur, record the state of ground as if they were not there.
- ✓ Top up the representative bare ground with new representative soil to keep the plot level with the ground nearby.
- ✓ The representative bare ground should be kept free of vegetation by hand-weeding or a suitable weed-killing system. It must not be dug over, hoed, raked, etc.



*View over a typical enclosure*



State of ground WITHOUT snow or measurable ice cover	Code
Dry (without cracks and no appreciable amount of dust or loose sand)	0
Moist	1
Wet (standing water in small or large pools on the surface)	2
Flooded	3
Frozen	4
Glaze on ground	5
Thin layer of loose, dry dust or sand not covering the ground completely	6
Thin layer of loose, dry dust or sand covering ground completely	7
Moderate or thick layer of loose, dry dust or sand covering ground completely	8
Extremely dry with cracks	9
Covered by snow or measurable ice cover or cannot be described by one of the above	/

#### Notes

- ✓ Codes 0, 1, 2 and 4 refer to the representative bare patch.
- ✓ Codes 3, 5, 6, 7, 8 and 9 refer to the open representative area.
- ✓ Codes 6, 7 and 8 should very rarely be reported from a station in the UK, as they generally refer to the residues from duststorms or sandstorms, or the result of volcanic activity.
- ✓ Glaze (code 5) is a smooth, compact deposit of generally transparent ice formed by freezing rain, freezing drizzle or freezing fog. It is caused by supercooled water droplets turning to ice as they hit the ground. Do not confuse it with 'ground ice', which is caused by either non-supercooled water droplets eventually freezing, lying snow which melts and then refreezes or snow that is compacted by traffic and turns to ice due to compression.

✓ Always report the highest applicable code.



State of ground WITH snow or measurable ice cover	Code
Mostly covered by ice	0
Compact or wet snow (with or without ice) covering less than half of the ground	1
Compact or wet snow (with or without ice) covering at least half of the ground	2
Even layer of compact or wet snow covering ground completely	3
Uneven layer of compact or wet snow covering ground completely	4
Loose, dry snow covering less than half of the ground	5
Loose, dry snow covering at least half of the ground	6
Even layer of loose, dry snow covering ground completely	7
Uneven layer of loose, dry snow covering ground completely	8
Snow covering ground completely; deep drifts	9
Not covered by snow or measurable ice cover or cannot be described by one of the above	/
<b>Notes</b>	
<p>✓ All descriptions and codes refer to the open representative area.</p> <p>Measurable ice cover is any form of solid, frozen precipitation that is not snow, e.g. hail, ice pellets, snow grains.</p>	

- ✓ Always report the highest applicable code.



State of concrete slab	Code
Dry	0
Moist	1
Wet	2
Icy	3
Covered by snow, ground frozen or cannot be described by one of the above	/

- ✓ Always report the highest applicable code.

## Measuring the depth of frozen precipitation

This includes snow, hail and ice pellets.

- ✓ If, at the time of your observation, the ground representative of the station is more than half covered by snow or other solid precipitation, then the depth should be measured and reported.
- ✓ Measure the depth in centimetres using a ruler held vertically in a location free from drifting or scouring by wind.
- ✓ Choose a location as near as possible to the rain gauge. Ideally, take three measurements at different places and report the average of these.

You must ensure that the ruler is either adapted to read zero at ground level or you take account of the length of the short gap between the end of the ruler and the zero mark when you make your measurement.

- ✓ Make sure your ruler does not pierce the grass or other ground surface beneath the frozen precipitation, as this will give a false reading.