

The 3 Norths

Which way is North?

This is an easy question but the answer is not straightforward. There are in fact 3 different norths!

- True North – This is the point at which the Earth rotates which we call the North Pole (or Geographic North).
- Grid North – As the Earth is a sphere, it is not easy to make a flat map. The maps of the UK are little chunks of a curved surface, so they can't all point directly north. North on the grid is in a slightly different direction on each map.
- Magnetic North – This is what your compass points to. Your compass needle is a magnet that lines itself up with the Earth's magnetic field. Magnetic North is in a different place to the rotation point. The magnetic north moves slightly each year and, when a compass is used in the UK, it is currently west of Grid North, which is itself west of True North.

The difference in angle between True North and Magnetic North is called **MAGNETIC VARIATION** or **DECLINATION**. The difference in angle between Grid North and Magnetic North is called **GRID MAGNETIC ANGLE** and it is this angle which needs to be used when converting between magnetic and grid bearings. On an OS Explorer 1:25,000 Map, the difference between True North and Grid North is shown in the information panel near the map symbols. This also shows the date when the information was last updated, and a figure for how much you need to adjust each year afterwards. This is one of the reasons for keeping your maps fairly up to date.

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How to work it out...

Let's take Map 117 Cerne Abbas and Bere Regis and look at the East Sheet. The Magnetic North to Grid North is given as 2 deg. 41' W in July 2006 decreasing by about 09' per year. So in July 2008 this would become 2 deg. 41' W - (2 x 09) = 2 deg. 23' West of Grid North.

Here is how the norths relate to one another. Note, that the angles shown may not be true for the map you are using.

This diagram demonstrates how to convert between the north on your map and the north on your compass:

This picture shows how the magnetic poles differ from the true ones: