

Know your sport: Up and down — using contours

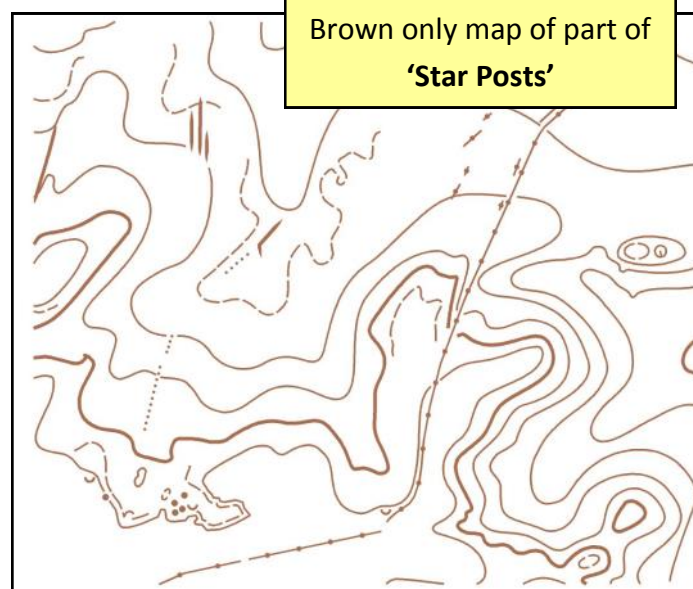
We can orienteer over all types of terrain—from flat areas of forest, to forested sand dunes, open upland moors and undulating heathland. The maps we use need to show this.

What are contours?

The maps we use are a representation on a flat (2-dimensional) sheet of the competition area. The area however is 3-dimensional. Contours are therefore the way that the orienteer is given information about the shape of the land — where there are hills and valleys and numerous other minor changes in height.

As most people will know, contours connect points of the same height. On orienteering maps the contours are usually placed to show the ground at intervals of 5 metres but this is sometimes 2.5 metres where this detail is useful. In addition, where it can help show the shape of the land, additional 'form lines' can be added between the main contours.

On orienteering maps, most symbols representing ground form are shown in brown. On the right is part of the map of 'Star Posts' showing only the features marked in brown. Notice that it is almost impossible to identify which areas are high and which are low. Other symbols usually make this obvious but where there might be confusion, a small tag is shown pointing down hill. This can be quite commonly seen in large depressions but it can also be added to contours and form lines (see the 'Scottish Moraine' map below for numerous examples).



Brown only map of part of 'Star Posts'

Southern Forest

Gentle slope

Steeper slope

Hill top

Wide and deep re-entrant

Welsh Moorland

Narrow re-entrant

Plateau like area

Narrow re-entrant

Scottish Moraine

Depression with knoll to the north and a steep slope to the south

Ridge

Steep slope

Reading contours

Every area used for orienteering is unique and part of the skill is being able to interpret the contours in very different terrains. Here 3 different areas are shown and being able to 'read' the contours will help you navigate accurately across the areas.

Contours and Control Descriptions

For technically advanced courses, planners are keen to use the contour features for control sites. The International Orienteering Federation (IOF) has provided guidance to try and provide a consistent description of possible controls sites. A guidance document is available for this and some examples are shown here. The full document can be accessed from this link:

<http://orienteering.org/wp-content/uploads/2010/12/IOF-Control-Descriptions-2004.pdf>

		5		Spur
		6		Re-entrant
		17		Hill
		18		Hill, north-west part
		19		Between the hills
		23		Saddle

Planning using contours

Here are some examples of planners devising legs where the contours are key to the route choice:

- 1: A common 'over or round' leg where the choice is the shorter direct route with a climb over the hill or the longer but flatter route around the hill.
- 2: A similar type of leg but with a 'down or round' route choice from 6 to 7.
- 3: Not such an obvious problem but going direct from 6 will leave a competitor uncertain where they are when they cross the track. You then have to head down the steep slope and it is easy to go too far if you are slightly to the left or right of the correct feature.

