



AT THE EDGE MOUNTAINEERING

"Your greatest failure is not to try"

Part 4.1 of my Navigation Techniques series will look at How to follow a Bearing and the techniques we can use to minimise errors.

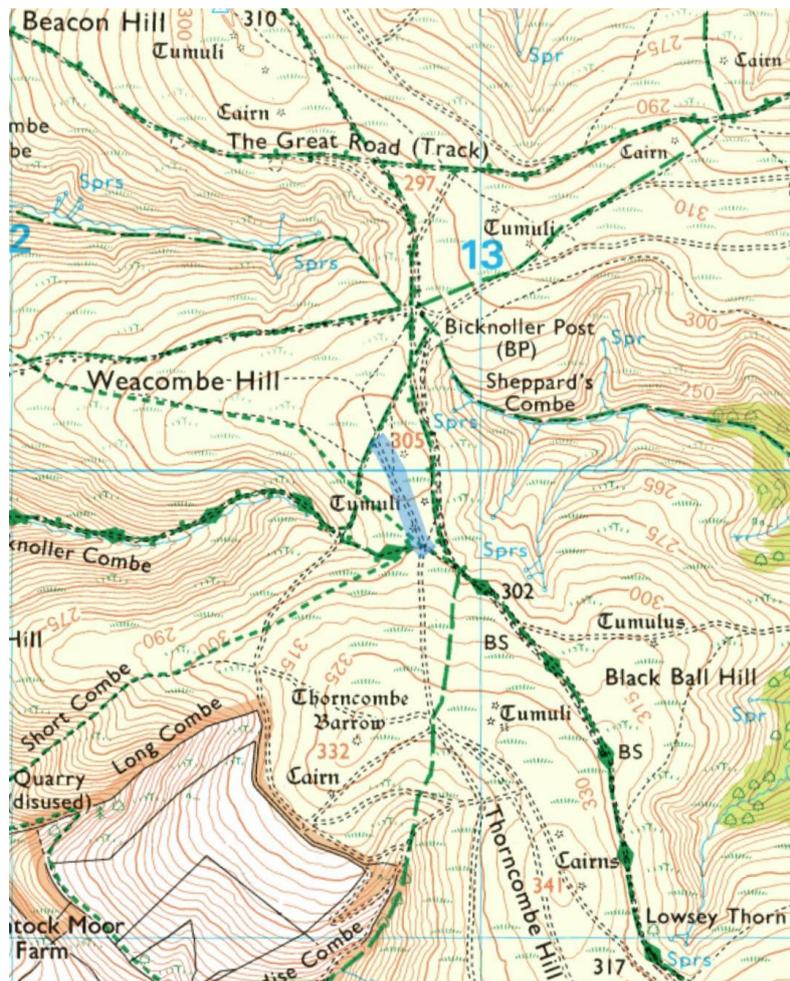
Answers for Navigation Techniques 2.4 – Bearings:

Q1: What is the bearing from the southern end of Wilmot's Pool (GR 152, 381) to the Trig point (GR 148, 381)

A: 267 degrees

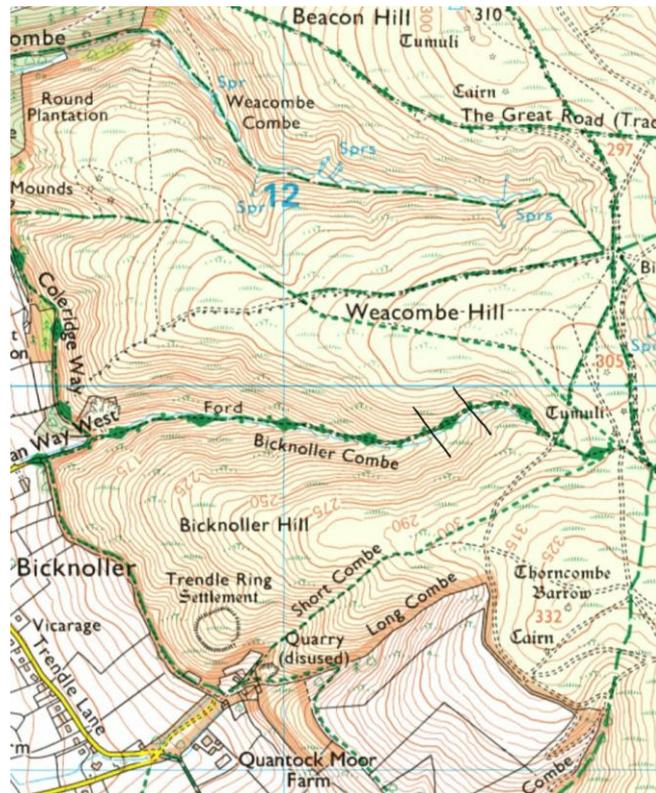
Q2: I have reached the track junctions at GR 128, 398 and I am unsure which track to take. I have taken a bearing on my map down the path I want to use. The bearing is 338 degrees. Which track will I take? (Highlight on you map)

A: Highlighted in blue



Q3: I am walking up Bicknoller Combe. I am in grid square 12, 39 and have checked the direction of the path using a magnetic bearing to see where I am on the track. My bearing is 59 degrees. Roughly where am I? (Highlight on your map)

A: Between the two black lines



Q4: I am stood at the Tumuli at GR 131, 405. I have spotted my next checkpoint through a break in the clouds. I took a sight bearing and it was 309 degrees. What feature did I see?

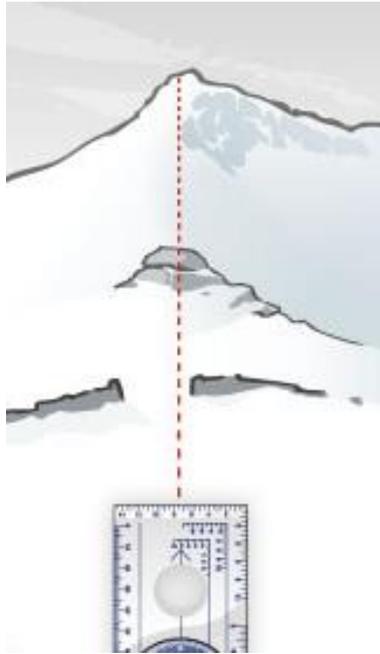
A: Trig Point

Q5: What is the bearing from the Tumulus at GR 147, 401 to Higher Knap at GR 148,395?

A: 170 degree

Q6: Check the direction of the handrail from GR 132, 379 to GR 135, 381

A: 60 degrees



Following a bearing

Being able to follow a bearing accurately is an important skill to learn in navigation. I have seen it all too often, when someone sets a bearing and follows it, only to walk off the bearing and veer off left or right, which ultimately leads to errors and missing their feature. In poor visibility or at night, this could end in getting lost, or worse.

Once you have set a bearing, hold the compass flat in-front of you with the direction of travel arrow pointing away from you. Rotate your body, keeping the compass fixed to your body, until the north magnetic needle and the orienting needle align. The compass is now set and the direction of travel arrow points in your direction of travel. Make sure you do not move the compass housing as this will change the bearing.

Pointing in the right direction and with the compass set, look ahead and see if there are any fixed objects that fall on the bearing (not sheep, they move!). Once you have a fixed object that falls on the bearing line, you can now put the compass away and walk to this object.

These objects could be anything in the middle ground that doesn't move. For example, rocks, tufts of grass, trees and bushes. So long as the object doesn't move and it is not too far away so to disappear in the cloud, these act as reference points for you to walk to.

Once you have arrived at your object, or just before you get to it, you can continue the process by sighting another fixed object on the bearing to walk to.

By having these set objects to walk to, we can walk around obstacles without the need for advanced compass techniques or losing our bearing. See the image below:

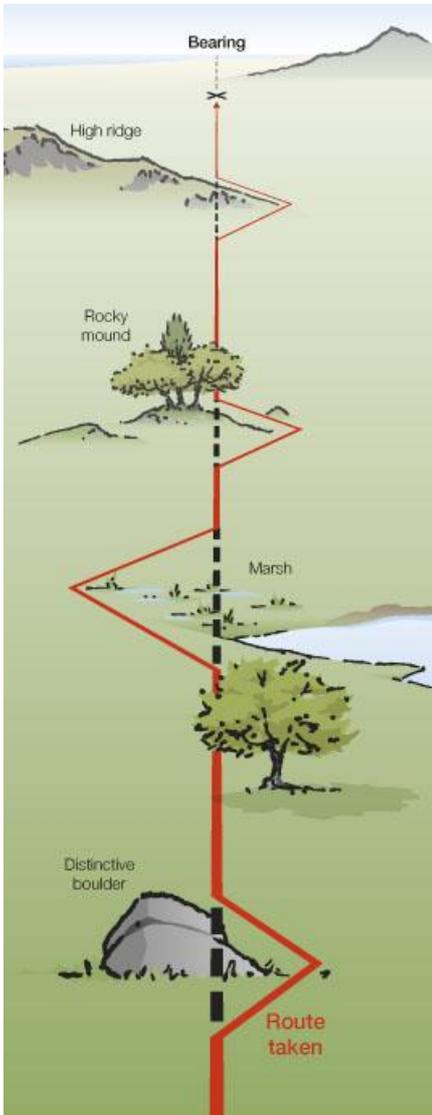


Illustration from 'Navigation in the Mountains' © MTUK/VG 2012

In poor visibility or at night, your field of view is greatly reduced. With this in mind, it is still possible to pick out objects on the ground to walk to. Look for subtle changes on the ground, for example. On Dartmoor, I have used tussocks to walk to on a bearing and even the silhouette of some reeds on a mound. All of which have fallen on my bearing and have been the most obvious reference for me to walk to.

In extreme circumstances, it is possible to use other members of your group to act as these 'objects'. Send a group member out to the limit of communication or sight on your bearing. You still need to be able to see and shout to them. Direct them, left or right and tell them to stop when they are in line with your bearing. They must then remain still, and the group can then walk to them. Repeat the process. This is very time consuming, difficult to maintain timing and pacing and over long distances can become inaccurate. Plus, it separates the group which may compromise the safety of the group.

Transit Points

In good visibility, we can usually sight two points on our bearing that line up. These are called transit points. If walking towards them, they will line up. But if you veer left or right, the two points will move apart and no longer be in line. This is a good method to ensure you walk in a straight line on your bearing. This method enables you to be able to put your compass away and walk on your bearing without having to check it frequently.

Transit points can be any two features that line up perfectly on your bearing line. Examples include (but not limited to):

- Two spot features (A building and a tree / a small pond and a boulder)
- Linear features (A stream or a boundary running directly towards you)
- Spot feature and a linear feature (A stream and a distant rock outcrop)

See below for visual examples:

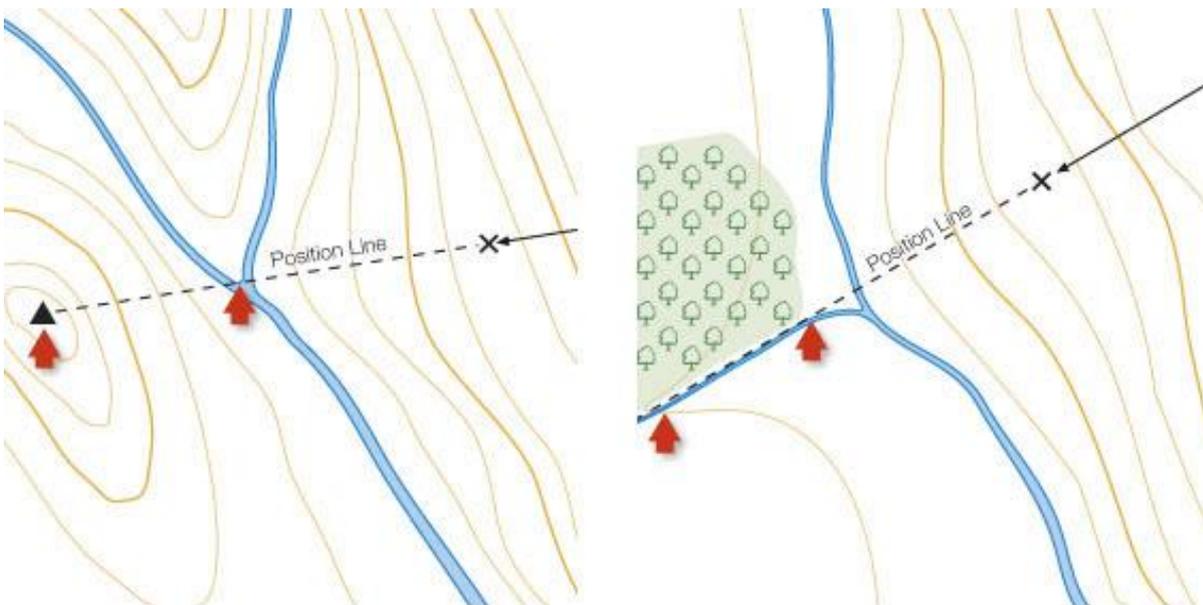
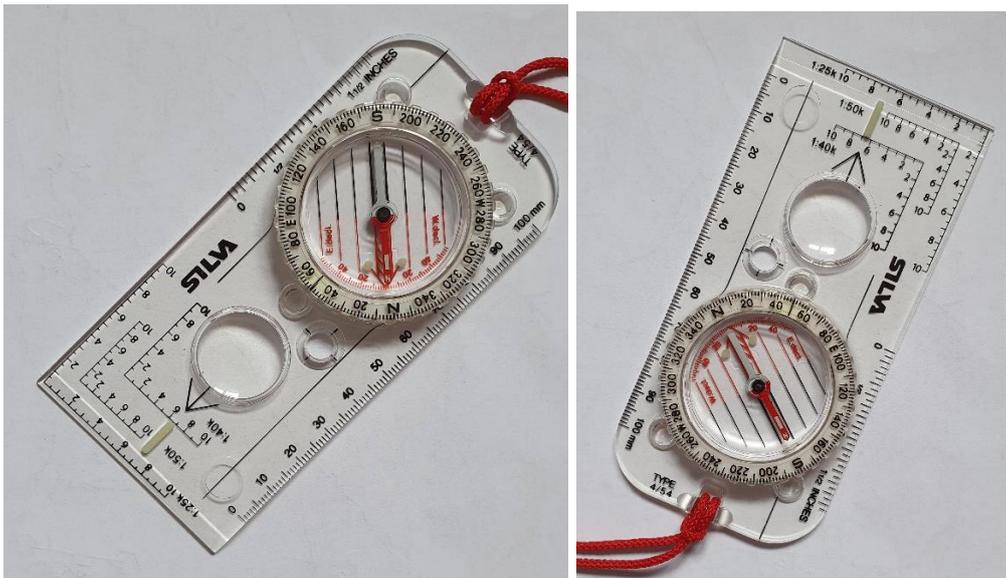


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Back Bearings

A back bearing can be used to check along the route you have already travelled to ensure you are still walking in a straight line and staying on track. It is useful if you can still see your start point or the last object you walked to on your bearing. For example, if you have just walked from a trig point to a set object on your bearing line, you can do a back bearing on the trig point to see if it is still in-line with your bearing.

The simplest way to take a back bearing is by rotating the compass so that the white south magnetic needle is aligned with the north orienting arrow:



It is possible to add or subtract 180 degrees from your bearing but this involves unnecessary maths and can lead to errors.

If your back bearing doesn't line up with your previous destination, it is possible to turn at a right angle and walk until your bearing lines back up.

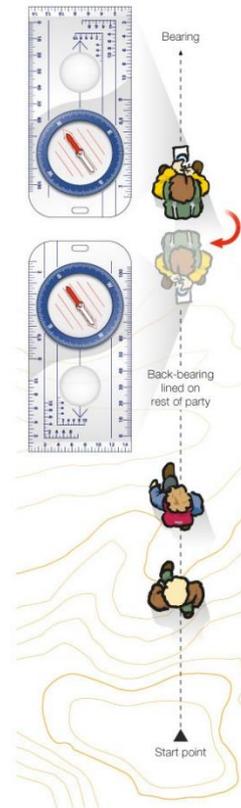


Illustration from "Navigation in the Mountains" © MTUK/VG 2012

There are no questions for this part. The best way to learn walking on a bearing is by practicing outdoors or by attending a navigation course. Take a look at my [Navigation Course](#) I offer and get in touch to learn more.

All **confirmed bookings** will receive a **10% discount** code to use on [Harvey Maps](#) products from their site.

Next Up:

The next article in this series will be **Part 2.5: Advanced compass work**

Stay tuned for updates by signing up to my newsletter!

See you At The Edge!