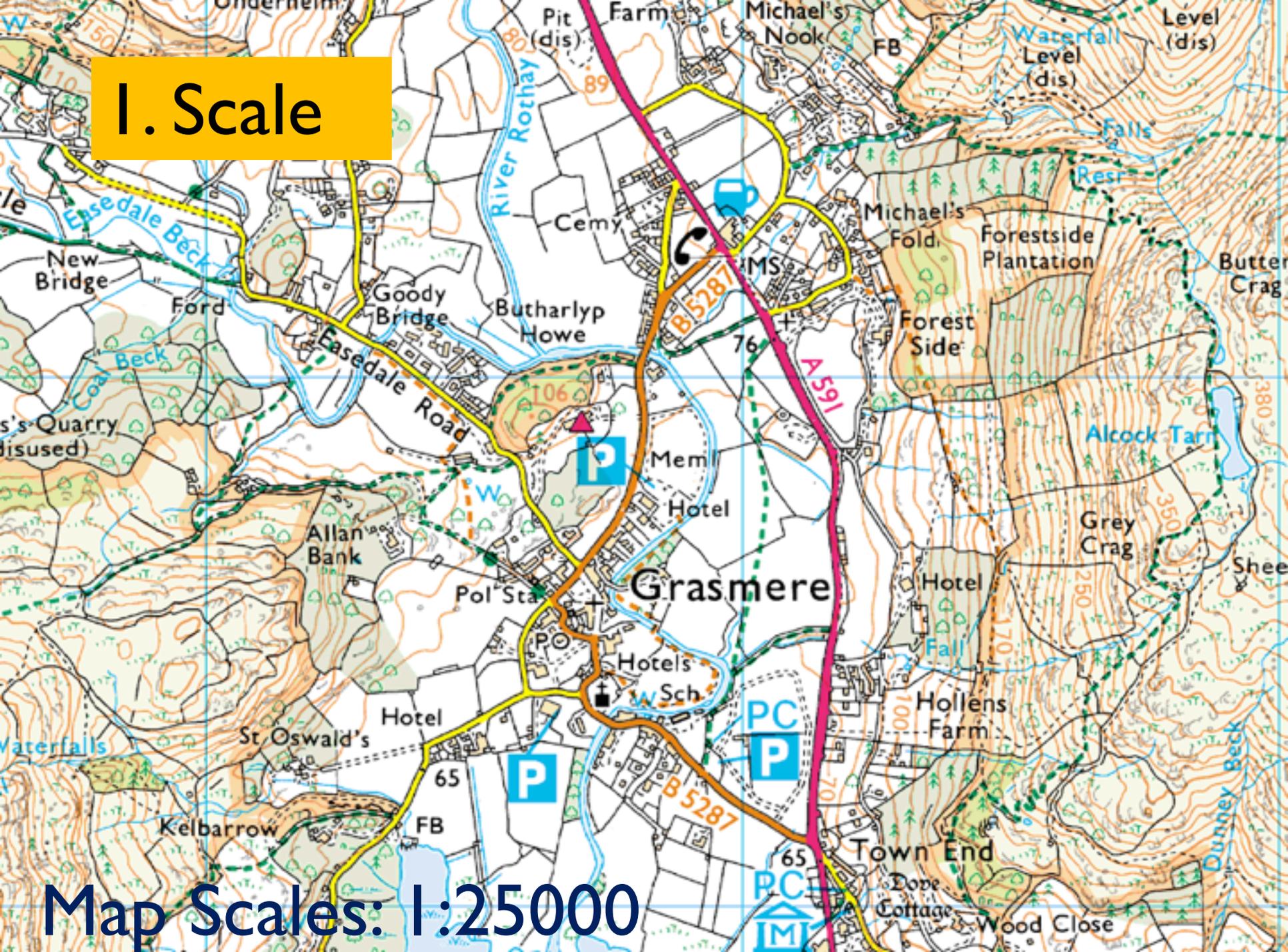


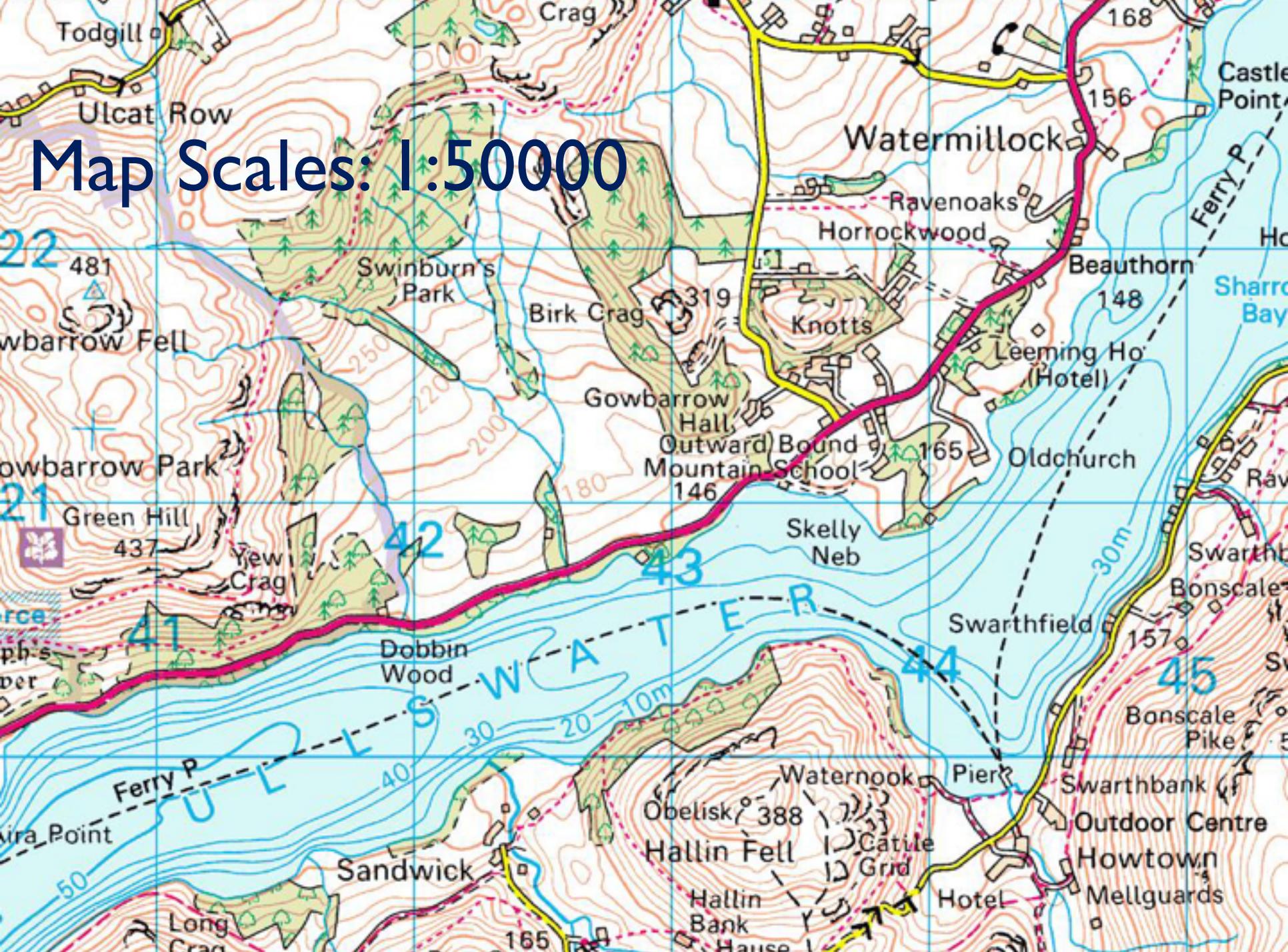
Navigation Recap and Advanced Skills

I. Scale

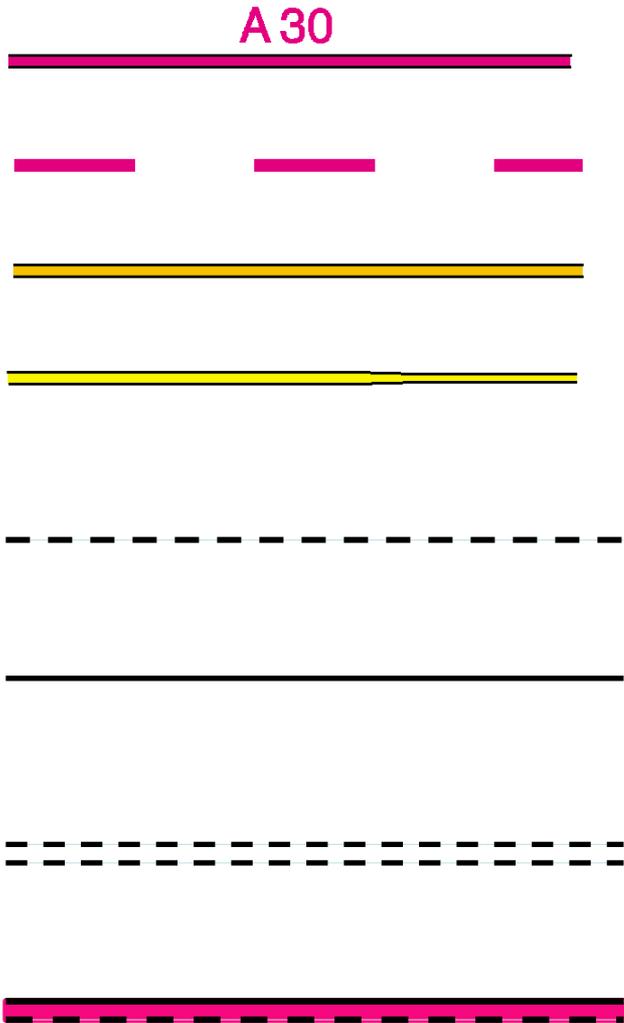


Map Scales: 1:25000

Map Scales: 1:50000



2. Map Symbols



FB

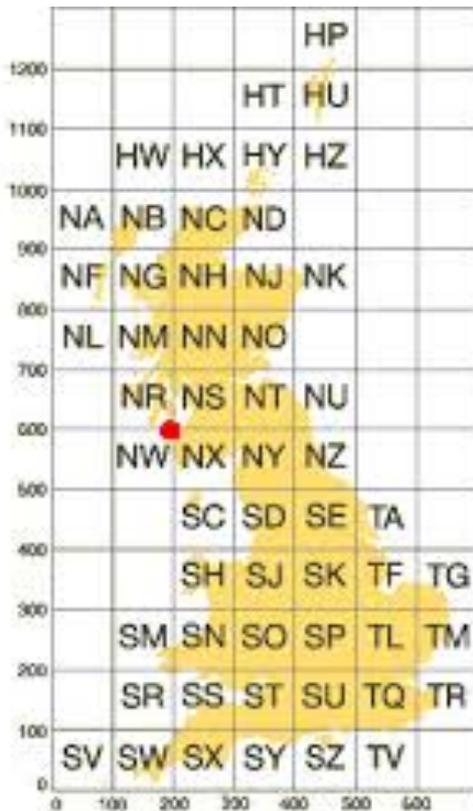
CG

PC

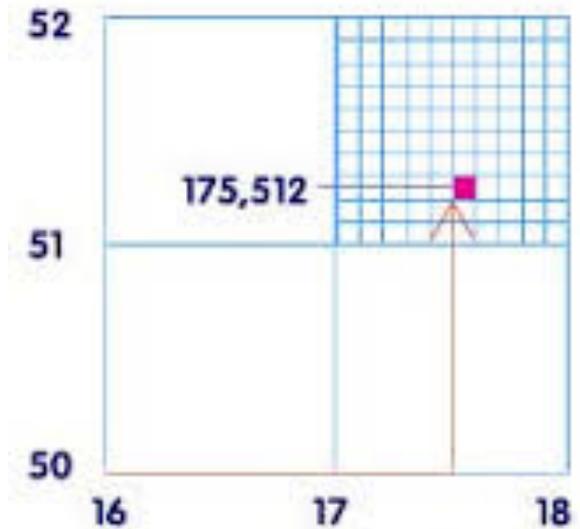


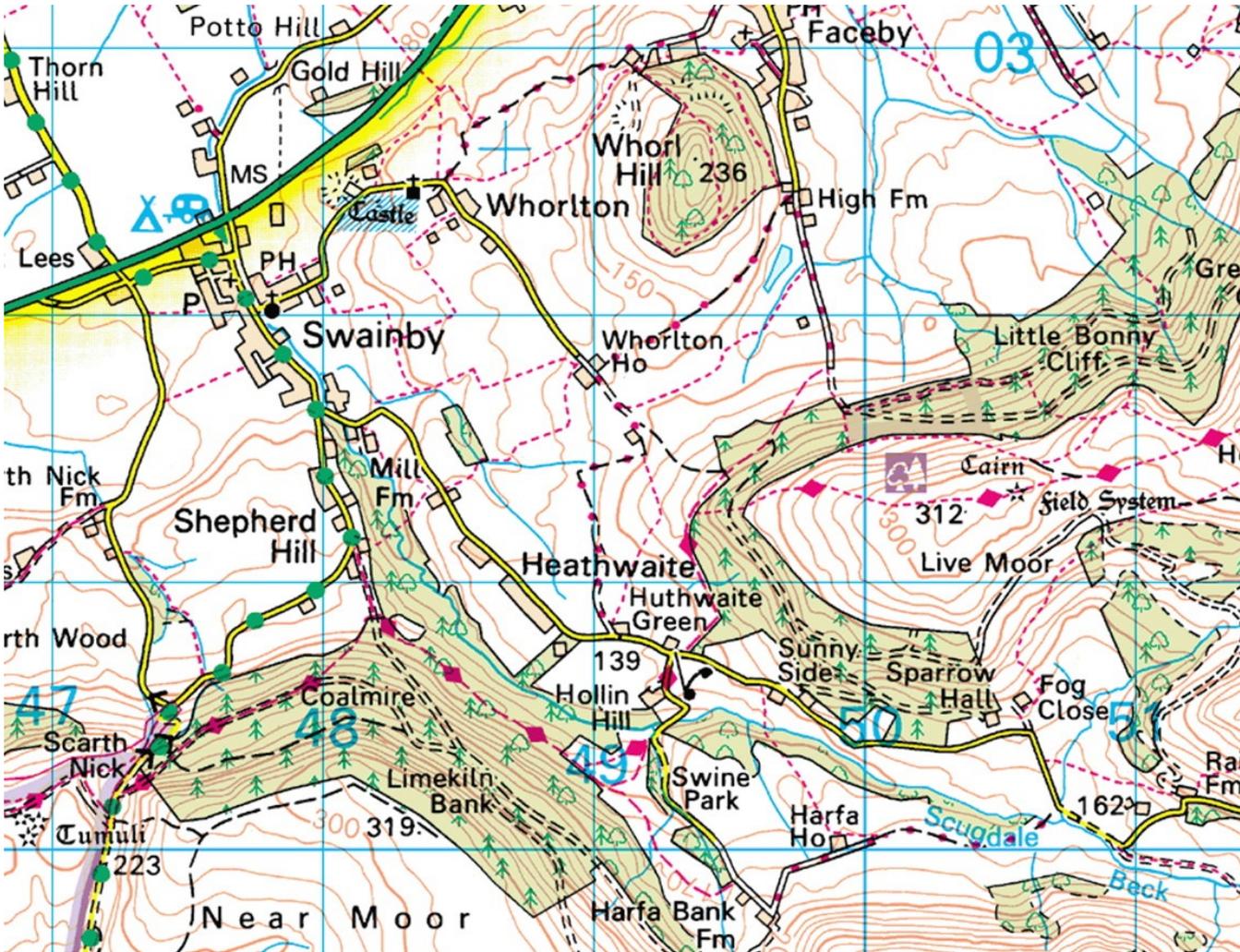
3. Grid References

- UK divided into squares 100km x 100km
- Squares on map 1km x 1km



- Read numbers along bottom first
- Use compass to measure tenths





- a) Church with tower
- b) Campsite
- c) Phonebox
- d) Most Northern Cairn
- e) Highest point

4. Setting the Map

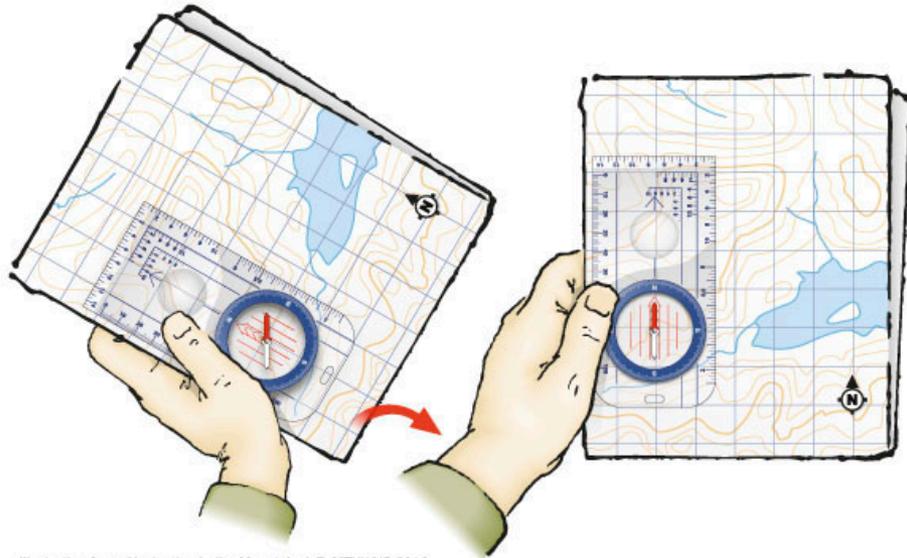


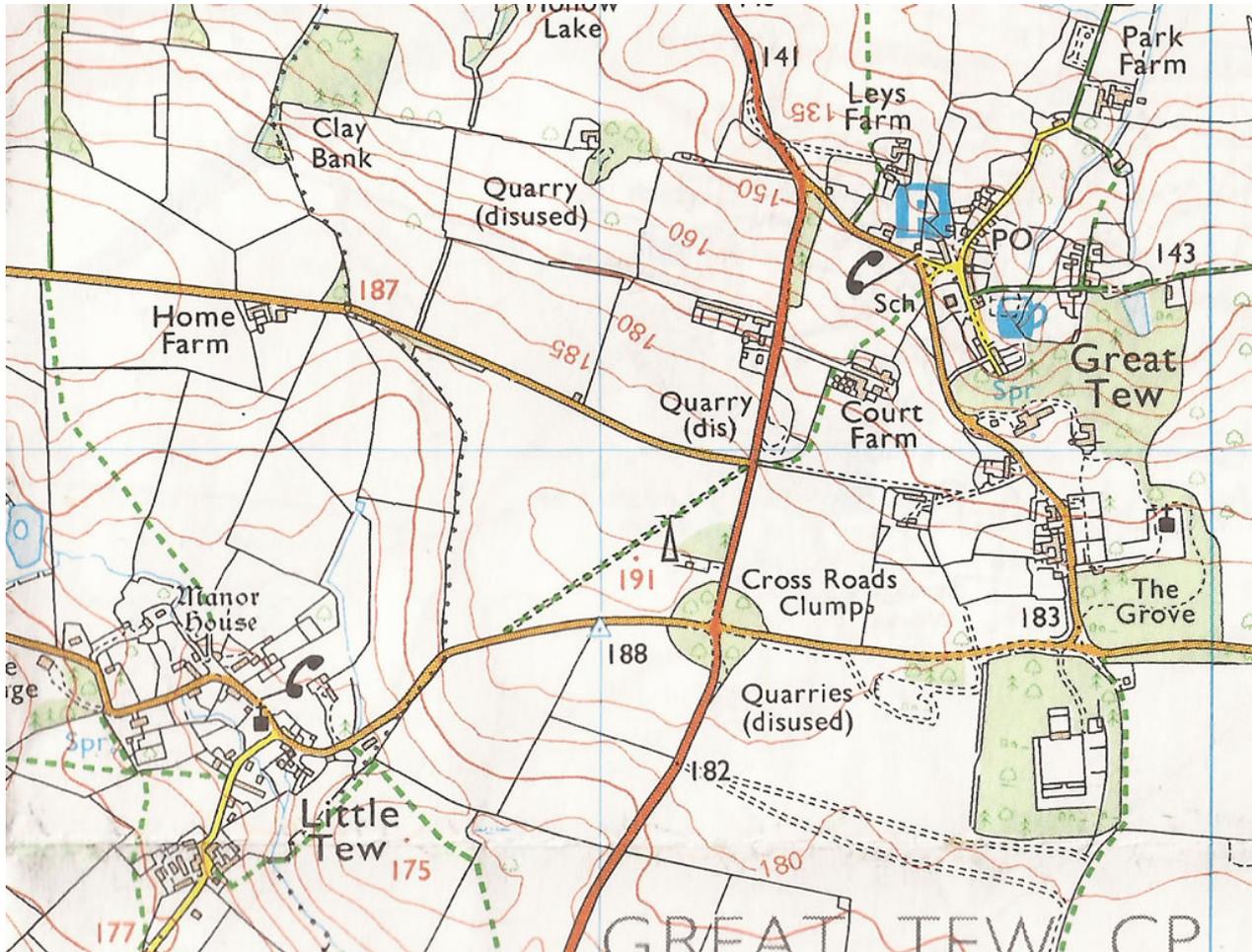
Illustration from 'Navigation in the Mountains' © MTUK/VG 2012



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

5. Ticking Off Features

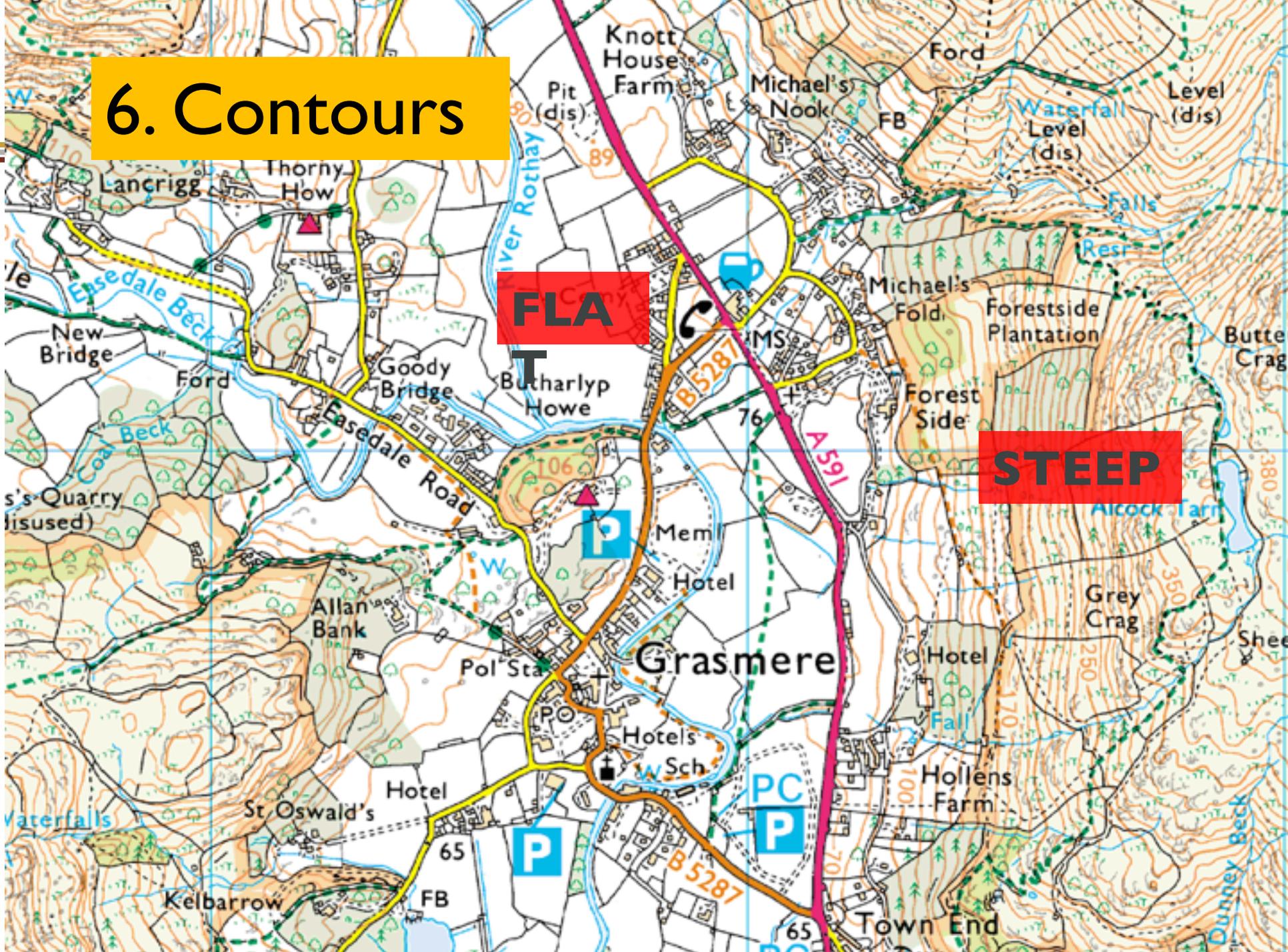
What do you expect to see?



A

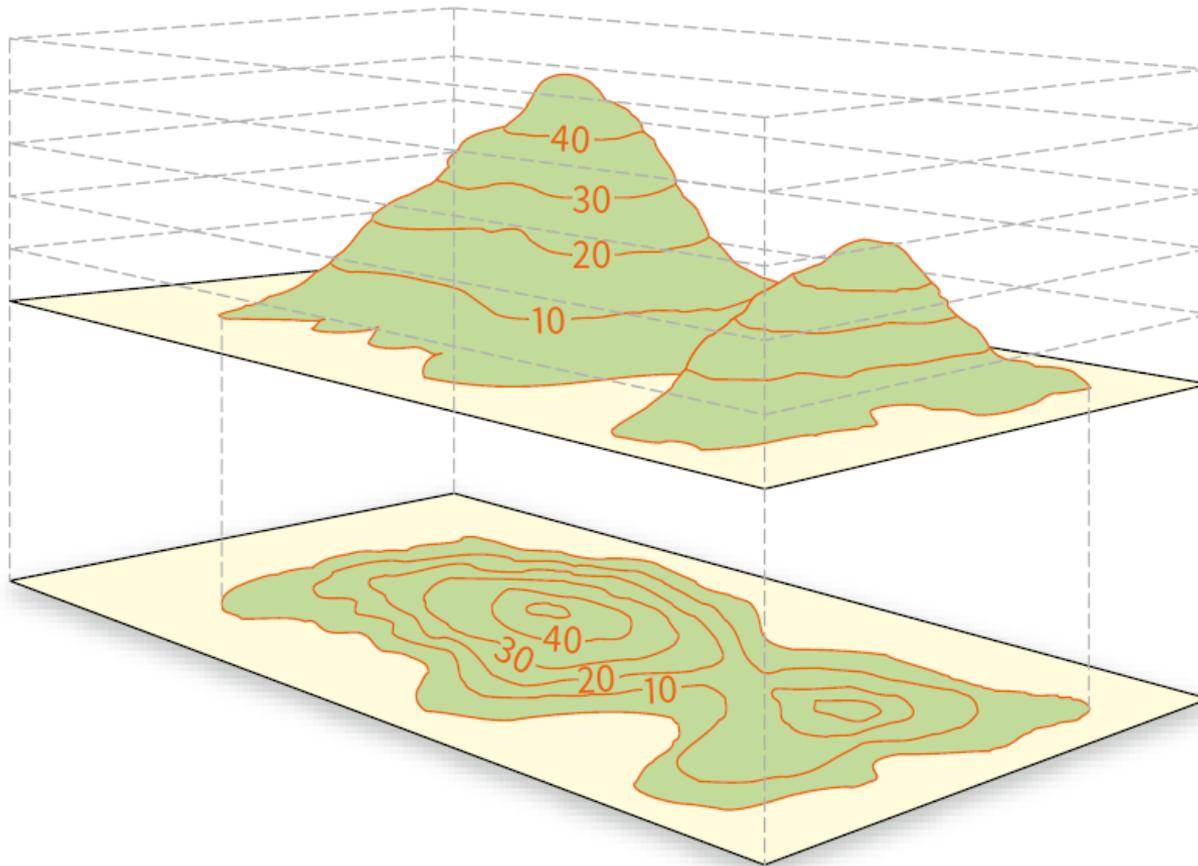
B

6. Contours



FLA

STEEP



Each contour line represents a different height. If you are crossing contour lines you are going up or down hill!

7. Timing



Distance travelled in metres	Speed in kms/hr		
	5	4	3
1000	12min	15min	20min
900	11min	13½ min	18min
800	9½ min	12min	16min
700	8½ min	10½ min	14min
600	7min	9min	12min
500	6min	7½ min	10min
400	5min	6min	8min
300	3½ min	4½ min	6min
200	2½ min	3min	4min
100	1min	1½ min	2min

Add 1 minute per 10m climbed steady walking

8. Pacing

Double paces per 100m	PACE CALCULATOR		
	CONDITIONS UNDERFOOT		
	GOOD	MODERATE	BAD
FLAT	60	70	80
UPHILL	70	85	100
DOWNHILL	60	70	90



9. Relocating

If you're lost what do you do?



Advanced Skills: Using a Compass



Poor Weather



Confirm correct route



When there's no path



Grid and Magnetic North

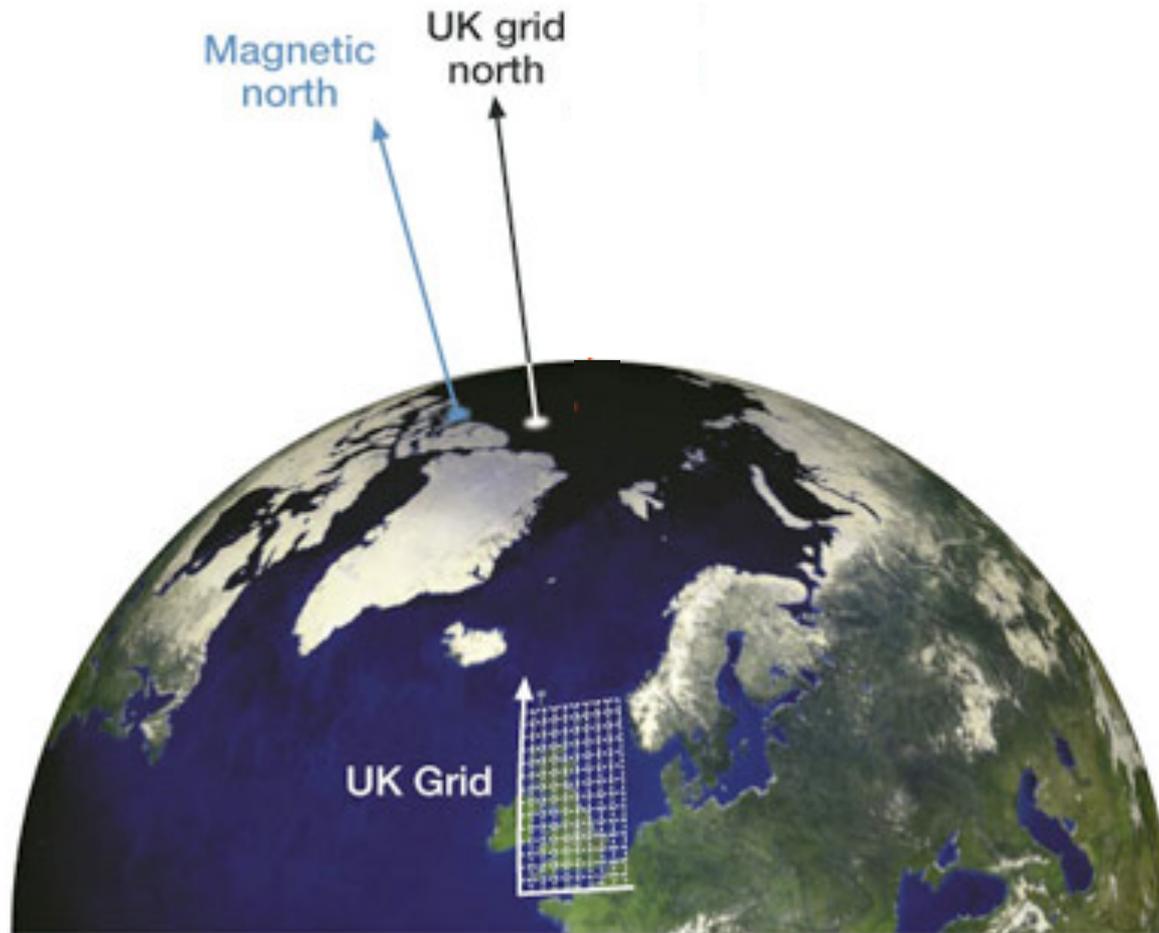


Illustration from 'Hill Walking' © MLTUK/ VG 2003.

Beware!



1. Taking a Bearing from the Map

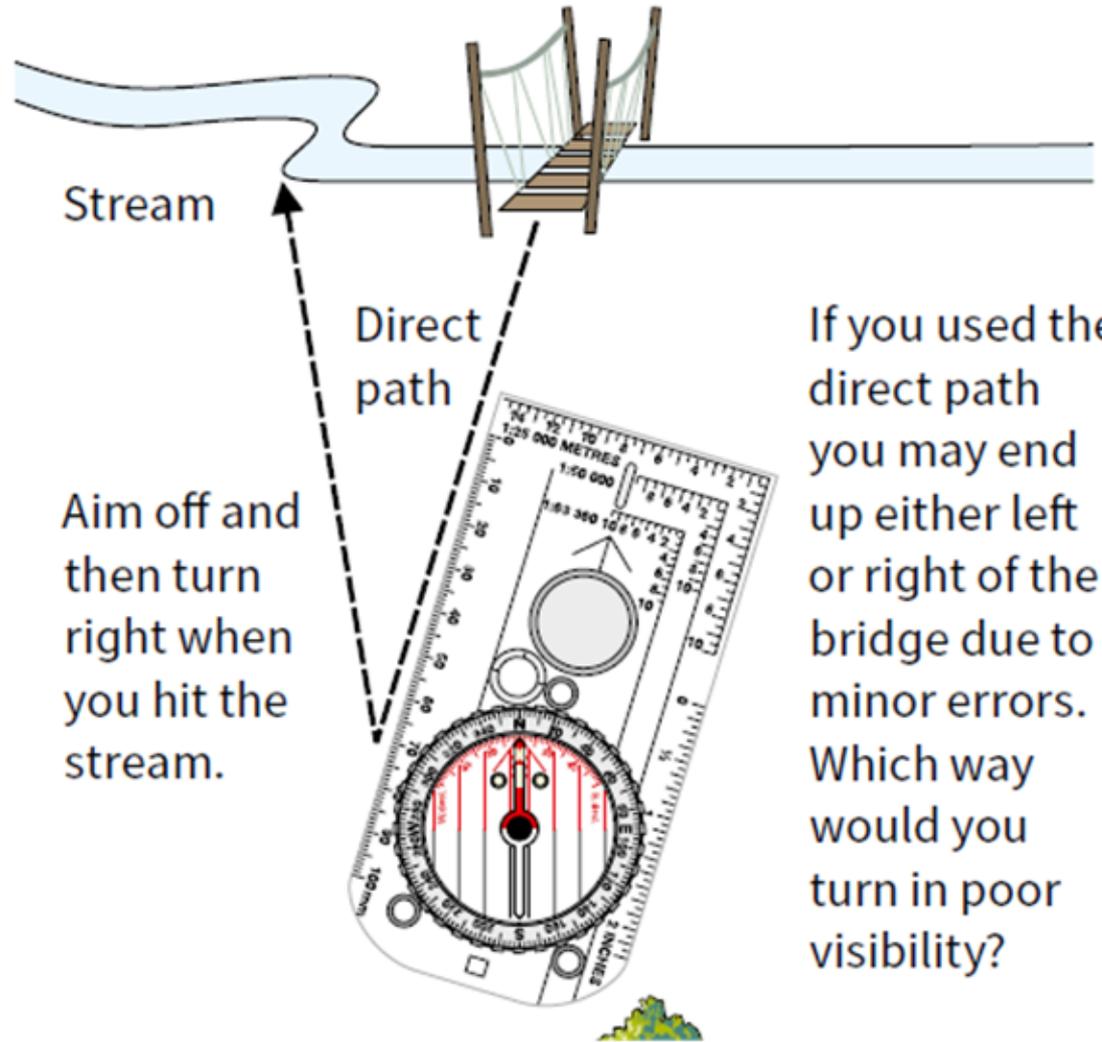


2. Walking on bearings



3. Aiming Off

Aiming off – If your checkpoint is on a linear feature such as a stream or a track, by simply aiming off slightly to one side of the checkpoint, you can guarantee which direction you need to head to reach your checkpoint upon hitting the linear feature.



You want to locate the stream junction

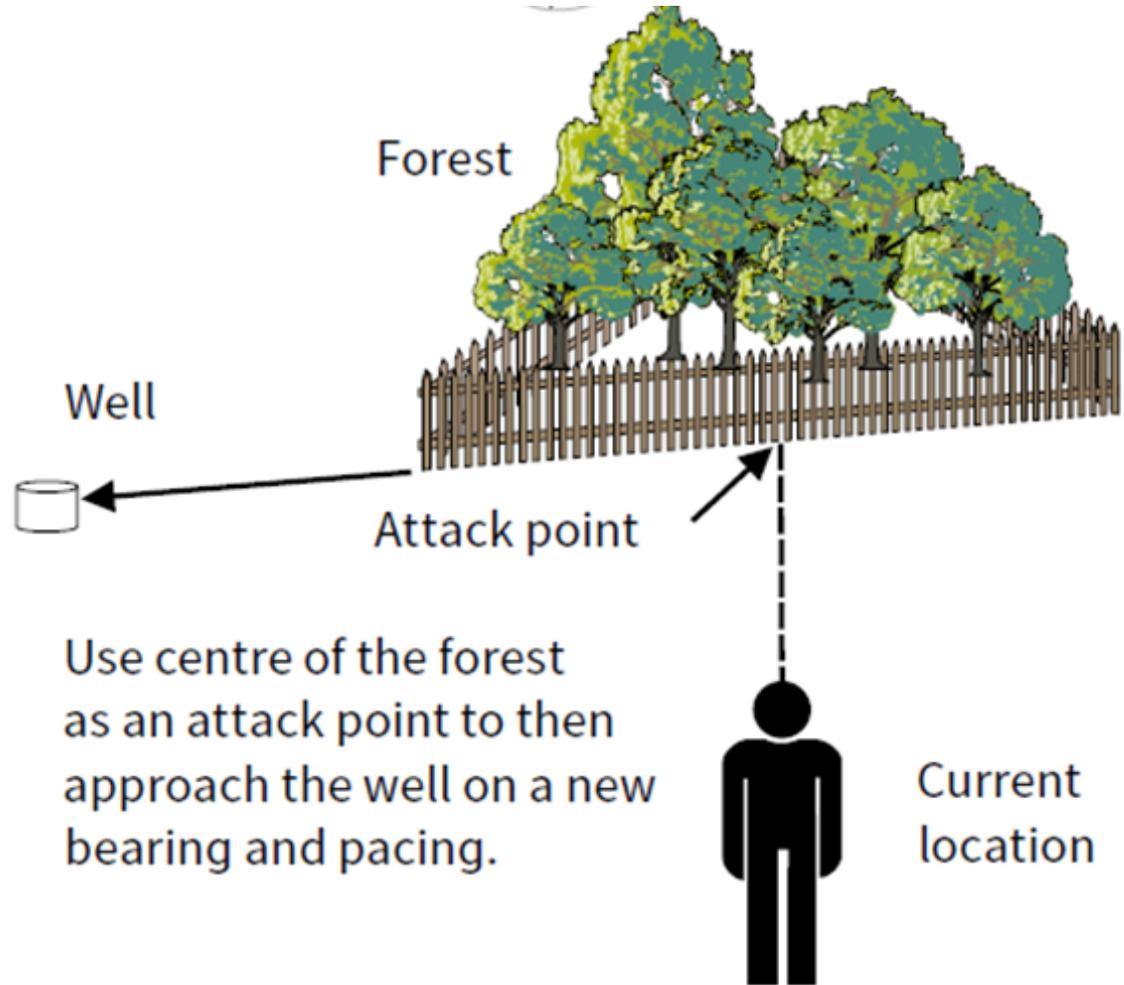


Option 1: Head direct. When you reach the stream you won't know whether to turn left or right.

Option 2: Deliberately aim off right. When you reach the stream you know you need to head left.

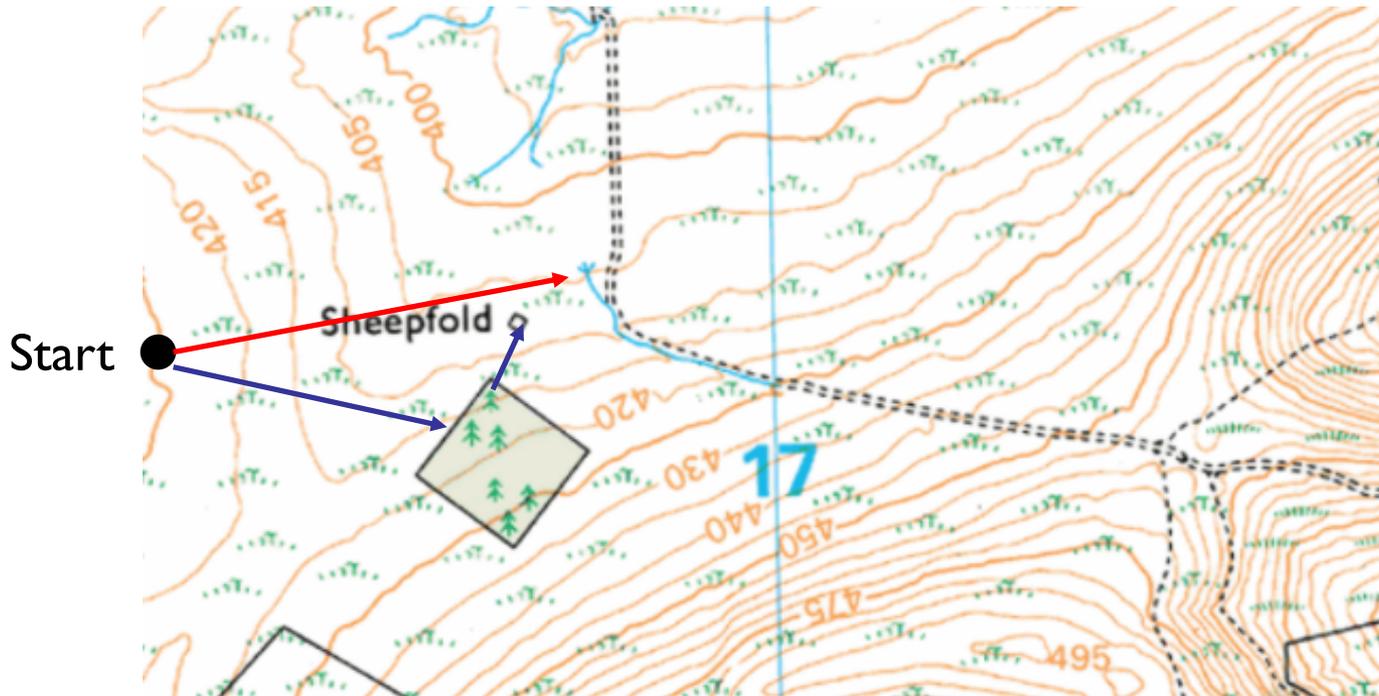
4. Attack Points

Attack points – To locate difficult features simply find another definite, prominent feature nearby and make your way to the centre of it. Once there use pacing to find the original feature you are looking for – as shown in the diagram.



Use centre of the forest as an attack point to then approach the well on a new bearing and pacing.

You want to locate the sheep fold...

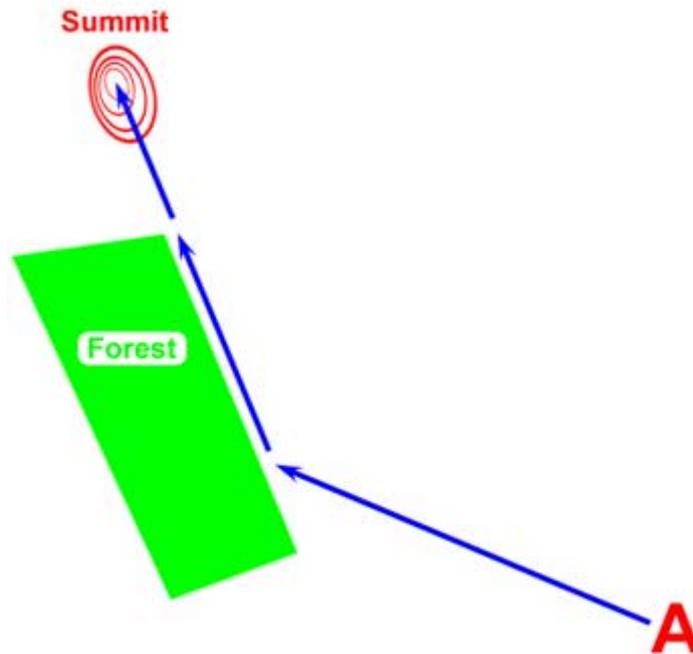


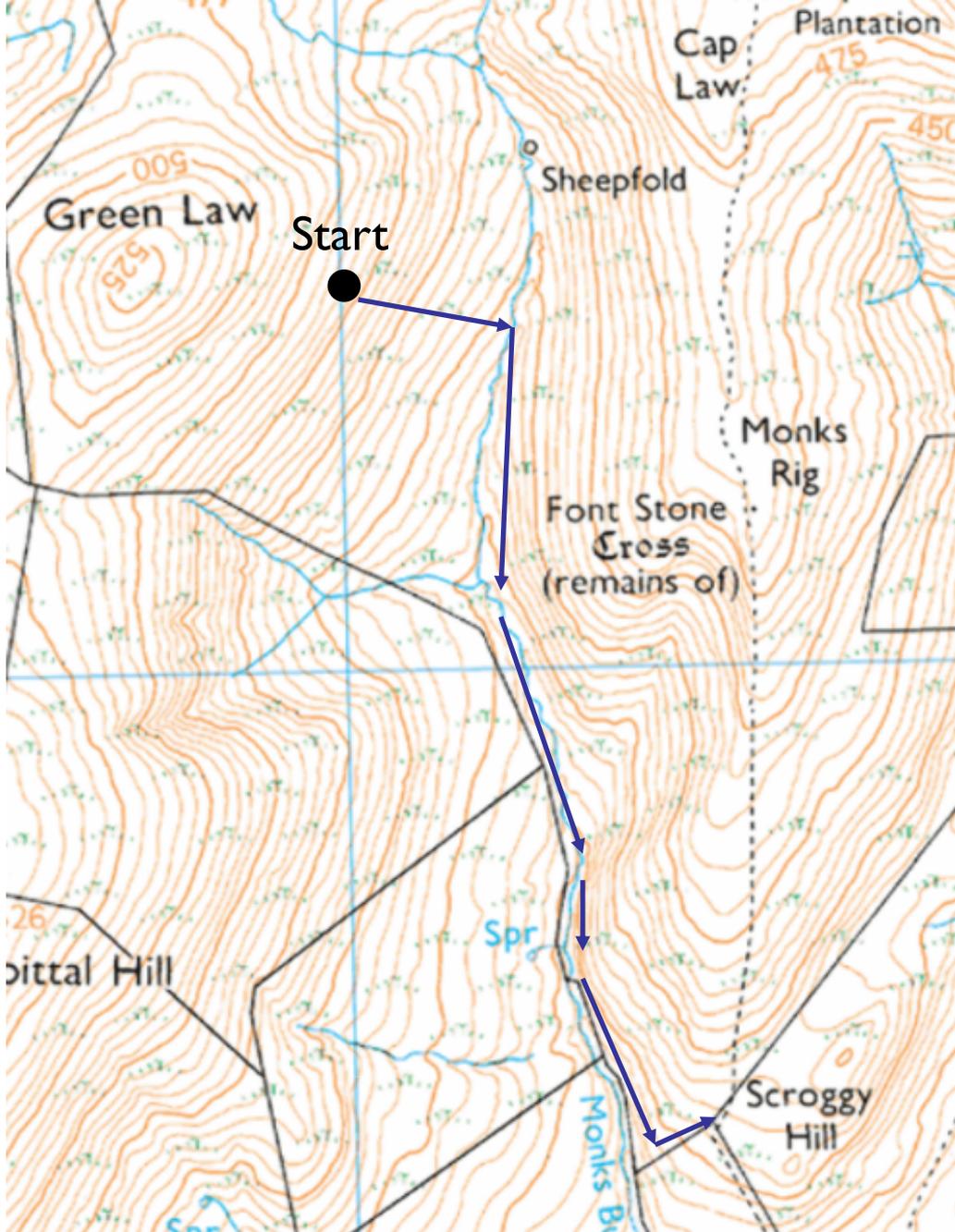
Option 1: Head direct. High chance you'll miss it...

Option 2: Use woods as an attack point. From corner of woods it'll be easy to find the sheepfold.

5. Handrailing

Handrailing is where you follow a linear feature (fence, pylons, edge of woods, stream etc) to lead you to your destination





Use the stream and fence as a handrail to reach the footpath junction