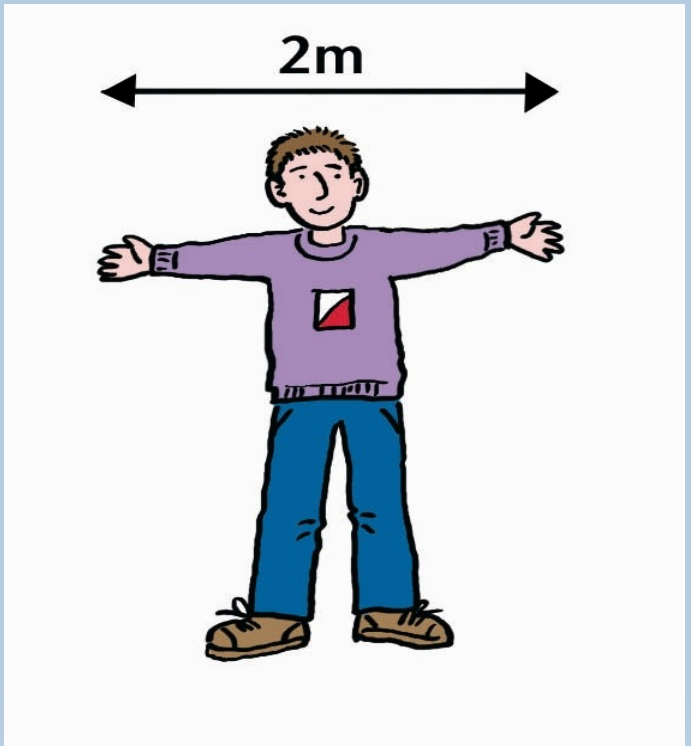
Generalisation Part 2

The 7 S's of mapping

- Scale and Symbols
- Speed
- Size
- Space
- Simplification
- Selection
- Shape of ground

I would like to introduce you to two new IOF measurements

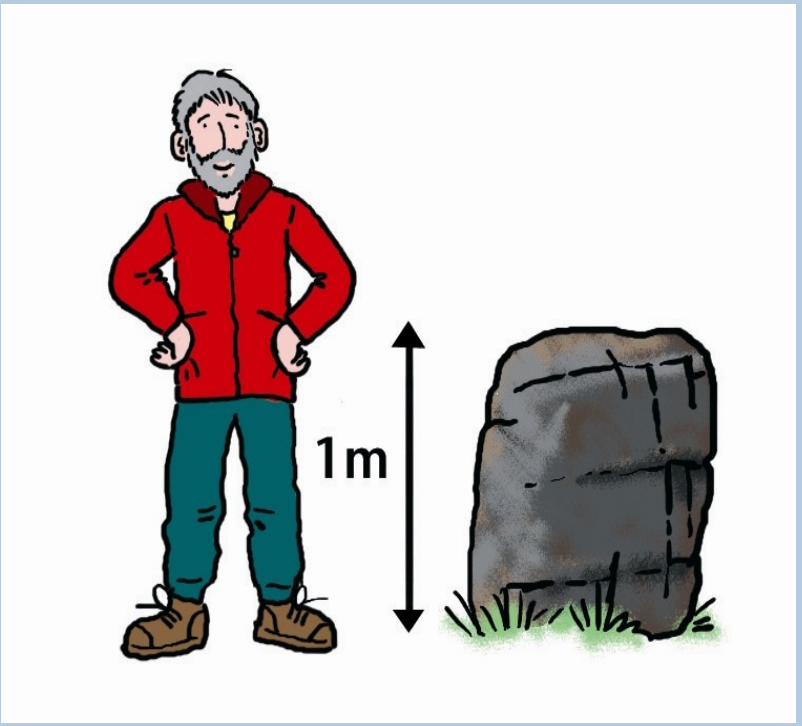
They are the arm span



The arm span

All features can be measured in arm spans.

And the waist high



And the waist high

The waist high or deep is a convenient check to see if the feature is high or deep enough to be marked on your map.

IOF measurements?

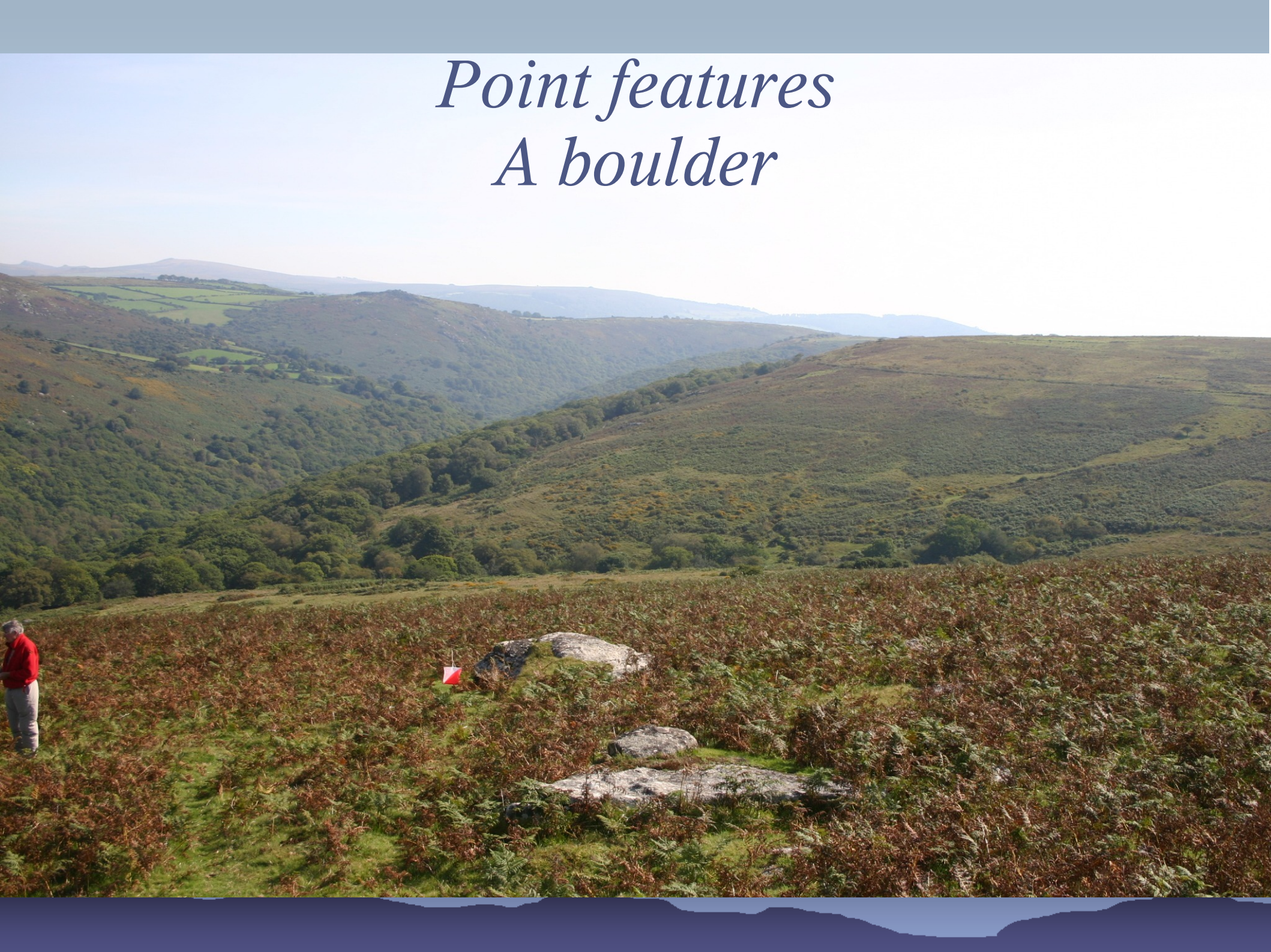
I am hoping that this concept will help mappers to visualise how large the feature is compared with the symbol used on the map

Size and Space

I should like to consider

- Point features
- Linear features
- Area features

Point features
A boulder



The Boulder

this is the smallest individual symbol on an orienteering map

206 Boulder

A small distinct boulder (minimum height 1 m). Every boulder marked on the map should be immediately identifiable on the ground. To be able to show the distinction between boulders with significant difference in size it is permitted to enlarge this symbol by 20% (diameter 0.5 mm).
Colour: black.

Symbol size

Some simple mathematics

0.4mm on the map

(0.4 x 5000)/1000

=6m on the ground

Some more simple mathematics

The circumference
of a circle is given by formula
Π x d =c
For the boulder it will be

6m x 3.14 = 19m

The distance all round the boulder symbol
on the ground is 19m

Symbol size

These calculations can be made for all map symbols.

It is a good measure to decide if the feature should be marked on your map.

Symbol size

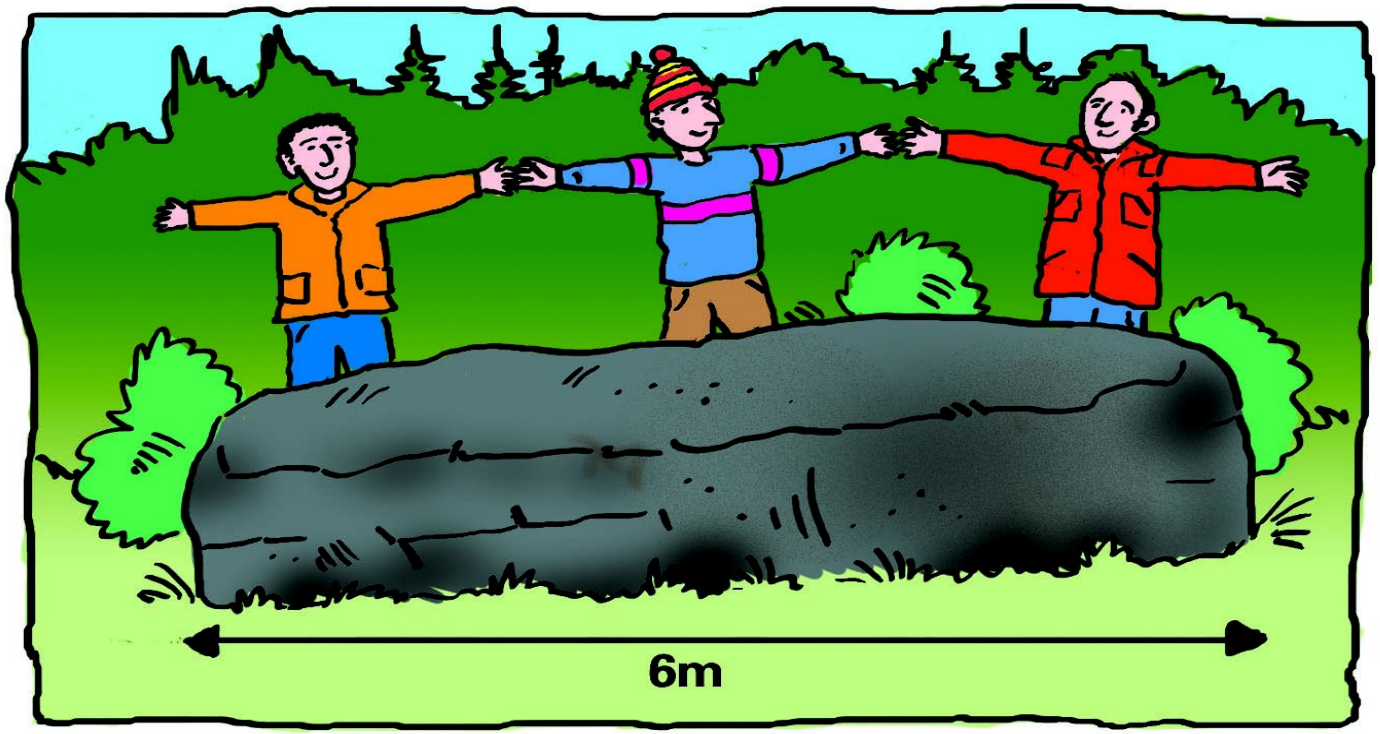
"If in doubt leave it out"

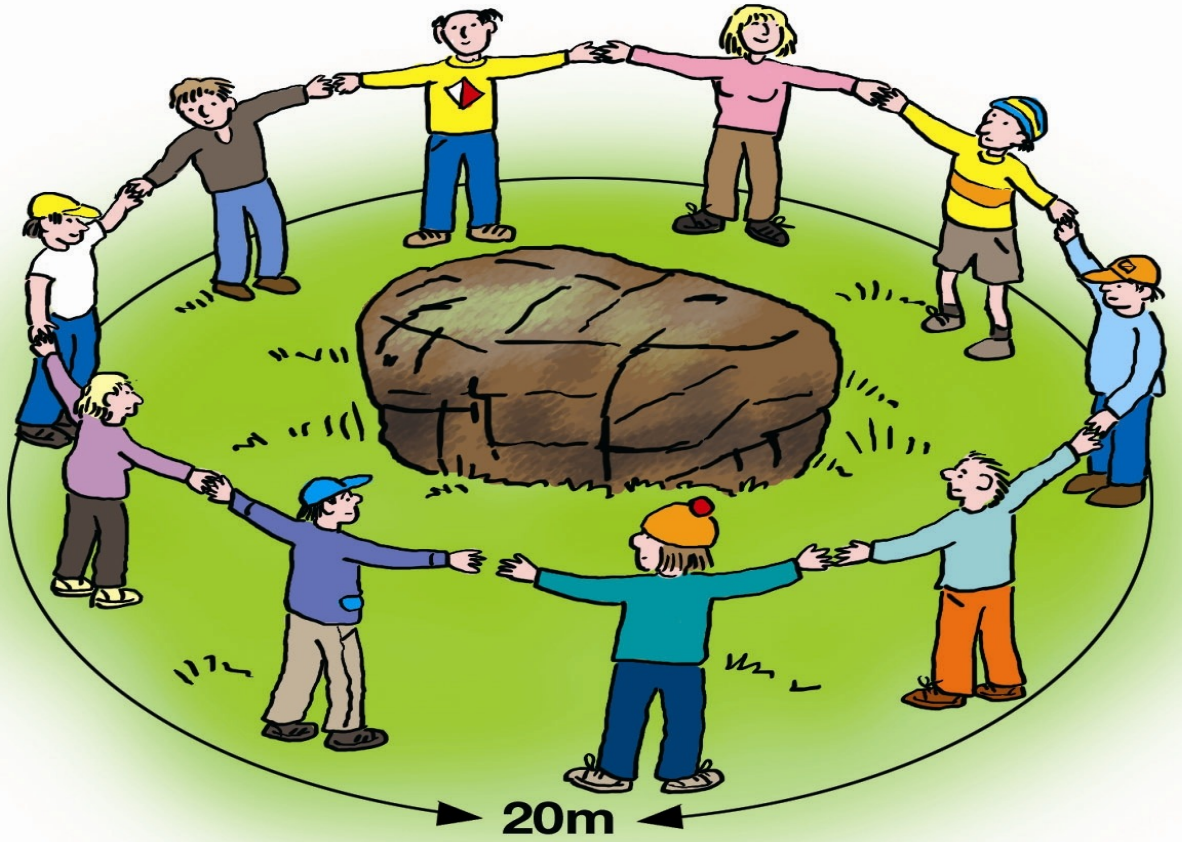
Pat Blashill Stirling Surveys

The symbols for most features used on an orienteering map will be larger on the map than on the ground

Symbol size

Some examples of symbols using the IOF measurements.


6m


20m

Demonstrating Symbols size

If you do not have enough people to demonstrate the size of the symbol on the ground you can use tape.

We will show this later in the presentation when we demonstrate the pit symbol.

Space

MINIMUM DIMENSION
for a 1:15000 map

- The gap between two fine lines of the same colour, in brown or black: 0.15mm
- The smallest gap between two blue lines :0.25mm
- The shortest dotted line: at least two dots
- Shortest dashed line: at least two dashes
- Smallest area enclosed by a dotted line:1.5mm (diameter) with 5 dots
- Smallest area of colour
  - Blue, green or yellow full colour: 0.5mm
  - Black dot screen: 0.4mm
  - Blue, green or yellow dot screen: 1.0mm

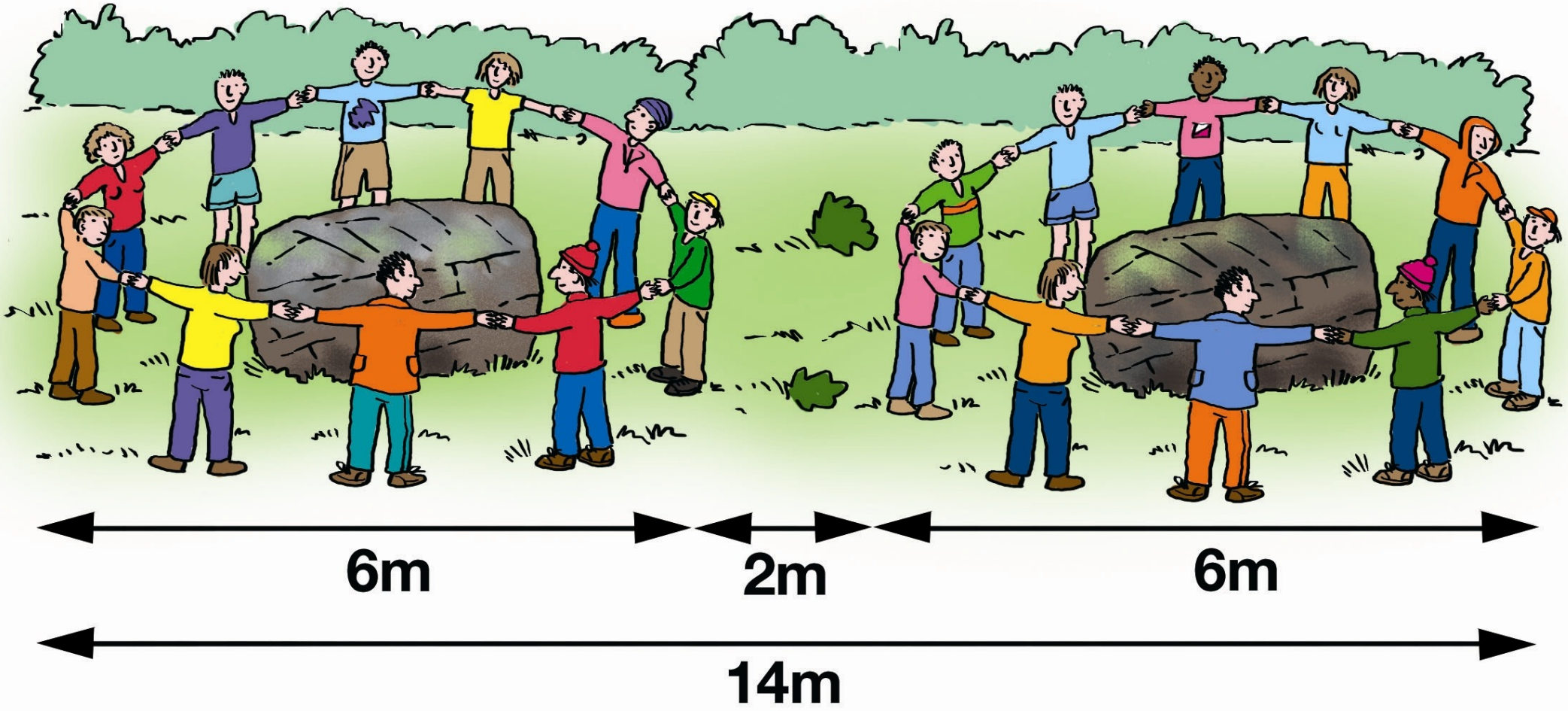
All features smaller than the dimensions above must be exaggerated or omitted, depending on whether or not they are of significance to the orienteer. When features are enlarged, neighbouring features must be displaced so that their correct relative positions are maintained.

Two boulders

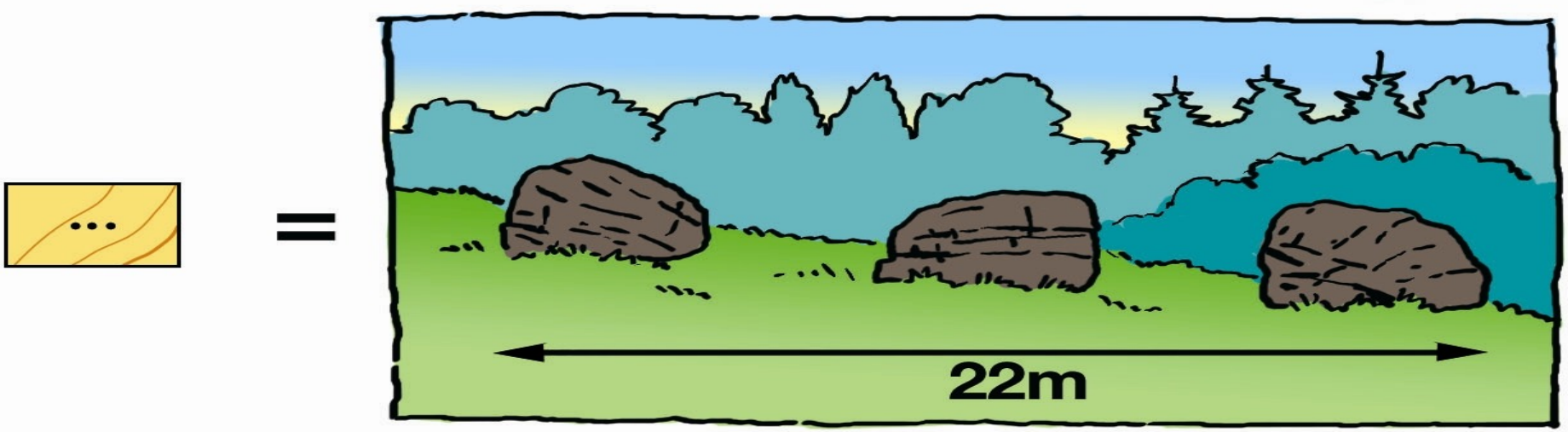
The space between two boulders should be 0.15mm or 2.25m on the ground.

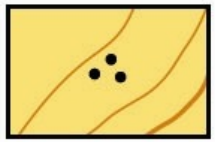
A good arm span.

What about two boulders?



Or three boulders





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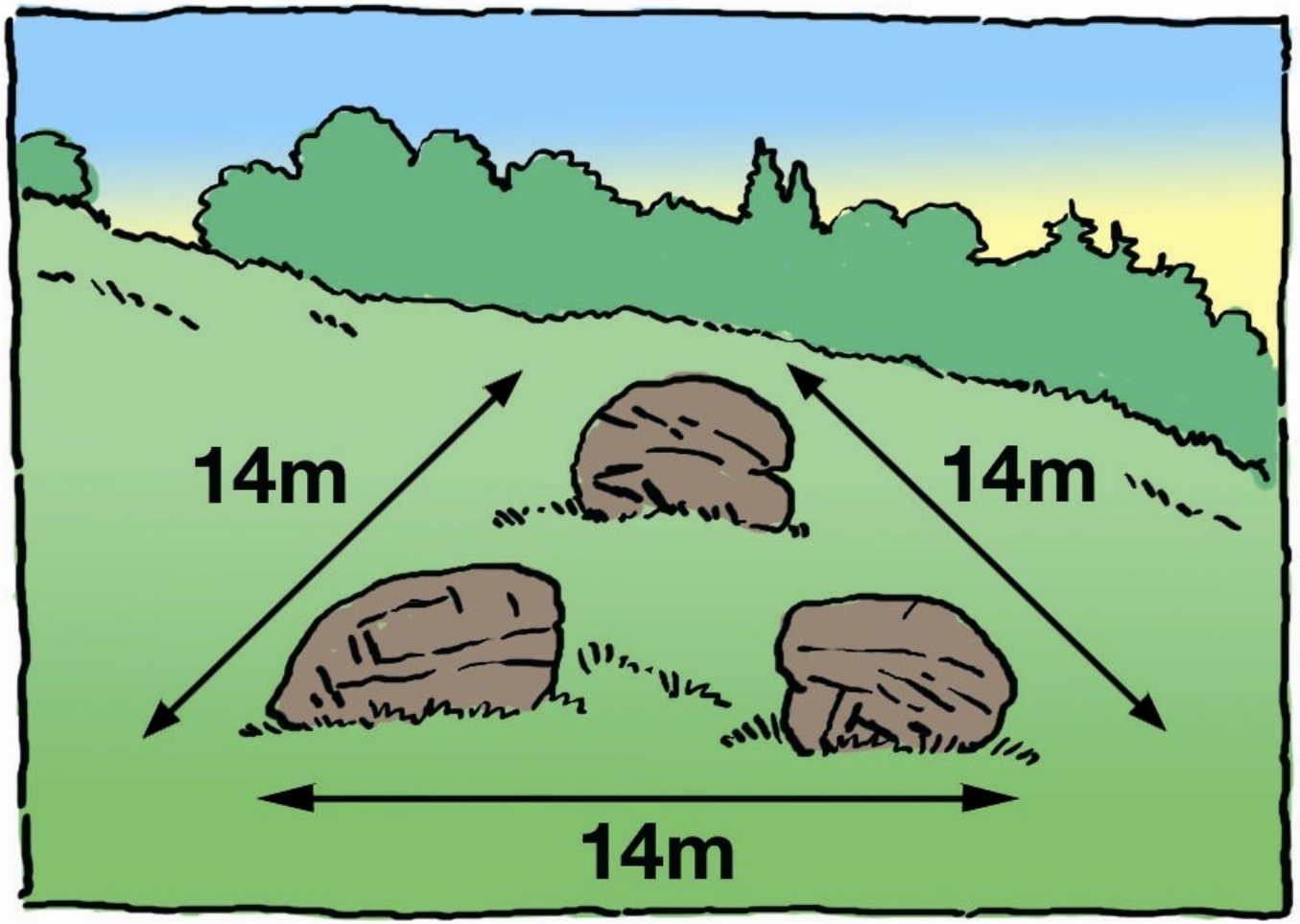

14m
14m
14m

Symbol size

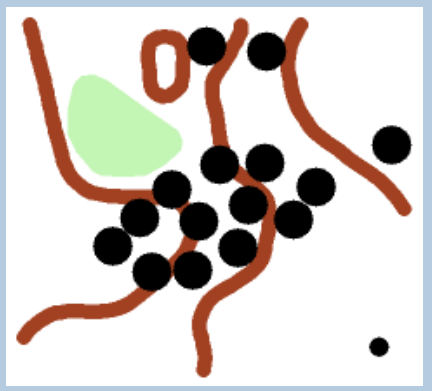
Hopefully these will give you a mental picture of the symbol sizes in the terrain.

Boulders

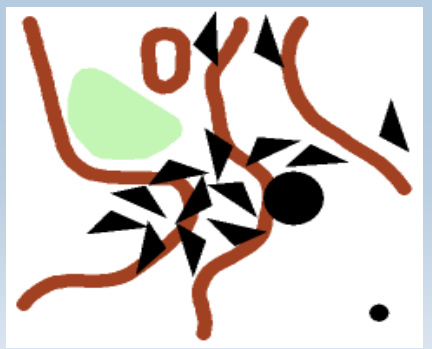
What happens if you do not have enough space?

Option 1
What happens when you run out of space

- Only mark the largest (206) or (207) and the rest as a boulder field(208) (at least two)

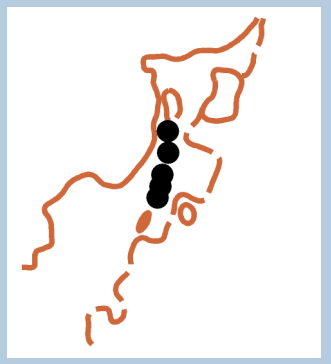


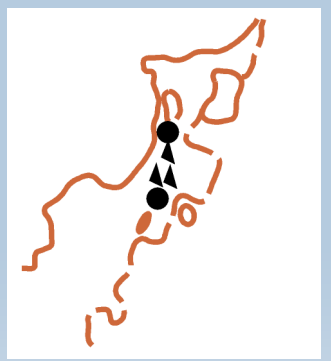
- This decision should perhaps have been obvious earlier



Option 2
What happens when you run out of space

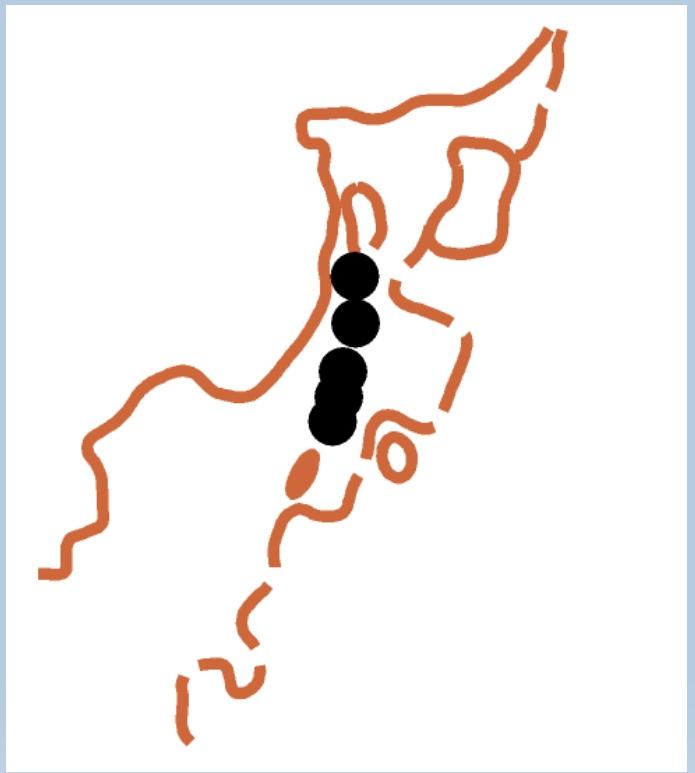
- If the boulders are in line then mark the end ones and replace the others with the boulder field symbols



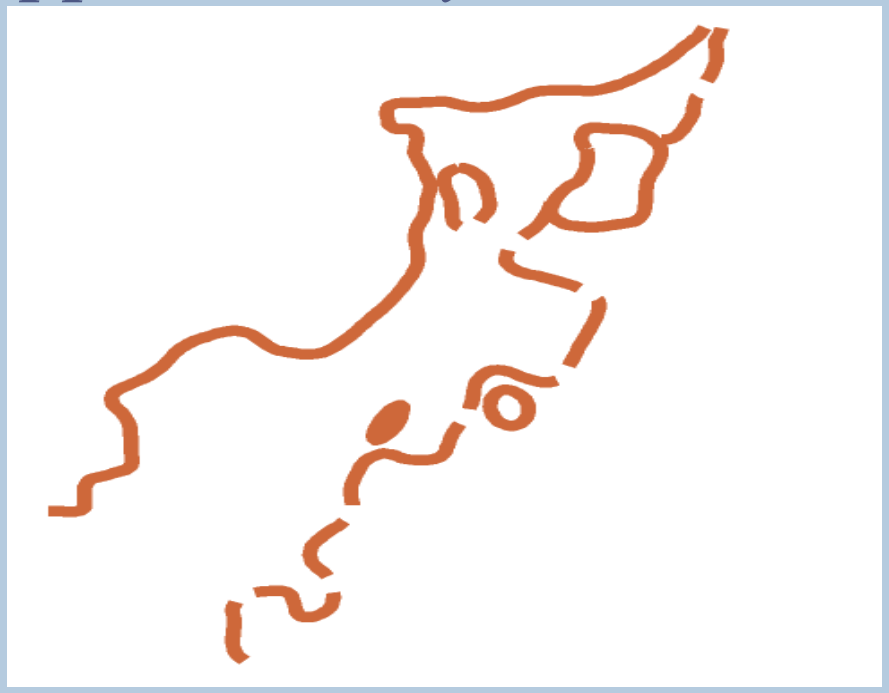


Option 2
What happens when you run out of space

- The 5 large boulders have to fit between the two knolls,



Option 2
What happens when you run out of space?



- The ground features limit the space that is available

Option 2
What happens when we run out of space?

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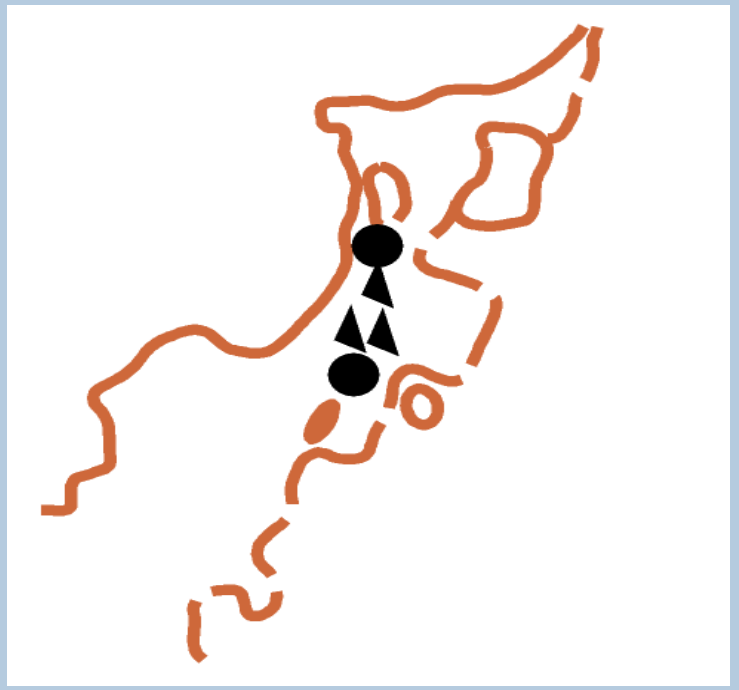
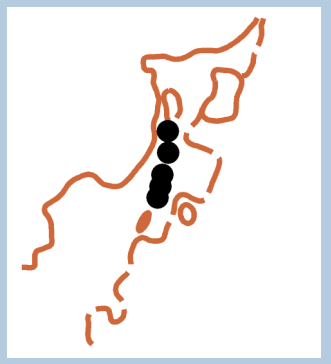
What happens when we run out of space?

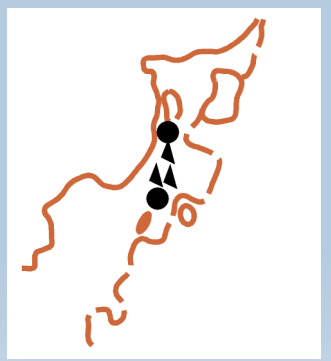


- The two end boulders are place in position and the rest are generalised by using the boulder fiels symbol.

Option 2
What happens when you run out of space

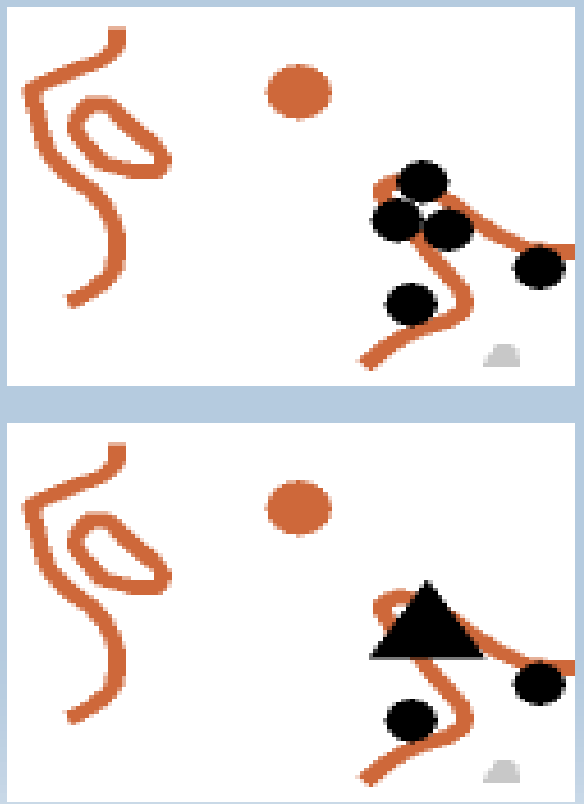
- If the boulders are in line then mark the end ones and replace the others with the boulder field symbols





Option 3
What happens when you run out of space

- If the group is well defined then consider the boulder cluster(209)
- It is a point feature and will be available as a control site.



Option 4
What happens when you run out of space

- If not unambiguous then mark as a boulder field (208)

Option 5
What happens when you run out of space

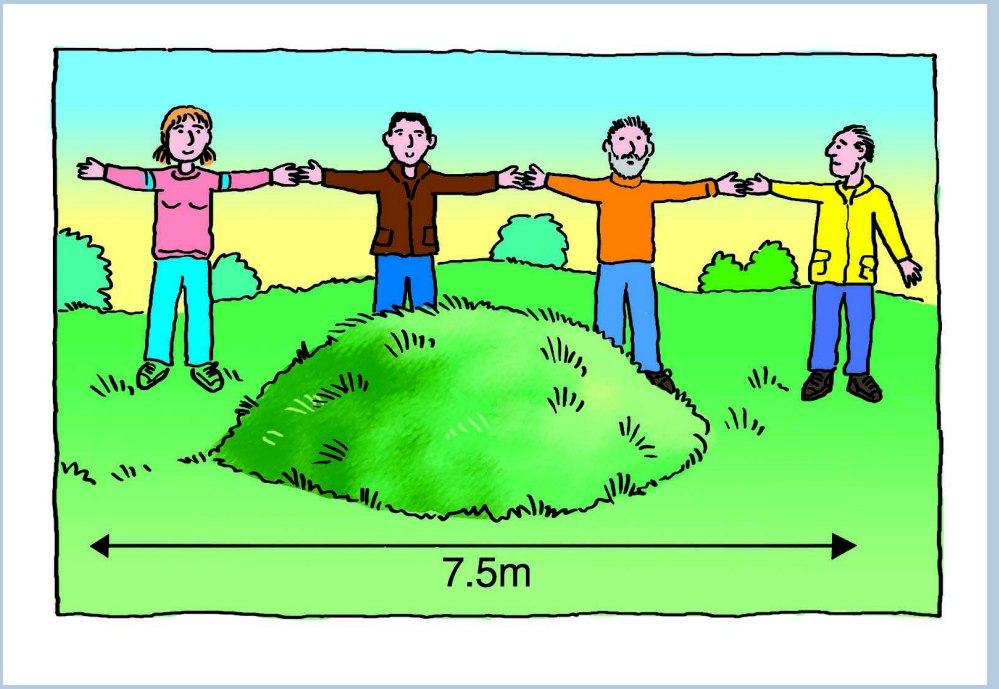
- The last possibility is to use the stony ground (210)

Ground features

- Knolls, large and small, pits and depressions
- These can be treated in a similar way to the rock features.

Ground features

- Small knoll (112)
- We have a similar set of dimensions as the boulder.
- 0.5mm 7.5m on the ground or
-
- x4 arm spans

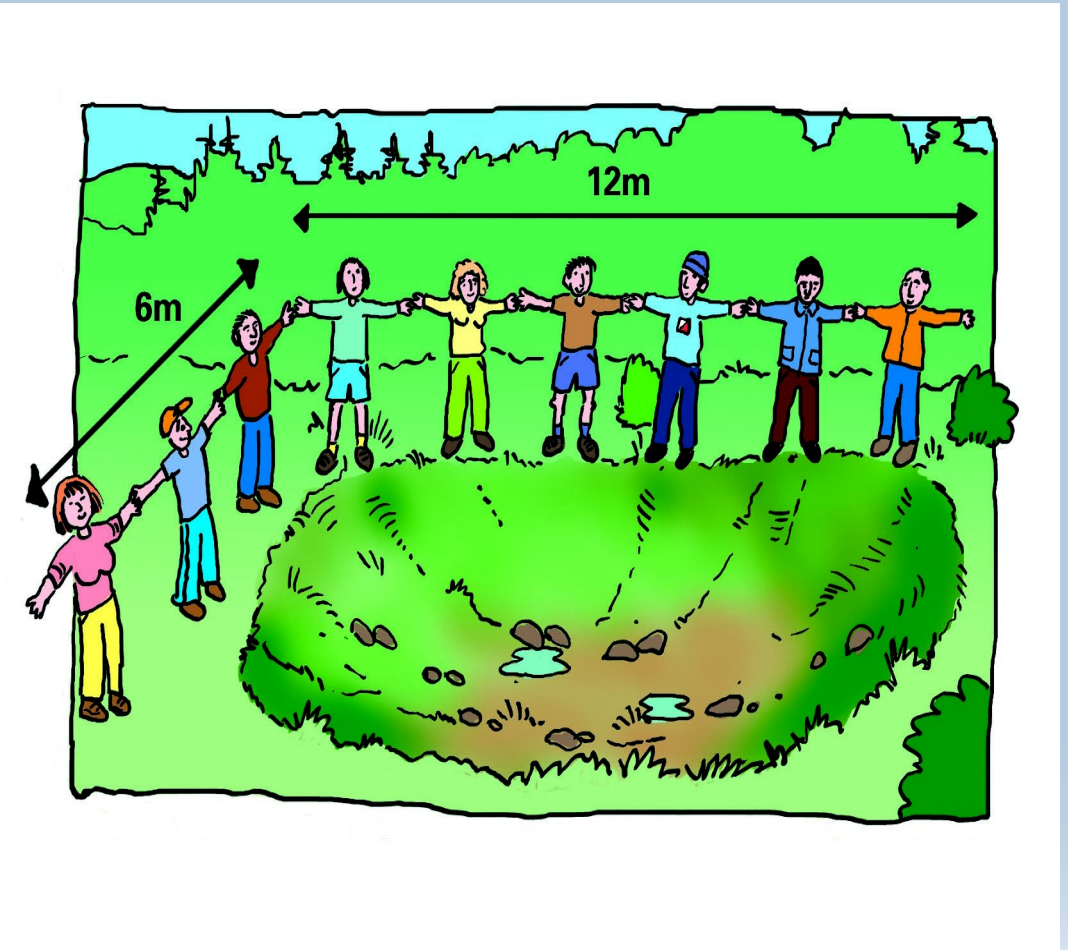


Ground features

- Small knoll (112)
- Distance around is 23m
- or 11 arm spans

Ground features

- Small depression
- 0.8mm x 0.4mm or
- 12m x6m
- 6x3 arm spans

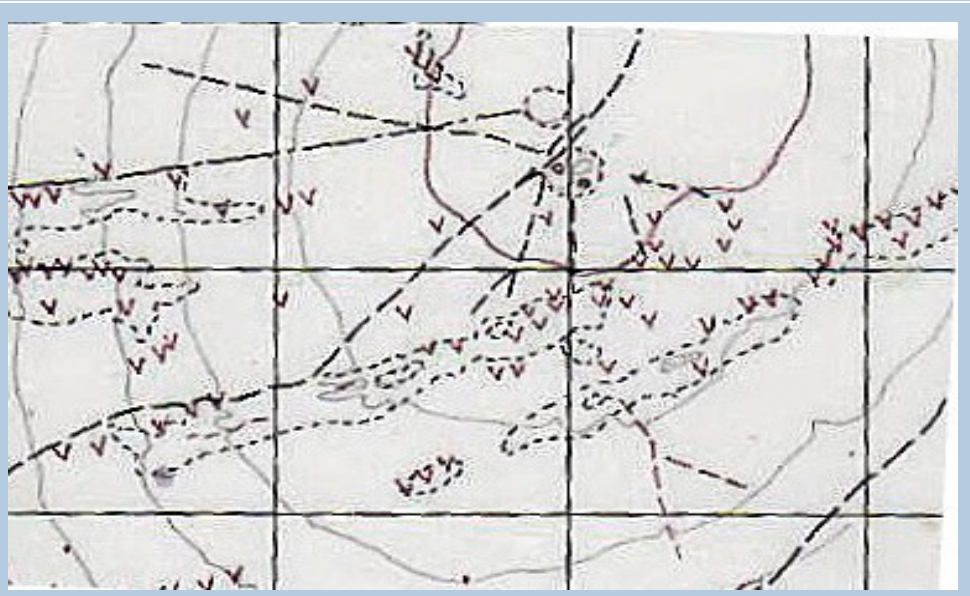


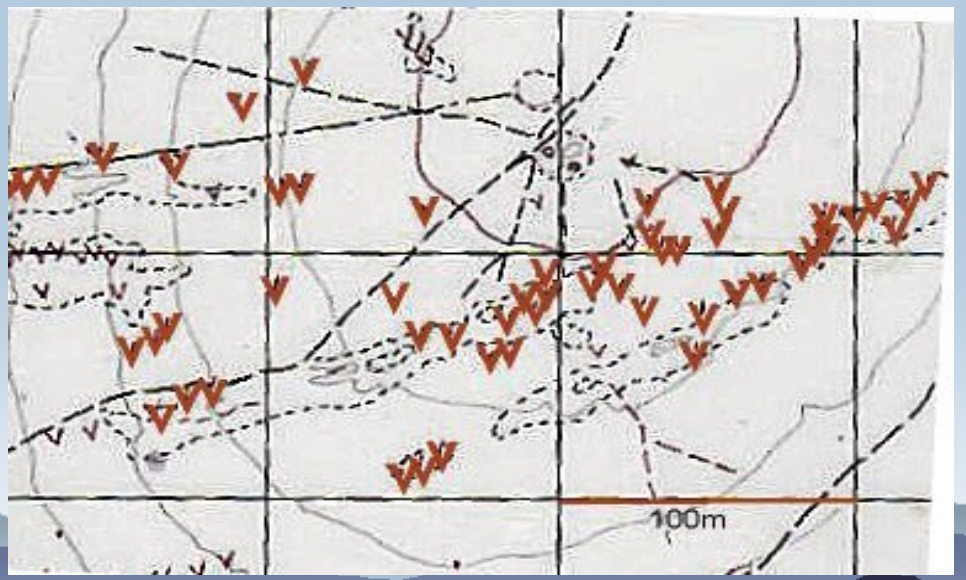
Ground features

- Pit (116)
- 0.7mm x 0.8mm or
- 10m x12m
- 5x6 arm spans

Ground features

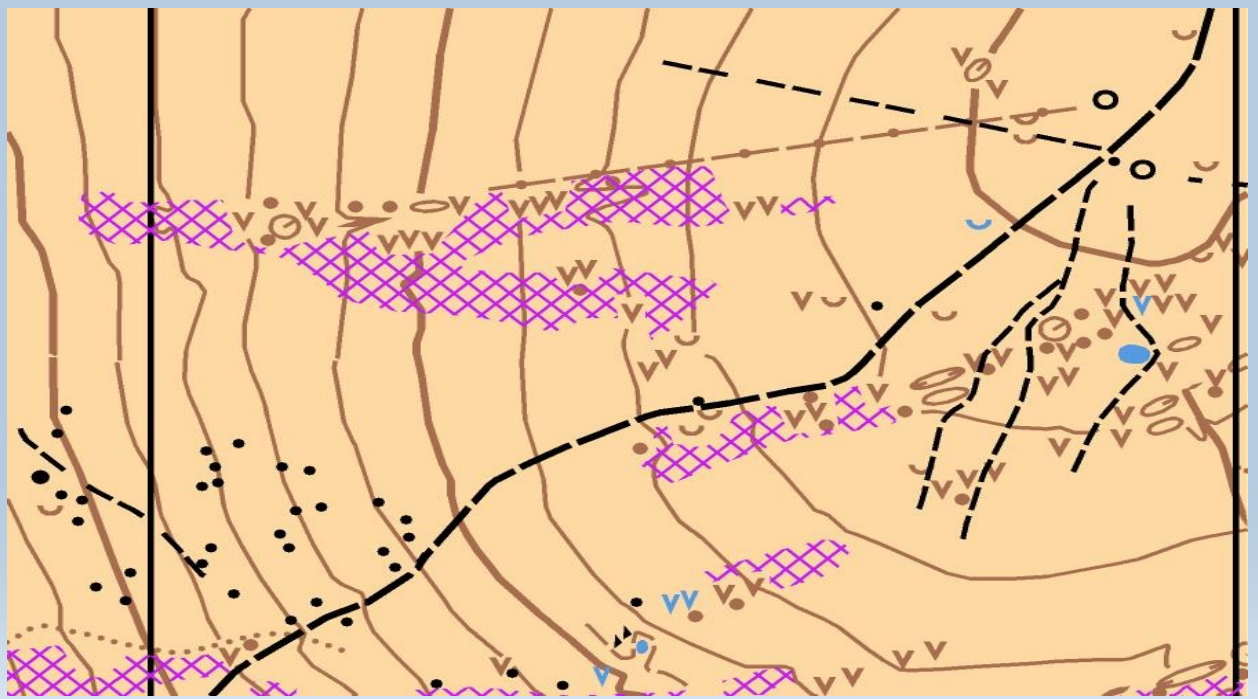
- Pit (116)
- The problem with the pit symbol is that if they are too close together in for example a mining area they can look a bit like a dead spider.





Ground features

- Pit (116)
- A solution (Note this map was drawn when OCAD had a broken ground screen)



Ground features

- The same strategy should be adopted with ground features as with boulder when you run out of space.

- Do not be afraid of using the broken ground symbol.

- Almost certainly you cannot use it for a control site it can only be used to navigate through an area.