

The National Grid

National Grid references are used to accurately pinpoint your location on an Ordnance Survey map. A series of faint blue lines on every map makes up a numbered grid that is used to create the National Grid reference. This is a simple way of finding points and places on a map, to give to others as a meeting location or to quote if you get into trouble and need to specify exactly where you are.

Before we look at what the grid reference numbers mean, it's important to understand the wider picture of the National Grid.

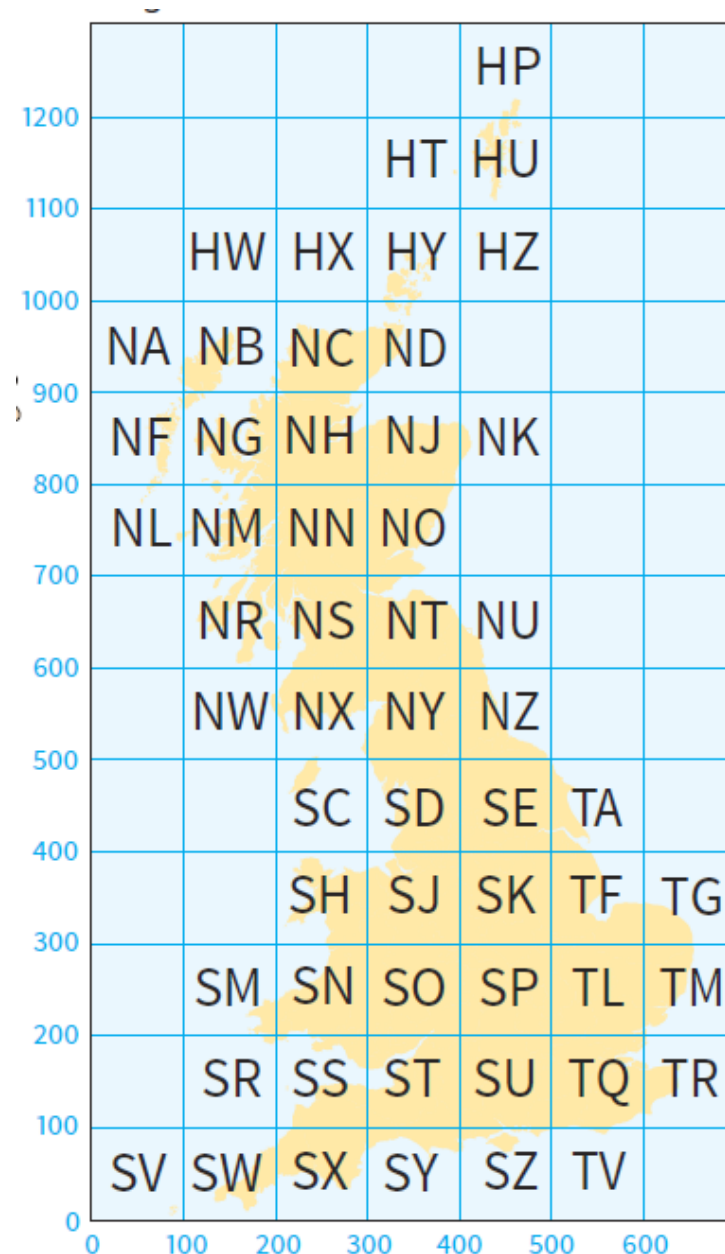
Ordnance Survey divides Great Britain into 100 km by 100 km squares, each with a two-letter code. The two-letter codes can be found printed in faint-blue capitals on Ordnance Survey maps and can also be found in the map key.

The first letter, for example 'S', denotes 500 km by 500 km squares and this is subdivided into 25 squares that are 100 km by 100 km within it, making 'ST', 'SU', 'SO' and so on.

There are four main first letters: 'S', 'T', 'N' and 'H' covering Great Britain, plus an 'O' square covering a tiny part of North Yorkshire that is usually below tide.

A unique National Grid reference should have this two-letter descriptor followed by the grid reference numbers within that square.

Elthorne Park High School is within the 100km² grid square TQ



National Grid reference numbers

The numbers going across the map from left to right are called eastings, and go up in value eastwards, and the numbers going up the map from bottom to top are called northings, because they go up in a northward direction.

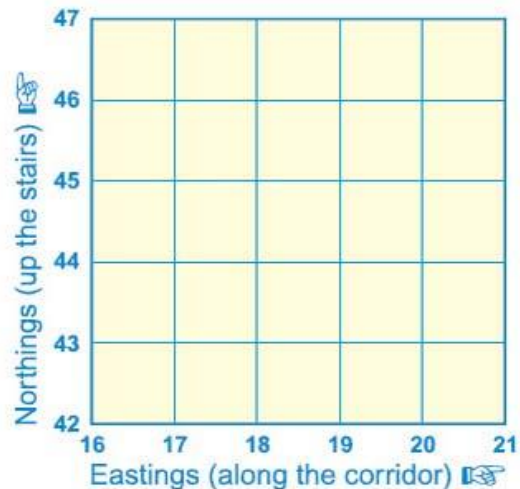
There are two main types of grid reference:

- four-figure grid reference, such as '19 45', indicates a 1 km by 1 km square on the map; and
- six-figure grid reference, such as '192 454', indicates a 100 m by 100 m square on the map.

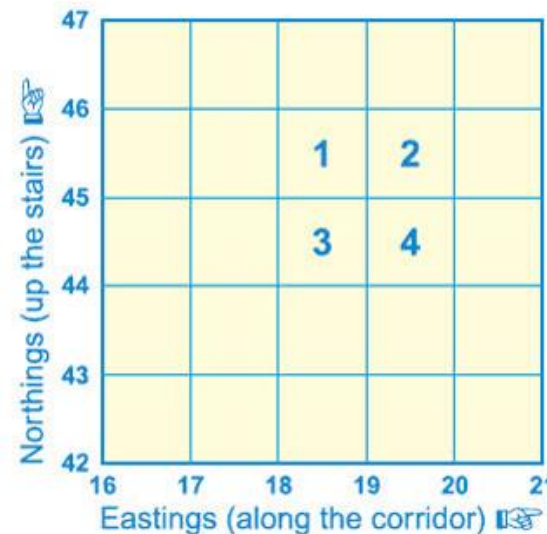
Four-figure grid references

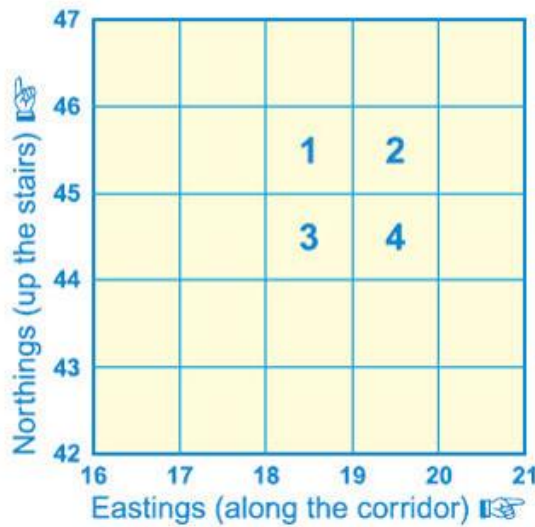
When giving a four-figure grid reference, you should always give the eastings number first and the northings number second, very much like when giving the reading of a graph in school, where you give the x coordinate first followed by the y.

An easy way to remember this is that to get the first number, you go along the corridor (horizontal, x axis, eastings) and then up the stairs (vertical, y axis, northings).



For example, the number 2 in the diagram below is square 19 across and square 45 up and therefore, the four-figure grid reference is '1945'.





The numbered squares on the diagram to the left have the following four-figure grid references:

1 = 18 45

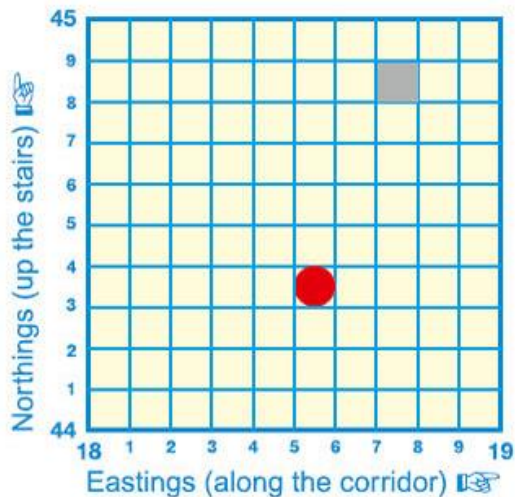
2 = 19 45

3 = 18 44

4 = 19 44

Six-figure map references

To get the six-figure grid reference, you have to imagine that the four-figure square is further divided up into tenths. In the example below, the grey box is in the four-figure grid reference square '18 44', but more accurately it is 7 tenths across and 8 tenths up within that larger grid square, therefore the six-figure map reference is '187 448'.



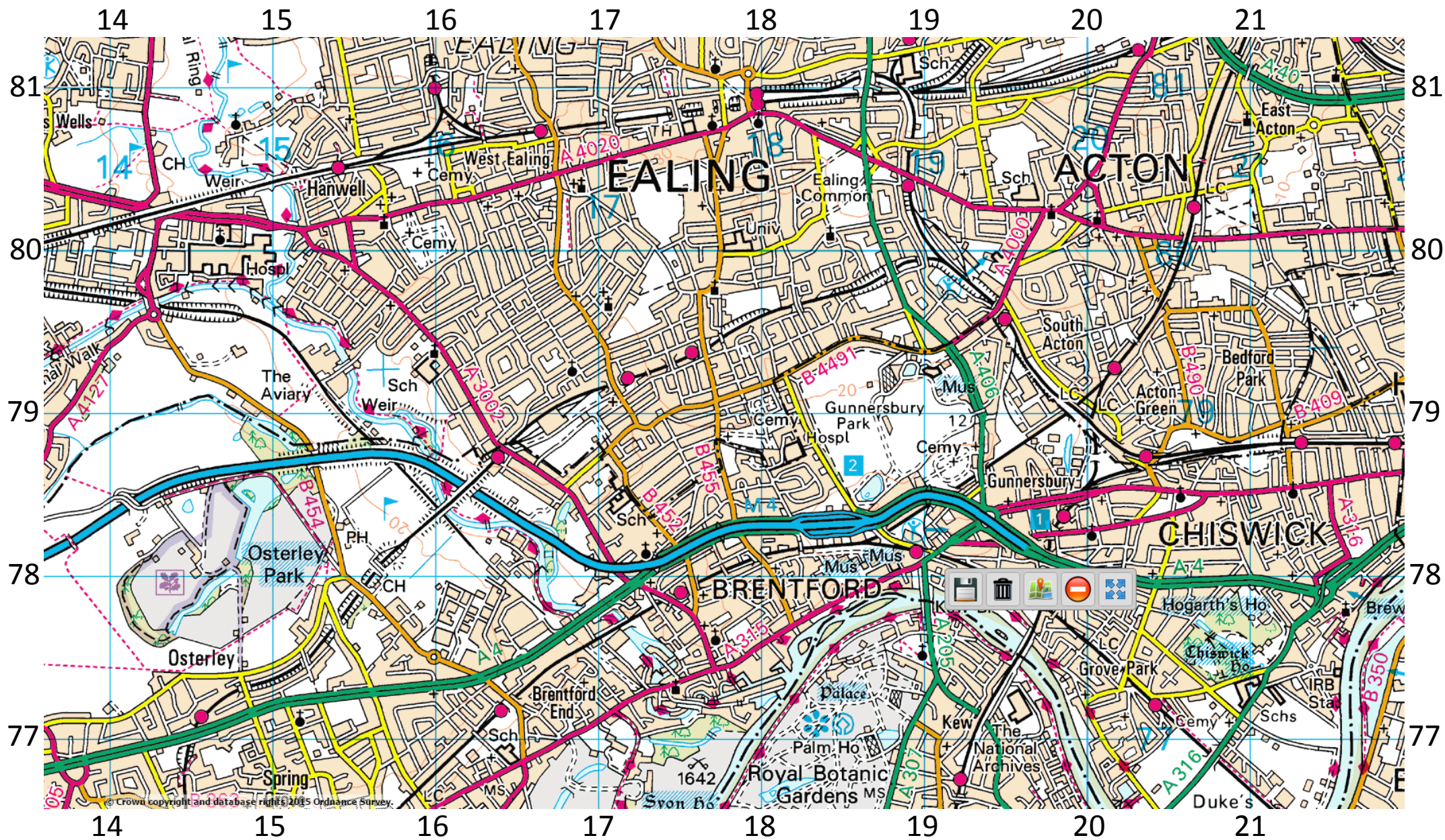
The shapes on the diagram to the left have the following six-figure grid references:

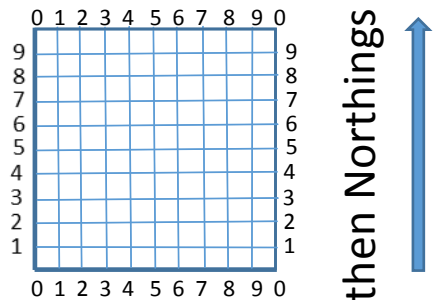
Grey square – 187 448

Red dot – 185 443

To be sure there is no doubt or confusion about which National Grid you're referring, when you quote the six-figure grid reference you should put the two letters of the area you are in before the numbers.

For example, you may be at grid reference '509 582' in south-west Scotland. The complete grid reference you should quote would be 'NX 509 582' (without the letters the numeric reference would be repeated in every 100 km square).

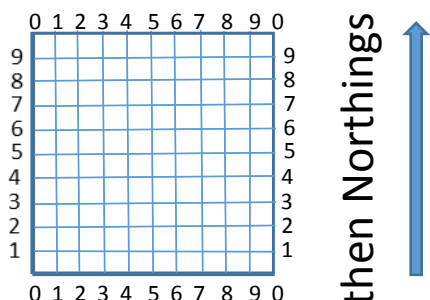




then Northings



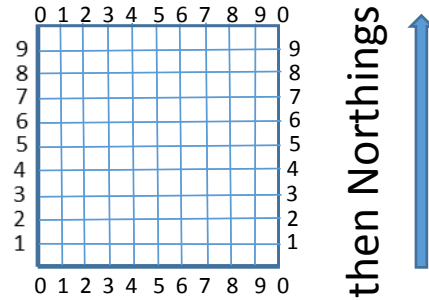
Eastings first



then Northings



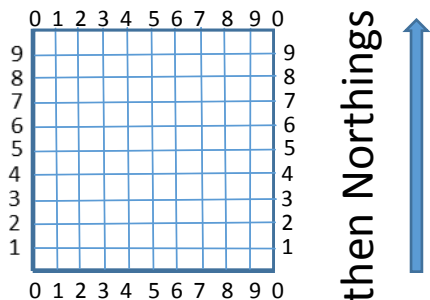
Eastings first



then Northings



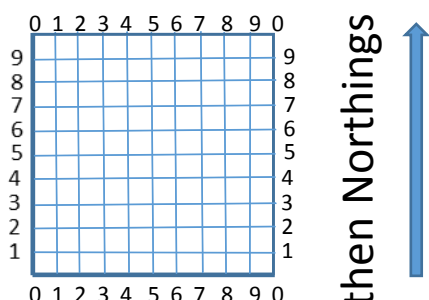
Eastings first



then Northings



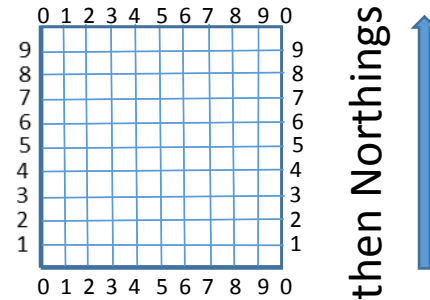
Eastings first



then Northings



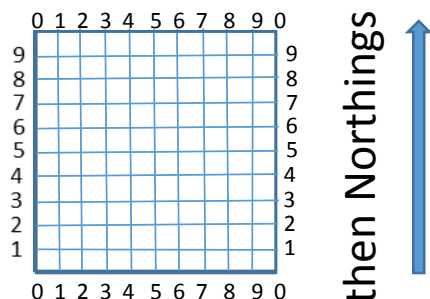
Eastings first



then Northings



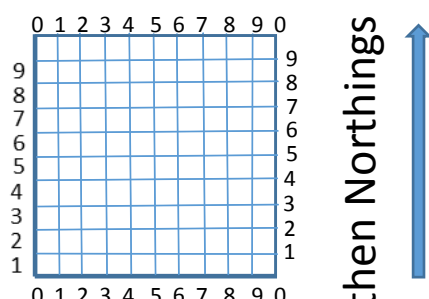
Eastings first



then Northings



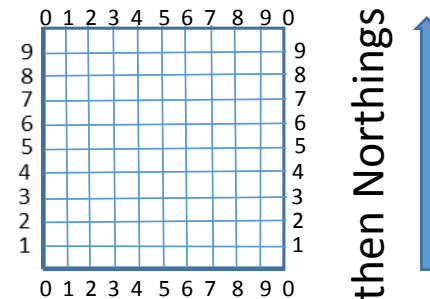
Eastings first



then Northings



Eastings first



then Northings





Eastings first















Using Ordnance Survey Maps: Grid References

1. What is at grid reference 151771?
2. What is at grid reference 175793?
3. What is at grid reference 202774?
4. What is at grid reference 157784?
5. What is at grid reference 183792?
6. What is at grid reference 200801?
7. What is at grid reference 146808?
8. What is at grid reference 185771?
9. What is at grid reference 194799?
10. What is at grid reference 176768?

1. What the grid reference for  at Kew?
2. What the grid reference for the museum at Gunnersbury Park??
3. What the grid reference for Hanwell railway station?
4. What the grid reference for the club house (CH) near Hanwell station??
5. What the grid reference for the IRB Station ?
6. What the grid reference for the Palm House at Kew?
7. What the grid reference for Chiswick House?
8. What the grid reference for the National Archives at Kew?
9. What the grid reference for the junction of the A315 and A3002 roads?
10. What the grid reference for the National Trust symbol  at Osterley Park?

Using Ordnance Survey Maps: Grid References (Answers)

1. Church with a spire 
2. Railway station 
3. Level Crossing 
4. Golf Course 
5. Glass structure 
6. Church with a tower 
7. Footbridge across a river 
8. World Heritage Site 
9. Recreation/ leisure/ sports centre 
10. Battlefield (with date) 

1. What is the grid reference for  at Kew? **183771**
1. What is the grid reference for the museum at Gunnersbury Park? **190792**
2. What is the grid reference for Hanwell railway station? **154805**
3. What is the grid reference for the club house (CH) near Hanwell station?? **143806**
4. What is the grid reference for the IRB Station ? **215774**
5. What is the grid reference for the Palm House at Kew? **187769**
6. What is the grid reference for Chiswick House? **210775**
7. What is the grid reference for the National Archives at Kew? **198772**
8. What is the grid reference for the junction of the A315 and A3002 roads? **177774**
9. What is the grid reference for the National Trust symbol  at Osterley Park? **143779**