

## SECTION 3: Map Direction and Orientation

### MAP DIRECTION

Map direction relates to direction in the real world and is usually described in terms of the four main (or 'cardinal') points of the compass—north (N), south (S), east (E) and west (W). These cardinal points divide the map into four quadrants which can be further subdivided in half by the 'intercardinal' points—north-east (NE), which is half-way between north and east, north-west (NW), south-east (SE) and south-west (SW). Figure 2.1 illustrates the eight points of the compass.

It is standard practice to have north pointing towards the top of a map. South is therefore towards the bottom, east towards the right and west towards the left. However, on rare occasions there may be a need to break this convention. In such cases the direction of north is usually indicated by an arrow called a north point, or sometimes on tactical maps by a north line at the top of the map-sheet. Figure 2.2 gives two commonly used kinds of north points.

It is very important to remember to check the direction indicator when using maps. Where direction is not marked on the map you may safely assume that north is at the top of the page.

### ORIENTING A MAP

Directions between features on a map are the same as the directions between the same features on the ground only when the map is correctly oriented. In order to orient a map it must be turned so that north on the map points in its correct direction.

If you already know the true direction of a linear feature such as a street you can stand in the street and turn the map until the street on the map points in the same direction. The map is then said to be oriented.

Figure 2.1  
Cardinal and intercardinal points

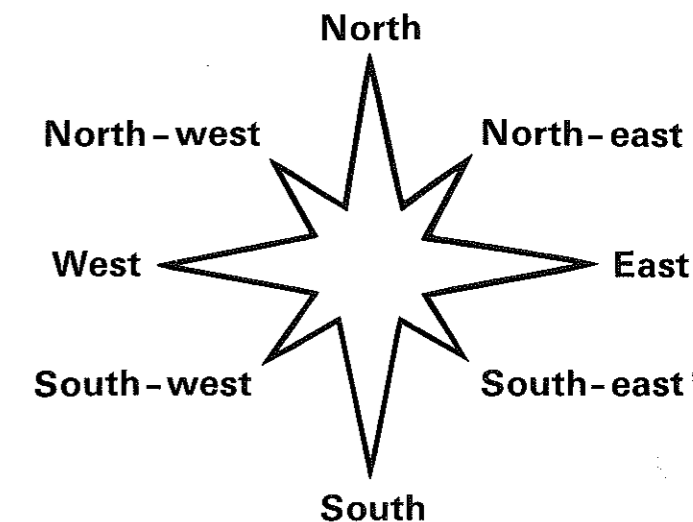
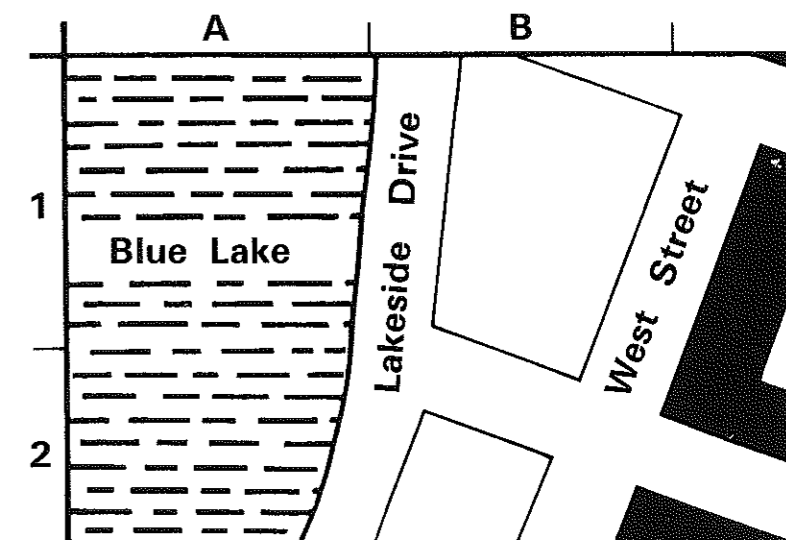


Figure 2.3  
Orienting a map

Urbanville Town Centre  
Map 2 of 3 sheets

Scale 1:1250



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world and is usually described in terms of the compass—north (N), south (S), east (E) and west (W). These four points divide the map into four quadrants. The 'intercardinal' points are halfway between the cardinal points: north-west, north-east, south-west and south-east. Figure 2.1 illustrates the eight points of the compass.

North is always towards the top of a map. South is towards the bottom, east towards the right and west towards the left. However, there are occasions when you need to break this convention. In such cases, the map is indicated by an arrow called a north arrow pointing towards the true north line at the top of the map-sheet. This arrow is one of the north points.

When using a map you may safely assume that the directions are the same as the directions between the map and the ground. In that north on the map points in its true direction.

When you are near a feature such as a street you can find it on the map points in its true direction.

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## FIGURE 2 MAP DIRECTION AND ORIENTATION

Figure 2.1  
Cardinal and intercardinal points

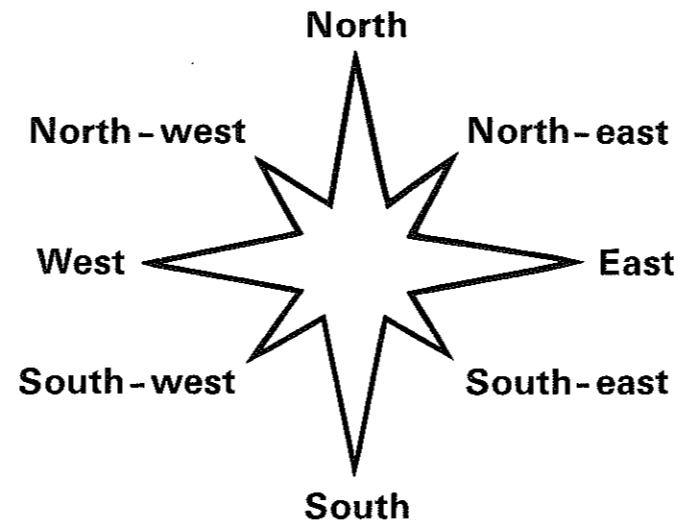
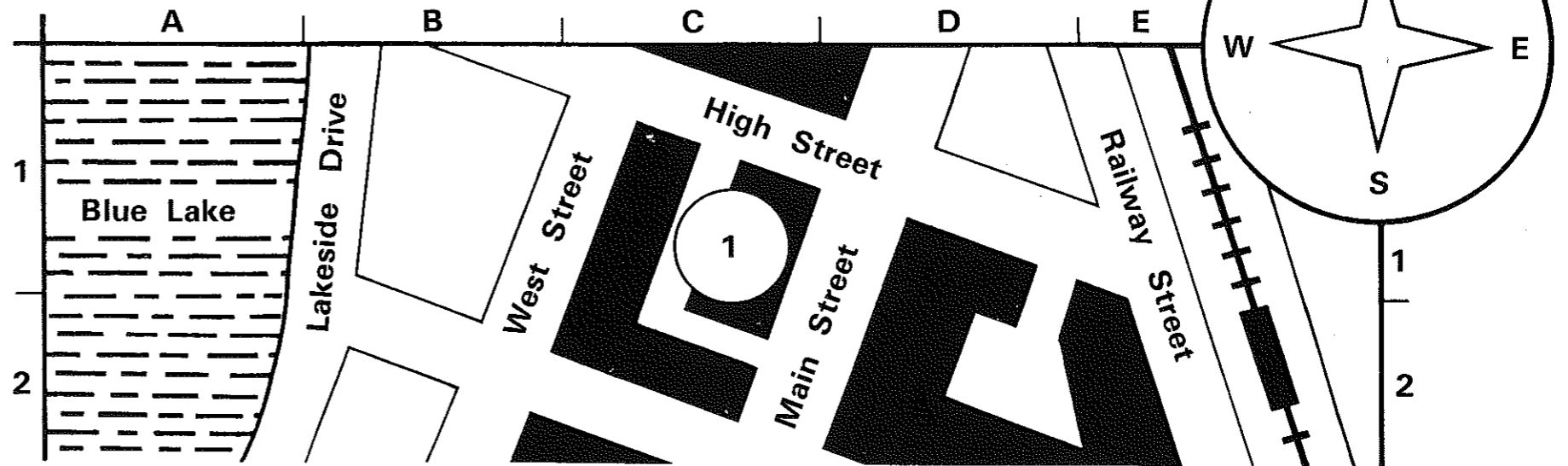
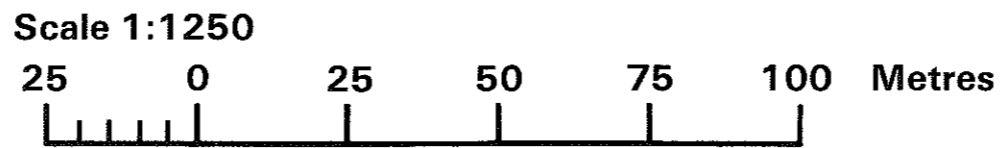


Figure 2.2  
North points



Figure 2.3  
Orienting a map

Urbanville Town Centre  
Map 2 of 3 sheets



More often, however, it is necessary to use a magnetic compass, which works on the principle that a pivoting magnetised needle always points towards the earth's magnetic pole. This is called 'magnetic north'.

A map can be oriented quickly by placing a compass on it and rotating the map until map north and the needle of the compass are pointing in the same direction. Refer to Figure 2.3 where a compass has been placed adjacent to the map's north point to allow alignment. The compass can of course be placed anywhere on the map; alignment of map north and compass north is what is important.

Tactual (braille) compasses are available and are very useful to both the visually impaired and the blind. On the compass dial north is usually indicated by a raised arrow; the dial can be locked in position for tactual reading.

One well-known type of braille compass uses the lid movement to lock the dial in position. To orient a map using this type of compass, place the map and compass on a level surface, with the compass adjacent to the north point on the map. Leave the compass lid closed for about 10 seconds to allow the dial to float freely and to be attracted by the earth's magnetic pole then open the lid to lock the dial in position. Now observe the direction of north on the compass and turn the map until both map north and compass north point in the same direction.

Re-check compass north by repeating the action and re-adjust the map if necessary.

For the locations of places where tactual compasses can be purchased refer to Annex 1 located at the back of this *User Guide*.

## SECTION 4: Map Reference Systems

Most maps have some form of reference system to help you find places and other features on maps.

### MAP GRIDS

A grid divides the map into columns and rows in a logical way to find a point or area on the map.

#### Alphanumeric Grids

Tactual and low vision maps usually have a grid to indicate a small area of the map in more detail. This is generally shown by ticks around the perimeter of the columns which are lettered and run down the page and the rows which are numbered and run across the page. The letter 'A' is at the left-hand corner of the grid.

Figure 3.1 provides a simple alphanumeric grid. To establish where the triangle is located, find the corresponding letter, and the corresponding number. The triangle is located at the intersection of the values which specify its location (known as coordinates). When working with alphanumeric grids, the letter always be stated before the number.

It may not always be easy for you to find the coordinates with your fingers and in these cases a grid is provided. See if you can find the coordinates of the triangle at the cross. The answers are at the end of the section.