

## What is a map?

Maps depict the places in which we live and travel. Modern aerial photographs can provide an accurate and visually detailed view of a locality, but maps do a lot more. Maps combine words and symbols to communicate a greater density of data and information than is possible in an equivalent photograph.

The symbolic language used in maps is space efficient and can pack large amounts of data into a relatively small space. To 'read' this information and fully understand the map, we need to decode its messages and place these within their proper context. The language of a map has to be understood by the people who are going to use it. If the symbolic language is too complicated, or difficult to understand, the map will be unreadable and therefore useless.

Map makers need to ensure that their maps are well designed and easily read. We all know that there are good maps and bad maps, the problem is defining which is which. The following principles are intended as a guide to mapmakers who need to decide what information to put in their maps and how to show it.

## Principles of good map design

The following principles provide a useful guide to producing useful and easily understood maps.<sup>1</sup>

### 1. Concept before compilation

What is the map for? Who is its intended audience? What types of information do the users need? What level of competency do they possess? All these issues need to be addressed before the map can be produced.

Bicycles are superb short-range vehicles, and cyclists' needs can be intensely localised. Cyclists tend to use the whole street system for their trips – not just the major and secondary roads. Short cuts and safe crossing points on busy roads are important to them.

All recommended cycle routes in the network need to be indicated, not just those parts already completed – otherwise the map will be useless as a navigational aid. Maps showing only the completed 'bits' of cycle networks may be useful to governments to track cycle network development, but should not be issued to the public, as they do not show all the wayfinding possibilities.

Bicycle riders need to reach destinations at street addresses and town centres, so it is important that street names, community facilities (schools, universities, public buildings, shopping centres/streets etc) and prominent landmarks are shown and labelled.

Studies of human physiology have found that some people relate better to three-dimensional information rather than to conventional two-dimensional maps. A common response to this is to combine three dimensional diagrams of landmarks (buildings, sculpture, bridges and other structures) with a conventional map. This technique is often used in tourist guides where people are usually new to an area and more likely to recognise a landmark from its picture than its plan view shape.

**Recommendation:** Maps for cyclists should be specifically designed to help them with their particular navigational problems and to show the kinds of things they want to know.

<sup>1</sup> British Cartographic Society Design Group 1999



Figure 3 (above): This German cyclists' map offers a unique way of mapping a dense urban environment (Berlin). The map doesn't show cycle network routes. Instead it shows the streets most suitable for cycling. Streets shown in a grey colour are unsuitable for cycling, streets shown in white are suitable but shared with cars and streets shown in yellow are most suitable and have marked bike lanes or off-road bike tracks (see major roads in top centre). This type of map can be useful for short local trips, but more difficult to use for longer cross-town trips.

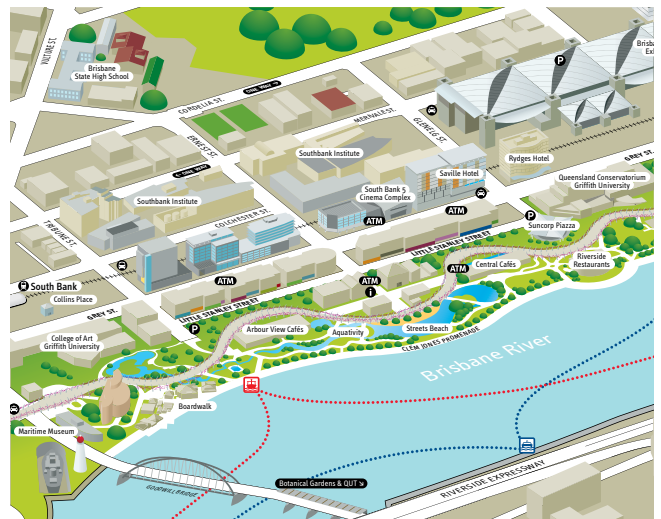


Figure 4 (above) and Figure 5 (below): These maps show details three dimensionally. This type of map is particularly useful for first time users such as tourists and newcomers. The map of Southbank Parklands (centre) provides a full 3D bird's-eye view of the area while the tourist map of the Italian town of Orvieto shows the major landmark buildings in 3D, and all other information in a more conventional 2D mapping style.

