HOW THE MAPS WERE MADE

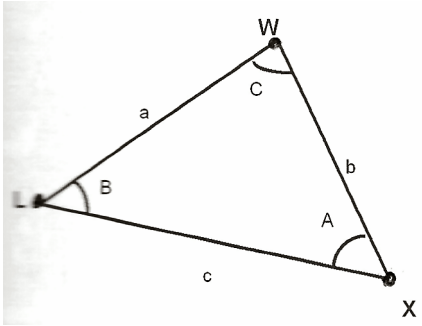
In 1784 Two points on Hounslow Heath (Near London) were set up to form a very accurate base line from which to start a survey of Britain. The points themselves were constructed by burying cart wheels underground, and wooden pipes were fitted into the central hub of the two wheels so that they were visible above ground. The distance between the two ends of this "baseline" was measured very accurately using glass rods fitted inside wooden boxes (for protection) the ends of the rods were left to protrude. And the rods were used end to end until the whole of the baseline had been measured, a length of 5 miles.

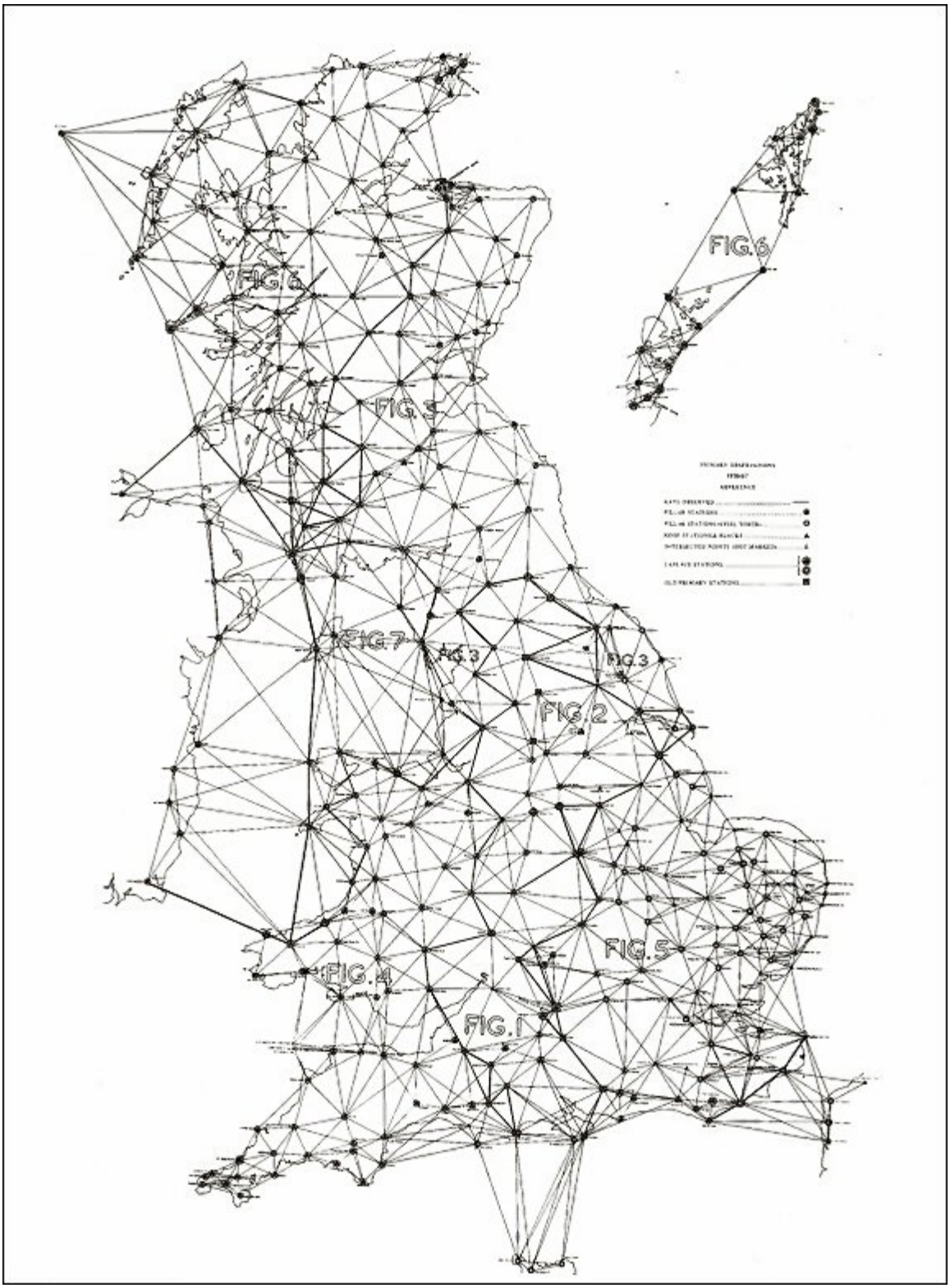
A very accurate instrument called a Theodolite was designed especially for the survey. The method used to map the land was called triangulation.

The two accurately measured points had the theodolite accurately placed above each wooden pipe in turn and the angle measured between each end point and a third point mounted on a hill was measured. By knowing the length of one side of the triangle thus formed and the two angles at the ends of the baseline, the position of this hill was calculated. This hill and one of the original end points of the baseline were then used to form a second triangle and the position of a second hill was calculated. Because the hills were not all of equal height then a procedure called "levelling" which used benchmarks and was employed to correct the distances determined by the triangulation calculations.

This system of triangulation was repeated over and over again until the positions of hundreds of hills and other features were accuratelyand and a map of Kent was produced. By the year 1870 the whole of England and Wales was mapped using a scale of 1 inch to the mile.

In 1935 The country was measured again more accurately from a baseline on The Ridgeway by using specially built TRIANGULATION PILLARS at the corners of each triangle. this was called the RE-TRIANGULATION of the country. These pillars have largely fallen out of use since 1962 when the re-triangulation was completed. GPS style measurements (The National Global Positioning System) and aerial photography have now taken over.



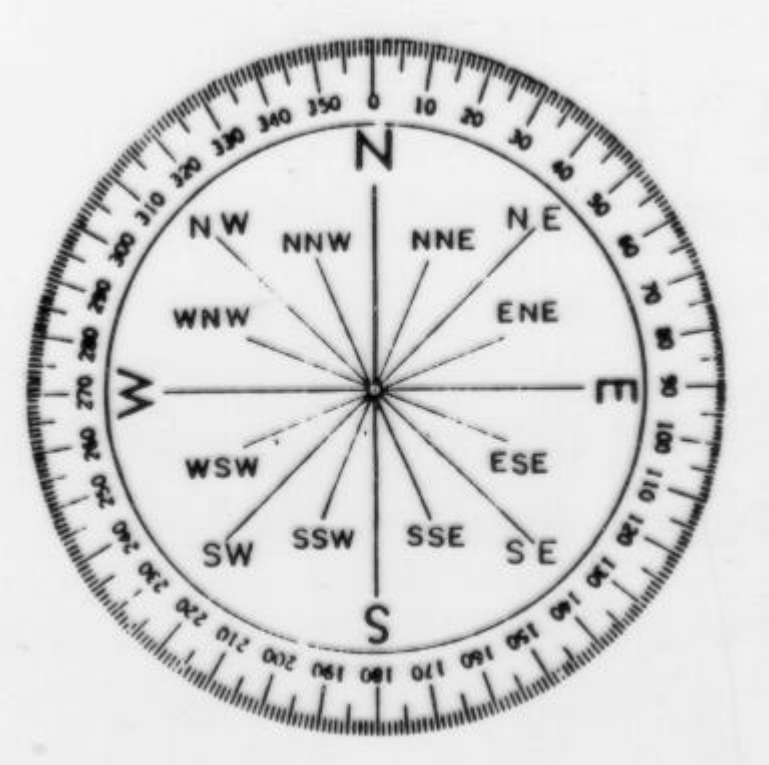


The PRIMARY Triangulation points

The 3 foot Ramsden Theodolite

A Triangulation (Trig) Point

A levelling Benchmark



Cardinal points of the compass

A TIMELINE OF THE ORDNANCE SURVEY

1746
Cartographer William Roy is commissioned to map Scotland after the Battle of Culloden demonstrates a military need for small-scale maps

1784

Accurate trigonometrical survey begins in Britain with William Roy's measurement of Hounslow Heath. Order placed with Jesse Ramsden for 3-Foot theodolite (delivered 1787)

1801

1 January – First Ordnance Survey map is published, the 1-inch Map of Kent

1858

Royal Commission recommends map scales of 1-inch for national mapping

1870

Mapping of England and Wales at 1-inch scale complete

1920

First Tourist Map published (Snowdon)

1935
Re-triangulation of Great Britain begins (Triangulation Points constructed)

1938
Final Report of the Davidson Committee recommends a **National Grid**, at a national scale at 1:25,000

1957

1:250,000 scale replaces the ¼ inch scale

1962

The re-triangulation of Great Britain was completed

1969

October – First metric maps published

1971

Digital mapping is introduced to large-scale map production

1972
Publication of the first Outdoor Leisure Map – The Dark Peak

1990

Work commences on the National Global Positioning System Network, replacing the triangulation network