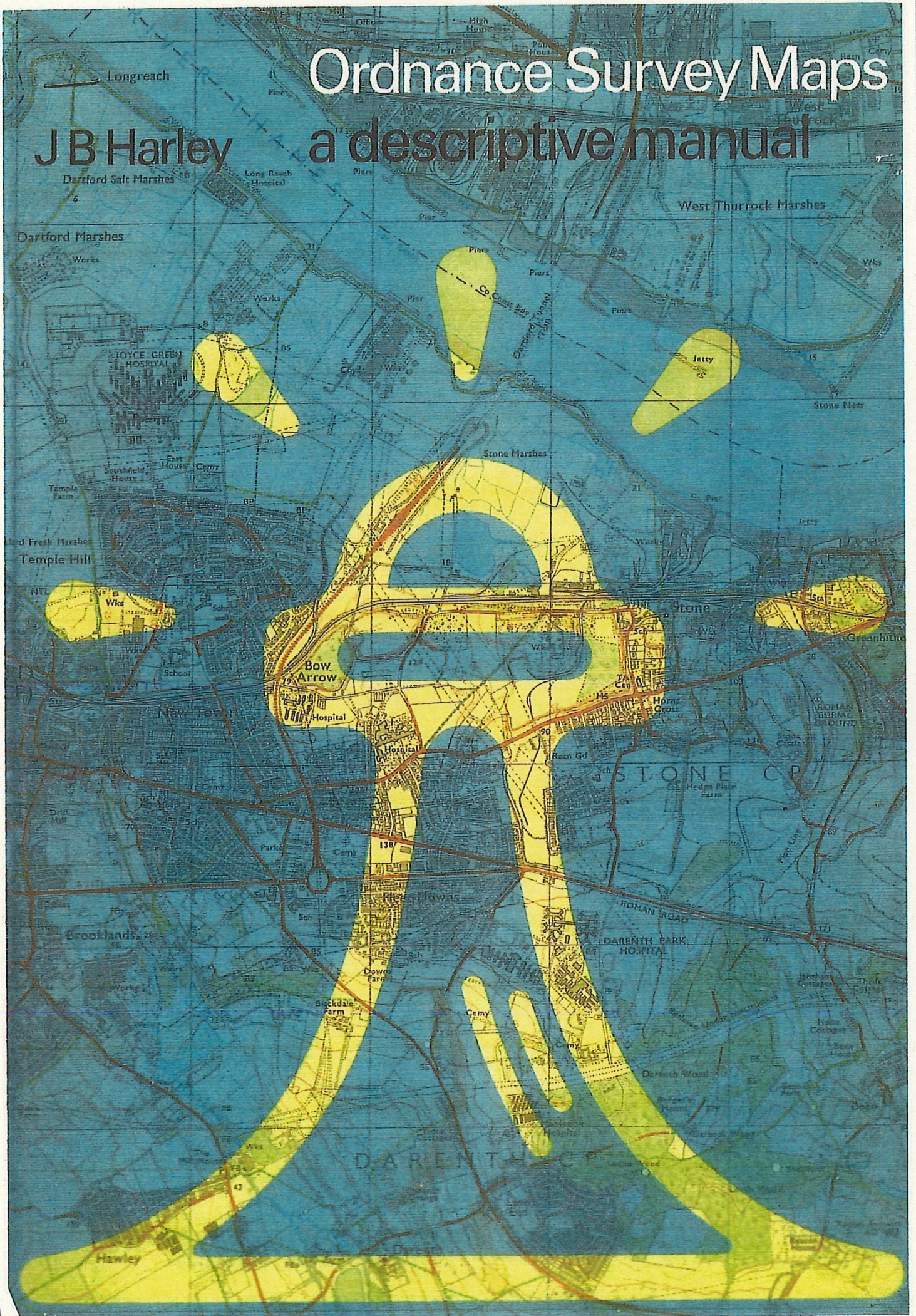


Ordnance Survey Maps

a descriptive manual

J B Harley



derived from them) have obtained their altitudes from three main levellings (and associated lower order observations) surveyed as shown in Table 8.

Table 8 Primary levelling in Great Britain

	<i>England Wales</i>	<i>Scotland</i>
First primary levelling	1840-60	1840-60
Second geodetic levelling	1912-21*	1936-52
Third geodetic levelling	1950-68	1956-68
Cyclic releveling	1956-	1959-

* Except parts of East Anglia and Kent, completed 1946-51.

Changes were especially significant as between the first and second levellings, owing to relatively inaccurate instruments and techniques in the first levelling and, to a lesser extent, to variable movements in the land surface. Other changes are linked to the fact that on the oldest maps, altitudes were computed from Liverpool datum, the mean of high and low water mark taken at Liverpool in 1844. This was unsatisfactory, as much from the short duration of the observations taken to establish it (ten days only), as from the location of the station on a tidal river. Thus, when the second geodetic levelling was put in hand,¹ Newlyn datum, as defined in Chapter 1 (see p. 7), was established. In 1922 the process began of converting heights published on new editions of Ordnance Survey maps to Newlyn datum, but, as far as the 1:2500 series was concerned, the policy could not be implemented for many years. In 1929 a compromise solution was adopted, in which the *difference* between the levels derived from the two datums was published in the sheet footnotes; this varied with locality, but was given so as to be accurate to the nearest 0.1 ft over the limited area of any 1:2500 sheet. Before 1929, *bench mark levels were* given to one decimal of a foot, but thereafter to two decimals of a foot, for example, BM 574.35; after 1929 surface heights were shown *along roads in* the manner +392.

Data from the third geodetic levelling has been used on National Grid maps published since March 1956. Again, owing to slight differences in adjustment, there may be small systematic differences between the two levellings although, for many practical purposes, these may be of little consequence. An estimate of the corrections necessary to bring altitudes based on the second geodetic levelling into approximate agreement with those based on the third may be obtained from the Ordnance Survey. In Scotland, bench mark values and altitudes on many sheets are still based on the second geodetic levelling; only on more recently published 1:2500 National Grid maps has data derived from the third geodetic levelling been incorporated, including areas not previously levelled.

Antiquities

On the National Grid 1:2500 series the same range of antiquities is shown as on the 1:1250 scale, though the rural areas covered by the former allow rather more scope for the publication of antiquities than do the heavily built-up areas of the latter. In any case depiction of archaeological information is similarly governed by the general principles described in Chapter 10.

It is more difficult to generalize about the archaeology on the County Series 1:2500. Depending on the date of the original survey the antiquity content

¹ See Colonel Sir Charles Close, *The Second Geodetic Levelling of England and Wales 1912-21* (HMSO, London, 1922); also H. St J. L. Winterbotham, 41-3, ... (1934).