“Testing the enhancement (part 2)”

John Cole

Sheetlines, 74 (December 2005), pp.34-35

Stable URL: http://www.charlesclosesociety.org/files/Issue74page34.pdf

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Published by
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for the Study of Ordnance Survey Maps
www.CharlesCloseSociety.org

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**Testing the enhancement – II**

*John Cole*

In Sheetlines 72 the author compared a 1:2500 map, which he had been responsible for revising in 1985, with the latest version, prepared under Ordnance Survey’s accuracy improvement policy. He has now had the opportunity of examining a further sheet.

In this instance the 1:2500 map selected had been improved, under the rural revision programme of 2001, for relative accuracy to ±0.9 metres (over 63% of the map) and for absolute accuracy to ±1.1 metres (National Grid accuracy for the same map percentage). The revision had been by air photography dated April 2003 and the map available since May 2004.

The previous National Grid revisions had been overhaul by ground methods, completed by myself in 1966, and an air photo plus ground completion ‘sweep’ (also supervised by myself) from 1988 air photography. The documents I had available were print outs from microfilm of the early 1990s which proved to be surprisingly stable when checked for stretch or shrinkage.

The area concerned comprised a small village picturesquely situated alongside a tidal river whilst the rural area was farmland, with some small wooded areas, but with further areas of new ‘community’ woodland recently fenced off. As these fences were relatively easy to survey by simple taping and graphic methods on the ground, I took the opportunity to do so before the improved map became available, the area itself being only 1½ miles from where I live. As in the case of the previous enhancement tested it was not possible to check the latest National Grid position. Discrepancies of around 1 to 2 metres in the rural area were noted but in the case of the village a rather more startling general 5 metre shift (southwards) was apparent.

The first disappointment was that only one of the five new fences appeared to have been erected by the time of the 2003 photography. However the longest, exceeding 600 metres and with twelve checkable angleposts, had been. Not only did this compare almost exactly with my survey, but also checks with old detail under trees were even better than on the older map in one instance. In view of the fact that such detail in no way visible on an air photo (even allowing for the April date) must have been obtained from the previous revision and adjusted, the result was surprising.

At the time of the 1990s sweep my attention was drawn to an original error (of between 1.0 and 2.0 metres), which the photography highlighted but would not have been obvious at the time of the 1966 ground revision. This was in the older part of the village where there was no new detail to add either in 1966, 1988 or 2003. I had roughly memorised this error and found it to have been corrected using the 2003 photography. Correction had not been attempted using the 1988 photography.

Shortcomings of the latest revision appeared to be new features missed: a private quay and slipway, and a permanent fence dividing two fields. Both are clearly visible on an air photograph dated 1999 held by the author. But possibly of greater concern are instances of incorrect alteration or even deletion of features correctly depicted on both previous revisions. In the former case the village church had been inexplicably altered positionally and wrongly

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1 Bar one small bend which would have been very hard to detect on the photograph.
altered dimensionally, by far the worst error being the 1.0 metre gap between church and hall widened to 5.0 metres. Apart from an insignificant error in the width of an adjacent drive\textsuperscript{2} there had been no real need to alter anything in the area. A slightly less serious alteration – but still rather obvious without taking a measurement – was apparent in the position of a bungalow relative to its boundary walls. As for deletions (in different locations) a block of three garages and a small building had both wrongly been removed from the map.

On digital printouts vegetation is indicated mainly by annotation (e.g. \textit{NC}, non-coniferous trees; \textit{Sc}, scrub). In the main this is unaltered from the previous revisions. But the annotation has been missed in one area of old woodland and, in a large field, the annotations \textit{NC Scat} (scattered) and \textit{Sc} appear near the centre and \textit{Sc Scat} in the northern half. Neither is correct or has ever existed!

As the 1999 photograph was taken at low water, a suitable afternoon was chosen to inspect this and compare with the 2004 map which displays the low water channel of the 1966 revision (supplied from photos of 1957). A significant alteration was confirmed at the junction of two rivers where both shape and position have altered whilst the alteration of a stream in a muddy creek was also confirmed.

Opportunity was taken to examine detail hidden from the air by vegetation or only verifiable by ground inspection, e.g. streams alongside hedges. Minor changes were noted; possibly the most significant were verges and depiction of the approach road to the village (which is a dead end). However in fairness again to the modern OS it is fairly certain that this situation existed in 1966 and was left as per the previous revision due to the directives of the day. Other items which could only be checked by a ground visit are names, house names and numbers\textsuperscript{3} and the existence of three foot ferries. All of these were confirmed as correct except for two very recent house name alterations.

High tide had been adjusted to one detail alteration on the 2004 map but was of course incorrect where the quay and slipway had been missed.

It should be mentioned that the 2004 map area of 1 km\textsuperscript{2} had, for the sake of convenience, been made up of the northern half of one map, SW 8442 (containing the village), and the southern of another, SW 8443. Both were revised in 1966 by the author. A small part of the village built up area intrudes into the southern half and, as a consequence, the village name had been conveniently sited in a blank area. The 2003 photo had supplied a new house at this location and no attempt had been made to re-site the name, giving a very ‘unprofessional’ result.

The Ordnance Survey response to my report was that the information had been logged for future investigation, which in effect was the expected reply as this is a relatively unimportant area map-wise. My conclusion is that although Cornwall has done quite well out of the enhancement to 1:1250 standards (nine towns or 89 km\textsuperscript{2} in area) some disquiet is felt regarding other important built up areas subjected to the lesser standard air only revision. By way of example, whilst the town of Hayle has been so treated, the adjoining and equally built up St Ives / Carbis Bay / Lelant area is not to 1:1250 standards. It is possible that projected future building development played a part in this.

\textsuperscript{2} Now altered from slightly too wide to similarly too narrow.
\textsuperscript{3} Virtually up to date due to the Ordnance Survey \textit{Address Point} scheme.