



NEW ZEALAND
ARCHAEOLOGICAL
ASSOCIATION

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER



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METRICATION AND THE SITE RECORD SCHEME

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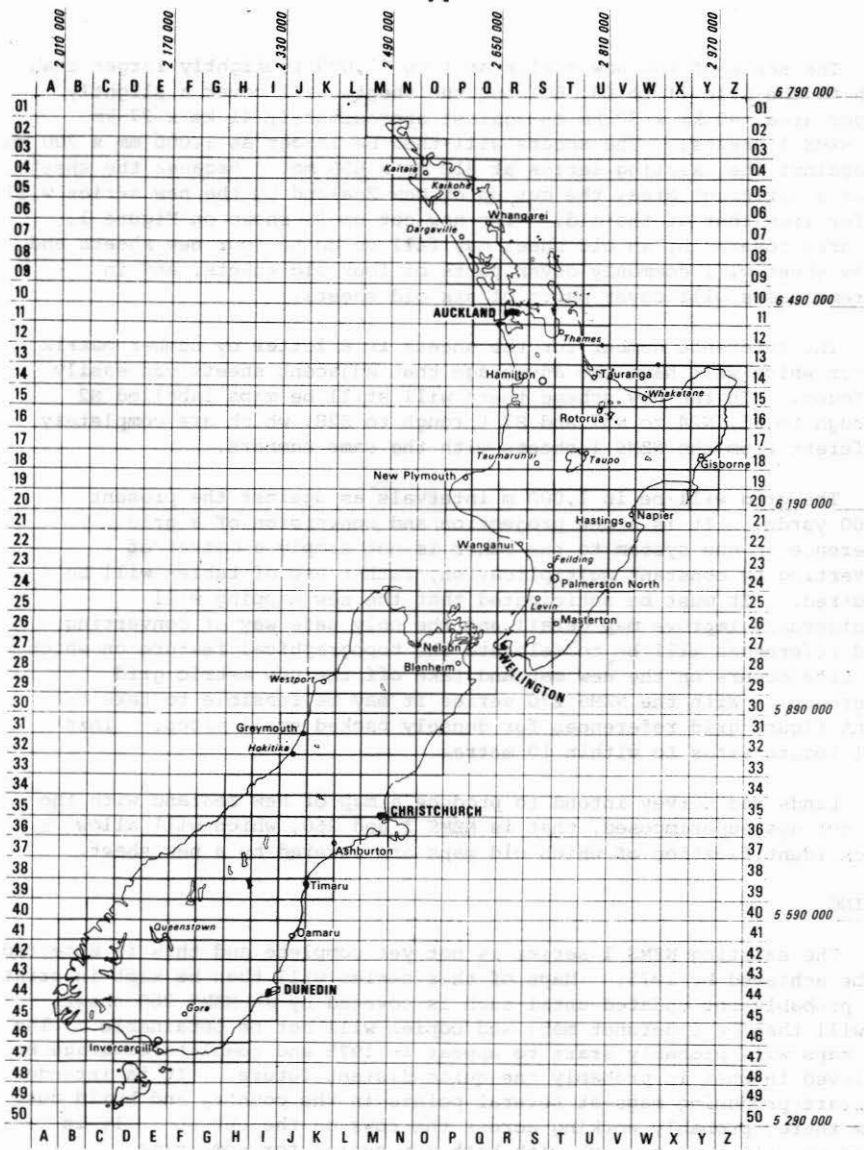
The site record scheme operated by the Archaeological Association plays an important and increasing role in site protection and in research in New Zealand archaeology. In its operation it is intimately entwined with the inch to the mile series of maps, New Zealand Map Survey 1 (NZMS 1). On these sheets the sites recorded are plotted; the sites are assigned numbers starting with the sheet number of this survey; the map name, number, and yard grid reference forms the basic location record on the filed site record sheet; and lastly the regional filing districts into which the country is divided are bounded by the edges of these sheets.

This map survey is to be replaced by the Lands and Survey Department by a new series with a new scale, a metric grid, a new sheet size and a new cut up. The site record scheme must eventually come to some compromise with the new maps. This article is intended to give information on the nature of the new maps and the proposed changeover. I would like to acknowledge the help of the Lands and Survey Department in answering questions, and their leaflet "New Maps by Department of Lands and Survey" issued in 1973 to which readers requiring more information on other new maps should refer. Secondly, a possible method of adaptation of the scheme to the new maps is presented, to demonstrate that the change need not be overly difficult.

THE NEW MAPS

It is not just the NZMS 1 series that is to be replaced. First the cadastral maps (showing legal boundaries) are to be replaced by a new cadastral series, NZMS 261 at a scale of 1 to 50,000, and, second, the country is to be covered by a new photogrammetrically prepared series, NZMS 270 at 1 to 25,000. This will be available in the form of single colour plan prints and will show basic topography with 20 m interval contours. From this series the series that will replace NZMS 1, that is NZMS 260, will be prepared, at 1 to 50,000 scale. NZMS 260 will be multi-colour printed sheets. Four of the NZMS 270 sheets will make up each NZMS 260 sheet. This first series will have the same metric grid as NZMS 260 and, being two and a half times the scale of our present inch to the mile maps, they will be marvellously useful for detailed site recording. This plan print series should become available and complete well before the NZMS 260 sheets.

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INDEX TO 1:50 000 MAP SERIES SHEETS

Reference by letter and numerals e.g. R 27

New Zealand Map Grid (values in Metres in italic figures) (Sheet size 40km×30km)

By Department of Lands and Survey - 1973

Figure 1. The cut up of New Zealand in the new map series.

The scale of the new series at 1 to 50,000 is slightly larger than inch to the mile (1 to 63,360) but the sheets will cover a slightly larger area, 40 km x 30 km as against approximately 41 km x 27 km for NZMS 1 sheets. The sheets will then be larger at 1,000 mm x 700 mm as against the existing series at 810 mm x 650 mm. Because the sheets cover a different area, the cut up of New Zealand by the new series will differ from that of the old. The new cut up is shown on Figure 1. The area covered by an old sheet may fall on up to four new sheets and a new sheet will commonly cover parts of four old sheets, and in extreme cases will cover parts of six old sheets.

The reference number for the sheets is a letter by number matrix system which will have the advantage that adjacent sheets can easily be found. In the new scheme there will still be maps labelled N2 through to N5, N24 to N37 and S7 through to S28, which are completely different from the NZMS 1 sheets with the same numbers.

The grid will be in 1,000 m intervals as against the present 1,000 yards. It is a new projection, and conversion of a grid reference in one system to the other is not simply a matter of converting by constant multiplication, rather use of tables will be required. It must be anticipated that the new mapping will considerably improve map detail and the only safe way of converting grid references will be to relocate the topographical feature on which the site occurs on the new map and take off the new metric grid reference. With the NZMS 270 series it may be feasible to take off eight figure grid references for densely packed small sites. This will locate sites to within 10 metres.

Lands and Survey intend to produce a map of New Zealand with the two cut ups superimposed, that is NZMS 1 and 260, which will allow quick identification of which old maps are covered by a new sheet.

TIMING

The existing NZMS 1 series is not yet complete and this is expected to be achieved by 1975. Maps of this series will then be kept in print, but probably not updated until each is covered by an NZMS 260 sheet. It will then be a defunct map, and copies will not be obtainable. The new maps will probably start to appear in 1975 and complete coverage be achieved in what is probably the quite distant future. It is intended to start producing maps at several points in the country and build out from there, probably working across the rows on the cut up. It is clear we will have to work with both map series for some time.

CONVERSION OF THE RECORD SCHEME

If we are to base the site record scheme on the new series in the same way as the scheme is at present we will have to alter the filing districts to the new sheet boundaries, alter the site number of every site recorded, and refile every site already filed. Moreover, this will involve formidable co-ordination between adjacent regional file areas, and between regional files and the central file, and all this could extend over two decades or more before the series is complete. An option with some immediate attraction is then to delay conversion until the new series is complete and change it at one stroke. Yet this must involve a lengthy use of an out-of-date map series which is increasingly unavailable, and the ultimate crisis of conversion will involve many thousands more sites than if conversion were done as the maps appear.

It is alarming that if we use the new map numbers there is room for confusion of the old and new, as numbers like N26/37 could be an old style number on the NZMS 1 sheet N26 in the North Island or a new style number on Sheet N26 of NZMS 260 which is in the South Island! Clearly the number scheme would have to be elaborated somewhat to remove this confusion. A further disadvantage of delaying changing is that there is no incentive to use the present numbers as references for sites when the present numbering scheme is to become defunct. Indeed, it would be disappointing to see the present site numbers being changed even now, when they are just coming into general use.

I would suggest that rather than follow this course we should divorce our recording subdistricts from the new map series. This after all happens in other parts of Polynesia where valleys are often used as subdistricts, yet the map and grid reference are still recorded. We could use large subdistricts such as our present district file areas and use an area code. Thus an existing recorded site N38/37 would become N-A-38/37 filed as an old sheet site in the Auckland (A) file, and N-A-673 would be a new site recorded on the new maps anywhere in the Auckland file area, and filed separately from the older records. The districts would however in most cases be large, rather arbitrary and inflexible.

To me the most attractive alternative is to retain the areas of the NZMS 1 sheets as our subdistricts. The file would then be accompanied by a series of file maps which would be duplicates of the present sheets but made up of paste-ups of parts of the new NZMS 260 sheets. Thus they would be at the new scale and show the new grid. This is illustrated on Figure 2. It must be emphasised that this is

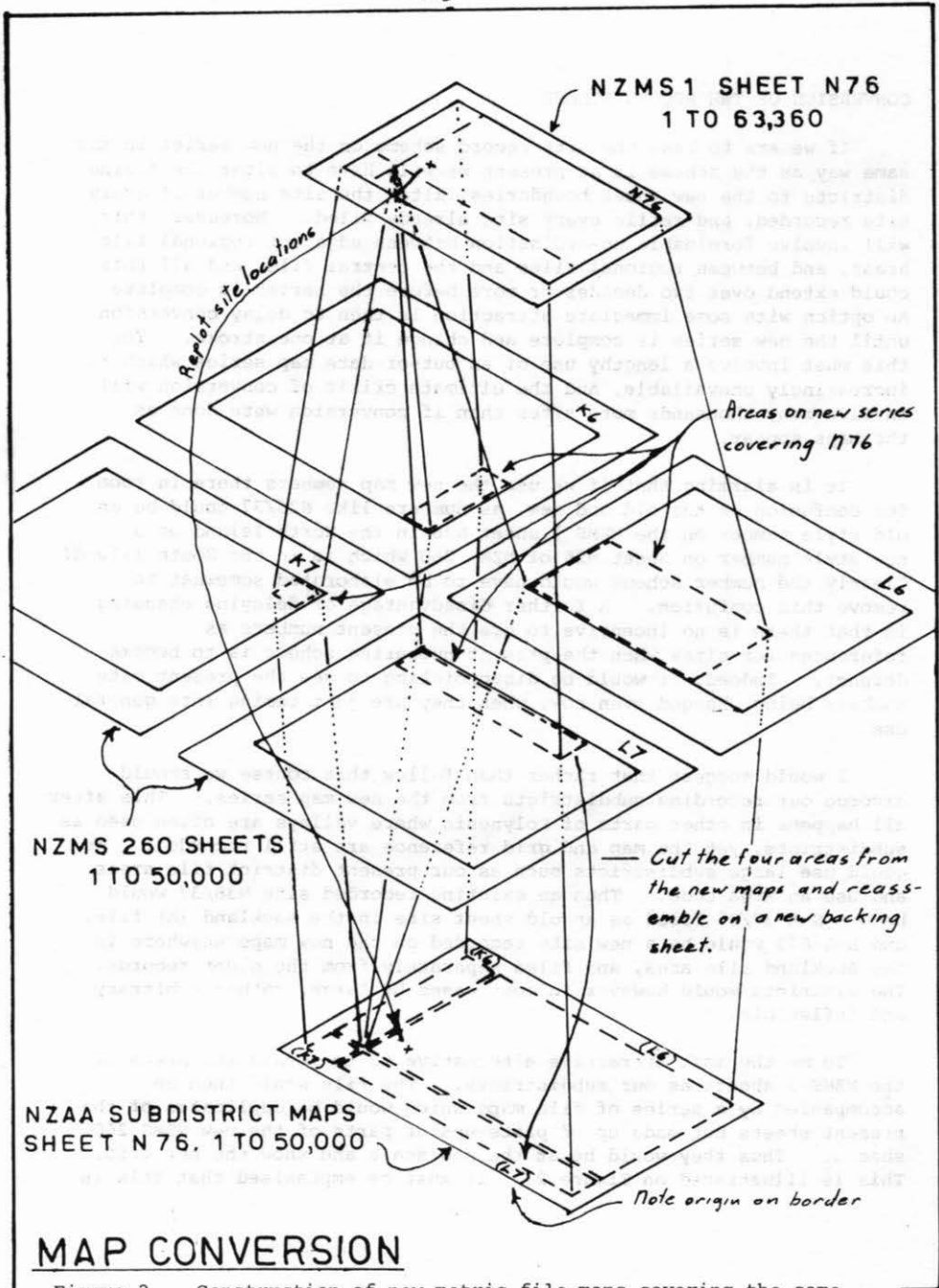


Figure 2. Construction of new metric file maps covering the same area as the present maps.

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM Map number N 67 Map name Mouno <i>waikau</i> Map edition 1955 Grid Reference 435.673 SEE ABOVE	SITE NUMBER N67/12
	SITE NAME: MAORI - OTHER -
	SITE TYPE Pa
1. Aids to relocation of site	

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM Map number J4 Map name Pukemanu Map edition 1977 Grid Reference 116.747	SITE NUMBER N67/43
	SITE NAME: MAORI - OTHER -
	SITE TYPE Pit group
1. Aids to relocation of site	

Figure 3. Top. Conversion of existing records.
Bottom. A record using the new maps.

only a possible scheme and has not been adopted, nor is there yet any pressing need to adopt any scheme. It is shown here to demonstrate that a simple adaptation is possible. Figure 3 illustrates how the present record forms might be altered to incorporate new information by use of a rubber stamp.

This particular scheme has the following advantages over some other schemes I have considered:

Site numbers remain unchanged.

Site filing remains unchanged.

Conversion can be done as the new maps appear without difficulty.

Co-ordination between the central file and district files is simpler than other schemes.

No changes of the district boundaries are required.

At no stage in the changeover can there be any confusion over in which file a site lies.

No co-ordination is required between regional files during conversion.

There should be no barrier to immediate use of the NZMS 270 sheets for field surveying. With these records a yard grid reference could also be given for interim plotting on the NZMS 1 sheets.

The potential confusion of the repetition of NZMS 1 map numbers in NZMS 260 is avoided.

The basic division of New Zealand records into 'N' and 'S' reflecting the island by island usage of site numbers in Polynesian archaeology will be retained.

A decision on how we are to adapt to the new maps is not urgent at present, but with the amount of work invested in the scheme, and its present and undoubted future research and site protection value, it is vital that the change we make is well considered. It is hoped that the above is a basis for further discussion and that such discussion will be constructive and pragmatic, and recognise that this is a matter over which we cannot afford to be divisive.