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AERIAL PHOTOGRAPHY ON HAMLIN'S HILL

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Hamlin's Hill, N42/137, has seen several seasons of excavations over the last dozen years (see Nichol, 1980 for references), but with the exception of a map of the site published in Davidson's (1970) report, all the work has concentrated on a single area on the "lower knoll". The area is now reasonably well known, but it is overlooked by the main occupation site, and is probably subsidiary to it. There are other good reasons for looking at the site as a whole too, as there is a possibility of a major road being built across the ridge close to the site, and a subdivision has been proposed for the hill itself.

Thanks to a grant from the Skinner Fund, it has been possible to obtain aerial photographs of the hill and its surrounding (Plates 1-3). These were taken by Godfrey Boehnke, of the Auckland University Audio-Visual Department. To take the photographs, Godfrey hung on a strap out of the door of a high-winged light aircraft, into a bright mid-winter afternoon. This caused a good deal of anxiety, on my part at any rate, but the results seem to be very worthwhile, as several features of the occupation on the hill that were not well known can now be easily seen.

The most obvious of these is an extensive area of European ploughing, on a variety of systems. Most of the ploughing was done by 'lands', narrow rectangular strips which are ploughed backwards and forwards. The characteristic trace of this pattern is a series of alternating ridges and furrows (Walton, 1982). I was excavating on the lower knoll when I first saw some of these across the stream, and it was these marks, which I believed were prehistoric field systems, that started me thinking about aerial photography. Tony Walton (1982:129) is quite right, however; they are undoubtedly plough-marks. It seems that this area has been ploughed twice, both times up and down the slope (Plate 1), but it is probable that only one event is represented. By contrast, the paddock next to the motorway has also been ploughed twice, but at right angles instead (Plate 2). This change is probably due to the terrain (ibid:128). Other areas have been ploughed so many times that it is impossible to sort out the traces.

As Walton points out, European ploughing is a possibility that must come into consideration whenever faint lines like this are encountered, and they are probably common on flat land as well as on slopes. The lines are almost always hard to see, but when slopes are viewed from adjacent flats, or vice versa, the observer

can get what amounts to an oblique aerial view. Walton (1982:127) sees site surveyors' preconceptions as responsible for the recorded distribution of these lines, but this factor of perspective is probably at least as important.

Fortunately there is one way of distinguishing between slope drains and the furrows between lands. This is simply that ridges should be visible between each pair of furrows, though the observer should be careful to look at the features from the right direction. The clearest sign of these ridges is usually the shadow they throw in oblique light, but the ridge itself might hide the shadow from view. This is what happened when I had a look at some very long straight lines on steep and stony ground at Pouerua, where Doug Sutton is working. All that could be seen at the time were the furrows, but a slide taken from the same place but at a different time of day shows the ridges very clearly.

A couple of the paddocks on Hamlin's Hill have been ploughed 'round and round'. In this case the most characteristic feature is the pattern of furrows where the uneven surface caused by the right-angled turns is cleaned up. This is done by ploughing along the lines of disturbance, i.e. diagonally from the corners of the paddock. In a more or less square paddock this produces a cruciform pattern. In rectangular paddocks the result is a Y shape at each end (Plate 3).

It might be that features like this on gently sloping ground could be very easily mistaken for converging drains. Probably the best way of checking would be to look for the diverging pair further down the slope.

Ploughing, both by lands and round and round, continues to the present, but the cart-tracks visible on the photographs, plainly superimposed on the ploughing, may indicate that some of the ploughing is quite early.

The other features of interest showing up on the photographs both relate to occupations preceding the ploughing. One of these is the hummocky area below the eastern end of the main ridge (Plate 3), which looks to me to be a much better candidate for a prehistoric garden. Hamlin's Hill has never impressed me as being well placed for exploiting the volcanic soils of the isthmus, which are of course closer to the pa on the volcanic cones that gave rise to them. The implication is that the prehistoric occupation on Hamlin's Hill, with its many pits, ought to be related to the use of local soils, and certainly the soil in the hummocky area is very deep, as Bruce McFadgen and I found when we tested there a couple of years ago. It has to be admitted, however, that the ploughing in this area makes interpretation difficult.

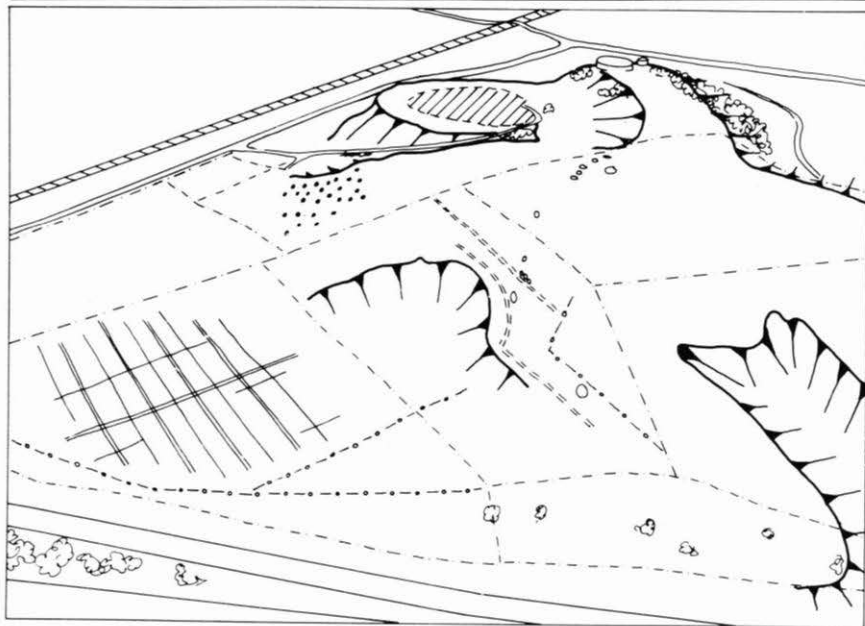
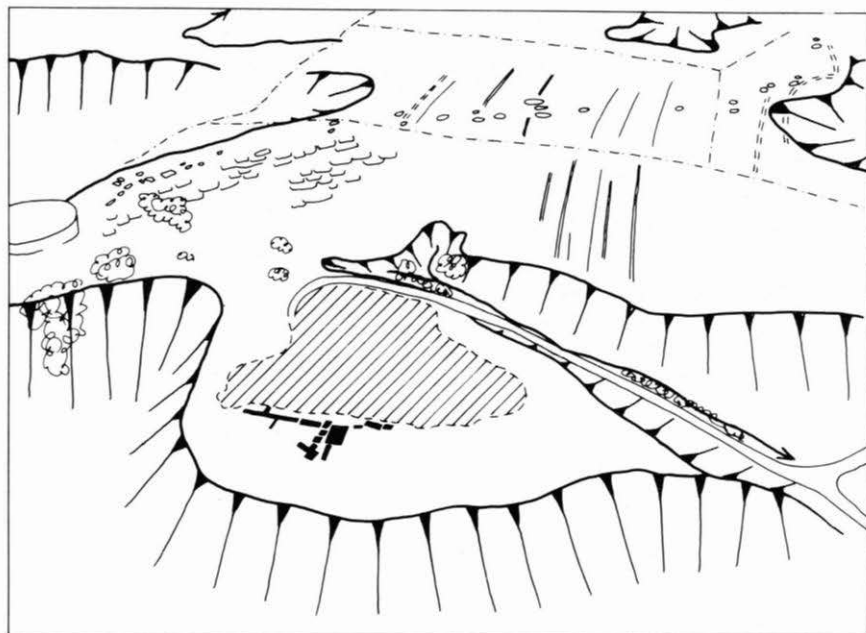
Also damaged by ploughing is the eastern end of the occupation site itself, and the terraces and shallower pits have naturally been more seriously affected. As a result the details of the layout of that part of the site have been largely obscured, but there are still sufficient traces to indicate that the settlement extended along the ridge as far as the present cutting for the motorway. That makes it at least 600 m long. More than anything else this reminds me of the description of the villages "about a mile long and half a mile broad" (Cruise, quoted by Groube, 1964:125), beside the Tamaki River, and it is interesting, to say the least, that the river is visible from the hills.

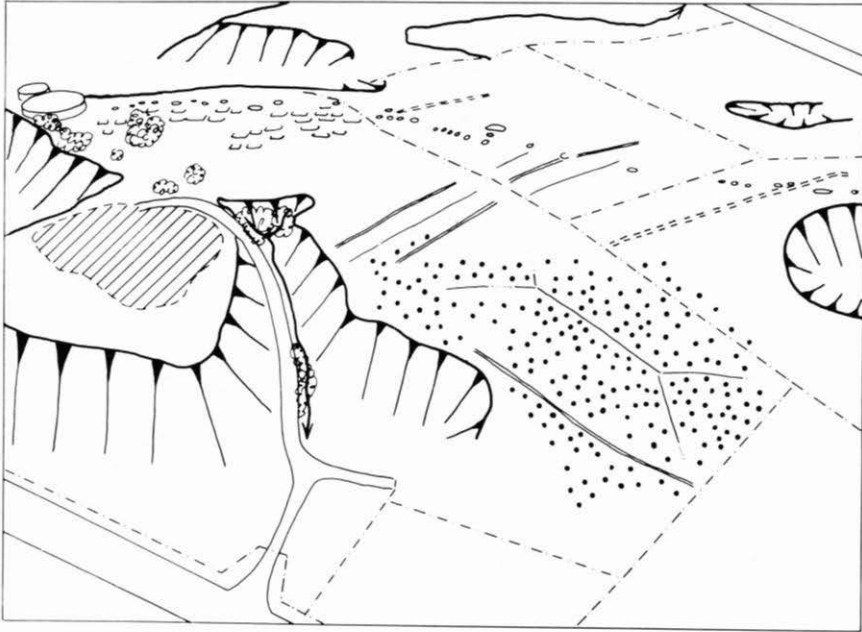
Most clearly visible are the deeper pits, an intermittent row of which lines the southern edge of the whole length of the occupation site. At the eastern end of the row, beyond the ploughed area, examination on the ground shows these pits to have been cut into terraces of the village. That makes them quite late in the sequence, and though it may be that they are just a late style of storage pit, there is an alternative explanation: they might be rifle pits covering an approach from the south. (At the moment the only evidence for guns on the site is a .577 bullet, found in excavations on the lower knoll.)

A point worth considering here is that, when taken together with the village or villages along the Tamaki River, just about the entire width of the isthmus could have been controlled by what must have been a practically continuous settlement.

The suggestion is sometimes made that Hamlin's Hill controls the portage across the isthmus, but that seems unlikely, because the portage proper is the other side of Mt Richmond and the McLennan Hills to the south. With a change of orientation, however, Hamlin's Hill can again be seen as having considerable strategic importance, as it controls part of the north-south route through the isthmus by land.

Some of the interpretations offered here need to be tested by excavation, but I cannot help thinking that it would be a tragedy if this site was to be lost. As well as having Auckland's largest open settlement presently identifiable on the ground, Hamlin's Hill is a unique area, where an attractive portion of the early rural landscape has survived within the largest urban area in New Zealand.





- - - Fenceline
 ——— Road
 ▨▨▨ Railway
 ▧▧▧ Quarry
 ▲ Excavation
 ○ Water tank

——— Ploughing ridge
 ——— Ploughing furrow
 - - - Old fenceline
 = = = Cart track
 ●●● Hummocky area
 ○○ Pits/terraces

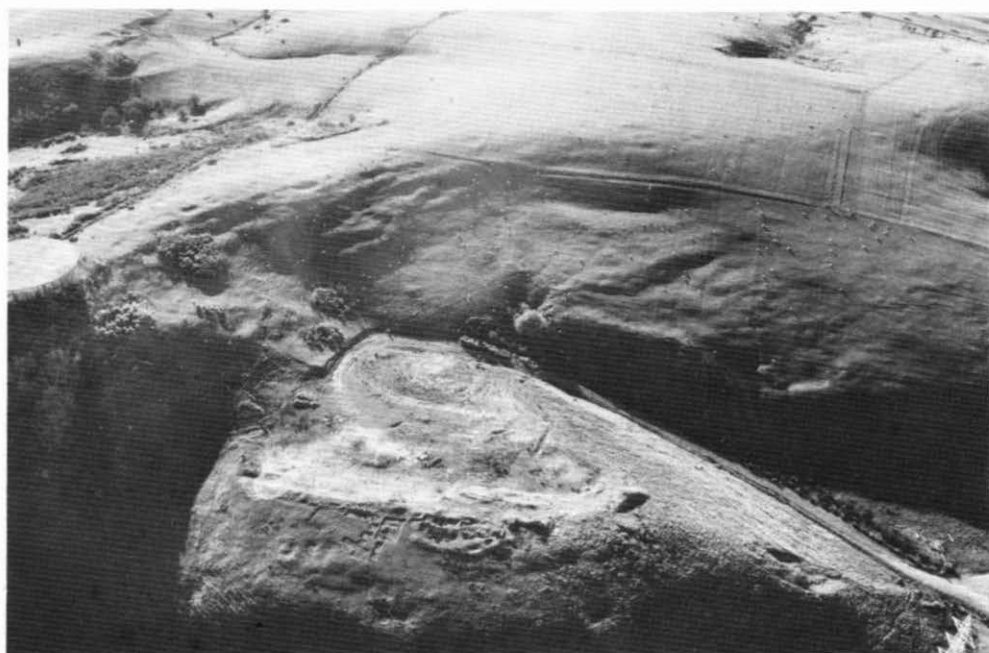
▬▬ Steep slope
 → Stream
 ○○ Trees

Acknowledgements

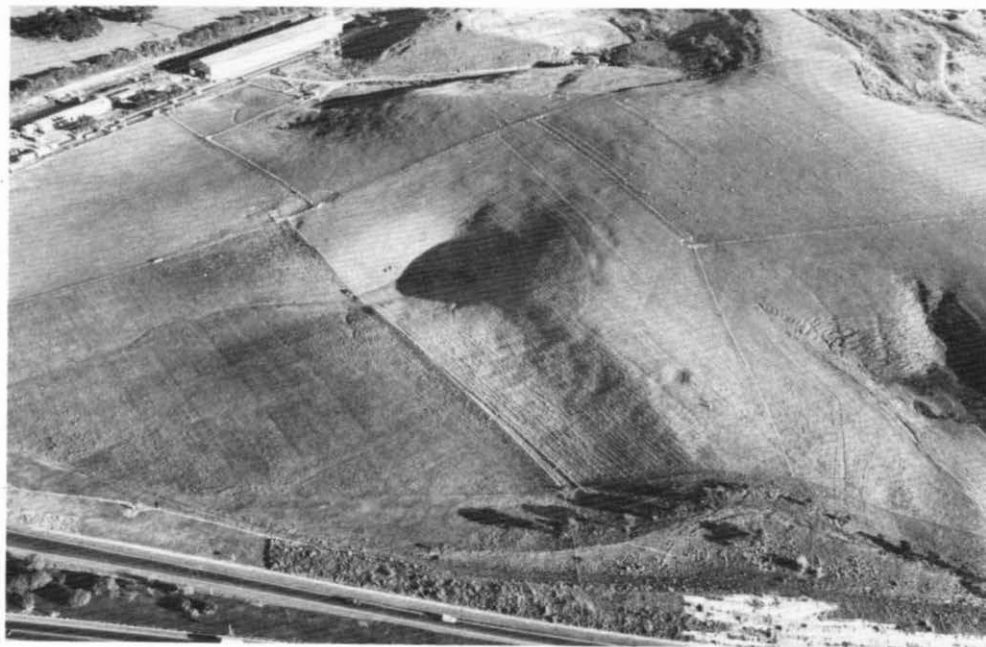
I want to thank Godfrey Boehnke, who did so much for this project, and I hope that this report does justice to the quality of his photography. I am also grateful to Doug Sutton and Nigel Prickett, for some very informative discussions of European ploughing methods, and to Caroline Phillips, who prepared the interpretive illustrations at short notice. Finally I have to thank the Skinner Fund, for providing the money that made this photography possible.

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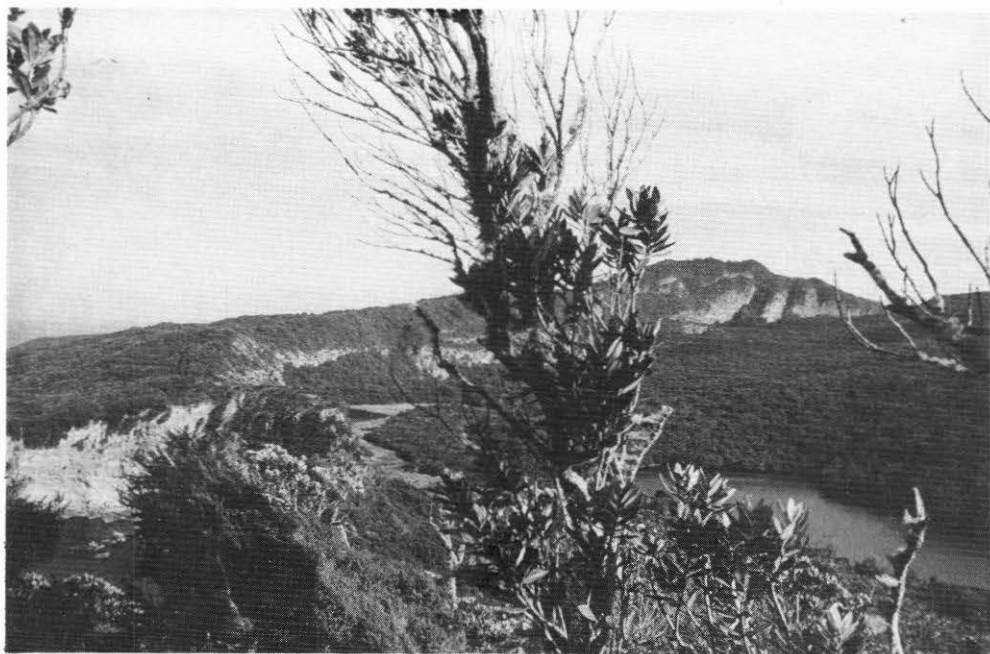
HAMLIN'S HILL Plate 1.



HAMLIN'S HILL Plate 2.



HAMLIN'S HILL Plate 3.



MAYOR ISLAND Plate 1. View from top of Taumou pa over Green and Blue Lakes.