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LAYOUT PLANS OF A **SUNCLOCK** (HUMAN SUNDIAL), AT  
THE AUCKLAND REGIONAL BOTANIC GARDENS.

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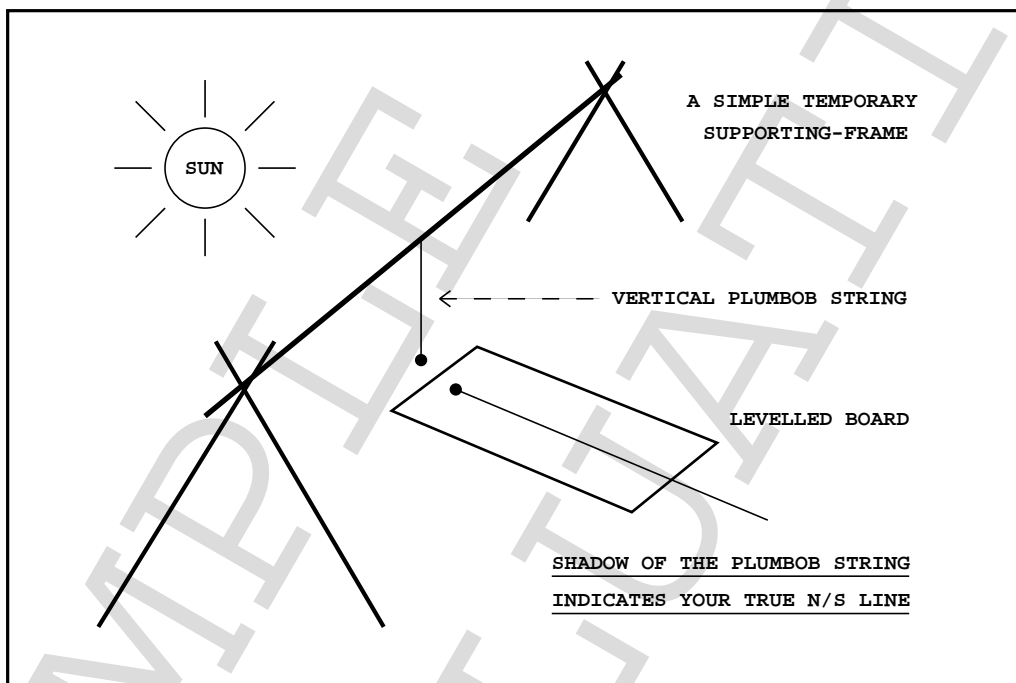
LAT. 37.02 DEG.S. LONG. 174.89 DEG.E.

THESE PLANS ARE CALCULATED FOR **YOUR** POSITION IN THE TIME-ZONE, INCLUDING  
AN APPROPRIATE 'CORRECTION-FACTOR' AMOUNTING TO: **+20.44 MINS.**

PLEASE NOTE THAT ALL NECESSARY MEASUREMENTS ARE GIVEN IN METRES

- (1). FIRST CHOOSE THE SITE FOR YOUR **SUNCLOCK**. THIS SHOULD BE A **LEVEL** AREA, PLUS LOCATED WITHIN A REASONABLY SUNNY AND 'SHADE-FREE' POSITION.
- (2). IT IS NOW IMPORTANT TO DETERMINE THE **TRUE** NORTH/SOUTH DIRECTION THROUGH THE CENTRE OF YOUR CHOSEN AREA. THIS IS **VITAL** TO ACCURATE TIME-KEEPING; (each Degree of error will make the Clock read about 5 minutes fast or slow) - AND A MAGNETIC COMPASS IS NOT ACCURATE ENOUGH FOR THIS.

**WE RECOMMEND THAT YOU USE THE FOLLOWING METHOD, (AS ILLUSTRATED HERE):-**



- (a). WAIT PATIENTLY FOR A SUNNY DAY, BUT WHICH IS ALSO NOT VERY WINDY.
  - (b). IN THE MORNING, PLACE A FLAT PIECE OF 'PLYWOOD' (OR ALTERNATIVELY STIFF CARDBOARD) OVER THE CENTRE OF YOUR CHOSEN AREA, AND THEN USE A SPIRIT-LEVEL, TO CHECK THAT THE BOARD IS **TRULY HORIZONTAL** IN ALL DIRECTIONS - YOU CAN LEVEL IT SLIGHTLY USING WEDGES, IF NECESSARY.
  - (c). WITH ANY SIMPLE SUPPORT, SUSPEND A 'PLUMBOB' OR A WEIGHTED STRING ABOVE (BUT ALSO A LITTLE TOWARDS APPROXIMATE NORTH OF) YOUR BOARD.
  - (d). USING THE 'CALENDAR' TABLE (see next page), LOOK-UP THE TIME WHEN THE SUN WILL BE DUE NORTH, AT YOUR LOCATION, FOR THE DATE ON WHICH YOU ARE SETTING-OUT YOUR CLOCK. (This is shown in 24-hour format).
  - (e). AT **EXACTLY** THAT TIME, DRAW A LINE ON YOUR BOARD, CORRESPONDING TO THE SHADOW OF THE PLUMBOB'S STRING - **THAT IS THE NORTH/SOUTH LINE.**
  - (f). BEFORE REMOVING YOUR BOARD, MARK THIS DIRECTION BY PEGGING A TAUT STRING ACROSS THE SITE, EXACTLY OVER THE LINE THAT YOU HAVE DRAWN.
- (3). NOW PEG A SIMILAR STRING ACROSS YOUR SITE, **AT EXACTLY RIGHT-ANGLES TO THE FIRST** (i.e. EAST/WEST), ENSURING THAT THE CROSS-OVER CORRESPONDS TO A POINT FROM WHICH CHECK-DISTANCES WILL BE MEASURED. (**SEE THE ENLARGED DIAGRAM, SHOWN ON PAGE 6, AND PLEASE NOTE THAT THIS POINT IS POSITIONED SLIGHTLY TOWARDS THE SOUTHERN END OF YOUR 'DATE-SCALE', NOT CENTRALLY.**)