

RESTRICTED

**SECTION 145 – LATERITE**

3106. Laterite is a porous residual rock, from which soluble constituents have been leached by weathering, leaving only insoluble oxides of iron and aluminium. Colour varies between red and grey, depending on the proportion of the two elements. It occurs in some tropical areas, notably in Burma, Madras, and Central Africa, and is commonly found as a hard surface crust overlying a softer material, which hardens on exposure to air and moisture.



Figure 31-3: Laterite

3107. The surface crust can often be quarried by hand but, if it is much weathered, blasting may be necessary. The soft, unweathered material is readily dug, and it can conveniently be shaped as soling or building blocks. These should be thoroughly weathered before use.

3108. Both laterite rock and lateritic soils form excellent bases.

3109. The hard surface rock is best used as 2-in or 3-in aggregate, the final surface being formed by rolling in lateritic gravel. Broken laterite rock and lateritic gravel can be used for concrete aggregate using one part cement to ten parts aggregate (total). Laterite concrete sets more rapidly than normal concrete, but it is more porous.

3110. Laterite soils should be laid on the moist side of OMC, and should be thoroughly compacted. Pneumatic tyred rollers usually give the best results. Compacted laterite soil has a CBR value normally greater than 50 percent and sometimes much higher.

3111. Laterite surfaces tend to ravel in dry weather. In wet weather they become slippery, and are liable to erosion. Bituminous surface dressing is advisable.