

closely observing the alignment of the fragments of wall still traceable here and there it was possible approximately to determine the area once enclosed, an oblong about 540 feet from north to south and about 340 feet across. The circumvallation could best be followed on the north and west; on the latter face, of which Fig. 81 shows the northern portion, the line of the wall could be measured for a distance of about 440 feet by the continuous chain of fragments which the process of erosion had not yet destroyed. On the east face the fragments of wall were much fewer, though extending a little further south than on the opposite face; the wall to the south had practically disappeared altogether. In view of the observations subsequently made as to the effect of wind erosion on the walled enclosures of sites surveyed further east, at 'Lou-lan', An-hsi, Ch'iao-tzū, etc., I think it safe to conclude from the above conditions that the destructive force of the wind and wind-driven sand must here have made itself felt with particular intensity and continuity from the north-east.

Ancient circumvallation north-east of Stūpa.

Wind erosion had evidently first breached the outer walls and then scoured the remains of whatever buildings the interior once contained. In the south-east corner of the walled area remains of massive walls seemed to indicate the former existence of a separate enclosure, measuring about 170 feet from east to west and 110 feet across. Whether these interior walls belonged to a large set of quarters as found in E. III or to a kind of citadel could no longer be ascertained. The only other structural remains traceable in the interior consisted of a small enclosure of which some remnants of the wall survived close to the highest fragment of the eastern wall face, seen in Fig. 83. It was significant that what had helped to protect them was a layer of consolidated sheep-dung, the relic of a later period when, perhaps, the least ruined structure within the abandoned 'old town' had served as a shelter for herdsmen. Elsewhere the ground within, where not covered by broad dunes, showed nothing but small pottery débris, mostly black or dark brown.

Effects of wind erosion.

The enclosing walls were formed at their base by a rampart of stamped clay, about thirty to thirty-five feet thick. This rampart appeared to have borne a superstructure built with courses of large sun-dried bricks set in thick layers of clay, as seen in Fig. 83. But there was little regularity in the construction, or else repairs had been frequent. Usually the courses of bricks were single, but in some places two or three successive courses had been used in the same way. Frequently the place of proper bricks was taken by shapeless lumps of fine clay. What is important to note is that the bricks throughout showed a fairly uniform size, 19 to 20 inches by 13 to 14, with a thickness of $3\frac{1}{2}$ to 4 inches. The same pattern was found in the ruins E. VI, VII, which were proved by epigraphical finds to belong to the earlier settlement, as well as in the southernmost ruins to be described below. But the bricks used in the buildings and the wall parapet of the T'ang fort differed distinctly in size.²

Construction of enclosing walls.

Owing to the lesser or greater effect of wind erosion in different positions the height of the actual remains of the wall above the pottery-strewn level of the interior varied greatly, from about ten to twenty-six feet. With the high tamarisk-cones rising above the north front of the circumvallation and the broad dunes filling a considerable portion of the interior, the whole made up a weird picture of desolation which even the openness of the vistas across the bare eroded areas all round did not help to relieve. For excavation there seemed no scope left here. But that these ruins, like those described south of the T'ang fort, went back to the period of the earlier settlement and were among those 'Tu-huo-lo towns' which Hsüan-tsang had found completely deserted, I could not reasonably doubt. Apart from the very definite indication furnished by the size of the bricks, there was striking evidence in the condition of the walls. Though much more massive in construction than those of the T'ang fort, their decay had advanced so much further as to be explicable only on

Remains of earlier town.

² Cf. *Ancient Khotan*, i. pp. 431, 434.