

of construction exactly, as time could not be spared to make a regular cutting through the massive rampart.

Materials
used in
wall con-
struction.

The materials and method employed in the construction of the fort wall are clearly of antiquarian interest. The method, even in the absence of any other proof, would suffice to make it highly probable that the erection of the fort took place at a period when the influence of Chinese engineering practice prevailed in the Lop region. From the materials used it may be concluded with certainty that there stood in the close vicinity of the site an extensive jungle belt, containing wild poplars big and small, such as is to be seen to-day by the side of every river-bed in the Tārīm basin that contains running water and does not immediately adjoin a terminal basin holding salt or brackish water.¹³ The neighbourhood of the ancient dried-up river-bed that we passed south of the fort fully accords with this belief, and so also does the use made in the construction of the wall of clay lumps such as could most easily be obtained from ground kept moist by periodical inundation. The abundance of Toghrak timber in the immediate vicinity of this fort may explain the fact that its walls were far more solidly constructed than those of the circumvallation of the ruined station L.A. explored in 1906, and have consequently survived in far better condition. However that may be, it is noteworthy that the corners of the walled enclosures of both L.K. and L.A. are orientated towards the cardinal points.

Construc-
tion of
ancient
gateway.

Another indication of antiquarian interest was furnished by the gateway, which was found to pass through the north-eastern face of the circumvallation at a point about a hundred feet from the eastern corner. The top of the gateway, together with that of the adjoining portions of the wall, had been destroyed by erosion; but from what had survived of the timber framework, the plan and arrangement of the gate could be restored with ease (see Pl. 10). The sides of the gate were revetted by means of nine posts on each side, set in two massive foundation beams still *in situ* and each measuring 22 feet. A cross-beam, also still in position, joined these two towards the entrance and showed that the width of the passage had been slightly over 10 feet. Of the side posts, seven still stood upright on the north side, and the dowels at the top of one or two that retained their original lengths showed that the gate passage had a height of 10 feet. The gate was closed towards the outer end of the passage by a massive wooden door of two leaves, each 5 feet wide. One of these was lying on the ground, practically intact, with its boards, 3 inches thick, secured by stout cross-joints. The cross-beam previously mentioned showed the sockets that once held the door jambs. The adjoining posts had holes into which fitted the cross-bar securing the folds when closed. In dimensions and arrangement the gateway showed close resemblance to that which led through the rampart of the defensive quadrangle at the Kara-dong Site, as excavated in 1901.¹⁴ My renewed exploration of this ruin in 1908 has proved that it belonged approximately to the period when the Niya and Lou-lan sites were abandoned.¹⁵

Debris
remains
from large
structure.

Within the walled enclosure, first inspection had shown me an area, III, near the middle of the north-eastern wall, of about 130 feet by 100, covered with the heavy timber debris of completely eroded structures. To the south of it there were the remains of two small groups of timber and wattle-built quarters, stretching from north-east to south-west (I in Pl. 10), and partially filled with drift-sand. Of the larger structures at III, nothing remained but massive beams and posts belonging to the wall foundations and framework, thrown down in utter confusion, as Fig. 133 shows. All this timber, including pieces over 30 feet in length, was shrivelled and fissured by centuries of exposure. As the soil below had been carried off by erosion to a considerable depth below the original ground level, it was impossible either to trace the outlines of the structural arrangement

¹³ See *Serindia*, i. p. 355; iii. pp. 1239, 1296 n. 1.

¹⁴ Cf. *Ancient Khotan*, i. p. 447, Fig. 53; ii. Pl. XXXVIII.

¹⁵ See *Serindia*, iii. p. 1242.