MEHRDAD SHOKOOHY and NATALIE H. SHOKOOHY:

Tughluqabad: A Paradigm for Indo-Islamic Urban Planning and Its Architectural Components.

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The imposing ruins of the great city of Tughluqabad survive to this day as the earliest and most substantial evidence of urban planning and architecture from the period of the Delhi sultanate (end of the twelfth to the early sixteenth centuries). The importance of this site is hard to overestimate since it came to influence almost all subsequent Islamic architectural practice in India. Capital of Sultān Ghiyāth al-dīn, who founded it between 1320 and 1325, Tughluqabad served as a prototype for urban planning and architectural engineering. Until recently, however, scholars of Indian sultanate architecture have been hampered by the lack of an accurate description of Tughluqabad and its remains, much of which are now reduced to overgrown rubble, except for the imposing ramparts with which the city is surrounded. The well-known Shokoohy husband and wife team have once again demonstrated their expertise for architectural survey and follow-up analytical interpretation, underscored by meticulous historical research based on relevant Arabic and Persian sources. Their volume is brimming with meticulous descriptions and well presented visual materials that should prove a fruitful resource for students and scholars in the years to come. Though some of these data have already been presented in their articles that earlier appeared in the Bulletin – LVII (1994: 516–50), LXII (1999: 423–61) and LXVI (2003; 14–55) – this may be considered to be their final and authoritative report.

After outlining the history of their fieldwork at Tughluqabad, which began in 1986 and continued until 2004, the Shokoohys offer a general background to the fundaments of Hindu and Muslim town planning. Here they contrast the prescriptions to be found in indigenous Sanskrit texts, as expressed in the geometric plans of Indian cities, with the more pragmatic Persian-Islamic tradition in which cities tended to provide rulers and their troops with adequate safety, and therefore lacked a mathematical basis. That Tughluqabad belongs to the latter tradition is clear from its plan (given on p. 28). Laid out as an irregular quadrilateral, the city has a fort and citadel at its south-western corner that functioned as the ceremonial and residential headquarters of the sultan. Protected on all four sides by massive walls, Tughluqabad is entered through a number of well defended gateways on all four sides. To the south was a great artificial lake, now dried up, across which a causeway leads from the citadel to an island, on which the city's founder erected his own domed tomb. Following this introduction the authors review the historical sources for the construction of the city. They conclude that Tughluqabad served as the Delhi capital for merely four years, from 1321 until the death of its founder in 1325. After this the city declined, because Ghiyāth al-dīn's son and successor, Muhammad b. Tughluq, decided to abandon Tughluqabad, even though he returned there for short periods, constructing the adjoining citadel of Adilabad as an outflank of the city.

In the chapters that follow the Shokoohys provide a systematic and convincingly thorough examination of Tughluqabad's architectural features. First they consider the defences of the city by describing the construction of the fortification walls, provided with loopholes and strengthened by massive, part-circular bastions. They then

describe the layouts of the principal gateways and their associated bastions, courtyards, vaulted corridors and silos before proceeding to the citadel, the most heavily defended part of the city, which was provided with a mosque, reservoir, royal apartments and a domed pavilion known as the Jahān-nāma, raised on a stepped, pyramidal base. They also consider the "dungeons" and a royal escape route that led downwards and outwards through the ramparts. The authors next describe the fort on the western flank of the citadel, drawing attention to the masonry traces of a large ceremonial complex that was focused on a vast rectangular court of public audience with a vaulted $\bar{\imath}w\bar{a}n$ on the south, presumably for the sultan's throne. The authors point out that this vaulted feature represents a different type of throne room from the hizār-sutūn, or hall of one thousand columns, known to have been erected by Muḥammad b. Tughluq at his later capital of Jahanpanah, only a short distance away. The fort at Tughluqabad also contains a palace complex, complete with courtyards, apartments with interconnecting chambers, and an upper pavilion. Here the authors must be congratulated on their interpretive perseverance; without their photographs and explanatory diagrams these greatly deteriorated features would be virtually incomprehensible to most visitors.

The investigative techniques of the Shokoohys is nowhere better represented that in their treatment of the town of Tughluqabad. Combining a surface reconnaissance with an aerial photograph from 1946 they convincingly "recover" the overall plan of the town, complete with its processional street, shops and markets, water supply system, blocks of residential quarters and mansions with central courtyards. Here, too, stands the Jāmic mosque of the city, as well as another smaller mosque and a madrasa. Throughout, the authors present both the existing evidence as well as their imaginative architectural reconstructions, some utilizing computer graphics techniques.

The volume concludes with a comparison of the city with later sultanate urban examples, such as Ahmedabad (Gujarat), Chanderi (Madhya Pradesh) and Bidar (Karnataka). The authors then return to Tughlaqabad to describe the lake and its associated hydraulic features, including Ghiyāth al-dīn's island tomb, a monument familiar to architectural historians and comparatively well published. Since the outworks of Adilabad are the only part of the main city to have been described previously, in *Ancient India*, no. 1, 1946, 60–76, the Shokoohys reproduce this earlier report in full, with their comments, a new survey of the palace, photographs and additional notes. A more exhaustive treatment of Tughluqabad could hardly be imagined. It can only be hoped that this volume will serve as a model for comparable, painstaking explorations at other sultanate sites in India that still lack adequate documentation.

George Michell

ADAM HARDY:

The Temple Architecture of India.

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This attractively produced and profusely illustrated volume presents a highly individual contribution to an understanding of the stylistic evolution of the Indian temple. Hardy is a trained architect, and the drawings and schematic diagrams that he himself has prepared go a long way towards underscoring his argument. The author