

Tughlaqabad Fort: An Analysis and Review through Kautilya's Arthashastra

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Abstract: Tughlaqabad is the third fortified city among seven cities of Delhi, the foundation laid by Ghiyas - ud - din Tughlaq in 1321 - 1325 C. E. The fort lies on Arawali hill of ridge area surrounded by forest at the 7 km away rear side of Qutub Complex. The fort is a masterpiece of the medieval era's achievement of advanced engineering and architectural ingenuity. The fortified city was designed with a dual purpose to serve as a defensive stronghold against external invasions and function as the administrative Centre of the burgeoning Tughlaq dynasty. Tughlaqabad Fort exemplifies one of India's most formidable medieval fortifications constructed of cyclopean wall. Its strategic location and designed reflects principles of defence and fort and fortification features as discussed in Kautilya's Arthashastra and under category of vana - durga (forest fort). The fort leverages natural barriers, vegetation, and terrain for protection. (Shamasastri, 1915) This article analyses Tughlaqabad Fort's Architectural features, history, and significance through the lens of Kautilya's Arthashastra, The fort's sloping walls, bastions, and strategically positioned gates illustrate a sophisticated understanding of defence mechanisms, while its robust layout reflects a pragmatic approach to urban development. By analysing historical records, architectural remnants, and modern interpretations, this study highlights the fort's blend of illusion, strong hold, inverted cup like domes, fusion of archuate and trabeate spanning system and battered wall made most militaristic fort in Delhi by Giasuddin Tughlaq. Through this analysis, the research underscores Tughlaqabad Fort as a pioneering model of medieval military architecture and urban planning, offering valuable insights into Tughlaq's technological and engineering advancements based on Kautilya arthasatra.

Keywords: Parapet, Cyclopean wall, watchtowers, Citadel, Civic, Military, Ramp, Battery house, battered and Postern

1. Introduction

Tughlaqabad Fort is exciting to researchers, historians, and travellers. The Archaeological Survey of India is the nodal agency for the Conservation, Preservation, and Protection of the Tughlaqabad Fort. The Archaeological Survey of India has published numerous research reports in Indian Archaeology A Review, Ancient India, Purattava, and other literature from time to time. Recent work of Pal and M. B. Rajni work on spatial analysis of Tughlaq city Jahpanah using geospatial analysis.

Diptarka Datta worked conservation, rescue archaeology and heritage tourism of Tughlaqabad (Datta, n. d.) . Mandal sarmistha work on conservation of ridge area of Tughlaqabad. Variety of work published before and after independence in India on mediaeval architecture and Tughlaqabad fort different aspect. But none of them attempted the evolution, motivation, inspirational components of indigenous architectural principles inducted in Tughlaq fort architecture.



Figure 1: Important structures of Tughlaqabad Fort

The Arthashastra by Kautilya (also known as Vishnu Gupta/Chanakya), written around the 4th century B. C. E., provides comprehensive guidance on Statecraft, Economics, and Military strategies. In its discourse on fortifications,

Kautilya classifies forts into five type i. e Dhanva - durga (Desert fort), Jala - durga (Water fort), Giri - durga (Hill fort), *Manu durga* and Vana - durga (forest fort) (Shamasastri, 1915). Durga Sanivessa, Gram Sanivessa,

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Building material, techniques, and method find in Ancient literary sources (Ray, 1964).

The earliest settlement of Delhi was Indrapat of epic age of Mahabharata, and in Sanskrit it is term as Indraprastha, a tell on which the present Purana Qila stands, supposed to have been built by the Pandavas (*The Padma Purana, Part IX, 1956*) the site has been probe by archaeological evidence of old habitation, and potsherds of PGW and NBPW, types dating back to the 5th century BCE, as well as Kushana remains of the 1st and 2nd centuries C. E., have been revealed (*Ancient India, Vol - XI, 1955, 140, 144*). The section of Delhi seems to have been almost abandoned thereafter, for the next settlement dates from the 9th or 10th century C. E.,

the Tomar city now popularly known as Suraj Kund, (Tomar, 2019). There is a large numbers of Hydraulic structures and earthwork are still in existence as archaeological evidence. More extensive are the remains of the Chauhan Rajput town, dating probably from the 10th - century era, which existed immediately before the Muslim conquest. Tughlaqabad Fort, situated on Delhi's rocky terrain, an attempt to be analysed as a *vana - durga*. The fort, surrounded by dense vegetation and rugged geography, aligns with Kautilya's concept of Forest forts. This article examines Tughlaqabad Fort's design, construction, and historical context through the framework provided by the Arthashastra of Kautilya.



Figure 2: Topographical Map of Tughlaqabad Fort with Spatial Relation to the terrain

Tughlaqabad is the third city of Delhi of medieval times and the first fortified city of the medieval period. It was established by Ghiyas - ud - din Tughlaq, the founder of the Tughlaq dynasty, in 1321 - 1325 C. E. (Brown, 1942). It was intended as a massive fortified city and represents one of India's earliest examples of Islamic huge fort architecture.

Ghiyas - ud - Din Tughlaq made an intelligent attempt to construct the fort and selected the site in the forest area of the Arawali range with ample water resources available near the city and sound and easy building material sources. (Roy, 2015) The new city is slightly behind central Delhi, i. e. Qila Rai Pithora and Siri Fort.



Figure 3: Features of Forest Fort Tughlaqabad

Tughlaqabad Fort: Historical Context

Ghiyas - ud - din Tughlaq, the founder of the Tughlaq dynasty, commissioned Tughlaqabad Fort in 1321 C. E. as a defensive stronghold against Mongol invasions and as a statement of his authority. Encompassing an area of 6.5 km, the fort featured high walls, sloping defensive battered walls, and bastions designed to withstand prolonged sieges (Stephen, 1876) . Despite its strategic and architectural brilliance, the fort was abandoned sooner due to political conspiracy and water scarcity and political shifts in Delhi's power centres. The theory of water scarcity was propagated by historian but it was not factually correct. The geodetic survey available data and other sources of that time are not matched with this argument there were ample water resources available there numbers of lake and water reservoirs still existing and QGIS survey also probing that there is no problems of water. There are three steps well constructed inside the fort for royal and residents of the fort.



Figure 4: Layout of Tughlaqabad Fort



Figure 5: Green area still existing

Kautilya's Arthashastra and Forest Forts

Kautilya defines a vana - durga as a fortification surrounded by dense forests, rugged terrain, and natural barriers. Key features of a forest fort include:

- 1) Natural Barriers: Thick forests, rocky outcrops, or marshlands to hinder enemy advancement.
- 2) Camouflage and Concealment: Dense vegetation obscures the fort's visibility.
- 3) Resource Availability: Access to water, timber, and wildlife to sustain inhabitants during sieges.
- 4) Strategic Isolation: Remote location to reduce vulnerability to direct attacks.
- 5) Military Advantage: The use of terrain for defence and unique design of the Tughlaq parapet, battered wall, underground Golaghar, three - tiered bastion and use of quartzite stone colours camouflage the fort for enemies and animals.

These principles ensure the fort's resilience against invaders and highlight the role of geography in medieval military strategy.

Tughlaqabad Fort as a Forest Fort

1) Geographical Setting and Natural Barriers

Tughlaqabad Fort is built on rugged terrain with steep slopes and surrounded by natural vegetation. During its prime, the area was covered by forests, which provided a natural barrier against invading armies. The elevated location of the fort offered a vantage point to detect and repel approaching enemies. Tughlaqabad Fort is surrounded by thick forest in the Aravalli range, away from the Qutub complex. The terrain of Tughlaqabad fort is a seasonal water pool formation that acts as a paprika during the rainy season around the fort.

2) Camouflage and Concealment

The color of the Building material, i. e. quartzite color, and the type of vegetation available camouflage with that, and it was hardly visible from outside. The fort's integration with the natural landscape reflects Kautilya's emphasis on concealment. Its massive stone walls blend with the surrounding rocky outcrops, while the vegetation around the fort adds an extra layer of invisibility.

3) Resource Availability

The Number of water reservoirs surrounding the Tughlaqabad fort and numerous seasonal lakes were

available. However, due to the pressure of development, rock quarrying and illegal encroachment have damaged most water resources. The fort's water reservoirs and artificial tanks ensured water supply, while nearby forests provided timber and sustenance. These features align with Kautilya's recommendation for self - sufficient fortifications (Shamasastri, 1915).

4) Strategic Isolation

Tughlaqabad Fort's location ensured its strategic isolation from the densely populated areas of medieval Delhi. This isolation minimized the risk of internal threats and maintained t...

Tughlaqabad Fort as a Forest Fort: An Analysis Based on Kautilya's Arthashastra

Tughlaqabad was constructed primarily for defensive purposes, reflecting the insecurity of that era. It was built on a rocky outcrop and enclosed a space surrounded by a four-mile wall of impressive construction. It was destined for a short life of four years and had never been inhabited. (Breese, 1975)



Figure 6: Encroachment at Tughlaqabad Fort

The fort was constructed within Four years, a very short period. Ghiyas - ud - din was assassinated by his son Mohammed Tughlaq, who first uninhibited the city to go south, then, on his reoccurrence, settled down in the Siri - Lal Kot area. He built walls to link these two and named the place Jahapanah. The Islamic rule that covered the plain of Delhi with its buildings is seven, in addition to the Slaves, the Khiljis, the Tughlaqs, the Sayyids, the Lodis, and the Mughals, the Afghan house of Sur. Among them, Tughlaq Architecture is executed knowledgeably.

Tughlaq built three cities - First, Tughlaqabad, which was safe and defensible against Mongols; Second, Jahanpanah the World, " which joined Old Delhi and Siri; and Third, Firozabad, which probably consisted of little more than a palace removed from the main centre of Population. (Kumar, 2011)

Rise and Fall of Ghiyas - ud - din

Ghiyas - ud - Din Tughluq, Governor of Debalpur, having overthrown the previous emperor, ascended the throne of

Delhi in 1320 C. E. and founded the third Turkish dynasty. The transitory successors of Ala - ud - din cossetted in an orgy of blood and debauchery, and the acme was reached when they saw the imperial throne occupied by a low - caste Hindu of the revolting character. (Nath, 1978) They recalled a trusted general from his outpost on the frontier and proclaimed him emperor under Ghiyas - ud - din Tughlaq. Ghiyas - ud - din's first and last work was in the city of Tughlaqabad. The fort comprises the construction and the batter of walls and bastions, forcing out the lower stones, use of a cyclopean wall, and large numbers of secret passages. After four years of rule, the emperor was murdered by the intrigues, it is asserted, of his son and that mysterious member of a priestly clan, Nizam - ud - din - Auliya, whose tomb became a venerated shrine clustered about by those of princes and princesses.

Tughlaqabad Fort

Ghiyas - ud - din Tughluq carefully selected a site approximately 7 km. to the east of Qila Rai Pithora, right away subsequently his overthrown of the converted Hindu

Nassir - al - Din in 720/1320 C. E, for the building of his capital Tughluqabad. (Aniruddha Ray, 2019). Massive stone wall construction, approximately 10 - 15 meters high, with 52 strategic gateways. Now a day only 13 gateways exist. Battered walls are unique Tughlaq architectural features designed to repel attackers. The fort has a multi - layered fortification wall. It has a layer fortification wall, i. e. citadel, middle, and lower town. The common features of Tughlaq architecture are heavy and massive. Thick and battered or sloping walls, squinch arches, triangular pendentives for supporting domes, battlemented necking and cresting, multi - domed roofs, and tapering minaret - like buttresses or supports at the external angles of the building. Some features of the earlier period such as the pointed arch, spear - head fringe decoration, etc., are still there, but not as a rule; a lintel, with or without brackets, is put across the lower part of the arch of the entrance, thus combining two opposed systems, the trabeate and the arcuate. This was originally meant, in all probability, to support stone traceries in the Arch opening of the entrance. A remarkable feature of the buildings of this period is their fine proportions, and if they do not possess qualities of charm and elegance, they are expressive of strength and virility.

The first medieval city had a fortification wall, now it is in a good state of preservation under possession of the Archaeological Survey of India, and the rest part of the fort land is encroached. Encroachment is part and partial of the structure under threat of disappearance.

The outer fortification walls run around the city, the palace confines, and the citadel, following the contours of the rocky crag of the site; on the north, east, and west, where the falls are less precipitous, they are garrisoned by a deep ditch, and on the south by a lake, flooded in rainy seasons. (Singh, 2016) These walls, as well as those dividing the three areas, are built of enormous stones, some 300 centimetres long and over and up to 20 centimetres high. The natural rocky strata of the site are dressed to match up to the base of the cyclopean wall, where the wall, including the outer gallery, and their thickness of up to 10 meters. The height of the wall in the fort varies according to terrain from 10 meters to 34 meters high at Bijay mandala at the citadel. There are large numbers of bastions were added at regular intervals at the fortification wall. It strengthened the fortification wall as well as used as a watch tower to keep vigil on the entire fort. Large numbers of strategic gateways were constructed according to the needs of their security aspects. Three tiers of the defensive system carried around the fortification walls and tiers bastions, the lowest tier from an external passage, the next, higher up, from another passage/ ramp for the supply of batteries, and the 3rd tier from the battlements on top of the wall. Due to the heavy nature of the building material i. e. Cyclopean wall used in rubble quartzite stone masonry much of the internal wall of the second tier passage has been torn away due to bulging.

The ramparts of each of the first and third levels are penetrated with two rows of loopholes, the lower ones dipped steeply down from inside to outside and the upper row slightly dipped; the loopholes from the galleries are

moderately wide; they are 0.16 meters. Extensive by 1.2 meters. High and parallel all the way through.

Citadel

In the citadel, a stairway that is disguised by a stone door runs down from a cellar inside a structure that looks to have been a donjon or a chalet to a postern that opens out at the base of the south wall. The rocks below conceal the exit. Many of the entrances have lintels and corbels for heads, and some even seem to have arched heads. Numerous circular chambers, each 8 meters in diameter and 10 meters deep, were dug out of the rock within each of the city's gateways. These chambers were most likely used to store grain and other edibles. Wells and reservoirs provided the water supply, and the walls were probably constructed using stone from a sizable reservoir that had been dug out of the rock inside the palace grounds. From the south gate of the palace precincts, a bridge which was previously fortified leads to Ghiyas - ud - din Tughluq's mausoleum, which is situated in the lake. This outwork, which includes a tall square tomb with worn sides, a paved walkway around the tomb, an outer defensive wall, a food storage room, and a well. This is the second fortress type tomb and first one is Sultangarhi tomb. The Ghiyas - ud - din tomb is in fair state of preservation.

Architectural Features

The Tughlaqabad Fort is an early example of Indo - Islamic defensive architecture built during the reign of the Tughlaq dynasty. It is constructed of massive stone blocks and showcases a blend of strategic planning and rugged aesthetics, underscoring its primary purpose as a defensive stronghold. The fort's walls, which rise to 10 - 15 meters in height and stretch over six kilometers, are at definite interval strengthen with bastions and tapering effect of bastions added strength against sieges. (Prakash, 2012) Its battlements is trilithon type parapets and central piece of stone wedge shape designed to provide vantage points for archers and soldiers, allowing for optimal defence.

Its spatial design incorporates municipal and military areas. The citadel, which houses the royal palace and administrative structures; the residential area for the general public; and a meticulously built defensive sector with watchtowers and well - positioned gates make up the fort's three main sections. To resist assaults, the fort's entrances, like the Ghiyas - ud - din Gate, are elaborately planned with arches that are pointed and flanking bastions. These gates lead to a labyrinth of passageways and courtyards, reflecting a meticulous understanding of spatial organization. The gateway is opened using a trabeate system.

The fort's architecture also incorporates innovative drainage systems, with stone channels and reservoirs designed to collect rainwater, ensuring a sustainable water supply during prolonged sieges. Within the premises, the Bijai Mandal, a raised platform, offers panoramic views of the surrounding landscape, highlighting the fort's strategic location atop a rocky outcrop.

Ghiyas - Ud - Din Tomb

The tomb of Ghiyas al - Din is located in the Tughlaqabad Fort, which was once an artificial lake and connected to the citadel by a defended passageway built on arches. In Kautilya's Arthashastra, the fortification was analysed as a forest fort located south of the city. A bund was created to hold back the lake's waters, and it was connected to Tughlaqabad on the southeast by a causeway (Aniruddha Ray, 2019). It was constructed on a pentagonal plan enclosed by a fortress wall and isolated in what was then a large artificial lake, save for a causeway that joins it to the southern side of Tughlaqabad. Its plain, massive outline and battering walls foretell the character of the buildings of his successors. Its outer wall is finished with ashlar masonry, and for the first time, it uses inlay work of marble on red sandstone. It's me as having been clad by marble. The tomb has been surrounded by a large artificial lake, save for a causeway that joins it to the southern side of Tughlaqabad. (Sharma, 2020)

2. Current Status

Tughlaqabad is now in ruins but remains an important archaeological site. It offers insights into medieval urban planning and military architecture based on Kautilya's Arthashastra, such as Forest Fort. Tughlaqabad Fort, viewed through the lens of Kautilya's Arthashastra, exemplifies the principles of a vana - durga. Its strategic use of natural barriers, resource management, and military architecture highlights the enduring relevance of Kautilya's treatise. While abandoned today, the fort remains a testament to medieval Indian ingenuity in integrating geography with statecraft.

Future research on Tughlaqabad Fort could explore its ecological and cultural significance, offering insights into the sustainability of ancient urban planning. Studying such historical sites through ancient texts like the Arthashastra deepens our understanding of India's rich architectural and strategic heritage.

If you're visiting, the area provides a foretaste of Delhi's rich historical fabric and is a must - see for history enthusiasts.

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