RESTORATION OF NALDURG FORT

UNITY MULTICONS PVT LTD

Under MAHARASHTRA VAIBHAV SCHEME WITH
DIRECTORATE OF ARCHAEOLOGY AND MUSEUMS, MUMBAI
Naldurga Fort, Osmanabad

Restoration Proposal

Naldurga fort_
History and Economic Influence
Historic and Economic Influence:

Forts in the medieval period in Peninsular India were essentially defensive structures girding a settlement or a town. Their location gave the defender a strategic advantage over his adversary, especially if they were constructed on hills with steep slopes. In the case of land forts (also called Buikot in Maharashtra), sturdy walls and massive bastions, along with a moat girding its circumference was the preferred method of defense. The concept of the fort as a key element of defense held its own well into the twentieth century, especially if it commanded the countryside from a great height.

The introduction of gunpowder and the cannon in the late 15th century CE played a key role in modifying the architecture of forts. The first recorded use of gunpowder in the Deccan was when Khwaja Mahmud Jilani (also known as Mahmud Gawan), the chief minister in the court of the Bahamani sultan Muhammad III, used it to undermine the fort walls during his campaign against the Vijayanagar kings in Belgaum.

The fort’s beginnings are quite obscure. It is believed that the structure was constructed by one Nalaraja, after whom the fort is named. Any evidence of the same in texts or inscriptions are not found. Neither is the fort mentioned in the chronicles detailing Muhammad bin Tughluq’s campaigns in the Deccan. There are reasons to believe that there was an existing fortified structure whose evidence is scattered near the outer wall, the bastions and the main entrance. The Bahamanis, who declared their independence from Delhi, took possession of the fort in the years following Delhi’s receding influence in Deccan politics, in the late 14th century CE and rebuilt it.
Naluraga fort

Geographic Influence
Naldurg is about 35 km from the Tuljabhawani temple of Osmanabad and 45 km away from Solapur town and is accessible through the Pune-Hyderabad highway. The Naldurg Fort is one of the strongest forts of Deccan. Spread over a large area, it is a township by itself.
Naldurga Fort, Osmanabad
Restoration Proposal

Date of Communication: 01-03-2019

BARRAGE
UPALI BURUJ
HAATI KHANA
MUNCIF COURT
BARADARI MAHAL
RAJWADA
RANGMAHAL
DARGA
HATTIKUND
NAVBURUJ
Townscape and Intrinsic:

The Naldurg Fort is one of the important ground forts in the Marathwada region. It represents a fine example of the medieval architectural style. It is believed that the Fort was built by Nalaraja (The King Nala). The Fort and the city is named after him. The Fort was built in the period of the Chalukya Kings of Kalyani. Later, from 1351 to 1480, in the period of the Bahamani Kings and in 1558, the Adil Shahi rulers constructed the massive fortification wall of the Fort. In 1613, Ibrahim Adil Shah II built the weir on the river Bori and constructed Pani Mahal. The main entrance gate of the fort is known as Hulmukh Darwaza. The protective walls have 115 massive bastions. The chief bastions are named Paranda, Upli, Sangram and Nav Buruj. Upli Buruj is the highest place in the Fort. Cannons are placed on these bastions to this day. These cannons have figures of Elephants and Crocodiles and are therefore called Hathi Thop and Magar Thop. There are some old buildings still standing in good condition.

Thereafter, the fort finds frequent mention in the prolonged dynastic squabbles of the Deccan. The fort now had a new owner, the Nizams of Hyderabad. Thereafter, with the ascendancy of the English East India Company in the first half of the 19th century, Naldurg became the regional headquarters of the British provincial governors, following an agreement with the Nizam in 1853CE, to cede present day Osmanabad district to the British.

An Englishman with multi-faceted talents, Colonel Phillip Meadows Taylor, was one of them. He made the fort his centre of operations in and transacted all matters of state from here. A prolific writer, painter, and an archaeologist, he has left behind some vivid memories of the fort, which he describes thus “Along the crest of the cliff on three sides ran the fortifications, bastions... firmly built of cut and dressed basalt and large enough to carry heavy guns”
Naldurga Fort, Osmanabad
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Naldurga fort
Architectural Significance
Defence Principles and Engineering Techniques:

The fort is built on the Bori riverfront site on a knoll, as mentioned earlier. To the North & East where the elevation is higher, it is protected by the double meander of the river and by steep slopes of the hill. To the West & the south, a ditch has been excavated in the rock to form a moat (also called Khandaq in local parlance) filled with water. If you visit the fort today, you will observe that the west side moat has been filled up and levelled, though one can still see sections of the embankment revetted with stone. A bridge or causeway across the moat would have been the only connection to the main entrance.

The importance of ensuring protection through massive masonry constructions is evident in the thickness of the walls & bastions. They were made of an earthen bank packed with rubble, faced (revetted) with dressed stone blocks, using lime mortar to bind them. This was the period when new engines of warfare, the cannon & cannonball, made their appearance. Their construction enabled to use as a firing platform for heavy guns as well as to absorb the impact of cannonballs. The bastions have a small inclination with respect to the ground level and act as a buttress for supporting the massive earthen bank.

Above the curtain walls and towers, parapets have been adapted for defence by musketry and cannons, with higher and thicker merlons built in stonework or brick and pierced with holes to provide covering fire. Continuous wall walks or chemin-de-ronde along the top of the ramparts have been provided along the outer line of fortifications to enable quicker movement of men and material to any quarter under attack.

Miniature turrets or box machicolations projecting from the parapet of walls, towers and gates have been built on supporting brackets, with gaps through which various types of missiles could be hurled at the aggressor, thereby reducing the dead ground (the space beyond which the attacker on the ground is not visible to the defender above).
The fort has two enclosures or fortification lines. The outer enclosure or fausse-braye is at a lower elevation and girds the inner or main enclosure. It has parapets for facilitating movement.

Being a land fort, the gateways have been fortified into one of its strongest defences. Access to the main entrance which is located some distance away from the gateways is through a barbican which projects from the main entrance. The first gate is flanked by two formidable towers (forming part of the outer line of fortifications), whose upper parts are terminated with battlements and box machicolations. This further leads to a second gate marked by the presence of box machicolations above it. A pathway gently climbs up to the inner open courtyard enclosed by thick walls. The aggressor attempting to enter the fort would have to pass through the heavily fortified gates and cross the open courtyard under heavy fire from the guards manning the battlements. Entry into the inner fortified enclosure would be gained through the main entrance (Hurmukh Darwaza) only after negotiating obstacles.

Architectural Style:

Most of the bastions are semi-circular in design. Compared to its rectangular counterpart, a semi-circular design offers more room for defence, since the circumference is more than 50% of the horizontal length offered by a rectangular design. This ensures space for deploying a larger number of defenders who can effectively utilize the space between the merlons for attacking the aggressor. Some of the bastions have a circular platform for mounting heavy pieces of artillery. However, one can still find rectangular & polygonal bastions along the outer line of fortifications. One possible reason could be that there was an existing fortified structure with rectangular & polygonal bastions. These were strengthened by increasing their wall thickness and by adding stone revetments.
The Nau Burz bastion is undeniably one of the fort’s star attractions for its design and sheer ingenuity. A semi-circular bastion is broken up into 9 semi-circular sub-bastions to increase the effective space available for defence. It is flanked by two semi-circular bastions. The bastion is overshadowed by an artillery platform at its rear for mounting very heavy guns. The combination of artillery fire and defenders providing covering fire below to deter the aggressor makes the entire structure an example of solid defence.

The Uppali Burz, also called the Tehlani Burz, is a solitary, standalone bastion located at the northern end of the fort. Built in 1558CE by Sultan Ali Adil Shah of Bijapur, it commands a complete view of the fort and is the tallest structure within the inner enclosure. It is an elaborate masonry cylinder 27m high, 20m in diameter at the top and is accessed by a steep flight of stairs with 77 steps. The structure is faced with rectangular blocks. Towards the top, above a thin moulding, merlons are introduced for ornamental purposes. There are two circular platforms mounted with two large cannon, which you can still see. One of them is the Magar Toph (cannon so named since its muzzle resembles the jaws of a crocodile). A short, narrow staircase leads to a rectangular guardroom which has large openings in the wall with a good view of the surroundings.

The Paani Mahal built into the dam on the Bori River is another fine example of medieval engineering. Built in 1613 BCE during the reign of Ibrahim Adil Shah II of Bijapur to ensure an adequate supply of water to the fort complex, it is a solid stone masonry structure with two arched channels, one at each end of the dam. During the dry season, when the water level is below the “spill” level, the spillways do not discharge any water into the pool formed by the dam on the discharge side. During the monsoon season, when the water level breaches the spill mark, it cascades through the channels into the pool, creating the effect of a waterfall. This “spill effect” is what draws hordes of visitors to the dam during the rains. The palace which is accessed by a rather steep flight of stairs is a well-ventilated, roomy structure, with a jharoka overlooking the pool below. During the rainy season, the water cascading from the spillways is a sight to watch.
PROPOSED MASTER PLAN-NALDURG FORT

Additional feature of dry cafeteria to hopper room/ CCTV room at upper level

Ticket counter

Conservation and restoration works
All additional RCC work to be removed
The door colour to be restored to original
The courtyard to be redesigned

Waste collection

Bench

SANKRAMAN DESIGN STUDIO
BEFORE

No Gate or formal entry existed earlier

AFTER

A separate approach road to the fort avoiding the crowded village road has been created which can now cater to tourist buses also entrance area and caters to security also

REVIEW/ DESIGN PROPOSAL

• A proper signage should be installed on the main road to encourage tourism.
• Warm light Illumination of the fort from highway side
Naldurga Fort, Osmanabad

Customised logo for Naldurg fort

48 inch high Basalt stone slate for signage

9 inch high dfdf

25 inch high compacted plinth

PROPOSED DESIGN FOR ROAD SIGNAGE

Customised logo of naldurg to be used on all signages inspired by the navburuj of the fort

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402, Crescent Business Park, Sakinaka, Andheri East, Mumbai - 400072, India | design@sankraman.com | +91 22 39 46 43 46
Lawn around the signage

48 inch high Basalt stone slate for signage

9 inch high stone slat

25 inch high compacted plinth

48 inch high Basalt stone slate for signage

9 inch high dfdf

25 inch high compacted plinth

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402, Crescent Business Park, Sakinaka, Andheri East, Mumbai - 400072, India | design@sankraman.com | +91 22 39 46 46 46
No Gate or formal entry existed earlier

A Grand entrance Gate has been made and installed to suit the fort and enhance the grandeur of the entrance area and caters to security also

REVIEW/ DESIGN PROPOSAL

- The newly added gate doesn’t imply to the original design of the gate, this gives a wrong information to the tourist about the history of the fort.
• **OPTION 1**: THE HEIGHT OF THE M.S GRILLED GATE CAN BE REDUCED TO GIVE CLEAR VIEW OF THE FORT AND ALSO THE EXISTING WOODEN BLOCKS CAN BE REPLACED BY METAL CROSS BRACINGS FOR VISUAL AND SECURITY PURPOSES.
OPTION 2: THE HEIGHT OF THE M.S GRILLED GATE CAN BE REDUCED TO GIVE CLEAR VIEW OF THE FORT, WITHOUT CHANGING THE DESIGN OF THE EXISTING GATE.
• OPTION 3 - M.S GRILLED GATE TO GIVE CLEAR VIEW OF THE FORT AND GIVING MORE IMPORTANCE TO THE STONE PILLARS ON EITHER SIDES.
People used to dirty and use the space for defecation

A low retaining and protection stone wall built to prevent the same

**REVIEW/ DESIGN PROPOSAL**

- The vertical signage representing is cutting the visual sight of the fort.
Polished Basalt stone facia for signage

Unpolished Basalt stone slab with Pcc grouting base

Polished Basalt stone facia for signage

Unpolished Basalt stone slab with Pcc grouting base

ENTRANCE SIGNAGE SECTION
REVIEW/ DESIGN PROPOSAL

- The CCTV control room/ Luggage can be redesigned by adding a Dry cafeteria on the top.
- This will help avoiding litter in the fort vicinity by the tourists.

CCTV Control room/Luggage has been created for Tourists safety point of view
• OPTION 1: THE ELEVATION OF THE CCTV ROOM CAN BE GIVEN A MORE CONTEMPORARY LOOK BY ADDING WOODEN SLATS AND RAILING FOR PROTECTION. THE EXISTING HANDRAIL ON THE STAIRCASE CAN BE REPLACED BY WOODEN BALUSTERS.
**BEFORE**

**AFTER**

Ticket room has been created for tourists

**REVIEW/ DESIGN PROPOSAL**

- Removal of the signage in front of ticket room.
- The wrought iron railing has to be replaced with temporary partitions with the ropes to avoid the clutter visually.
REVIEW/ DESIGN PROPOSAL

- The redesigned public toilet lacks basic provisions
- Uniform and subtle signage to be followed to guide tourists
- Handicapped toilet provision is not given.
• **OPTION 1**: THE TOILET STRUCTURE CAN BE MODIFIED BY INCREASING THE HEIGHT OF THE EXISTING COMPOUND WALL WITH A FLOATING ROOF OVER IT FOR PRIVACY AND PROTECTION PURPOSES.
**REVIEW/ DESIGN PROPOSAL**

- Removal of railing on compound wall.
- Reusing the Baradari hall into an interpretation centre.
Interpretation centre can be proposed at baradari hall to enhance the understanding of heritage of Naldurg fort. It can also display history of Colonel Phillip Meadows Taylor. The presentation strategy can be user friendly and interactive by using scenographic exhibitons and multimedia programs.
Naldurga Fort, Osmanabad
Restoration Proposal

BEFORE

AFTER

Landscape in front after zig zag entrance

REVIEW/ DESIGN PROPOSAL

- Information signage to be put in front of every monument
- Removal of the striped paid on top of the fort wall used as flag hoisting.
• Vertical signages to be placed at entrance of monuments to give clear vision considering all aspects.

Sandblasted basalt stone

Toughened glass for the signage

1.92

2.30
Naldurga Fort, Osmanabad
Restoration Proposal

BEFORE AFTER

Fort information board at zigzag entrance

REVIEW/ DESIGN PROPOSAL

• Removal of information board from zigzag entrance
Proposed railing design for Upali Buruj

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The drinking water facility has to be redesigned with standardized rules of public sanitation.
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**Existing RO Water supplying plan**

**Concrete make water fountains placed at junctions as per the layout plan**
Naldurga Fort, Osmanabad
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AFTER

PROPOSED
BEFORE

REVIEW/ DESIGN PROPOSAL

- The streetlight becomes a visual hindrance due to its height
- Small street lights can be proposed instead.

AFTER

Landscape work and streetlight added
Existing CCTV poles

Sleek Hinged CCTV poles to avoid the ladders as seen in existing poles
AFTER

Round Kiosk stalls

AFTER

Square Kiosk stalls

REVIEW/ DESIGN PROPOSAL

- As we have provided cafeteria outside the fort, we propose the removal of kiosk stalls.
- Kiosk stalls proposed are not complementing the heritage fort and look plonked on the site with lack of context.
REVIEW/ DESIGN PROPOSAL

• We suggest above mentioned sports relevant to the fort history.
ARCHITECTURAL, INTERIOR AND LANDSCAPE DESIGN CONSULTANTS
GREEN BUILDING AND CONSERVATION CONSULTANT:

ARCHITECTURE | INTERIOR | URBAN

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