

ETHNIC LOOK IN THE DESIGN OF CONCH SHELL IN DHANO DHANYO AUDITORIUM IS AMAZING

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School of Pharmacy, Techno India University, Salt Lake City, Sector-V, EM: 4/1, Kolkata-700091, West Bengal, India. DOI: <https://doi.org/10.5281/zenodo.23434922>



How to cite this Article: *Dr. Dhrubo Jyoti Sen, Subhajit Samanta (2026). Ethnic Look In The Design Of Conch Shell In Dhano Dhanyo Auditorium Is Amazing. World Journal of Pharmaceutical and Medical Research, 12(10), 356–359. This work is licensed under Creative Commons Attribution 4.0 International license.

Article Received on 21/08/2026

Article Revised on 11/09/2026

Article Published on 01/10/2026

ABSTRACT

Dhano Dhanyo Auditorium is a premier state of the art multi-auditorium complex in Alipore, Kolkata, West Bengal, India. The auditorium was named "Dhanadhanya" in honour of the renowned poet, playwright and lyricist Dwijendralal Ray (19 July 1863 – 17 May 1913). The auditorium was planned in December 2017. February 2019 was the deadline for the project but due to COVID-19 the works halted and restarted in 2021. About 600 workers worked in the construction. In 2022, the work completed and on 13 April 2023, it was inaugurated by chief minister of West Bengal.

KEYWORDS: Dhano Dhanya Auditorium, Dwijendralal Ray, Conch Shell, Lifts, Escalators, LV/AV Systems, LED lights, Solar System, Building Management System.

Overview

Structure: The auditorium is designed in a form of conch shell. It has a main auditorium of **2000** seats with a mini-auditorium of **540** seats and an open stage with **300** seats. The building has **6** floors containing guest house, restaurant, cafeteria, VIP lounge, media lounge and a convention centre. The revolving stage has two concentric circles. The complex also uses LV/AV systems [Low Voltage/Audio Visual], Solar systems, Building Management System etc. The complex has basement parking with 2 levels of car parking with proper ventilation which also helps to free traffic congestion in Alipore area.



Figure-1: Dhanadhanya Auditorium.

Dhanadhanya Auditorium is a premier state-of-the-art multi-auditorium complex located in Alipore, Kolkata, West Bengal, India, renowned for its distinctive conch shell-shaped architectural design spanning 4.5 acres. Inaugurated on 13 April 2023 by West Bengal Chief Minister **Mamata Banerjee**, the facility was constructed over 76 months from August 2016 to November 2022 by the Public Works Department (PWD) of the Government of West Bengal, at a cost of **₹440 crore** reflecting advanced engineering with materials including **10,000 square meters** of zinc sheets from France, 3,700 metric tons of structural steel, and 30,000 lights from Ireland. The structure stands 49.7 meters above ground and extends **11.6 meters** below, embodying a visually opulent marvel envisioned by the Chief Minister. The complex, operated by the West Bengal Housing Infrastructure Development Corporation (WBHIDCO) Limited, features a main auditorium with **2,000** seats across the third to sixth floors, a mini auditorium accommodating **540** seats on the first and second floors, and a ground-floor street theatre with **350** standing capacity. It includes modern amenities such as **10** lifts, **22** escalators, a VIP lounge, three banquet halls, a cafeteria, a food court, a dormitory, and parking for **300** cars, making it a versatile venue for cultural, theatrical, and public events in the region.

Planning and Construction: The Dhono Dhanyo Auditorium project was envisioned by West Bengal Chief Minister Mamata Banerjee as a state-of-the-art cultural hub to enhance performing arts and events in Kolkata. The initiative was undertaken by the Government of West Bengal, with planning and oversight handled by the Public Works Department (PWD). Construction commenced in **August 2016** and concluded in **November 2022**, spanning **76 months** due to the project's complex scale and design requirements. The total cost of the project amounted to approximately **₹440 crore**, funded through state government resources. The PWD served as the primary constructor, with NBCC (India) Limited acting as the civil contractor responsible for execution. Structural design was provided by STUP Consultants (now part of Assystem), ensuring integration of the building's unique conch shell-inspired form. Specialized contributions included **1,200 tonnes** of structural steel from Tata Structural for the curved framework and **10,000 square meters** of zinc sheets imported from France for the exterior cladding. Overall materials encompassed **3,700 metric tons** of structural steel, **43,000 cubic meters** of concrete, and **12,000 metric tons** of reinforcement, with **30,000 LED lights** sourced from Ireland to support the venue's illumination needs. Located on a **4.5-acre** site in Alipore, Kolkata, the project employed around **600 workers** throughout its duration. Key engineering aspects involved constructing a six-floor structure above ground with a two-level basement, reaching a height of **49.7 meters** and extending **11.6 meters** below ground to accommodate the conch shell shape while ensuring structural stability and functionality. This design demanded precise coordination to blend the symbolic curvature with practical elements like basements for parking and utilities.

Inauguration and Early Operations: The Dhono Dhanyo Auditorium was inaugurated on **April 13, 2023**, by Chief Minister Mamata Banerjee in the presence of state officials, marking a significant milestone in West Bengal's cultural infrastructure development. The ceremonial event highlighted the facility's readiness following construction completion in November 2022. Envisioned by Mamata Banerjee as an embodiment of cultural and architectural innovation, the auditorium transitioned from a construction project to a public asset with its official opening to visitors on April 23, 2023. From inception, the auditorium has been operated by the West Bengal Housing Infrastructure Development Corporation (WBHIDCO) Ltd., which oversees bookings and daily management through dedicated channels such as the email manager.dda@wbhidco.in and phone lines +91 99327 47209 and +91 82402 12576.1 Early operations emphasized rigorous testing of key facilities, including the 10-meter revolving stage and advanced AV systems, to ensure seamless functionality for events. Sustainable features, such as a 45 kWp solar power system with backup and a building management system

(BMS), were integrated during this startup phase to support energy-efficient operations.

Initial bookings for conferences and performances began in mid-2023, with the facility hosting its first major events by late summer, including corporate convocations and cultural gatherings that tested its multi-auditorium capacities. The post-inauguration period encountered minor delays in achieving full operational readiness, primarily related to finalizing technical integrations like stage mechanics and AV setups, which were resolved by late 2023, enabling consistent public usage thereafter. By 2025, the auditorium has hosted international events such as the Tata Steel Chess India tournament in 2024 and Asiacrypt 2024, demonstrating its established role in regional cultural and conference activities.



Figure-2: Conch Shell structure.

Exterior Design: The Dhono Dhanyo Auditorium features a distinctive exterior design inspired by the shape of a conch shell, known as *Shankha* in Bengali culture, symbolizing prosperity and auspiciousness. This 3D curved structure, measuring **510 feet** in length, creates a fluid, wave-like form that evokes the natural elegance of the sea shell while serving as a cultural landmark in Kolkata. The facade is clad in **10,000 square meters** of zinc sheets imported from France, providing a shimmering, metallic surface that enhances the undulating aesthetic and reflects light to mimic ocean waves. These zinc panels are integrated with **3,700 metric tons** of structural steel, ensuring both visual appeal and long-term durability against environmental factors. The building rises to a height of **49.7 meters** across six floors above ground level, complemented by a two-level basement extending **11.6 meters** underground, with external escalators and lifts incorporated for enhanced accessibility. Situated on a **4.5-acre** site, the auditorium is surrounded by open landscaped spaces that facilitate pedestrian approaches, including pathways linking to nearby Jatin Das Park metro station on the Blue Line and Khidirpur metro station on the Purple Line.

Interior Features: The interior of the Dhono Dhanyo Auditorium is organized across multiple levels to optimize vertical and horizontal flow, with the main

auditorium spanning the third through sixth floors, the mini auditorium on the first and second floors, and the ground level dedicated to a street theatre space. This floor-wise layout facilitates efficient multi-purpose usage while accommodating large-scale performances and smaller gatherings. Vertical movement is supported by **10 lifts** and **22 escalators**, ensuring smooth circulation for visitors across the six-story structure. Technological integrations enhance functionality throughout the building, including comprehensive low-voltage and audio-visual (LV/AV) systems for seamless event support, and a building management system (BMS) that oversees climate control, security, and overall operations. The interior design echoes the conch shell motif of the exterior through curved walls and spaces that promote natural acoustics. Common areas include VIP and media lounges for exclusive access, as well as convention centre spaces integrated into the multi-level layout; wide corridors with acoustic panelling provide effective sound control and guide traffic flow between venues. The basement features a two-level parking facility accommodating **300 cars**, equipped with ramps for entry and exit along with ventilation systems to maintain air quality. Accessibility measures incorporate ramps at key entry points and designated areas for differently-abled visitors, complemented by clear signage throughout the interior to aid navigation.

Performance Spaces: The performance spaces at Dhono Dhanyo Auditorium are designed to accommodate a range of events, from large-scale concerts and theatrical productions to intimate seminars and outdoor-style performances. The complex features three primary venues: the main auditorium, the mini auditorium, and an open stage for street theatre, collectively supporting diverse cultural and artistic activities with specialized setups for each. The main auditorium, located across the 3rd to 6th floors, offers a seating capacity of **2,000** in a multi-level configuration optimized for immersive audience experiences. It includes tiered seating arrangements to ensure visibility and comfort, along with an orchestra pit area for live musical accompaniments during performances. The stage incorporates advanced stagecraft elements, including provisions for future installation of a revolving mechanism and lifts to enhance dynamic show transitions. Equipped with high-end audio systems and lighting rigs, the space supports professional-grade productions, with the overall setup managed through an integrated AV and building management system.

The mini auditorium, situated on the 1st and 2nd floors, provides **540 seats** in a more compact layout suitable for smaller gatherings such as plays, workshops, or corporate seminars. Its flexible staging options, with a stage area of approximately **1,713 square feet** and pre-function areas on either side, allow for adaptable configurations to suit various event formats. The venue's audio and lighting systems ensure clear sound distribution and visual enhancement tailored to mid-scale

events. The open stage, or street theatre area on the ground floor, accommodates **350** standing participants, evoking an outdoor performance vibe within a protected indoor environment. This space is ideal for interactive or experimental shows like folk theatre or public readings, with partial weather-resistant features to maintain usability during light inclement conditions. It integrates with the complex's surround sound capabilities and basic projection mapping for atmospheric effects, promoting accessibility for community-based arts. Across all venues, the auditorium employs sophisticated acoustic treatments and over **30,000 LED** lighting fixtures, including specialized Irish-style units for versatile illumination, alongside multi-channel surround sound and projection mapping to deliver high-fidelity experiences. The performance spaces provide a total capacity of approximately **2,890 persons**.

Support Infrastructure: The Dhono Dhanyo Auditorium provides dedicated accommodation options for performers and guests, including three guest rooms each equipped with two beds and spanning **280 square feet**, as well as three dormitories accommodating six beds each in **450 square feet** of space. A single VIP room of **250 square feet** offers private access adjacent to the main stage area, while a lounge on the second floor seats up to **150** people for relaxation or informal meetings. These facilities ensure comfort for visiting artists and dignitaries during extended stays. Dining facilities at the auditorium include a cafeteria and food court designed to serve visitors, though specific capacities and menu details are not publicly detailed beyond general availability. The setup supports catering for events, complementing the overall operational needs of the venue. The auditorium features three banquet and conference halls, each with a seating capacity of **250** people: Banquet Hall 3 on the ground floor (3,570 square feet), Banquet Hall 4 on the first floor (3,536 square feet), and Banquet Hall 5 on the second floor (3,536 square feet). These halls are equipped for meetings and events, with availability from 9 a.m. to 9 p.m. on event days, and include audio-visual systems as part of the venue's operational tenders. Parking infrastructure consists of a double basement accommodating up to **300** vehicles, with allocations including **100** spaces for the main auditorium, **40** for the mini auditorium, and **20** each for the banquet halls. Electronic vehicle charging points are integrated into the parking facilities to support sustainable transport options. The site's location in Alipore provides convenient public access via nearby Kolkata Metro stations, such as Jatin Das Park on the Blue Line. Operational support is managed by the West Bengal Housing Infrastructure Development Corporation (WBHIDCO), which oversees maintenance and includes systems like CCTV surveillance, fire protection, and building management for efficient daily functioning. Lifts and escalators further aid accessibility throughout the facility.

Naming and Symbolism: The Dhanadhanyo Auditorium, also spelled Dhono Dhanyo, draws its name from the iconic patriotic song "*Dhano Dhanno Pushpe Bhora*," composed by the celebrated Bengali poet, playwright, and lyricist Dwijendralal Ray in the early 20th century. This song, a timeless tribute to the motherland, celebrates the earth's bounty and evokes deep nationalistic sentiments, remaining popular in Bengali cultural performances and Independence Day observances. By adopting this name, the auditorium pays homage to Ray's profound contributions to Bengali literature, where he pioneered patriotic and devotional songs that blended folk traditions with literary finesse, influencing generations of artists and writers. The etymology of "Dhono Dhanyo" stems from Bengali words signifying "wealth" (dhono) and "grains" (dhanyo), core elements in the song's lyrics that portray a land brimming with prosperity, flowers, and natural abundance—"Dhono dhanno pushpe bhora amader ei boshundhora" (filled with wealth, grains, and flowers, this earth of ours). This nomenclature symbolizes fertility, economic richness, and cultural heritage, aligning with Ray's vision of an idealized homeland and underscoring the auditorium's role as a venue for artistic expression rooted in Bengal's traditions. The structure's distinctive conch shell (shankha) design further amplifies its symbolic depth, drawing from Hindu iconography where the shankha embodies sanctity, auspiciousness, and the cosmic sound "Om," believed to purify spaces and ward off negativity during rituals. Associated with deities like Vishnu, the conch represents prosperity and divine order, mirroring the name's themes of abundance. Envisioned by West Bengal Chief Minister Mamata Banerjee as a fusion of contemporary architecture and indigenous motifs, the auditorium was inaugurated by her on April 13, 2023, and serves as a state-owned cultural landmark under the Government of West Bengal, exemplifying the region's dedication to preserving artistic legacy amid modernization.

Notable Events and Impact: Since its inauguration on April 13, 2023, by West Bengal Chief Minister Mamata Banerjee, the Dhanadhanya Auditorium has emerged as a premier venue for diverse cultural and public events in Kolkata. Early operations included the Mahanayak Samman award ceremony on July 24, 2023, organized by the Folk & Tribal Cultural Centre to commemorate Uttam Kumar's death anniversary, featuring performances by 1,200 folk artistes.

The venue's versatility has enabled it to host a range of performances, from music concerts and theatre productions to seminars and film screenings, accommodating up to 2,000 attendees in its main auditorium. In 2025, the auditorium played a central role in major gatherings, underscoring its growing prominence. It served as the opening venue for the 31st Kolkata International Film Festival (KIFF) on November 6, where Chief Minister Mamata Banerjee inaugurated the event, honoring veteran actor Shatrughan Sinha and

singer Arati Ankalikar-Tikekar, with screenings of 215 films from 39 countries across 21 theatres. Additionally, on October 11-12, the Kolkata Pet Expo, organized by the Kolkata Fish Federation, drew pet owners, breeders, and vendors for exhibitions, contests, and educational sessions on aquarium and pet care, highlighting the venue's adaptability for niche expos. Music events, such as live performances by acclaimed artists, have further diversified its programming, attracting large crowds for contemporary Indian fusion genres. The auditorium's operations have significantly influenced Kolkata's cultural landscape by positioning the city as a hub for meetings, incentives, conferences, and exhibitions (MICE) tourism. As a key facility under state initiatives like Egiye Bangla, it supports events such as the concluding ceremony of Students' Week 2025, fostering youth engagement and cultural exchange. Its strategic location near Jatin Das Park and Khidirpur metro stations enhances accessibility, drawing visitors from across the region and boosting local tourism and economy through increased footfall at nearby businesses. By hosting international-caliber events like KIFF, the venue elevates Kolkata's global cultural profile, with potential for expanded collaborations in film, arts, and conventions.

CONCLUSION

Dhono Dhanyo Auditorium is a premier state-of-the-art multi-auditorium complex in Alipore, Kolkata. The auditorium was named Dhana Dhanye in honour of the renowned poet, playwright, and lyricist Dwijendralal Ray. Initially, the project's target completion was December 2022, but the construction was disrupted due to the pandemic. The cultural relic was finally inaugurated and opened to the public in April 2023. West Bengal's Chief Minister, Mamta Banerjee inaugurated this amazing auditorium. The inauguration of this state-of-the-art facility is a significant development for Kolkata's cultural scene and is anticipated to become a prominent venue for various events in the region.

REFERENCE

1. https://en.wikipedia.org/wiki/Dhanadhanya_Auditorium