



The Bombay High Court

A Conservation Story

Savani Heritage Conservation Pvt. Ltd



The Bombay High Court

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A report of restoration and repair works

2012-2019



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Introduction

Kintsugi is the Japanese art of putting broken pottery pieces back together with gold — built on the idea that in embracing flaws and imperfections, you can create an even stronger, more beautiful piece of art.

Heritage conservation can be one profession that can draw direct analogies with this Japanese art form. The profession does not look at an old, broken, derelict or defunct building as a loss. It instead looks at it as an opportunity to make a piece of art that is even better than the original work.

The multiple, eccentric, eclectic identities that are attached to the metropolis of Mumbai, deep down owe a lot to the colonial heritage of the city. Mumbai today represents a pot-pourri of cultures, languages, professions, passions and identities. An administrative boundary that stretches from Colaba to Borivali; a linear 50km geographical extent that once began as a humble group of small seven islands.

The city could be perceived as futuristic due to its fast paced glamour, technology and an economy fuelled lifestyle. The city's identity is also reflected in form of the physical enclosures of the colonial buildings like museums, gymkhanas, public buildings, urban planning schemes and under the intangible elements of etiquettes, discipline and habits of the people.

Though opposite, both identities exist and both matter. With the growing trends of gentrification, exposure to it's historicity, concept of interdisciplinary exchanges, conservation has become an important piece in the puzzle of the city's imageability. Heritage conservation, preservation and restoration is helping in building an identity for Mumbai.

A strong believer of 'जीर्णोद्धारक' (In Sanskrit means 'Restoring the lost Glory'.), Savani Constructions has played an important role in this image building exercise. With 27 years of experience in country wide conservation projects, we strive hard to bring about a balance between the traditional methods and skills of building along with modern technology.

We have contributed in restoring the lost glory of the original city core by being conservation contractors for important buildings like The Bombay high court, The Mumbai university convocation hall, Rajabai tower, the Times of India building, the HSBC building, the Asiatic library, the CSMVS museum, the St. Thomas Cathedral, the Afghan church to name a few.

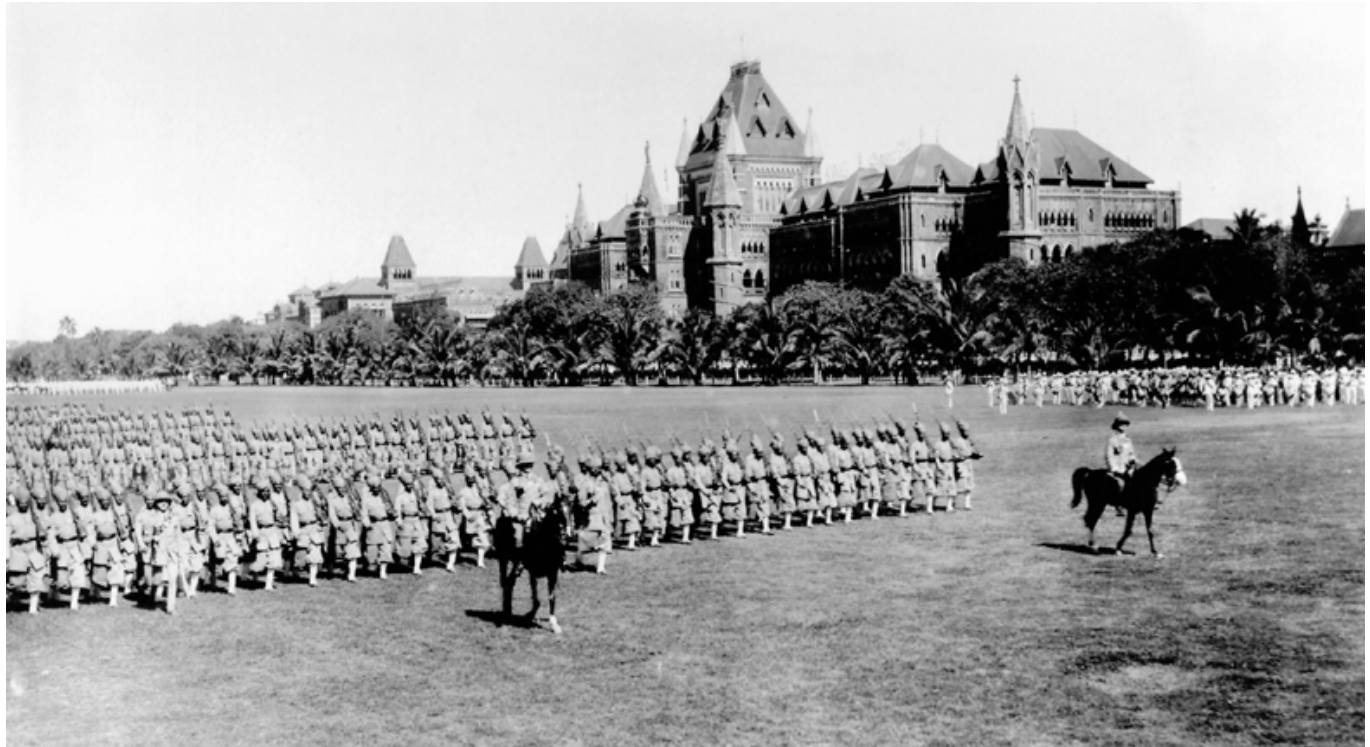
Amongst the beautiful High Gothic buildings that parade along the Oval maidaan, The Bombay High Court holds a special place in the profile of the company. Being one of the most expensive projects of it's time, the challenges and rewards of this building have been unique. This compilation records the conservation efforts (ongoing) that we along with the conservation architects, M/s Abha Narain Lambah architects conducted from 2012-2019.

History and Architecture

From 1668 to 1715, the British East India Company had set base here. The first two governors of Mumbai took massive measures in populating the city. They built a port for 20 ships, warehouses, a custom house, a mint complete with fortification. They began encouraging people to populate Bombay. With their efforts, the population of the island increased six fold in a span of 7 years. By 1854, with the advent of mills, civil war, and the political transfer of power from East India company to the crown, Bombay boomed economically.

It was amidst this economic boom that the then Governor, Sir Bartle Frere, decided to demolish the fortified walls. The town had been under constant threat of fire and disease. Tearing down the walls would also allow better accessibility for trade, commerce and more immigrants, further booming economy. Once the walls were pulled down, parts of the sea reclaimed, land was available for, infrastructure, housing and public development. This was the 'New town' or popularly addressed as the 'Frere town'.

Today, buildings like The Public Works Department, The Bombay High Court, The Bombay University, The Rajabai tower, along the Oval, were once a fortification! These and many more, beautiful, European flavoured buildings dedicated to justice, learnings, finance, health, hospitality, communication, transport and trade, indeed made Bombay the **Urbs Prima of India** (the First city of India) in line with Governor Frere's dream.



View of the Bombay High Court from the Oval Maidaan, 1911.

Source: https://commons.wikimedia.org/wiki/File:127th_Baluchis,_Bombay_1911.jpg



Left:
A map of the Bombay Fort with the fortifications, the esplanade, trenches, docks before the Frere town was conceptualised, represented in late 1800s.

Source:
By The British Library
No restrictions,
via Wikimedia Commons

Right:
A map of Governor Frere's dream of Urbs' Prima of India. The city no longer has fortifications.

Source:
By Constable
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via Wikimedia Commons



The Bombay High Court

M/s Savani Constructions bagged the opportunity to work on restoration and conservation works for 'The Bombay High Court' building in 2011. The works were undertaken under the able guidance of heritage conservation architect Abha Narain Lambah Associates, Shashank Mehendale Associates and the Public Works Department, Maharashtra.

The building is located along the Karamveer Bhaurao Patil Marg. To the north of the building stands the Public Works department building, to the south lies the Bombay university building. The rear facades of buildings of HSBC bank and Standard Chartered bank flank the east.

This English Gothic revival building was designed by Col. James Augustus Fuller in 1871-1878. It is 562 feet in length by 187 in breadth. The Central staircase feature is 178 ½ feet in height. It was completed at a cost of Rs. 16,44,528 and is considered to be one of the most expensive buildings built at that time.

Architecture

Inspired by a German castle, it is built in roughly dressed shallow courses of dark basalt, punctuated by soft Porbunder stone and enhanced in places by red sandstone and buffed basalt. The building is capped with sloping timber roofs and dormer windows. The building is balanced by towering staircases spires, delicate lancet arches and balusters that lace the corridors.



The Bombay High Court Building.

Source: By The National Archives UK, No restrictions, via Wikimedia Commons

There are two parts to this linear building- a public side that runs along the eastern length and the judge's side that extends along the western length of the building. The judges' entry has a large entrance porch flanked by two octagonal spiral staircases overlooking the Oval maidaan. The key element along the public side is the large central open well staircase with a skylight on top.

The courtrooms and judges' chambers are located in the core of the building. The finest courtroom is located on the second and the third floors of the central tower. It is top lit via lancet windows, paved mosaic flooring, com-

plete with a teak wood gallery for the public. The building also houses functions like judges' library, a bar council room, a public library, a canteen, eight additional staircases and lifts, a central lift and toilet blocks.

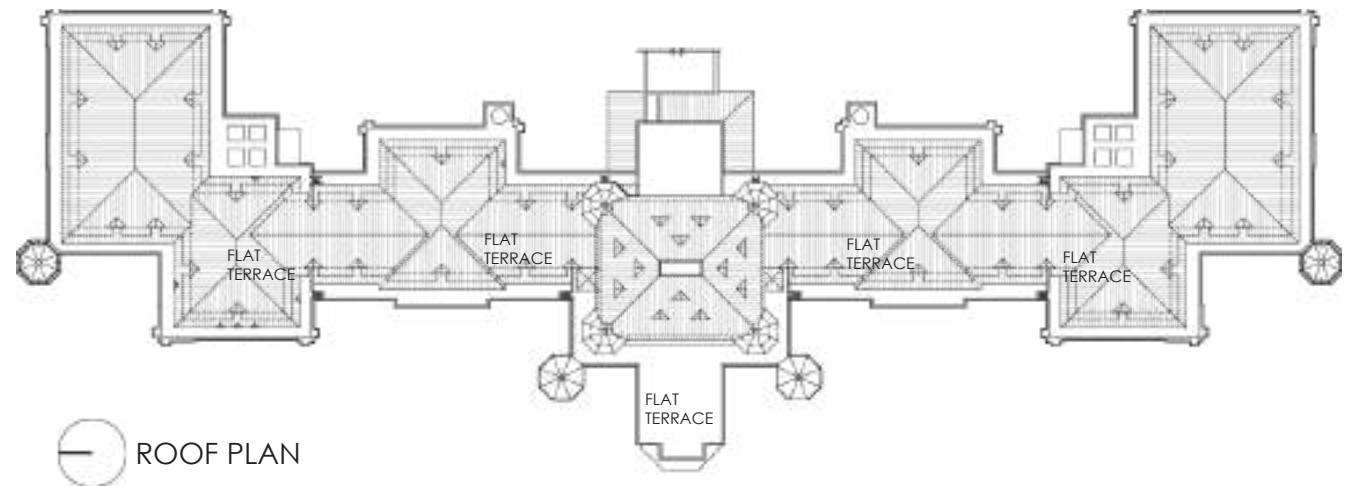
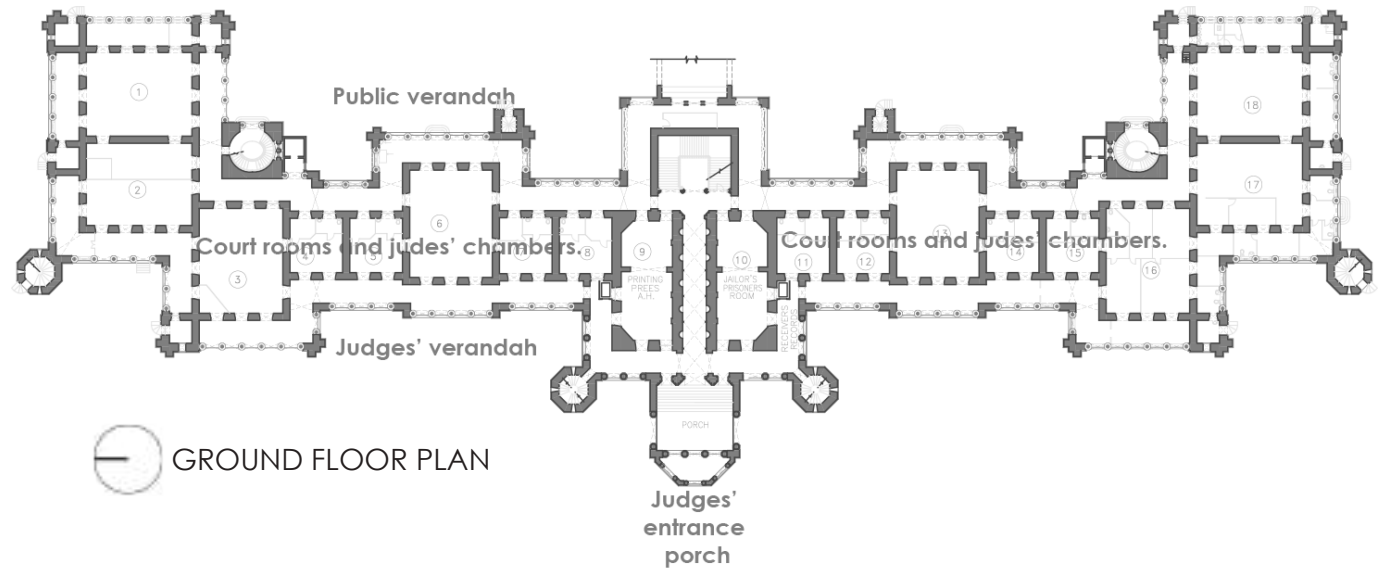
The perception of grandeur and power of the building is subdued by the thoughtful placements of two ornamental sculptures. The judges' staircases are capped with sculpted figures of a blindfolded lady with a sword and a balance- Justice and the other lady with folded palms in prayer - Mercy.

Public Works Department Building

To the north of the High Court lies the Public Works Department or the P.W.D building which is currently taken over by the Bombay High Court and houses court offices. Designed by Wilkins, the P.W.D building played a huge role in the construction of new buildings of Frere town. The building has a remarkable double-steeped roof, facing the north, and beautiful Venetian balconies, surrounded by corridors with lancet arches. It is built using the same dark basalt, which makes it easier to be an integral part of the High court premise today.

An eastern extension, was constructed in 1909 for the high court building, that is sympathetic in style and use of materials and does not obstruct the ornamental western facade of the Bombay High court.

Unlike most of the old buildings in the world, High court building has been a functional environment since its construction till date. A lot of the original Bombay-Gothic furniture, fittings, details, elements are still in use in the three the buildings, making the restoration process slightly easy.



Building Condition & Challenges

Project Information

Project Name	Conservation of The Bombay High Court
Heritage Status	Grade IIA (Proposed Grade I)
Client	Public Works Department, Government of Maharashtra
User Department	The Bombay High Court
Consultant - Conservation Architect	Abha Narain Lambah Associates
Consultant – Structural Engineer	Shashank Mahendale Associates
Contractor	Savani Heritage Conservation Pvt. Ltd
Project Tenure	2011 - 2019
Phase 1	2011 – 2014
Phase 2	2014 - 2019

The Bombay High Court building has survived 150 long years and yet stands tall. Chipped floorings, dangling brass aldrops, missing cast iron rails, leaky roofs, corroded sculpted figures, clogged gargoyles have lived to tell us the tale of what grandeur the court was.

We at Savani Constructions, worked hard on reviving the lost glory of what High court was. The following sections reflect the quality of work we put in to give the building its lost identity and in the process fulfil our responsibility towards the city.

Condition Analysis, 2011

This project was commissioned to us in 2011 and the works continued up to 2019. Due to the severity of damages in the building, we conducted a variety of restoration works starting from roofs, structural work of verandahs, façade restoration, interiors works, toilets, repair works of furniture, lift blocks, smaller utilities like signages.

This chapter will discuss the condition of the building when we first had a look into it.

Roof and terrace condition

The high court building broadly has four types of roofs.

1. A roof of the central tower
2. A composition of pitched roofs that covers the core of the building- court rooms and chambers, with dormer windows.

3. Lean to roofs that rest on these pitched roofs that run throughout the perimeter of the building covering the corridors.

4. Flat terraces that cover the staircase blocks and lift blocks of the public corridors and a large flat terrace above the judges' entrance porch.

The roof has had severe seepage through the timber structural elements, into the load bearing stone walls, damaging the building in several places causing cracks, dampness, leakage, water puddles, and structural distress.

Most of the flat terrace areas were encroached upon with water tanks, lift machine rooms, electrical units, HVAC outdoor units etc thus adding to the load of the slabs. There



The lean to roof above the public corridors.

were some make-do efforts undertaken to repair these parts of the roof in the past, but due to poor execution it aggravated the damage to the terrace and the floor below.



The above three images show damaged roof members at multiple locations in the building.

Verandahs

The building is surrounded by verandahs along all four sides thus enveloping the court rooms and judges' chambers in the centre. Severe structural distress, sinking of the floor was observed at multiple places in these verandahs.



A judges' side corridor with mosaic cement tiles.



Original Minton flooring in one of the corridors.

These verandahs were covered with various types of finishes, ranging from vitrified tiles, ceramic tiles, terrazzo tiles along with original encaustic tile (popularly known as Minton flooring) flooring in some areas. This erratic choice of material, caused a loss of the identity of the building.

Façade

The magnificence of the dark basalt of the Bombay High Court was lost behind years of dust, paint, erosion, chipped courses, missing stone courses, poorly done pointing, exposed services, water leakage and vegetation growth. The decorative limestone details were severely affected due to weathering and dust accumulation.



The soiled facade of the building in process of cleaning.

The original timber and glass, double shuttered, multiple panelled doors too were in poor condition. With missing fixtures, replaced doors, missing ventilators, packed ventilators, the charm of the façade was lost.

Interiors

Since the building is public in nature, there was a variety of public furniture in use. Aluminium and glass signage boards, types of furniture, missing handrail sections, damaged balusters etc further deteriorated the integrity of the building.

Over the years, the Judges' offices were customised as per the user, thus bringing in an inconsistency in the design, material and colour palettes. Toilet blocks within the judges' chambers had all the service pipes running exposed through the verandahs of public side.

A variety of lighting fixtures featured in the verandahs of the building. The lift blocks, being a much later addition seemed alien in the heritage setting. Electrical wires, data cables, erratic light fixtures, dusty walls, eclectic mix of furniture, were causing visual chaos and further killing the aesthetic experience of the building. Though the building had decent and fairly maintained exterior, the interior lacked the historic character it deserved.



A damaged portion of interior wall.

Challenges

The Bombay High Court is a Grade II A heritage structure (proposed Grade I). It is a Social Monument along with being a fully functional building. The challenges thus faced had solutions hidden in time and space management strategies. Considering the life of age of the building; 150 years; a lot of the building details had to be meticulously researched, discussed and then restored.

It was critical for us to ensure that the restoration works are executed in the right spirit and manner within all heritage restoration norms. It was our pursuit to make sure we maintain absolute Visual, Structural and Material Authenticity of the monument wherever possible.



A view of the pitched roof with dormer windows.

A magnanimous building

The Bombay High Court is a massive four storey structure with each floor height of nearly twice the height of regular storeys. A simple physical reachability of ceilings was thus a challenge.

Since the building is surrounded throughout with corridors, the perimeter of these corridors sums up nearly to 1 km. The Bombay High Court, the P.W.D building and Annexe building all come together into one property of the Bombay High Court thus stretching the building restoration boundaries.



The 24 by 7 vigilance by the Mumbai police on site.

A guarded monument

The building seats the Chief Justice of the Bombay High court thus elevating the social, judicial and political status of the building. A lot of the dignitaries of the judicial system from Mumbai, Maharashtra, Dadra and Nagar Haveli, Goa, use the campus throughout the year. The 2008 terrorist attacks on the neighbouring buildings, added further scare and thus the premises are heavily guarded at all times. This strict surveillance and scrutiny have a huge implications on movement of labour and material within the premises.

A living site

In most of the old buildings we work in are defunct, derelict, or largely unused. Very few times do we get an opportunity to work on old, living, functional buildings. And thus one of the biggest challenges of working on this project was that the Bombay High Court is a functioning institution. It has a daily foot fall of more than 1,00,000 people. Hence, shutting down parts or entire structure, temporarily moving the structure were not options at hand.

The terraces are a non-public zone. But these spaces were utilised for locating water storage tanks, lift machine rooms, HVAC units and other service equipment required for the in the floors below. Bringing about any repair works in these areas thus implicated in major disruption to the daily functioning of the court.

This left us with an option of planning all the works to the minutest detail that were to be executed. So as to avoid any inconvenience to the users, we had to make sure that the works undertaken commenced and concluded at the promised time. This required planning in making available timely labour and material.

All in nights shift!

Considering the fact that the High Court is a fully functional building, the works had to be undertaken only in the non-office hours- night shifts, weekends and public holidays. This meant that we had to train the labour to work at odd hours and ensure the site is

usable by morning. It also had an impact on the tender documents as we had to specify and get approved the work schedule from the involved authorities. Due permissions and vigilance was also undertaken by the P.W.D and the High Court during these awkward work shifts.



Some images showing the quantum and type of work undertaken during the night shifts.



Methodology & Planning

Methodology:

Since the Bombay High Court is a Grade II A Heritage Structure and a Social Monument, thus it was critical for us to ensure that the restoration works are executed in the right spirit and manner.

We were constantly doing a back and forth with the four aspects of the project

1. Dismantle
2. Investigate
3. Salvage and reuse
4. Assemble or build

We spent maximum amount of our time in careful dismantling of any work we took up. While dismantling lot of importance was given to efficient storing and stacking of the material that was in good condition.

Careful dismantling allowed for the team and the consultants to inspect and conduct on-



A group of workers dismantling a corridor slab.

site investigations. Based on this, a detailed approach plan was devised for the methodology of the works to be executed.

To ensure best quality material we conducted periodic testing from authorised agencies, We also did multiple sampling works to replicate the heritage finishes, patterns and designs.

The assembly or building was always a mindful concluding step so as to ensure precise use of technique and process.



Stacking of roof tile battens.



Stacking of new cement tiles on site.

Timber Work

Material integrity has been our constant pursuit in all the projects we have undertaken. The Bombay High Court is built using timber rafters, joists, beams, boardings, etc. All the timber work was done using pure and well-seasoned Burma Teak wood only. The sections or samples of wood used in all these areas and elsewhere was sent for periodic testing to ensure best quality material is used.

Best efforts were made by our team to ensure that maximum amount of the original wood is salvaged and re-used on site. Any small sections of wood which were cut-out from large deteriorated members but in good condition would be re-used for non-structural works like doors and window sections, furniture etc. with the sole effort to maximise wood salvage on site.



Finishing the timber rafters and stacking.

Stone Work

The stone work primarily included restoring certain sections of the façade and its elements, railing members of arched openings in verandahs etc. For this purpose, sections of stone were carefully procured from across the country to ensure that the new stone members are of the same type and colour as the original. These were then worked upon by skilled craftsmen to replicate the exact design and size as that of the original members found on site.



External facade restoration and pointing.

Floor Finishes

Original Minton flooring was discovered in a few places within the building. The company that manufactured these tiles is now non-existent and thus sourcing similar floor tiles was impossible. To match the design of the flooring the consultants recommended cement

tiles finished with the matching pattern inlaid using pigments.

With inputs from consultants and cement tile manufacturers, cement tiles were customised for this project. Multiple samplings were done to ensure that the tiles matched the colour, design and size of the original. These too, were sent for testing to government authorised testing labs before installing the same on



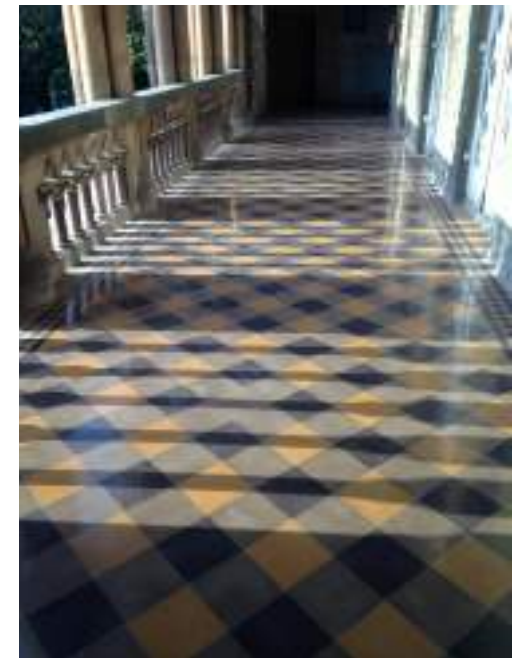
The original Minton flooring found in some areas.



site. Our team also made efforts to maintain patches of original flooring wherever possible.

From restoring large structural works, exterior façade restoration, to finer works like signages, room number plaques, notice boards, aldrops, door window details, all aspects of the building were researched upon and investigated thoroughly.

A unique mindset and methodology thus had to be adapted to complete the conservation works at the Bombay High Court. In order to make any building usable and liveable, the first and foremost requirement is to ensure it has no structural morbidities. After a thorough initial research and documentation by the team, it was decided to strengthen the building in phases.



A sparkling verandah floor post restoration.

Planning

There are 3 main phases proposed to restore the High Court building in totality.

Phase I- 2011-2014

Roof restoration & terrace waterproofing works

Restoration works of the lean-to roof section on all four sides along with water proofing works of the terraces adjacent to the same.

Structural works of verandah slabs

Due to budgetary limitations, the structural restoration works of only eastern and western sides of the ground & 1st floor was considered in the original estimate. However, with the pace and quality of work executed by us, the High Court & P.W.D decided to take up structural consolidation works of 2nd & 3rd floor verandah slabs as well.

Floor finishing works of verandahs

To live up with the original encaustic or Minton flooring of the building, cement tiles with matching patterns were to be fixed over the R.C.C slab.

The original encaustic tile flooring was retained & restored wherever possible.

Façade restoration works

The façade restoration works were limited to the section above the porch on the judges' verandah facing the oval maidaan & C-section walls behind the central lift in Public corridor.

Phase II 2014-2018

Structural works of north & south verandahs & toilet upgradation.

All structural and interior works of the verandahs on north and south side along with public toilets .

Interior restoration works

All structural and interior works of the judges' chambers.

Public Verandah Works

Restoration of doors, signages, notice boards, reviving original water fountains, dado works in the staircase blocks, cladding works of central lift etc. were taken up to complete the restoration works of the public verandahs.

Service upgradation works and Fire Fighting measures (Taken up by P.W.D Electrical Department)

Exterior facade restoration & building illumination

Façade restoration of the south and northern facades of the building.

Roof restoration works of P.W.D building

Other works

The phase II involved the renovation of the canteen, connecting corridor of annexe and main building, security outposts and compound wall.

Phase III (Done as Extension of Phase II)

Interior upgradation

Interior upgradation of courts, the judges' chambers and all pending civil, electrical, structural, consolidation of slabs, acoustic & furniture upgradation works were undertaken.

In the phase III, completing the final finishing works in public corridors on all floors including cleaning up of cables & wires, installation of signages, visitor facilities etc.

The process

The process of all the work involved dismantling, inspecting, salvaging, and refixing, fuelled by research and constant vigilance from the consultants.

Roof Restoration

The process of roof restoration was began by removing and dismantling the existing mangalore tiles, waterproofing layers, the teak wood boarding, rafters and purlins. Once these were removed inspected and sorted, the damaged rafters, purlins and boardings were replaced with new members using well-seasoned Burma teak wood to match with the original. Wherever feasible, the salvaged members were reused. Once replaced, the layer of boarding and battens were fixed, it was covered with waterproofing layers of dungaree cloth, bitumen and specially profiled G.I. sheets. A final layer of horizontal battens were fixed above the G.I sheeting before fixing the mangalore tiles. Since most of the older mangalore tiles were in good condition, these were cleaned and fixed back. Wherever damaged, these too were replaced with new tiles of similar make and quality.

In the severely damaged gutter areas, the timber members were dismantled, replaced and further laid with water proofing layers of brick bat coba, G.I sheet and fibre reinforced bitumen tar felt sheets, finished with lead sheets. Storm water drains were cleaned up along with adding new water spouts, that spewed the water away from the facade.



Dismantling and fixing new members for the roof.



Storing and stacking of the timber sections.



Water proofing with tar felt and G.I sheet.



Battens fixed over the G.I sheets.



The additional water spouts.

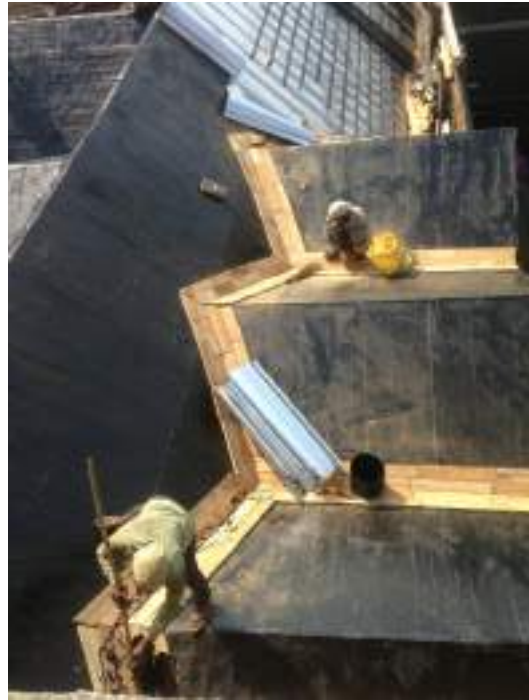


The restored roof.

Images to the right showing the process repairing the roof- dismantling, laying with waterproofing layers.

Bottom left and middle images show the roof boarding work from the interior of the central roof.

Bottom right image shows the restoration work of the spire and the water proofing of the roof.





Images showing the restoration work of the central tower roof.

Terrace water proofing

In order to repair the flat terraces, multiple layers of waterproofing had to be dismantled, the damaged rafters replaced, fixed boarding over it. This was followed by a layer of brick bat coba and reinforced bitumen tar felt. After providing for necessary slopes, it was finished with a cement mortar layer mixed with waterproofing agents.

The flat terrace adjacent to the Central Tower, facing the Oval Maidaan was different from the remaining terraces. While dismantling the lime coba we discovered 6" thick limestone slabs placed over the teak wood boardings of the slab below as an additional build-up layer. These slabs were in excellent condition and dismantling was not recommended by the consultants. It was hence decided to directly lay the waterproofing over the existing slabs and lime coba which was also in good condition thus retained. Specialized treatment was carried out to seal the joints of the original lime coba and the new brick bat coba layers to avoid any water seepage.



Images showing the stages of structural consolidation and terrace water proofing of the flat roof facing the Oval Maidaan.

Structural Restoration of verandahs

Running along the west and east, the verandah floor slabs have had to face severe damages due to constant and very heavy monsoons over the years.

While dismantling the floor tiles, boardings and rafters, it was noticed the entire length of the rafter, was embedded in lime coba slab above it. Both ends of the rafters was embedded in the walls, one interior wall and the other was the exterior baluster wall. This detail caused all the possible deterioration as the length of the rafter was constantly exposed to moisture from the lime slab, while the ends were also exposed to moisture from the walls.

After multiple investigations, the consultants proposed a different detail of construction. The load bearing capacity of the rafters was increased by fixing additional 8mm thick M.S plates, over each rafter. The teak wood boarding was placed over the rafters and R.C.C. slabs were to be cast over it. While restoring the rafters, the ends were coated with a layer of Black Japan and polythene sheets and then embedded in the walls. The boarding too were coated with bitumen to reduce the impact of moisture exposure on the wooden sections and thus increasing the life of the all the members.

These steps were undertaken while retaining the original aesthetics of the slabs. All damaged timber members were removed and maximum possible salvaged material reused wherever possible. The salvaged material too had an organised way to be stacked, stored and used.



The dismantling of the slab.



The fixing of the rafters with its edges coated in Black Japan.



The fixing of M.S plates over the rafters.



Left: The boardings coated with Black Japan.

Below: Placing of reinforcement above the black Japan coated boardings.

Last image below: The casting of R.C.C slab

Right: Casting of slab in progress.

Right middle: Curing of slab

Right last: Laying of cement tiles.



Finishing Works of Verandahs

Once the slabs were cast and structurally secured, these were to be finished with tiles. A heritage pattern found within the building was replicated in cement tiles. Every night our team worked on fixing the tiles and in the morning the same were covered with tarpaulin sheets and plywood so that public can continue to walk over it. Once the tiles were fixed, these were to be polished 7 times with varying grades of polishing stones and the final buffing layer was to be done using special chemicals. The original encaustic or Minton flooring found in the judges' verandahs, were only cleaned and not polished, as polishing would have damaged it further.



Images showing the process of finishing the verandah floors. Laying, levelling and polishing 7 times to gain a marble like finish.



Image above and right showing finished and complete ceilings with new fans and light fittings.

Ceiling Works of Verandahs

Another important part of the finishing works in the verandahs was of polishing the ceiling rafters and boarding. Due to the towering floor to floor height our team had to erect scaffoldings to access the ceiling level from below to take up the scraping and finishing works. Unlike fixing the floor tiles, it was not possible to erect the scaffolding at night and dismantle it the next day in the morning for public use. The ceiling works like scraping off the paint from steel and timber rafters, painting and polishing them, attaching light fixtures and fans were all thus completed.

Stone wall restoration

Apart from a few cracks there were no major structural issues in the walls. For restoring these, Helifix- a special stitching technique was used in which long helical bars were inserted in grooves created across the cracks at regular distances. A specialized team was deployed for this.



Images showing restoring the stone facade with Helifix.

Some stone balustrades had their top railing member displaced which were fixed back in place using SS Dowels and pins.

The stone railing of the judges' lounge had all its members entirely displaced. This railing assembly was carefully dismantled and re-constructed using the same members but with SS pins for additional supports and anchoring. Missing pieces were replaced with similar stone elements procured from the country.

Façade Restoration Works

Due to years of pollution, dust accumulation and natural weathering, the intricate details in the facade were dark, stained, chipped and ugly. Some were also causing minor leakage into the inner surfaces of the walls.

The continuous basalt façade surfaces were cleaned with water and surfactants without damaging the stone surface. In areas with very strong facade damages and layers of dust specialised techniques like sand and copper blasting were used. After cleaning the façade, the joints in the stone masonry were carefully re-pointed using lime mortar.

The building has some beautiful column capital, arches, lancet windows, rose windows, handrails, columns in Porbunder limestone that needed repair and restoration. Since it is a delicate material, these were restored with multiple techniques like poulticing, gentle cleaning with mild surfactants. We also carried out very delicate lime plastic repair works in few areas which involved carefully laying a thin layer of rich lime mortar over weath-

ered stone surface and original details were carved out from it.

The recurring corner Ficus were treated using biocides and then pointing grouted with lime mortar. The process had to be repeated multiple times as it recurred.

Considering the sensitivity of material and work at hand, skilled labour was deployed and was under constant supervision.



Using misting technique to remove years of dirt, dust and pollution.



Pictures showing cleaned, restored stone walls, arches column capitals along the public verandah.



A skilled personnel doing pointing of the stone courses.





A restored corridor.



Before stone cleaning.



After stone cleaning.



Some images of restored exterior or façades of the buildings.

Staircase blocks

The spiral staircase blocks had peeling lime plaster along its curved walls. Some portions of the original timber handrail too were missing.

All the loose plaster was dismantled and the walls were re-plastered with lime mortar. The missing or damaged wooden handrails were replaced with new ones of the same type and carving pattern.

Small tiles, of a pattern similar to the floor tiles, were to be fixed along the curved walls. The curved walls were a challenge and fixing demanded highly skilled labour. The top of the tiles was finished with plaster of paris moulding and were polished to match the finish of the verandah floor tiles.



Other verandah works

Lift cages

The lift shafts in the judges' corridor were visually chaotic and thus the consultant designed a cladding detail for it. The lift shafts were cladded with white painted plywood followed by fixing of 12mm thick toughened using stainless steel studs. This assembly of plywood and glass was further finished with vinyl stickers bearing the print of the pattern of the original cast iron grill gates present in the judges' entrance porch.



Water fountains, signages and other works

The High Court building has original decorative drinking water fountains in stone in the public corridors (2 on each floor). These were defunct and new water coolers were placed next to them. The consultants proposed re-charging the drinking water fountains through a central drinking water system. We were to restore the damaged stone water fountains. The fountains were carefully cleaned, missing sections of stone details replaced or replicated with new members of the same type, size, or mixed with stone dust to match the colours. The inner surface of the sink was finished with new layer of rich lime mortar to achieve a smooth surface. New brass taps of heritage design were specially customised and installed for these water fountains.



The images above shows the water fountain before and after restoration.

To the left are images of the lift along the judges' corridor, before and after restoration.

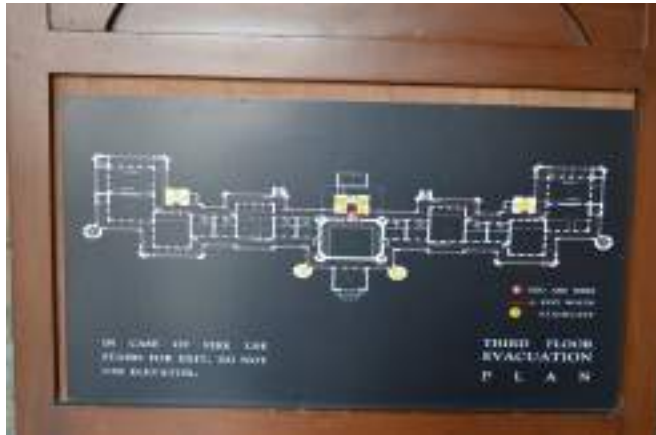
Extreme left is an image that shows a complete restored curved staircase with walls re-plastered, missing handrails fixed, along with new cement tile dado.



Images on the left below and right show the signage designs in timber and glass executed by us in the High Court premises.



designed with intricate patterns and minute details. Similarly, all the chambers and court rooms were fixed with new signages.



Interior Works

The interior upgradation works of judges' chambers and public toilets were mainly taken up for 3 reasons,

1. Structural Restoration of damaged sections due to water seepage
2. Upgrading the existing plumbing to a more systematic, visually less intrusive system.
3. Consistency in design and revival of the heritage character

Some original pieces of signages and furniture had survived in the building. Based on these original designs, the consultants standardized the designs for all the public furniture, which were then replicated on all floors. The original wooden benches and notice boards were

Judges' Chambers

The Interior refurbishment works of the Judges' Chambers was a major component of the phase II. It required coordination with multiple people like the honourable judges, their staff, the court office, the P.W.D engineers and the consultants. Also, we had to coordinate with different working agencies like the HVAC, electrical and data works. We along with the consultants tried our best to customise the space design as per the user requirement.



Pictures of restored interiors of the judges' chambers.

Within the chambers, only toilets had considerable structural damage, thus consolidation works were done only in these areas following the same process like the verandahs.

To retain the toilets within the chambers, an internal duct had to be made. This would help in organising the plumbing system and clean the visual clutter. This meant that we take up the interior refurbishment of chambers that were one above the other. We eventually did the plumbing but created temporary diversions till the chamber below/above was taken up for renovation.

For a holistic upgradation, the furniture, upholstery, wall finishes, floor finishes were all to be redone as per the Neo Gothic style. The consultants had finalised on cement tiles to match with the Minton flooring for the chambers and a checkered pattern of white and black marble, for the toilets. The chamber and toilet also had an intricate wooden rail and skirting detail for the walls.



A toilet in a judge's chamber.



Restoring heritage furniture.



Restoring heritage furniture.



Restored furniture.



A restored Judges' Chamber.



A restored Bar council room.

Door Works

The door openings had a specific design, capped with a timber and glass fan light in the judges' corridor and an intricately carved timber fanlight in the public corridor, each opening has two shutters opening inside and two shutter opening outside with a common door frame attached with parliamentary hinges. The double shutters that open outside have timber bracing with glass infill and the double shutters opening inside are two panelled with open-able louvres.



Design of the fan light samples from the public verandah side.



A restored door.

The original details were largely compromised upon. Packing up the fan lights, replacing the shutters with plywood and laminated doors, missing fixtures, broken glass infill layers of paint, were a common site. The damaged door parts were carefully dismantled and replaced with new members. Salvage material from roof boardings were used at places. Further, a specialized team carefully scraped off all layers of paint and finished with new thin layers of polish with natural finish. All the missing fixtures were replaced like the original.

Public Toilet Works

The public toilets in the building are located in the extreme north and south corners of the public corridors on each floor. Heavy seepage has caused major structural concern. Like all other areas the slabs of the toilet slabs were taken up for structural consolidation/re-construction after which the interior works of the toilets were done. The interiors of the public toilets were kept similar in design with river washed kadappa flooring and green marble dado.



Restored public toilet.

Ancillary Works

The public entrance to the High court lies along the east of the site behind the HSBC bank office. This side had two linear two storey R.C.C buildings; one to the south had the canteen block and one to the north had a few garages, an ATM, a tea stall and some offices on the first floor. Along the back of the northern building was a walkway connecting the High court and the P.W.D building. These buildings hid the eastern façade of the heritage building. Further, it did not match with the language of the complex. After realising these sensitive issues our team was given the job to demolish these structure and build a new canteen block, a covered walkway, compound wall and security bunkers. The compound wall design was to replicate the western side, base of which would be in stone masonry installed with M.S grill over the base.



The newly made covered walkway from the High Court building to the P.W.D building. The image also shows the compound walls with grills.

The covered walkway between P.W.D and Main Building

Behind this compound wall a new covered walkway was designed. The walkway has timber clad M.S columns, timber rafters and mangalore tiled roof. The flooring of the walkway was paved with 4" by 4" basalt stone blocks. The small patch between the walkway and compound wall was covered with a small lawn.

Canteen Block

A new ground storey canteen block with pitched mangalore tiled roof and stone walls was constructed instead of the existing R.C.C block. The roof was fabricated using well-seasoned Burma teak wood members with mangalore tiled finish. The walls were made in large stone slabs specially procured and hand dressed individually by skilled workers. The canteen furniture was replaced with newly designed wooden benches and tables.



Timber roof over the new canteen building block.



Constructing the canteen block.



The new canteen block with benches, tables and roof.



Constructing the security bunkers.

Security Bunkers

The security bunkers were made of sand bags with G.I corrugated roofs. The bunkers were dismantled, new framework of M.S columns and wooden roofing members with mangalore tiled roof were erected and the bund walls were constructed in stone masonry similar to the compound walls.

Roof Restoration of P.W.D Building & Annexe Building

Our team was also appointed to carry out the roof restoration works of P.W.D building and of the annexe building. The process of restoration was followed similar to the main building.

Museum Works

Another prestigious works that was awarded to Savani Construction was setting up a Museum within the Bombay High Court premises. It was setup in Room No. 14 on the ground floor which required basic restoration works. Our team took up civil restoration of the works including lime plaster of walls; scraping and polishing of ceiling rafters and boarding along with restoration and polishing of existing doors and windows. Existing floor tiles were dismantled and floor was levelled before finishing with heritage pattern cement tiles. The interior works involved extensive timber panelling of walls with well-seasoned teak wood. Also, as per the design our team had carved out various emblems out of single piece teak wood planks to be fixed at the top of the wall panelling. Customised furniture like replicating



A view of the museum interiors completely restored by Savani Construction; cement tiles as per heritage pattern, restored walls, ceiling new panelling, displays etc.



The new exhibition panel, wall panelling and flooring in the museum.



A view of the door restoration, flooring, ceiling rafters and complete civil restoration works of the museum.



Left:
Timber Chairs
with the em-
blems carved
at the head.



Right:
The traditional
court diora-
ma.

a special diorama of dais, witness box etc to replicate the traditional court scenes, artefact display cases, information panels, artefacts pedestals were all fabricated and installed by us. Best quality teak wood was used to match the existing heritage designs of furniture found within High Court premises and as directed by the consultant.

The Museum was inaugurated by the Hon'ble Prime Minister of our Country which was another proud moment for our team.



Top Image: The diorama of a traditional court with a scaled model of the Bombay High Court in the museum.

Bottom: Customised Display case.





In retrospect

The restoring works at the Bombay High court brought to the forefront an almost endless number of challenges in all aspects of our expertise. Be it time, space, material, skill, labour or the number of consultants and stakeholders. Yet, the satisfaction the decade long project gives, surpasses all the work we have done so far. We continue getting assertive and positive feedback from the users till this date.

Projects like these have reinforced our faith in being the 'जीर्णोद्धारक' (In Sanskrit means 'Restoring the lost Glory'.)

We at Savani Constructions vow to continue our rigour towards bringing Mumbai to its lost glory, one building at a time.



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