

ICOA1434: E SAFE CONNAUGHT PLACE PORTAL

Subtheme 03: Protecting and Interpreting Cultural Heritage in the Age of Digital Empowerment

Session 2: Use of Digital Technology for Dissemination and Interpretation

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Abstract: Connaught Place was designed as a part of the Imperial Delhi construction effort. It was a grand urban statement with a central park, three circular avenues and a double height public walkway colonnade in the innermost circle.

However, as the British purse ran out of money, its construction happened as a private initiative, resulting in a scheme of dividing the circus into pies, and selling these segments to individual buyers. The spatial arrangement and construction materials of each segment varied depending on the needs and financial resources of the owner.

Connaught Place has been constructed layer by layer over the past 85 years and is inhabited by a range of owners, tenants and non-status occupants. Inappropriate interventions, age and neglect in carrying out timely repairs are resulting in declaring this robust heritage 'unsafe'.

We propose a strategy involving various custodian groups. First, we envisage a Heritage Dispensary in each block which will serve to create solutions to retrofit the structure and services. Second, we propose the E SAFE CP PORTAL with an occupant user interface. This will serve as a virtual repository for recording the status of the historic fabric. The progressive documentation done on this portal will be used to generate typologies for intervention management of the heritage at multiple levels.

The E SAFE CP PORTAL will serve to bring together the occupant and user community to manage the change of the historic resource and ensure structural stability of the built fabric. It will also ensure life safety of the users by delineating emergency evacuation processes and routes. Together, the city authorities and the occupants will function as a group who will shoulder the responsibility for the sustainability of this heritage resource.

Key words: *community, memory, participation and management*

HISTORICAL CONTEXT

Connaught Place at the time of its inception was conceived to be the Cultural-Residential-Retail hub for the Imperial city of New Delhi.

Dec 1911 at the Delhi Durbar King George proclaimed the transfer of the capital of the British Empire from Calcutta to Delhi. Lutyen's bibliographer records that a new metropolis for the Indian sub-continent was announced with the intention of creating an architectural splendour, an Anglo Indian Rome.

In 1917 Nicholls set down the planning parameters for Connaught place which was subsequently designed and detailed by Robert Tor Russell the Chief architect to the Government of India. It was a grand urban statement with a central park, three circular avenues, two concentric circles of buildings divided into blocks, a double height public walkway colonnade in the innermost circle and radial roads to connect the circles.

Connaught Place was planned to be executed as a part of the Imperial Delhi construction effort. However since the British purse ran out of money land was sold in parts pie shaped to individuals. Stringent urban design guidelines were set to form the grand Circus around the green called the Connaught Place. The construction was commenced in 1933.



Fig.1- 1930's aerial photography, S (Imperial Delhi pg 246)

The Prime concerns were to display good workmanship use durable material and create a solution based on FINANCIAL REALITIES.

The Concerns Today

The original ownership pattern of land in Connaught place was based on the financial capacity and aspirations of each owner, each built an individual segment of the pie, forming a part of the larger grand design.

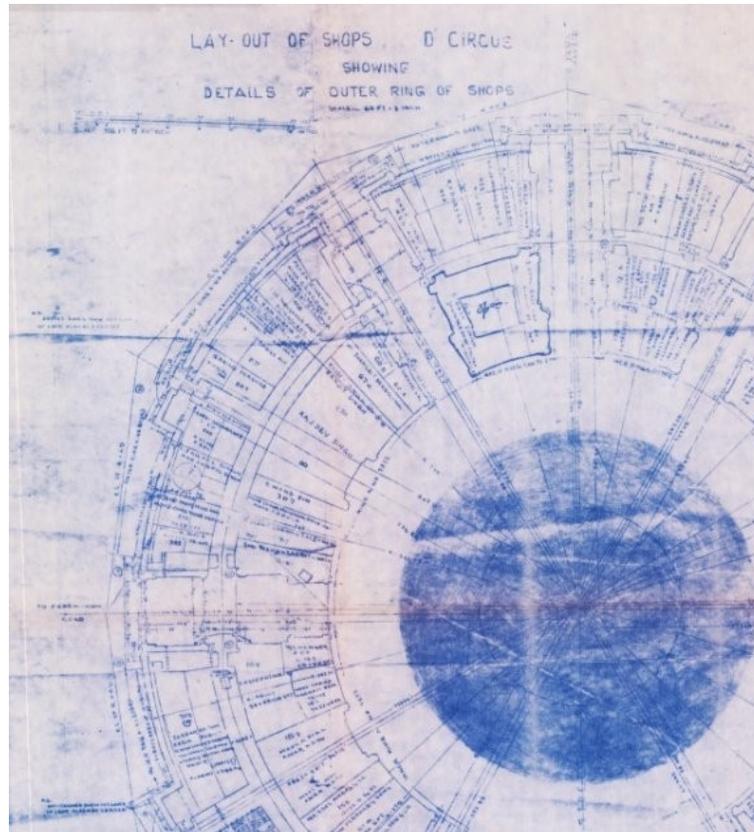


Fig.2. Plot ownership plan (LNDO archives)

Post Independence the ownership of land was transferred from the British crown to LNDO. Along with independence the city had to deal with partition of India leading to the exodus of people from India to Pakistan leaving a number of properties with disputed titles and non status residents.



*Fig.3- British India May 1947 Mahattas and Connaught place 1950's Alkazi photo collection
Homai Varawalla, B. Navsari, Gujarat, 1913-2012*

Over the past 85 years Connaught Place has been built upon by a range of owners, tenants and non status occupants. Post 1947 subdivision of property at multiple levels, inappropriate interventions, age and neglect in carrying out timely repairs have resulted in declaring this robust heritage 'unsafe'.

There is a need to come up with a system for its heritage management of this complex entity which will take into account the authenticity component of this heritage, foster the growth of this hub as a cultural-retail-commercial-recreation centre, along with ensuring safety parameters for people and the historic fabric and simultaneously evolving solutions which ensure economic growth and viability.

Post independence development plans for Connaught Place Reviewed

The vision to make CP the financial District for Delhi was initiated with the master plan allowing for residential space to be used as commercial. The subsequent development plans were focused at maximizing the use of land by raising the FSI to 400, bungalows on Barakhamba Road and Kasturba Gandhi Marg erstwhile Curzon Road were raised to ground and multi-storey buildings were erected.

The change of the use regulation resulted in driving out the people residing on the first floor of Connaught place. Commercial establishments were set up on the first floor level; thereby a need for much more parking and energy resources was generated. The relationship of the buildings with the inner circular plaza was lost adjacent to the colonnade by replacement of the motor able plaza to a parking lot.

Inflation and an archaic rent control act prevented owners from getting a reasonable income from the property leading to neglect and deterioration of the historic fabric.

Detrimental development pressures on Connaught place were taken into cognizance and the FSI was reduced from 400 to 250. This too was found to be unmanageable hence the FSI was again brought down to 150 for commercial use till date.

The Central Park in the original scheme was as a central green lined with trees in direct relationship to the central avenue, which in turn abutted the Inner Circle double height colonnade.

The development scheme in Connaught Place provided for underground Palika parking and Palika market in the green on the south of the central park. Both the efforts did not achieve the desired goal as the need for parking and the informal retail only grew.

With the Metro coming into Connaught Place the Central Park was redesigned and somewhere the historic sightlines and connections were lost both physical and visual along with the intent of a green recreational core being an integral part of the spatial experience.

CP Redevelopment Initiative reviewed

Connaught Place Redevelopment Project was launched with a budget of 76 Crores with an aim to uplift the façade. The project was initiated in 2007. Soon thereafter funds became available under the JNNURM

scheme and an extensive Redevelopment Plan was approved for a sum of 671 Crores, to be completed by July 2010 it was however completed in 2013.

The first phase was planned to augmentation and up-grade the engineering services, façade restoration and provide a centralized chilled water air-conditioning system. The second phase would deal with a comprehensive re-development plan covering traffic, parking and landscaping of the entire Connaught Place.

The Agencies Involved was “New Delhi Municipal Corporation (NDMC)” as the client; Engineers India Ltd (EIL) as the Consultant; the approving authority was Delhi Urban Art Commission and funds were made available from both State and Central Government in addition to the special funding from the JNNURM allocation.

The redevelopment restoration scheme only addressed the front elevation and ignored the possibility of structural stresses within the building, manmade and age related problems.

The historic built fabric disregarded during the façade restoration operation.

EIL made very superficial studies of the façade unrelated to the robust and the original construction materials, the workmanship and techniques of construction had withstood the test of time.

They disregarded materials used extensively in the historic construction brick and baked clay components specially cast for the roof structure, set in lime mortar and plastered in lime plaster finished and very beautifully with precise geometric mouldings. Some of the latter construction also used concrete which was reinforced with iron bars.



Fig.4- Connaught Place façade prior to Redevelopment

The buildings were subjected to unsympathetic treatments like plastering with cement based mortars which did not match in strength and breathability of the original. During the execution sound and strong

lime plaster exquisite mouldings were hacked mercilessly and replaced with misaligned aligned badly executed façade elements leading to a loss of the authenticity.



Fig.5- Historic fabric damaged



Fig.6- Lime plaster and mouldings replaced by Cement plaster

The redevelopment proposal missed addressing the critical problem of the structural roof distress. The historic roofs were built of iron bar reinforced C shaped baked clay components placed upside down one on top of the other. Damp intrusion over a period of time has caused rusting which has resulted in an increase of the volume of the iron bars. The expansion of the volume of Iron bars has dislodged the lower C section of the baked clay component, making the slab unsafe.



Fig.7. Historic roof structural system

The EIL implementation programme disregarded the construction complexity, age and history and that each piece of the pie had a different construction system and a spatial typology. Insensitive incompatible single cement mortar repair treatment for the entire façade has erased history and the geometric precision of the original workmanship in lime and brick is lost forever.

The Failure of the Redevelopment scheme to address the key issue of scientific conservation and revitalization of the cultural- commercial- retail hub of Central Delhi, to make it safe, throbbing and accessible, has brought to light that efforts are required to create a spirit of community among the inhabitants of each segment of Connaught place and evolve a digital platform for their interaction, to raise the level of scholarship of the heritage resource along with building capacity within the group to make interventions beneficial and safe for a larger community.

Connaught Place Virtual Heritage Network

The network envisaged engages with both the people and the place simultaneously. Having understood that the key issue is to find a common ground for the inhabitants, owners, custodians, users and government funding and administrating bodies to share responsibility and enhance revenue generation capability of the stakeholders in Connaught place; having noted that the original construction was done on originally delineated plots over a number of years with multiple materials and technology; the key to ensuring structural safety is creating a platform for information sharing among all people linked to this heritage.

The Virtual Digital Platform is visualized to address the interrelated structural systems and spatial configuration on multiple levels for each space occupied by individual inhabitants and to make a very clear connect between the current space occupied by an inhabitant in relation to the original construction on the historic plot allocated to the original buyer.

A Unique ID can be created which will link the space and the primary inhabitant to manage the level of accessibility in the network. The ID code will comprise of a Block designator: Original Plot designator: Level Designator and the Primary Inhabitant unique designator.

Virtual network will be created to assist formation of sub groups based resolving an issue pertaining to a specific location, use and space typology.

The People Place Interface

The interface will provide for interaction in both the real and virtual world. At the first level the virtual platform will be used to share information between all the members occupying one historic plot. The inhabitant ID will be based on the inhabitant status which may be the owner or the tenant or the custodian or a service provider or an informal occupant.

The digital portal will open up for each inhabitant to upload data which can be in the form of oral history, photographs, statistics, economics, events, drawings and documents. The upload will be sorted based on the type of information attribute like construction, history, association, education, culture, entertainment or any other relevant head.

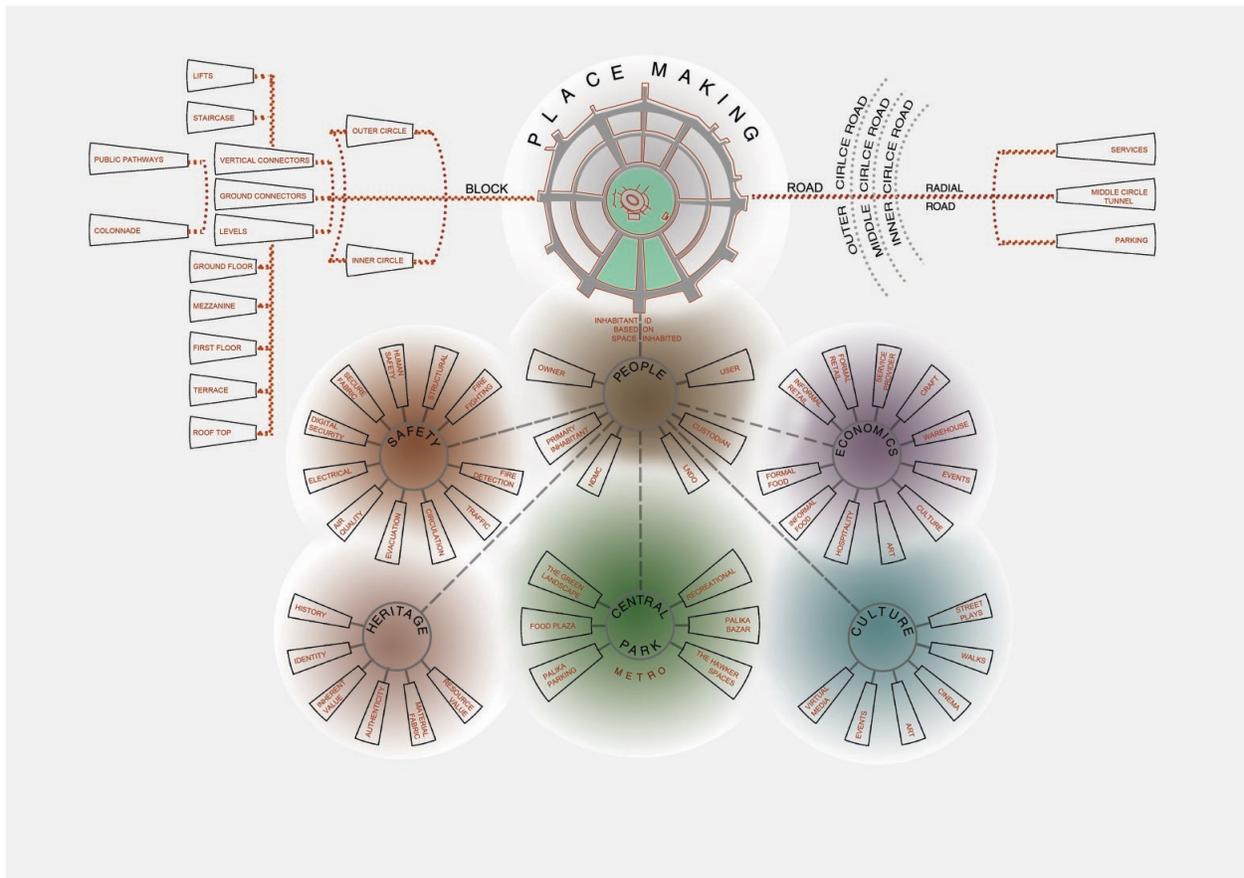


Fig-8- Virtual Connaught Place Connect Structure

The inhabitant will have the ability to choose to keep the information secure or to share regarding all matters except those pertaining to safety. The Portal will serve as a tool for information sharing to make informed decisions. It will assist to build in safety into an intervention plan on the existing fabric both built and open.

The real world interface will be a block heritage dispensary which will be established to manage information for each block. It will foster interaction between the inhabitants, users and professionals to ensure a healthy sustainable optimal utilization of the heritage resource.

Heritage professionals will be engaged through the virtual interaction to contribute towards developing a detailed documentation and non destructive diagnosis procedure along with a format for information management to ensure structural, fire and human safety. Professionals will be requested to dedicate time and review the information provided by individual inhabitants to generate a cohesive data base to be used for intervention planning with a goal to retain the authenticity of the historic fabric and to ensure the safety of present one. Post diagnosis analysis will be undertaken to study load transfer patterns and look at typical zones which are susceptible to failure. Digital methods of three dimensional recording like the point cloud survey can be used which is very fast and accurate. Human safety measures will be given paramount importance.

Costs sharing modules by inhabitant groups can be devised in a consultative forum.

User and occupant community groups can be created for making choices for optimization of valuable spatial resource. The Radial lanes reorganization of haphazard services can open up hidden pockets which can be effectively planned. Once the back of the house is organized, activities can be planned to increase footfall and revenue.

Emergency exits and access and evacuation routes have to be worked out by all the inhabitants together. A single staircase serves multiple levels used for various activities ranging from warehousing to commercial, retail and many others.

Inhabitants on a single plot can work out solutions to ensure that the roof top is well kept, safe from damp ingress, and most the heavy equipment is placed with well designed structure to transfer load to appropriate structural components from the roof to the foundation. The potential for roof top for activities is utilization is to be explored.

Conclusion

This proposal has been presented to the New Delhi Municipal Authority who can use funds allocated for the Smart City project to run the Connaught Place Heritage Network Portal. Political will and pressure from people who have common aspirations is required for this vision to be a reality, to help establish mutually beneficial goals by connecting people; to use the historic ethos as inspiration to innovate... make solutions for needs of today; to revive the memories of the place being a theatre, a shop a recreation and cultural hub.

Connections beyond Connaught place for economic revival can be made. The plot communities can expand to Block communities and finally have an outreach beyond Connaught Place. Groups can work towards space adoption by agencies that can fund revitalization efforts as a fulfilment of a role of being socially responsible. Communities can reach out to government, non government, corporate and professional groups to take up documentation, diagnostic studies and intervention proposals.

The building industry can be given economically viable opportunities to market compatible materials and technology for restoration and structural retrofit. A supply chain of historic materials like lime mortar, plaster and baked clay components to match the original can be put in place.

Economic regeneration can be undertaken connecting businesses to help develop models which can thrive in this heritage zone.

Finally create together innovative solutions for this dynamic heritage which enhances its inherent value and simultaneously ensures a feeling of safety, well being, joy and economic prosperity for all the inhabitants and the users.

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List of Figures

Fig.1- 1930's aerial photography, source: IMPERIAL DELHI pg 246.

Fig.2- LNDO archives plot ownership plan

Fig.3- British India May 1947 Mahattas and Connaught place in 1950's, Alkazi photo collection, Homai Varawalla, B. Navsari, Gujarat, 1913-2012

Fig.4- Connaught Place façade prior to Redevelopment

Fig.5- Historic fabric damaged

Fig.6- Lime plaster and mouldings replaced by Cement plaster

Fig.7- Historic roof structural system

Fig.8- Virtual Connaught Place connect structure

ICOA1434: LE PORTAIL E-SAFE DE CONNAUGHT PLACE

Sous-thème 03: Protéger et interpréter le patrimoine culturel à l'ère de l'autonomisation numérique

Session 2: Utilisation de la technologie numérique pour la diffusion et l'interprétation

Lieu: Silver Oak 2, India Habitat Centre

Date et heure: 14 Décembre, 2017, 09:55 – 10:10

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Le travail inclut la gestion des ressources culturelles, Cultural Resource management, Réutilisation adaptative du patrimoine bâti, conception contextuelle, initiatives de sensibilisation par génération, et enseignement en tant que professeur invité à l'École de planification et d'architecture, Département de la conservation architecturale.

Résumé: Connaught Place a été conçue comme un élément participant de l'effort de construction de la Delhi Impériale. C'était un grand geste urbain avec un parc central, trois avenues circulaires et une promenade publique à colonnade sur deux niveaux dans le cercle intérieur.

Cependant, comme l'argent public britannique vint à manquer, la construction en a été confiée à des initiatives privées, le cercle a été divisé en tranches, dont chacune était attribuée à des acheteurs individuels. La disposition spatiale et les matériaux de construction de chaque segment variaient donc ainsi en fonction des besoins et des ressources financières de chaque propriétaire.

Au cours des 85 dernières années, Connaught Place a été construit couche par couche et est habité par toute une gamme de propriétaires, locataires et occupants sans titre. Des interventions inappropriées, la vétusté et la négligence dans la réalisation de réparations en temps opportun ont abouti à ce que ce patrimoine pourtant robuste soit déclaré «*dangereux*».

Nous proposons une stratégie impliquant différents groupes de dépositaires. Premièrement, nous envisageons la création d'un

«*Dispensaire du Patrimoine* » dans chaque bloc qui servirait à trouver des solutions pour moderniser la structure et les services. Deuxièmement, nous proposons un PORTAIL E SAFE CP* avec une interface utilisateurs/occupants. Cela servirait d'archivage virtuel pour l'enregistrement de l'état et la composition du tissu historique. La documentation progressive réalisée sur ce portail servirait à générer des typologies en vue de la gestion des interventions sur le patrimoine à plusieurs niveaux.

Le portail E SAFE CP servirait à rassembler la communauté des occupants et des utilisateurs autour de la gestion de l'évolution de cette ressource historique et d'assurer la stabilité structurelle du tissu bâti. Il assurerait également la sécurité vitale des utilisateurs en précisant les processus et les itinéraires

d'évacuation d'urgence. Ensemble, autorités municipales et occupants pourraient ainsi fonctionner comme un groupe qui partagerait la responsabilité de la durabilité de cette ressource patrimoniale.

Mots clés: communauté, mémoire, participation et gestion