

So the object building will transform society?

A programme that understands the relationship between animal survival, human culture and folklore, while also becoming a driver for socio-economic upliftment is translated into architecture, its language and systems of construction

Design
Kamath Design Studio

Text
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Kamath Design Studio

Not always is a tabula rasa necessary for the making of thought-provoking architecture and evocative spatial narratives. The challenges of working within 'the existing' outnumber by far those that one encounters on a more-or-less blanket site. I remember engaging with students and professionals who assume that for an architect, the greatest sense of (supposed) artistic freedom comes from the ability to shape the 'object' unencumbered — to conceive of the building 'completely' without the constraints of an imposed physical structure. In fact I have often argued with professionals and students to insist that, well, you are just plain wrong. A glance at contemporary architecture in historic contexts shows one what the adaptive re-use and the rehabilitation of older buildings can do for the discourse of architecture. So much so that the last chapter of the European Union Prize for Architecture¹ celebrated what by now has become a significant genre within architectural production by awarding its top honours to projects that masterfully served to rehabilitate existing buildings. Closer home, we still need to see a significant developing culture in terms of renewing buildings — one remembers the dramatic transformation of the C J Hall in South Bombay into the four-storeyed National Gallery of Modern Art by Eero Saarinen in 1996, as well as the expansion of historic buildings by Brinda Somaya, again in Bombay.

But not always does the older fabric need to be 'historic' or necessarily 'significant' for it to be saved and adapted for re-use. Often it just makes economic sense to do so. Revathi Kamath's Tal

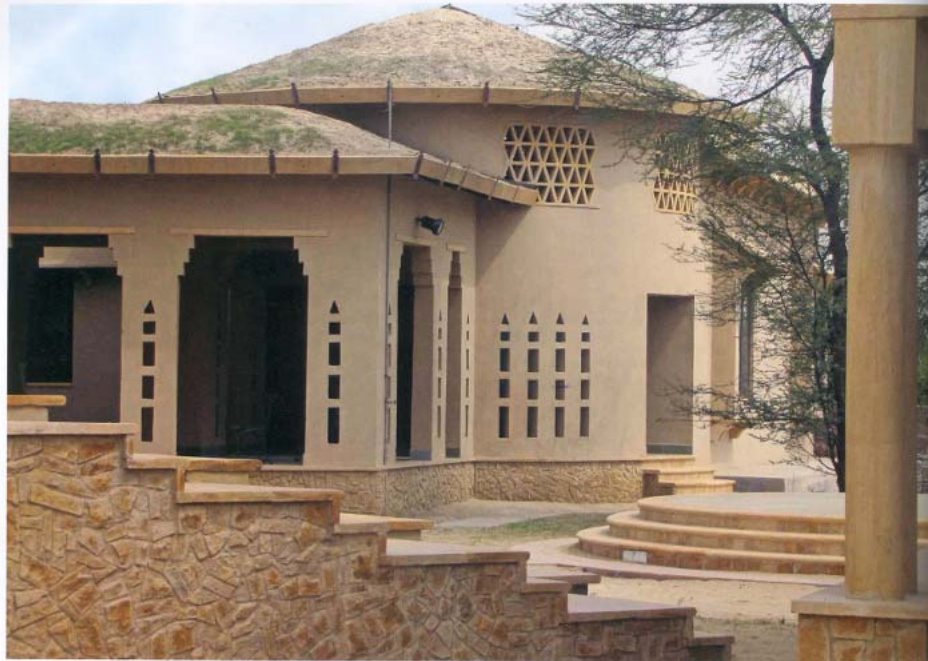
Chhapar project is an example of this. But that is perhaps only the smallest aspect of significance in what can be seen as an important programme of transformation that not only deals with the physical aspect of the 'building' but also with the context within which the buildings assume their presence. This project is a manifestation of all the 'other' processes that entail the making of the building, where the actual 'making' of it becomes the means to an end — the crucial final gesture within a web of interdependency and socio-economic concerns that leaves us with lasting impressions in terms of the larger ramifications of building practice and continuity of craft traditions, with a renewed understanding of our roles as architects and our corresponding social obligations within a post-colonial, post-global nation.

Let us begin with the setting. Tal Chhapar in Rajasthan (*Tal* means 'flatland' in local lingo — the region is a Savannah-like grassland — and Chhapar is the name of an adjacent settlement — literally the 'flatlands of Chhapar') is a 715-hectare blackbuck antelope reserve in northern Rajasthan carved out in the 1960s of what used to be the hunting grounds of the Maharaja of Bikaner. Encroachment into their habitat (the sodium content in the soil and the availability of fresh water draws them to this region) has meant that human-animal interactions have increasingly become violent — with a few of the animals killed due to their straying into cultivated land. This is in stark contrast to the traditional symbiotic relationship shared by local communities with the animal. The antelope wanders freely within inhabited settlements, and millennia of



Tal Chhapar

The building is located in a 715-hectare Savannah-like grassland in northern Rajasthan — home to blackbuck antelopes



human contact has meant that these proud and elegant animals do not shirk away from people. A transformative programme was needed — that would not only ensure the animal's survival and its continued intertwining with human culture and folklore, but also become a driver for socio-economic upliftment and women's empowerment. A nodal agency was established to cohesively plan and actualise an integrated strategy that involved various Government departments and the local administration. The focus was on achieving an ecological balance that would enable the creation of sustainable livelihoods. Enlightened political leadership has meant that a participatory process ensued wherein all stakeholders such as the bureaucrats, local panchayats, engineers, local politicians, social workers and the architects themselves (as shapers of the physical environment) became involved in structuring a future for the place.

One of the first tasks for the architects involved the outlining of an ecological programme and masterplan for the entire sanctuary. A highway that runs adjacent to the sanctuary will be shifted in the long term, as would be salt pans that have caused an increase in the acidity of the soil. The edge between the sanctuary and the adjacent inhabited areas was also in dire need of definition, as the antelope was being attacked by predators such as dogs and foxes. A long-term strategy of replacing the boundary wall with a traditional *dola* or a berm with thorny bushes has been chalked out. The building programme became intertwined



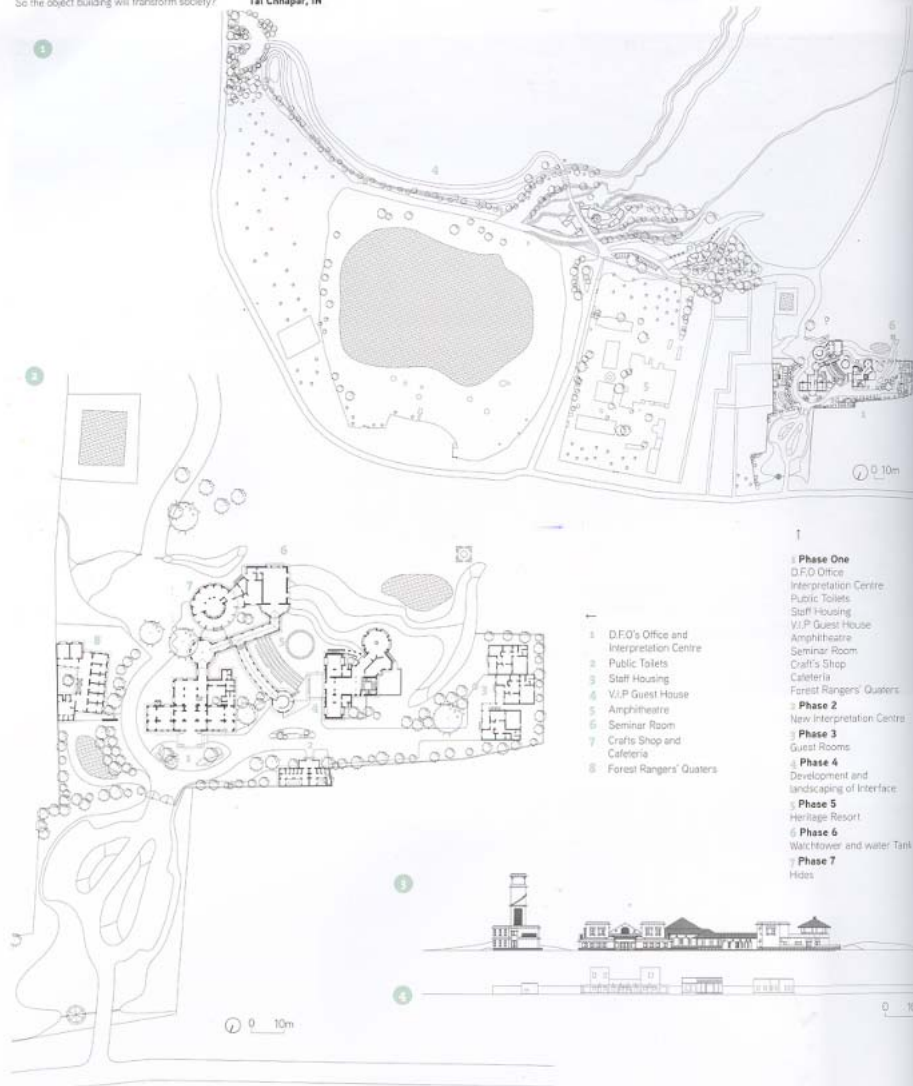
The buildings are so designed to be open and porous as compared to the earlier buildings, and they constantly are in dialogue with the landscape and the surrounding environment



The buildings sport a graft of stonework that has added a layer of 'localisation' as well as functioning as 'vents' to ensure pressure equalisation during frequent dust storms

with a programme for women's empowerment as well as the larger ecological programme. The first tasks involved the conversion of four disparate and disjoint extant buildings strewn across the landscape into a cohesive facility with a multi-dimensional functional programme involving an Interpretation Centre as well as Tourism-related facilities and accommodation, in addition to spaces for community welfare and vocational training programmes. This act of reprogramming and transformation of the building's physicality is a striking aspect of the project. Formerly closed and confined buildings have now become open and porous — with the 'insular boxes' now transformed into airy chambers for the free use of the surrounding populace.

The buildings now sport a graft of stonework that has added a layer of 'localisation' as well as functioning as 'vents' to ensure pressure equalisation during frequent dust storms. The most remarkable of these grafts is a three-storey high triangulated jaali that replaces former closed walls. Revathi Kamath sees the triangle as a translation of her experience with the black bucks — the patterns formed in the landscape by the animals and their antlers — as well as the patterns inherent in local crafts that come from black buck folklore. These jaalis, built completely out of local sandstone form a visually intricate but robust and sturdy iconographic image — and seem more abstract in comparison to the other stone features that are derivative of traditional forms — such as the chajjas and their bracket supports. But the architect



TAL CHHAPAR

Design
Kamath Design Studio

Principal Architect
Revathi Kamath

Design Team
Revathi Kamath, Shruti Soni,
Smriti Chauhan, Jasloerat
Sangra, Satendar Garg

Civil Contractor
Bhageerat Prajapati

Carpentry
Bhageerat Prajapati

Client
Government of Rajasthan

Location
Chhapar, Churu District,
Rajasthan

FACT BOX

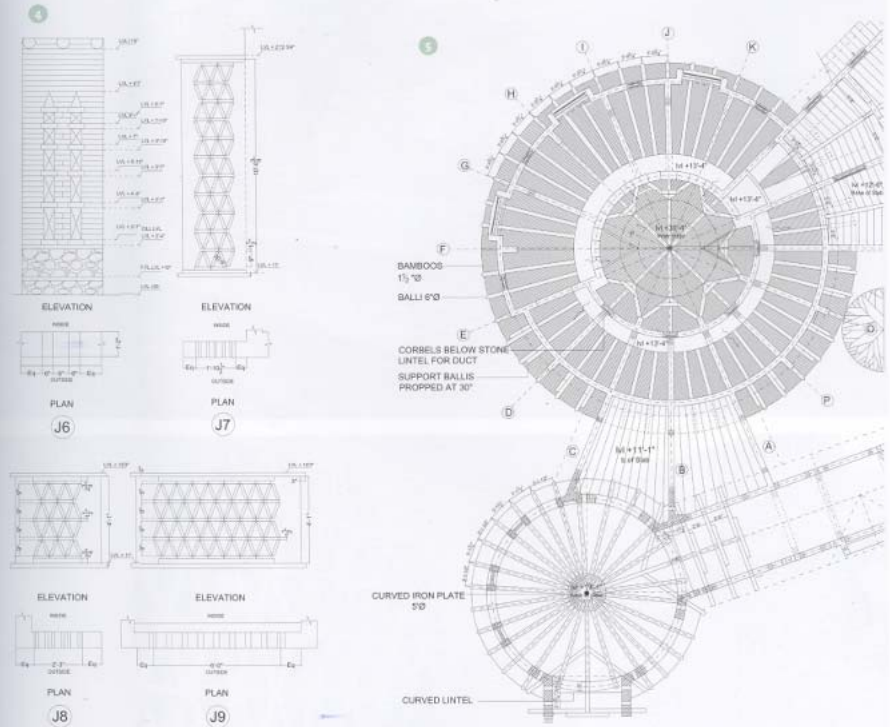
Project Area
7150000 m²

Built Area
350 m²

Construction Phase
2006-2011

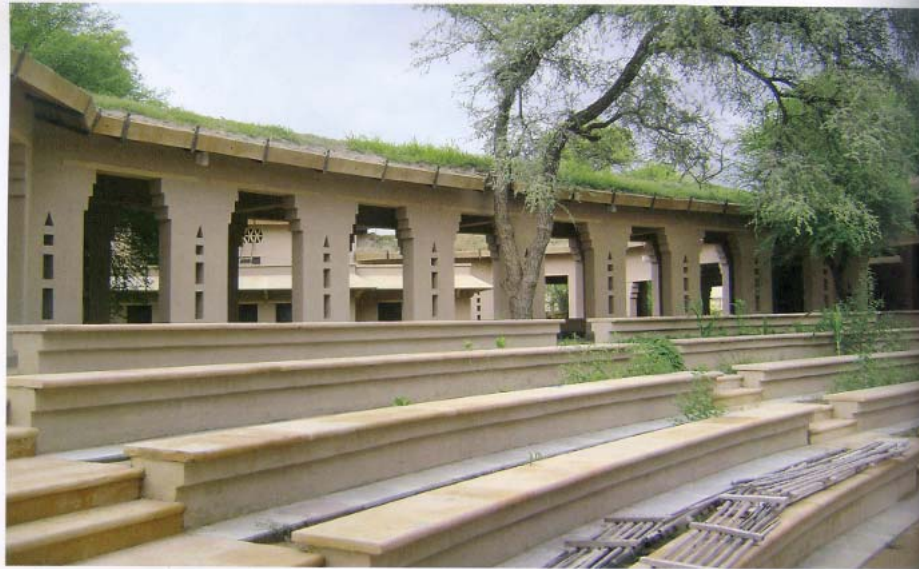
DRAWINGS

- 1 Site plan
- 2 Floor Plan
- 3 North Elevation
- 4 North Elevation (old)

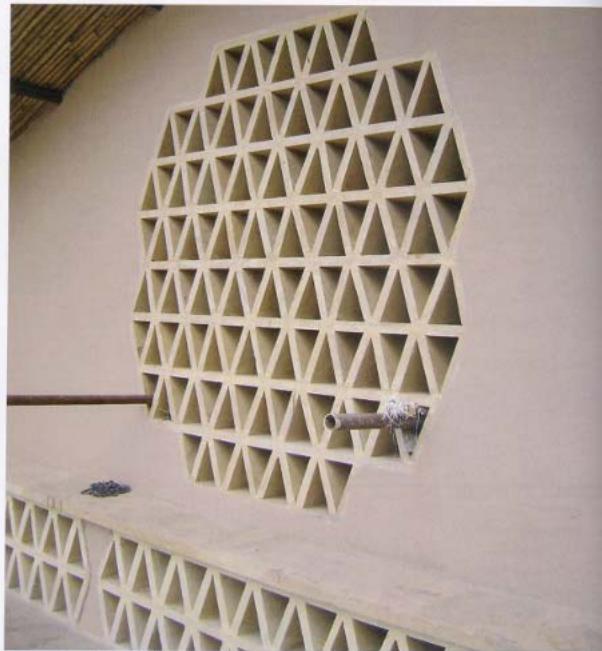


DRAWINGS

- 1 Jaali details
- 2 Ceiling details



The architect sees the triangles in the jaali as a translation of her experience with the black bucks — the patterns formed in the landscape by the animals and their antlers as well as the patterns inherent in local crafts that come from black buck folklore



does not see this as 'replication' — a term that she believes connotes to extinct cultures. Here, in contrast, the building traditions and craft cultures are still 'alive', she argues, and thus needs to be seen within the framework of continuity of aesthetic values and native intelligence.

Stone is used in more dramatic fashion for the newer extensions and additions to the project such as the covered verandahs — distinctly as sandstone lintels and hexagonal vents that float within the 'matrix of plastered brickwork'. The brickwork is articulated in minute detail — forming delicate corbels to support the sandstone lintels whilst also being built as a 'jaali' or massive screen — with a repetitive pattern of openings. A similar 'visual' character also pervades the architect's own house but she discards this as an 'idea' — rather choosing to regard it as a 'functional' strategy to mitigate a harsh climate without compromising on thermal mass and natural ventilation. Small openings within massive walls ensure that the sand is deposited outside the walls during dust storms as the air forces itself through the narrow openings' — a strategy that, now scientifically proven, has been adopted by native wisdom for centuries. Thus the interior spaces are always vented, but kept comparatively free of sand particles to a great extent.

The new additions also feature circular rooms in the form of the 'jhumpa' — a traditional desert typology in the region with thatched roofs. Here these 'neo-jhumpas' boast of an articulated triangulated steel frame that holds up a bamboo roof finally decked out in concrete. A layer of soil and grass imparts the thermal mass to the roof, thus lowering indoor temperatures. The use of renewables and materials sourced locally means that the building has an exceptionally small



ecological footprint. Wastes were used too — the stone comes from leftovers after slab-cutting from a nearby sandstone quarry and bricks from adjoining structures was recycled. The overall small dimensions of the stones used in the grafting exercise as well as the new jaalis meant that this was possible. This is evidence of a deep consciousness within the architects to 'make do with what is available' such that the act of building does not necessarily become the energy-intensive act of destroying the landscape, but rather becomes an active agent in reducing ecological damage.

The 'neo-jhumpas' boast of an articulated triangulated steel frame that holds up a bamboo roof finally decked out in concrete. Above: A layer of soil and grass imparts thermal mass to the roof, thus lowering indoor temperatures



“Like the 2011 edition of the Mies van der Rohe Prize, the winner was David Chipperfield’s remarkable transformation of the Neuen Museum, Berlin, Germany, with the Emerging Architect Special Mention going to a young Spanish practice Bushi Capdelero for their fantastic and aptly titled Collage House. Both these buildings stand at the opposite end of the ‘object-architecture’ trend.”

“Mud plaster was not used as it is ‘not legal’ as per PWD norms — the final building has the appearance of the mud-plastered walls of the buildings in the region.”

“This is also true for the triangulated grafted stone jalis — the ‘Venuri Effect’ as it is known also lowers the temperature of the air pushing in — thus ensuring a significantly lower air temperature.”

“A true ‘handmade’ building can be seen in those by the Aga-Khan Award winning Sarraf Architects in Rajasthan, as well as another acclaimed Aga-Khan Award winner — the Handmade School in Rudrapur, Bangladesh.”

“Here ‘solidarity’ is expressed with the people and the land — and not as an external influence or ‘imposing’ an overarching visual order.”

“The architect described how it was ‘not legal’ to use mud plaster according to the PWD.”

“The architect has deep regard for the PWD engineers who were instrumental in executing the project and understanding its conceptual aspects in terms of continuity of heritage traditions and local consciousness.”

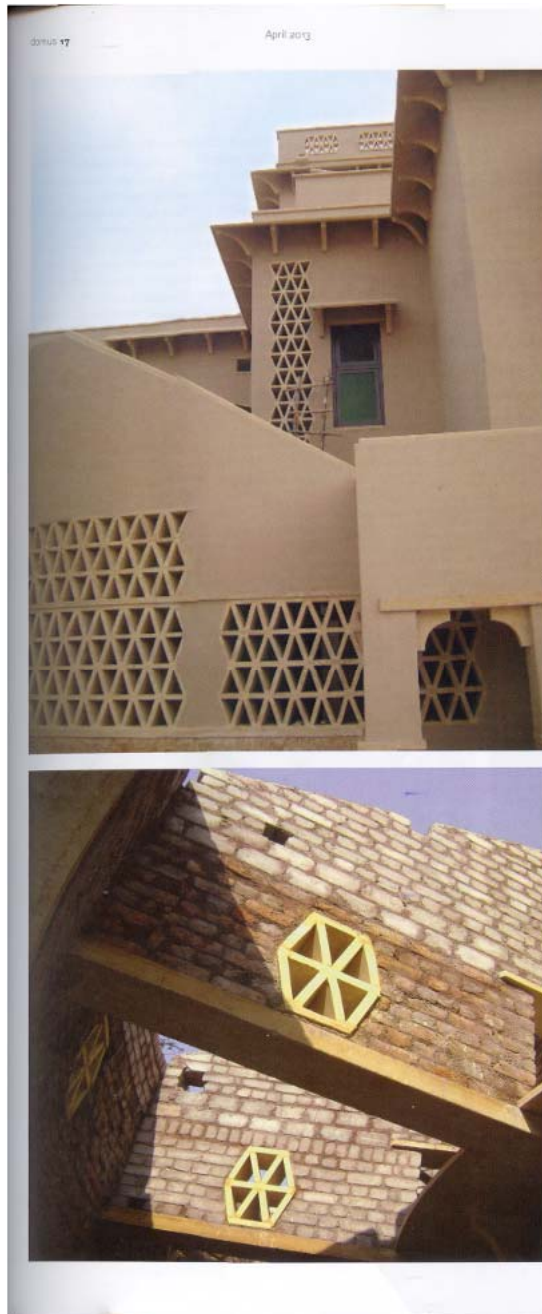
“Here the pragmatism is the polar opposite of what has been termed a ‘radical’ ‘pragmatism’ within contemporary architectural cultures of the Netherlands and lately, Denmark. Whilst these are driven by a bare-bones utilitarianism and adoption of industrial components and techniques, here, within a less industrialised context, one refers to the native wisdom and indigenous knowledge of the local populace.”

“Conversation with Revathi Kamath on 10 March 2013. This was said in context to an unfinished building within the Tal Chhapar context.”



This page: the spaces within the facility — such as the amphitheatre, the open verandahs linking the buildings, the crafts shops as well as the accommodation facilities ensure that the local population is supported and local women are trained in a number of crafts and vocations

Opposite page, bottom: sandstone lintels and hexagonal vents float within the matrix of plastered brickwork. Top: small openings within massive walls ensure that the sand is deposited outside the walls during dust storms



What is also remarkable is the manner in which the architecture becomes an active agent in the larger aims of economic welfare and wealth-distribution (and generation) programme that is part of the project. 70% of the project budget was spent towards the fees of local craftsmen in the building of this facility. The architecture is ‘close to being hand-made’. The spaces within the facility — such as the amphitheatre, the open verandahs linking the buildings, the crafts shops as well as the accommodation facilities ensure that the local population is supported and local women are trained in a number of crafts and vocations such that they can earn a livelihood. In this manner, the preservation of an endangered species has become the fulcrum in the restoration of the man-nature balance within a region, as well as a driver for economic and social transformation.

It is not often that architecture can become the mechanism of socio-economic engineering — but this project shows the dormant possibilities inherent within the act of building and its capacity to ‘really’ transform the lives of surrounding populations as well as making far reaching statements on sustainability and support of local crafts traditions — that in turn becomes the means of preserving cultural wealth as well as economic wealth distribution, besides relevancing these for our current times — in a country at the crossroads between advanced technologies and the persistence of vast craft traditions. What is important is that this project, much like the ‘Modernist’ programme, seeks a social transformation — but whereas the latter focussed on homogenisation and the adoption of a technological future, here this spirit is made relevant by contextualising it to a specific purpose and celebrating diversity and heterogeneity, yet adding a layer of coherence and solidarity of expression to a set of former buildings that stood at odds with their context. What is even more remarkable is that all this has been achieved within the framework of an archaic Public Works Department.* But it is also a testament of the latent skill and drive of the few intelligent individuals who are lodged within this behemoth† — as well as the finery in execution that is possible within this system.

This building is a direct outcome of the architect’s deep-seated empathy and pragmatism‡ of approach with respect to building. As has been established in an earlier essay on the practice’s Tribal Museum, the architecture is intentionally self-effacing and devoid of the ‘architect’s voice’ — a telling ‘anti-monumentalist’ reminder in our current age of ‘starchitecture’ that it is not always necessary to build an expensive, striking but alien ‘object-building’ to transform a context and focus public attention. Sometimes it can be done with humility and without much fuss. But with the approval, consent and participation of those for whom the piece of architecture is made for in the first place. And for this perhaps the architect’s premier task is to prepare the ground for an ‘appropriate’ building to be built when the time is right — by instigating an ‘authentic set of relationships that create the right environment for architecture’§

— SUPRIO BHATTACHARJEE
Architect