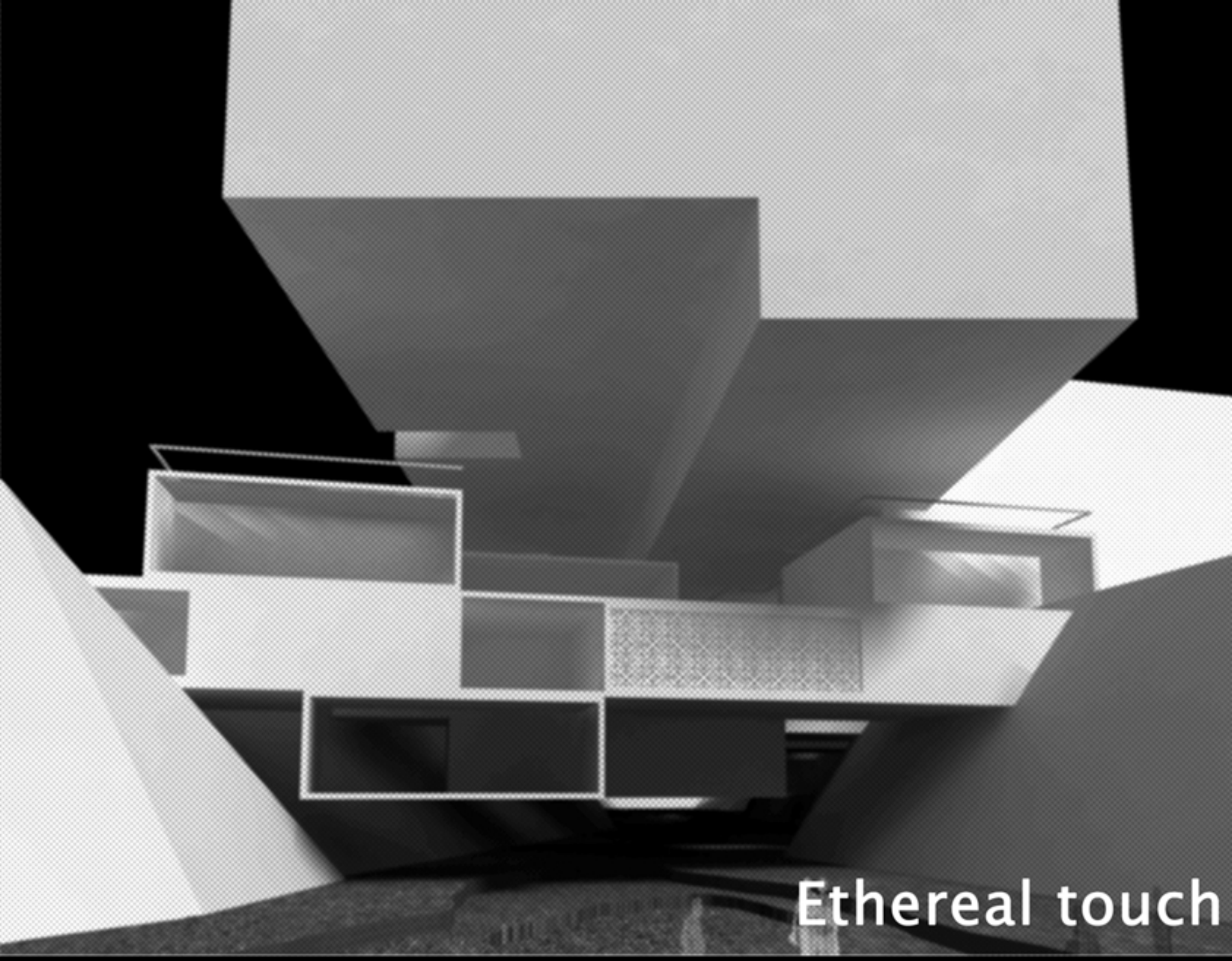

Ethereal touch
an unfettered dialogue

Low Impact Design

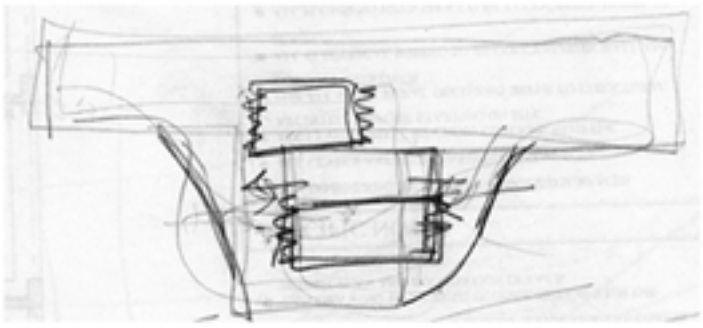
The proposal evolves on the lines of architectural intervention that protects and circumambulates the natural site features and thus incorporates them as an integral part of the design. To be able to reduce the impact of the intervention on the natural system, impervious surfaces are minimized, earth work is reduced and large extents of the site are left completely untouched by both building and thorough movement.

The design aims for “ethereal touch” through an exploration of an unrestrained dialogue between nature and proposed building. An interaction based on integration where nature is not imagined as a separate entity that needs to be either romanticized or controlled but rather is allowed its due space to thrive.

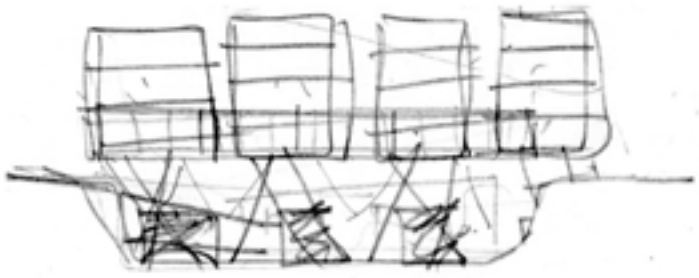
site planning

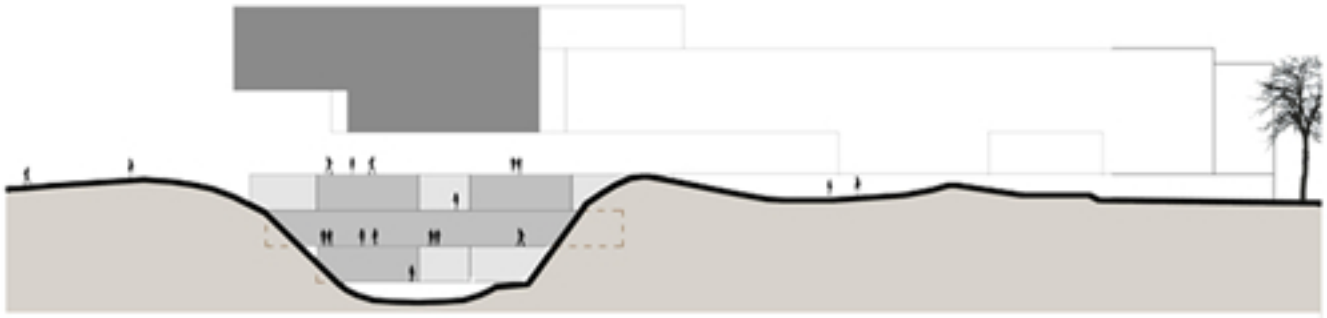
The designation of "BUILD" and "NO BUILD" zones helps in the creation of high density pockets as well as conservation zones to maintain a natural and ecologically balanced environment. The peripheral part of the site clearly reflects an internal zoning idea where the housing and academic areas express themselves on the edge. A parking wall along the periphery is a very conscious gesture. This is to ensure that no vehicular road cuts through site and the site is largely pedestrian. A service road runs along on the edge of site. Most building orientations are as per climatic considerations: longer edges of buildings face north/ south sides so as to be exposed to less radiation.

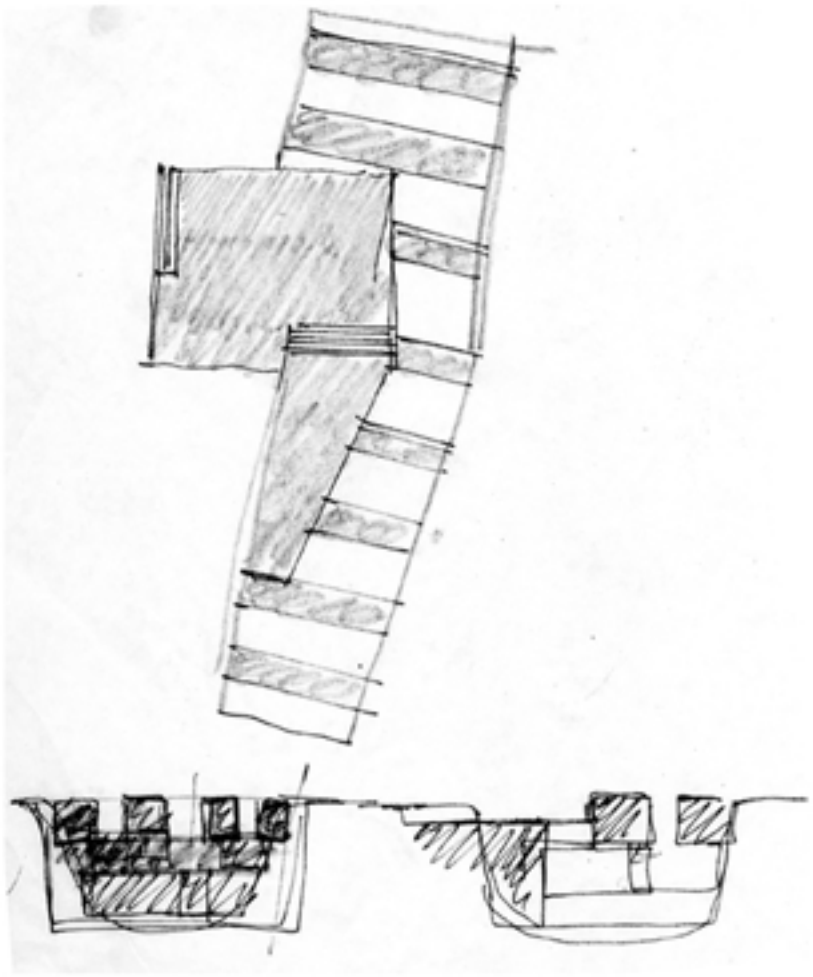
academic building

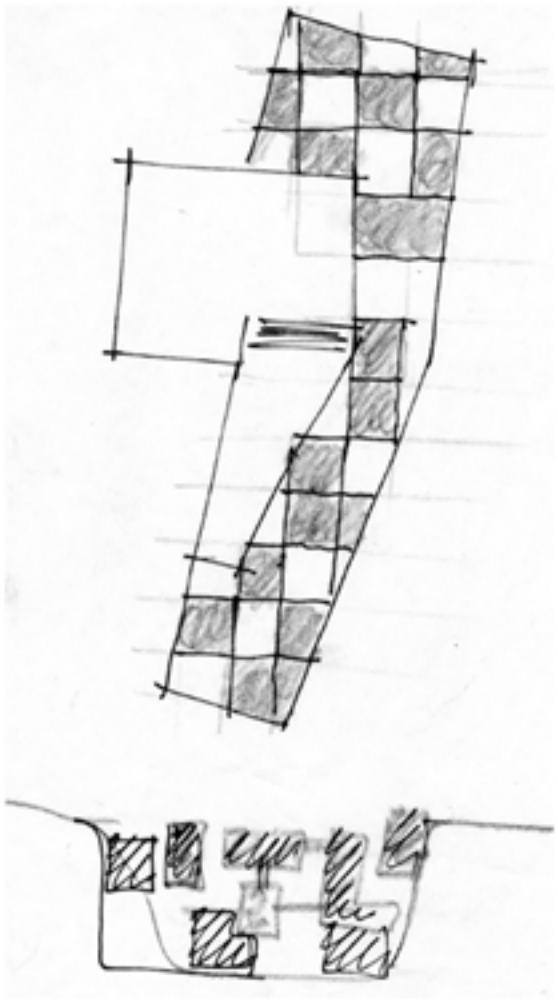


The interesting profile of the gorge on the site has been exploited to cater to the academic building. While letting the built mass rest very gently on site, stacking the gorge with the common functions such as lecture halls, the central library, faculty and researcher rooms, the computer centre and cafeteria, allows high density massing.

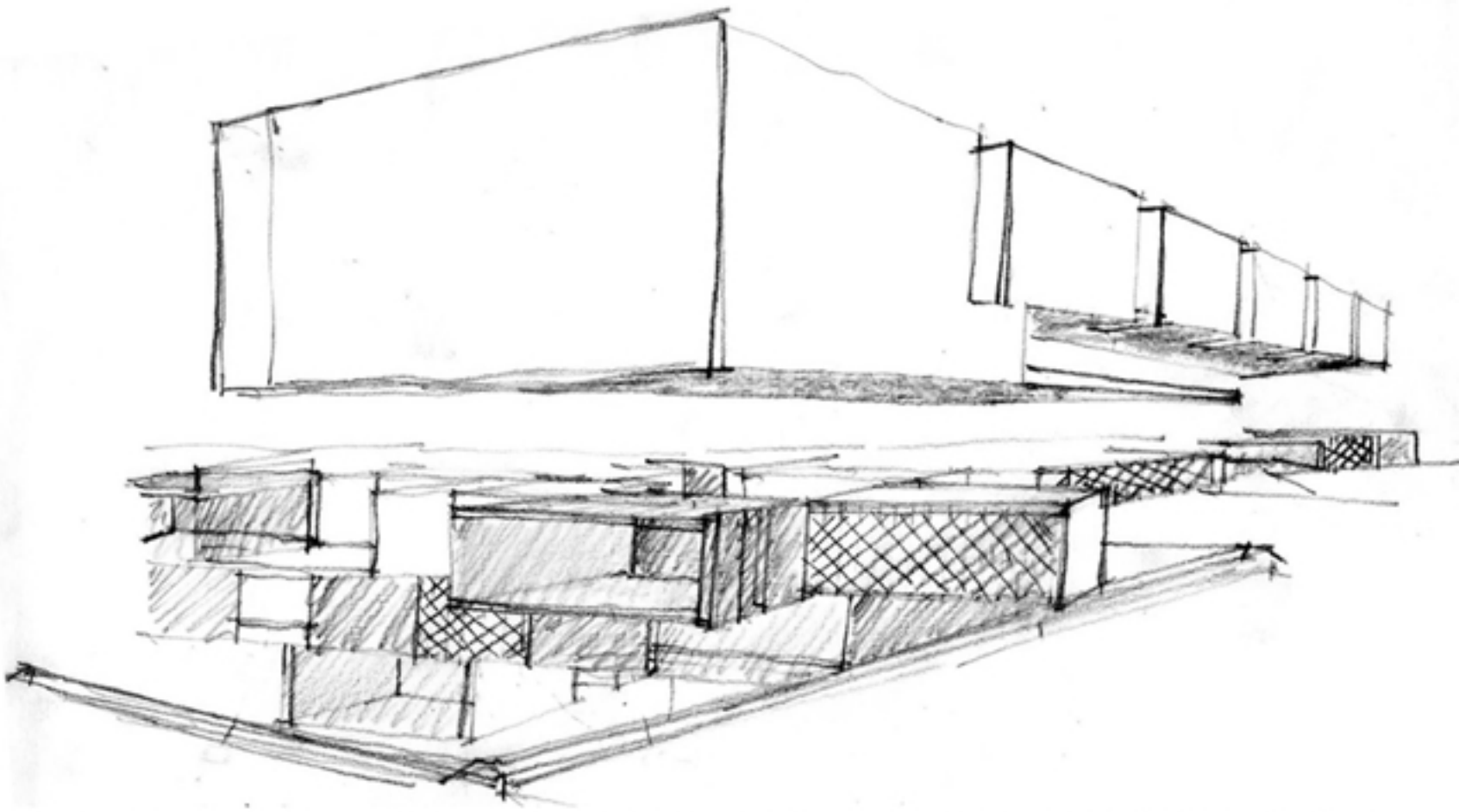




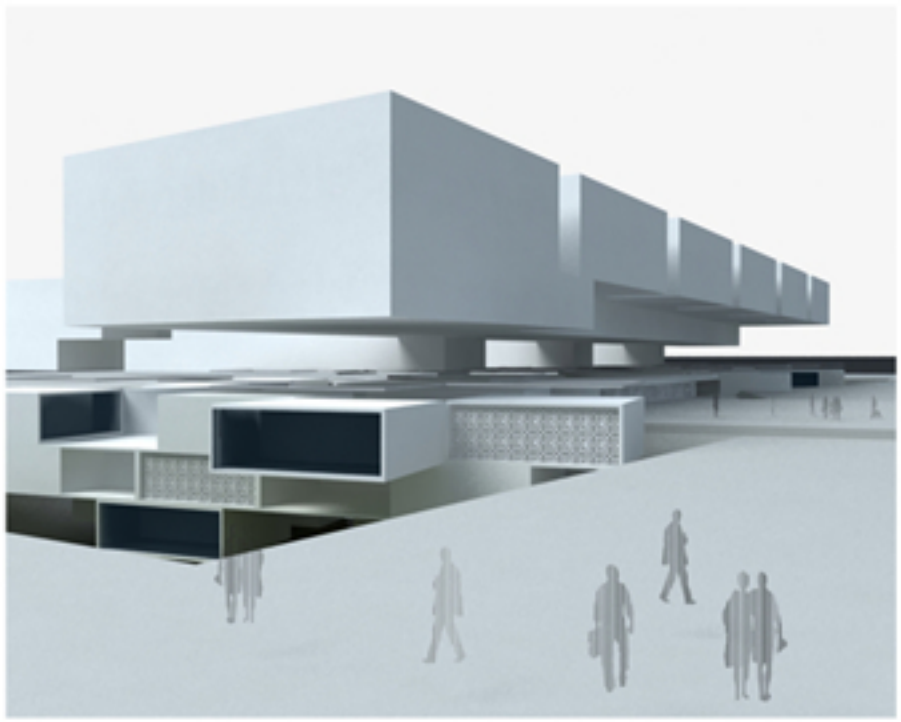


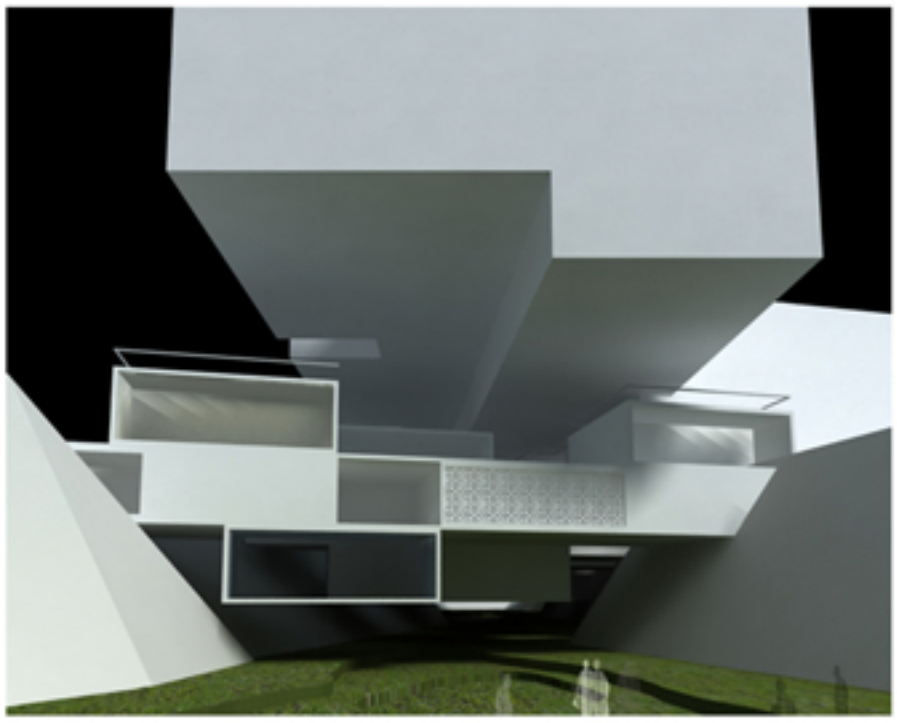


Functions within the gorge are arranged in a fragmented morphology to allow light to penetrate through. The gorge is also a strong climatic gesture to address the extreme climatic changes typical of Delhi. In summer it is shaded and cool below and in winter the floating built mass allows air to circulate from below thus insulating it.



The "ZERO" level is kept unobstructed to allow for the eye to be able to scan the site without interruption. All crit rooms, labs and resource centres as well as departmental cores are stacked in a single block in the upper three floors 'floating' over the Zero level. All studios are housed in the fingers which stick perpendicularly out from main building, oriented to maximize on the natural north light. Techniques and elements such as recessed windows, shaded corridors and Jalis are to be used to address climate. These in turn play a significant role in generating the tectonic character of the building.

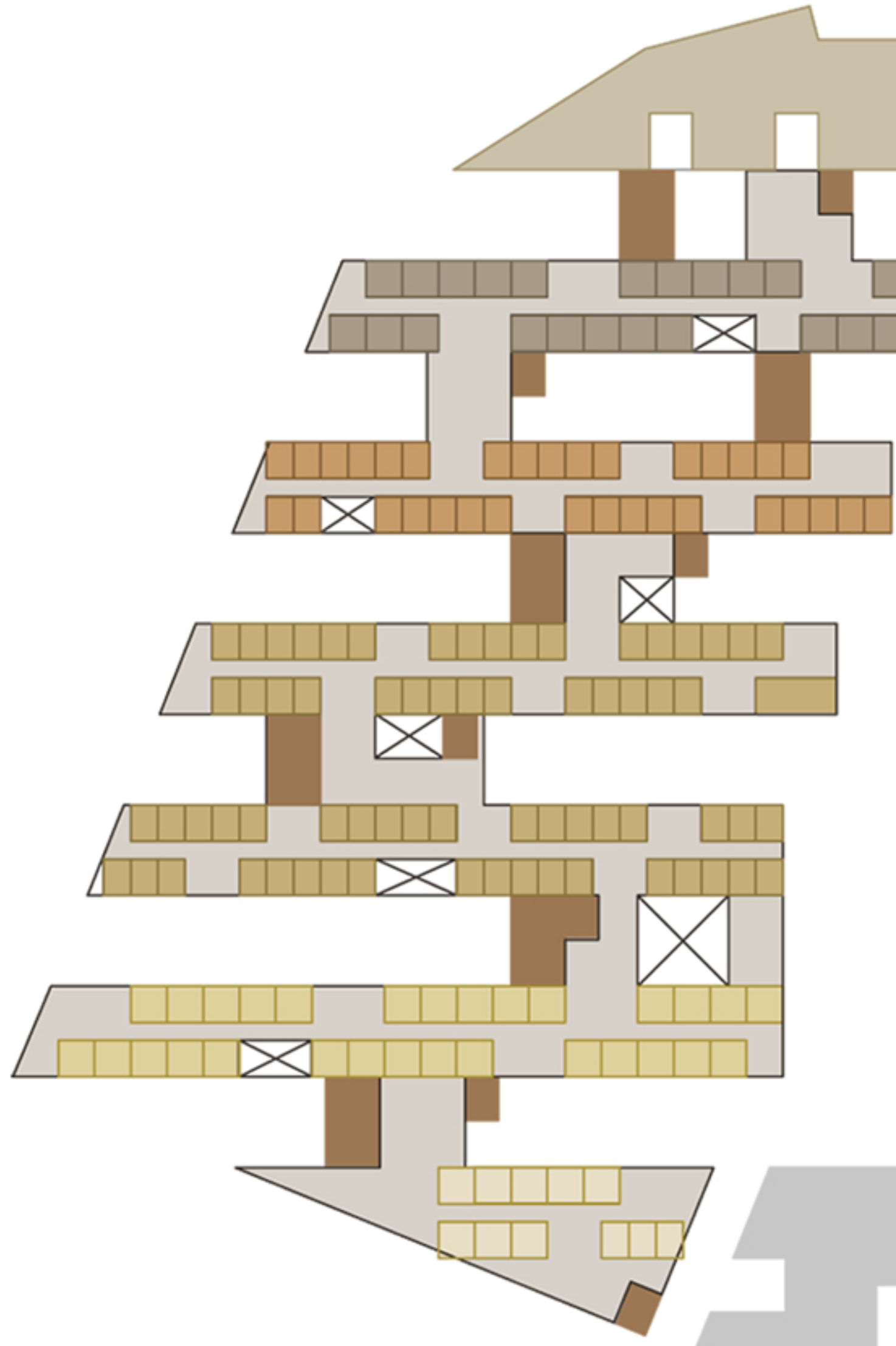




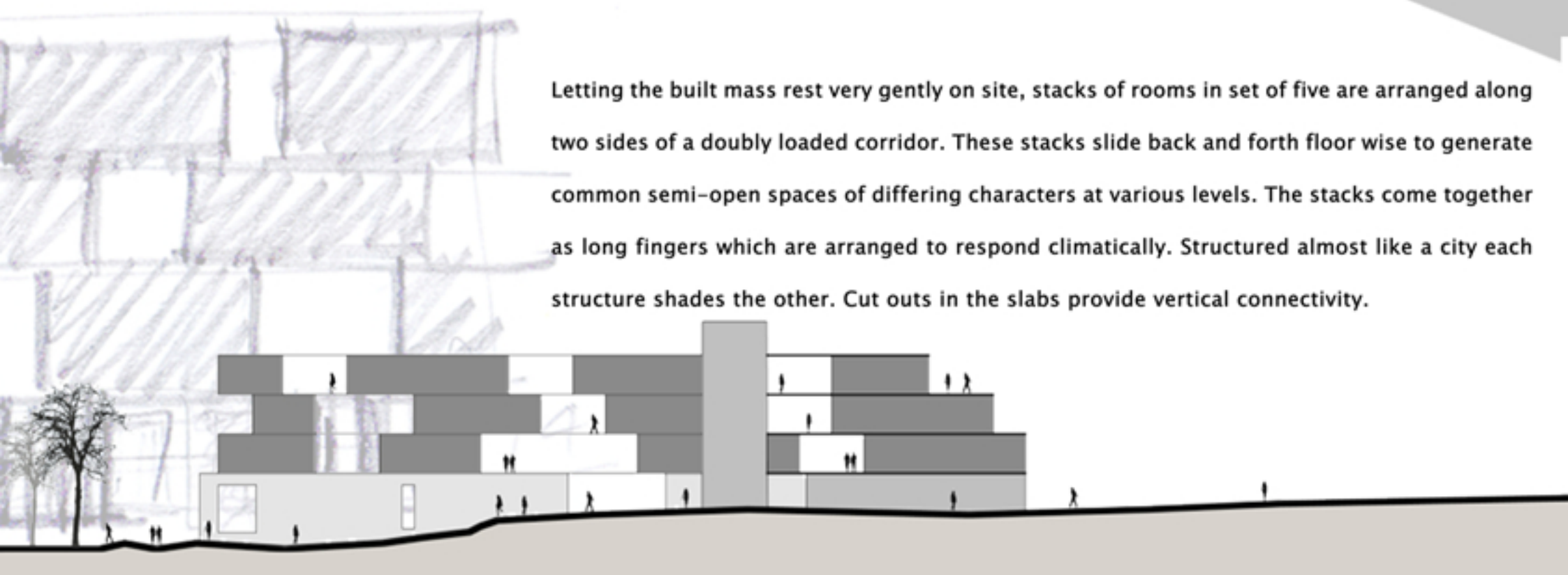
academic building

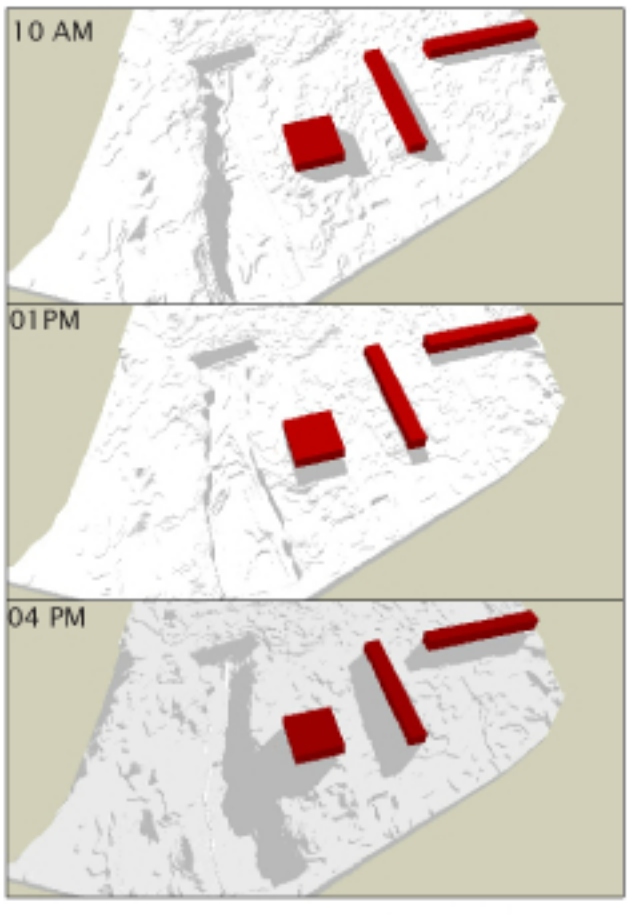
housing

The entire block sits lightly on ground in the form of parallel walls which follow the contoured land to create a very interesting interface. The dining areas and other common facilities sit at the ground level as special accentuation points in the landscape, opening up to the green areas below.



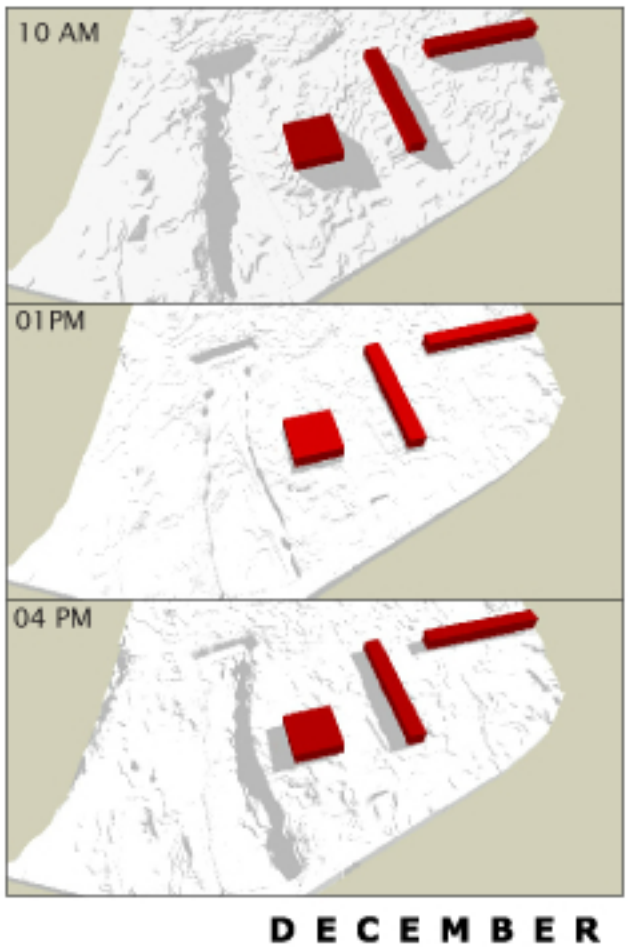
Letting the built mass rest very gently on site, stacks of rooms in set of five are arranged along two sides of a doubly loaded corridor. These stacks slide back and forth floor wise to generate common semi-open spaces of differing characters at various levels. The stacks come together as long fingers which are arranged to respond climatically. Structured almost like a city each structure shades the other. Cut outs in the slabs provide vertical connectivity.





MARCH

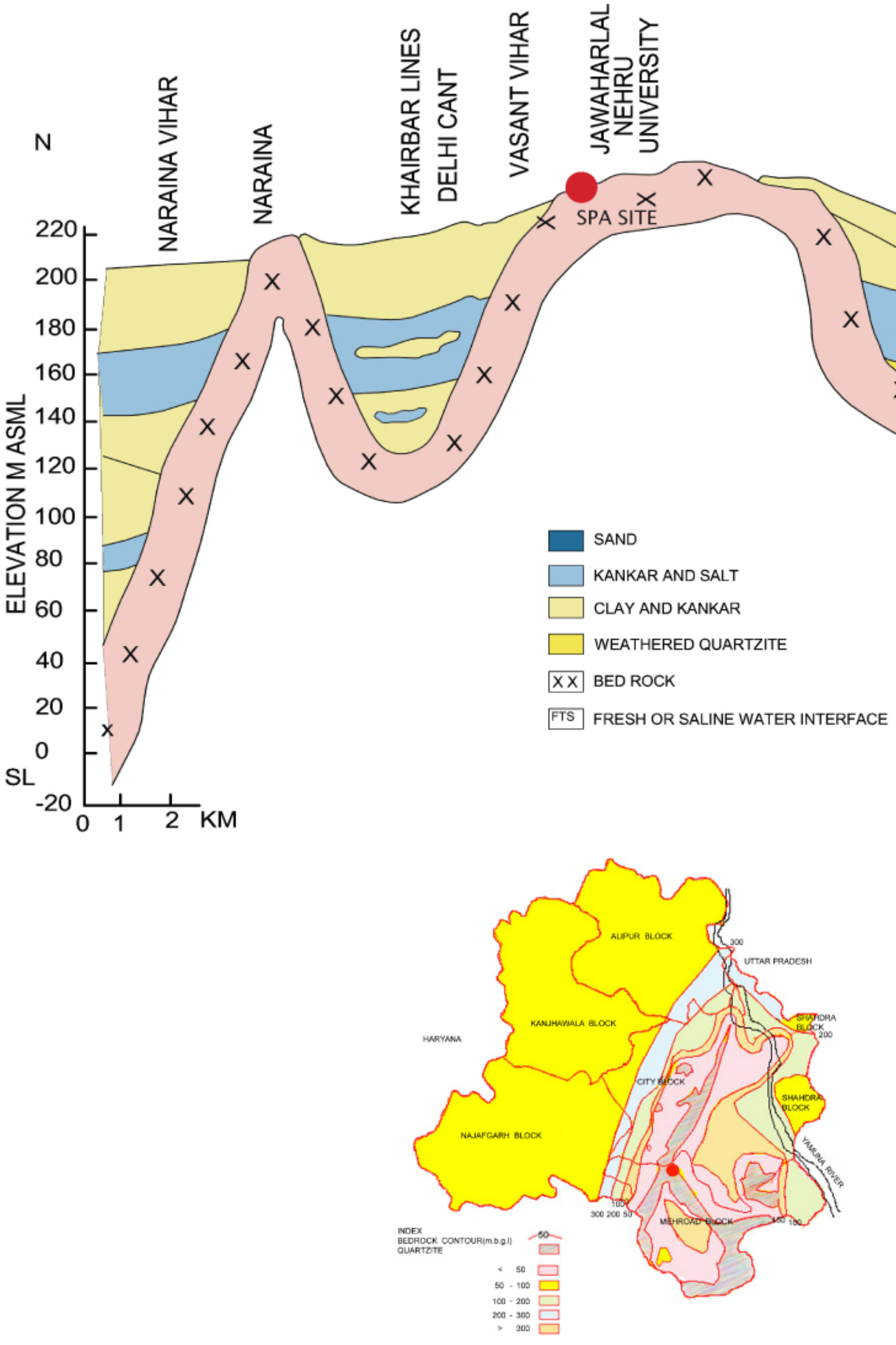
JUNE



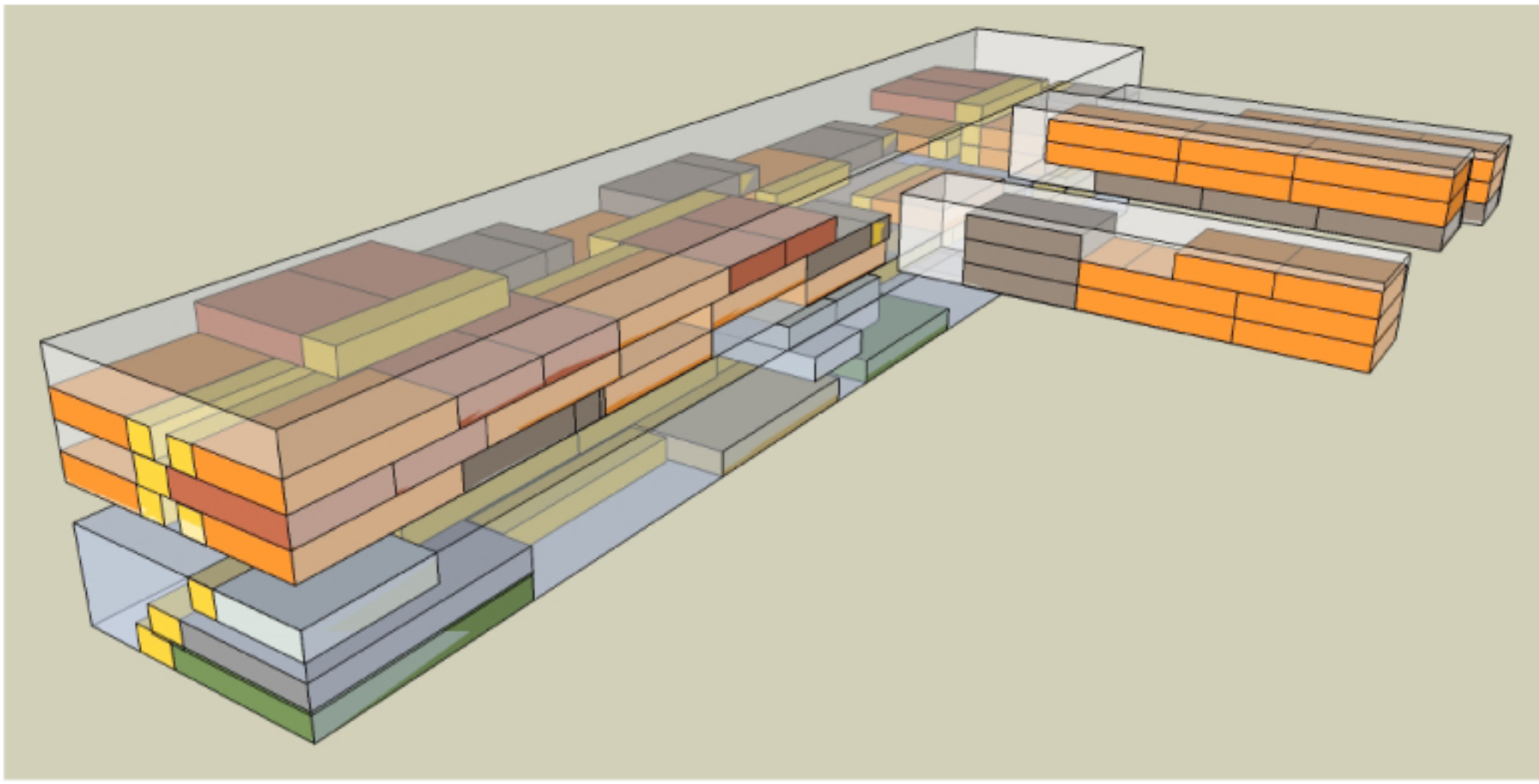
DECEMBER

Most building orientations are as per climatic consid-
erations: linger edges of buildings face north/ sounth
sides so as to be exposed to less radiation.

Climate

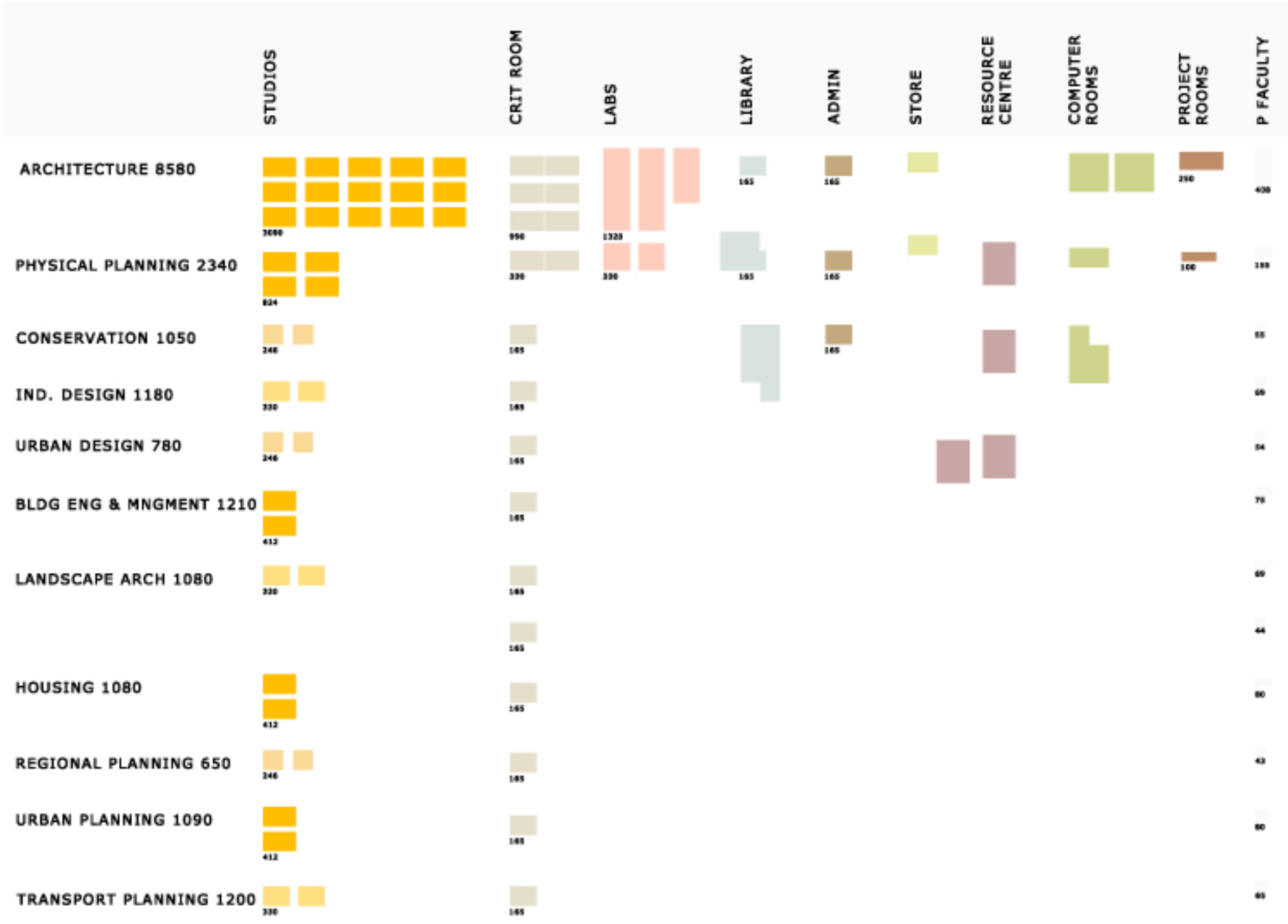

N
NARAINA VIHAR
NARAINA
KHAIRBAR LINES
DELHI CANT
VASANT VIHAR
JAWAHARLAL NEHRU UNIVERSITY
SPA SITE
ELEVATION M ASML
220
200
180
160
140
120
100
80
60
40
20
0
SL
-20
0 1 2 KM
SAND
KANKAR AND SALT
CLAY AND KANKAR
WEATHERED QUARTZITE
BED ROCK
FTS
FRESH OR SALINE WATER INTERFACE
ALIPUR BLOCK
KANJHAWALA BLOCK
NAJAFGARH BLOCK
CITY BLOCK
SHAHDRA BLOCK
MEHROAD BLOCK
UTTAR PRADESH
HARYANA
YAMUNA RIVER
300
200
100
50
INDEX
BEDROCK CONTOUR(m.b.g.l)
QUARTZITE
< 50
50 - 100
100 - 200
200 - 300
> 300

Geology

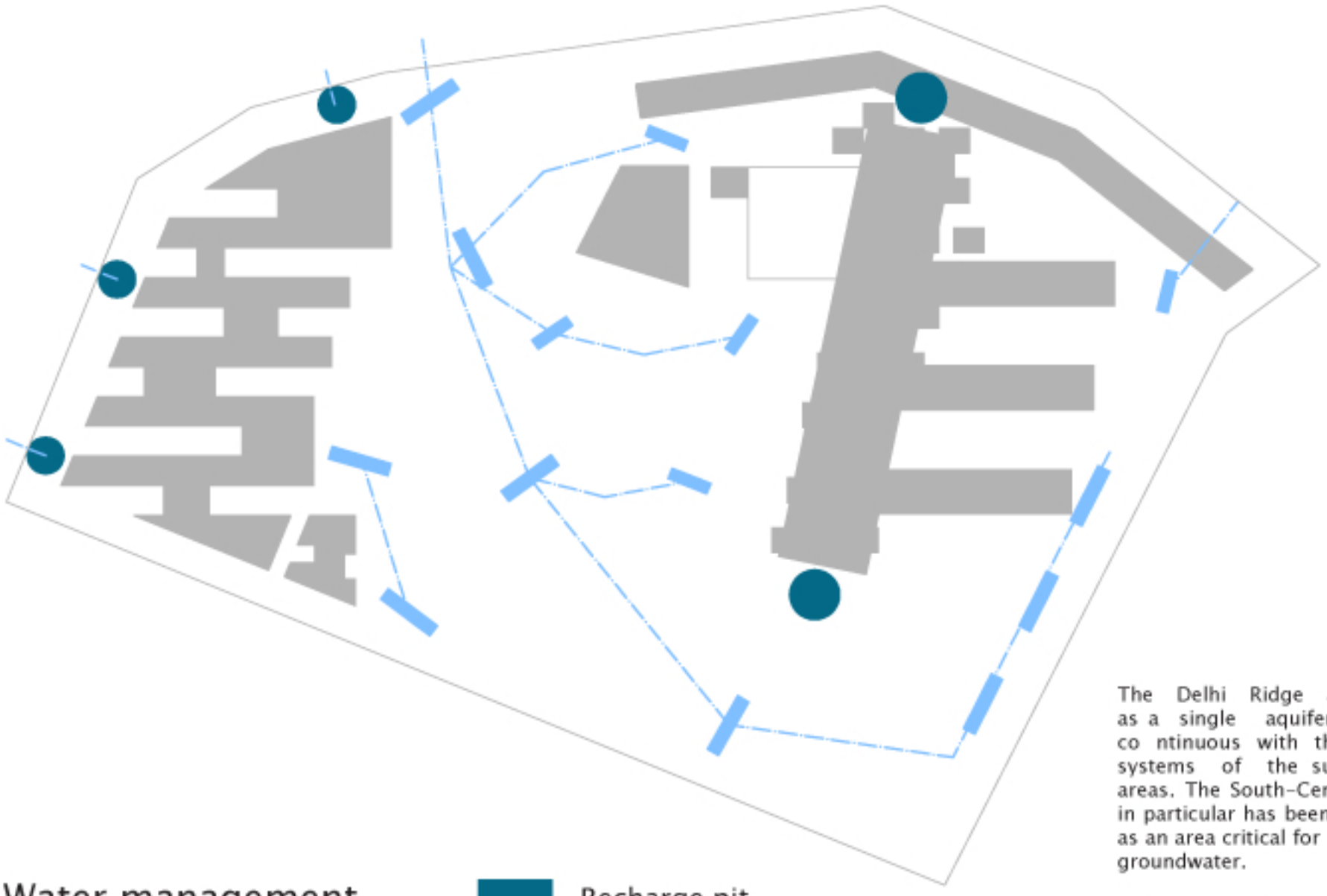


Preliminary programmatic model

Dense vertical stacking. All studios and crit rooms are arranged together to encourage interdiciplinary interaction.



Programme



Water management

Recharge pit

Check dams

Water lines

The Delhi Ridge area acts as a single aquifer system co ntinuous with the aquifer systems of the surrounding areas. The South-Central Ridge in particular has been identified as an area critical for recharging groundwater.

With minimal intervention to the landscape, the proposal for surface water management is a combination of check-dams, recharge 'pits' and swales.

The check-dams occur periodically along the existing stormwater drainage pathways, halting the movement of water so as to a) check excessive erosion b) temporarily stall water for percolation and c) become silt collection hollows that encourage thriving bio-systems.

Ground porosity

Hard Paved Areas

Recharge 'pits' occur at terminal points of the water movement such as at the bottom of the gorge. Permeable Swales line the pathways and roads.

Keeping the impermeable surfaces to the minimum assists in the uninterrupted flow of water and percolation.

Ecology

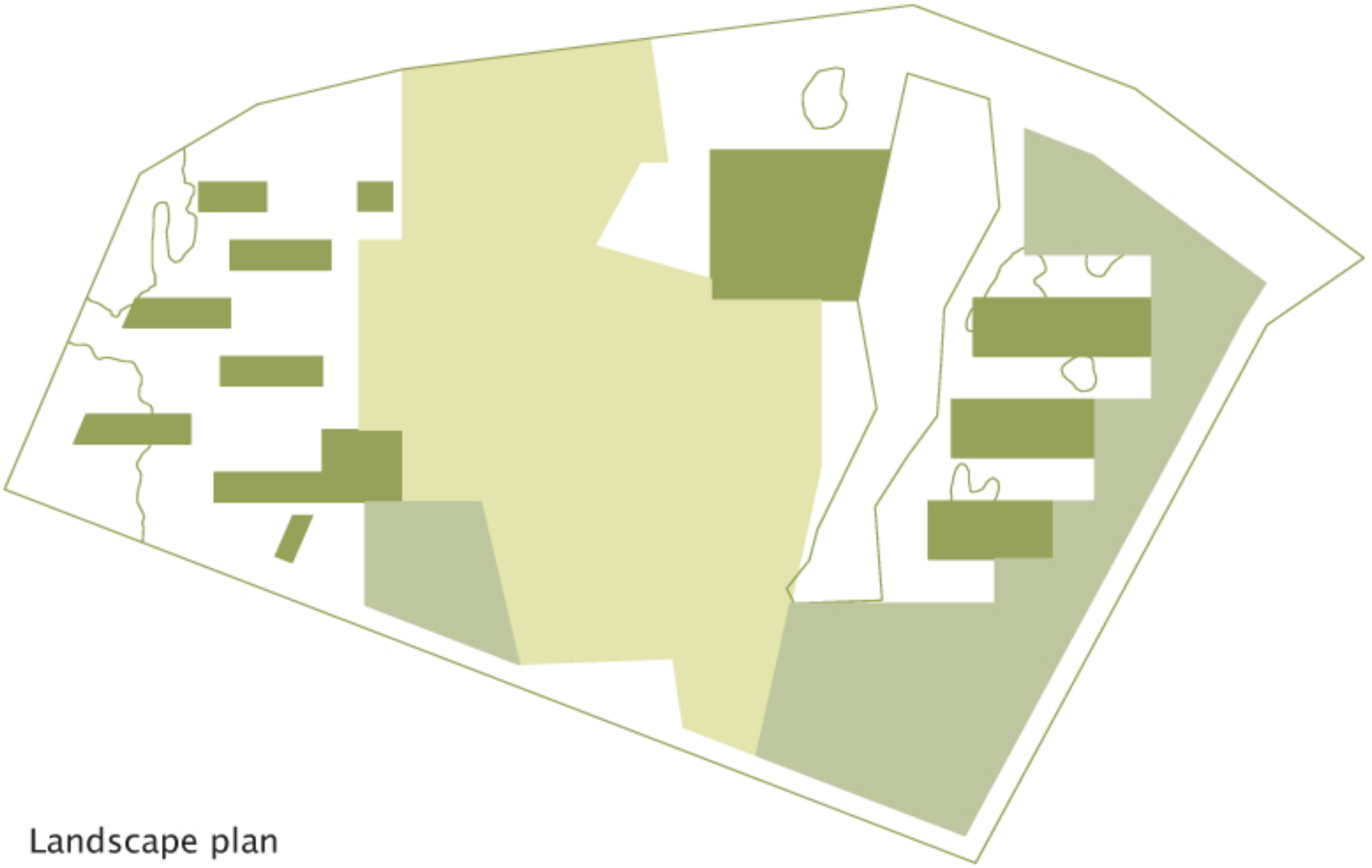
At present the major flora of the site appears to comprise almost entirely of vilayati kikar, or jungle babool (*prosopis juliflora*).

This exotic plant has been identified as an invasive pest and widely held responsible for the rapid desertification of the Aravallis (including the Delhi ridge) as well as the colonization of landscapes across the sub-continent. Initially introduced to aid the process of afforestation because of its fast growth and hardiness, its lack of natural pests has made its spread unclecked.

It can take root almost everywhere and go down deep about 15 metres, sucking dry ground water aquifers. It also dries up the moisture of the surface soil, devastating sub-soil chemistry and hindering the growth of native plants. Its lack of established relationships with other species of the local ecosystem also makes it a poor candidate for bio-diversity restoration.

Further, considering that its felling has been strongly recommended and partially executed in the adjoining Aravalli Bio-diversity Park, there is a strong case for its removal from the site as well.

Ecology



Landscape plan

The landscape strategy looks at long-term ecological restoration of the site.

Formal landscape

Restoration landscape

Temporal landscape

The recommended flora of the site primarily consists of species native to Delhi and specifically the Ridge.

Trees:

Goolar	Ficus racemosa
Chamrod	*Ehretia laevis*
Bistendu	*Diospyros cordifolia*
Dhau	*Anogeissus pendula*
Peelu	*Salvadora persica*
Kaim	*Mitragyna parvifolia*
Kareel	*Cappari decidua*
Hingot	*Balanites roxb*urghii
Dhak	*Butea monosperma*
Amaltas	*Cassia fistula*
Shisham	*Dalbergia sissoo*
Ronjh	*Acacia leucophloea*
Phulai	*Acacia modesta*
Kumttha	*Acacia senegal*
Jhand	*Prosopis cineraria*
Siris	*Albizia lebbeck*
Khajoor	*Phoenix sylvestris*

Shrubs

Capparis sepiaria
C.deciduas
Zizyphus aenoplia
Croton sparaiflorus

Herbs

Calotropis procera
Withania somnifera
Achyranthes aspera
Tridax sp.
Alysicarpus vaginalis
Peistrophe bicalyculata.

Grasses

Cenchrus ciliaris
Aristida sp.
Eragrostis poaeioides
Saccharum spontaneum

Timeline

It is possible to reconstruct the history of the site on the basis of available information about the Delhi Ridge in general and more specifically the Mehrauli section of the ridge.

- Original vegetation type	Dry deciduous or thorny brush.
- 14th century	Afforestation is carried out on the ridge by Emperor Firoz Tughlaq for hunting purposes
- late 19th century	Large swathes of the Ridge are lost to colonial expansion
- 1913	Part of ridge is declared Reserve Forest under Indian Forest Act, 1878
- 1970s	Great dismantling of the Ridge after independence, as exploding population and spreading suburbs push south of city sections of the ridge leased to private companies for stone quarrying lead to further devastation
- 1990s	The Aravalis are also protected by the 1994 Aravali Fragile Area Notification Sections of the ridge declared as No Development zones. Mining and urban expansion stopped.

The gorge or canyon on the site in other words has been witness to a number of human interventions over time. Its apparently picturesque 'naturalness' then is open to question and it is clearly a manufactured feature of the landscape.

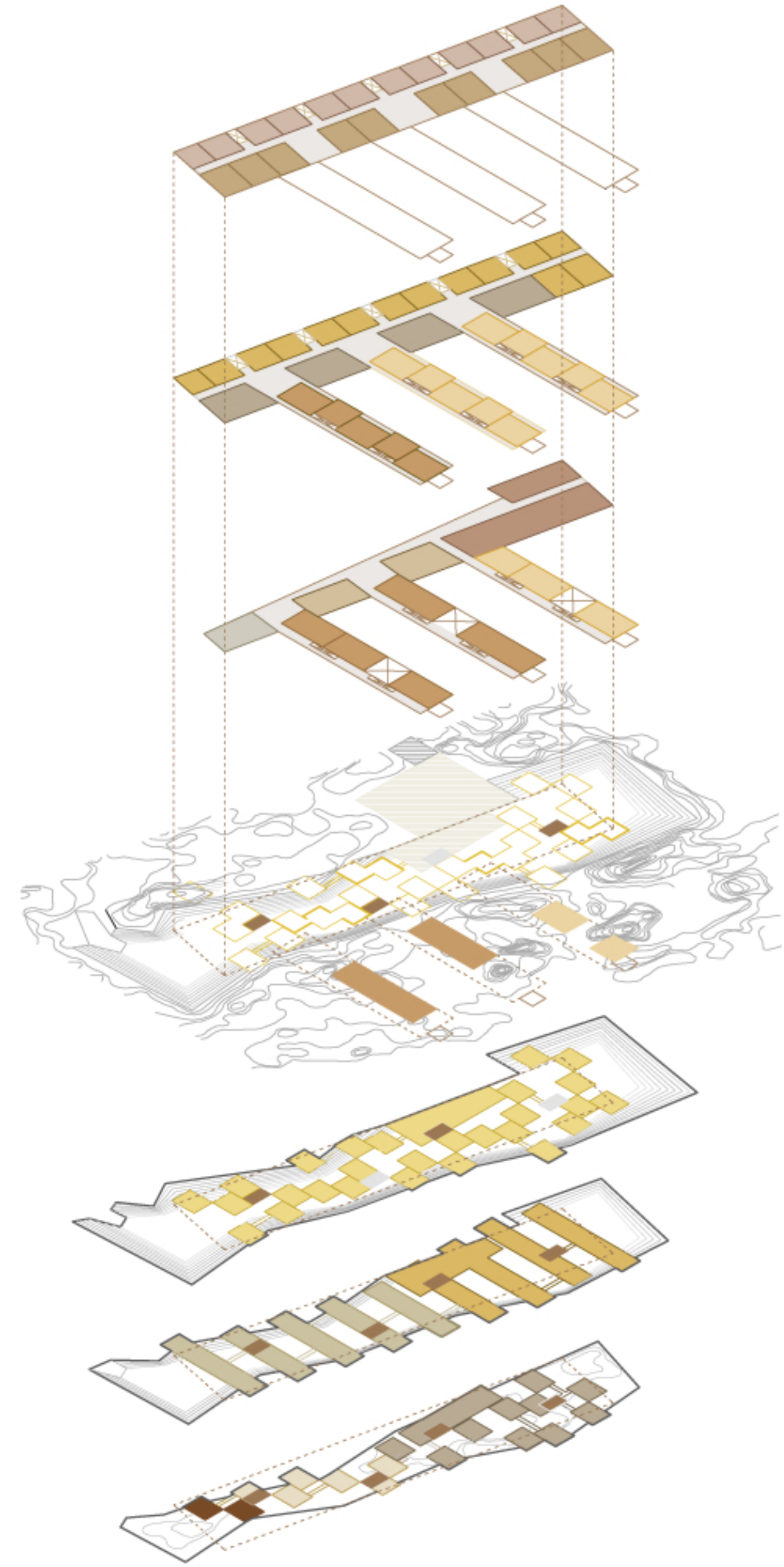
This understanding allows us to approach it without romanticism and intervene in it if it serves the larger purpose of restoration of the ecology of the site.

The Gorge

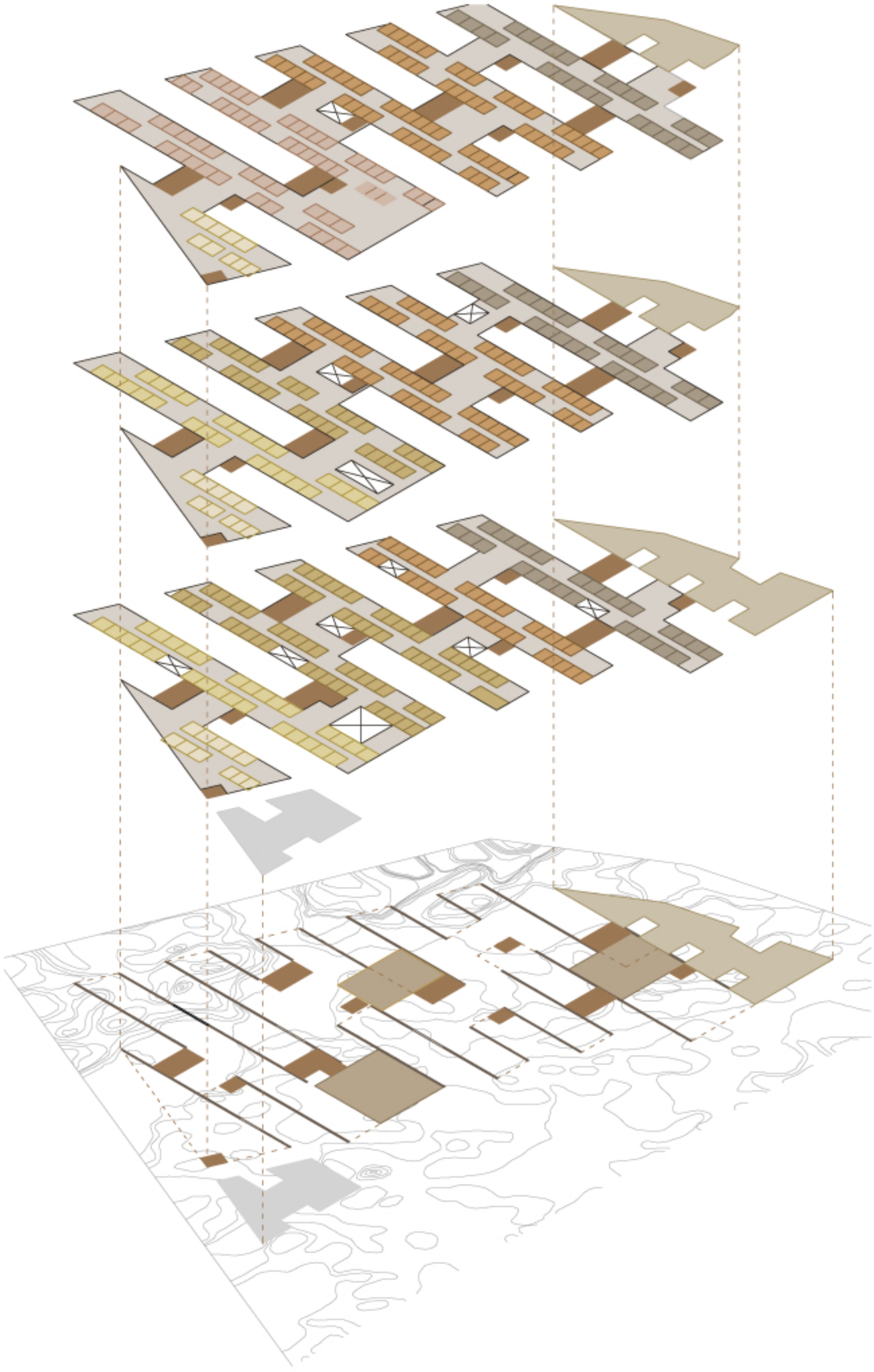
The Gorge

The interesting profile of the gorge on the site has been exploited to cater to the acedamic building. While letting the built mass rest very gently on site, stacking the gorge with the common functions such as lecture halls, the central liberary, faculty and researcher rooms, the computer centre and cafeteria, allows high density massing. Functions within the gorge are arranged in a fragmented morphology to allow light to penetrate through. The gorge is also a strong climatic intent to address the extreme climatic changes typical of Delhi. In summer it is shaded and cool below and in winter the floating built mass allows air to circulate from below thus insulating it.

Resultant Built Form



Academic



Housing