

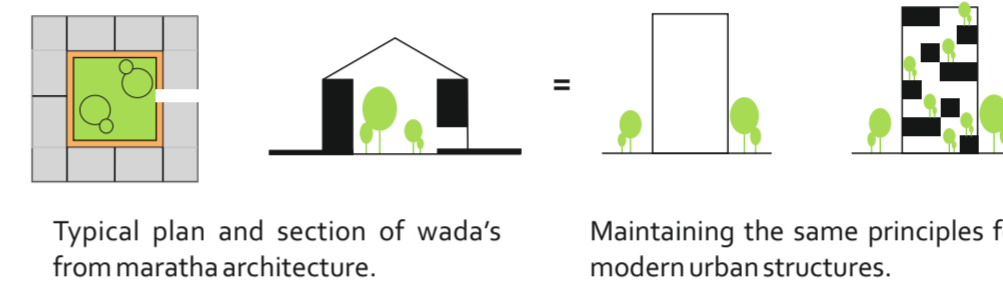
THE URBAN TREE

The idea is to break the notion of typical conventional structure and to exploit the advantages of CLT as a material in Indian context. Also, to challenge the common belief of how housing structures are perceived and also provides a break from typical hermetic structures. This is to provide the experiential value to the user keeping all socio-cultural activities intact in the grid. The site is located in Nagpur where climate accentuates to emerge need of a building which provides the optimized microclimate within an independent building in a harsh urban environment.

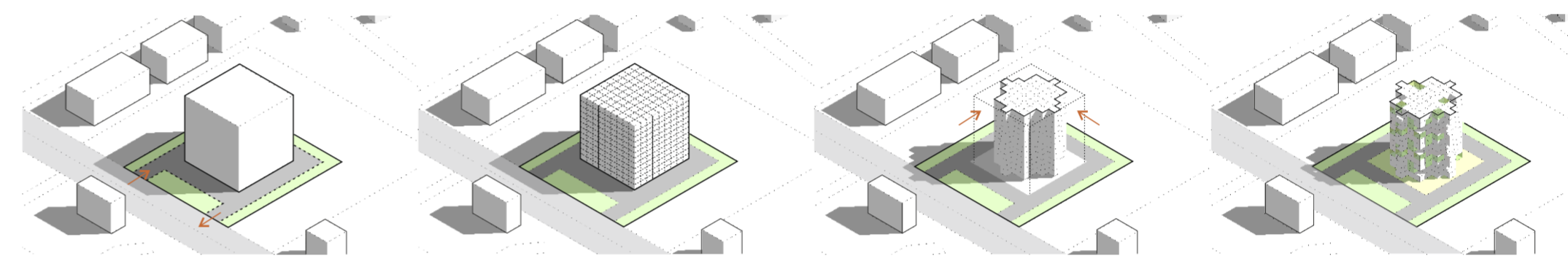
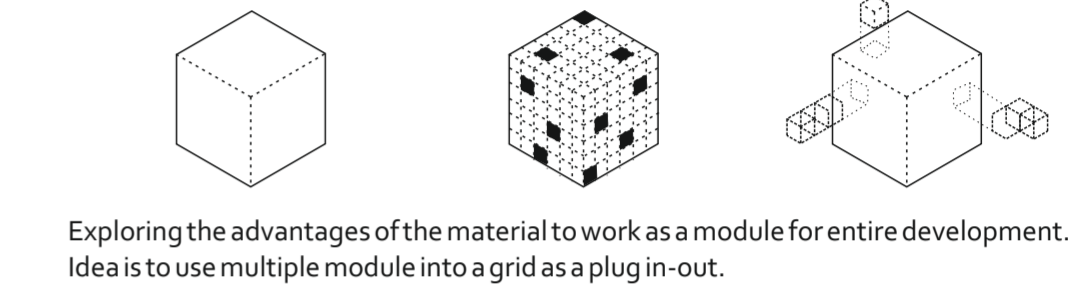
Site location : Nagpur, India
 Site area : 4847 sqm
 Site dimensions : 74.8m X 64.8m
 Co-ordinates : N 21.151537
 S 79.024260
 Climatic major : Heat waves

IDEA

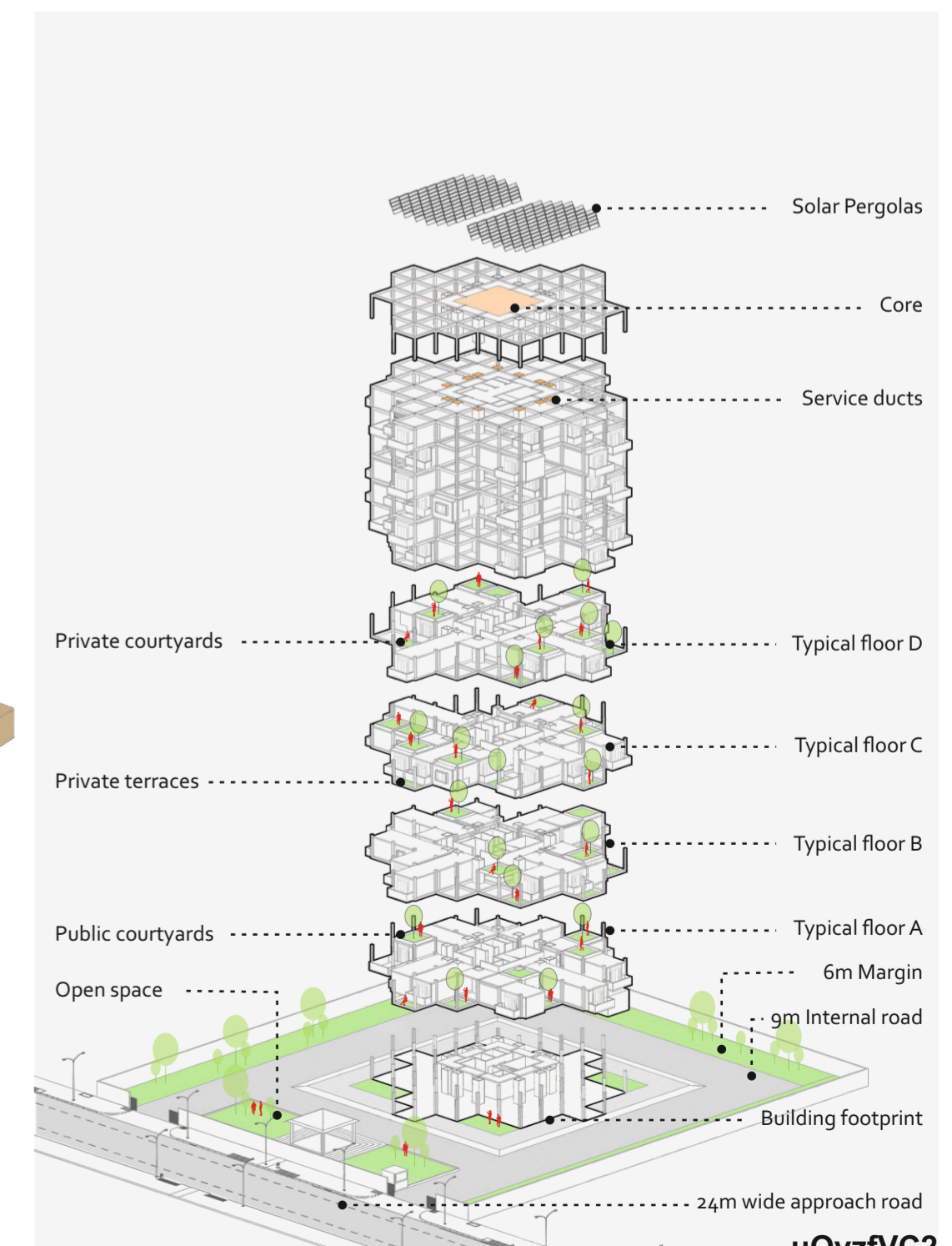
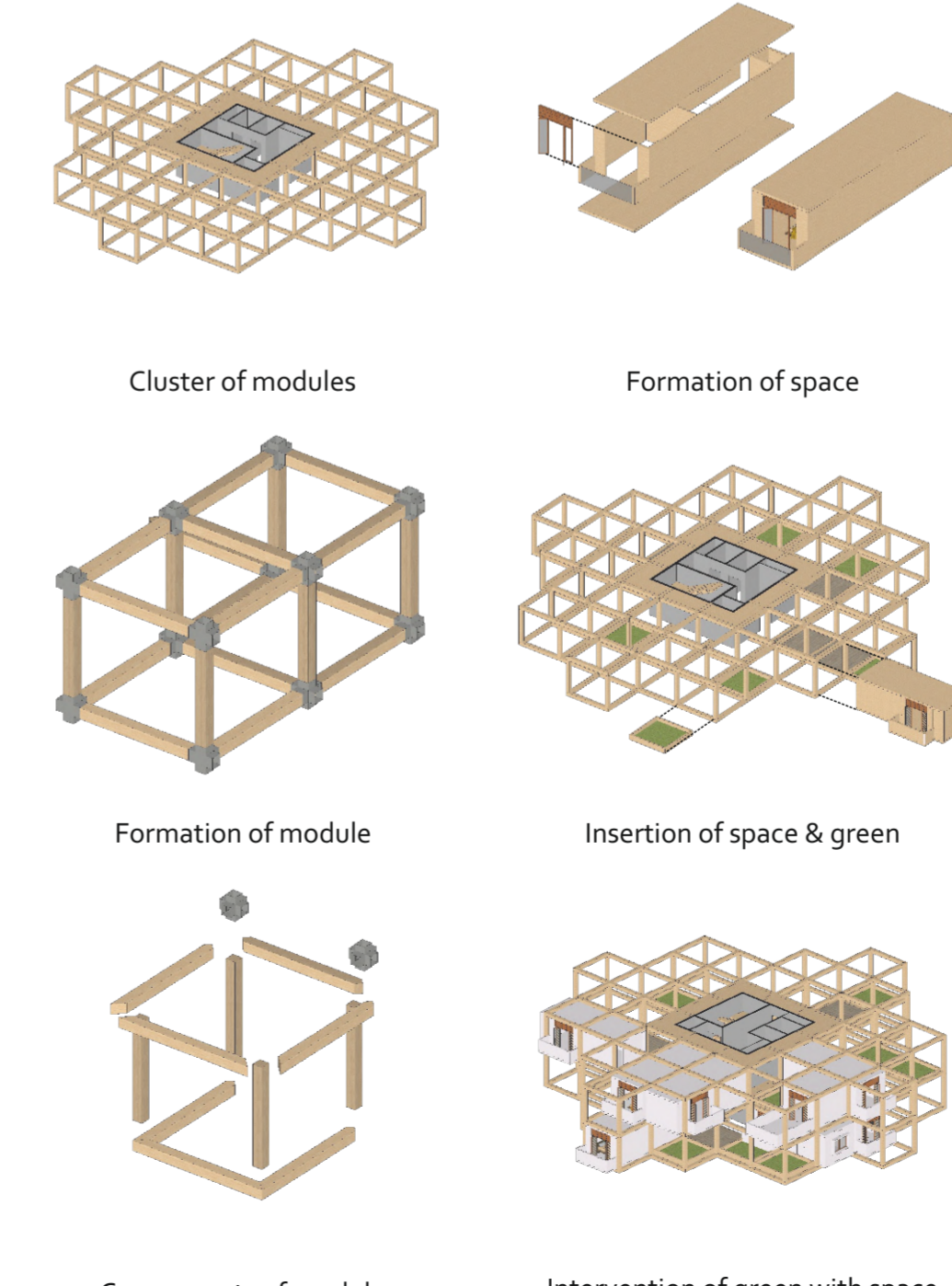
CLIMATIC RESPONSE

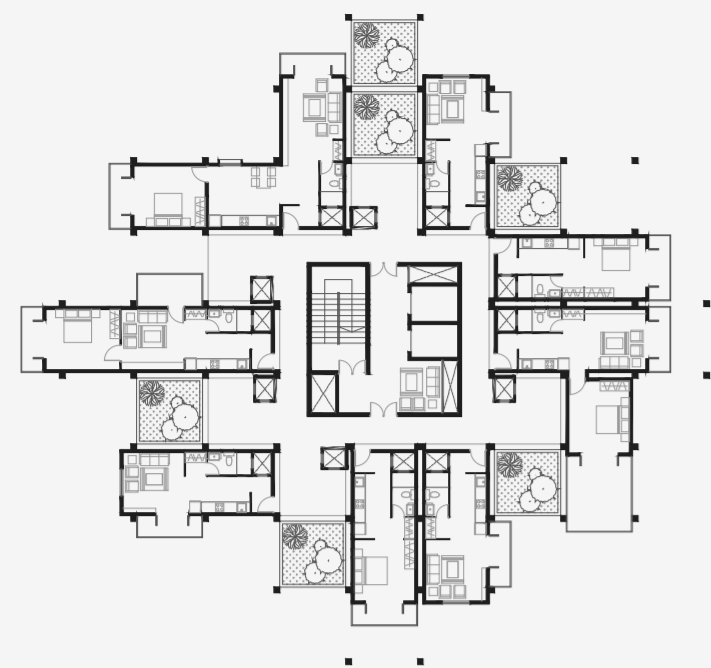


FUNCTIONAL OPTIMIZATION

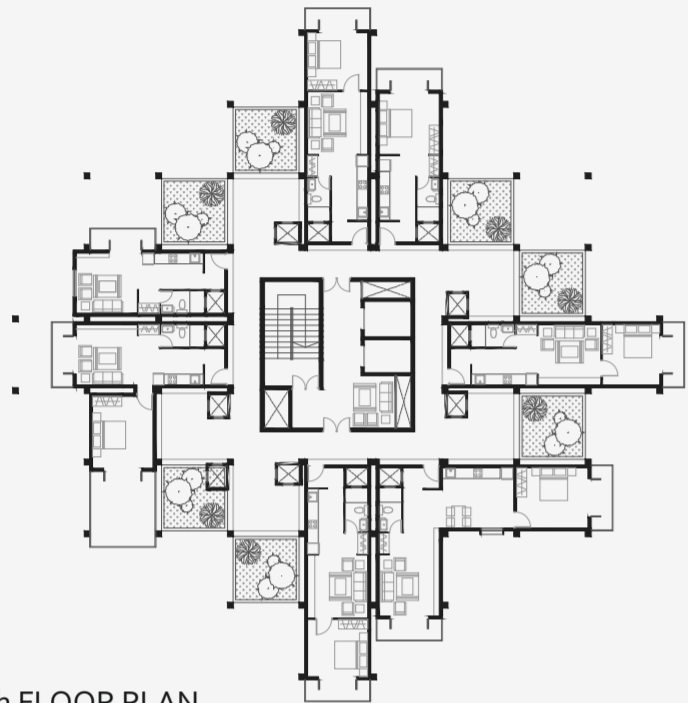


SITE Site demarcation leaving 6m margin and maximum potential of the plot.
GRID Dividing the potential block into modular grid to juxtapose the spaces.
CONTEXTUAL RESPONSE Making of a grid pattern in order to make structure self shading and breathable.
MASSES & VOIDS Creating voids into masses to make green pockets on each level to create microclimate.

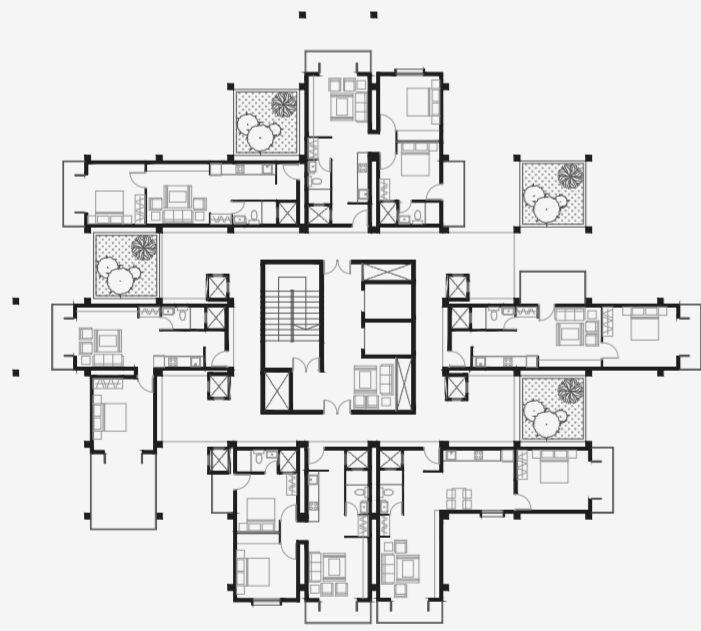




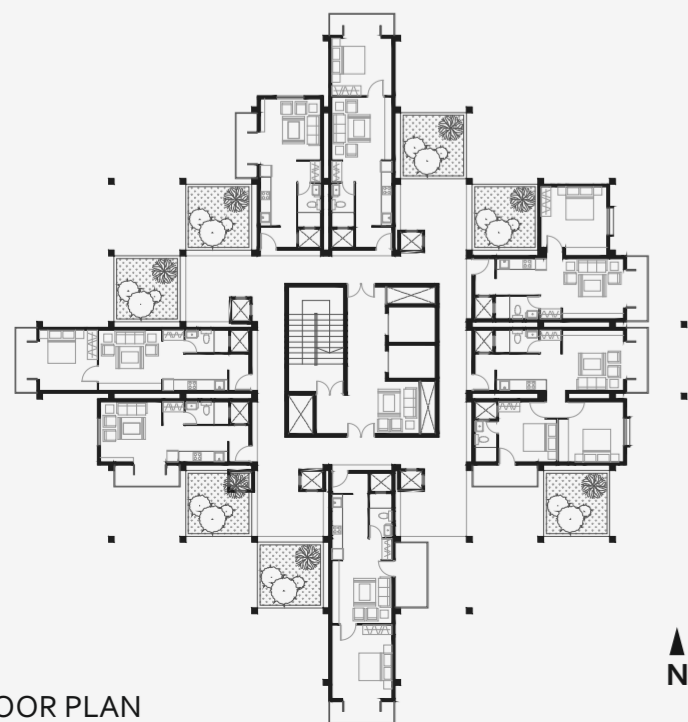
1st, 5th, 9th FLOOR PLAN



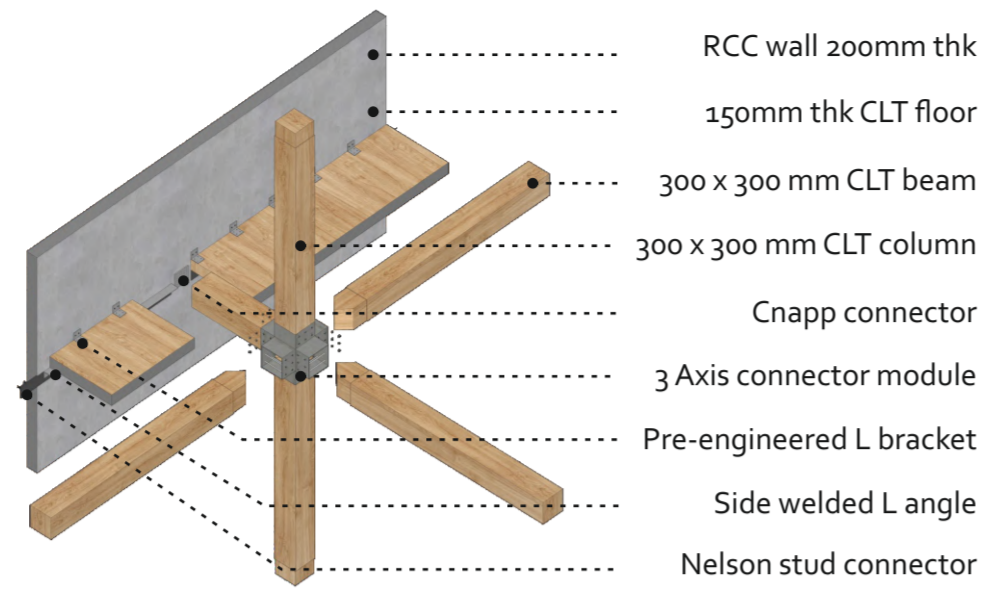
2nd, 6th, 10th FLOOR PLAN



3rd, 7th FLOOR PLAN

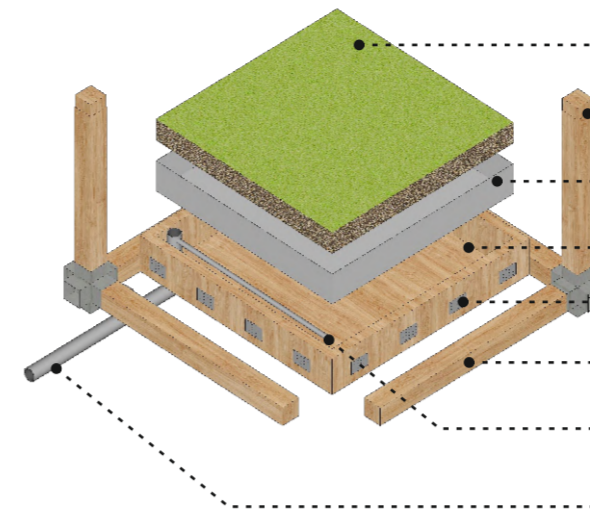


4th, 8th FLOOR PLAN



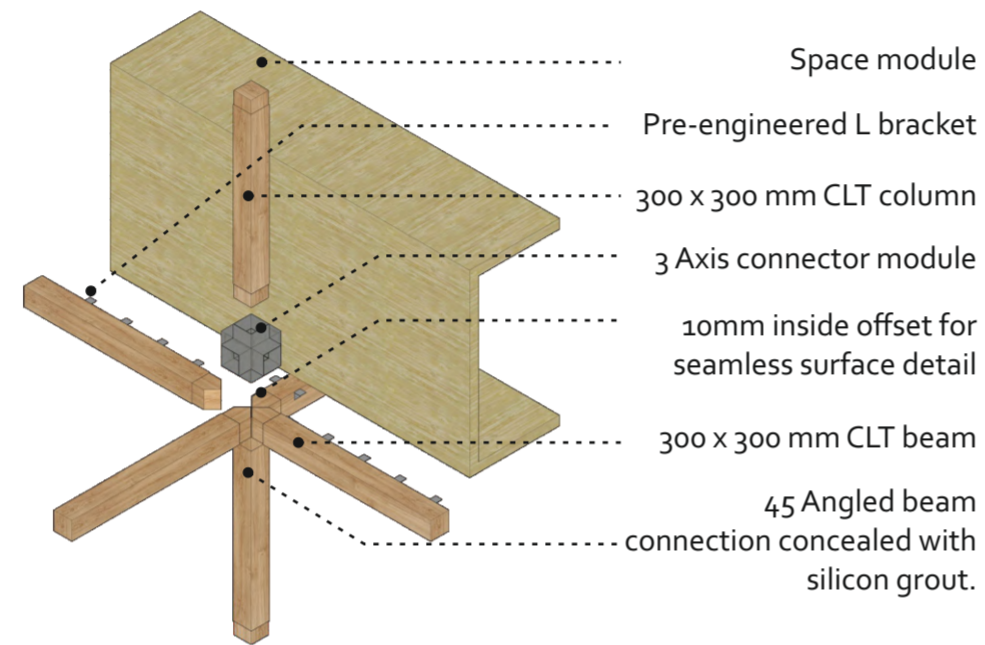
CLT to RCC core connection

- RCC wall 200mm thk
- 150mm thk CLT floor
- 300 x 300 mm CLT beam
- 300 x 300 mm CLT column
- Cnapp connector
- 3 Axis connector module
- Pre-engineered L bracket
- Side welded L angle
- Nelson stud connector



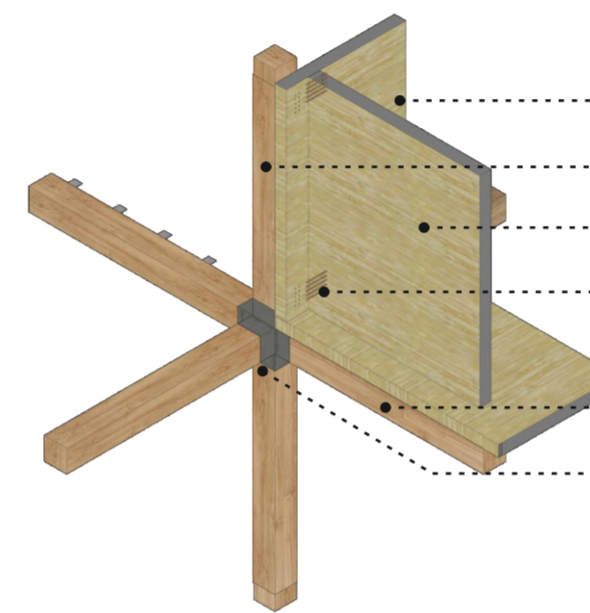
Planter detail

- Planter top soil 400mm
- 300 x 300 mm CLT column
- Waterproofing membrane
- 150mm thk CLT box
- Megant connector
- 300 x 300 mm CLT beam
- 35mm Weep hole pipe
- 110mm Drainage pipe



CLT column - beam - module connection

- Space module
- Pre-engineered L bracket
- 300 x 300 mm CLT column
- 3 Axis connector module
- 10mm inside offset for seamless surface detail
- 300 x 300 mm CLT beam
- 45 Angled beam connection concealed with silicon grout.



Module Panels to CLT structure connection

- Space module
- 300 x 300 mm CLT column
- 150mm thk CLT wall panels
- 300mm Angular timber dowelling
- 300 x 300 mm CLT beam
- 3 Axis connector module

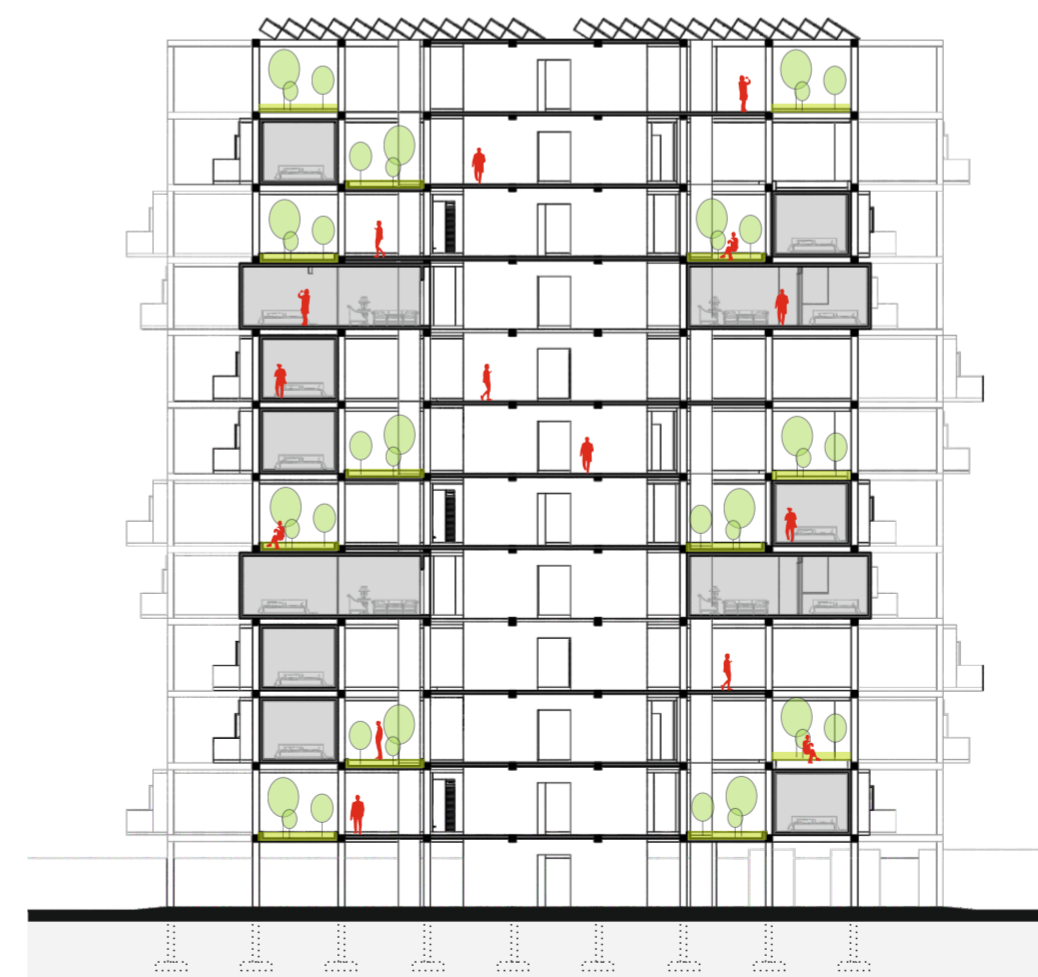


Unit modules are designed on 3600 x 300 grid on both axis to make it habitable and functional space in Indian context. Wall cutouts are made in such proportion that it can be recycled as doors and partitions.



UNIT PLANS

300
0 3600



SECTION

