

Habitat Zero

The future of housing through transient modular pods traversing the urban fabric to fixed nests revitalising the environment while being reborn infinitesimally. An ode to carbon neutral on and off grid hybrid living and adaptable lifestyles. This project aims to combine the dynamic nature of housing with the systemic urge to save and preserve nature. A perfect ecosystem of public participation assisted and enhanced by harmonious and synergic living.

1. Transient

A transportable modular pod which adapts to the requirements & structure

Site

Indian Urban Areas are strewn with under-utilised dilapidated public zones and parking lots. Adaptive reuse to create these transient living pods which essentially act as garages for houses could be an efficient replacement while creating and energising community spaces.

2. Cradle-to-cradle

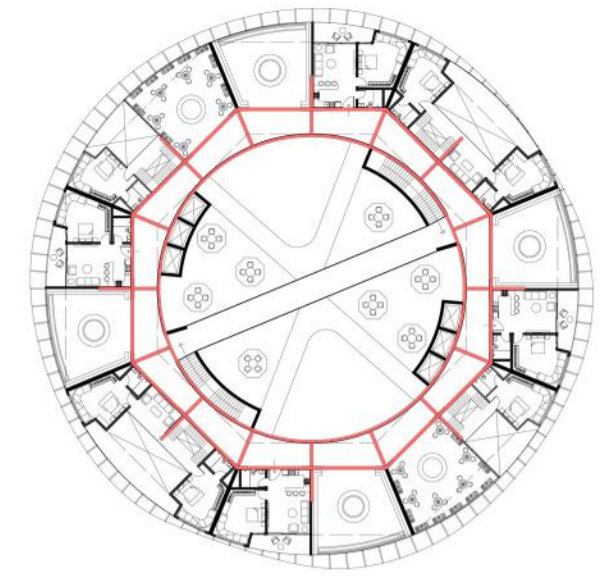
Designed to be completely reusable through dry modular CLT construction



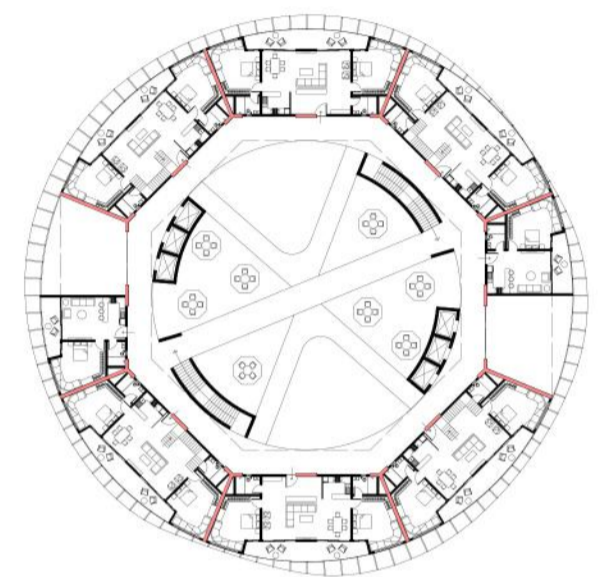
3. Urban Lung

Contributes to the environment by pollution remediating facade

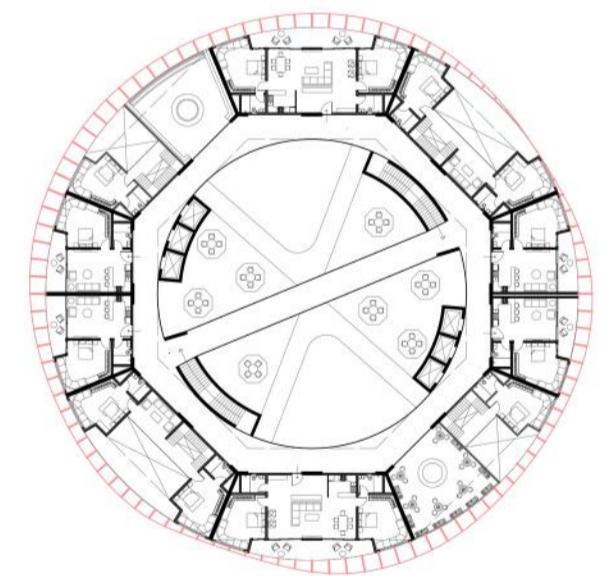
Typical Floor Plan with Structural Beams



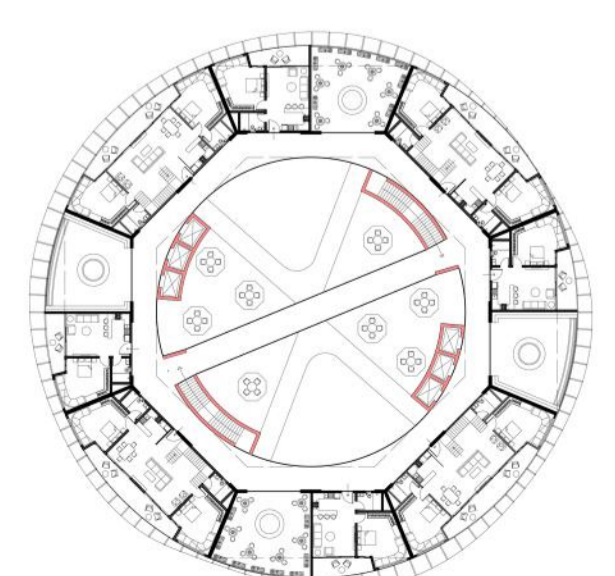
Typical Floor Plan with Structural Columns



Typical Floor Plan with Facade Component

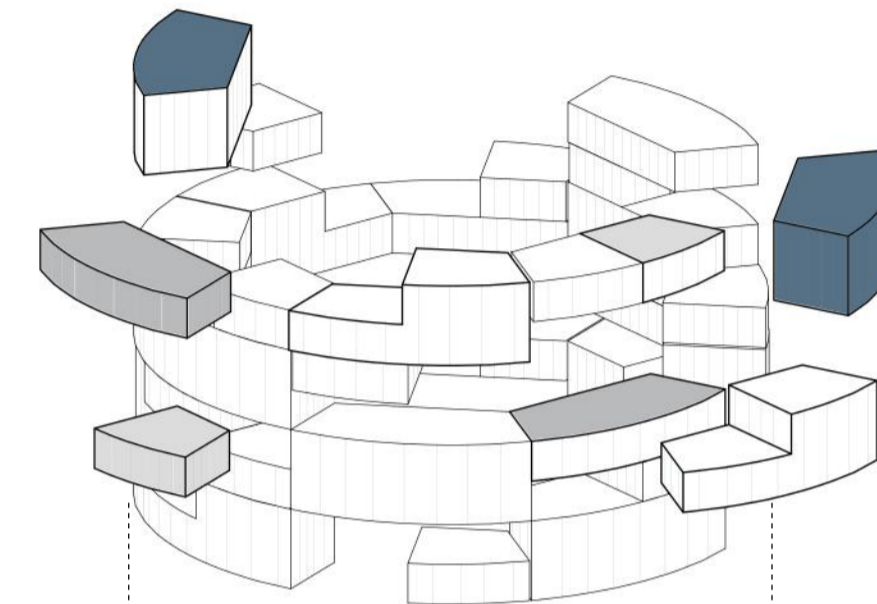


Typical Floor Plan with Structural Core



Transient Pods

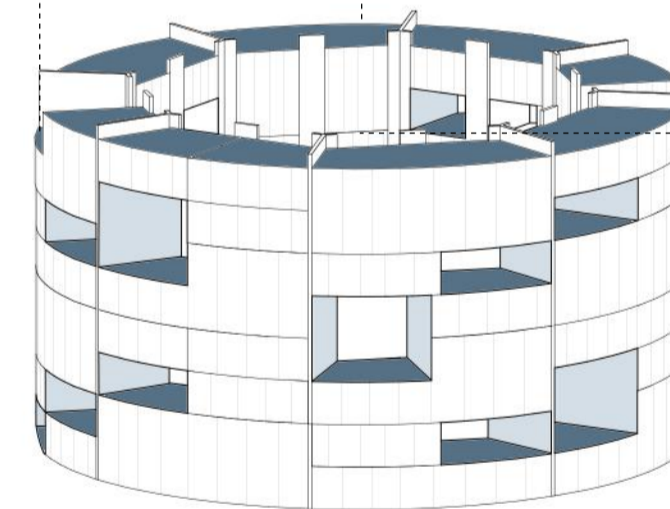
The modularised living units are configured into various functional types which can be plugged into the superstructure or shifted to another hence giving flexibility of living in various locations without the need of reconstruction or demolition. These transient pods can be plugged into the grid or be self standing off grid units as well.



Massing Model showing 1BHK 2BHK 3BHK 4BHK attaching to the HIVE

Dynamic Public Spaces

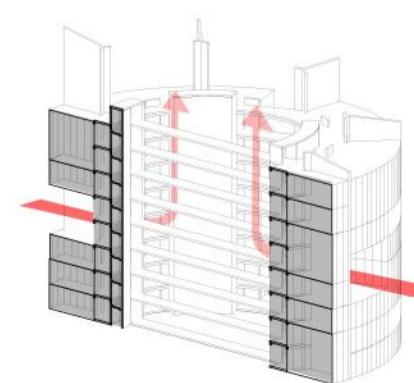
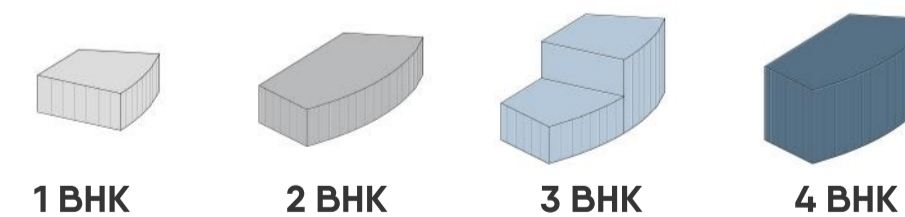
The relative orientation of the pods results in the creation of the public spaces in this high-rise structure. These dynamically change in orientation and arrangements and create a sense of diversity in the fabric of the whole system. Each individual effects the overall wellness and health of the space and contributes to the public realm in their own ways.



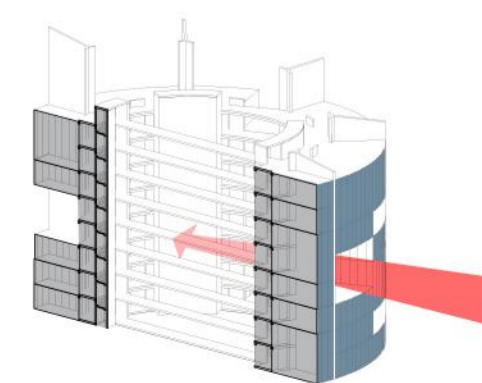
Massing Model showing the voids created due to lack of masses in place

Program - User Groups

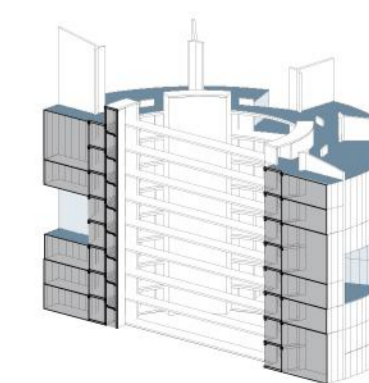
The units are divided into 1BHK, 2BHK, 3BHK and 4BHK each a modular space of the other so that a truly jigsaw like adaptable system can be achieved with simplicity and ease.



Ventilation - Stack & Cross



Pollution Remediation



Sky Gardens



Dynamic Elevation

The overall facade and external elevation is column free so as to provide an easy insertion and removal of the various typologies of pods. The whole system will look different based on the insertion positions of the pods as well as the community spaces created in the highrise will change. The relative orientations and facade will vary and create an everchanging form which is responsive to the needs of the time. This hyper adaptive system is solely possible due to the use of CLT and its intrinsic material properties.



View of the internal core connecting the various modular units and enhancing ventilation through the atrium



Horizontal Circulation

The bridges and walkways are created to interconnect the various parts of the building providing for a visual connect as well as a simpler ease of access across the various functions. This also leads to enhanced structural stability of the whole system.

Phyto-remediating Algae Facade

The parametric facade is held in place by kinetic frames in between which rests the skin which acts as a pollution purification tool. The phyto-remediating algae facade is a skin that enhances air quality in the spaces within and surrounding regions.

Modular Wall Panels

The walls are all straight and devised to be modular so as to provide for a fixed unit of construction. These 169mm THK CLT Panels are the core of the plug and play unit which can be detached from the superstructure, transported and re-erected with minimal effort.

Vertical Circulation

The staircase and lifts are encased in separate shear wall system CLT based to hold the overall structure to each other. This forms the innermost ring at the core of the whole structure.

CLT Floor Panels

The complete flooring which sits on top of this grid is made of 239mm THK CLT Panels modularised to standardise the shape and area of the units and to ensure workability and efficiency of construction.

CLT Shear Columns and Beams

CLT Shear wall fins are linked to each other by curved beams which help create the radial shape of the structure. The structure is heavier in the internal zone leaving the external face column free to allow for plug in units to be fixed.

Habitat Zero System

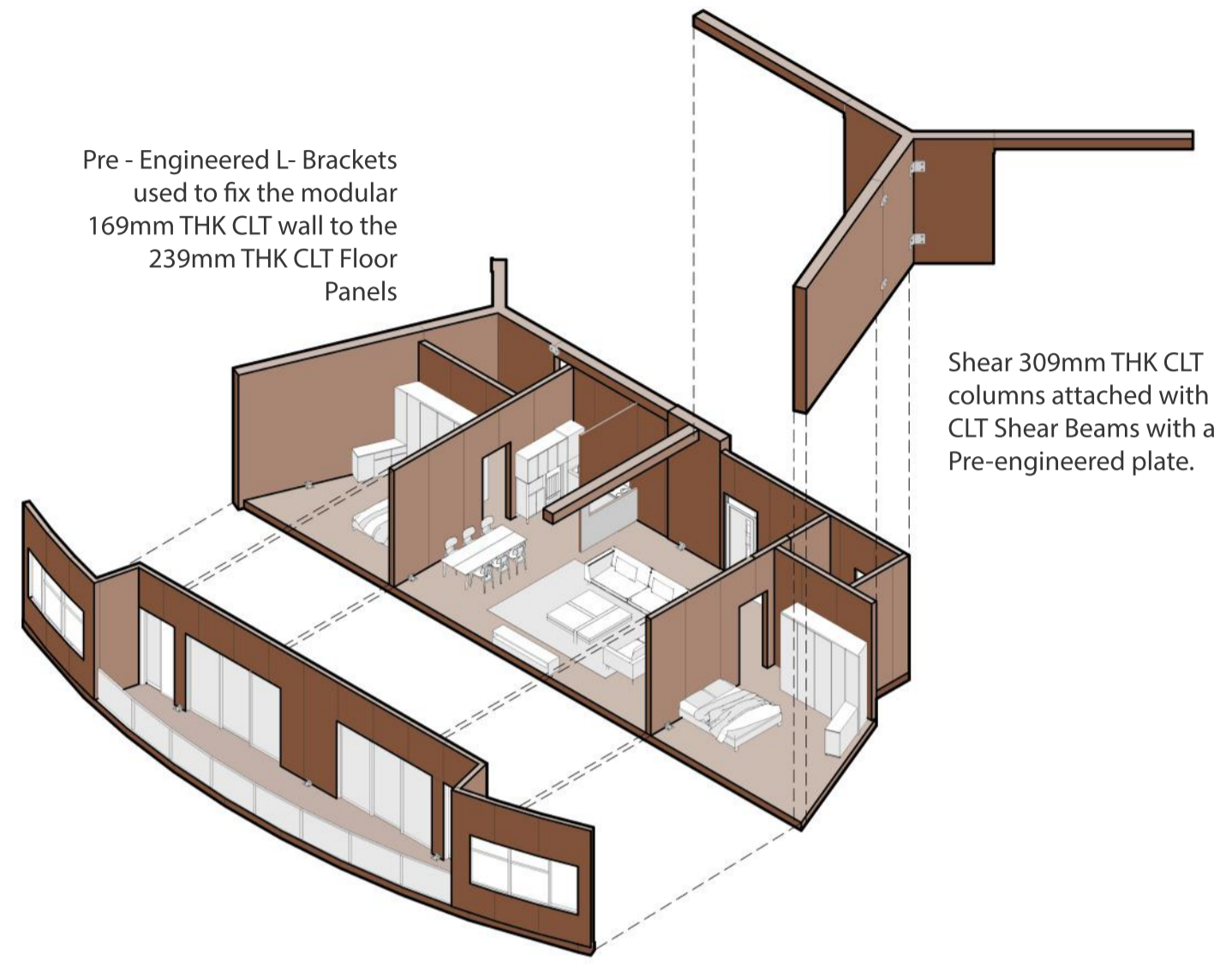
The overall complex plug and play pod system encased and created completely out of various forms of CLT structural systems aiming to create a hybrid living experience.



The completely porous yet filtering facade system provides for enhanced air quality and lifestyle

Structure - The Modular Pod

This modular Unit is self-sustainable with the option of it being on grid by placing it in the superstructure and become part of the community or can be transported and re-erected someplace isolated and made off grid by simple means. This is a completely modularised unit and post its completion of utility it can be salvaged to up to 90% of all the materials. This CLT based unit is devised to outperform its normal life cycle and planned to adapt to varied circumstances while being resilient in nature.



The superstructure can be refurnished in varied locations and climatic conditions