

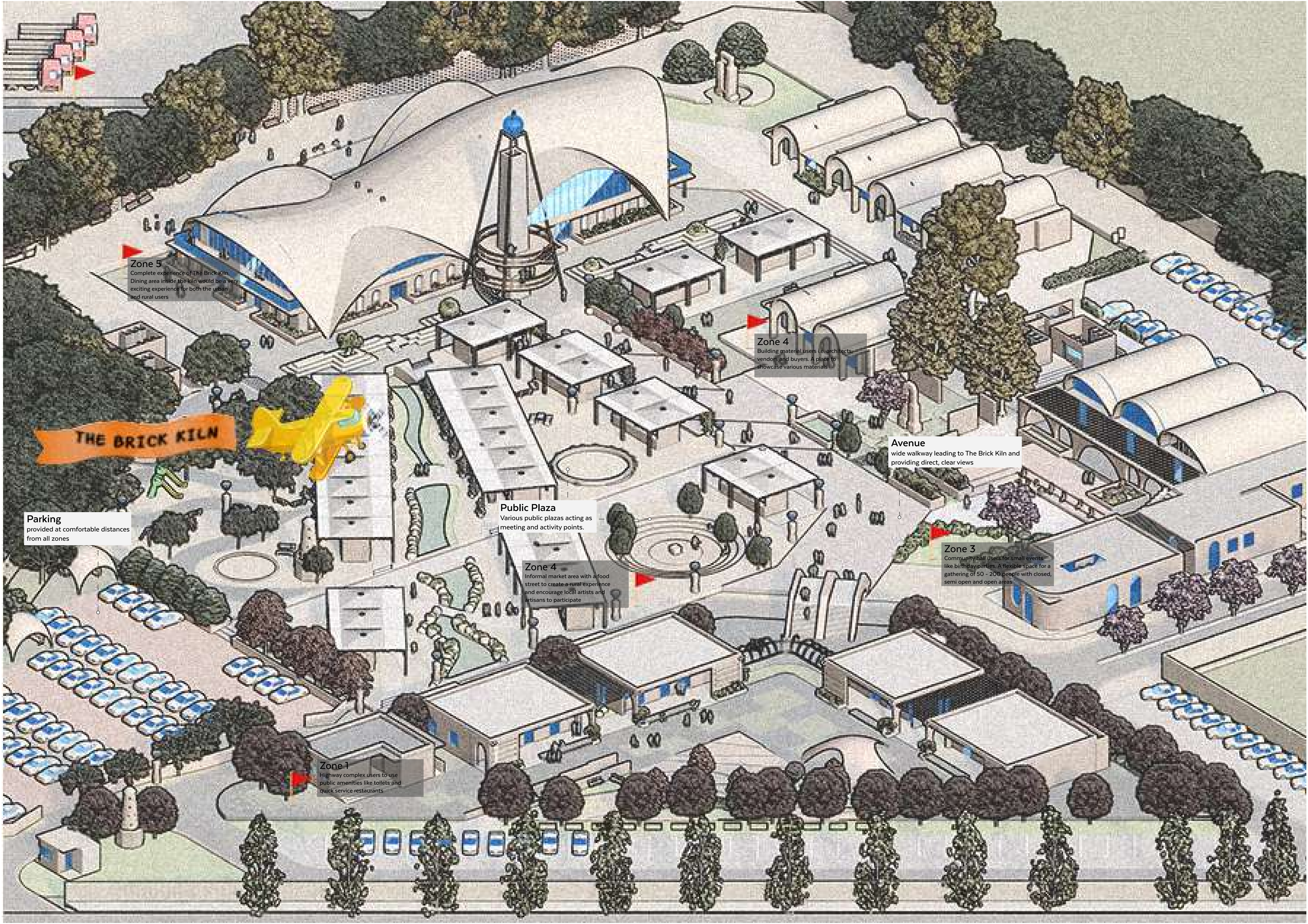
01 THE BRICK KILN - AN ADAPTIVE REUSE

*This thesis will be a study into how an old brick kiln can be rethought, designed and accentuated post its manufacturing phase through adaptive reuse
Site in Baagwali, Haryana, India*

Undergraduate Thesis Project, 2021

Over the past few years, a lot of brick kilns have been closed down throughout the country leaving these land parcels abandoned or under - developed. Continuous urban sprawling has resulted in the exploitation of fertile agricultural land while ignoring the available land resource. There is a need to realise the potential of such land parcels. This adaptive reuse project will help create possibilities of infrastructural development and bring about awareness regarding the fact that - former kiln sites are not merely degraded areas, but can add value to the site and act as a catalyst for development of the neighbouring regions.

The aim is to understand how an old brick kiln can be rethought, designed and accentuated post its manufacturing phase through adaptive reuse. The trilogy of the dying land, weak rural economy and crowded urban infrastructure will benefit from this study.



Zone 5
Complete experience of The Brick Kiln. Dining area inside the kiln would be a very exciting experience for both the urban and rural users.

Zone 4
Building material users i.e. architects, vendors and buyers. A place to showcase various materials.

Avenue
wide walkway leading to The Brick Kiln and providing direct, clear views

Zone 3
Community hall users for small events like birthday parties. A flexible space for a gathering of 50 - 200 people with closed, semi open and open areas.

Public Plaza
Various public plazas acting as meeting and activity points.

Zone 4
Informal market area with a food street to create a rural experience and encourage local artists and artisans to participate.

Zone 1
Highway complex users to use public amenities like toilets and quick service restaurants.

Parking
provided at comfortable distances from all zones

THE BRICK KILN

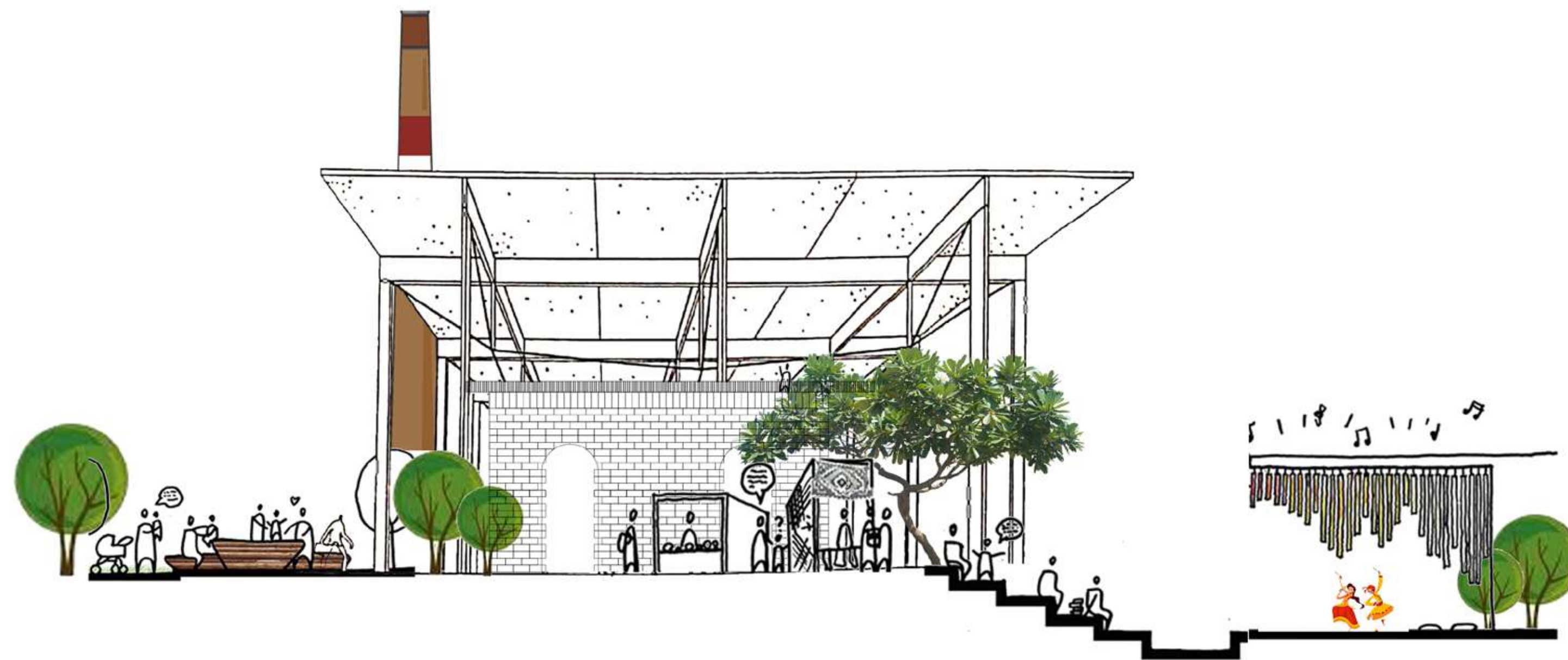
INTRODUCTION

India has more than 100,000 brick kilns most of which have been constructed with the old methods. Over the past few years, these traditional methods of brick production have raised environmental concerns globally.

The fertile topsoil is used up in the manufacturing process and the water table of the region drops. This effects the productivity of this land and makes it a brownfield.

Continuous urban sprawling has resulted in the exploitation of fertile agricultural land while ignoring the available land resource.

The trilogy of the dying land, weak rural economy and crowded urban infrastructure will benefit from this study.



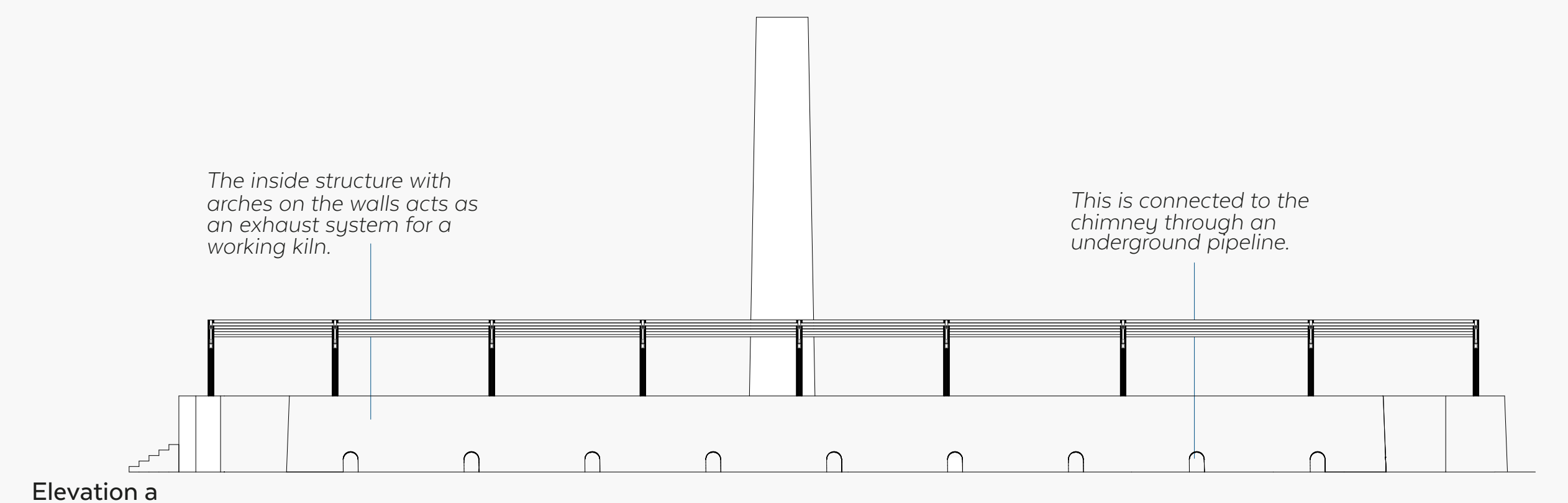
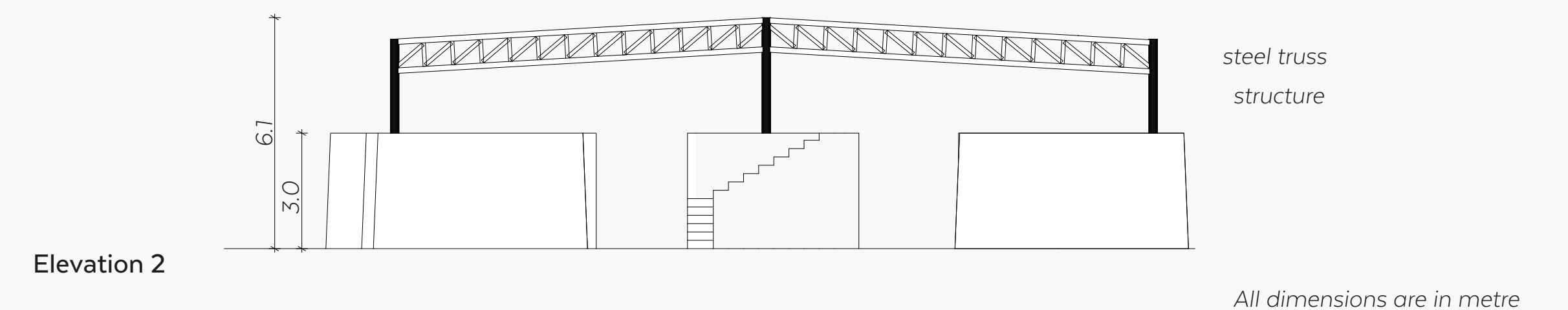
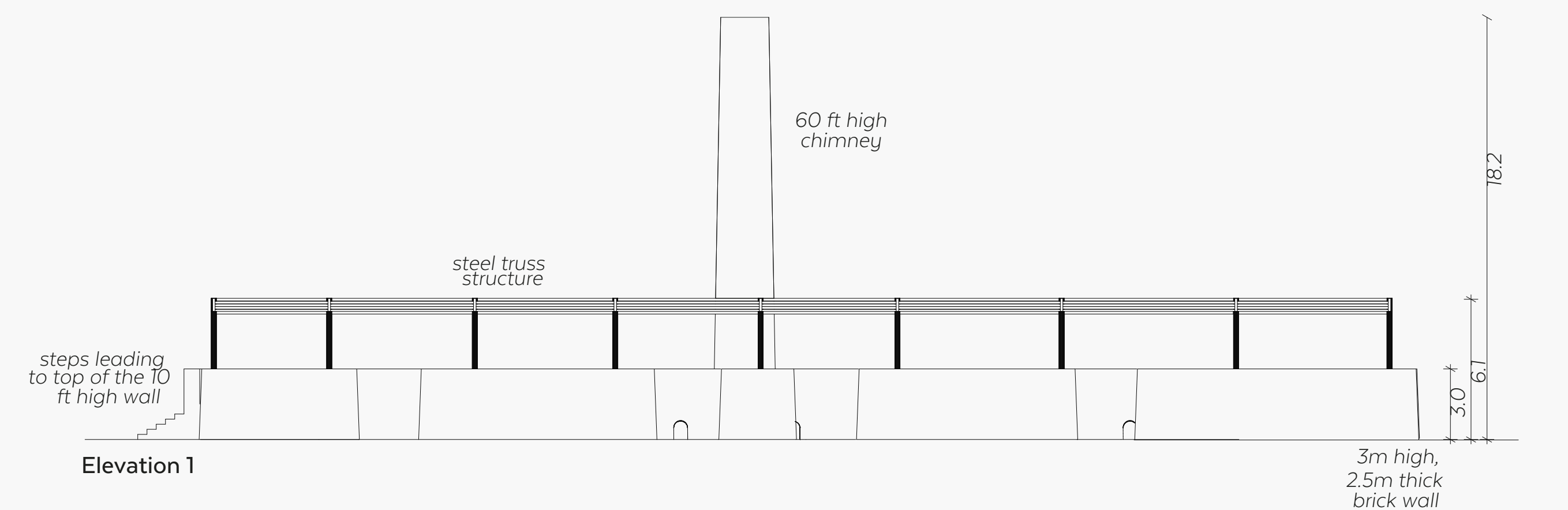
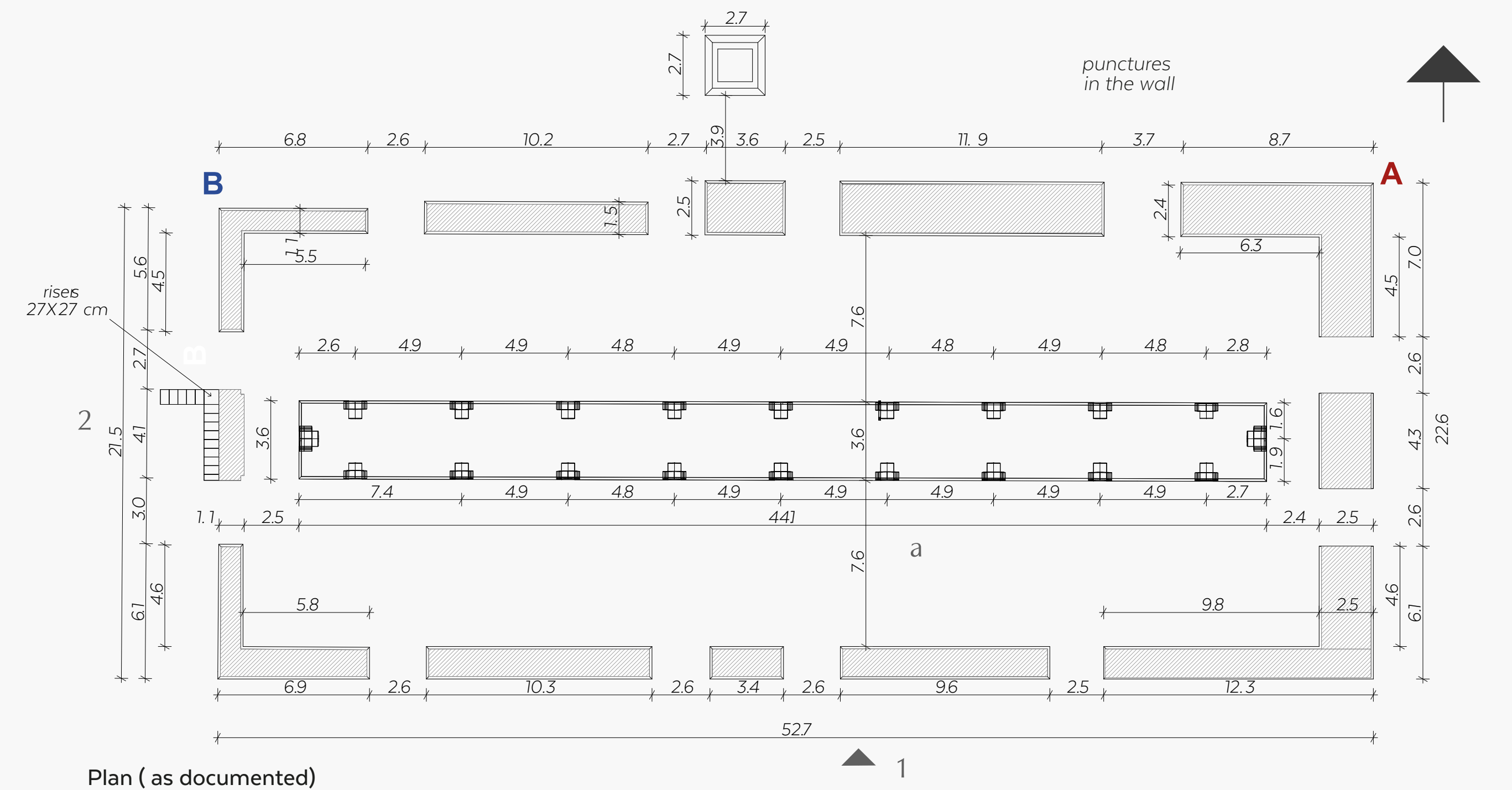
CONCEPTUAL VISION

By reimagining the existing structure on site, the concept developed for The Brick Kiln is based on a philosophy of natural balance between resources and design. The result would be a truthfully designed space to provide an exciting experience to the users.

Therefore, every design decision will be guided by

1. Truthfulness to Site by Reinterpretation of the kiln and minimum interventions
2. Truthfulness to material by the celebration of Brick
3. Truthfulness to user by creating exhilarating experiential spaces
4. Truthfulness to the community by the integration of rural and urban

EXISTING STRUCTURE OF THE BRICK KILN



SITE LOCATION

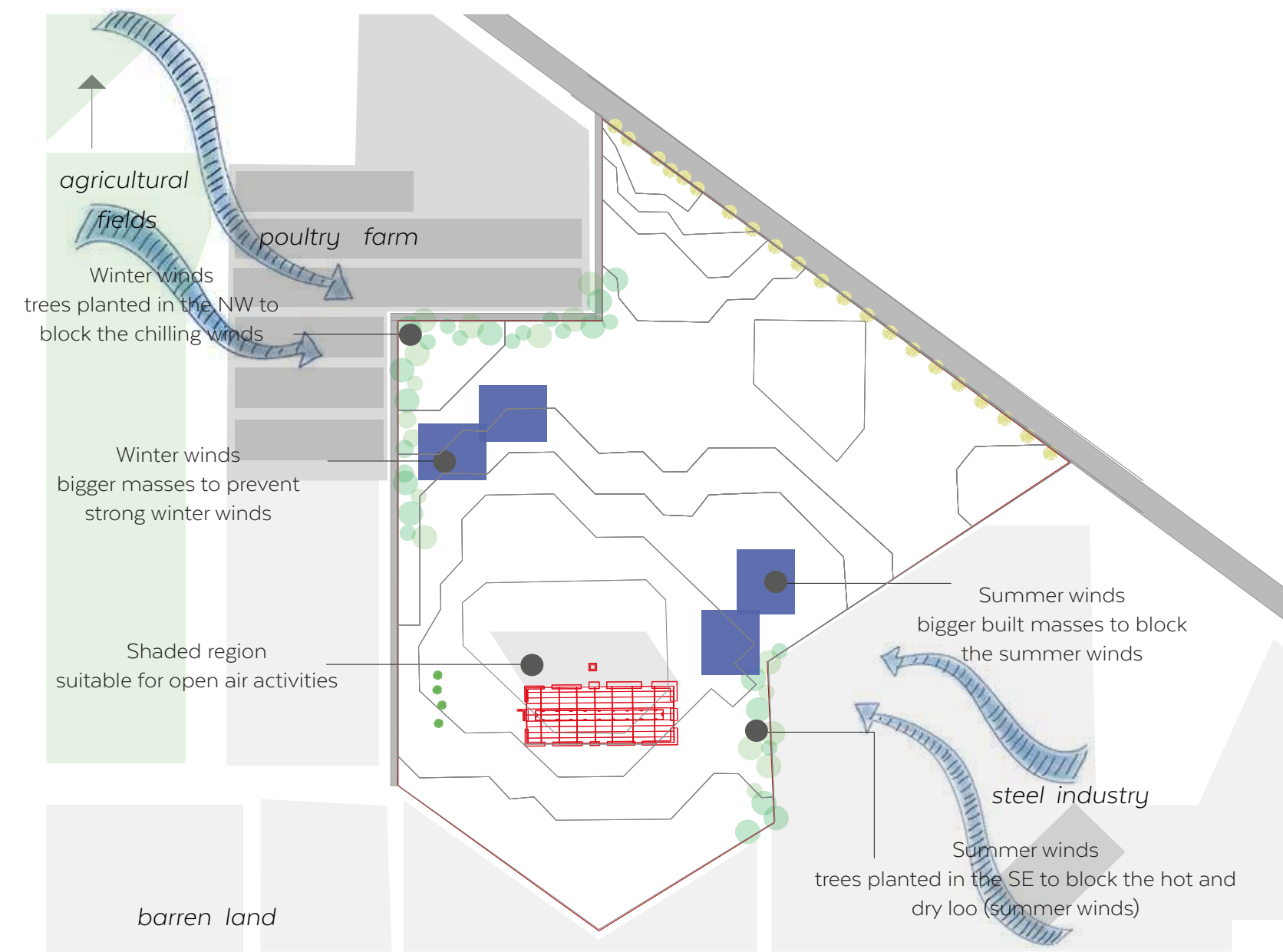


Since brick kiln industry is a polluting industry, it is usually located far from rural or urban settlements or in the middle of agricultural fields. Continuous urban sprawling has resulted in the exploitation of fertile agricultural land while ignoring the available land resource.

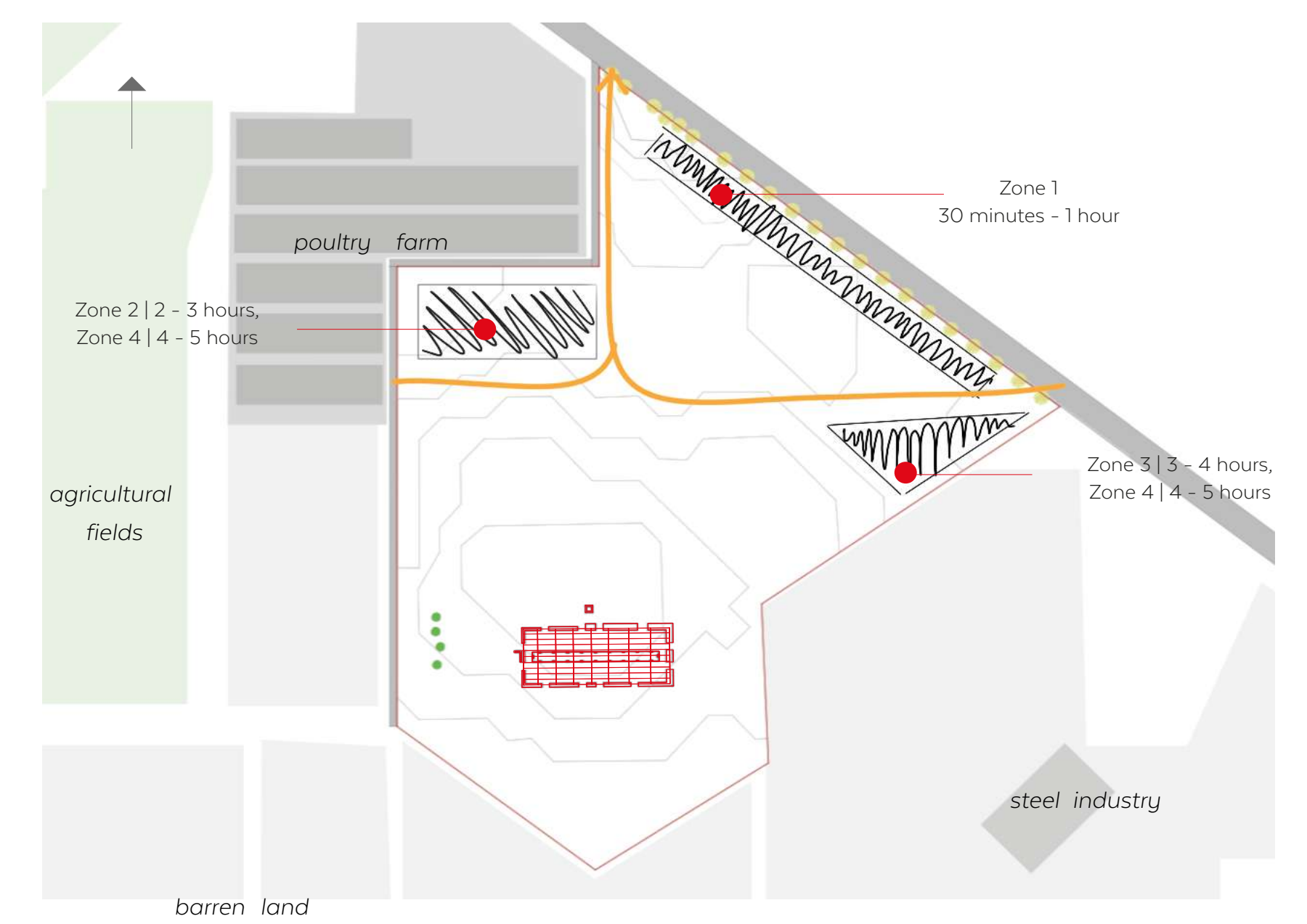
The aim is to understand how an old brick kiln can be rethought, designed and accentuated post its manufacturing phase through adaptive reuse.

The abandoned kiln site is located on the National Highway 7 and is easily accessible to the passers by - both visually and physically. It experiences traffic of religious tourists travelling to Kedarnath, Badrinath, Gangotri and Yamunotri. Other tourists travelling to Nainital, Dehradun, Mussoorie and other hill stations of Uttarakhand will also take this route.

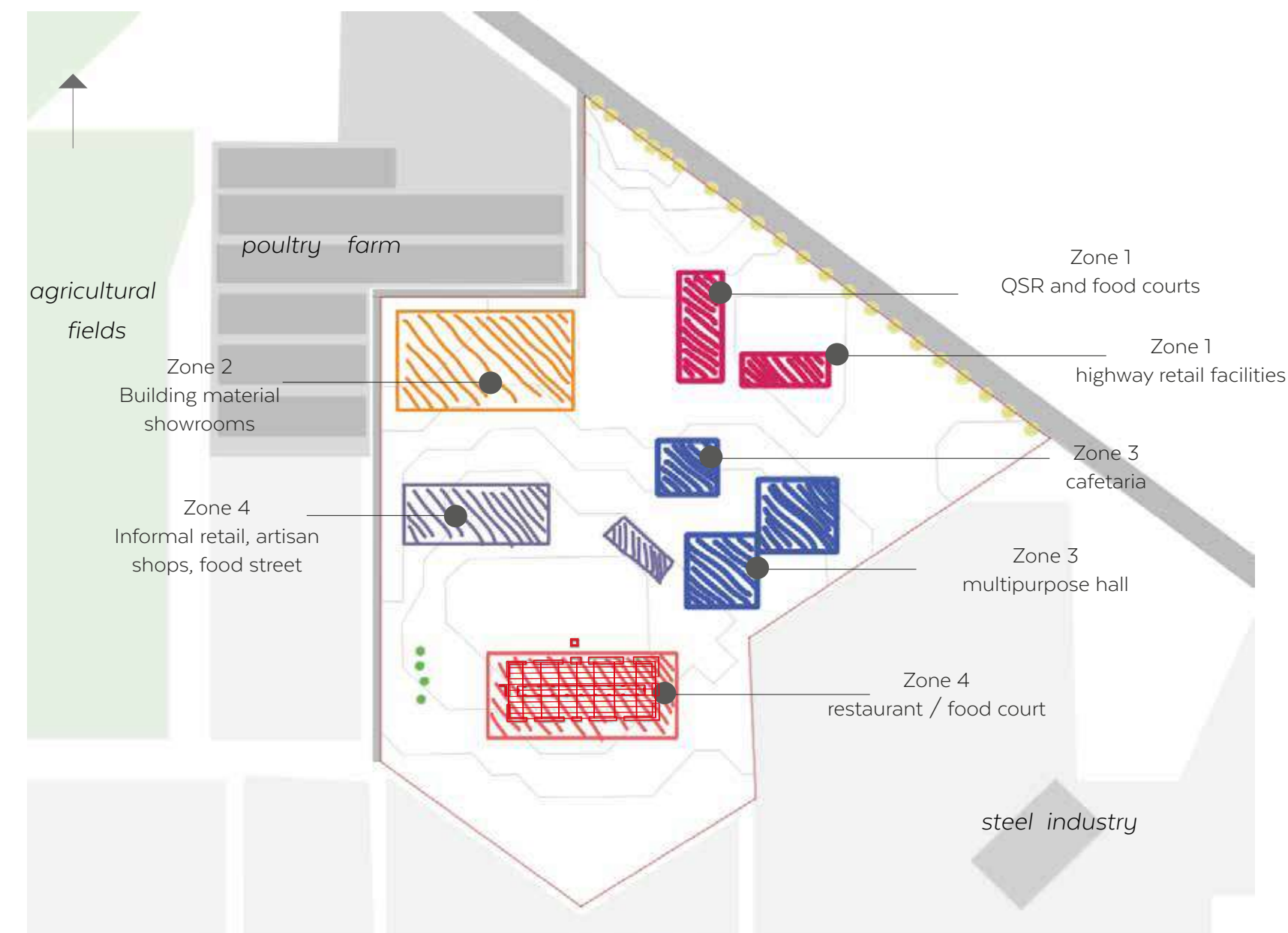
Sun/Wind Pattern



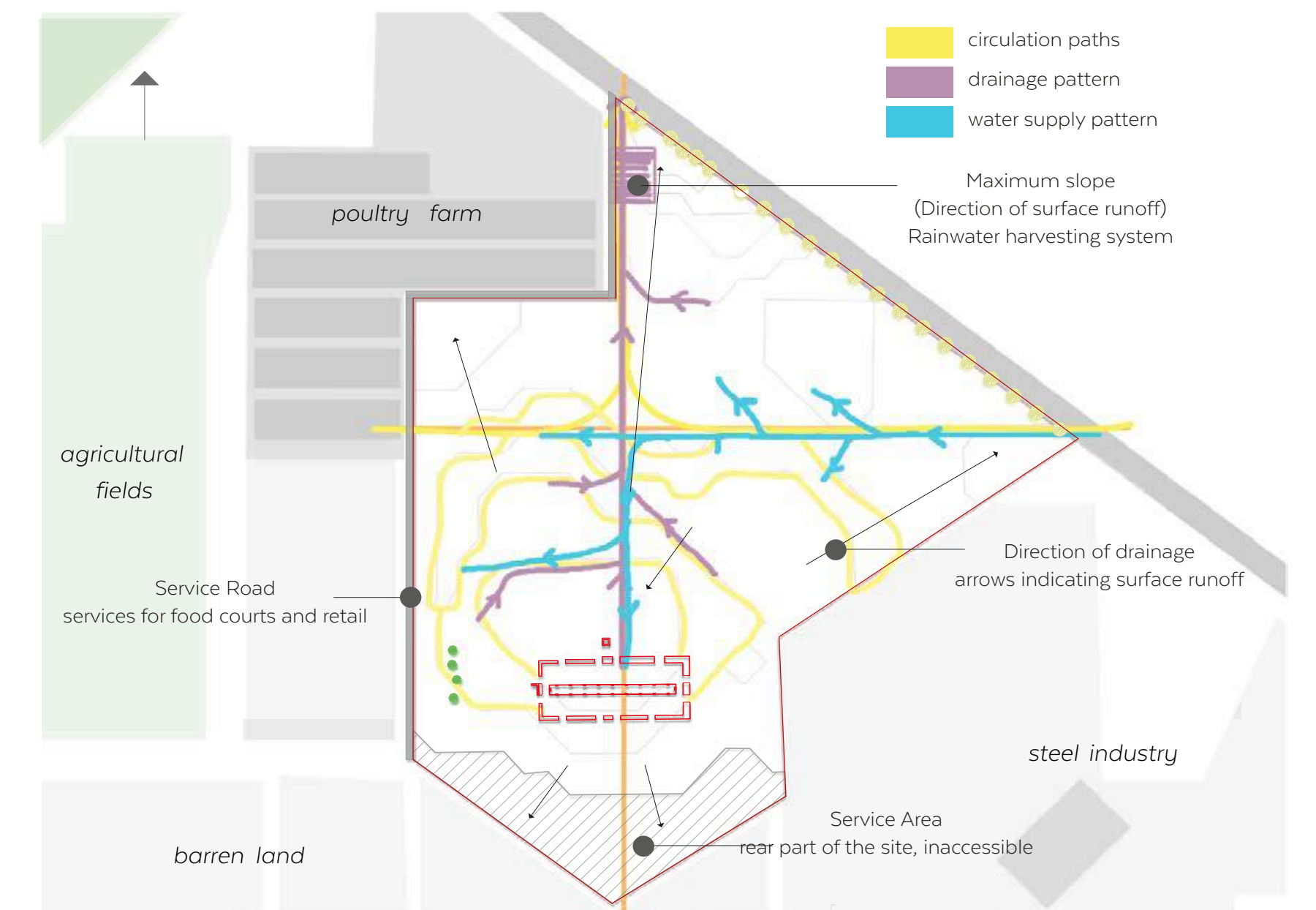
Parking Pattern



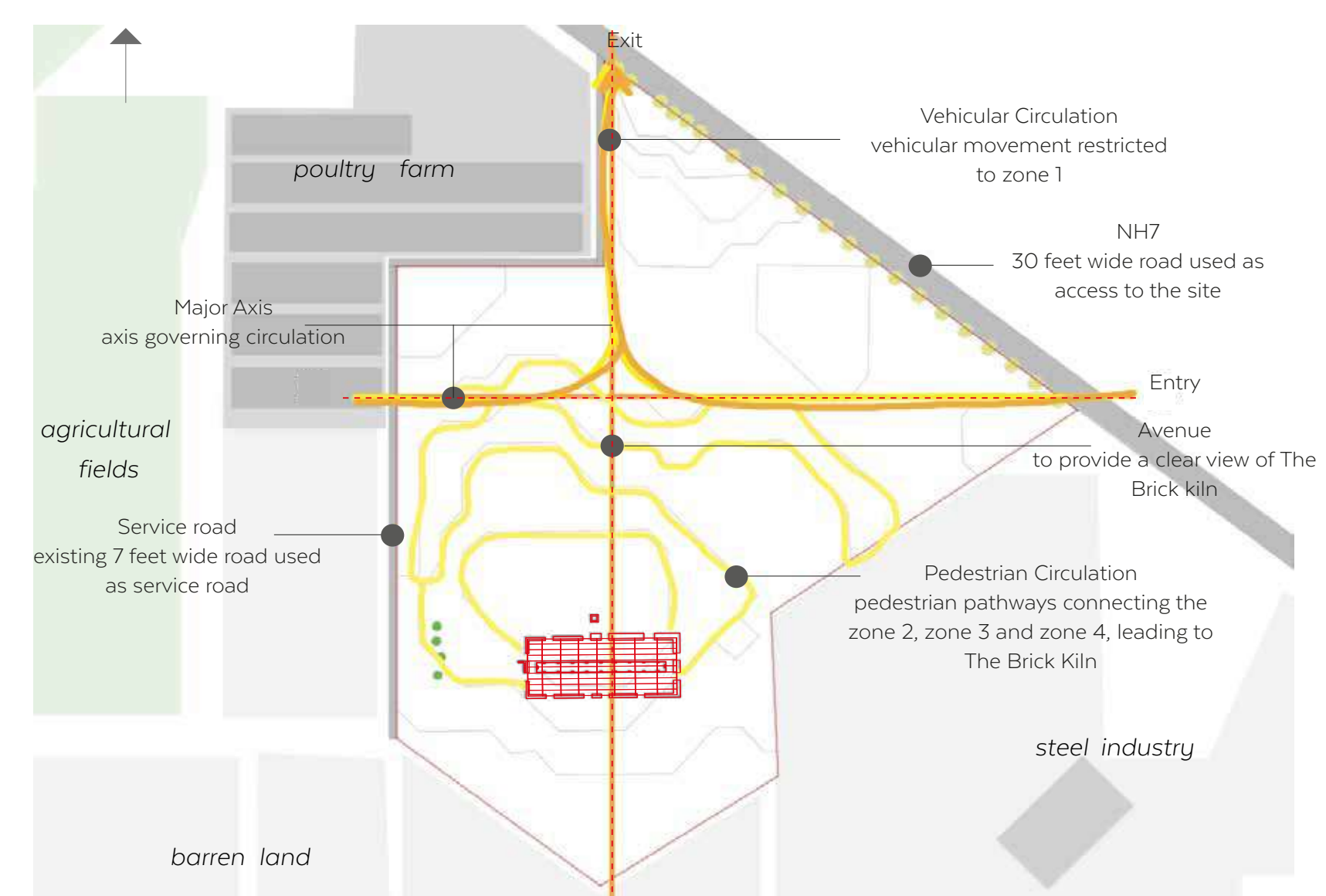
Program Pattern



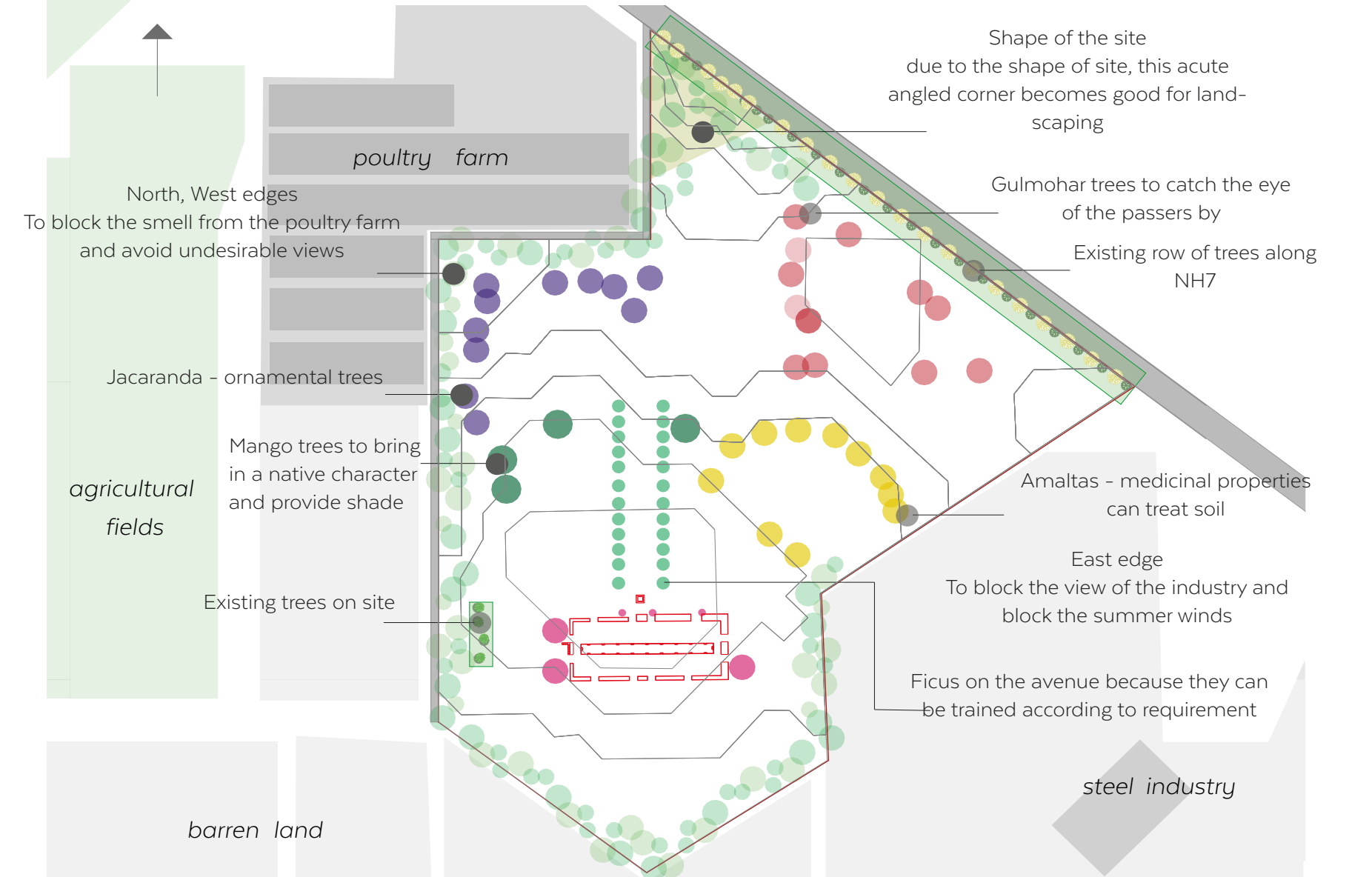
Service Pattern



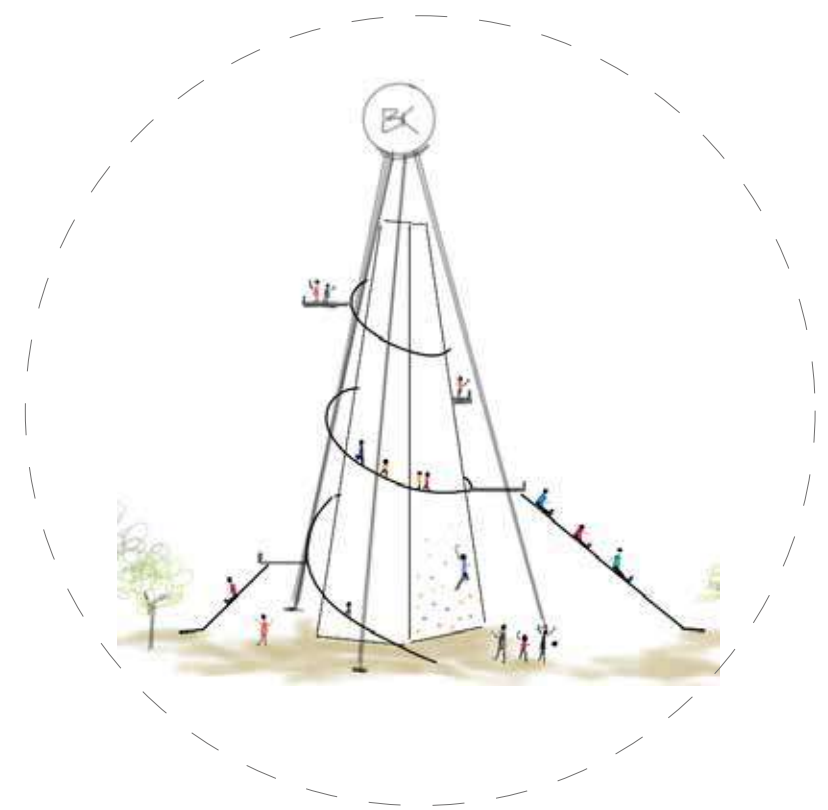
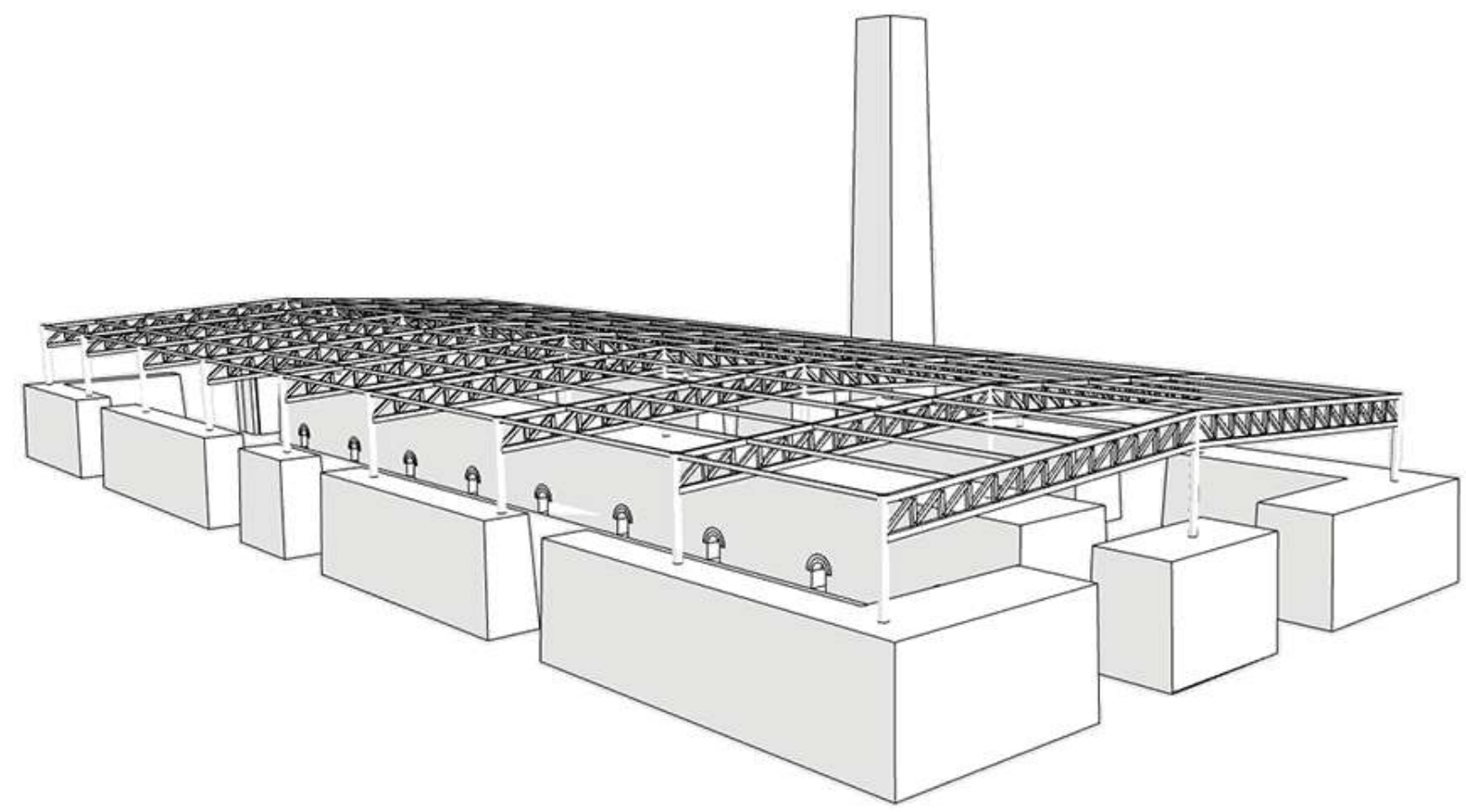
Circulation Pattern



Landscaping Pattern



PROPOSAL FOR REINTERPRETATION OF THE BRICK KILN



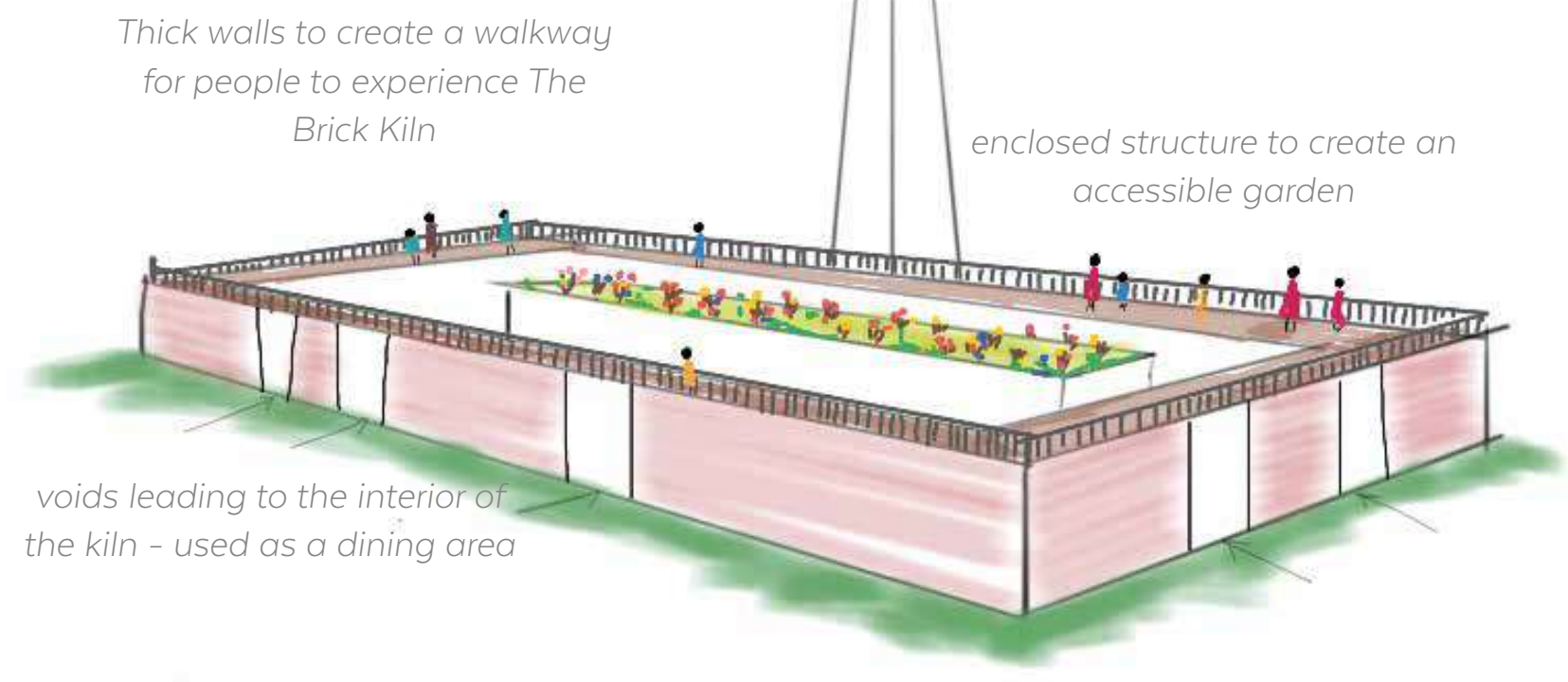
Reimagining the Chimney used as the focal point and landmark for the site.



1. Dismantle the existing roof
Due to the poor condition of the existing roof, it must be dismantled



Creating avenues and vistas to draw attention to The Brick Kiln structure and provide clear views.



Thick walls to create a walkway for people to experience The Brick Kiln

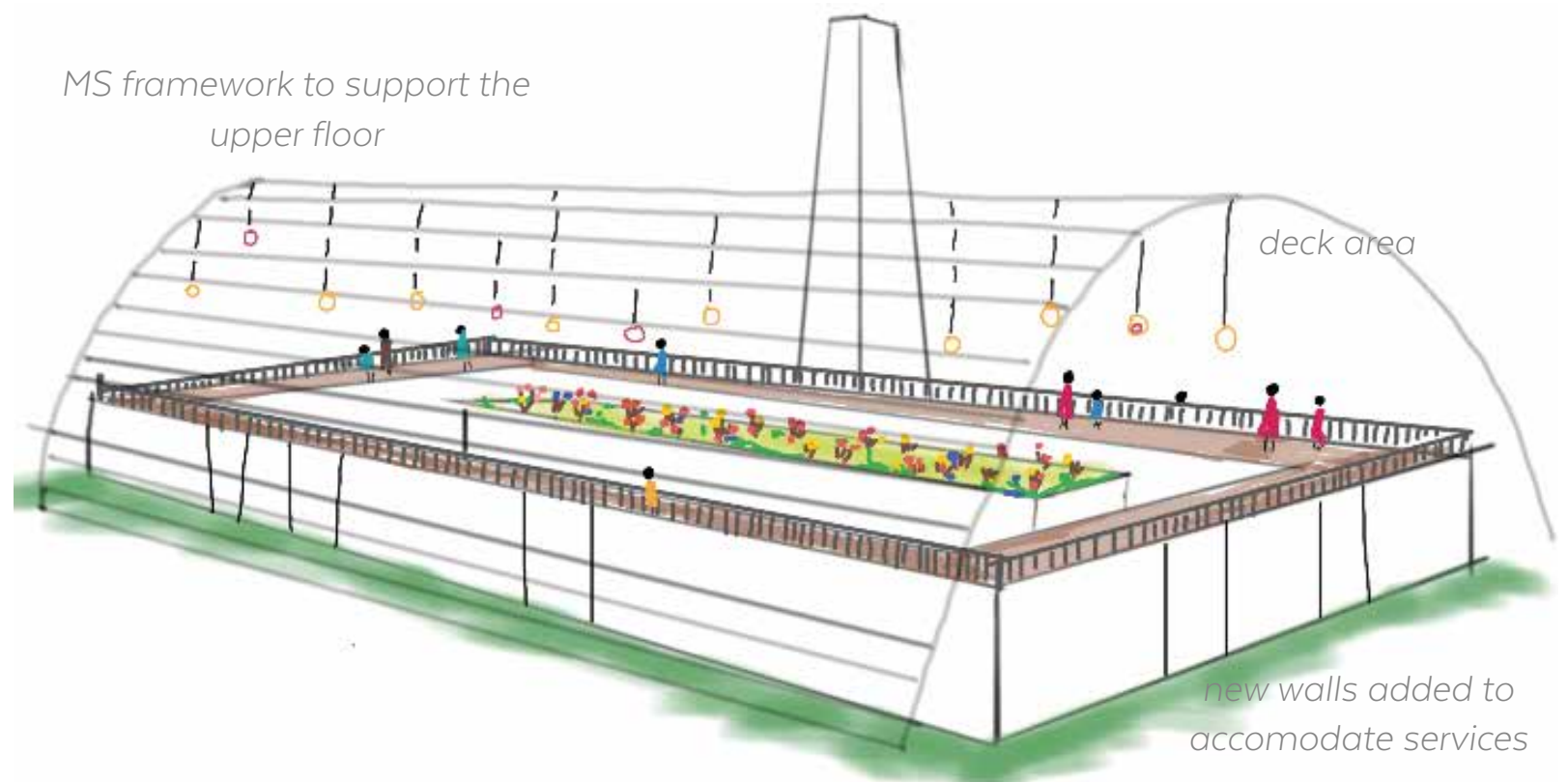
enclosed structure to create an accessible garden

voids leading to the interior of the kiln - used as a dining area

2. Walkways and Gardens
using the thick walls of the kiln to create public spaces and break down the huge solid mass by creating green spaces



display areas and exhibitions for the industries in the vicinity



MS framework to support the upper floor

deck area

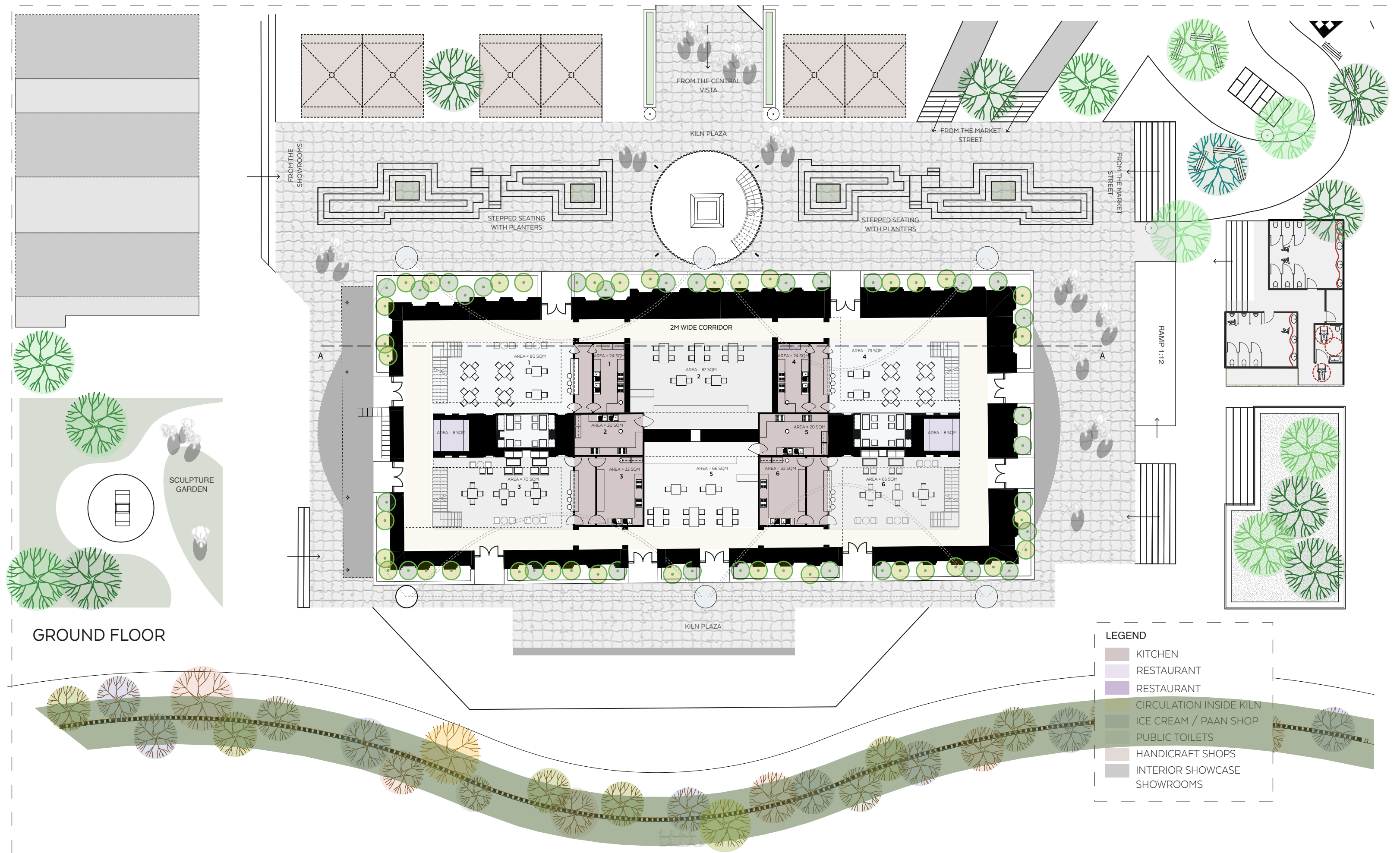
new walls added to accommodate services

3. New Roof covering
creating a see-through covering to protect the kiln and let the users have a clear view of the site and the surroundings

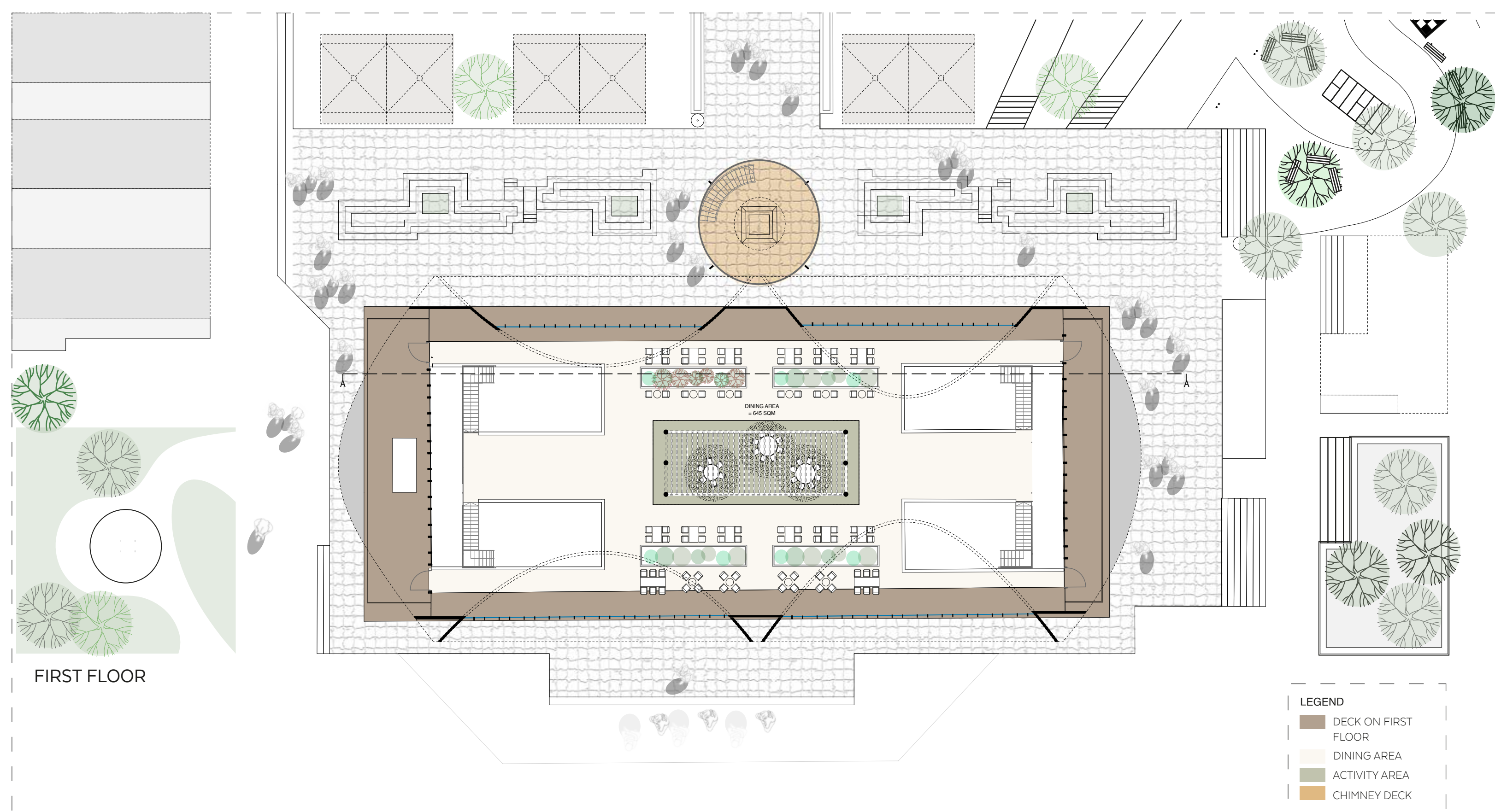


What makes a great public space?
Great public spaces are those places where celebrations are held, social and economic exchanges occur, friends run into each other, and cultures mix.

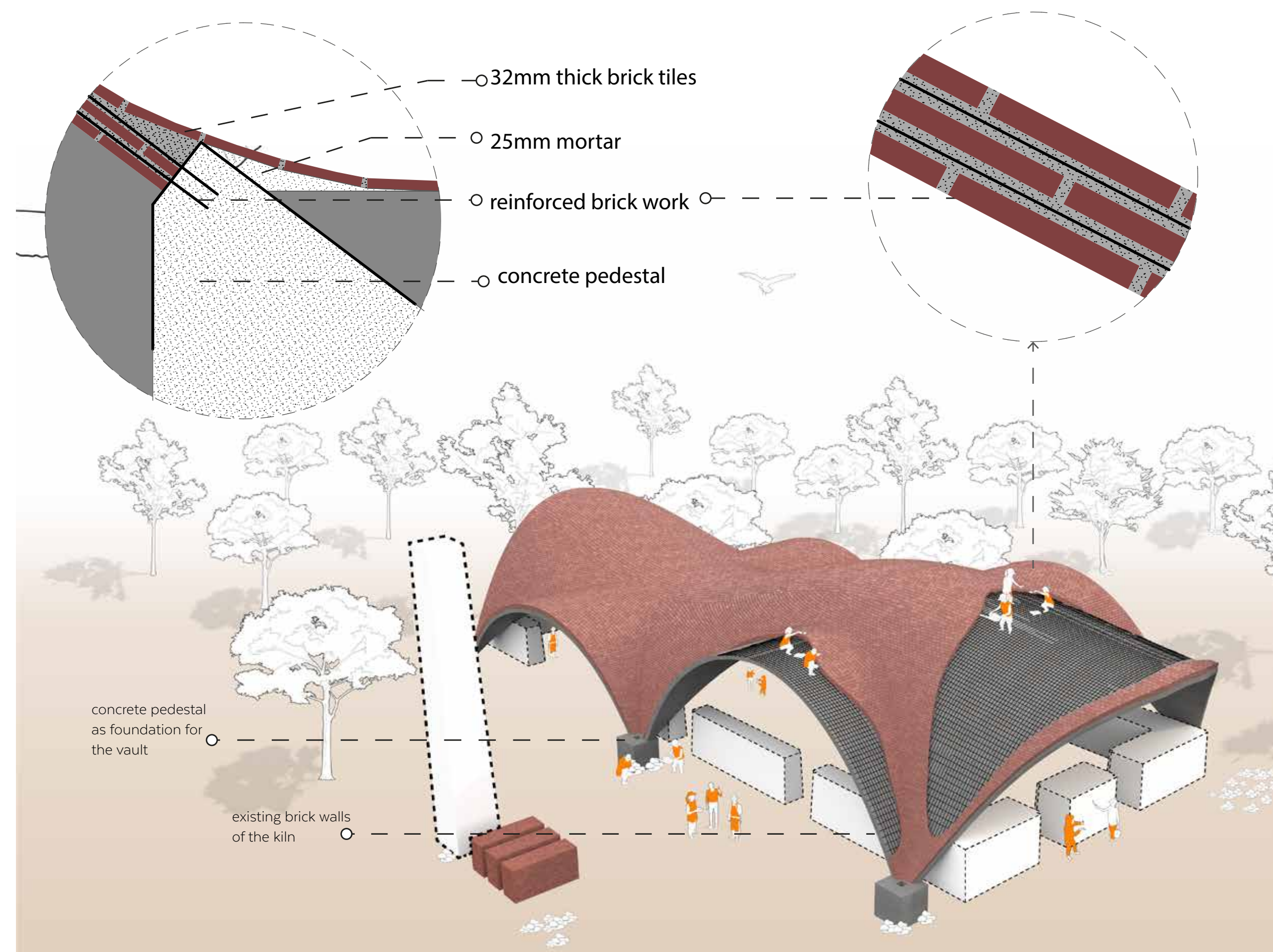




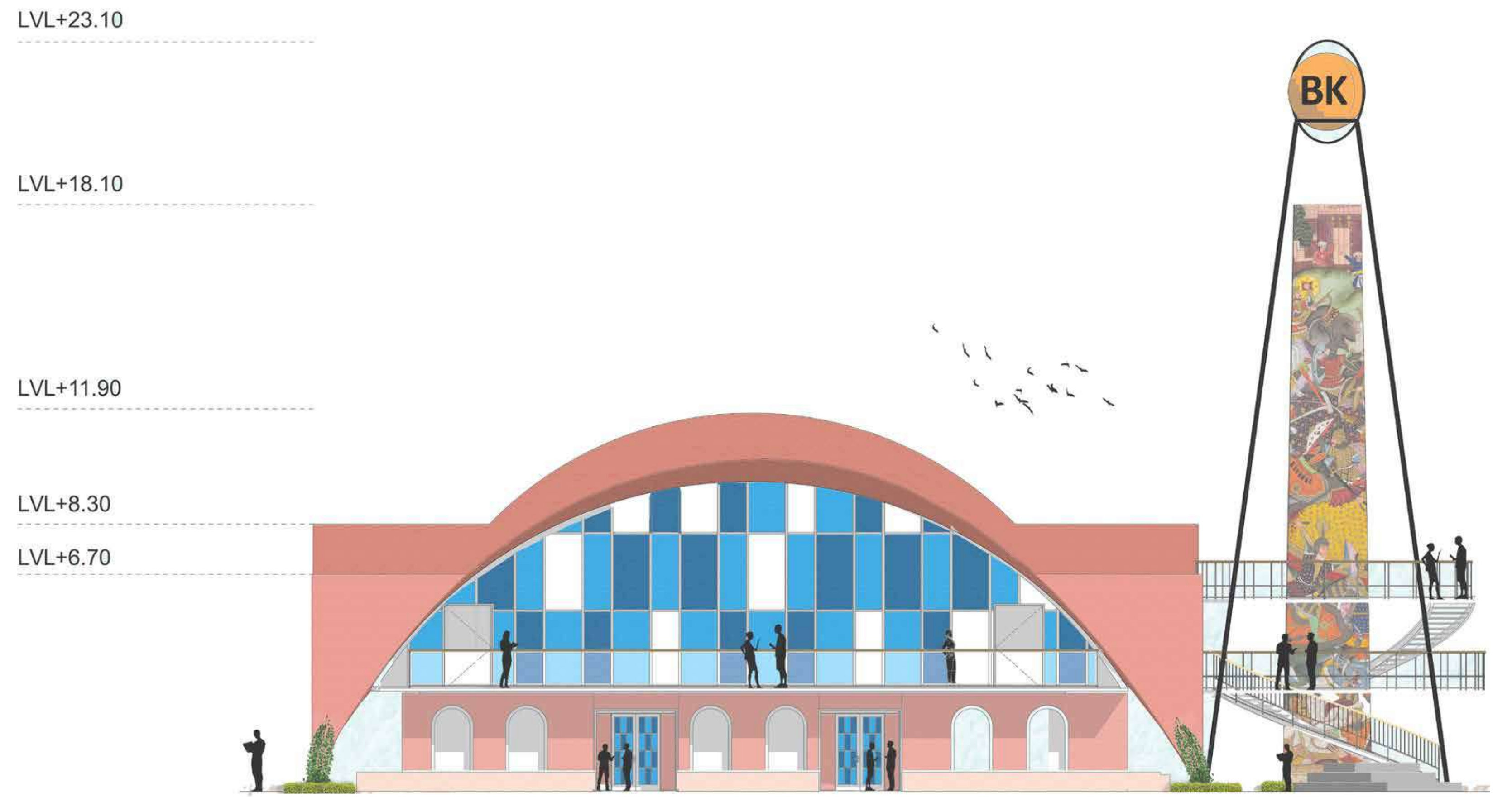
The plaza at the rear side of the kiln with gradual steps acting like a sit out space. It can host live music for a complete fine dine experience



A covered walkway on the upper level helps people experience the entire kiln and the site. Laser shows depicting the culture of Haryana on the vaulted roofs will become a major attraction making the local communities proud



CONSTRUCTION OF REINFORCED VAULTED ROOF OVER THE KILN



SHORTER ELEVATION (ALL DIMENSIONS IN METRES)



LONGER ELEVATION(ALL DIMENSIONS IN METRES)



During the night, The vaulted roof of the kiln is used to project the historically rich culture of Haryana making the local people feel proud. This could also motivate people to realise the potential of such land parcels and use the resource wisely.

MARKET STREET

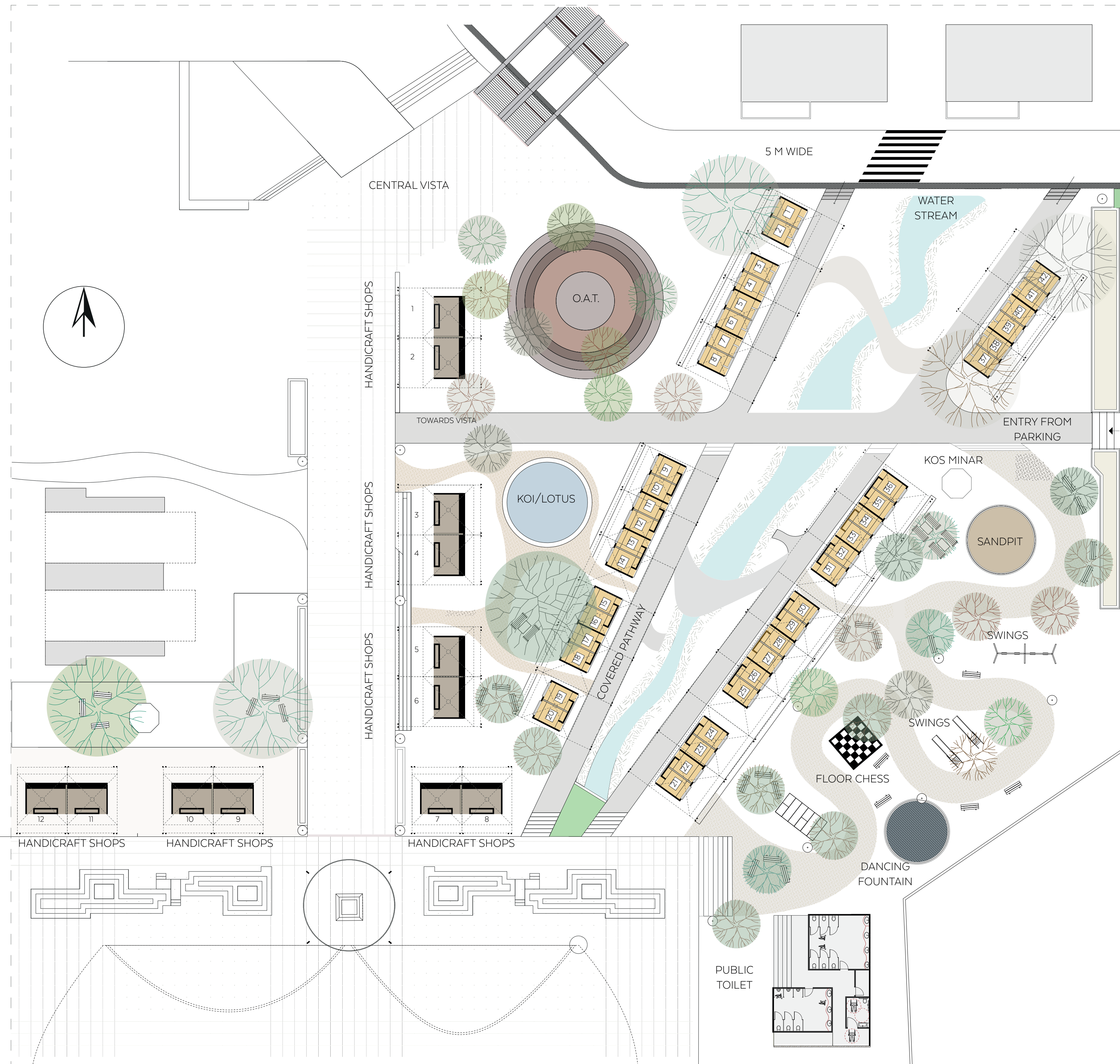
VALIDITY

To promote the local artisans and craftsmen, an informal market street has been provided for them to sell their handicrafts. Since most of the footfall shall be from the destination-oriented urban youth, this will encourage rural-urban exchange and contribute to the nearby villages' local economy.

STRUCTURE

The layout is such that multiple informal pathways eventually leading to the Brick Kiln have been created with a different experience for each. An artificial water stream helps create a relatively mild microclimate. An Open-Air theatre provides a platform for the exchange of folklore. The market street with food courts, street food stalls, and handicraft stalls have been placed along the central vista and the informal pathways.

Each unit has a metal framework with a tensile roof. The interior is a temporary brick structure that can be modified per the vendors' interpretation, contributing to cultural and communal exchange.



brick jaali wall and a concrete gargoyles pouring rainwater into the planter bed



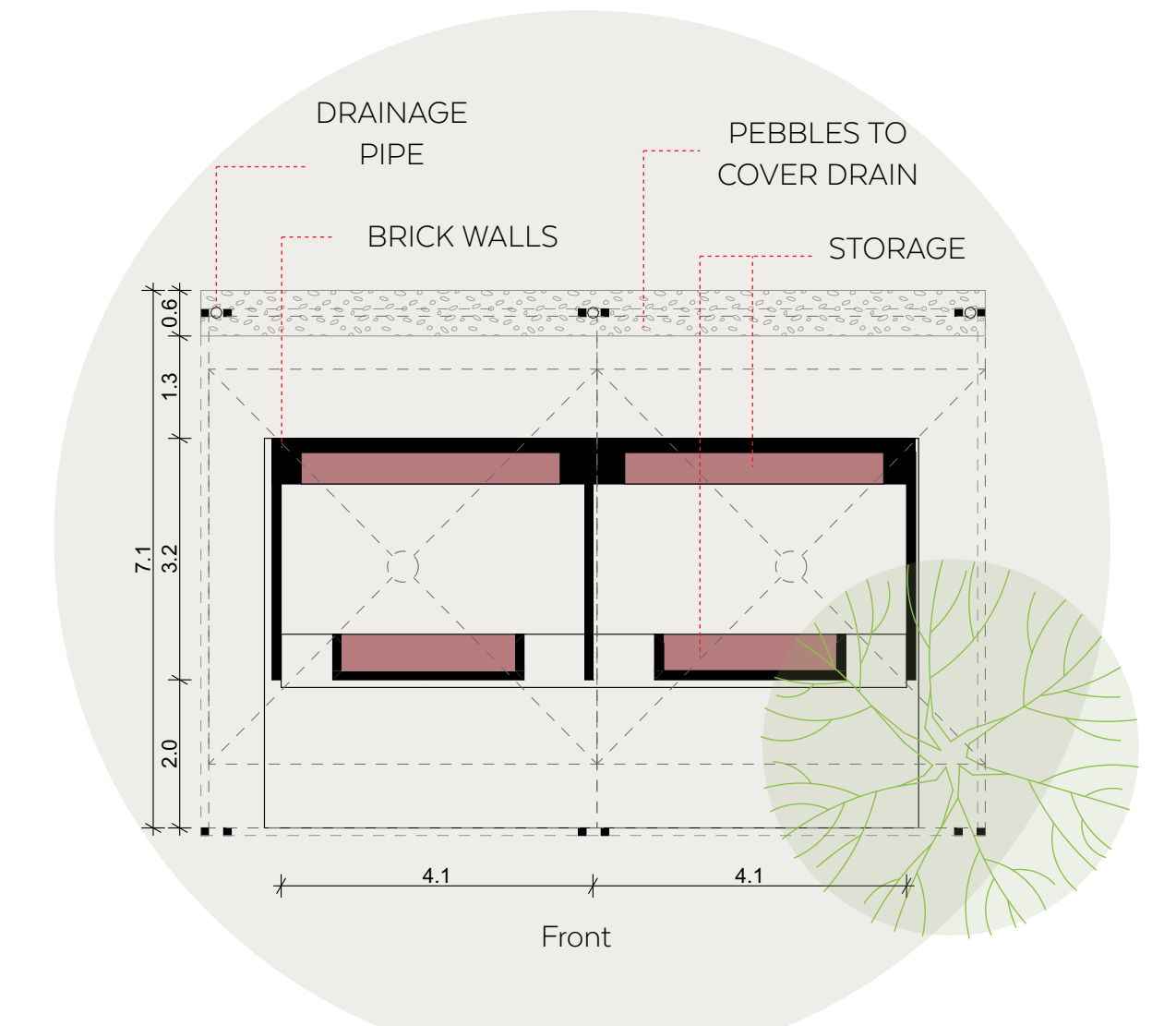
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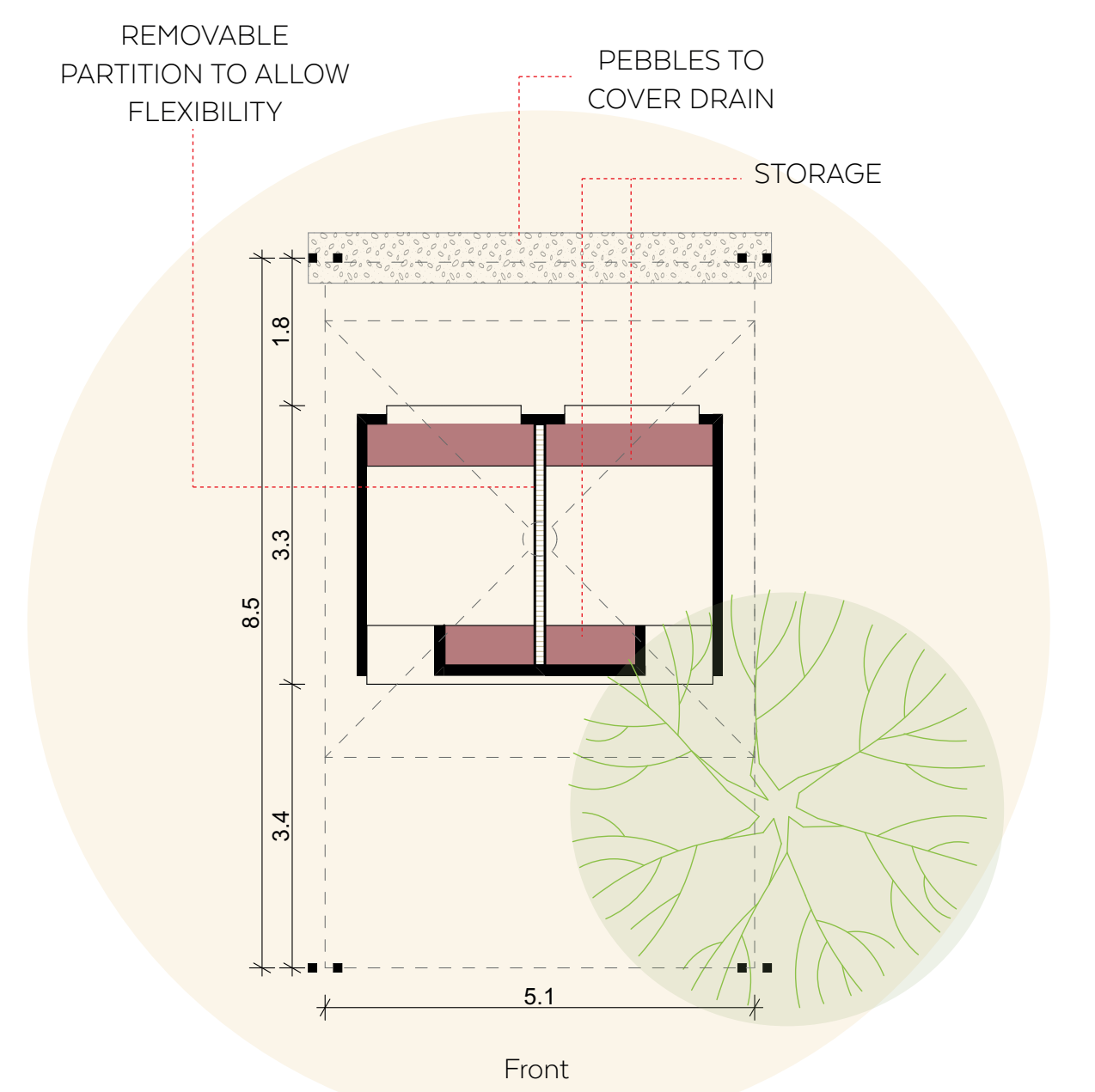
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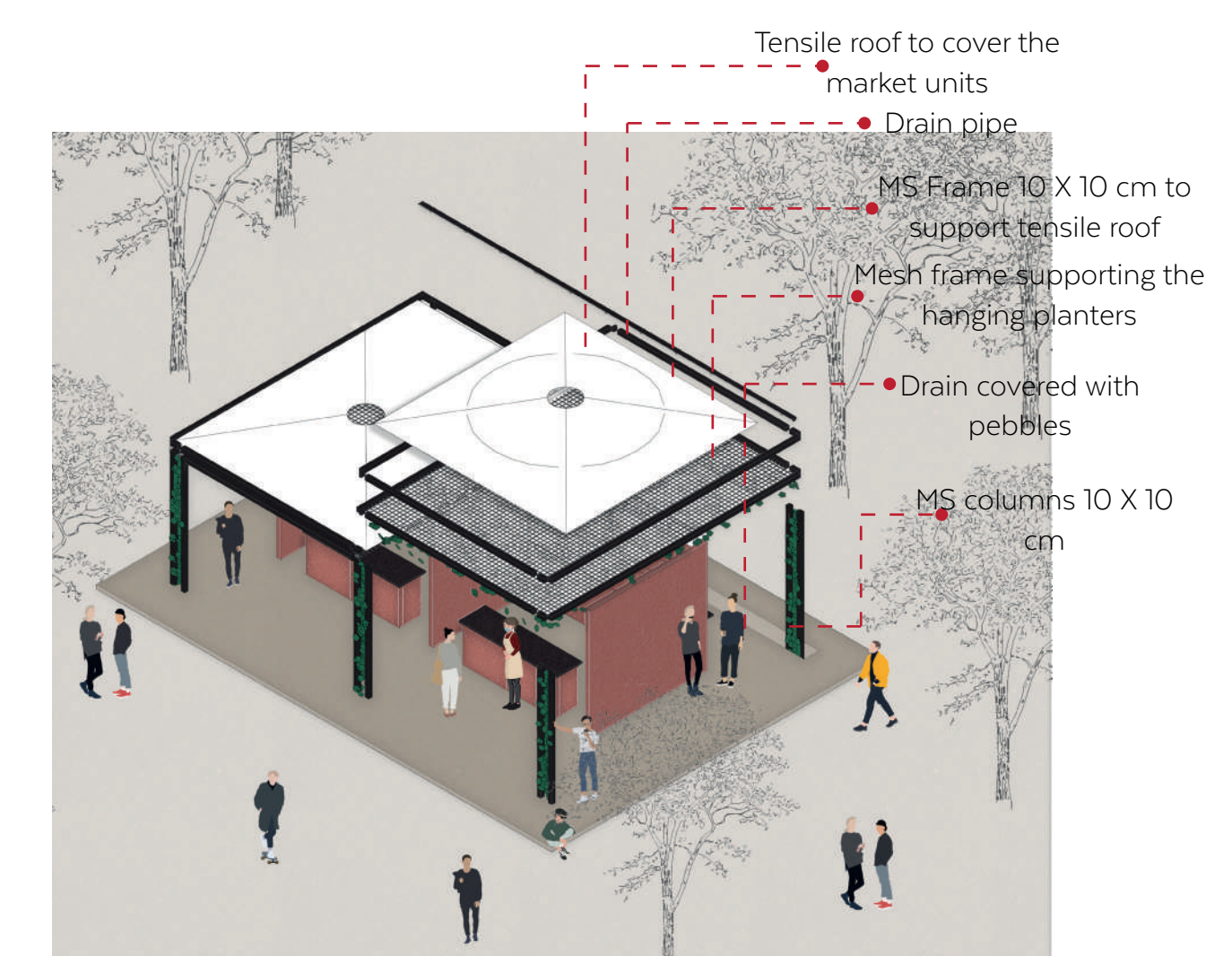
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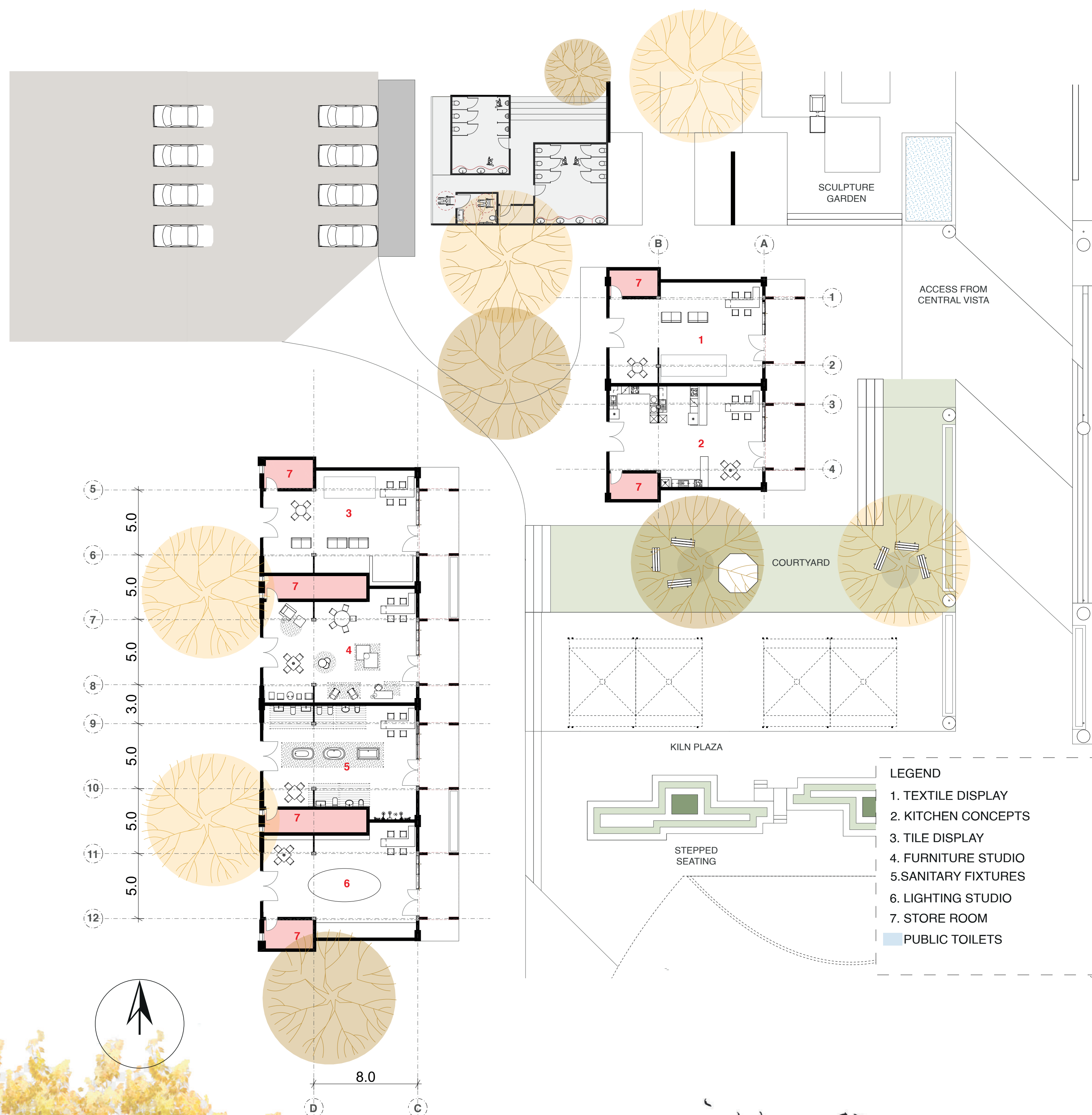


Type 1 : Handicraft stalls

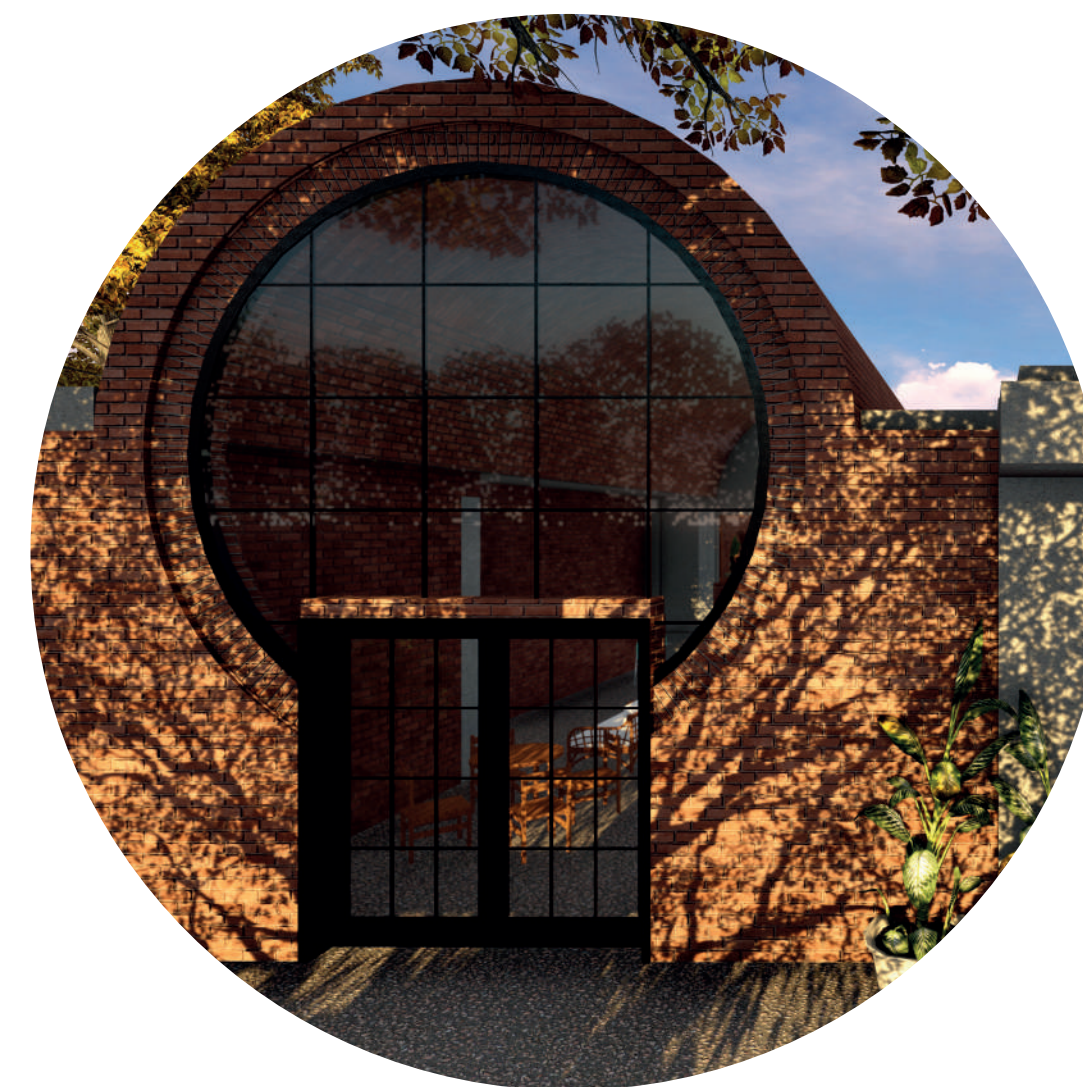


Type 2 : Food stalls





Front Entrance towards the Brick Kiln. A 6ft. deep corridor to provide a shaded walkway



Rear entrance with a parking for people who don't wish to experience the entire site

SHOWROOM / EXHIBITION

VALIDITY

Many people from the neighbouring cities and villages visit the nearby kilns to procure construction materials. Showcases and exhibits regarding innovations in terms of types, colours and techniques of brickmaking can help people make informed decisions.

This provides a single platform to discuss multiple aspects of the construction industry.

STRUCTURE

The structure is a vaulted roof resting on RCC columns. Towards the front is a 6 feet deep corridor to create a shaded walkway.

It has fenestrations to allow for unrestricted movement between various exhibits. The gargoyles drain the rainwater into the planter beds.

A parking space has been provided close to this area to assist the movement of heavy articles/exhibits

LEGEND

- 1. TEXTILE DISPLAY
- 2. KITCHEN CONCEPTS
- 3. TILE DISPLAY
- 4. FURNITURE STUDIO
- 5. SANITARY FIXTURES
- 6. LIGHTING STUDIO
- 7. STORE ROOM
- PUBLIC TOILETS

COMMUNITY CENTRE

VALIDITY

On analysing the area near the site, it was realised that there are no places for local people and organisations to meet and socialise.

To enhance the experience for the urban crowd by familiarising them with the historical art and architectural elements, a conscious effort was made to integrate the architectural language of Haryana.

Laser shows depicting the culture of Haryana on the vaulted roofs will become a major attraction making the local communities proud. The community centre and Open-Air theatre provide a platform to generate a rural-urban mutual exchange of culture.

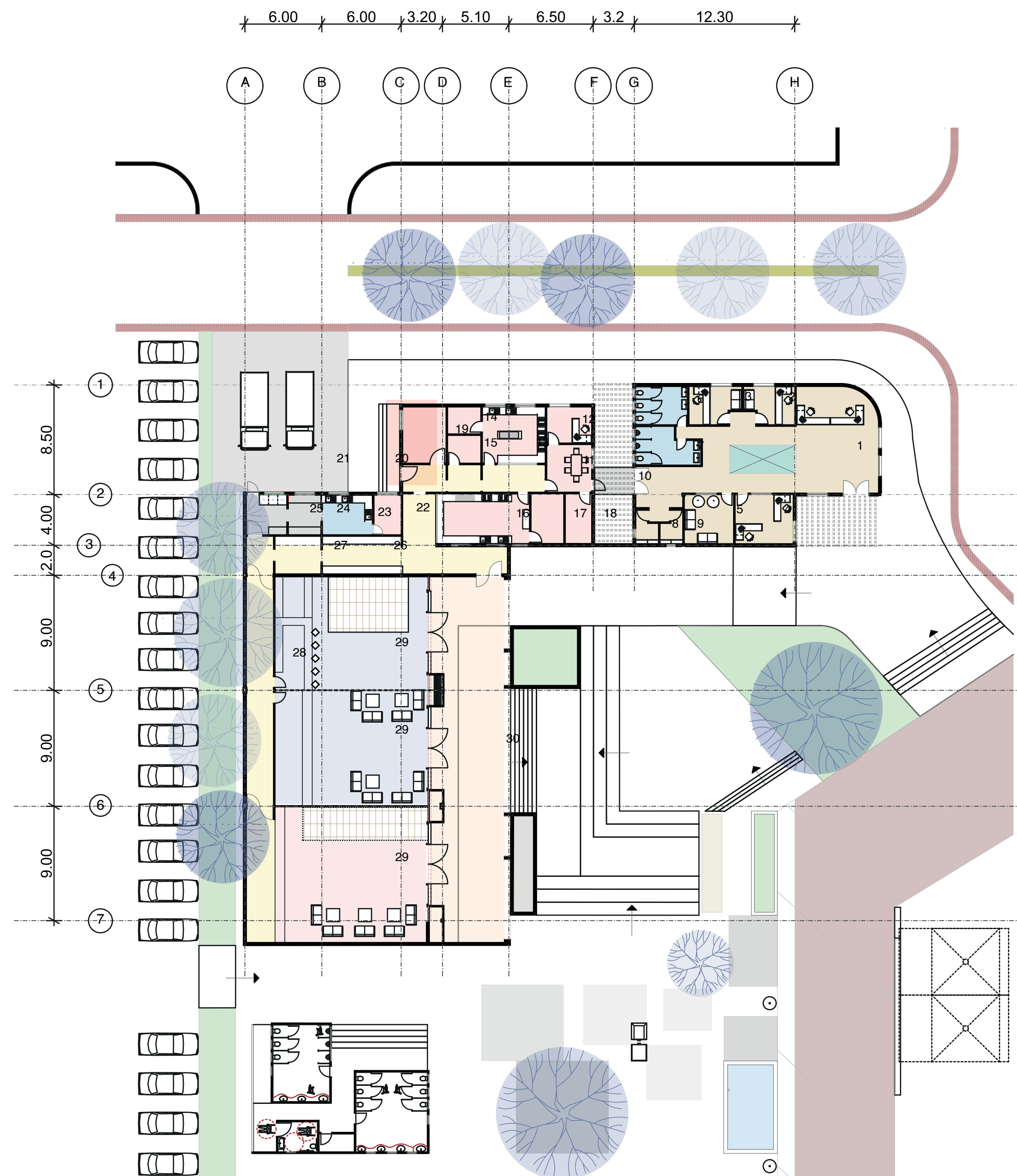
STRUCTURE

It was essential to provide flexibility in terms of indoor and outdoor spaces, which can be broken down into smaller segments when required.

The layout is such that a visual connection is maintained with The Brick Kiln by providing a plaza in front of the building. A pre-function space in the form of a wide corridor looks out into the open space.

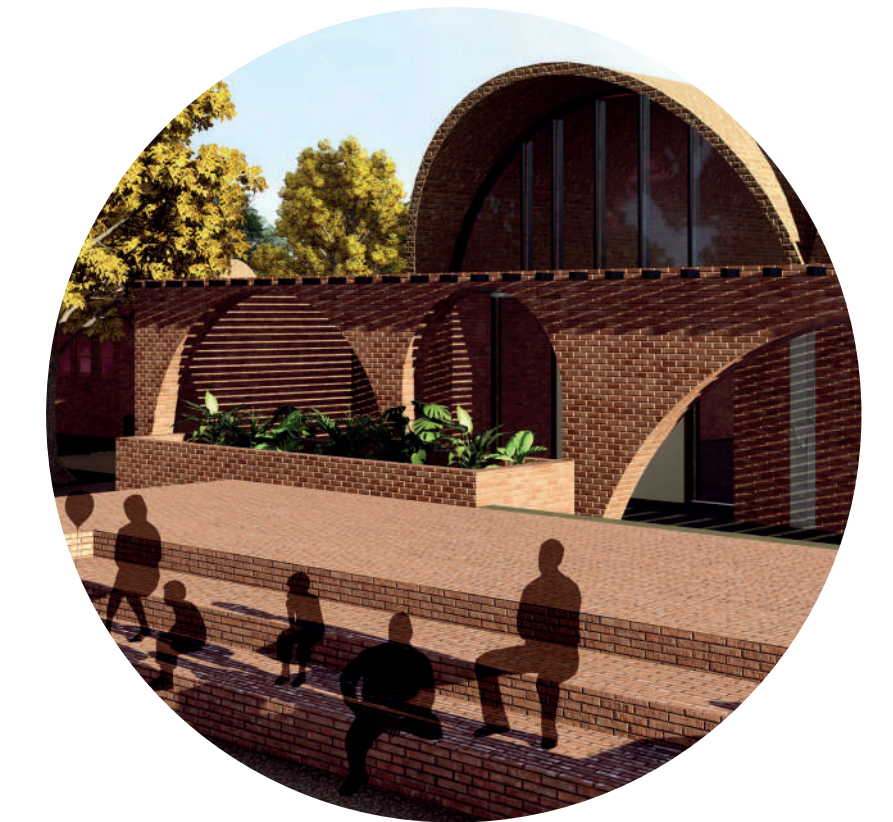
The meeting hall has been designed to be converted into smaller halls to cater to smaller gatherings. A service and a guest parking space allow the easy movement of users and services.

A sculptural garden adjoining the community hall acts like a spillover in case of outdoor events



LEGEND

1. RECEPTION/ INFORMATION
2. MANAGER'S OFFICE
3. ACCOUNTANT'S OFFICE
4. STAFF OFFICE
5. BREAK ROOM
6. FEMALE TOILETS
7. MALE TOILETS
8. FEMALE LOCKER ROOM
9. MALE LOCKER ROOM
10. STAFF ENTRY
11. STAFF MESS
12. CHEF'S OFFICE
13. VEGETARIAN KITCHEN
14. VEG COLD STORAGE
15. WINE STORAGE
16. NON VEG KITCHEN
17. NON VEG COLD STORE
18. A.H.U. ROOM
19. DRY STORE
20. LOADING/ UNLOADING DOCK
21. SERVICE PARKING
22. STORAGE
23. WASHING AREA
24. STORAGE
25. GARBAGE DISPOSAL AREA
26. PREPARATION AREA
27. WAITERS' AREA
28. SERVICE CORRIDOR
29. HALLS (3 FLEXIBLE ROOMS)
30. VERANDAH/ PREFUNCTION AREA



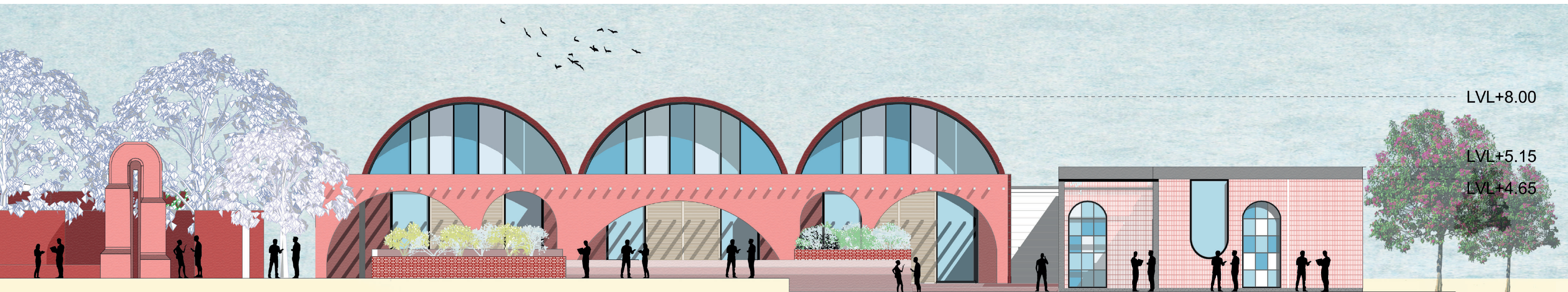
Stepped plaza in front of community centre to hold outdoor events

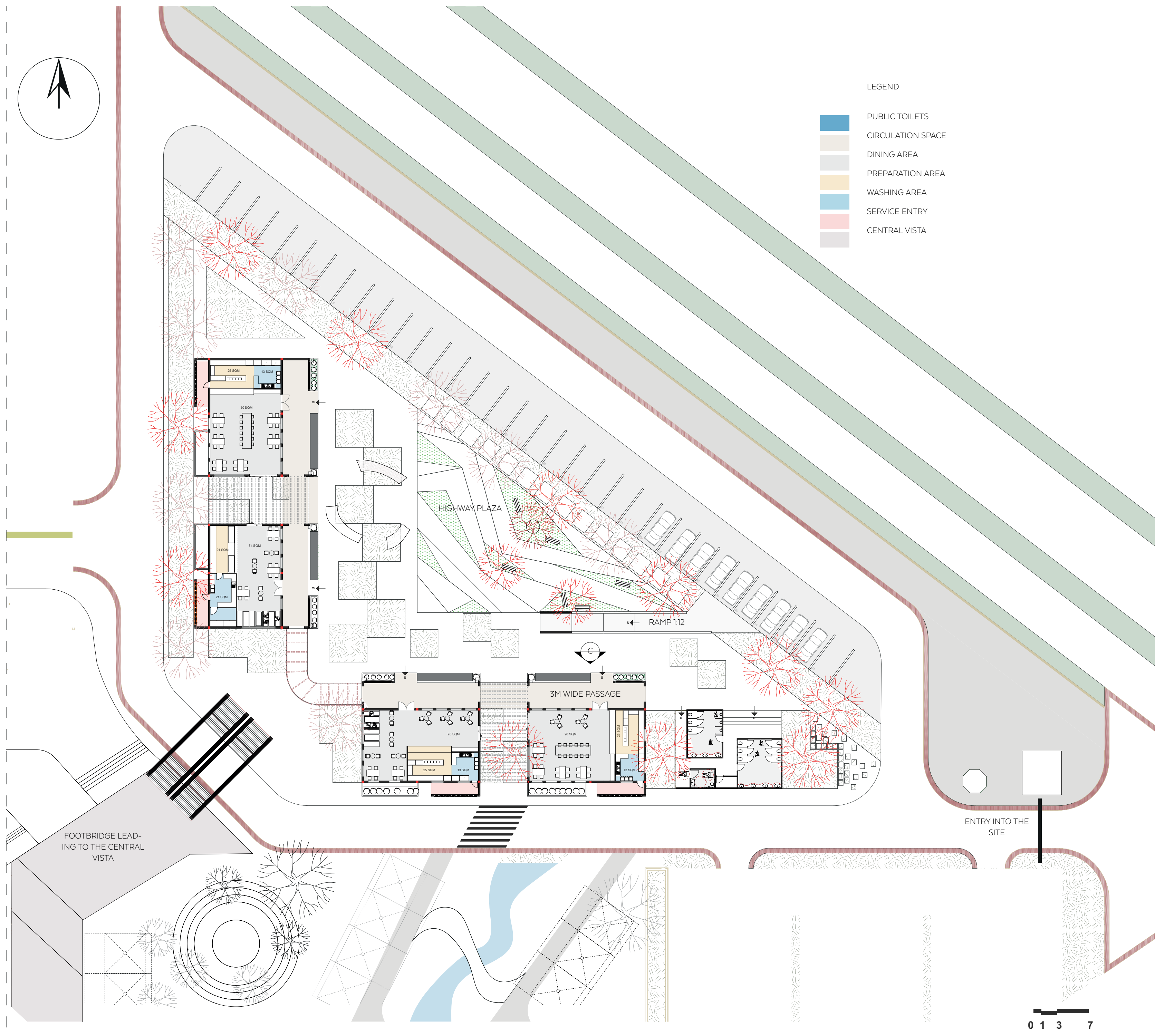


The arched doorways frame scenic views of the site



The vaulted roof is projecting outwards to prevent heat gain





brick jaali wall and a concrete gargoyles pouring rainwater into the planter bed



A 6m wide space covered with pergolas between two units act as a spillover

HIGHWAY COMPLEX

VALIDITY

The locational characteristic of the site has been used to the advantage of this project. By providing QSRs right at the entrance to the site, we can increase the footfall of people travelling on the NH7.

“If we could combine Starbucks spirit with the spirit of the artisan, we know we could achieve something special.”
- Kengo Kuma

STRUCTURE

The architectural language is in line with the concept of celebrating brick. The brick jaali wall and a concrete gargoyles become the stand-out elements here. The inverted arched windows bring a touch of modernism to the otherwise traditional brutalist materials.

Each unit has a semi-covered spillover space with pergolas providing shade. The plaza leading to the QSRs has gradual steps with green pockets allowing people to sit and enjoy the clean air of the villages.

This area is connected to the rest of the plaza by means of a footbridge to facilitate pedestrian movement.



A cotanary vault in the plaza area acts like a sunshade and enhances the overall experience of the user



View of the outside with the Brick Kiln as a backdrop

