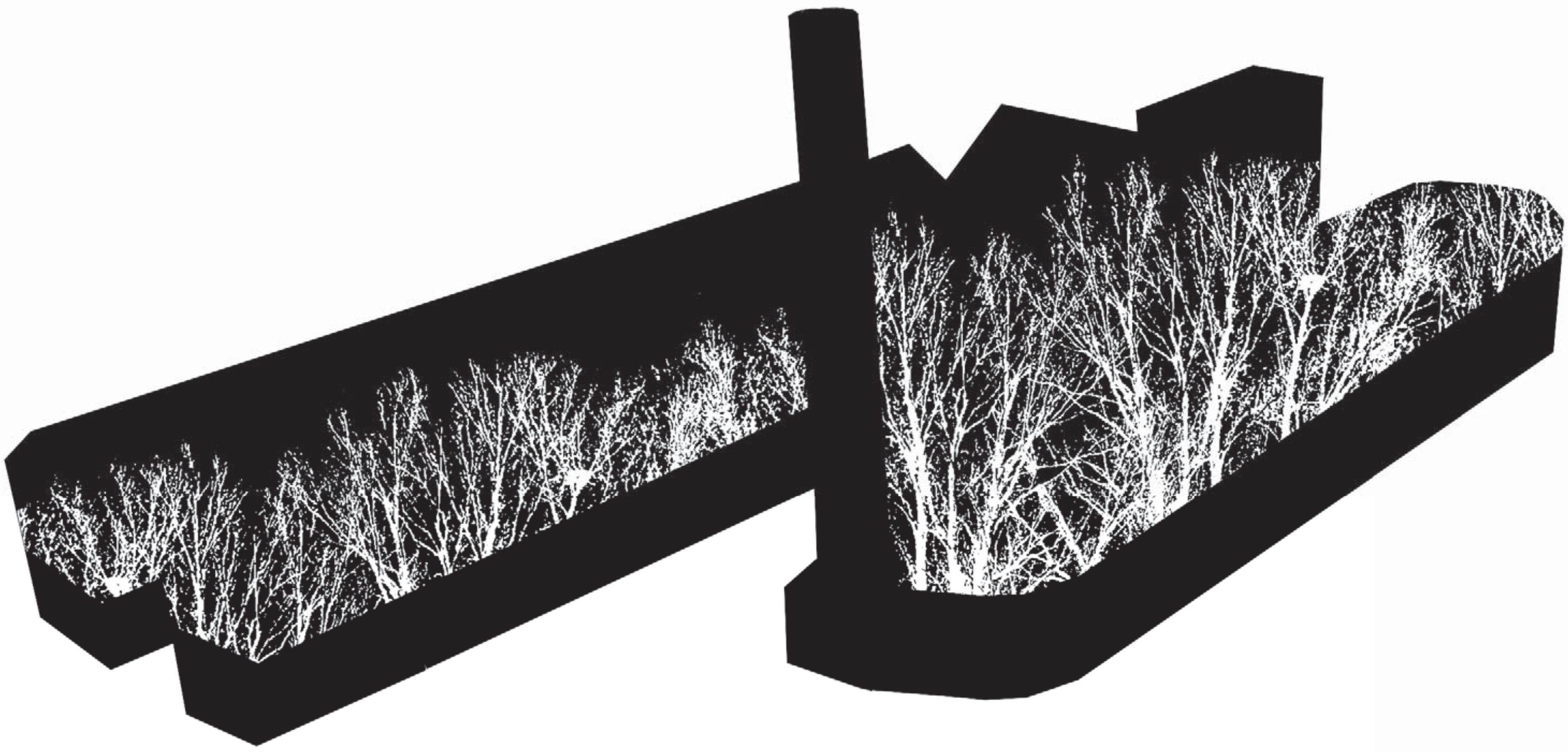
FROM RUINIFICATION TO CULTURIZATION

Reconciling industrial and natural landscapes
through the culturization of nature in and around the
Dumoulin Brick and Tube Factory monument.



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Designing for Social and Cultural Sustainability

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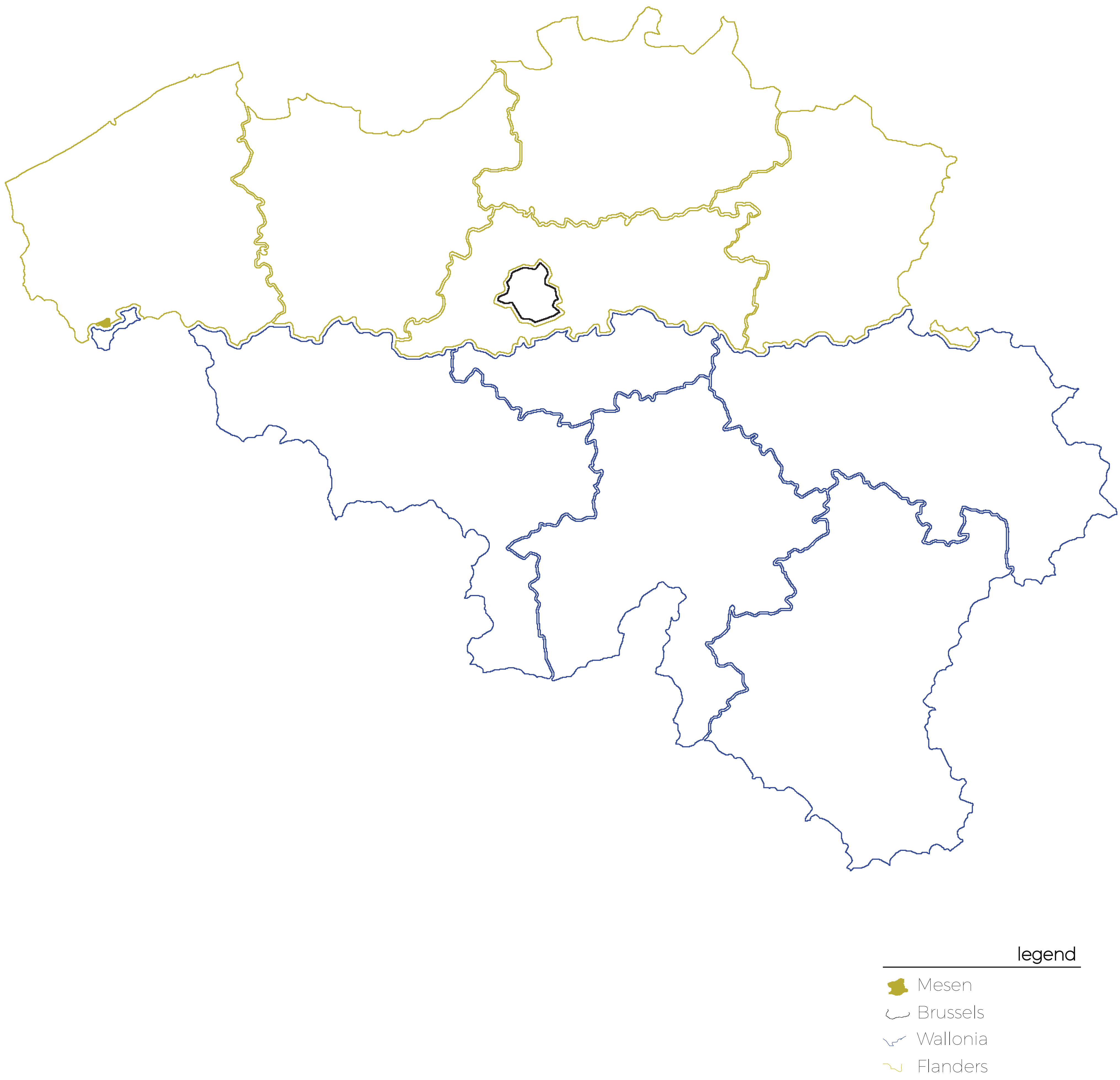
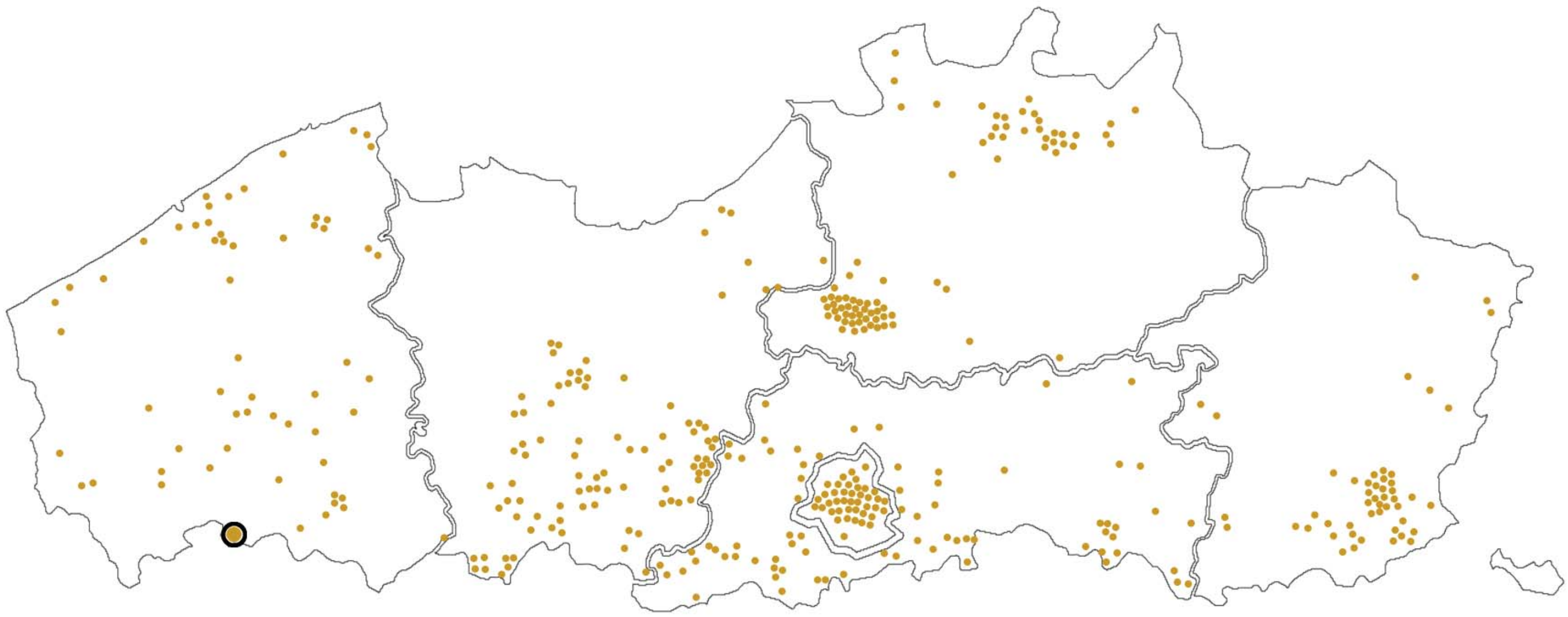
URBAN ANALYSIS

LOCATION

TEXT AND IMAGES BY THE RLICC IPW III PROJECT: PIPE AND BRICK FACTORY WIJTSCHATE (2018-2019)

The factory is located on the territory of Wijtschate, but is integrated into the urban structure of Mesen. As a result, the local inhabitants consider the factory as part of Mesen. Mesen is a municipality on the border of the Walloon and Flemish part of Belgium, which means that they are obliged to offer administrative and government services in both languages.





MAP OF SIMILAR BRICK FACTORIES IN FLANDERS - Laura Le Noir ©

legend

- brick factory location
- brick factory Wijtschate

Brick Industry Flanders

The brick industry went through a real evolution during 19th century. The fast growth of the population and the new techniques of production lead to a fast mechanization of the production process. Brick became more and more popular in the local architecture and later on a national and even international level. The booming market of the clay industry resulted in enormous industrial areas where large amounts of clay were extracted out of the soil to produce the brick. To be able to meet the demand of the construction sector, excavations were done on a daily basis, leaving gigantic craters in the landscape. Nowadays the traces of this remarkable industry are still visible in some places around Belgium.

Brick making before the industrialization was a real craftsmanship. To make the manual labour 'lighter' and the production faster, machines were introduced. The mechanization of the production process was mainly focused on three aspects: the clay preparation, forming and baking. Still the process remained very intensive leading to awful working conditions and health problems among the workers.
Because of the crucial position of Boom after the construction of the canal from Willebroek to Charleroi, the brick factories of the 'Rupelstreek' had a great advantage on other brick industries in Flanders. They could now beneft from a faster and larger import of coals to heat the ovens together with a larger market and easier export of products over the canal.

The brick industry knew its absolute peak around 1860, with the introduction of the Hofmann kiln to bake the brick. This made it possible for the frst time to bake products non-stop as the fire kept burning as long as the production was active. As the drying process of the unbaked bricks could not be changed, the products still needed several weeks to dry. Connected to one Hofmann kiln, the drying sheds could run up to eight or even nine kilometers, only to be able to keep the production process going.

Establishment of Dumoulin Factories

The origin of the different Dumoulin factories were located in Langemark, were Jozepf Dumoulin started the first brick factory in 1922. He saw the opportunity to install an industry which could rebuild the area after the total destruction of the 'Westhoek' caused by the First World War. Cities and towns from before the war were wiped from the map and often needed to be rebuilt from nothing. After the ware the industries slowly started to redevelop again. Jozeph jumped onto this ressurection of the post war economy with the production of clay products to rebuild the pre-war landscape.

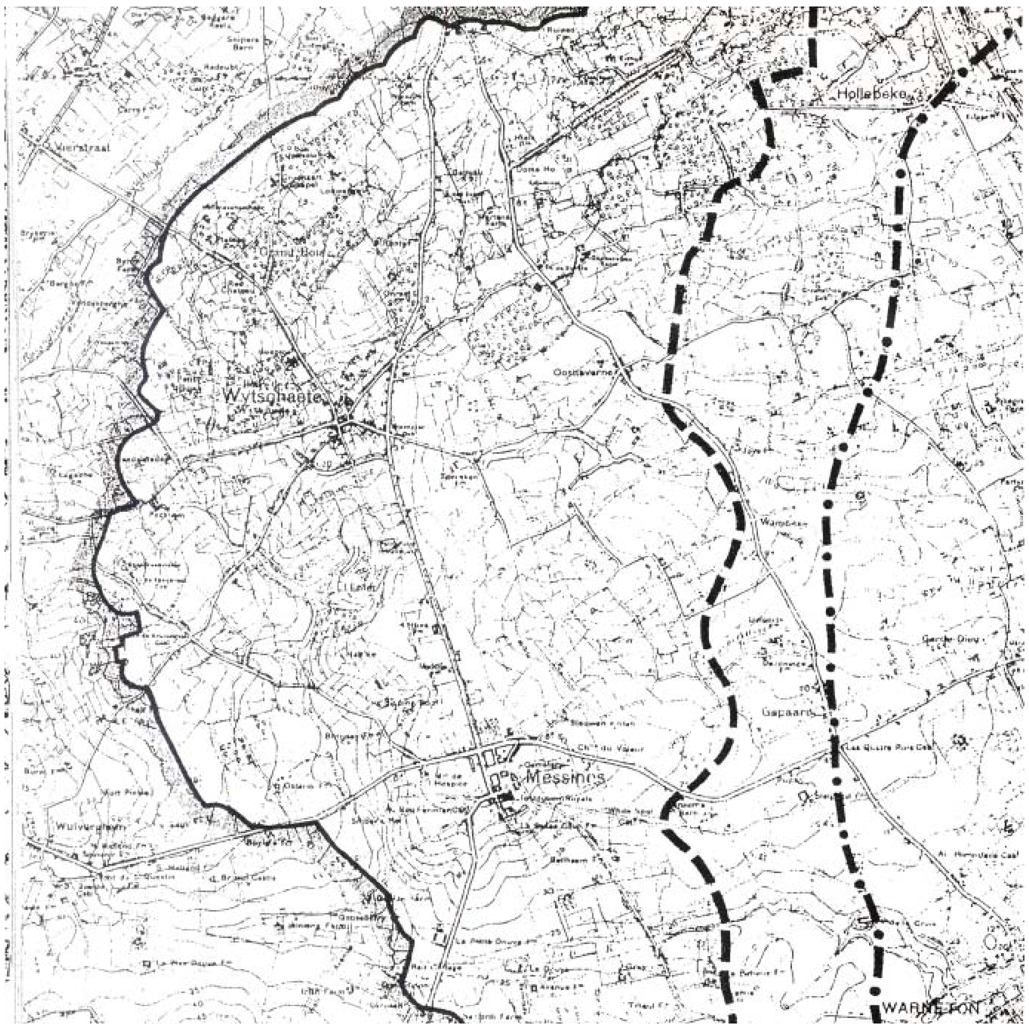
The Ypres Clay

The soil in the south of West Flanders is characterized by its sand and loam composition. In the area around Ypres a geological top layer of clay can be found. This clay is ideal for the clay industry as it is defined by its excellent plasticity. This makes the clay easily moldable and guarantees the consistency and low deformation of the final products. Additionally, this clay is characterized by its high watertightness which makes it applicable for products as roof tiles and drainage pipes. Because of this suitability of the clay there is a lot of brick production in the Westhoek, although it stays rather a small industry in comparison with the industry located in the Rupelstreek.

HISTORICAL CONTEXT

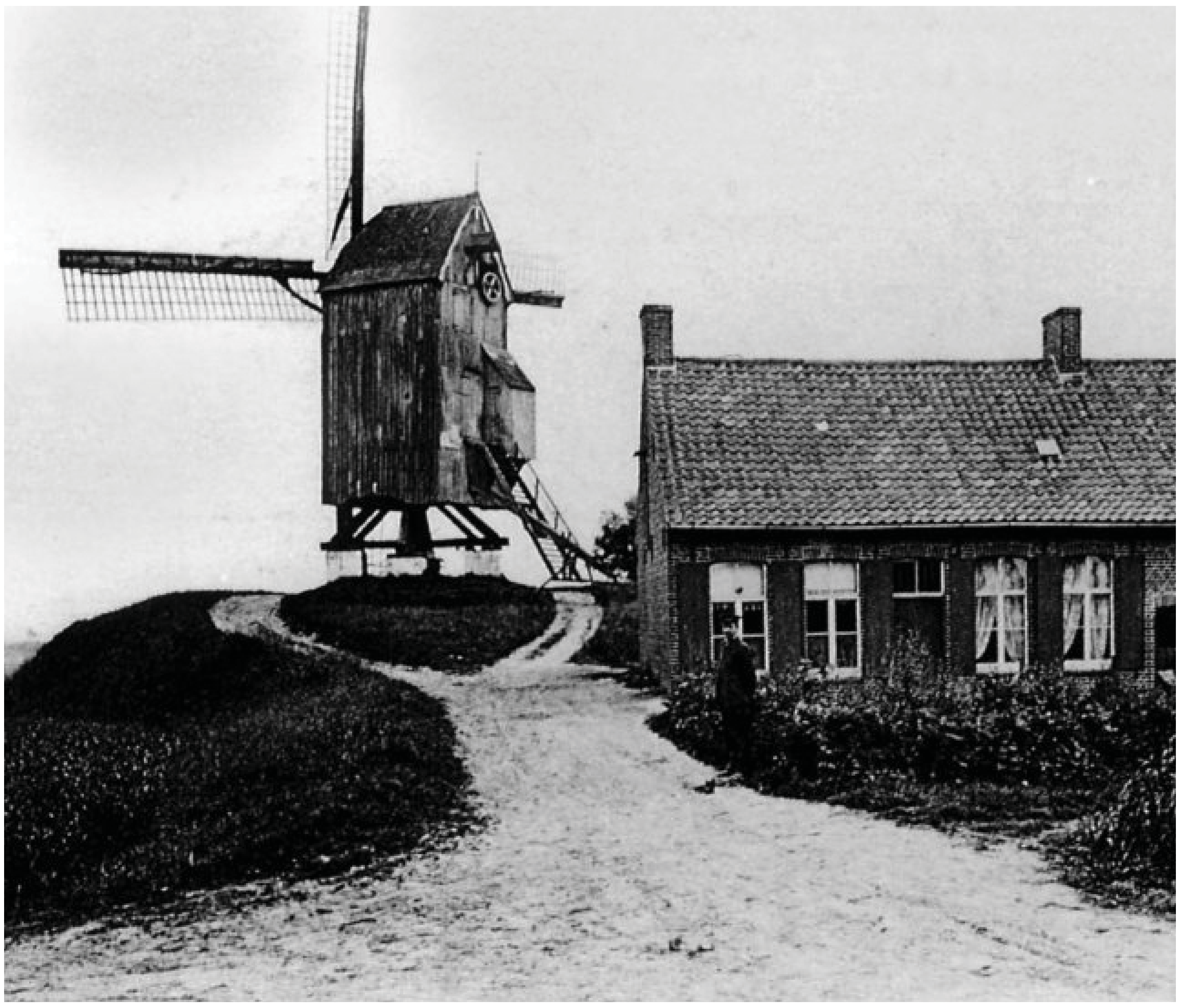
IMPORTANCE DURING WORLD WAR I

TEXT AND IMAGES BY THE RLICC IPW III PROJECT: PIPE AND BRICK FACTORY WIJTSCHATE (2018-2019)



British front line information map - *Peter Oldham* ©

Wijtschate before battle (1915) - *McMaster University* ©



De Blauwe Molen (1900) - *www.molenechos.org* ©

De Blauwe Molen or Goethals Mill

This mill, named to the original millers, is located on the border of Mesen and Wijtschate exactly on the current location of the Dumoulin Tube and Brick Factory. This mill, with an open base, was built on four wooden stakes connecting the wooden mill hull with its brick foundations. The topographic location of the mill made it interesting for the German army to occupy the mill site during the First World War. As a result we have nowadays a German bunker on the factory site which is the foundation of the claytower. There are no traces left of the mill after it went up in flames by bombings during the battle of Messine.

Wijtschate after battle (1917) - *McMaster University* ©

Wijtschate present day (2018) - *www.vlaanderen.be* ©

World War I

The area of Mesen and West Flanders, in general, has a very strong link with WWI. This link began at the eve of the Great War and continued throughout its duration. Its "scars" are still visible today. People from all over the world visit Flanders every year, to learn about the major battles of this turbulent period and to remember and commemorate the victims and the areas that "shaped" the history, as we know it today. Therefore one of the most important incomes for the area is war tourism. The outstanding example of this is the Peace Village Hostel of which almost all overnight stays are related to the war.

This link between the city of Mesen and WWI extends to this site as well. The Dumoulin brick factory was a key factor for the re-building of the city of Mesen after the end of WWI. That was actually one of the main reasons behind the beginning of its operation in the mid 1920's. It played a significant role for the "rebirth" of the city, not only by re-shaping the urban landscape, but also by providing jobs and salaries to the people of the city and the area. Furthermore, this link between the factory and the war becomes even more direct, if we take into account that the foundation used for the construction of one of the buildings (the clay tower) of the factory was a German Bunker, which is still visible and accessible today. Hence, the "birth" of the factory rose from the traces of the Great War. Its construction, and afterwards its operation, are directly linked with the effects of WWI and that is something that should be taken into consideration and implemented into any kind of master plan for the re-use of the Dumoulin Brick Factory.

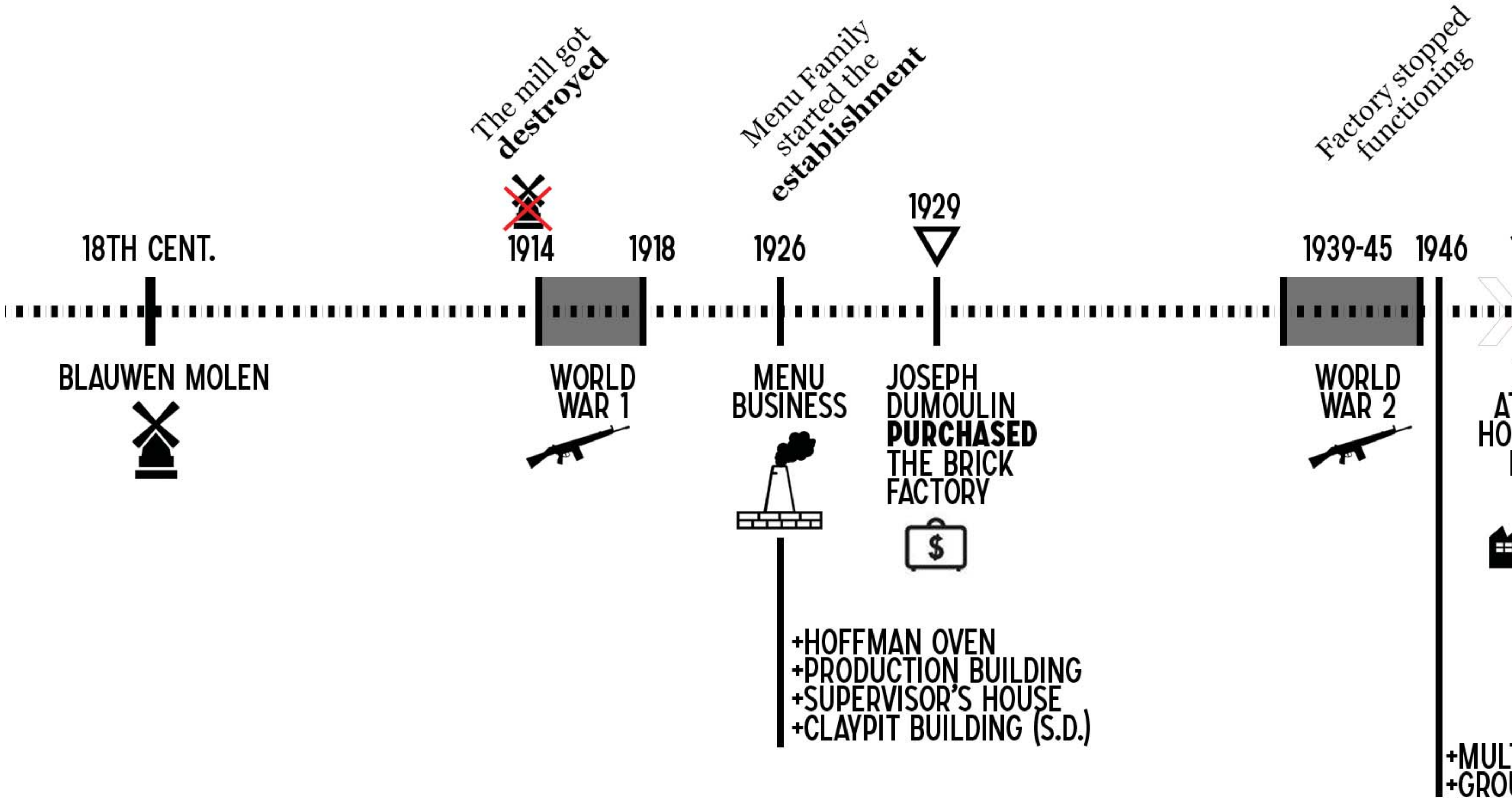
Battle of Wijtschate-Mesen

Mesen was one of the most important areas towards the dawn of the First World War. More particularly, the battles of Messines, is mentioned as very decisive for the retreat of German Forces and a significant "hit" that signaled the beginning of the end for them. In 1914 the Germans had occupied Wijtschate after a three-day battle against the British and the French. One of the most important places that they had managed to conquer was that of the Messines Ridge. This ridge allowed them to control and survey the situation of the whole area. That situation was to be changed in June 1917, after a very offensive move by the British Army and the Allies' Forces. The aim of this attack was to bring this ridge to British hands, to gain the high ground over the Germans, extend the front line and finally to retain an advantage for the forthcoming planned attack in the autumn of 1917 to the northern area.

At the dawn of the seventh day of June, the British forces launched an attack that would reshape totally, not only the power balance, but also the "face" of the earth. More specifically, British engineers were commanded to detonate around 450 tons of explosives that were already buried in 19 mines alongside Messines ridge, approximately 75 feet below the ground. The outcome of these explosions would result in the biggest ever man - made explosion. Rumors stated that the explosion was mistaken as an earthquake and was even heard by the British Prime Minister in London. One thing that cannot be doubted is that the detonation cost the lives of more than 10.000 German soldiers and made it much easier for the Allies to claim the area. Furthermore, it was a critical hit that would play a significant role to the loss of the Germans. They managed to briefly regain this specific area in the April of 1918, before finally losing it again, for good, in September of the same year.

TIMELINE OF THE SITE

TEXT AND IMAGES BY THE RLICC IPW III PROJECT: PIPE AND BRICK FACTORY WIJTSCHATE (2018-2019)



Goubau and Menu

The history of the brick factory starts in 1864 when a family called Goubau established a small brick factory in the Komenstraat at Mesen, close to the current location of the Dumoulin factory. It was located on main road of Mesen, called 'Komenstraat', which was at the same time the boundary line between the territory of Mesen and Wijtschate. In 1875 the firm was taken over by Dekeuwer-Verkindere and later on it became property of Eugene Menu.

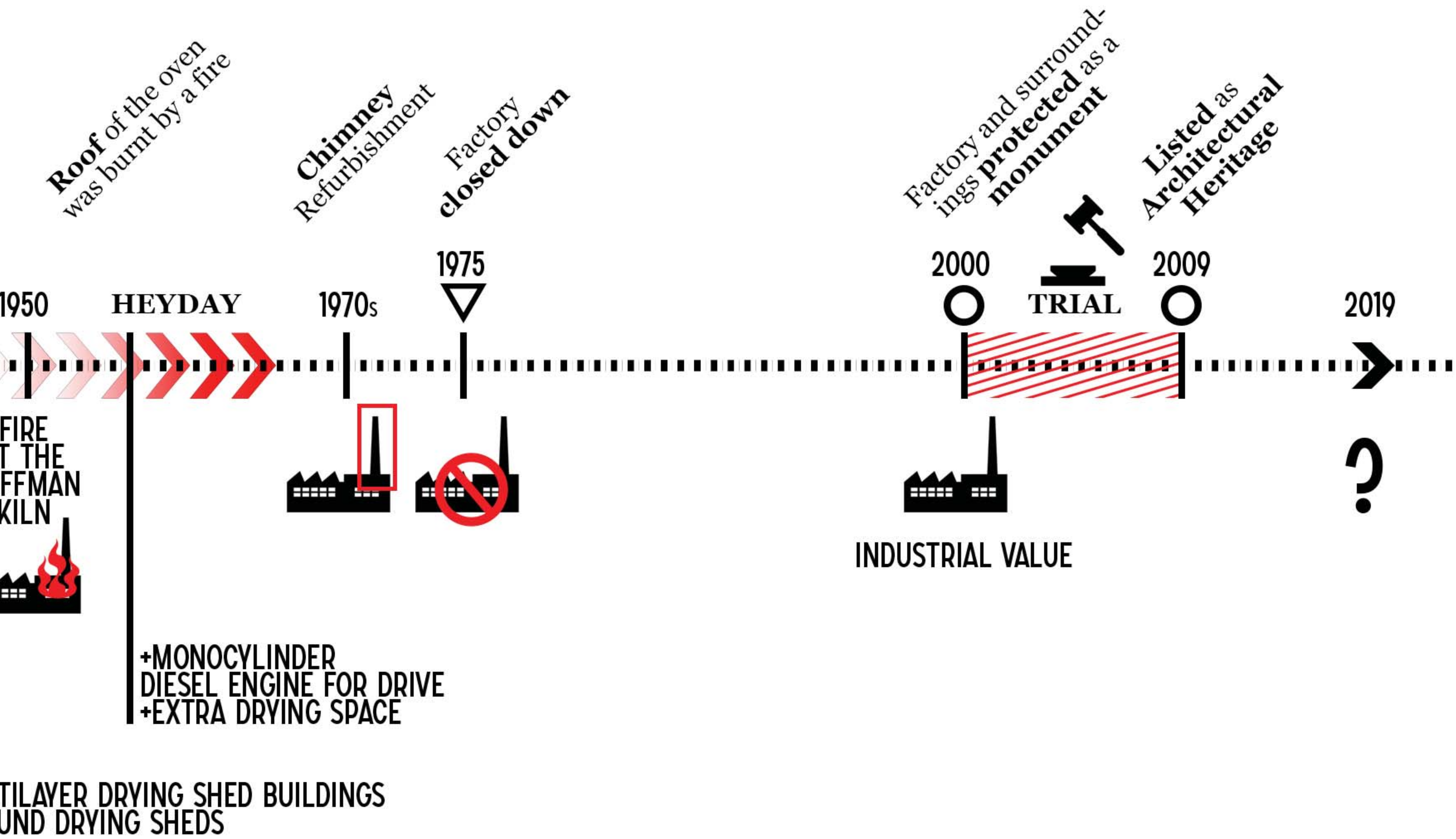
After the total destruction of the factory during the First World War, Georges Menu, son of Eugene, founded a new brick factory on the location of the destroyed 'Blauwe Molen'. The factory of his father probably did not meet the regulations for the industry anymore, which required him to find a new place to build a brickyard. Georges could use this plot of land, which is the location of the current factory, because of the good relation between the Menu family and the former miller family Goethals. This good relationship could be seen from the later marriage in 1925 between Eugene Menu and the sister of the former miller Jules Alfred Goethals.

Start of the Dumoulin Factory

Four years after founding the factory at Langemark, Jozef Dumoulin bought the factory in Mesen from the Menu family in 1926. Jozeph immediately started with the modernisation of the factory by building the addition to the Hofmann kiln, production space and the claytower on top of the German bunker. The construction of the factory happened in different phases spread over the period in which the factory was active. Introduction of new technologies and machines caused several changes in the production process and with that changes in the architecture and composition of buildings of the factory.

World War II

In the beginning of the Second World War the factory of Langemark suffered some damage. Production was shut down because they didn't want to make bricks on command of the German occupier. The Wijtschate factory kept producing the drainage tubes for the farmers in the area. In that way they succeeded in keeping some income during the period of the war. The factory wasn't damaged during the war but presumably the clay pits were used as shooting range for exercises, as there were shooting patterns and targets found in the clay pit.



Heyday

After the Second World War different additions and changes within the factory initiated the beginning of the 'heyday' of the factory. In 1946, right after the war the expanding production required more drying and store place for the products. Therefor long drying sheds were constructed on the ground floor to increase the covered drying surface necessary for drying of the clay products which are not baked yet. Because of the rather limited area of the factory site, there were two multi-layered drying sheds to increase even more the covered surface for drying of non-baked product. In 1960 the installation of the diesel engine (Ruston horizontal oil engine, 1952) initiated the beginning of the 'heyday'. From that moment most of the production process and transport methods for clay on the factory site was automated, which made the production process considerably faster and lighter.

Factory Closed Down

Around 1975 the factory at Wijtschate was shut down after the introduction of PVC as a material to manufacture the drainage tubes. These had some major advantages as they were produced in long flexible tubes which were perforated. This new kind of drainage system was much faster and easier to integrate into the soil and provided a better and more adequate drainage of the agriculture fields. Also the production of the prefab beams were outpaced by new, modern techniques which were better, faster and stronger. The factory at Langemark produced for some more years but also had to stop the production few years later as the clay pits slowly got exhausted and the problems with the tunnel oven lead to the closure of the factory because they could no longer face the competition with the other factories in the area. After the closure of the factories, the clay pits were used as dumps for households waste. The clay pit of Wijtschate was never filled completely causing a unique green landscape which gives a hint to the former activity on the site.

Protection Process

In 2000 the Factory officially was protected as a monument. The historical, industrial-archaeological and socio-cultural value of the monument was described in the protection documents as followed:

"as an unique example of a tube factory built approx. 1920, of great importance for the intensive reconstruction after WWI in the destructed front region, and expanded after WWII, i.a. characterized by the presence of multi-layered drying sheds, of a so-called clay tower for the preprocessing and of the drive by means of a horizontal mono cylinder diesel engine which through an impressive belt system drives several machines."

Immediately after the protection was established, there was an official appeal against the protection of the factory. The legal procedure went on for about 9 years. After the trial the protection as a monument was abolished. The appeal never went against the values and significance of the factory as a historic and architectural construction. Eventually the protection was removed because of procedural errors, not because the values were lost. Nowadays if we check the criteria for the protection on site, we still see that the values described are present on the site.

PRODUCTION PROCESS

TEXT AND IMAGES BY THE RLICC IPW III PROJECT: PIPE AND BRICK FACTORY WIJTSCHATE (2018-2019)

The factory worked as one large machine which consisted of different phases and procedures to work the clay into the brick or tubes which were produced. Passing through the different buildings on the site the clay gradually was transformed form raw material to final product. Every building had a designated function within the production process. The configuration of the buildings, bridges and conveyor belts were organized in a way that the production process could fluently go on without different procedures would interrupt one another.

BUILDINGS ON THE SITE AND THEIR ROLE IN THE PRODUCTION PROCESS:

1. The Clay Pit

The process starts in the clay pit where in the beginning of the factory the clay was dug out manually by workers. The corporate movie from 1961 shows a small excavator in the clay pit of the Wijtschate factory which was probably later introduced to mechanize the extraction of clay out of the soil.

2. Mixing Building

The raw clay was transported first with small tipping carts on rails and later by a conveyor belt to the mixing building which mixed the clay with earth. The ideal composition of the prepared clay was composed of 2/3 clay and 1/3 earth. The clay coming from the clay pit on the 'Nieuw-Zeelandstraat' on the other site of Mesen was transported from the clay pit location to the factory by a small lorry. This lorry drove up and down two times a day to bring the excavated clay to the factory where the loading boxes were emptied in the mixing machine.

3. Clay tower

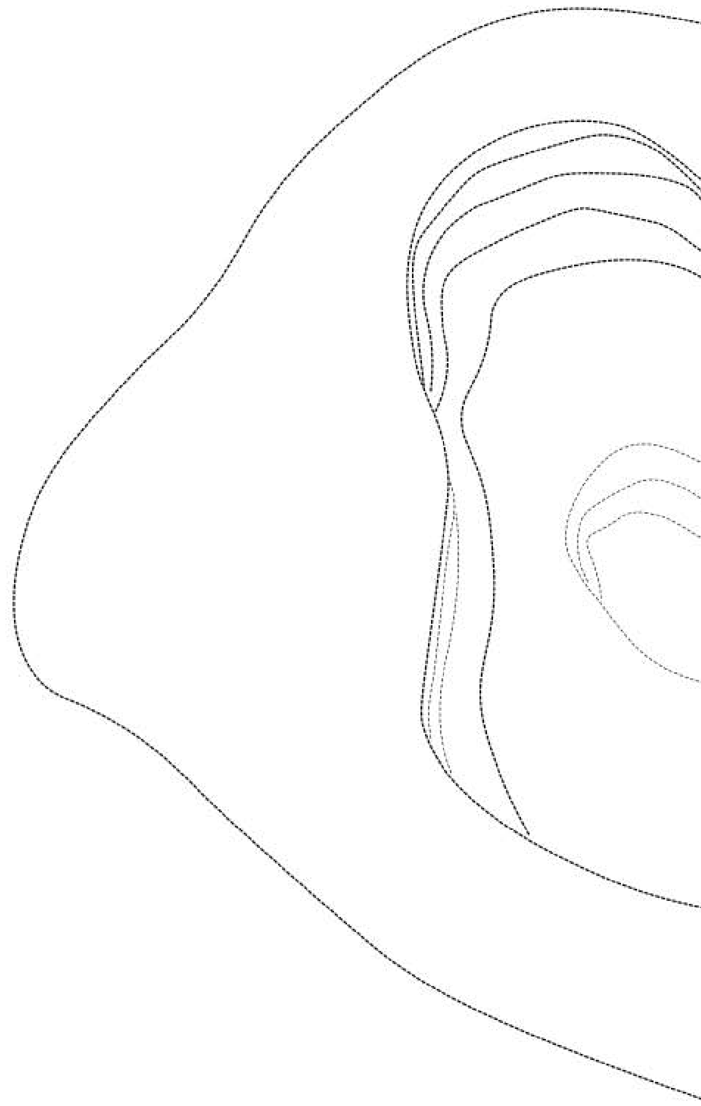
After the first mixing procedure, the prepared composition was transported from the mixing building on the edge of the clay pit to the claytower again first with carts, later with the conveyor belt. There it undergoes a kneading process to obtain a homogeneous substance which ensured a same quality of all end products. After mixing and kneading the clay in the tower the substance was prepared and ready to be formed in its final shaped. A slide on the outside of the tower wall brought the clay substance from the tower to the production space,immediately into the extruder which is located in the moulding atelier.

4. Production Building

The clay was pressed between two large barrels into the extruder. A propelling element in the extruder pushed the prepared clay composition through particularly formed openings according to the shape of the end product. The molds were made out of cast iron and could be replaced by other forms when producing different products, although these cast iron moldings were really heavy and needed some real manpower to replace them. Long strands of clay came out of the extruder and were cut on the correct length by a steel wire.

Before this extruder was used in the brick industry, all molding was done manually. The introduction of the extruder made it possible to process large amount of clay in a short time producing larger amount of product on a daily basis. The extruder was an important development to make mass production of bricks possible.

The extruder was powered by a mono-cylinder diesel engine which was located in the machine room connected to the moulding space. The engine not only was the driver for the extruder but was connected by a central axle with other machinery on the site among which a vacuum pump and the large conveyor belt in the clay tower.



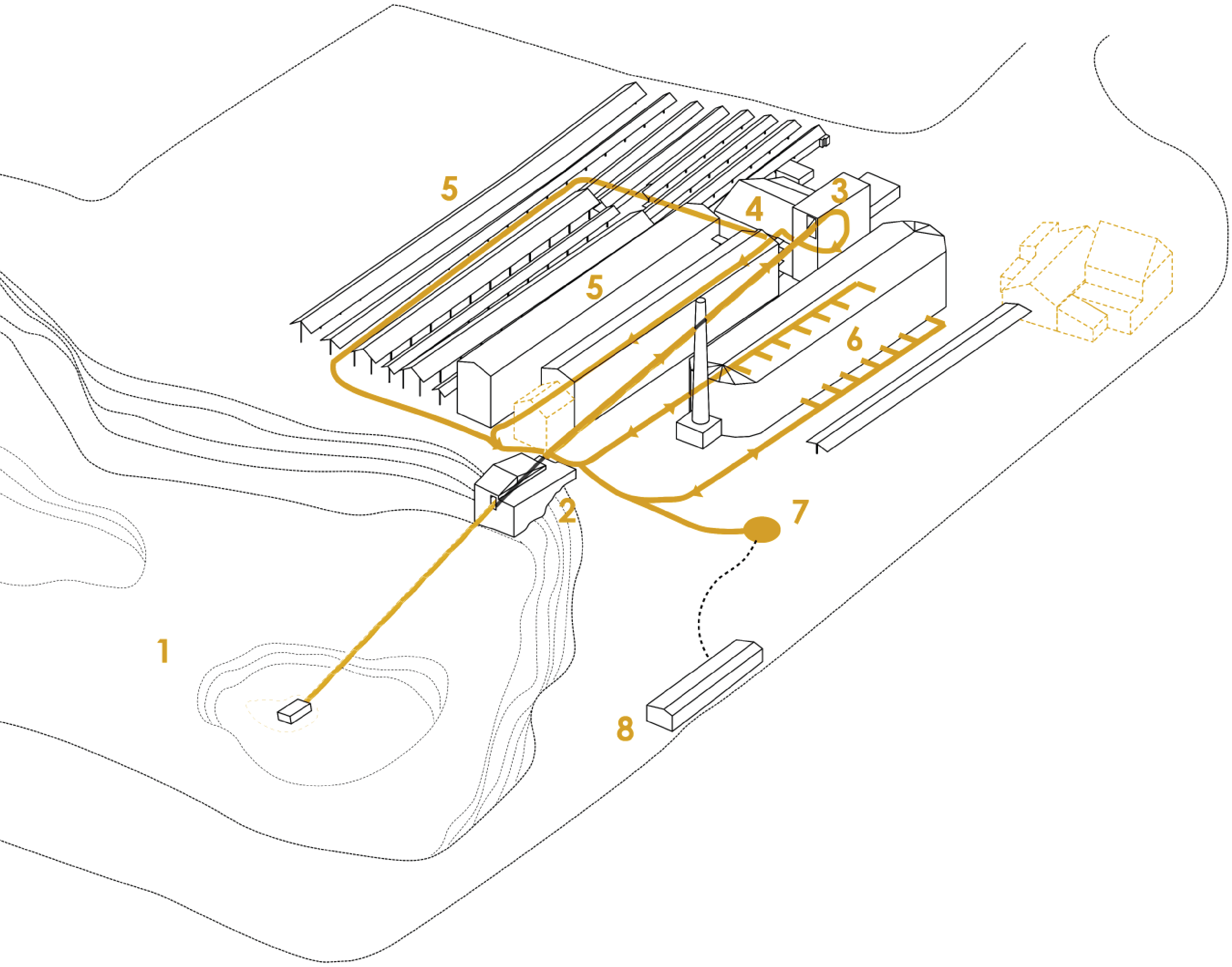
Procedure (1-8)

1.Digging the Clay

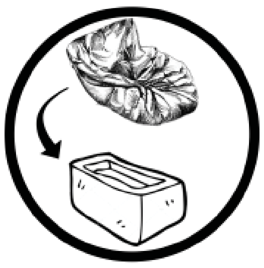
2. Mixing the clay with the dirt

5. Drying Sheds

After molding and cutting the product in its final shape they were transported to the different drying sheds. The ones going to the multi-layered drying sheds were lifted by an elevator working only based on gravity to bring them to the different levels of the large sheds. The products were stocked in a way that a good air stream was ensured for an optimal drying. They stacked products up to a height of 1,5 meter in three phases each with a drying period of fourteen days to give time to harden before stacking on top of them. Good drying of the products was crucial for the strength and shape of the final product. In order to avoid ruptures during the baking of the product, they should be perfectly dry. Every layer of products had a date on which they were stocked into the drying sheds to ensure the correct drying period was reached before going to the kiln.

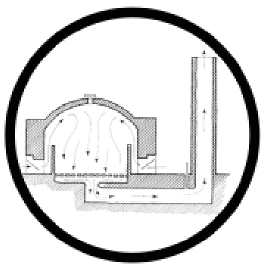


3.Kneeling the mix

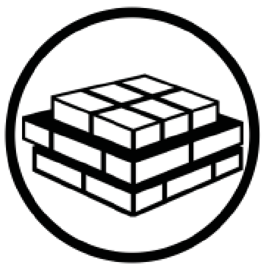


4. Creating the Brick

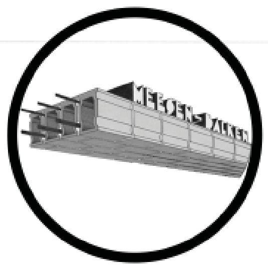
5.Drying the Bricks



6. Burning the Bricks



7. Storing the cooled Bricks



8. Creating prefab panels

6. The Hoffman Kiln

The final step in the process was baking in the Hofmann Kiln. The bricks and tubes went into the oven on the ground floor level, where they made a fire. Once the fire was on workers poor coal into the oven from the level above, through small channels connection the ground floor of the kiln with the first floor. The 'fireman' needed to keep the fire running every hour of the day, all week long. During the production and baking the fire in the kiln stayed on permanently for month. The fire travelled from chamber to chamber preheating and baking the products.

7. Storage

After the baking procedure was completed the products were transported with small lorries to the stock place on the side of the factory.

8. Prefab Atelier

Additional to the basic products, the Dumoulin factory produced early prefab construction elements. These were made in the small long atelier in the end of the factory side. From the stacking places the final products were transported on lorries to the buyers. A part of the drainage pipes were immediately transported to Langemark were they were stocked for local costumers.

HISTORIC PHOTOGRAPHS OF THE SITE

TEXT AND IMAGES BY THE RLICC IPW III PROJECT: PIPE AND BRICK FACTORY WIJTSCHATE (2018-2019)

Drying sheds - *Ghent Liberal Archives* ©

Conveyor belts - *Ghent Liberal Archives* ©

Clay pit - *Koenraad Dumoulin*

Nature on the site - *Koenraad Dumoulin* ©

Children playing on remnant materials - *Koenraad Dumoulin* ©

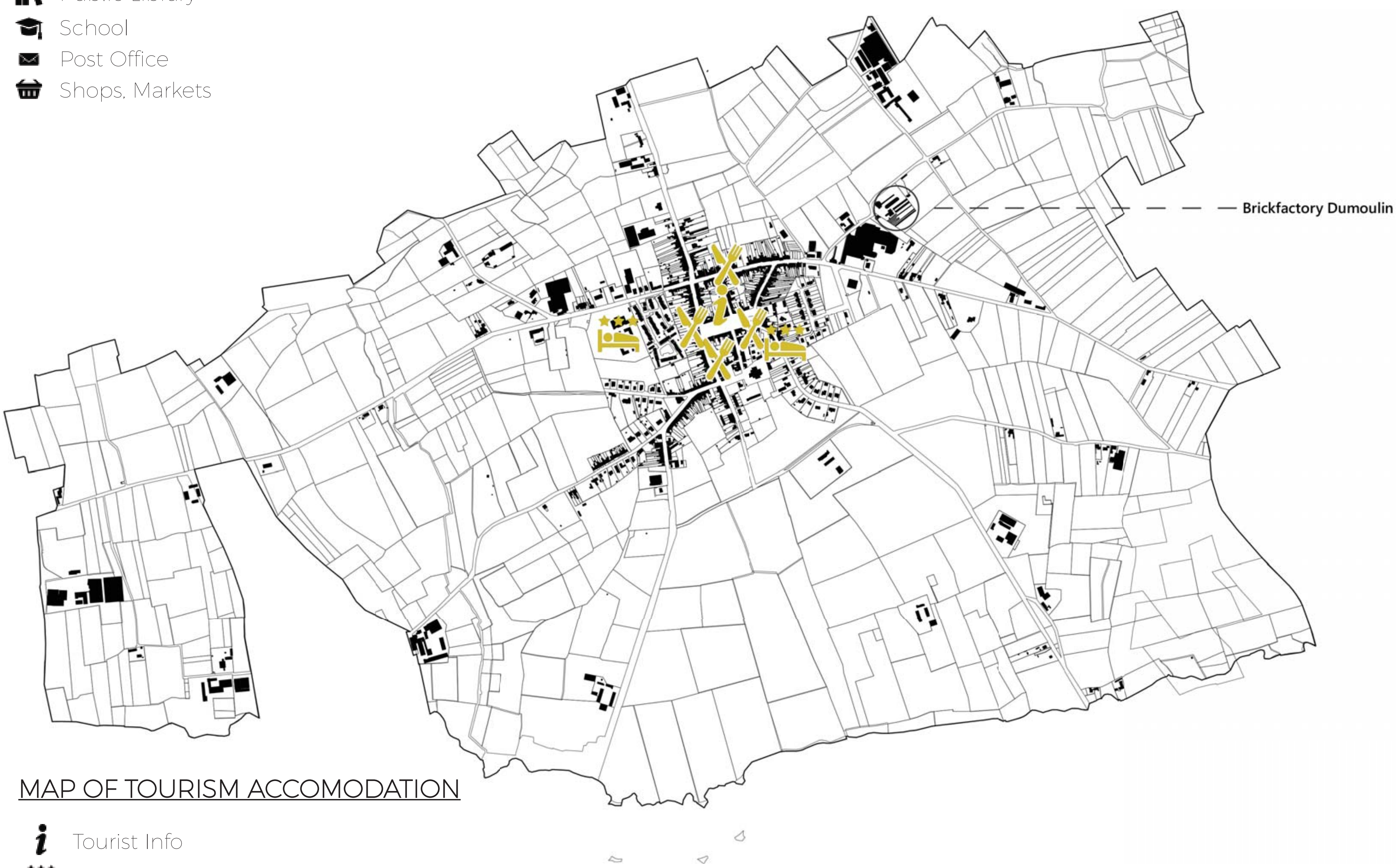
Products still present on the site (2012) - *Johan Beun* ©

MAPPING - URBAN CULTURAL ASSETS

TEXT AND IMAGES BY THE RLICC IPW III PROJECT: PIPE AND BRICK FACTORY WIJTSCHATE (2018-2019)

MAP OF PUBLIC SPACES

- Town Center
- Sint-Nicholas Church
- Townhall
- Public Library
- School
- Post Office
- Shops, Markets



MAP OF TOURISM ACCOMODATION

- Tourist Info
- Hostel, B&B
- Restaurants, Bars

MAP OF HERITAGE

- Listed Buildings
- Protected Architectural Monuments
- War Monuments

MAP OF PUBLIC TRANSPORT: BUS

Line 72: Le Bizet - Mesen - Wijtschate - Ieper

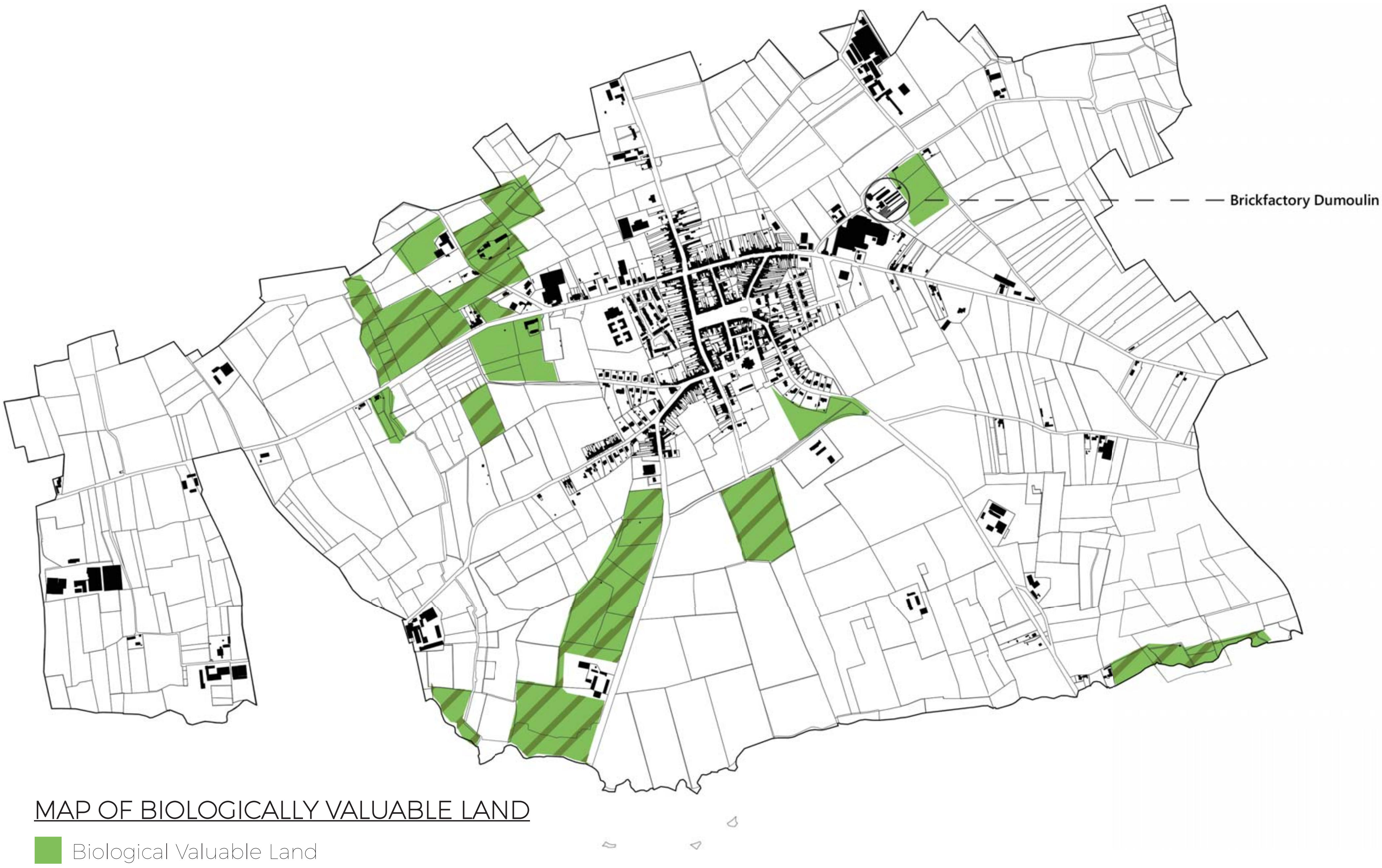
every 2h: Ieper - Mesen: 24 min.

MAP OF CYCLING ROUTES

- Hellingroute
- Route of Mesen
- SamenSterk Tour I
- Great War Remembrance Tour I
- SamenSterk Tour II
- Smoefelroute
- Great War Remembrance Tour II

MAP OF GREEN ZONES

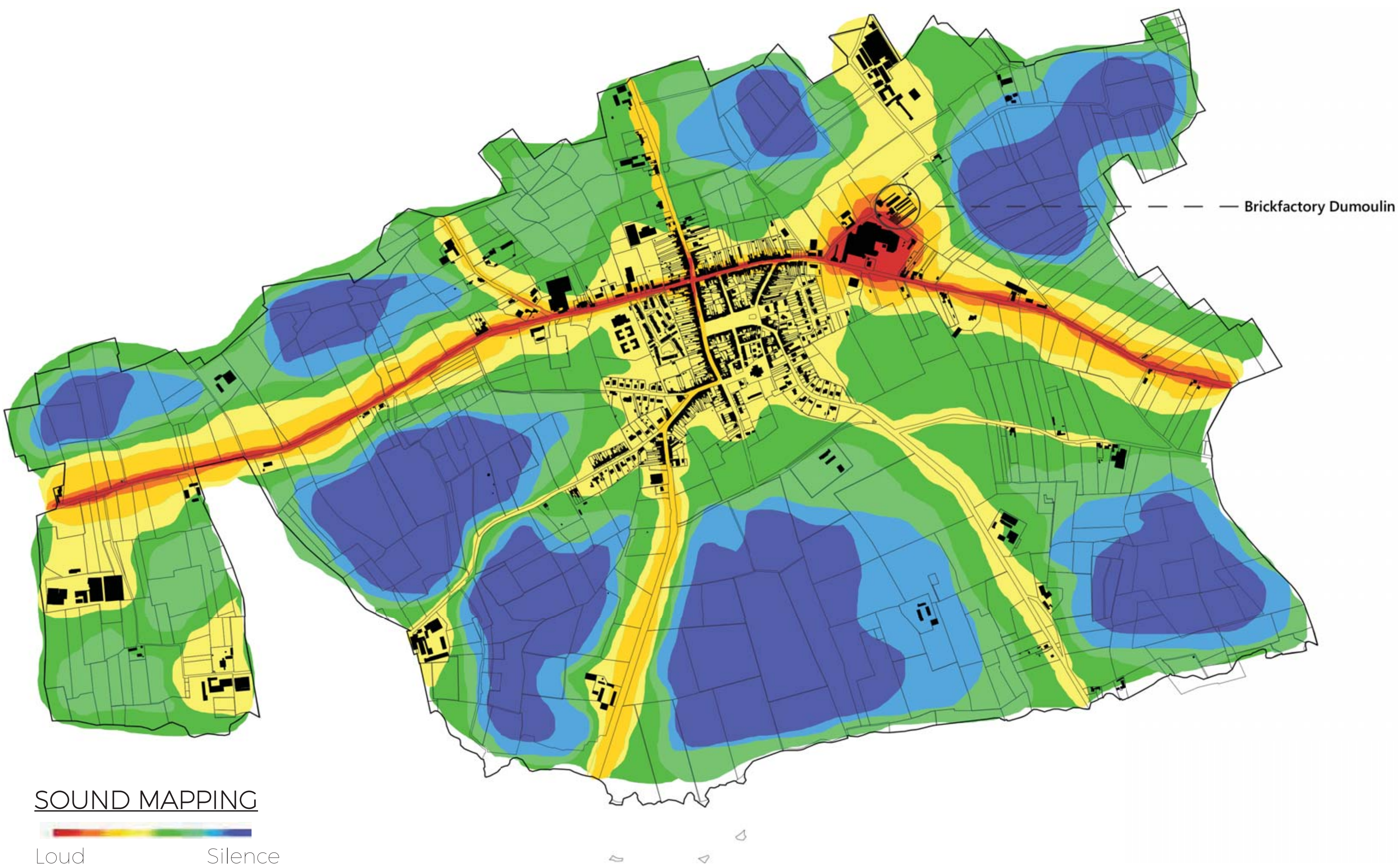
- Green zones
- Border
- Built area



MAP OF BIOLOGICALLY VALUABLE LAND

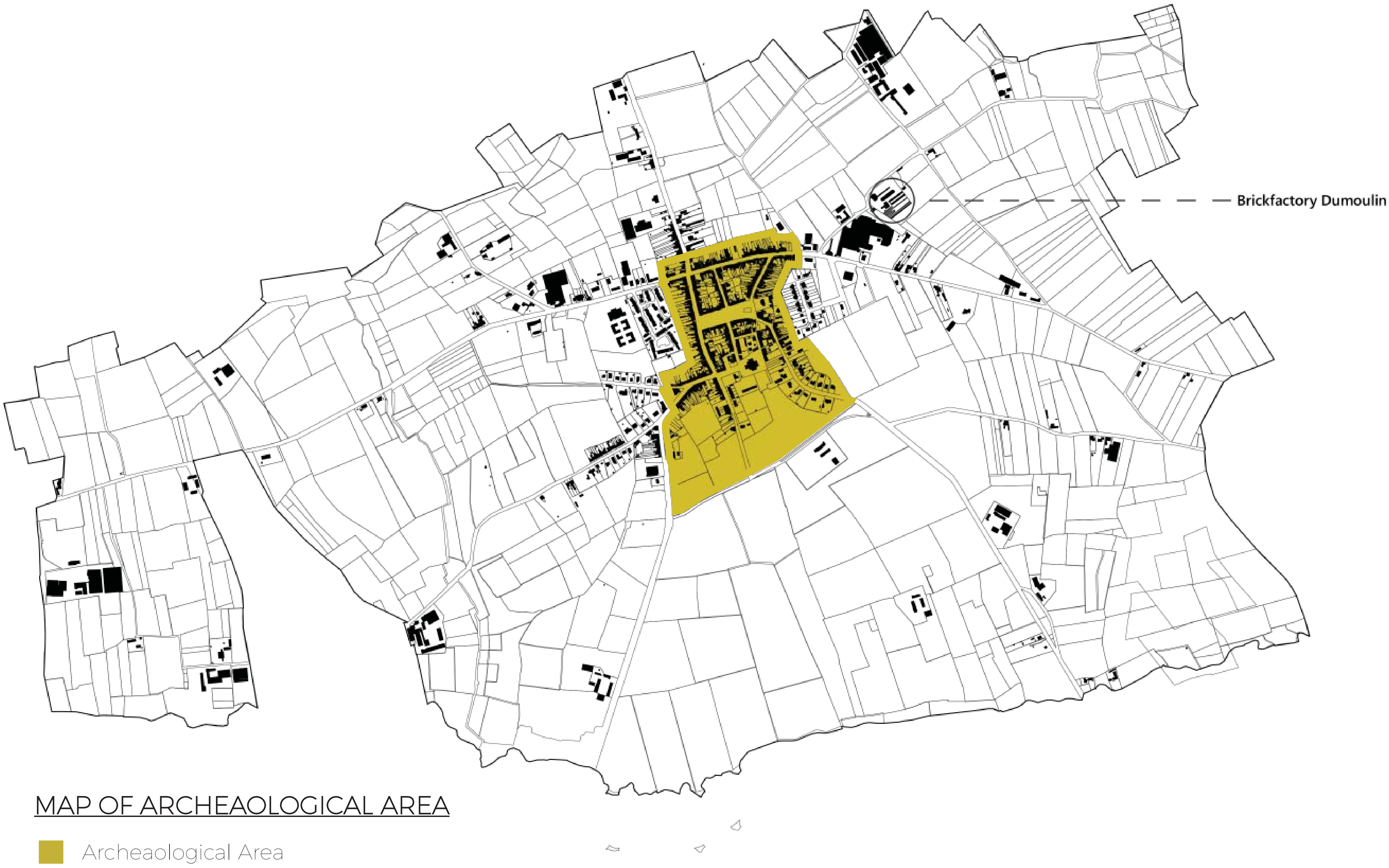
Biological Valuable Land

Mix of Biological Valuable and Very Valuable Land



SOUND MAPPING

Loud Silence



MAP OF ARCHEAOLOGICAL AREA

Archeaological Area

MAP OF MEMORIALS

Memorials with annual commemorative ceremonies

MAP OF REAL ESTATE - BUILDING STOCK

For Sale < Average Price
(14 properties)

For Sale > Average Price
(11 properties)

Average: € 182.653

MAP OF EXTERNALITIES

Industry (Covameat)

Hostels, B&B's

Restaurants, Bars

Markets, Shops

THREATS TO THE LIFE OF THE FACTORY

NATURE IS TAKING OVER

The factory has been vacant for almost 50 years leaving it in a state of ruin. Nature has started to take control of the site, smothering the factory until it will no longer be accessible or usable. If the factory is left abandoned and nature is allowed to continue to take over, then eventually the beautiful spatial qualities of each building will be destroyed. This would be a significant loss to the heritage and historical value the factory brings to Mesen and to Industrial Heritage as a whole.

Example of nature taking control, smothering the factory

PRESSURE FROM THE SLAUGHTERHOUSE

Another threat to the life of the factory is pressure from the local slaughterhouse which is located right next to the site. The slaughterhouse wants to buy the Dumoulin factory only to demolish it and use the land to expand their current facilities. The current owner is not willing to sell his family's legacy only to see it disappear. However, he will not live forever and once he passes away there is no remaining family that is dedicated to preserving this factory. This means that the time to act is now. Any design intervention that happens on this site must bring value to the community in order to preserve the factory from demolition.

View from the site of the slaughterhouse

RELATIONSHIP OF NATURE AND INDUSTRY

Between the two main threats to the life of the factory, I chose to focus on how nature is taking over the factory. There has been a strong relationship between the Dumoulin Brick and Tube Factory site and the surrounding landscape throughout its history. There is a history of control on this site which impacts how the factory is currently percieved and how it can be reimagined to generate new affordances in the future.

HISTORY OF CONTROL

Battle of Messines

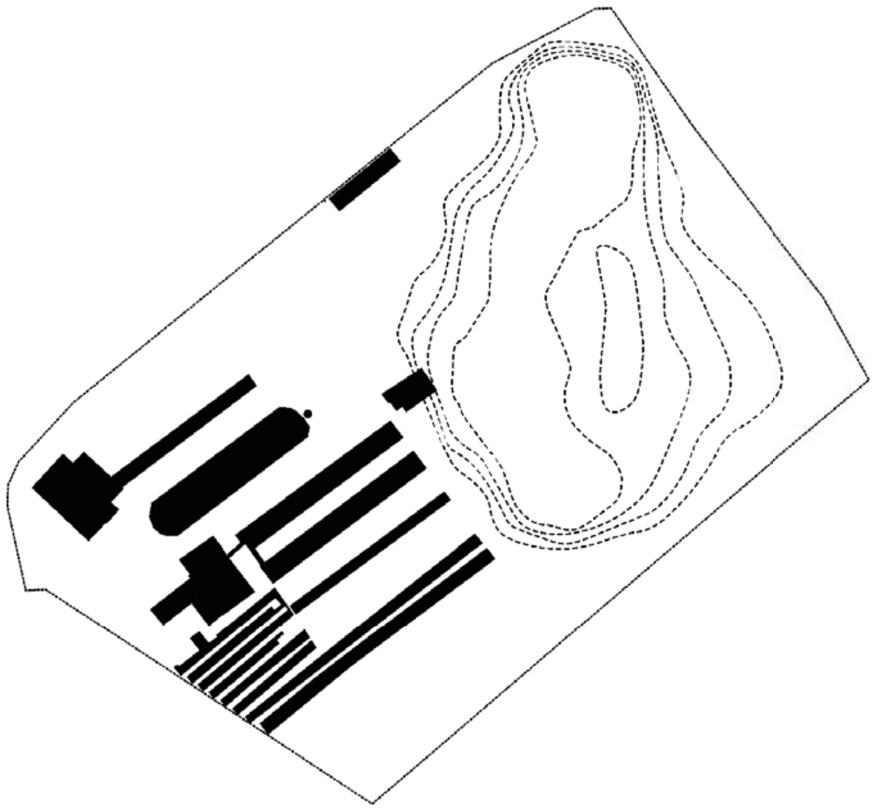
At the Battle of Messines during World War I, around 450 tons of explosives were detonated along the Messines ridge. The result physically changed the topography and this change dominated the landscape of the site.


Wijtschate before battle (1915) - *McMaster University ©*

Wijtschate after battle (1917) - *McMaster University ©*

Industry takes control

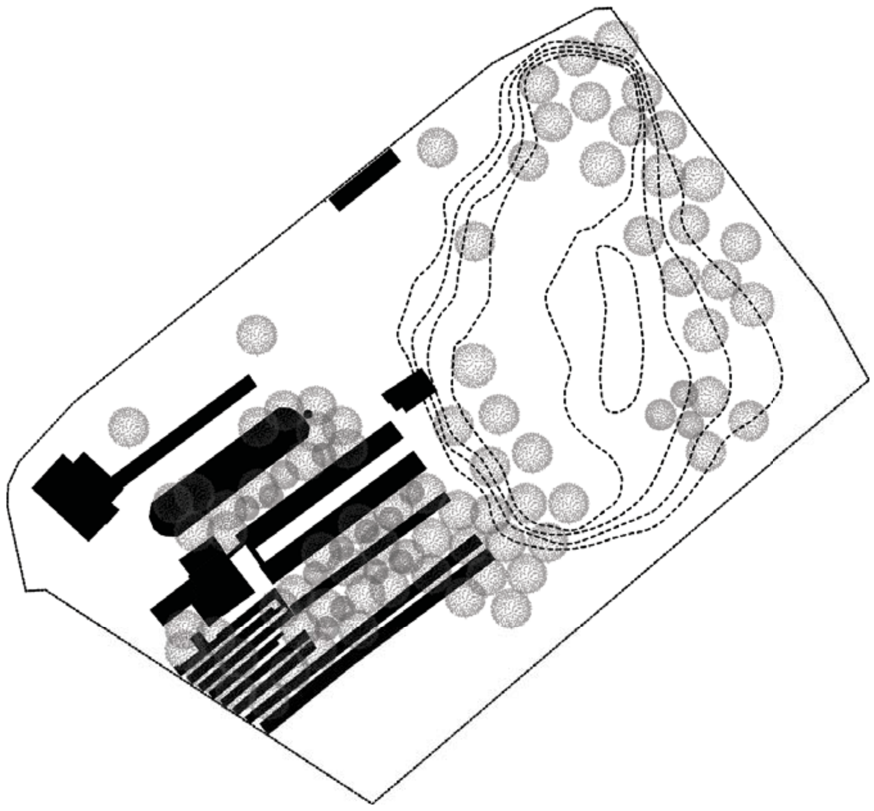
The start of the Dumoulin Factory in 1926 was vital in rebuilding the town of Mesen. During this time period industry dominated the natural landscape of the site and the claypit was dug out to facilitate the production of bricks. The claypit is thus man-made and the topography was manipulated again.



Nature takes control

After the factory was closed down and the clay drained from the clay pit, the site was left vacant for about 50 years. Slowly, nature has regained control of the site. Now nature dominates some areas of the site making them inaccessible. This physically alters the structural and spatial qualities of each building.

The claypit has now become biologically valuable land which should be used in its current state as a public park for the residents of Mesen.



URGENCIES

LIMITED SOCIAL SPACES

Mesen is the smallest town in Belgium with only about 1,000 inhabitants, but it has a lot of history to tell and is very connected to its role in World War I. For such a small town there are a lot of public spaces that are dedicated to WWI as memorials. It is very important to remember the past and have these memorials to the soldiers that lost their lives, especially for the war tourism industry in the area. However, there are not enough public spaces for people to gather and socialize outside of this historical shadow. War memorials and designated historic sites have an atmosphere of reverence and respect, as they should, but it does not enable the citizens and tourists of Mesen to gather and socialize outside of this atmosphere.

As shown in the map below, all of the outdoor public spaces are dedicated to memorials. Other social spaces are provided through the library, church, and school but these are limited to activities centered around those functions. Other than these designated places, there is no other public park or social gathering space provided to Mesen's inhabitants.

MAP OF SOCIAL SPACES

- Outdoor public space
- WWI Memorials
- Sint-Nicholas Church
- Public Library
- School
- Restaurant or Bar

View of the town center public space

Base map and symbols provided by the RLICC IPW III Project: Pipe and Brick Factory Wijtschate (2018-2019)

POSITION

Working within the framework of hardcore heritage and behaviorology, the intent of this project is to investigate the diversity and potential of 'vacancy' connected to the issue of 'affordances' or possibilities for action within the unique spatio-cultural context of the Dumoulin Pipe & Brick Factory.

Hardcore Heritage

The modus of hardcore heritage is described by Amsterdam based RAAAF architects (RIETVELD Architecture-Art-Affordances) as:

"Hardcore Heritage represents a new way of thinking about monuments and cultural heritage. Through deliberate destruction, radical changes in context, and seemingly contradictory additions, a new field of tension arises between present, past and future." (RAAAF)

Behaviorology

Behaviorology is a design method developed by Tokyo based architects Atelier Bow-Wow. As described in their book "Behaviorology":

"Behavior could be central to a hypothesis for understanding the correlations between human life, nature, and the built environment. The concept of behavior need not apply solely to human beings, and we can discern at least three main classifications relating explicitly to architecture and urban space. Of course, the first is still, the behavior of human beings. Next, is the behavior of the natural elements, such as light, heat, water and wind. Third, is the behavior of buildings as observed in their larger context or environment. Behaviorology attempts to place architecture and urban space in a position where these three categories are effectively synthesized." (Atelier Bow-Wow)

The goal of this project is to utilize these research frameworks in order to generate affordances and design for multiple-modalities. I strongly identified with the behaviorology modus developed by Atelier Bow-Wow. I was triggered by the fact that the buildings had such a strong presence on the site when the factory was running, and now that they are in a state of ruin, the nature has a dominating presence on the site.

Currently there is a contradiction between these two elements: The factory made bricks which were used for housing and other buildings. Not only was the factory itself destroying nature, but its products were also. However, without the industrial heritage present on the site, the spatial qualities created from the ruinification by nature would not be present. This tension-field between the factory and nature can create future spatial affordances within the unique spatio-cultural context of the Dumoulin Pipe & Brick Factory.

Nature is taking over....

"timescales...rhythms...the coordination of these different rhythms can result in various encounters: the past with the future, and the social with the natural, building up a spatial and temporal framework for positioning ourselves in the here and now."

-Atelier Bow-Wow, "Behaviorology"

REFERENCES

Parc de la Villette / Bernard Tschumi Architects

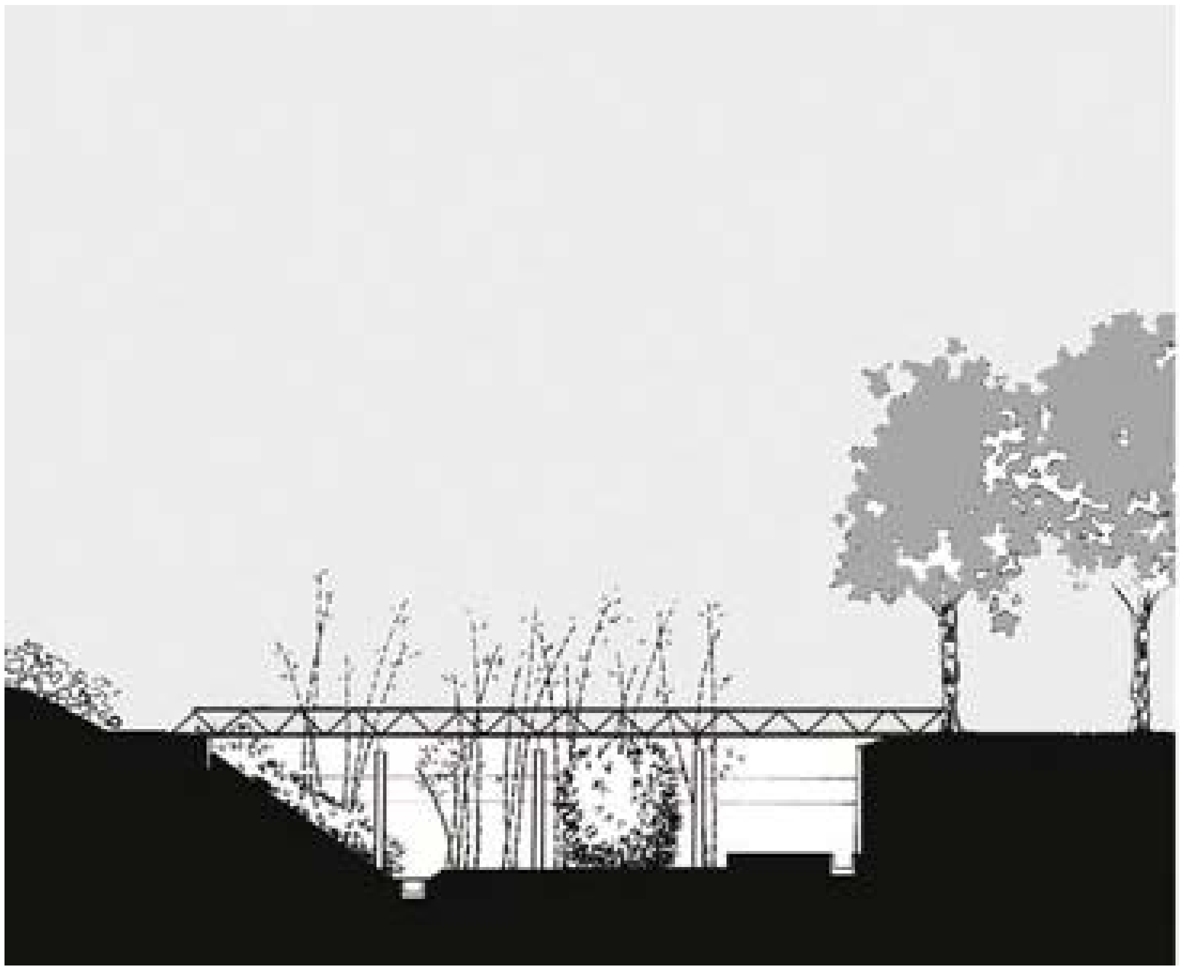
During the early 1980s Paris was undergoing an urban redevelopment as part of city beautification, as well as making Paris a more tourist influenced city. In 1982-3, the Parc de la Villette competition was organized to redevelop the abandoned land from the meat market and slaughterhouses that dated back to 1860. (1)

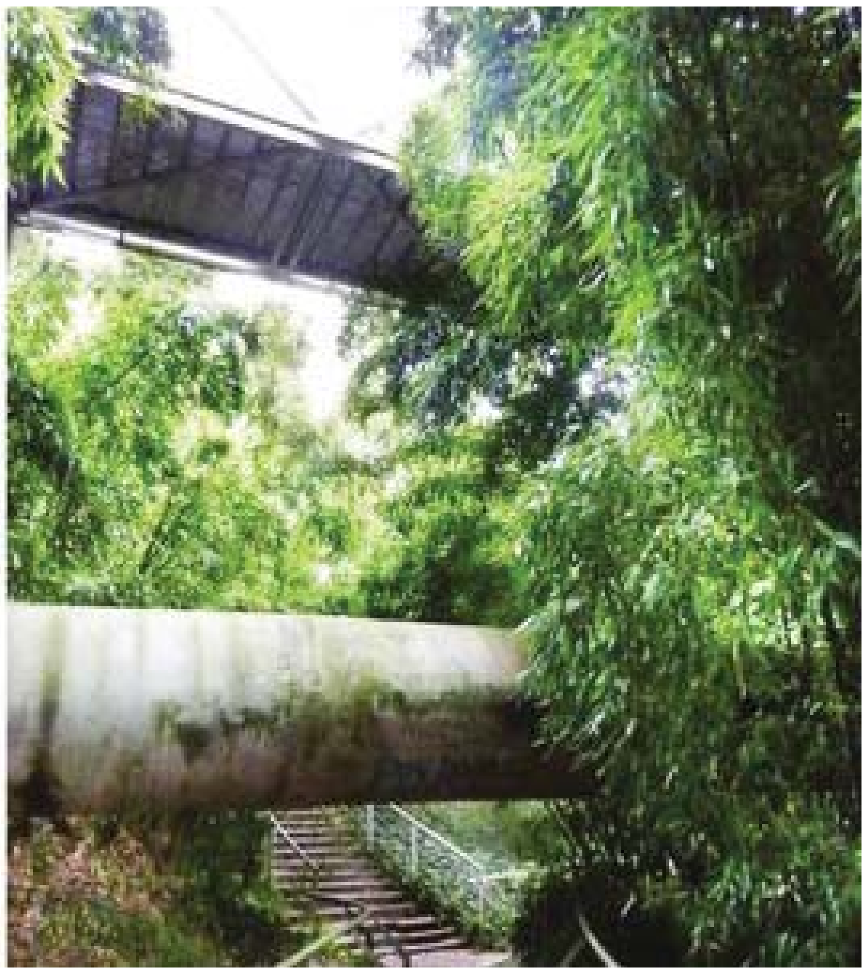
Tschumi did not design the park in a traditional mindset, rather he envisioned Parc de la Villette as a place of culture where natural and artificial are forced together into a state of constant reconfiguration and discovery. (1)

Parc de la Villette was not meant to be a picturesque park reminiscent of centuries past; it was more of an open expanse that was meant to be explored and discovered by those that visited the site. Tschumi, wanted the park to be a space for activity and interaction that would evoke a sense of freedom within a superimposed organization that would give the visitors points of reference. (1)

Parc de la Villette (1)

Parc de la Villette Trellis Garden (2)





Parc de la Villette Bamboo Garden (3)

Sources:

(1) Cyrus Penarroyo © - https://www.archdaily.com/92321/ad-classics-parc-de-la-villette-bernard-tschumi

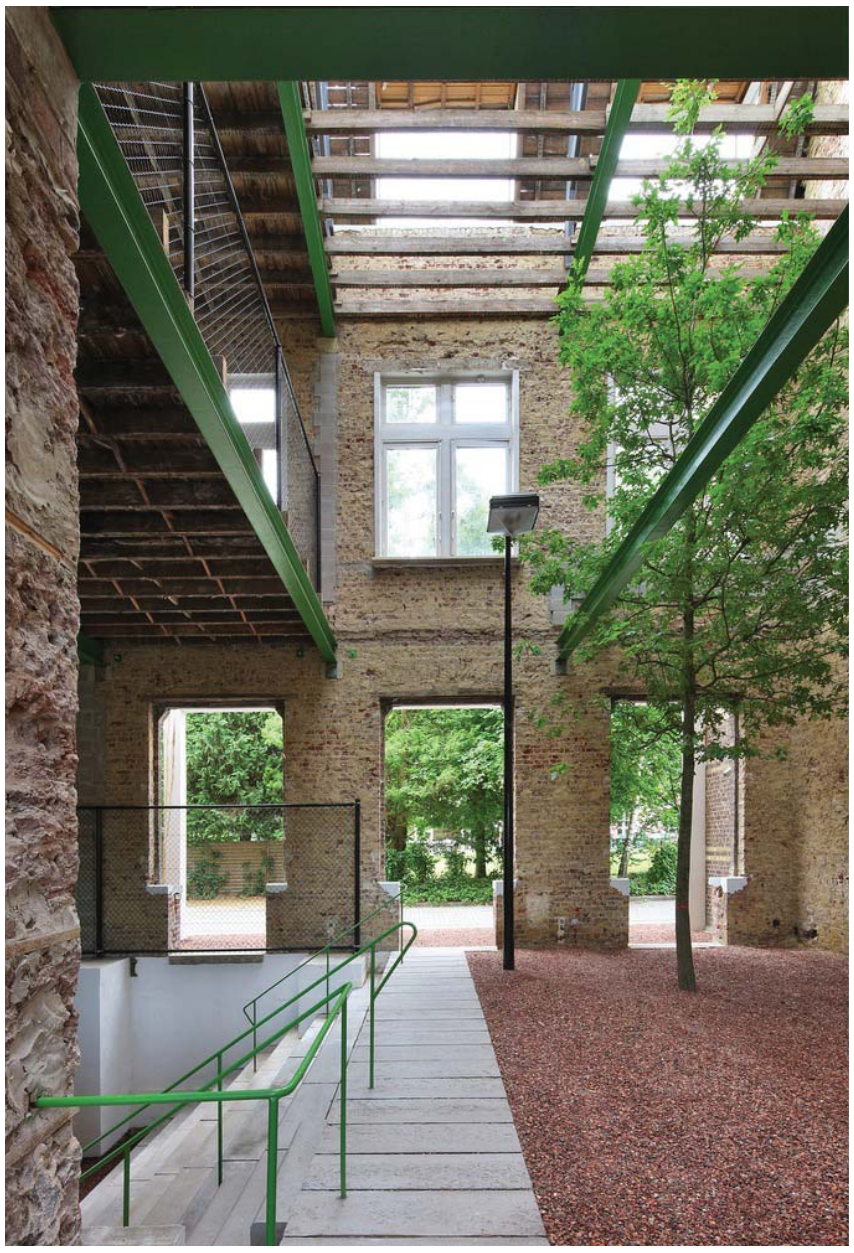
(2) By In Vitae Publicae - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=48731889

(3) van der Velde, René & de Wit, Saskia. (2015). Representing nature: Late twentieth century green infrastructures in Paris. 3. 205-228. 10.7480/rius.3.838.

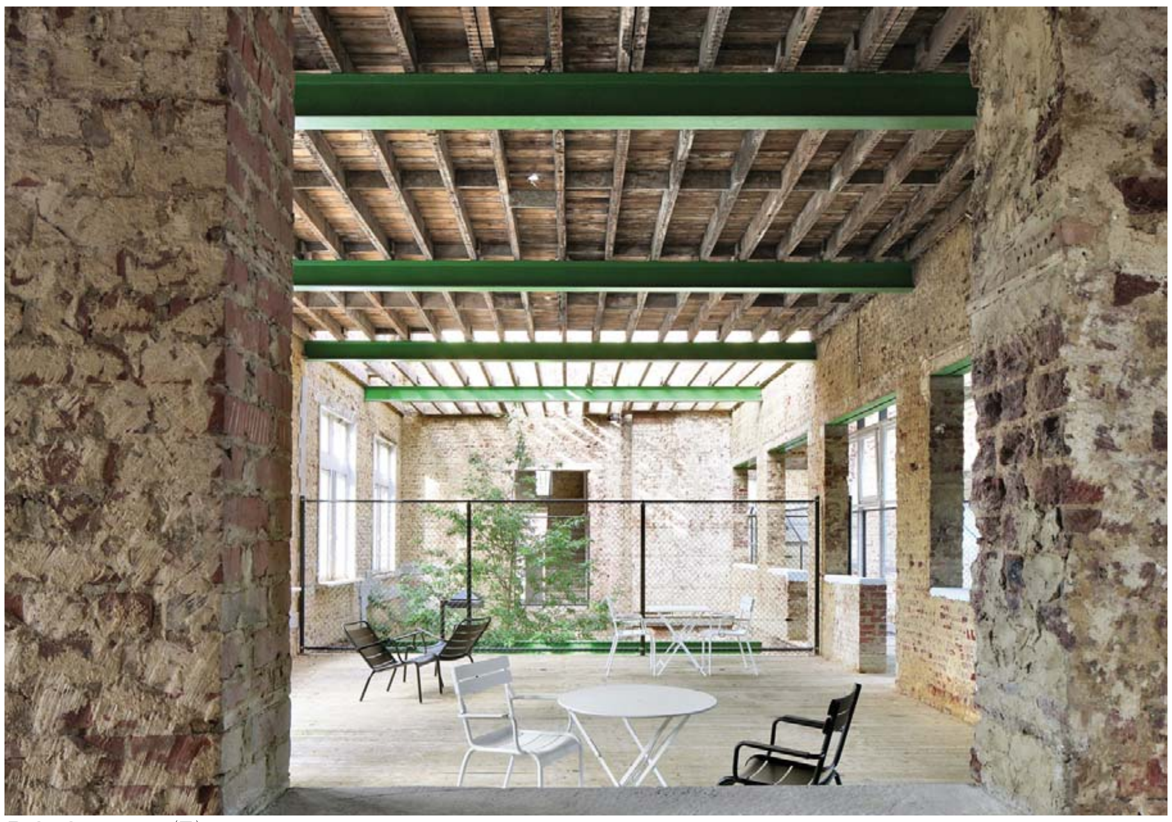
PC CARITAS / architecten de vylder vinck taillieu

The Caritas Psychiatric Centre in Melle, near Ghent in Flanders (Belgium), opened on its premises, in June 2016, the 'Kanunnik Petrus Jozef Triest Plein' ('Canon Peter Joseph Triest Square') and designed by architecten de vylder vinck taillieu. The former 'Sint-Jozef' ('Saint Joseph') building was erected in 1908 as a facility to treat so-called troubled women. Now, more than a century later, the building has been kept in a state of partial demolition and opened to the public as such. (1)

The design proposal keeps the Sint-Jozef building in its current state of partial demolition. The building is opened up as a complex void with varying degrees of accessibility, light, transparency, closeness, nature, collectivity, etc. Floor partitions are partly removed and enable vertical sightlines from ground floor to attic. The roof is removed but the timber frame structure retained. Plants and trees are scattered in the interior, turning the building inside out. The resulting network of enclosed outdoor spaces provides a surplus of space that can be freely used and appropriated by anyone. (2)



PC Caritas (3)



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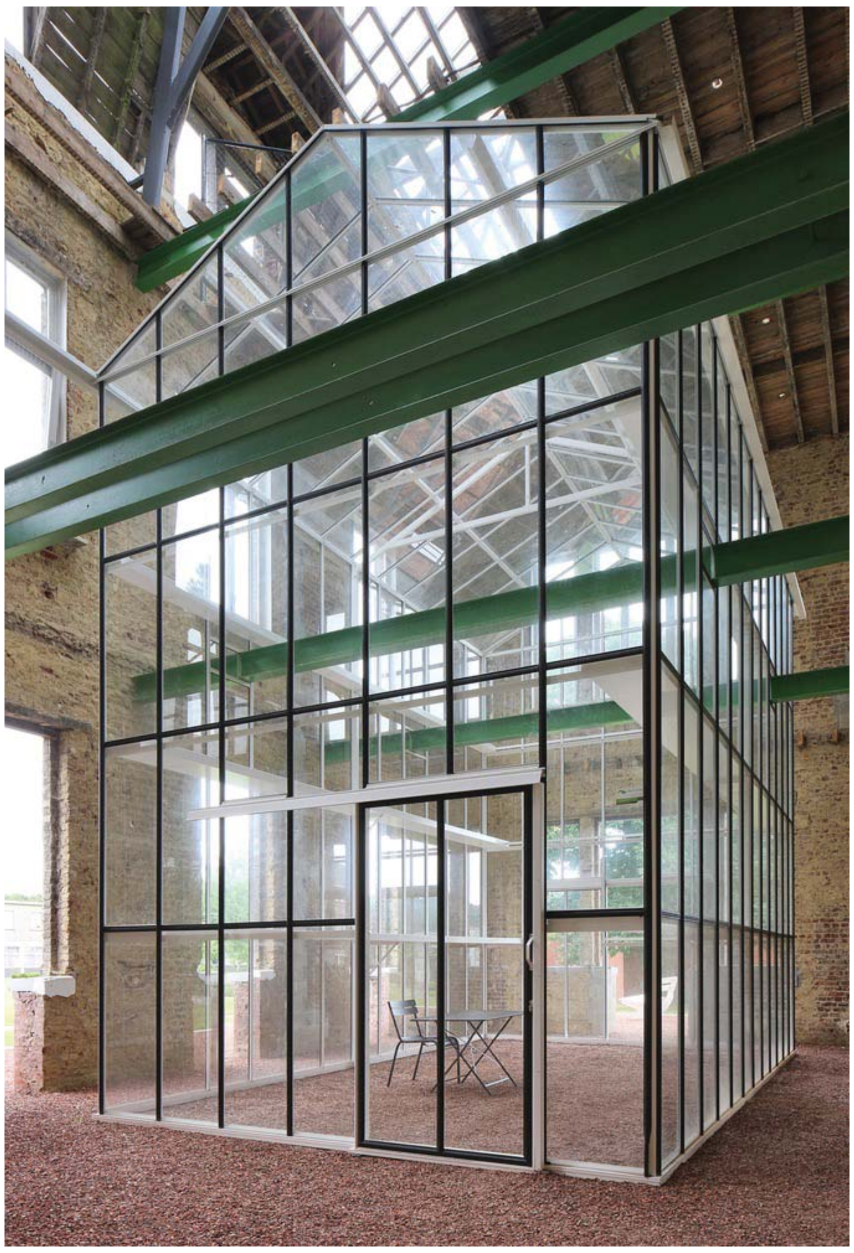


PC Caritas (3)

Sources:

(1) "PC CARITAS / architecten de vylder vinck taillieu" 12 May 2017. ArchDaily. <https://www.archdaily.com/871034/pc-caritas-architecten-de-vylder-vinck-taillieu/> ISSN 0719-8884

(2) Boie G., ' Design Your Symptom, ' BAVO [Web document] (2018), < https://www.bavo.biz/design-your-symptom >,

(3) Filip Dujardin © - https://www.archdaily.com/871034/pc-caritas-architecten-de-vylder-vinck-taillieu

INITAL SITE OBSERVATIONS

Interactions of plant growth and buildings on the site

During the site visit I documented different conditions of how the nature and biological growth have grown in and around the existing buildings of the factory. Each building has a unique condition and interaction with the nature that is slowly overtaking the site. In some areas the nature and plant growth has become unmanagable and is completely overgrown, restricting access to some buildings and areas of the site.

Hoffman Kiln and Chimney

The chimney is intact and structurally sound. There is some vining plant growth that is starting to creep up the side of the chimney. There were also birds that were using the top of the chimney as a resting place while flying between the top of the chimney and the other buildings on the site.

The Hoffman Kiln is in a worse state. Part of the upper wall of the kiln has collapsed and on the other end of the kiln the roof collapsed and has been removed. This creates an interesting condition of trees and other plants to grow on the upper level of the kiln. Here there are many examples of different interactions between nature and the kiln ranging from low-lying ground vegetation to trees growing in and around the structural elements left standing.

Birds on top of chimney

Collapsed wall of the kiln

Material loss of the kiln walls

Biological growth on kiln walls

Vines growing up the chimney base with overgrown plants


Tree growing out of an opening towards light

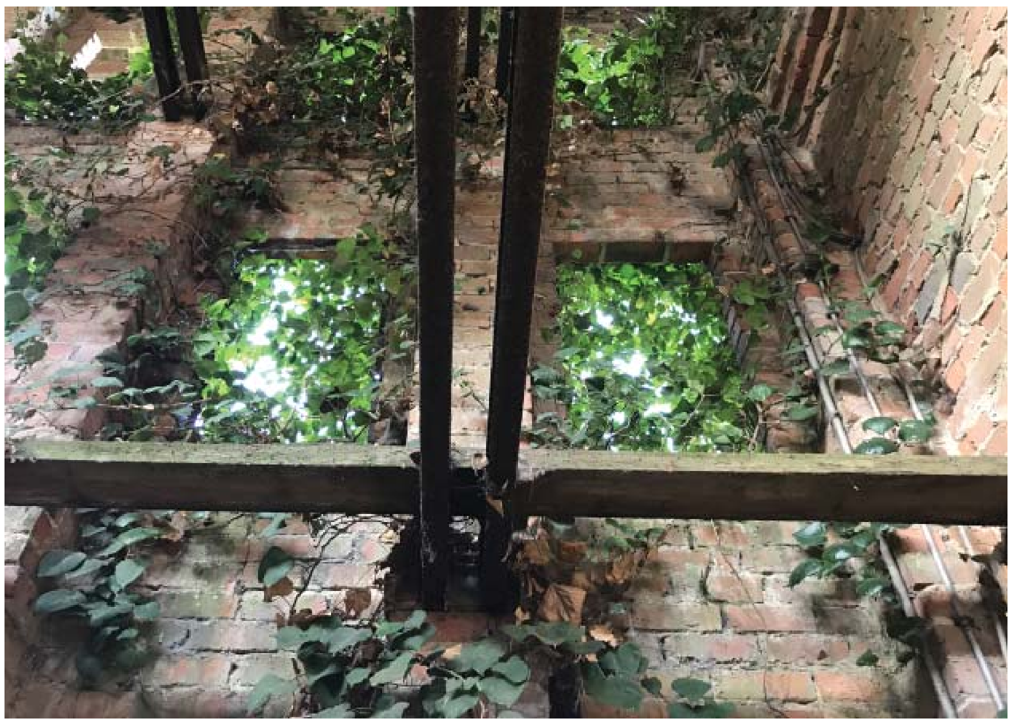

Tree growing around structural elements


Vining plants growing on wall of kiln


Larger plants growing out of the kiln walls

Drying Sheds

The drying sheds are in very good structural condition. Because the roof has remained intact the growth inside the buildings is limited. On each end of the steel structured drying shed there are vines growing on the walls of the building. In some areas the plants are starting to grown in through the windows. On the precast structured drying shed there is almost no growth inside the building. The windows of each drying shed frame views of the overgrown nature on the site. I also noticed that the low level drying sheds prevented grass and other plants from growing underneath them creating strips of dirt on the site underneath the roofs.


Plants growing in through window openings - *Vanda Vybohova* ©


Vining plants on north end of drying shed


Windows frame views of overgrown plants


Low level drying sheds preventing growth - *Vanda Vybohova* ©


Drying shed buildings frame view of claypit

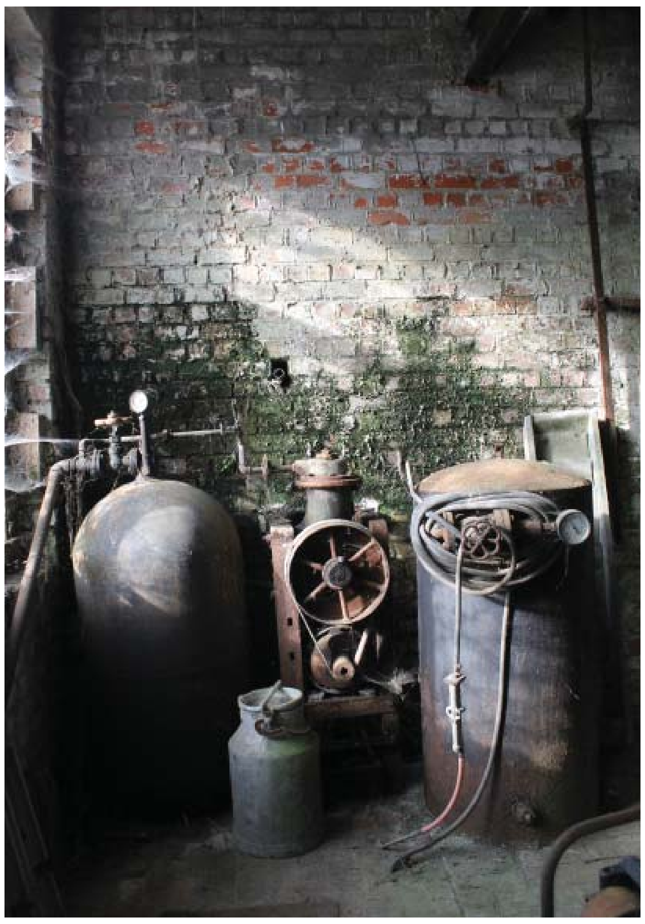
Production Building and Claytower

The production building contains most of the machinery and the diesel engine that was used to power the equipment on site during production. The room that contains the equipment and machinery has little to no growth inside because the floor above and the windows remain. However the upper floor has some plants growing on the floor because the roof has collapsed and is missing in most places. The space between the production and the claytower has trees and larger plants growing where the roof is completely missing.

The claytower has less growth and is in a very good condition. Underneath the claytower is the bunker which has no growth. Here there is only a little bit of growth that is creeping in from the openings and growing in the cracks along the bricks.

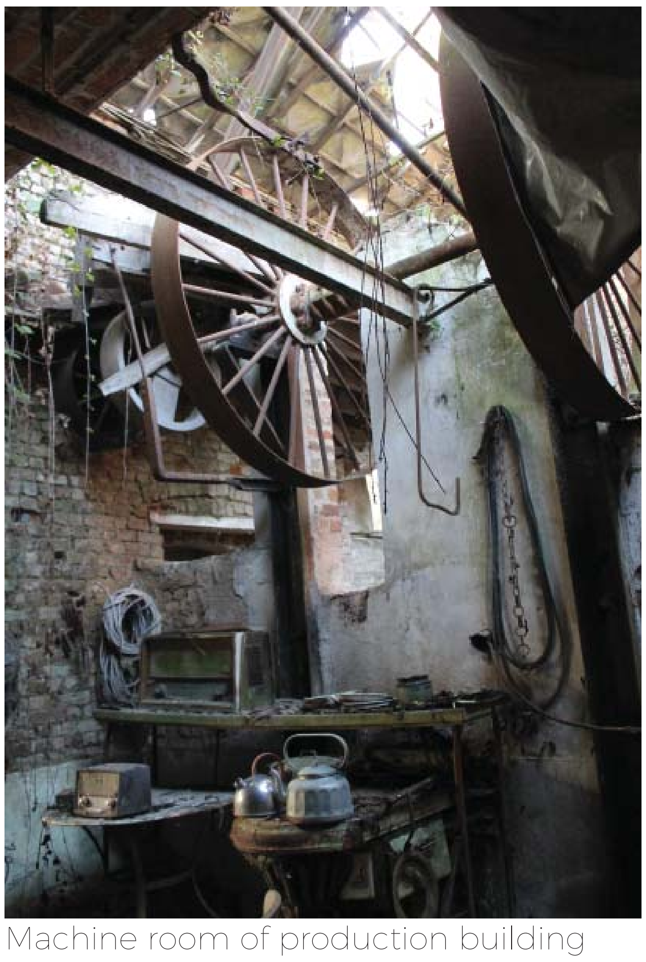
Biological growth growing in cracks of claytower

Upper level of claytower



Machine room of production building

Missing roof of production building



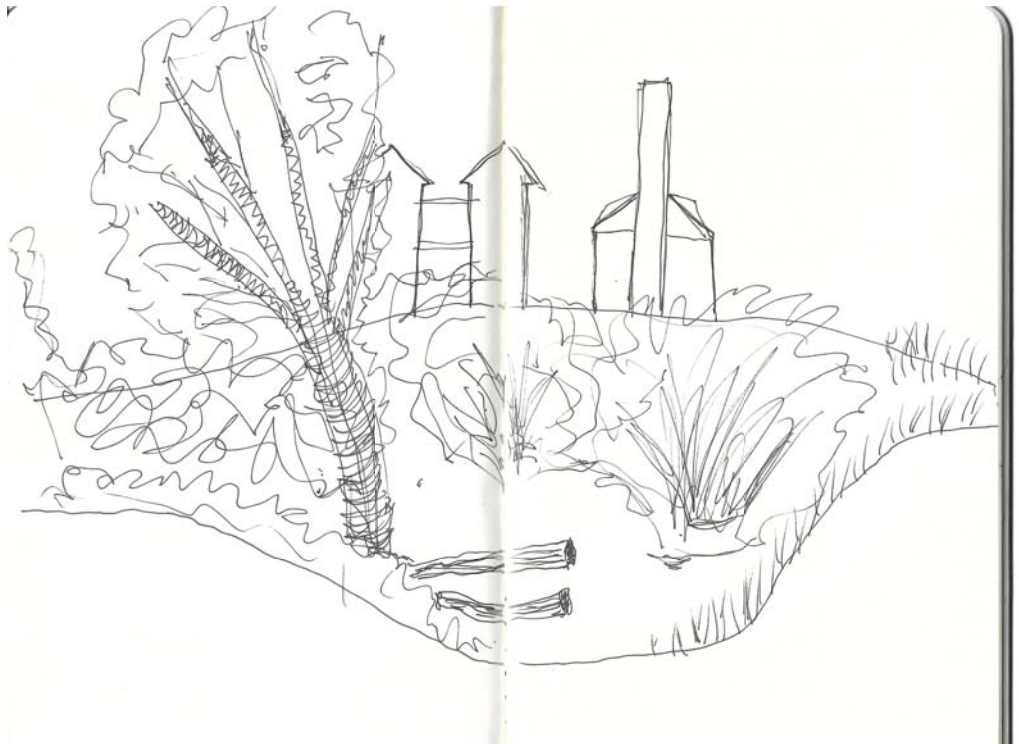
Machine room of production building

Claypit

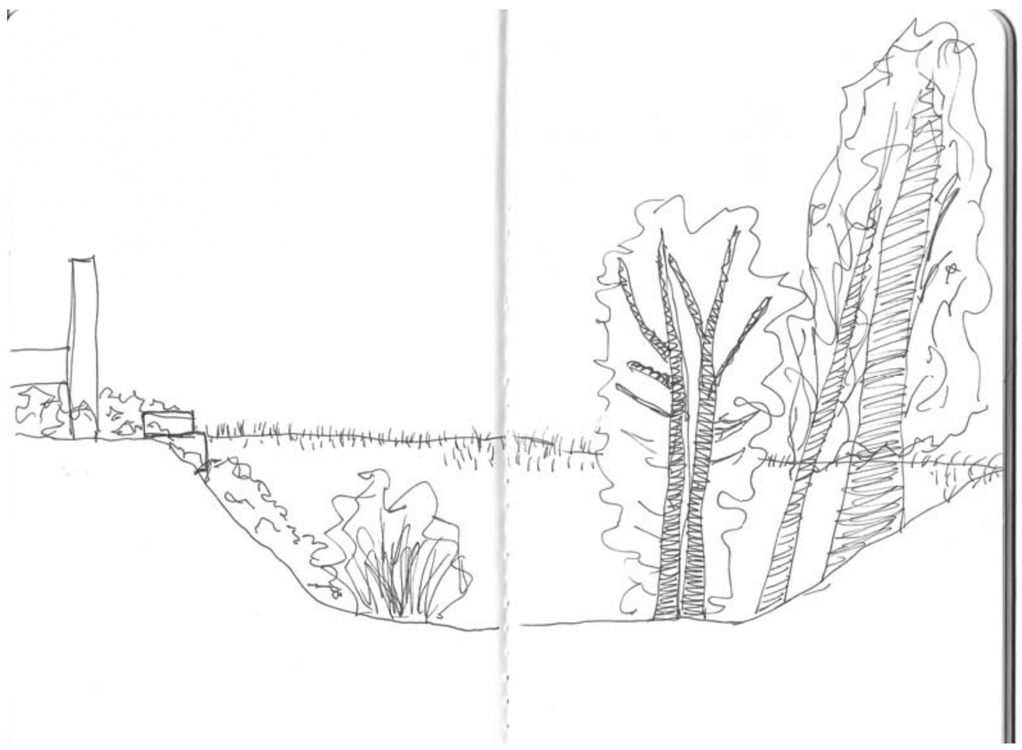
My initial response to the claypit is that it was deeper and larger than I originally thought. Once you are at the lowest point in the claypit the only buildings that you see are the drying sheds and the chimney. It was very quiet and you could not hear the noise from the slaughter house nearby, making it a very peaceful place to be. I also sat and sketched some natural tree clearings and slopes of the claypit. While sketching I saw some wildlife such as rabbits, birds and deer. It has become a valuable biological area on the site.

Panorama of claypit from highest point

View of tree clearing at bottom of claypit



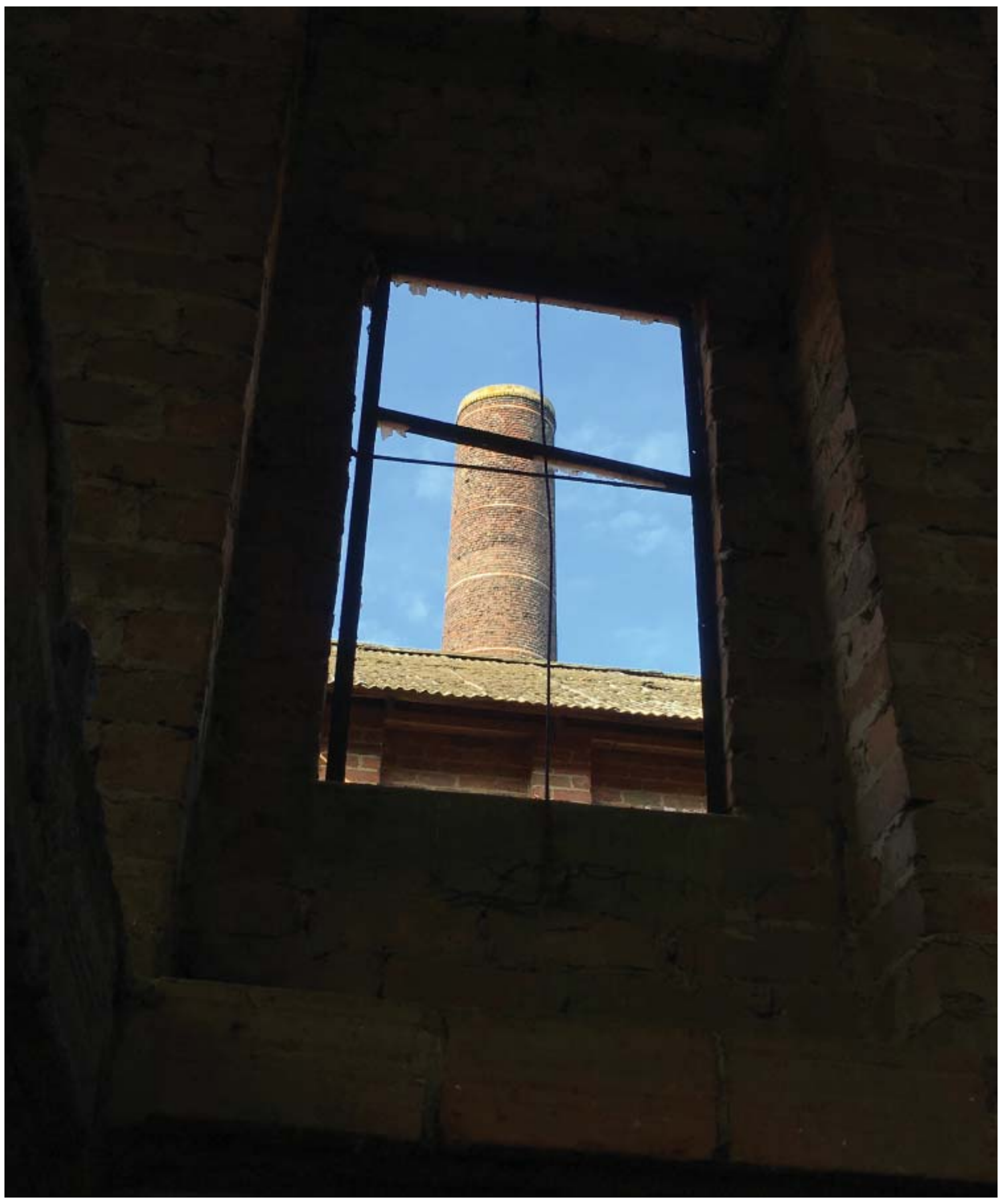
Sketch of claypit



Sketch of claypit

Chimney as a landmark

Something that stood out to me while approaching the site is that the chimney is a landmark in the landscape, orienting you towards the site. Even while walking through the other buildings and around the site the chimney is almost always visible. The different buildings throughout the site frame the chimney in many different ways. This reinforces the idea of the chimney as a landmark that needs to remain on the site.

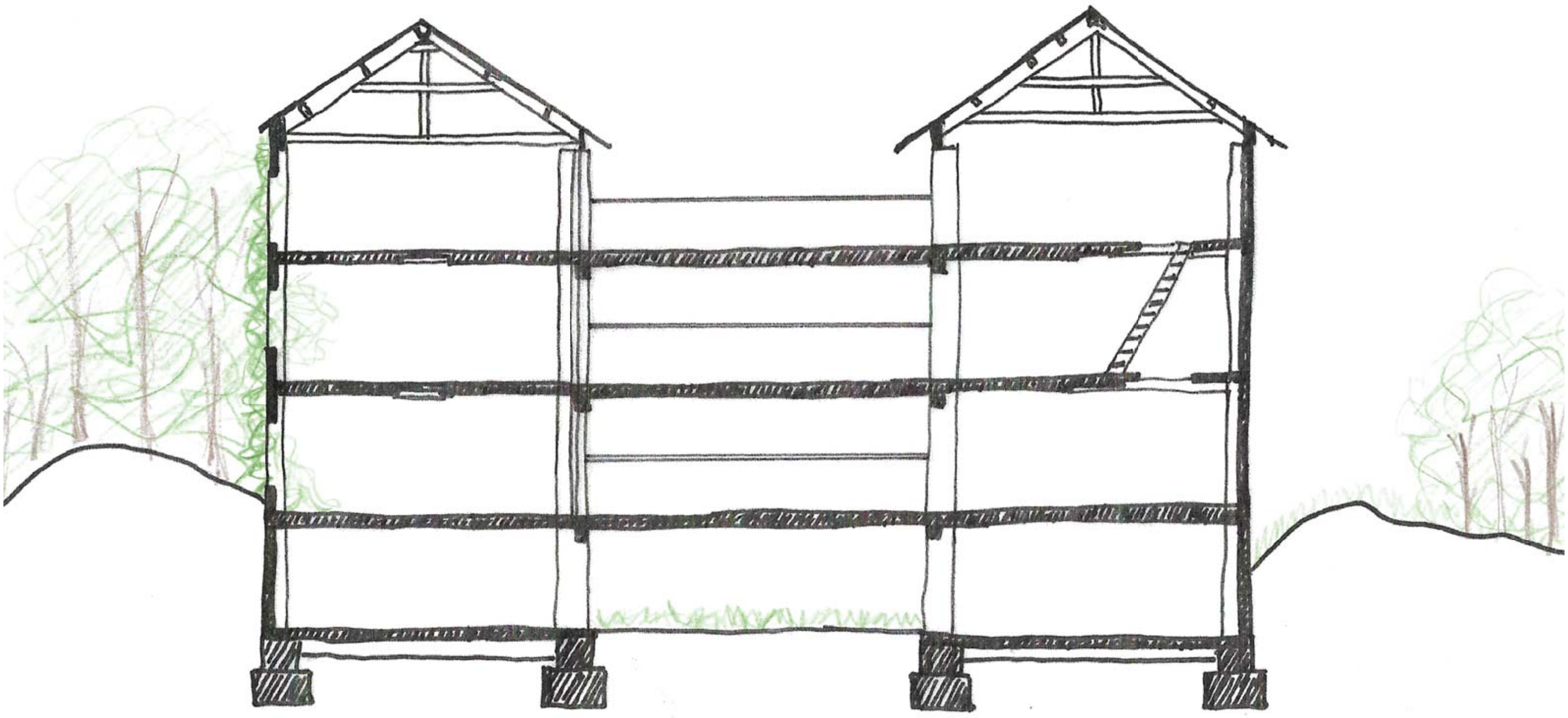

Chimney seen from inside drying sheds - *Léonie Tellia* ©


Chimney seen from between drying sheds - *Artit Markshom* ©


Chimney seen from claytower - *Vanda Vybohova* ©

POSSIBILITIES OF CONTROLLING NATURE

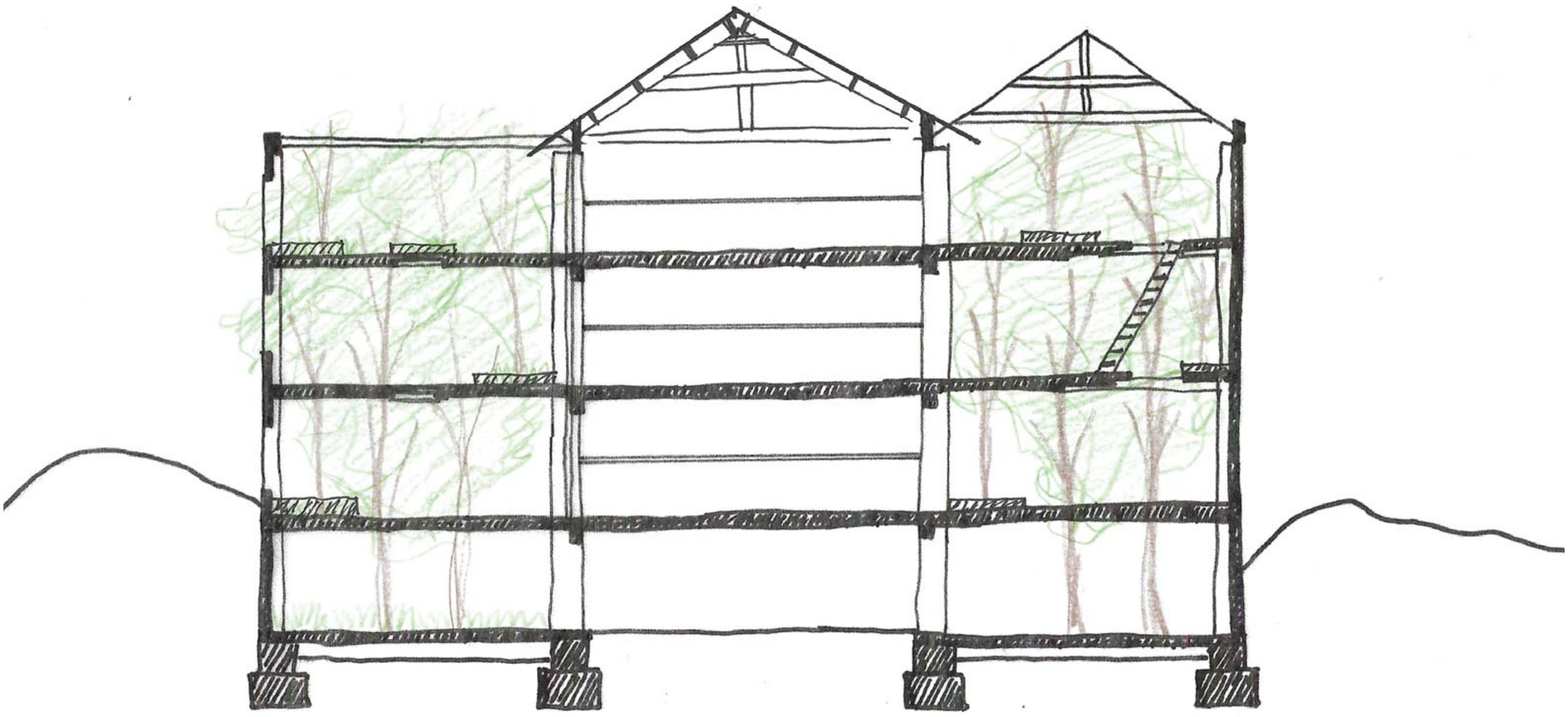
DRYING SHEDS



Existing Conditions

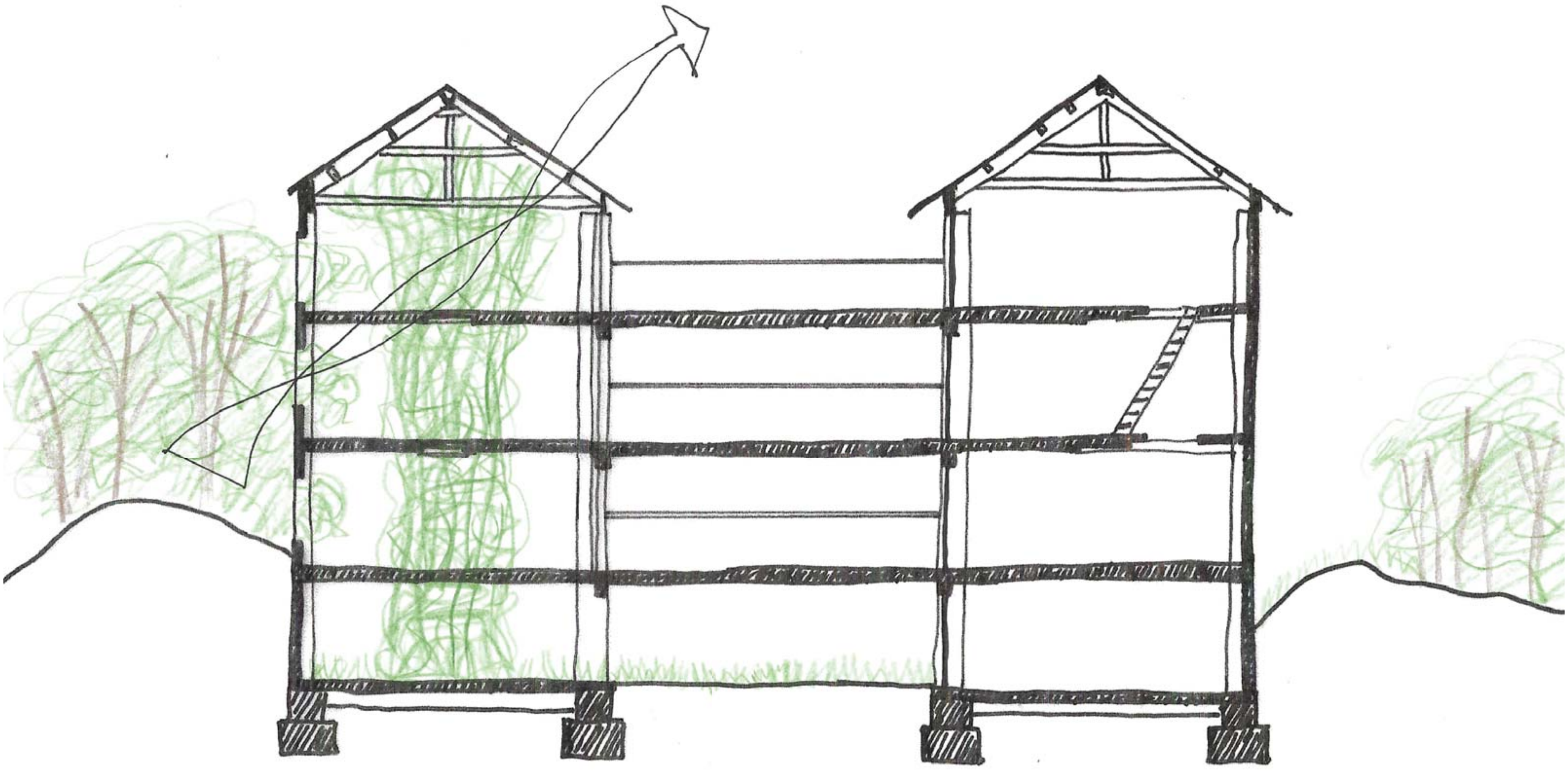
Steel Drying Shed (left):
- Vining plants on exterior creeping towards the interior through window openings
- Heavy exterior vegetation

Prefab Drying Shed (right):
- Almost no interior plant growth
- Exterior vegetation distanced from building



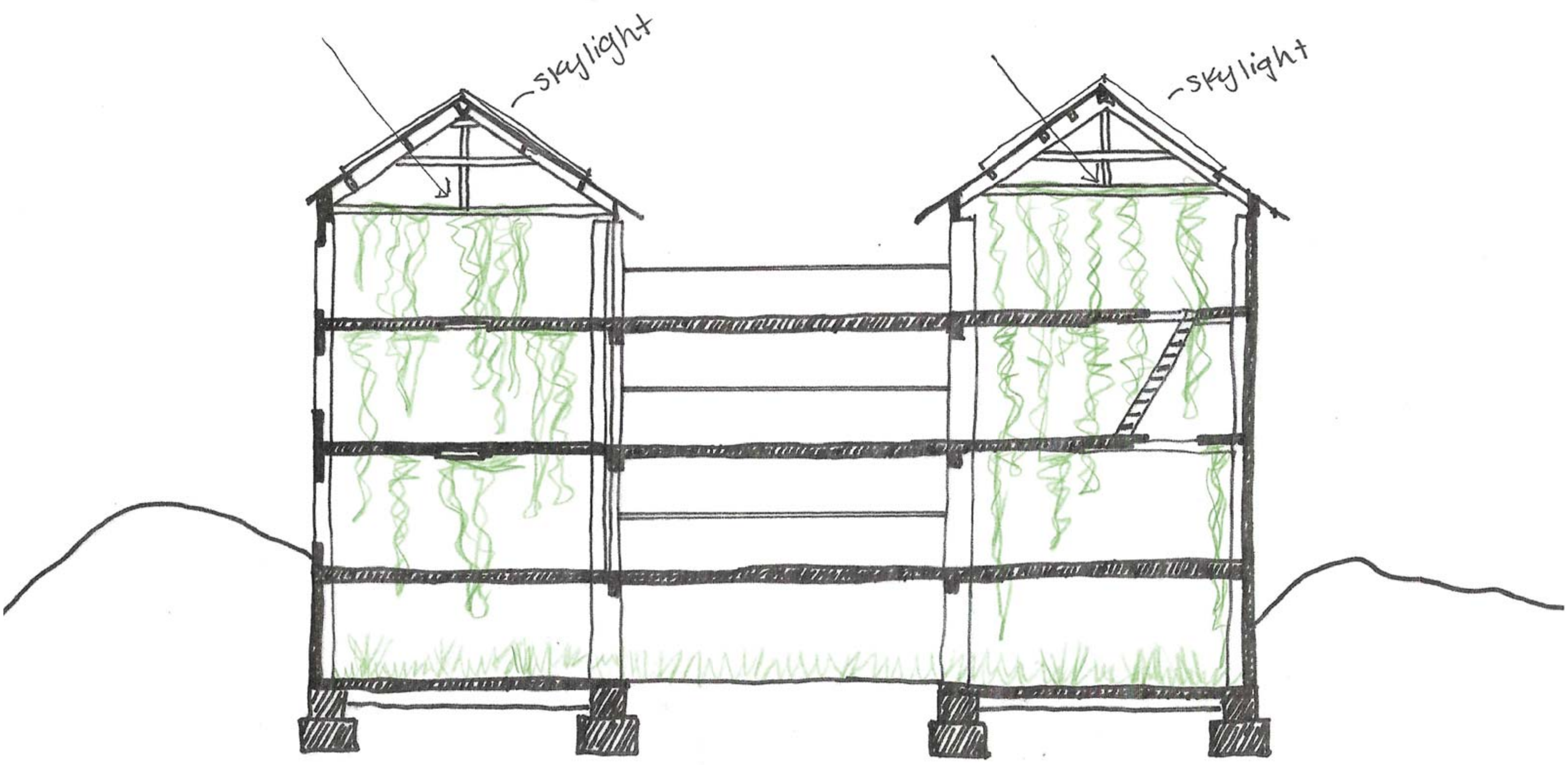
Partially Controlled Nature

- Clear exterior vegetation
- Remove roofs and only grow plants inside the drying sheds
- Add roof between drying sheds to prevent growth in the in-between space and shed water into existing buildings
- Add pathways for circulation and places for vegetation to grow



Partially Controlled Nature

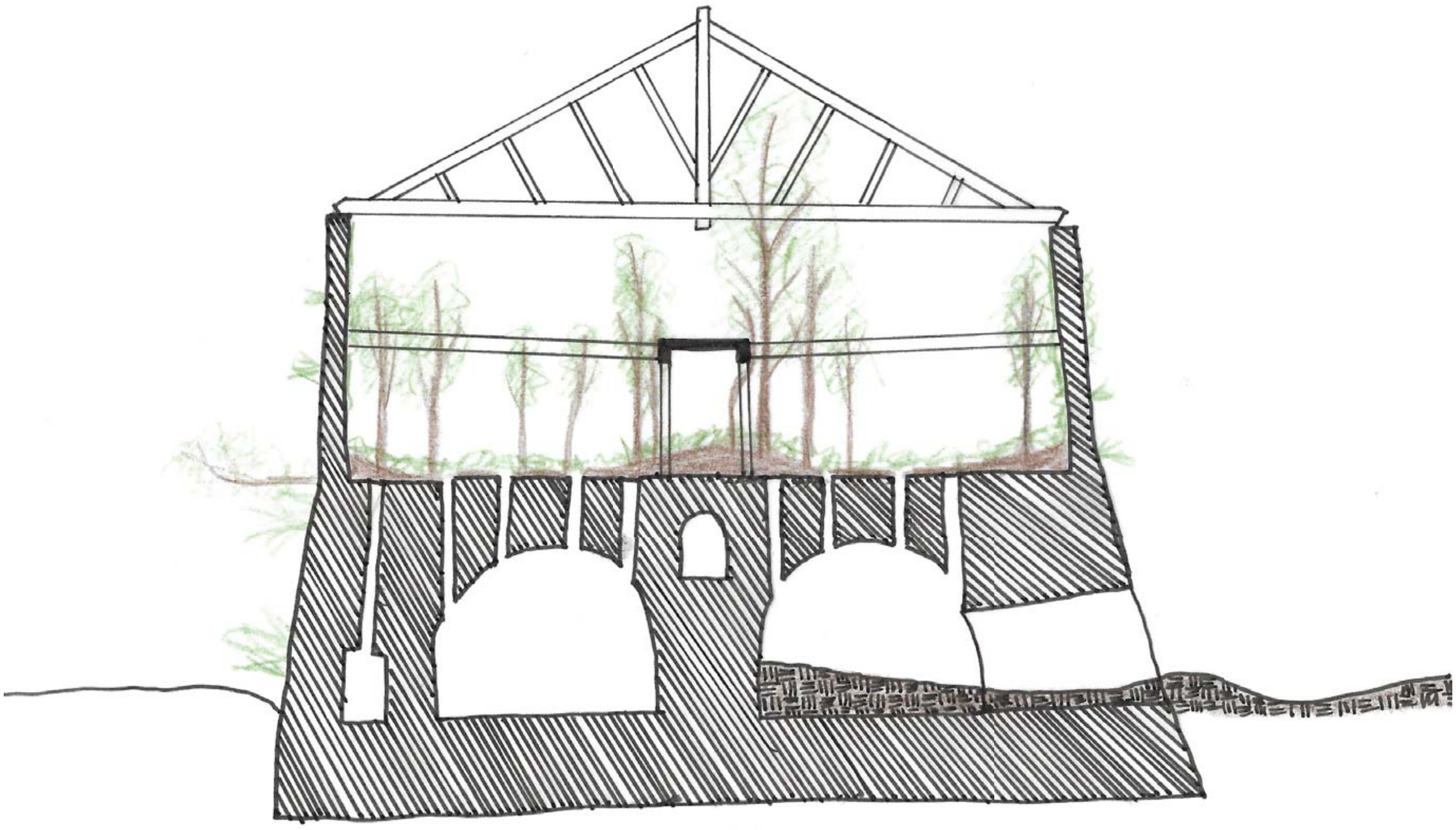
-Remove windows and place a new glass roof.
-Allow vertical growth on brick walls.
-In prefab drying shed replace windows and don't allow plant growth inside to contrast the steel drying shed.



Partially Controlled Nature

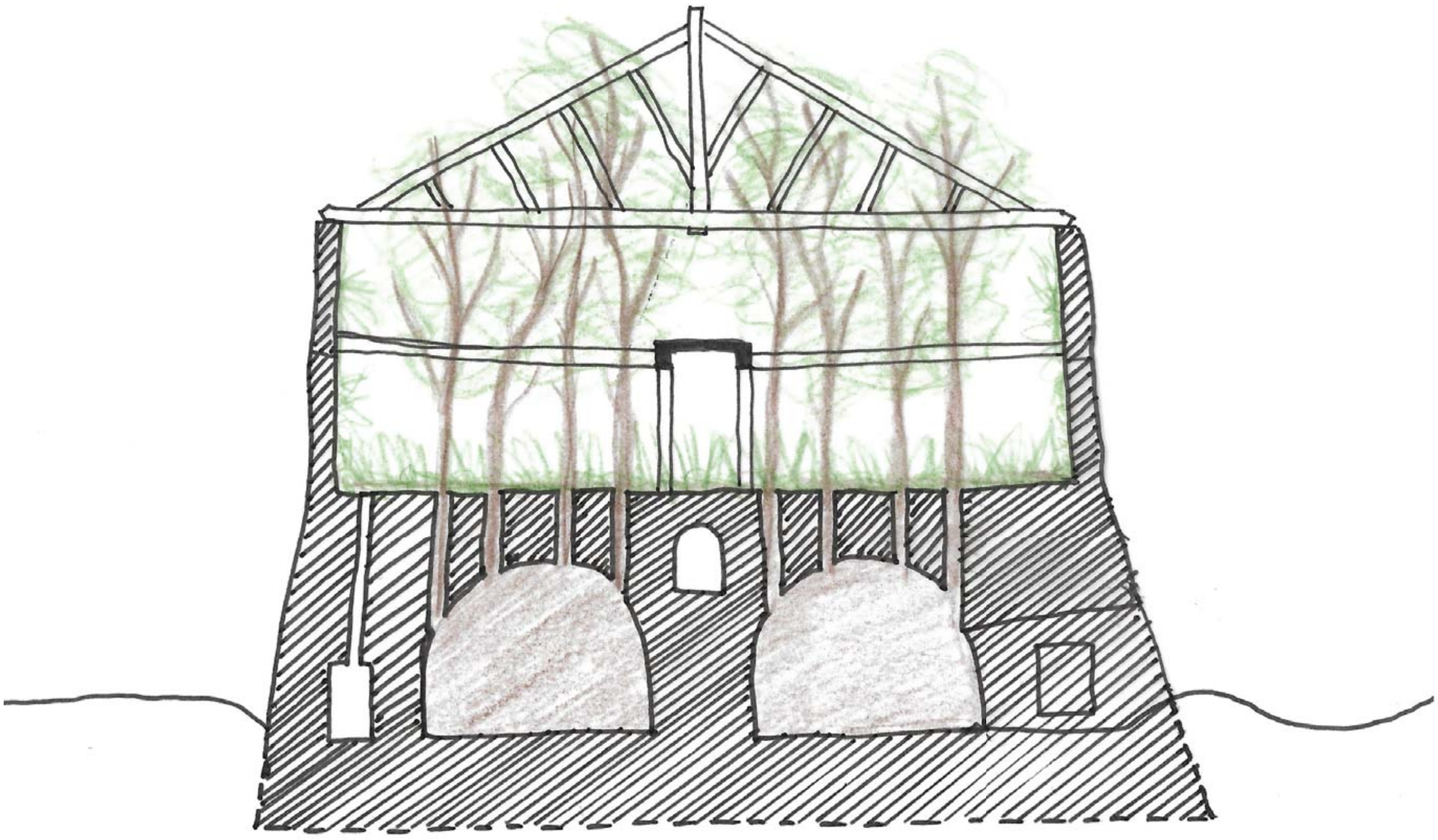
-Replace roofs
-Skylights for daylighting
-Hanging vertical garden to experience vegetation in a new way

HOFFMAN KILN



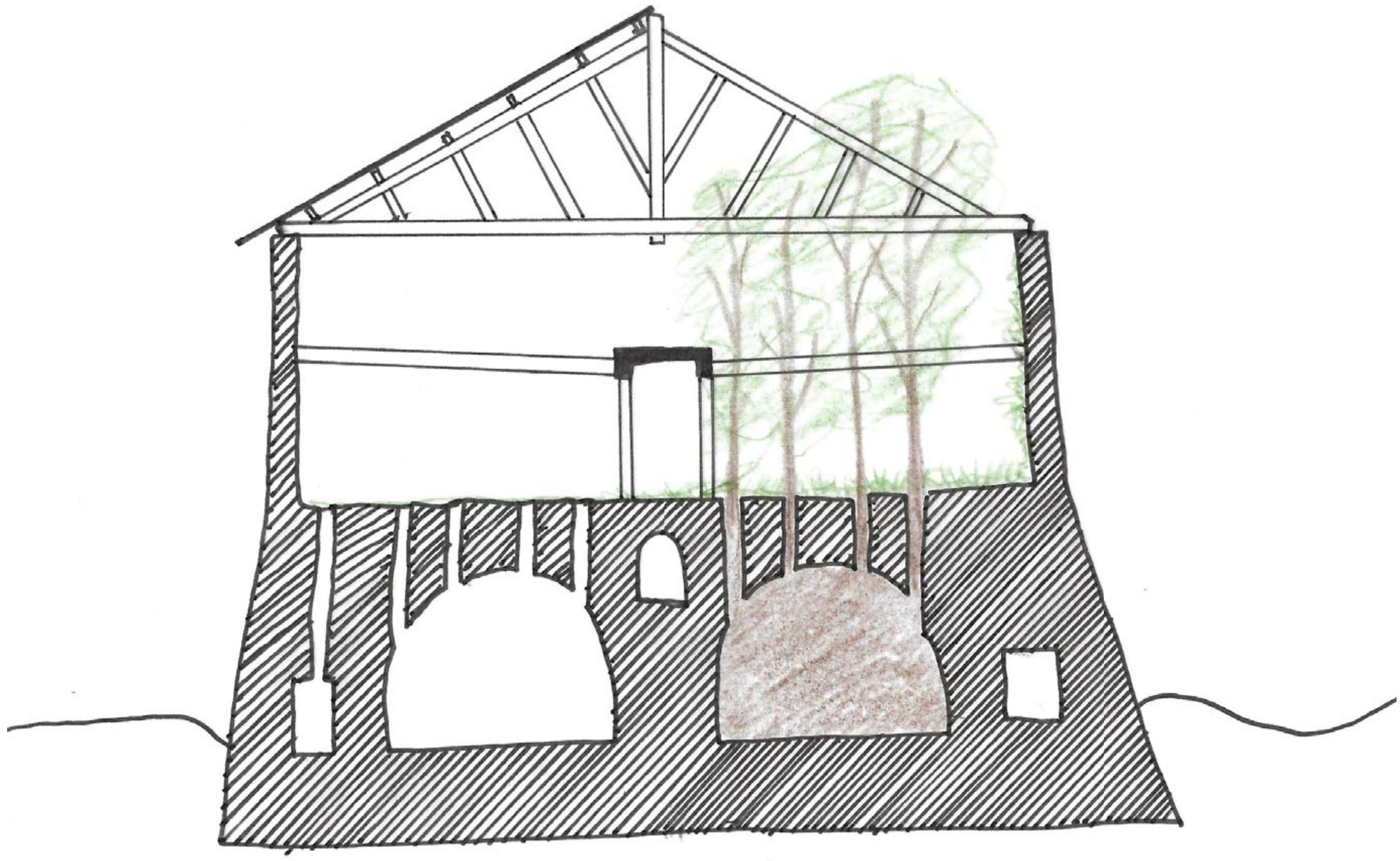
Existing Conditions

-Roof has collapsed in places allowing growth of plants on the kiln
-Trees growing on upper floor of kiln
-Only one accessible chamber below (other chambers are blocked with debris and brick)
-Abundance of ash in the soil from operation of the kiln which is good for reneration and plant growth
-Plants also growing out of the side walls of the kiln



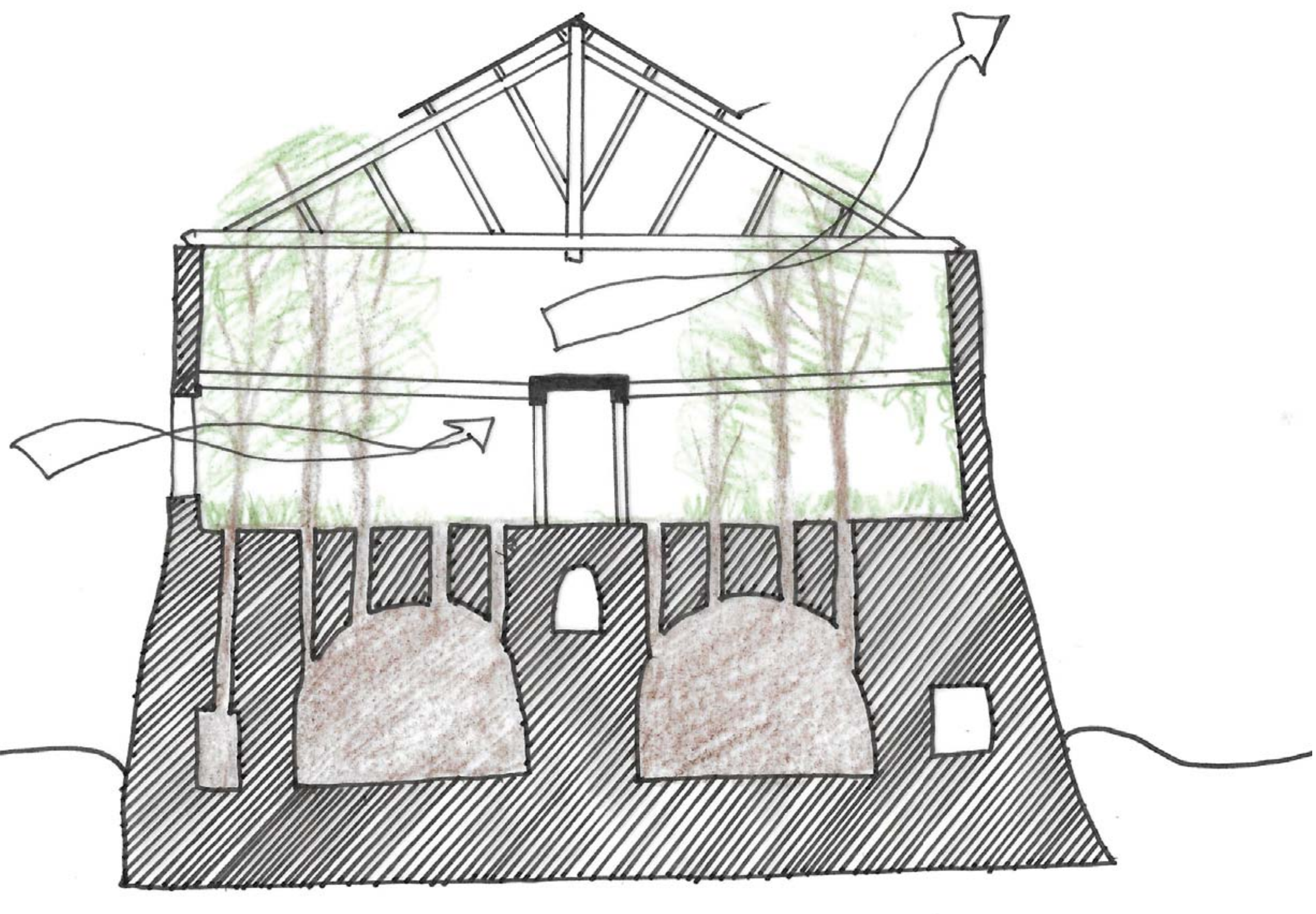
Uncontrolled Nature

-Creates a natural forest environment in an industrial landscape
-Most deterioration of existing kiln
-Can become overgrown with no maintenance
-Lose spatial qualities of chambers by filling with earth



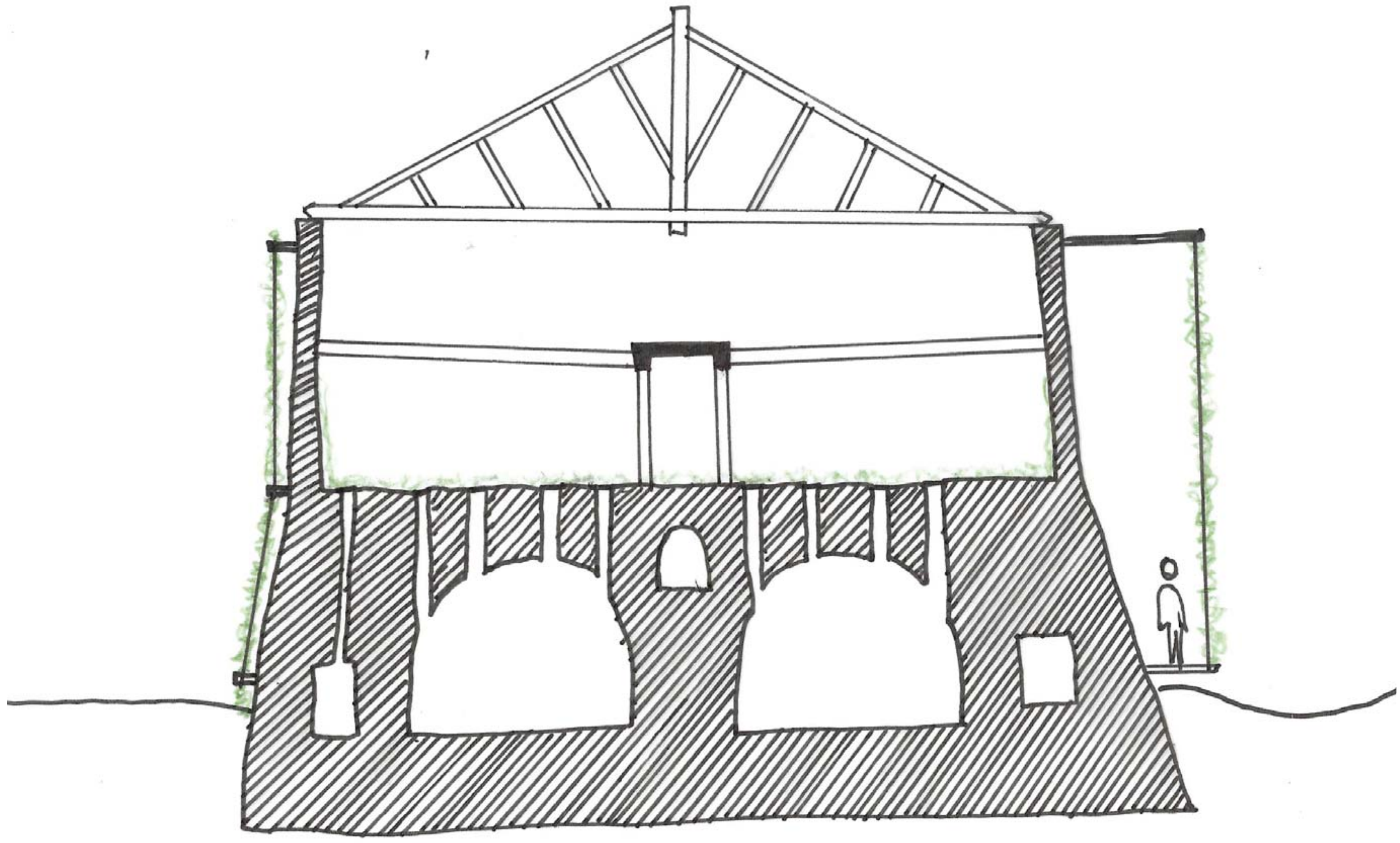
Partially Controlled Nature

-Remove only parts of roof to allow growth in certain places
-Kiln floor partially accessible between plants
-Some chambers accessible, but not all



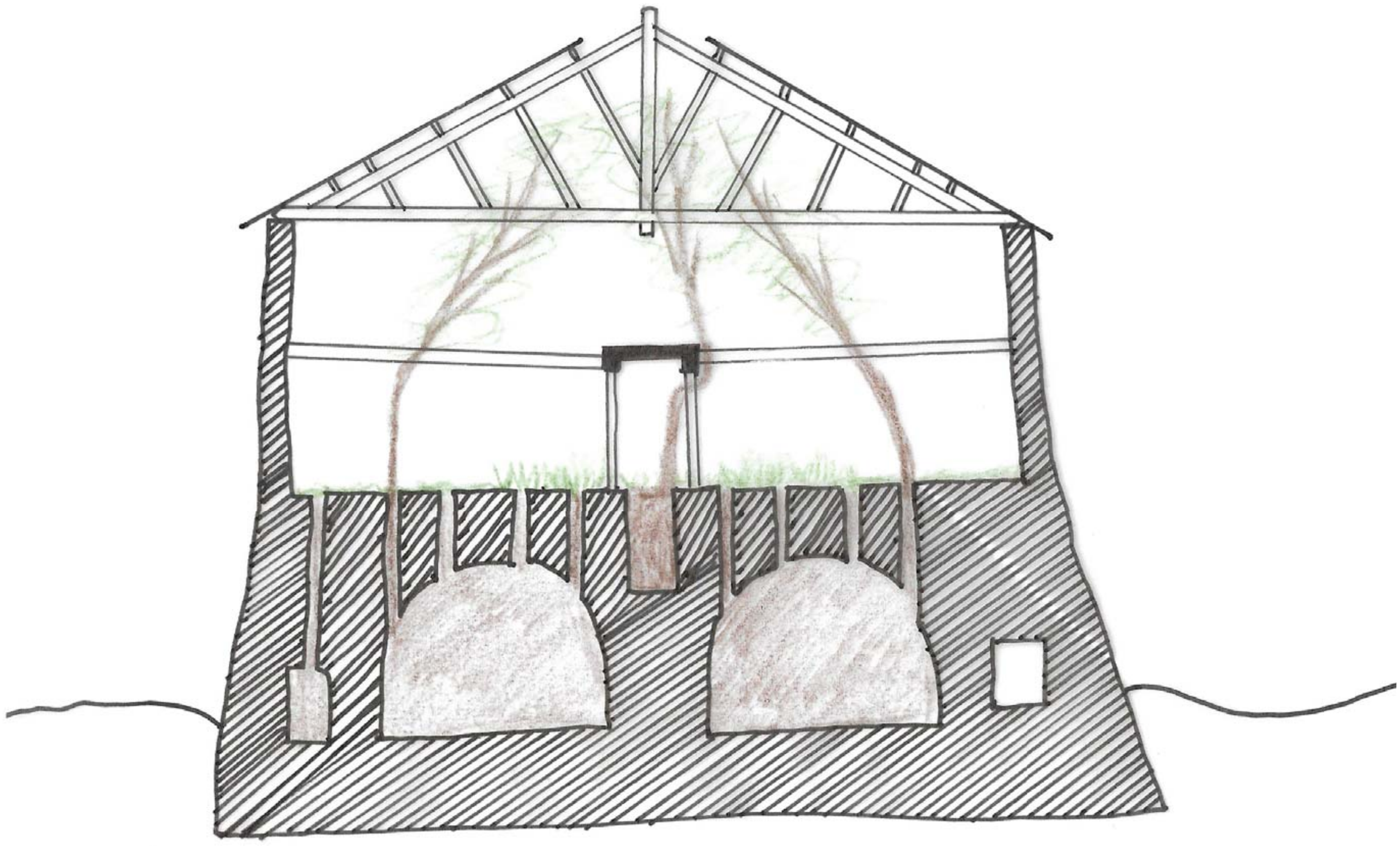
Partially Controlled Nature

-Remove only parts of roof to allow growth in certain places
-Allow other natural elements such as wind to enter the space
-Controlled views out through openings in kiln walls



Partially Controlled Nature

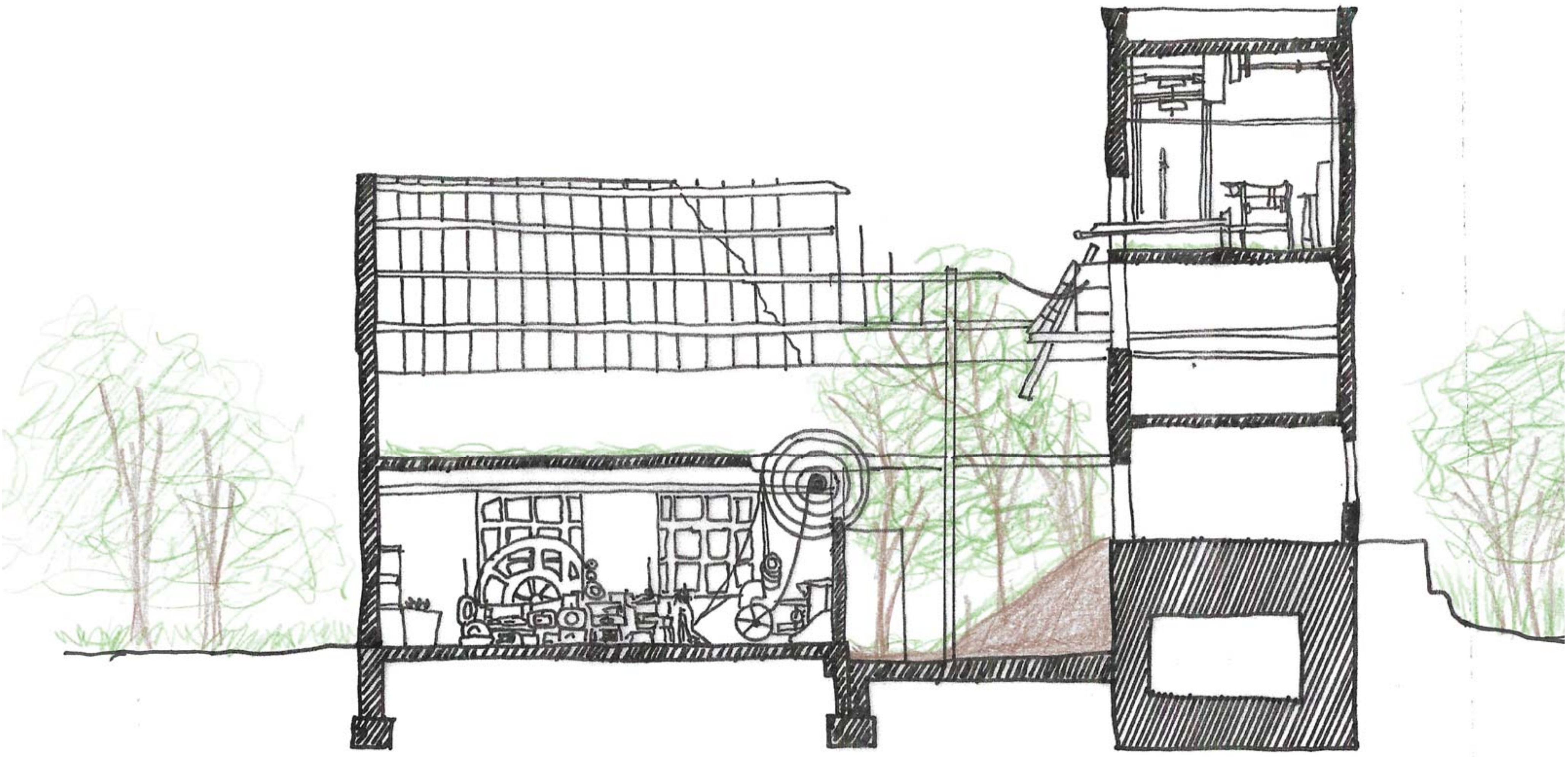
-Vining plants on cables set apart from kiln to create space between the building and nature
-Close holes for coal restricting further growth in kiln



Partially Controlled Nature

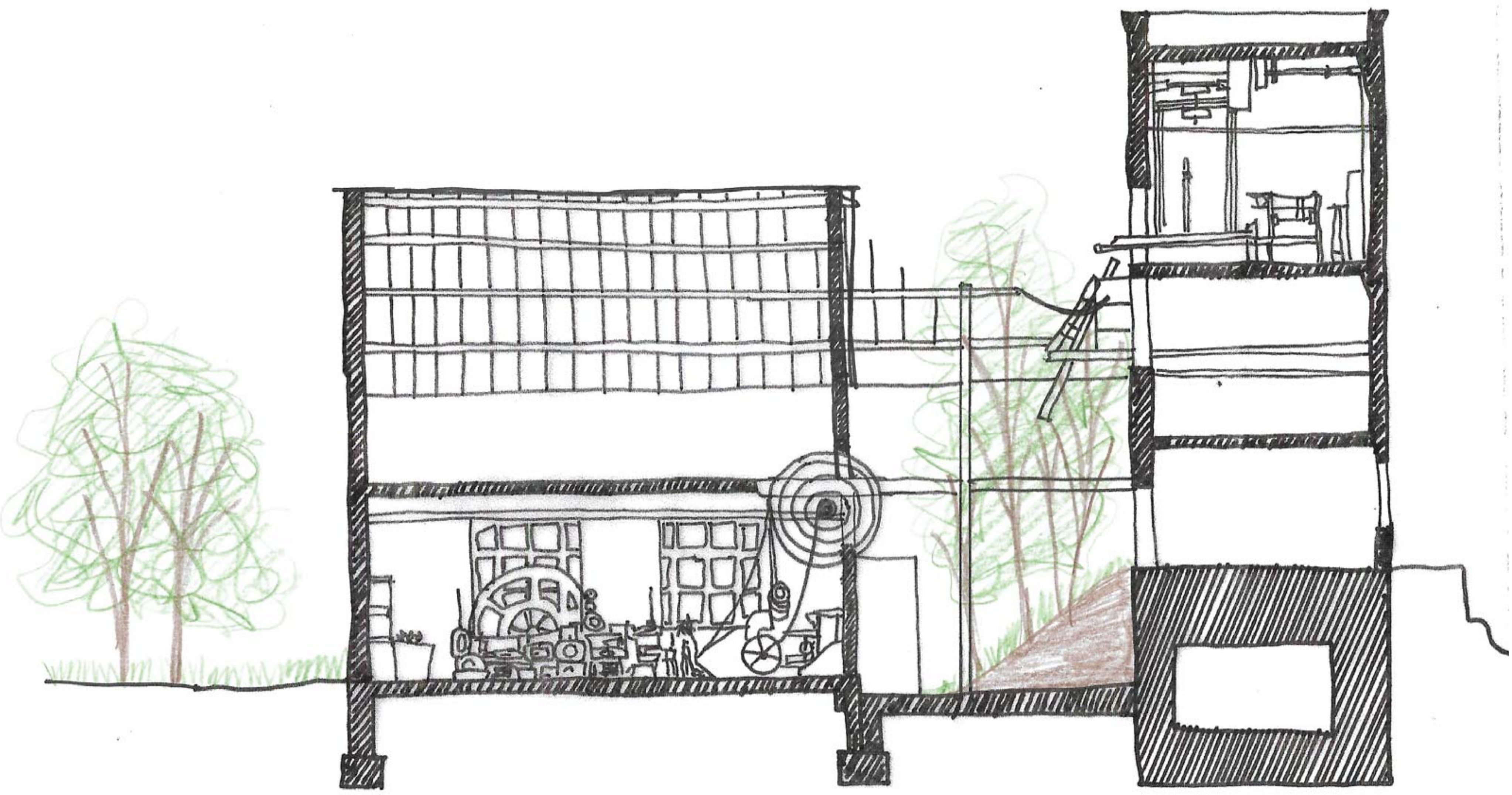
-Remove center of roof to encourage phototropism
-Examples of this condition already present at the kiln

PRODUCTION BUILDING



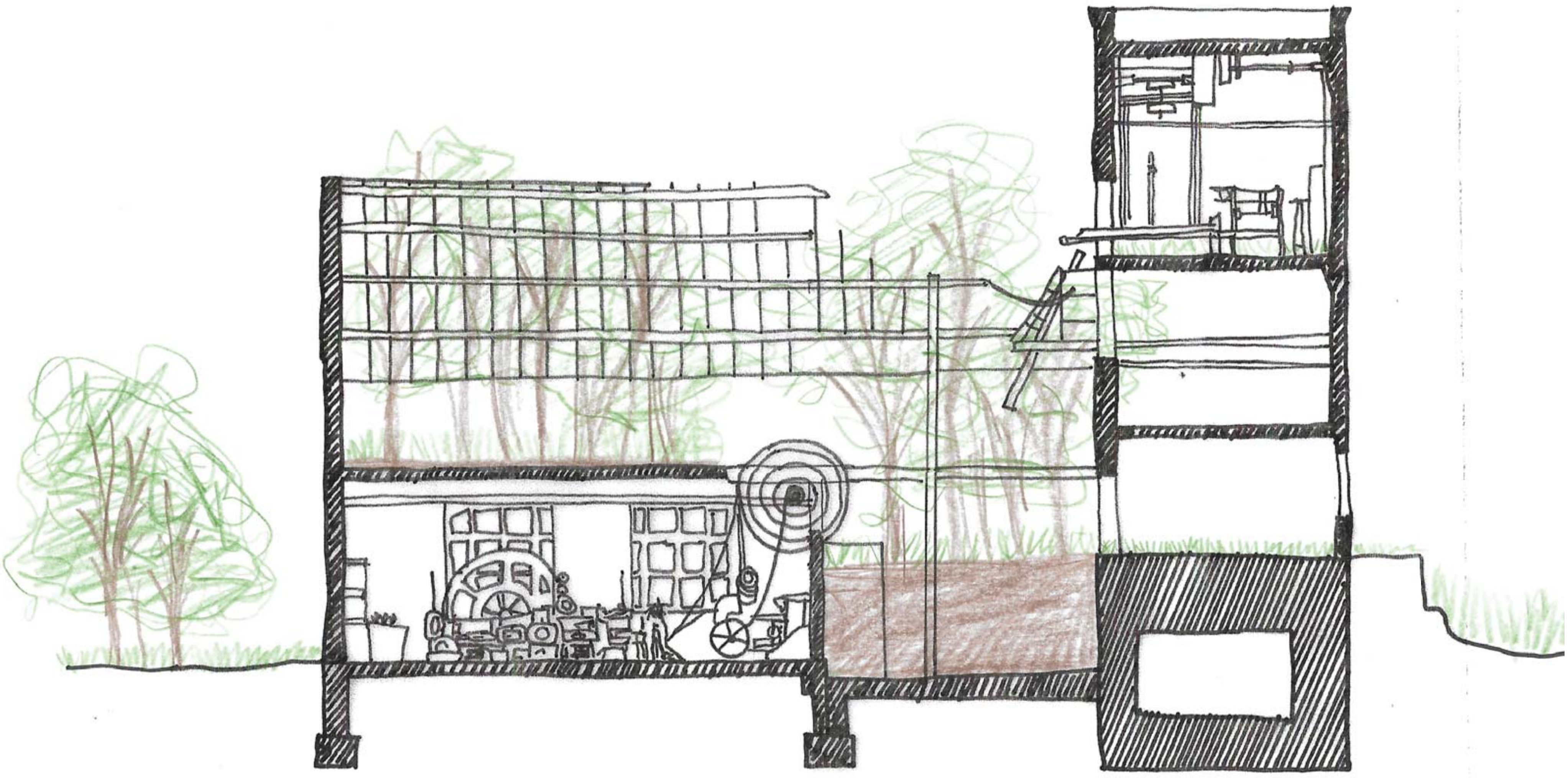
Existing Conditions

-Roof has collapsed allowing growth inside the building
-Almost no vegetation inside the clay tower
-Heavy exterior vegetation
-Machine room below has no plant growth because it is protected by the floor above



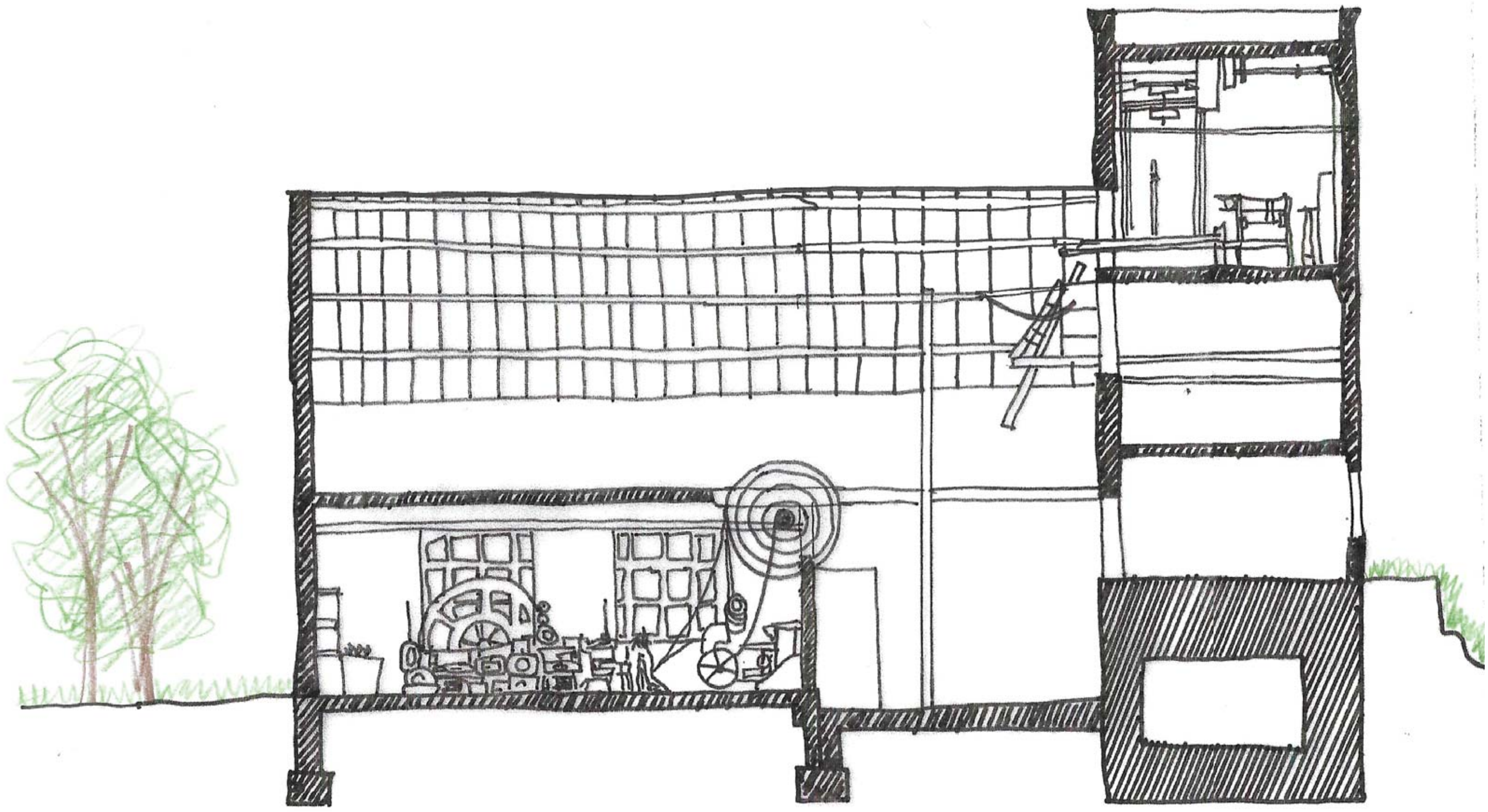
Partially Controlled Nature

-Restore roof in some areas but not everywhere
-Create exterior atrium between machine room and clay tower
-Maintain access to underground storage/drying room
-Do not allow growth inside the claytower



Partially Controlled Nature

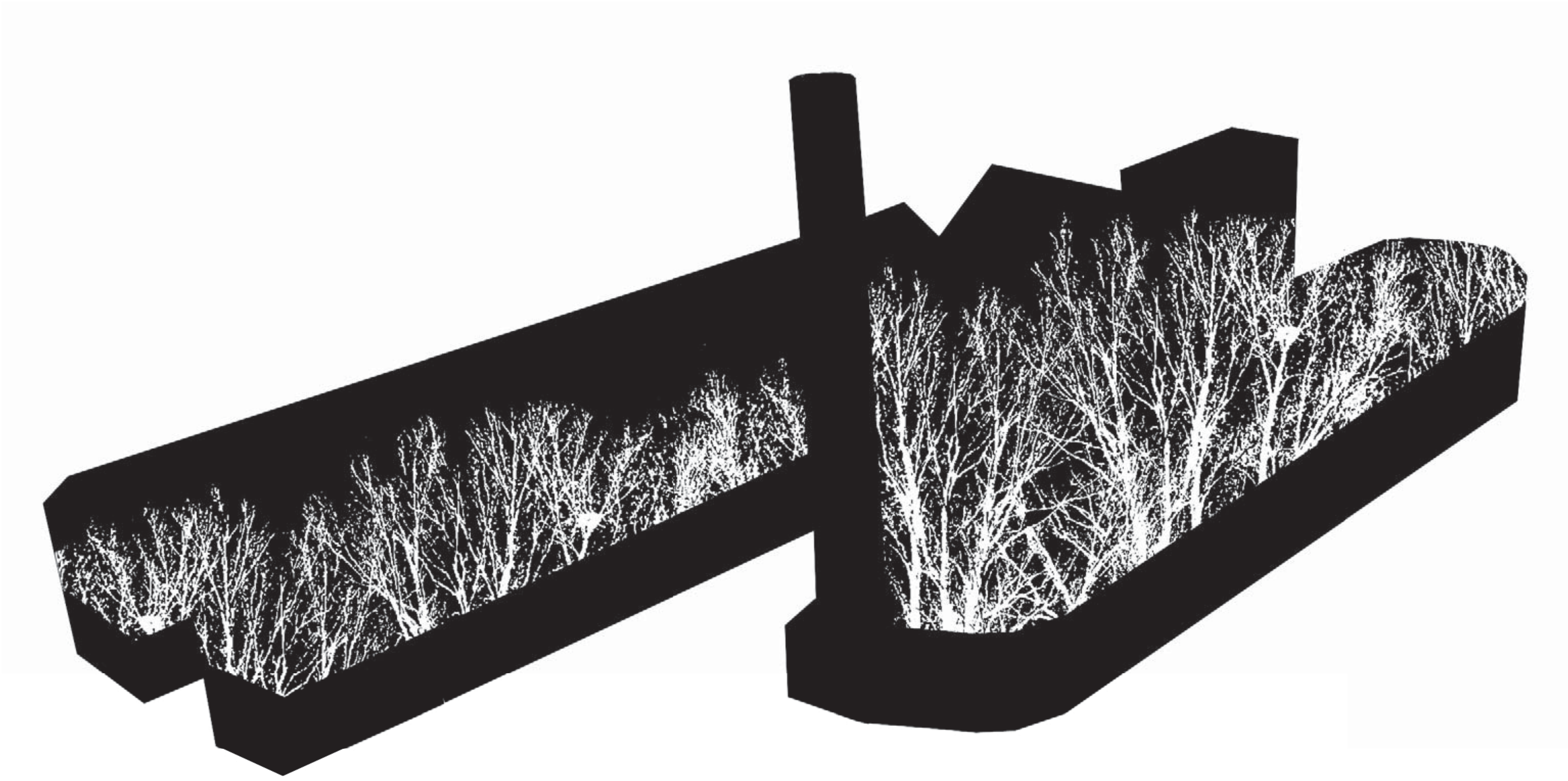
-Use the space between the machine room and clay tower as garden accessible from clay tower
-Remove rest of roof to allow plants to grow above machine room
-Visual connection to nature from machine room through openings near wheels
-In Clay tower on ground floor allow low plant growth to lead you into heavily vegetated area



Completely Controlled Nature

-Restore all roofs
-Restrict any growth on interior
-Remove existing growth to regain usable space

CULTURIZING NATURE



How can the interaction between nature and structure create an interesting and dynamic space?

Can a greenification strategy be implemented to enhance the existing spatial qualities of the factory and provide social spaces for the residents of Mesen?

"Summon plants instead of people as the dominant agent to manage the building's space and sustain continuous activities there."

-Atelier Bow-Wow, *"Behaviorology"*

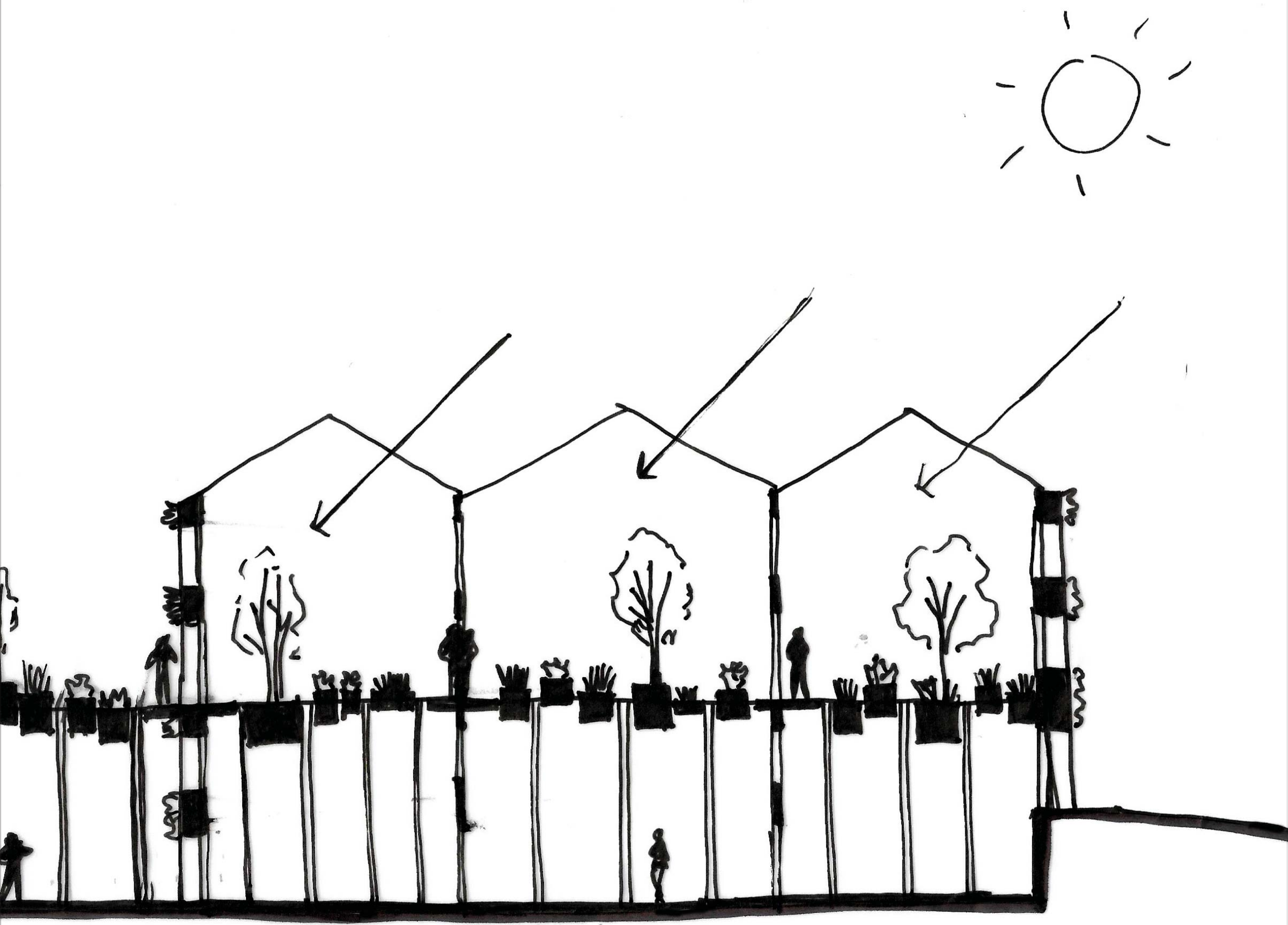
Culturizing Nature: Controlling the conditions of natural growth in and around the buildings to create new spatial experiences.

Connecting the buildings on the site through the addition of an elevated green plaza controls the overgrown vegetation that is taking over while enhancing and making accessible the spatial experiences of the nature.

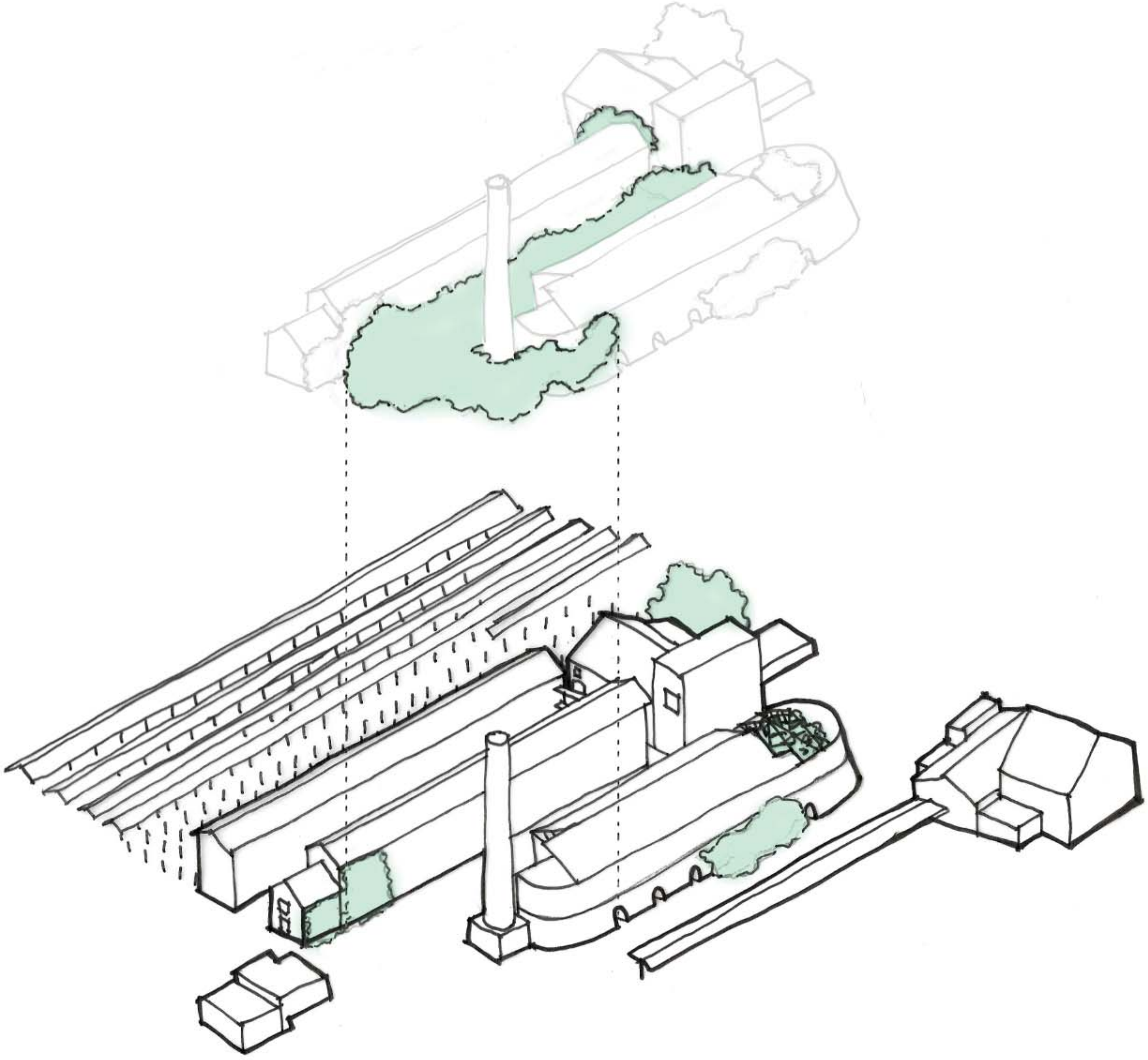
This upgrades the buildings to the status of a public space. The interaction between humans, nature and structure generates active participation which fosters social activities and forms connections, both physical and emotional, to the site and to each other. The new public space is perfect as a meeting place, but it can also be the backdrop for all kinds of social and cultural activities in Mesen.

Greenification: In this case an all-natural greenification strategy is used. I define all-natural greenification as recognizing and exploiting the biological takeover happening on the site. This creates a strong connection to the unique spatio-cultural context of the factory.

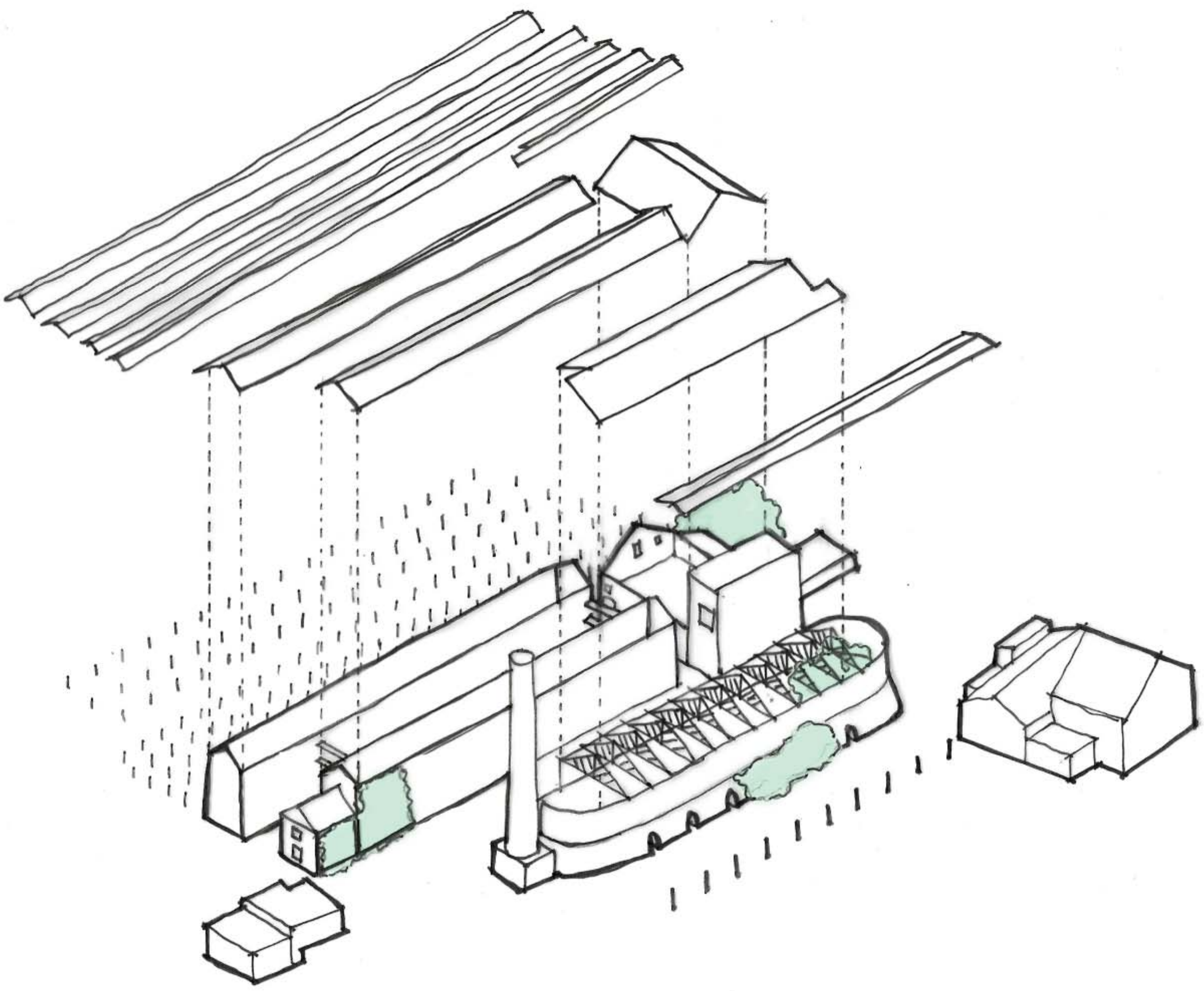
Implementing this natural greenification strategy on the elevated plaza creates a strong impact on the architecture and the perception of the heritage, giving the factory a new monumentality.



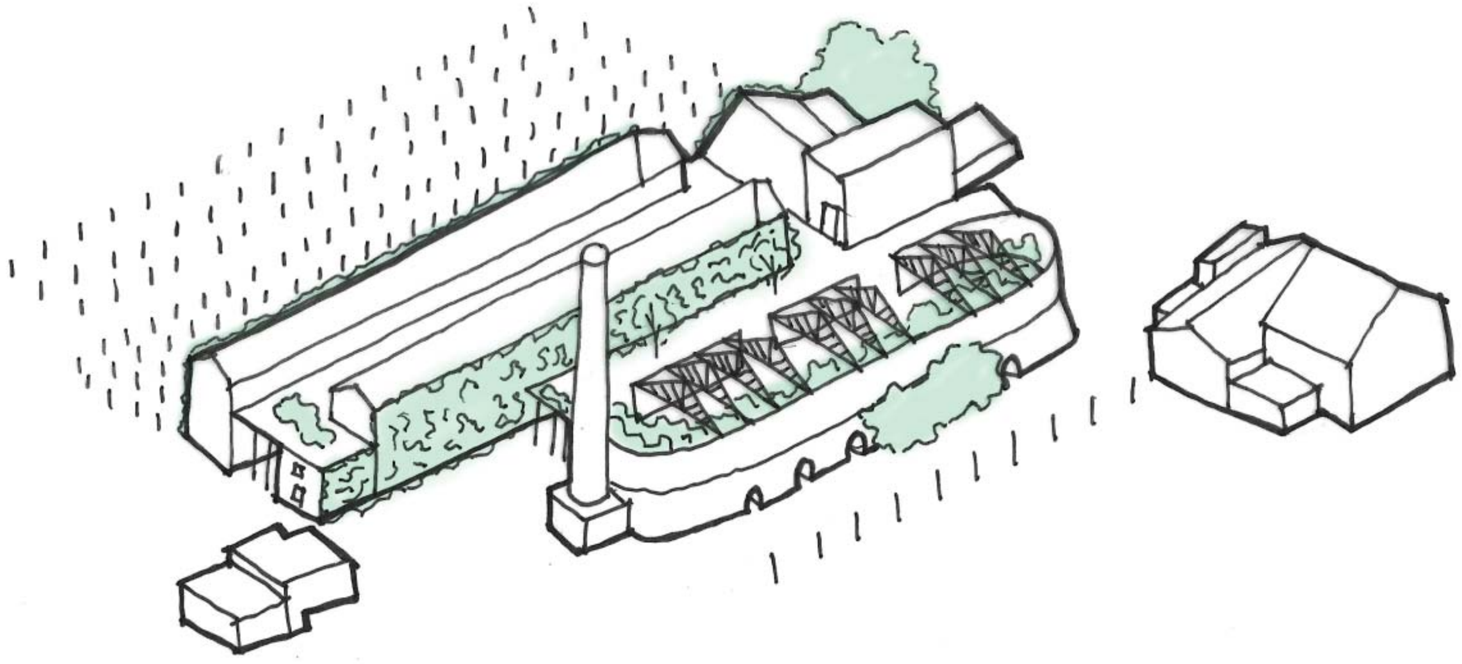
CONCEPT DIAGRAMS



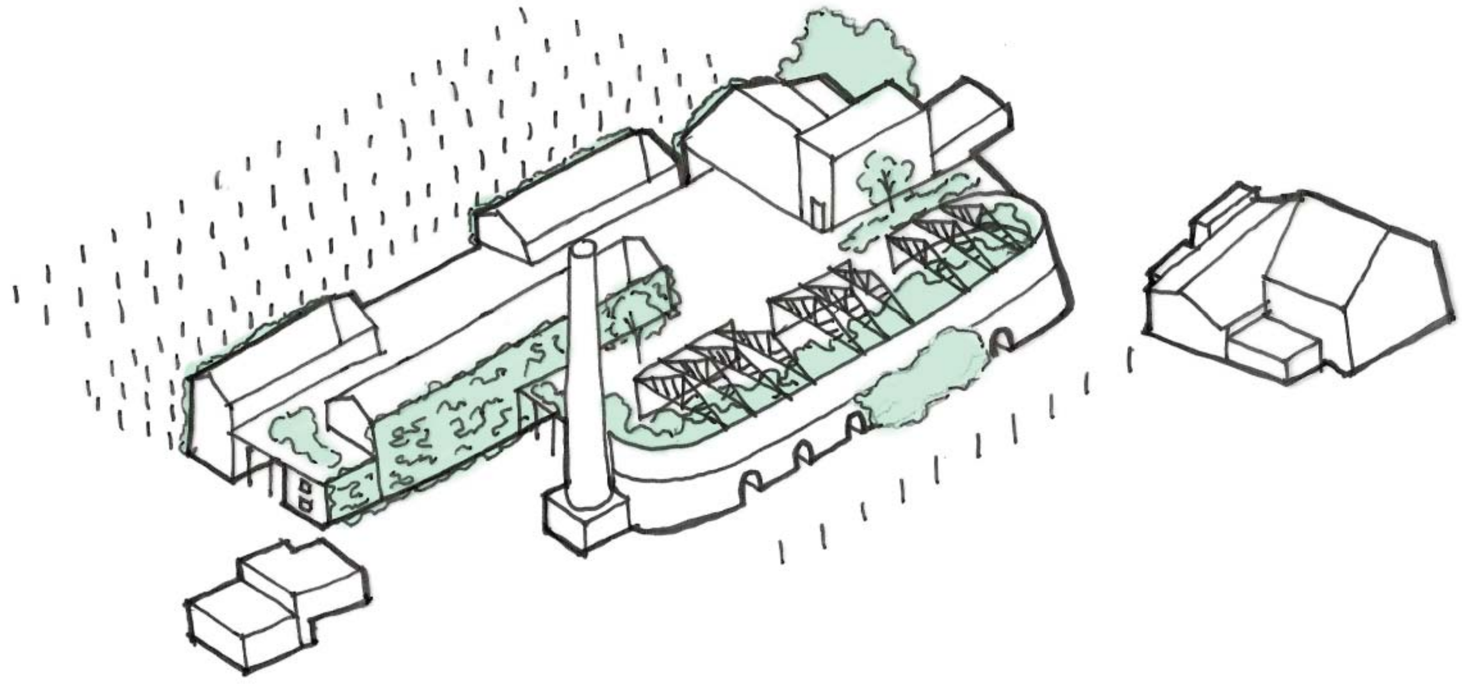
1. Remove all overgrown brush which is suffocating the buildings and restricting access to the site.



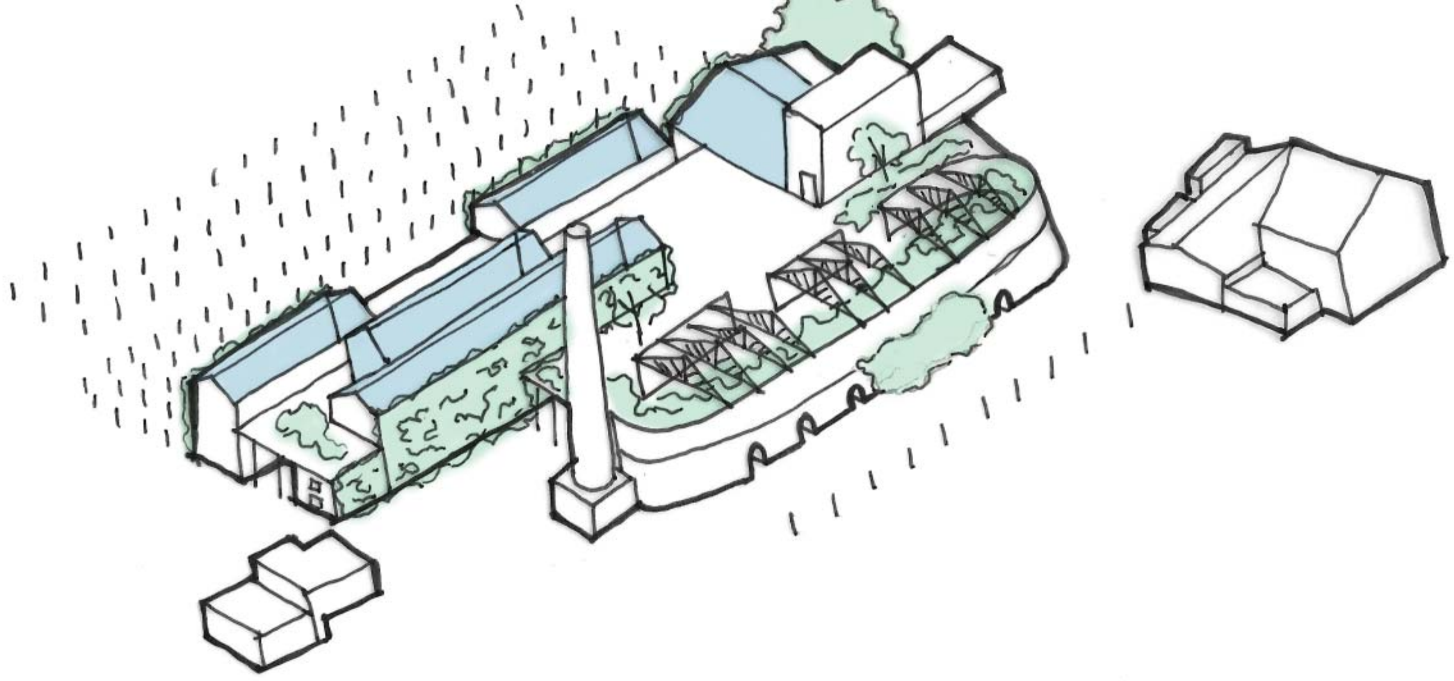
2. Remove all roofs that contain asbestos.



3. Add green plaza between the kiln, drying sheds and production building. Place climbing plants on exterior walls of drying sheds to help insulate the building and reduce the noise from the slaughterhouse.



4. Selectively remove parts of drying sheds according to the sunpath to allow the maximum amount of natural sunlight in the buildings. This also creates a more dynamic plaza with various sized spaces.

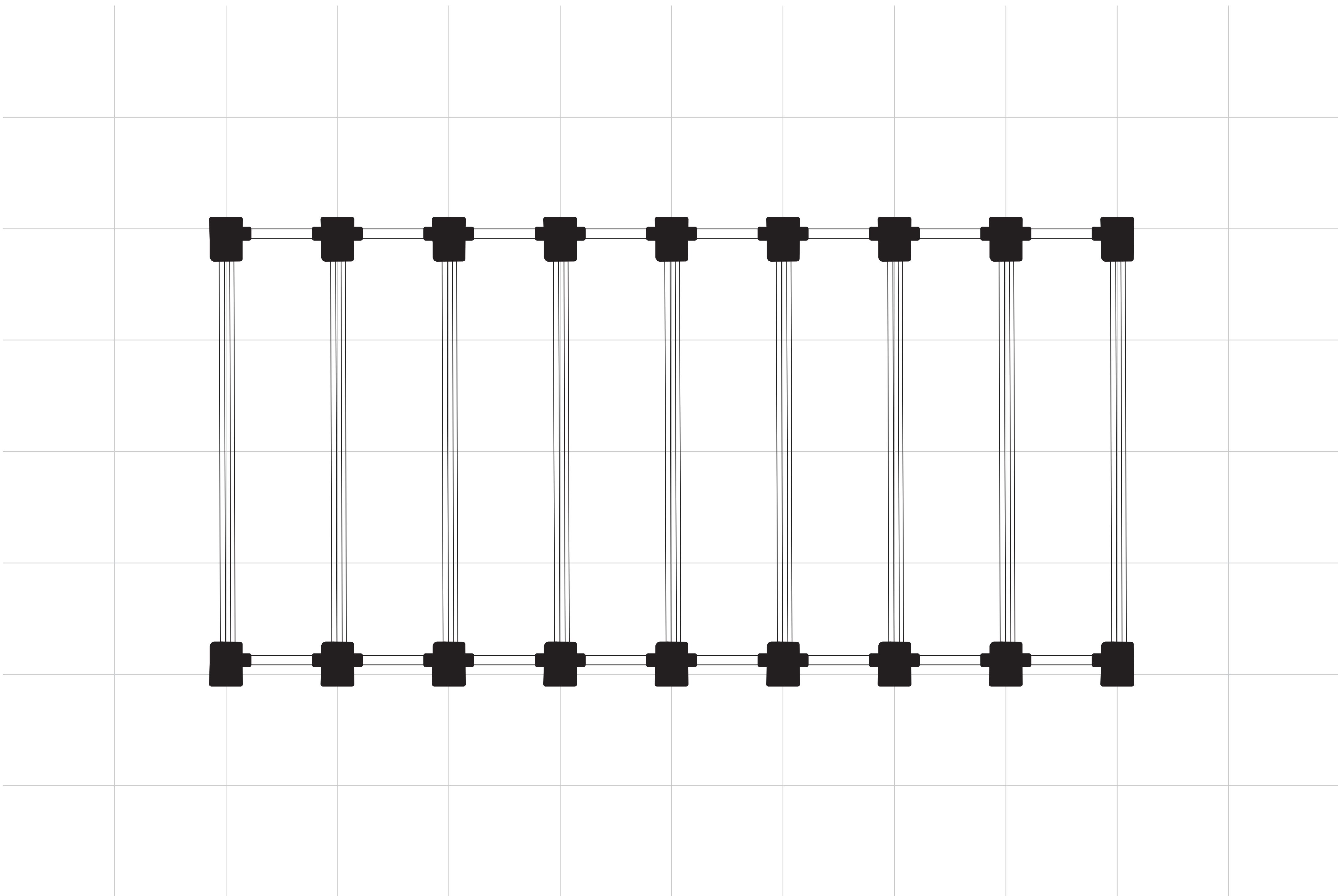


5. Enclose the space in between the existing drying sheds with a glass structure to gain more enclosed space. Add glass roofs to the drying sheds and production building.

THE GRID

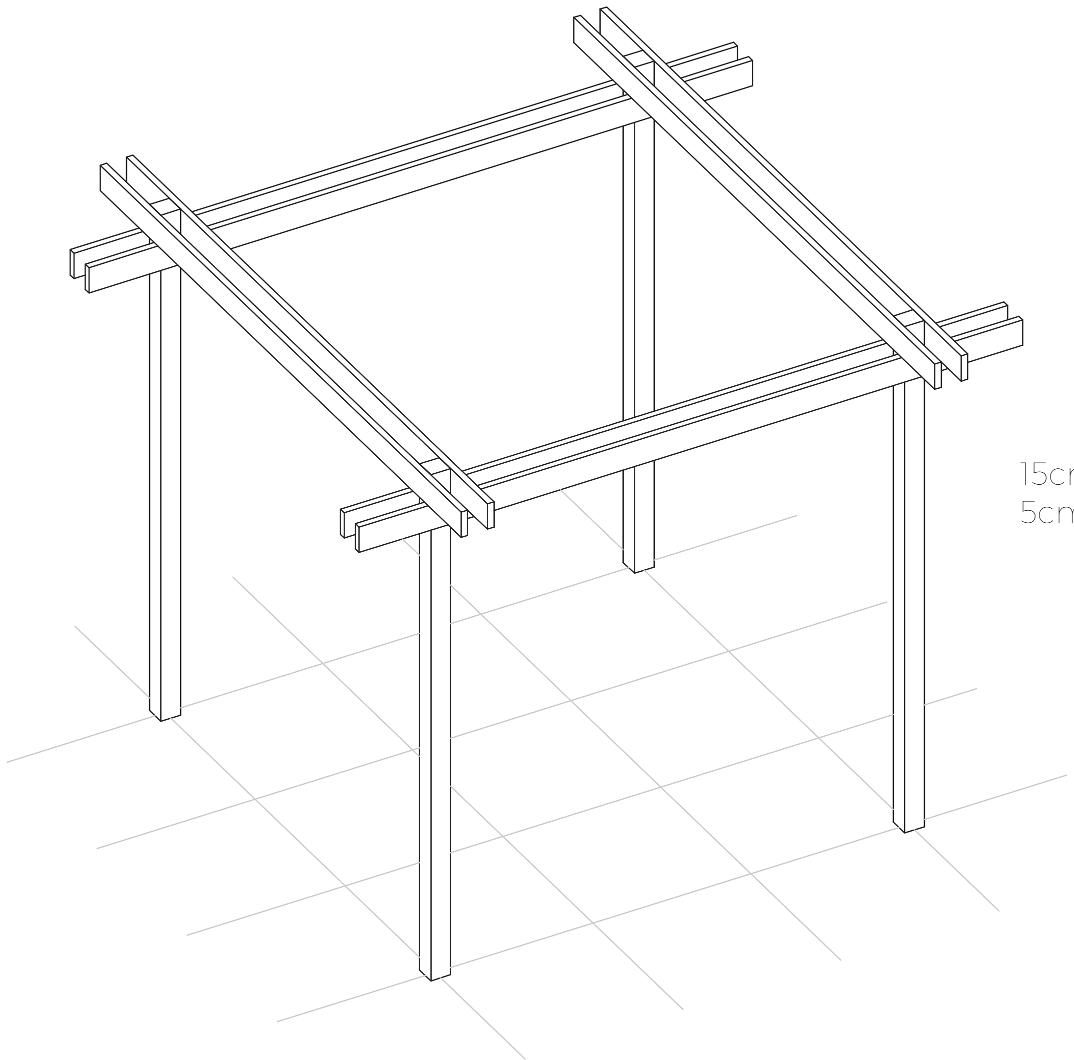
The square grid of 120cm X 120cm is derived from the drying shed structure. Each brick column is spaced 120cm apart. This grid is applied to the whole site to inform the design of the elevated plaza.

120cm X 120cm



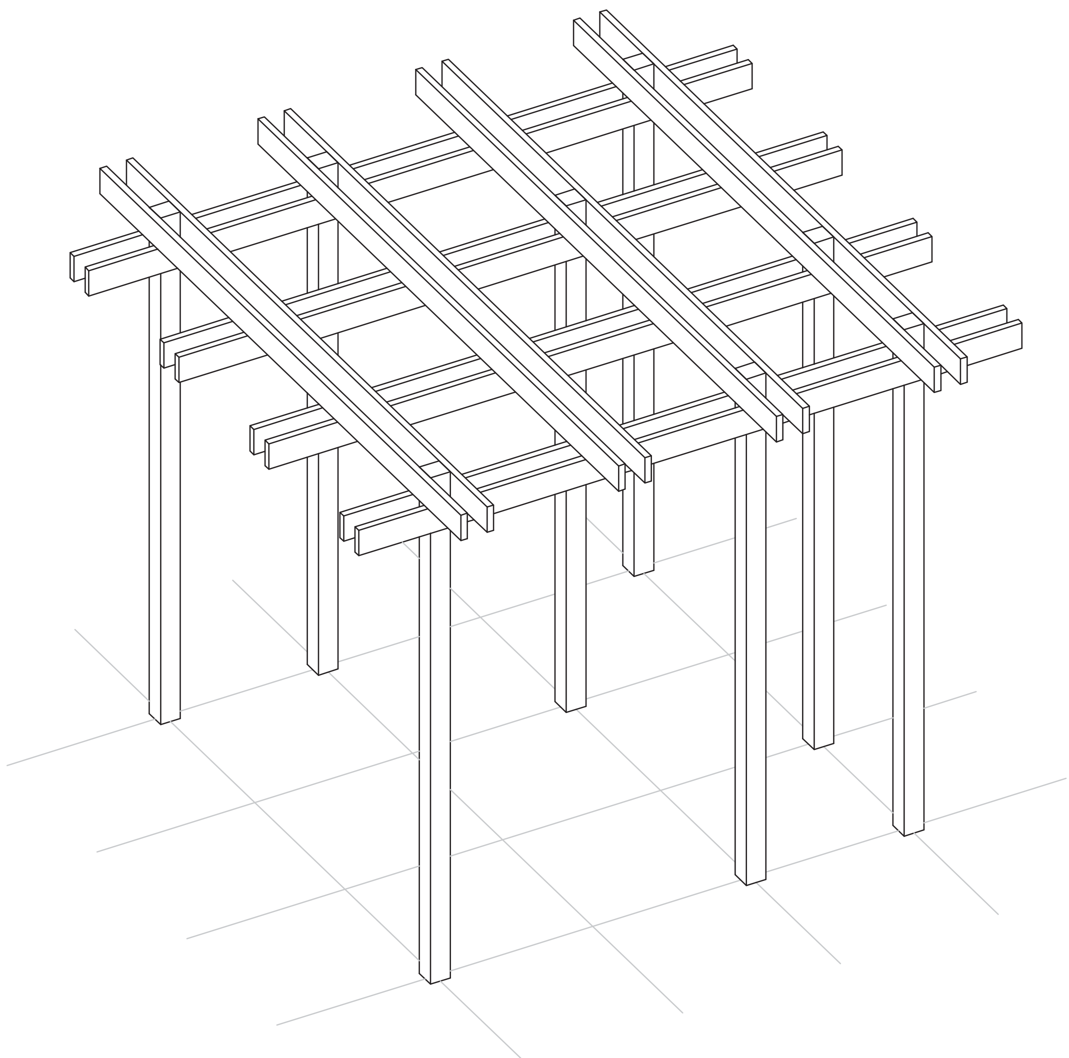
partial plan
scale 1:200

MODULAR STRUCTURE

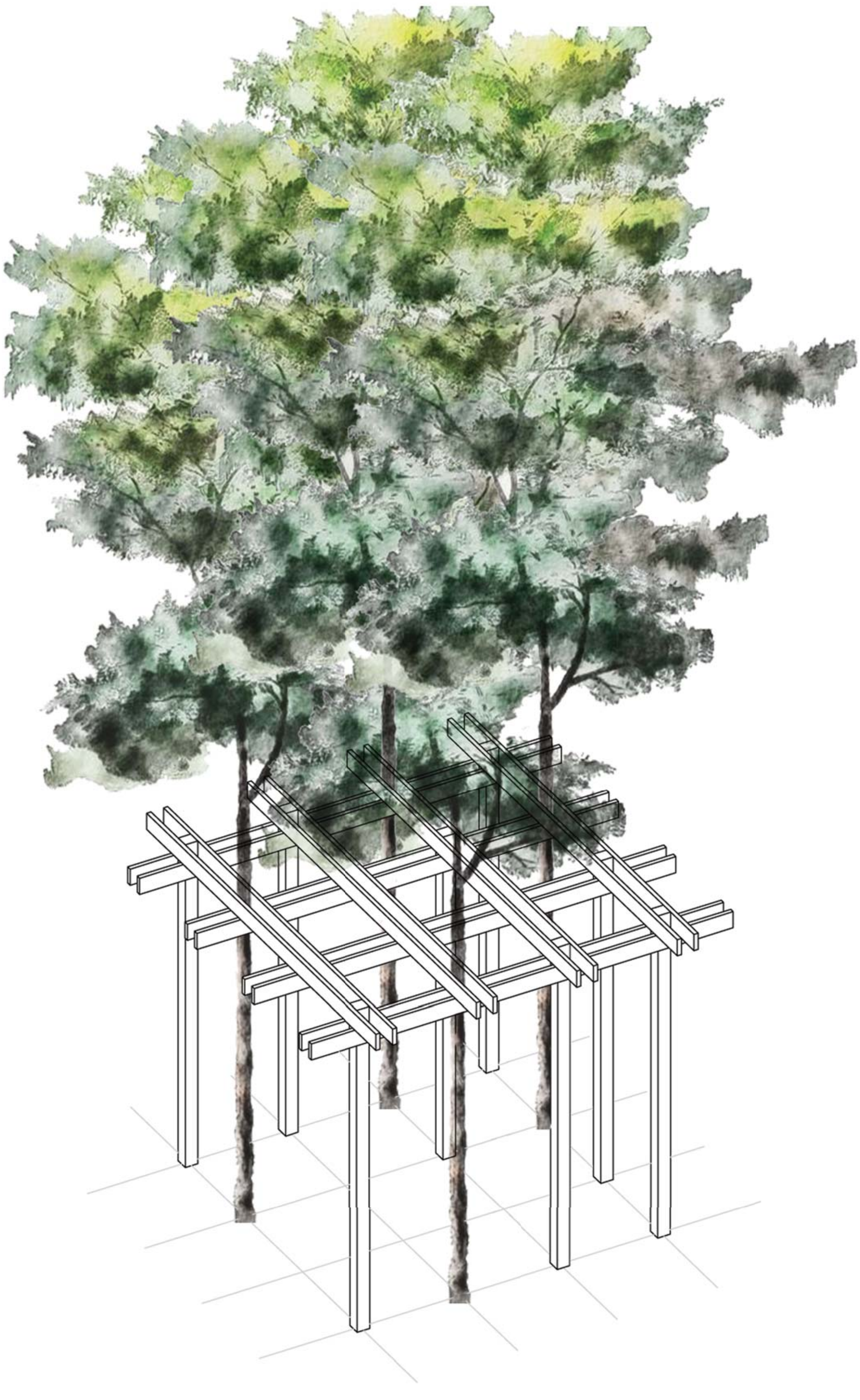


15cm X 15cm Columns
5cm X 20cm Double Beams

The base structure of the plaza is placed every third module on the 120cm grid to form 360cm square spaces. This stabilizes the structure of the plaza and provides the framework for variations along the grid..



Secondary columns create various spaces and circulaton paths underneath the plaza and help to break up the regularity of the grid.



A structural forest is created by adding trees as columns to humanize the grid and relate to the crucial image. The trees grow through the beams, which can be attached to the trunks of the trees, integrating nature and structure.

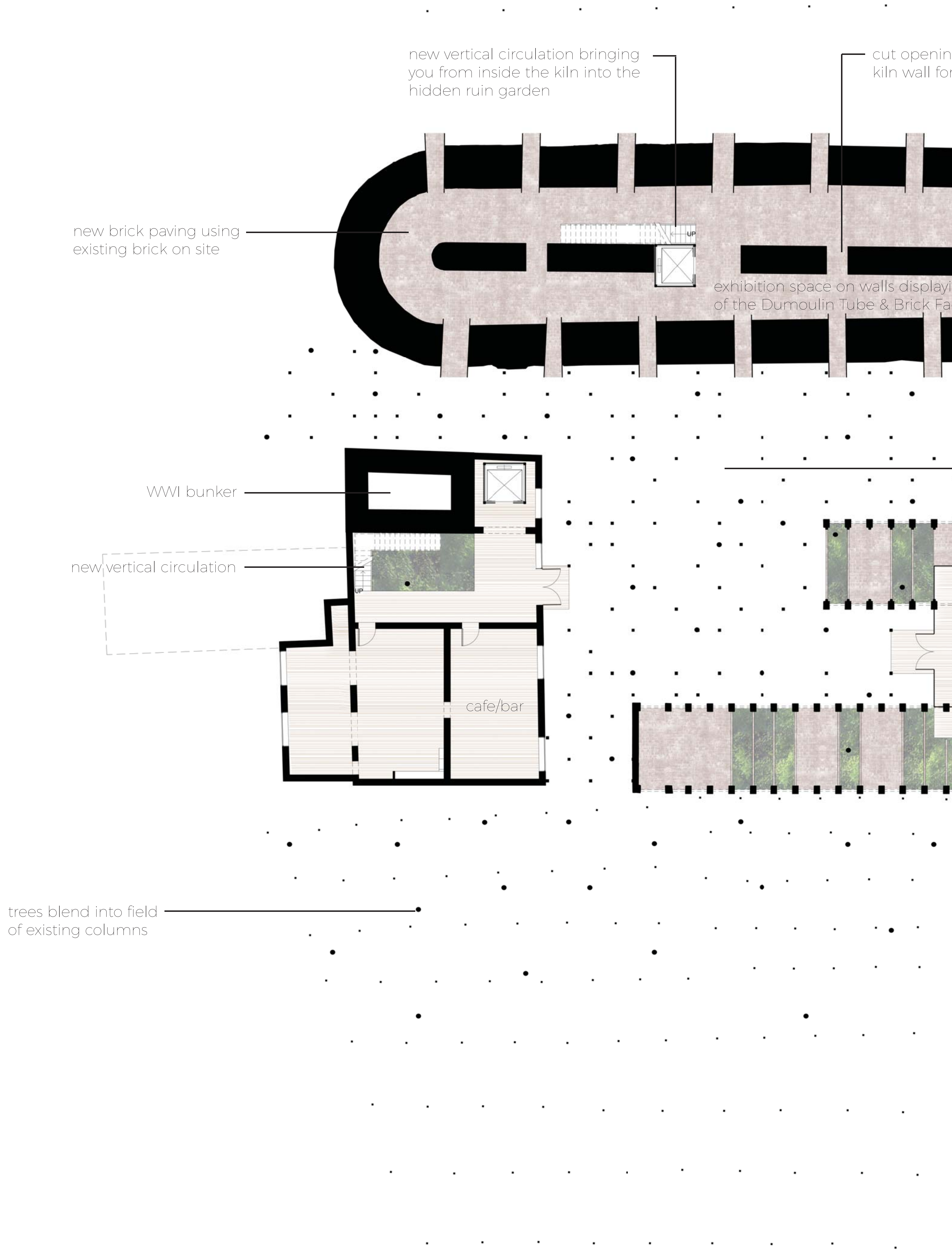
Intermediate floor structure and finish flooring are added to imitate the wood pallets that are existing on the site. There are different depths of planters to create green spaces on the plaza. The planters also create a dynamic space underneath the plaza.

The trees grow through and create two different interactions with nature above and below the plaza. Below is a field of natural and structural columns to wander throughout. The absence of columns creates spaces for pause and reflection. Above it creates an experience of being in the tree canopy.

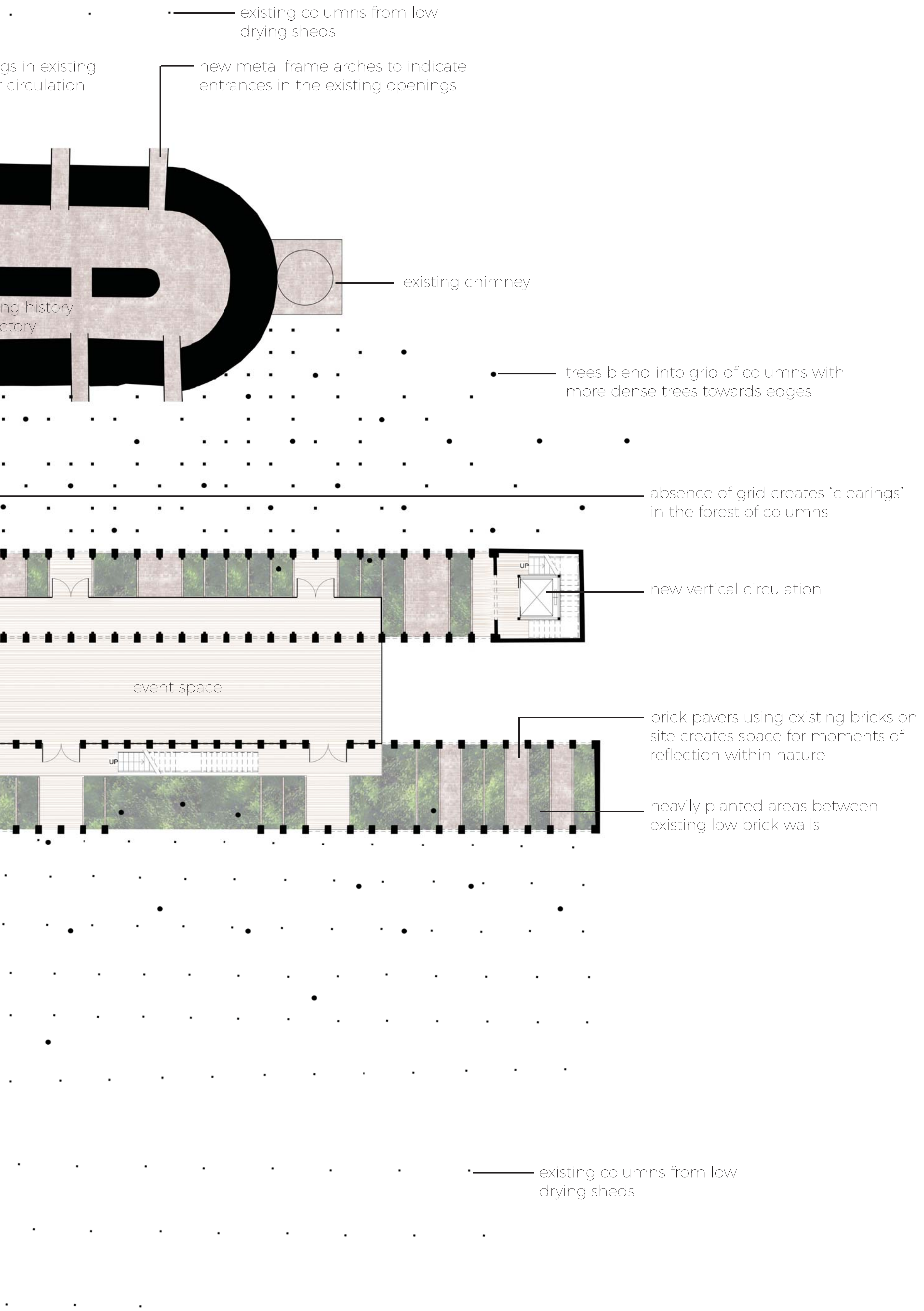
ELEVATED LAWN

in between the drying sheds will be an elevated lawn for recreational activities. This is inspired by a picture taken between the drying sheds. There is a low drying shed with moss/algae growing on it between the two brick drying shed buildings. At first glance, I thought this was at ground level; that it was just a grass area that had grown over something existing on the site to create the form. I placed an elevated lawn in the same location in plan as this existing low drying shed to reference what was there previously.

PLANS

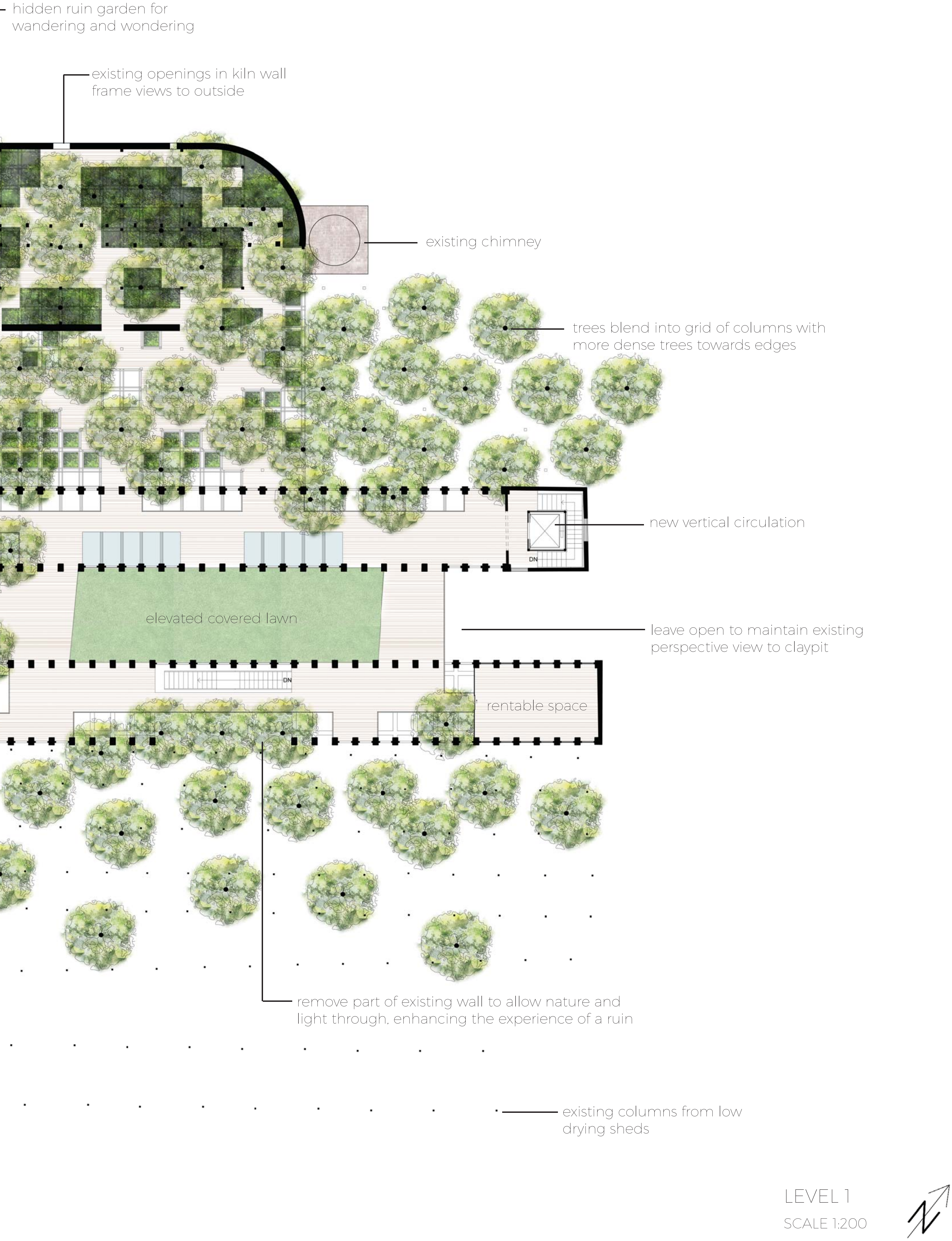


new vertical circulation bringing you from inside the kiln into the hidden ruin garden
cut openin
kiln wall for
new brick paving using existing brick on site
UP
exhibition space on walls displayi
of the Dumoulin Tube & Brick Fa
WWI bunker
new vertical circulation
UP
cafe/bar
trees blend into field of existing columns



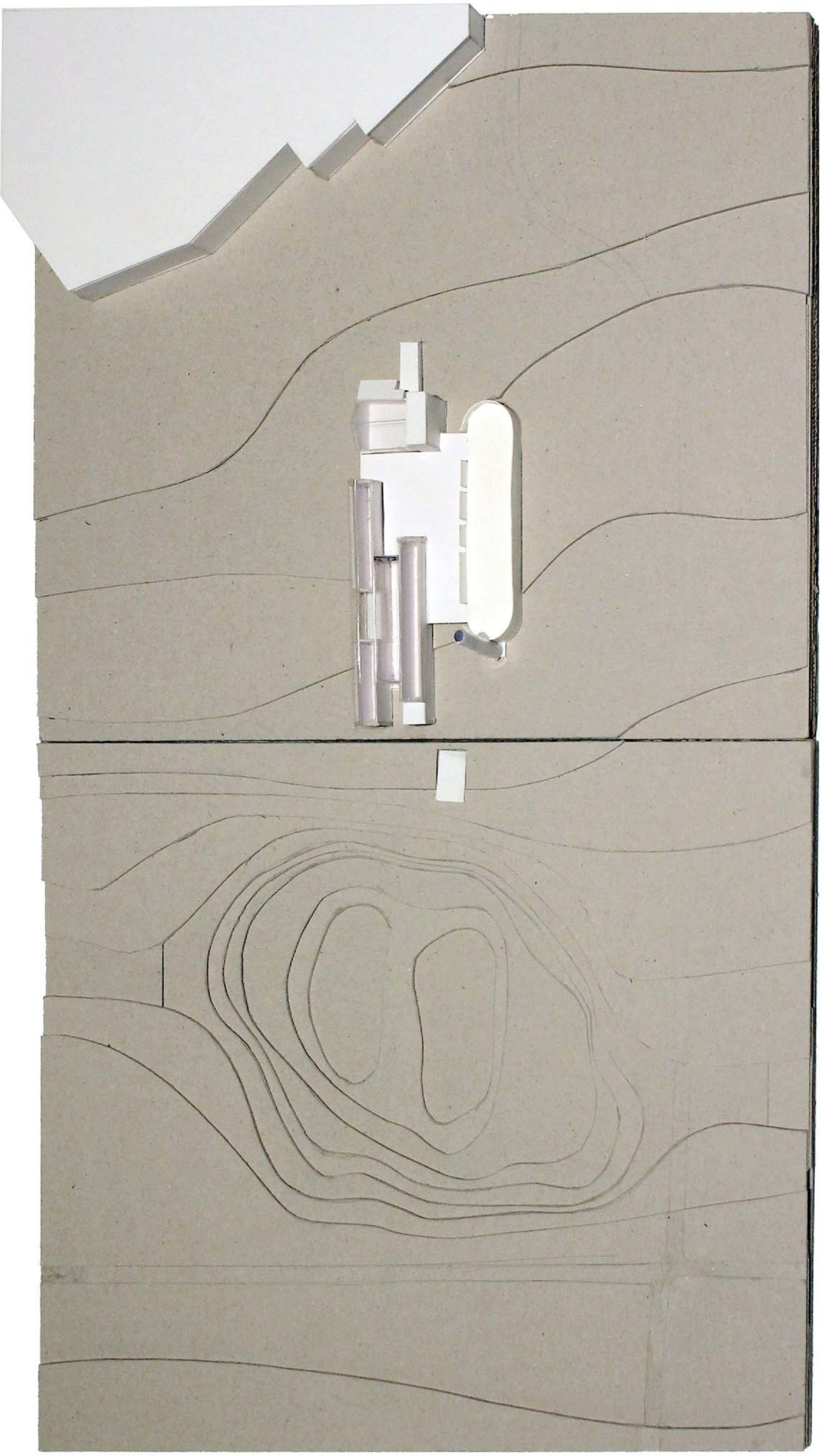
LEVEL 0
SCALE 1:200

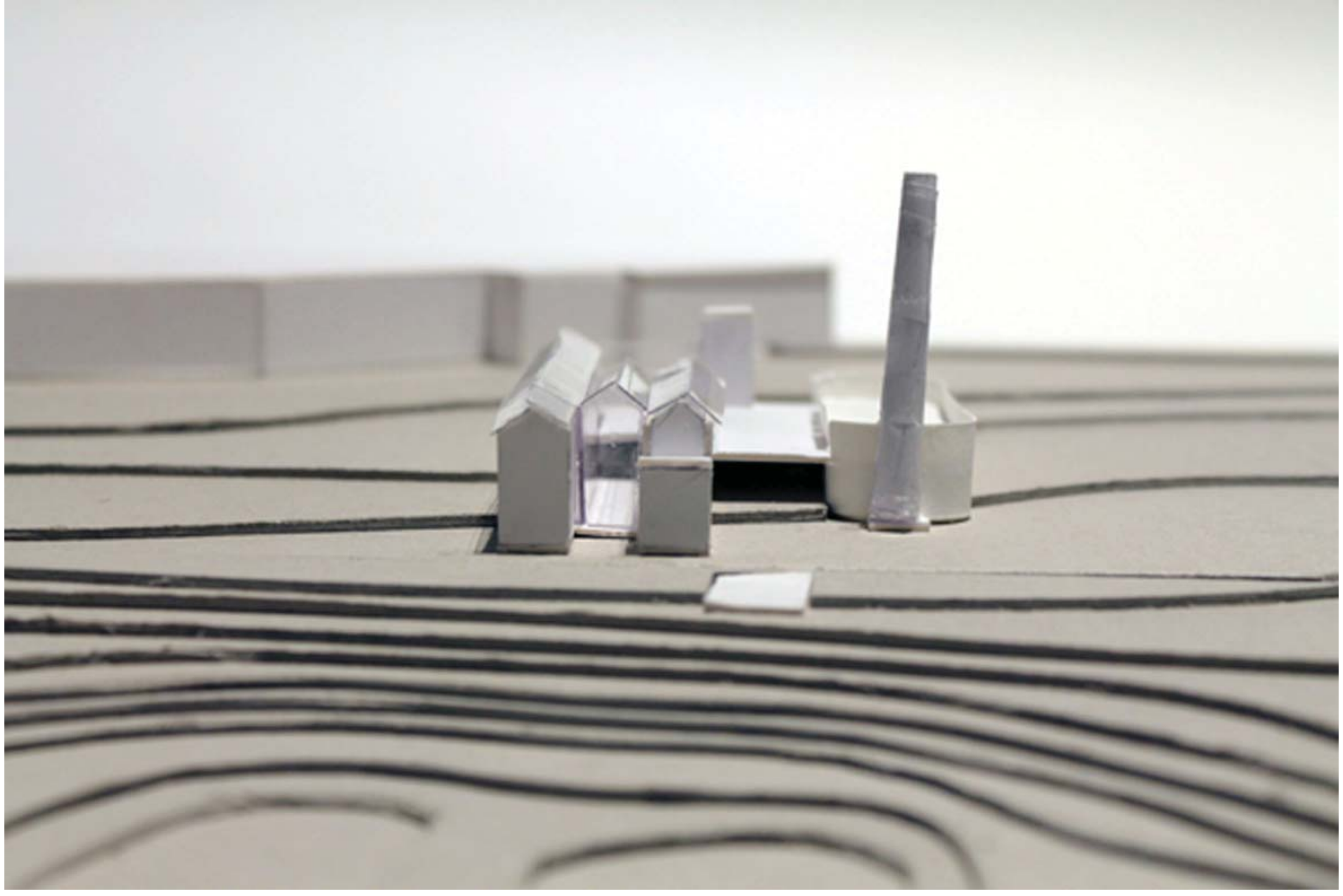

keep existing concrete columns to maintain the atmosphere of a ruin from the crucial image
new vertical circulation bringing you from inside the kiln into the hidden ruin garden
openings in existing kiln wall for circulation
elevated green plaza along 120cm grid
DN
WC
new vertical circulation
leave existing machinery and allow nature to grow into it, enhancing experience of a ruin
rentable space
rentable space
trees blend into field of existing columns

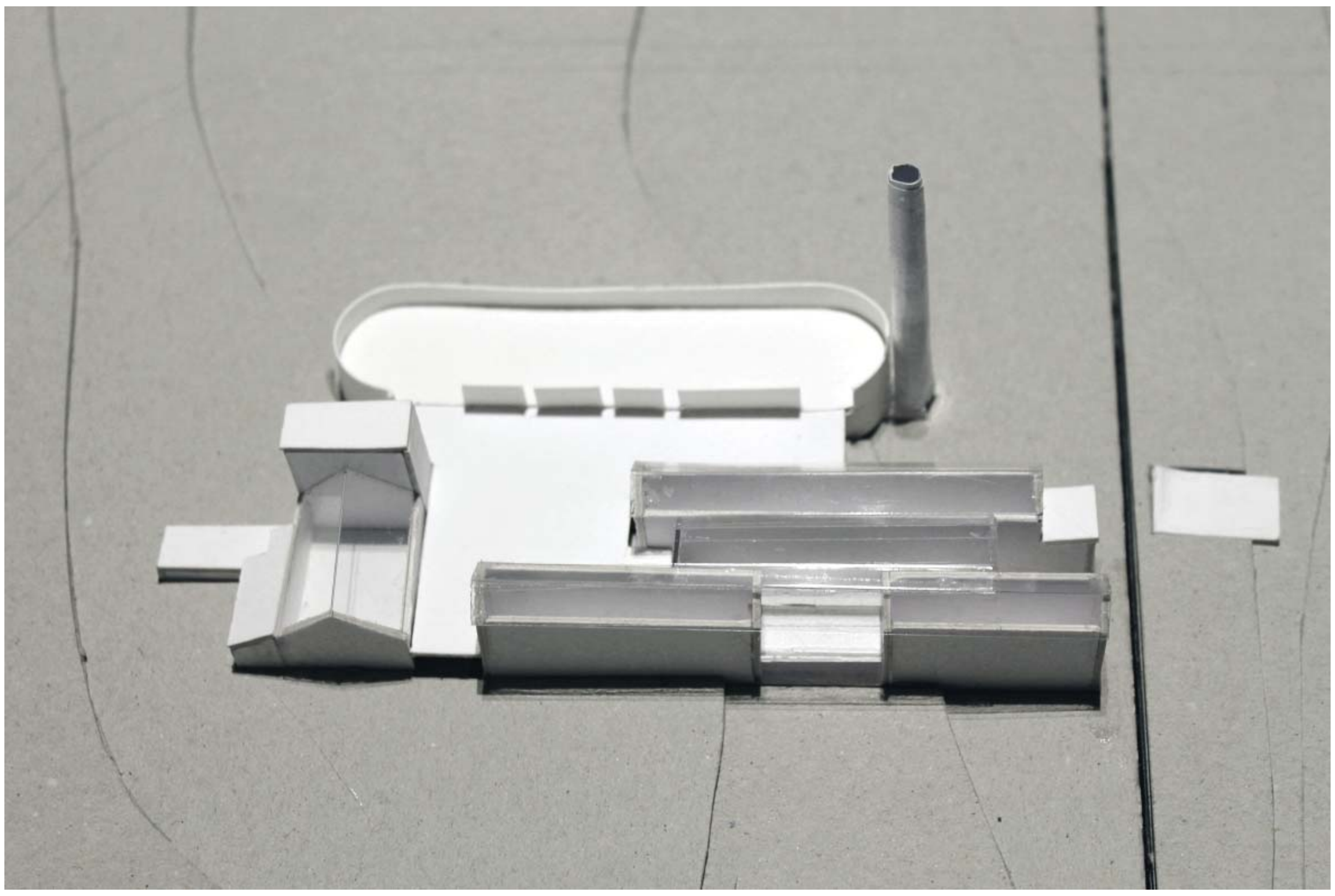

hidden ruin garden for
wandering and wondering
existing openings in kiln wall
frame views to outside
existing chimney
trees blend into grid of columns with
more dense trees towards edges
new vertical circulation
DN
elevated covered lawn
leave open to maintain existing
perspective view to claypit
DN
rentable space
remove part of existing wall to allow nature and
light through, enhancing the experience of a ruin
existing columns from low
drying sheds
LEVEL 1
SCALE 1:200

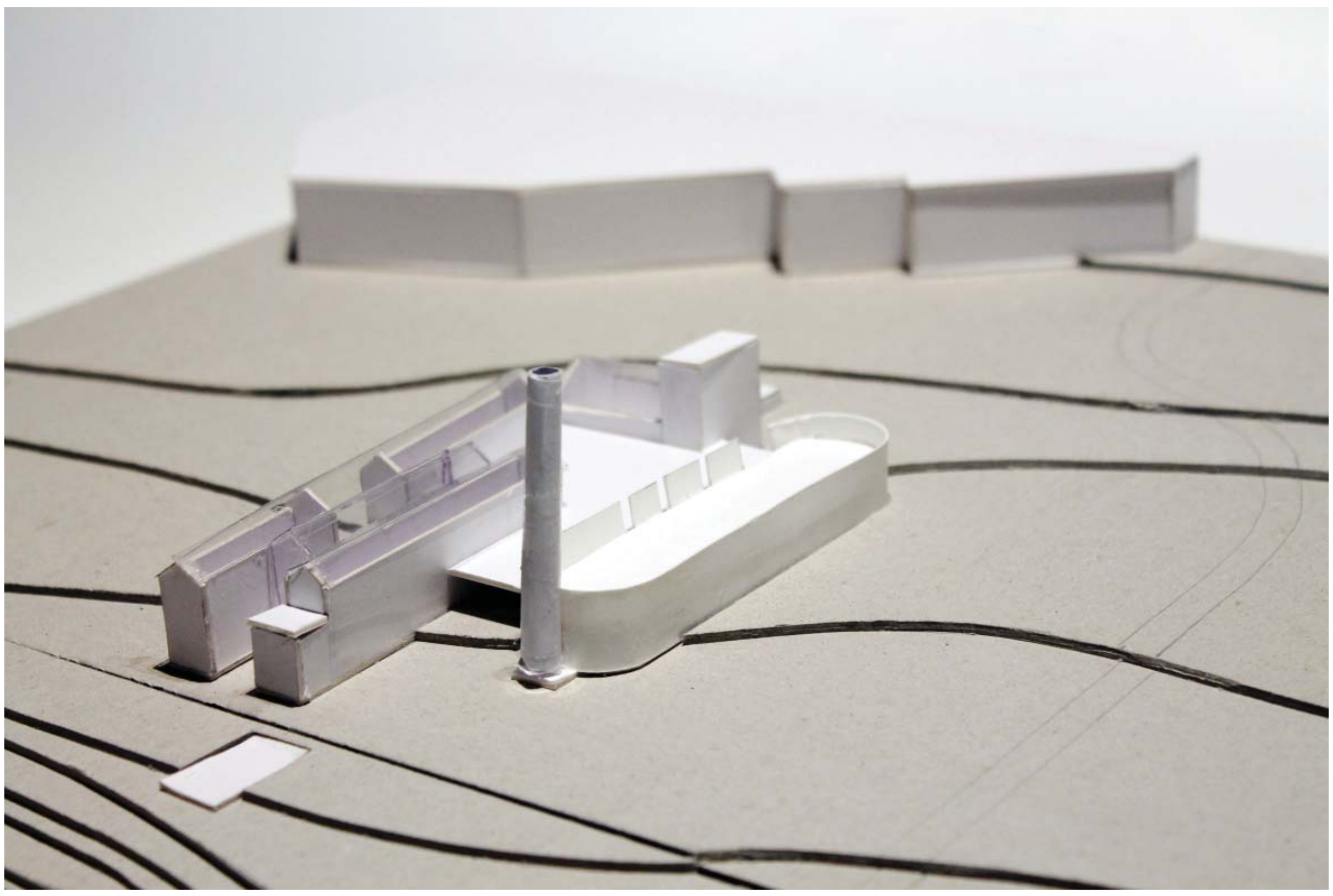
MODEL PHOTOGRAPHS

SITE MODEL
SCALE 1:500

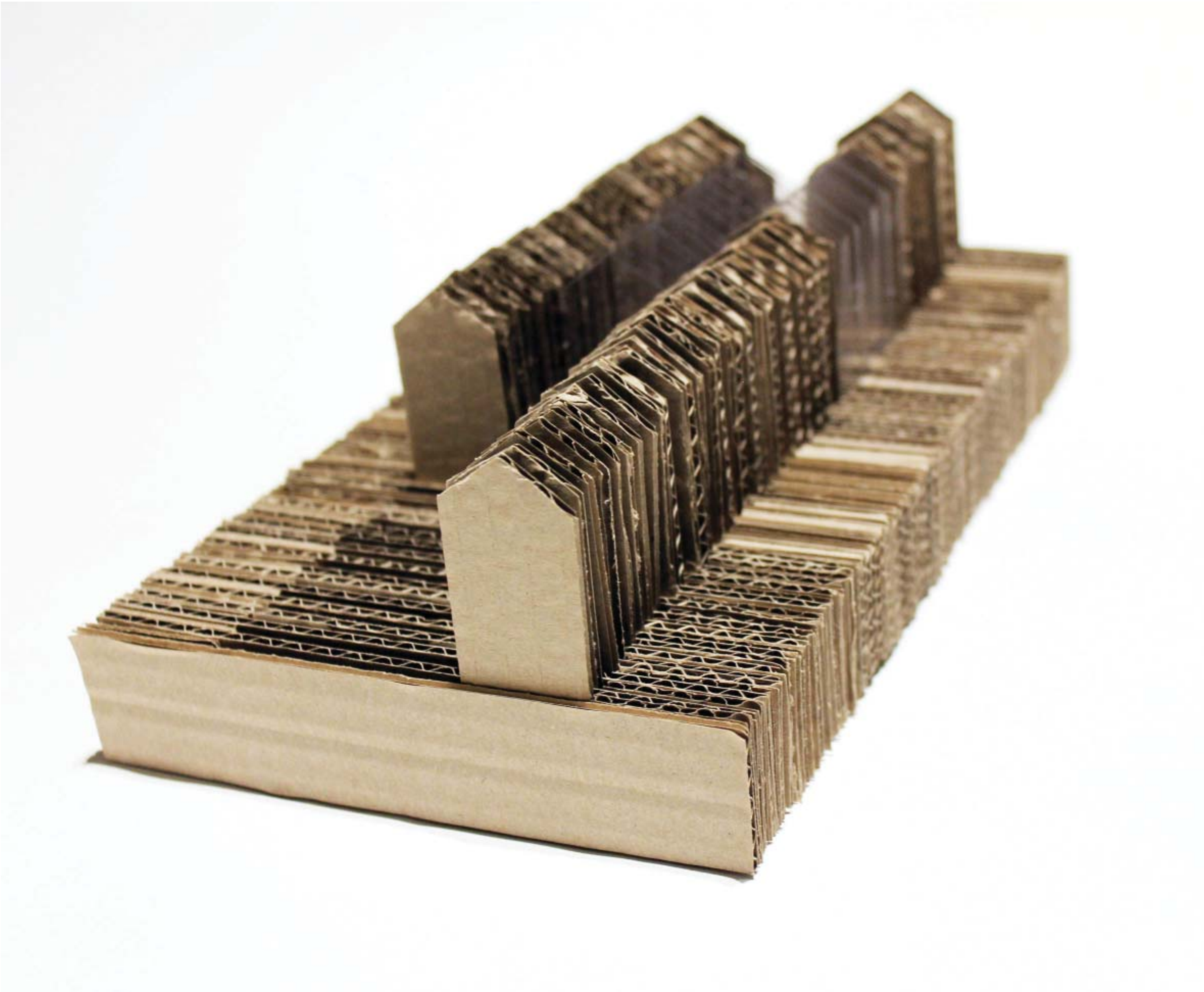


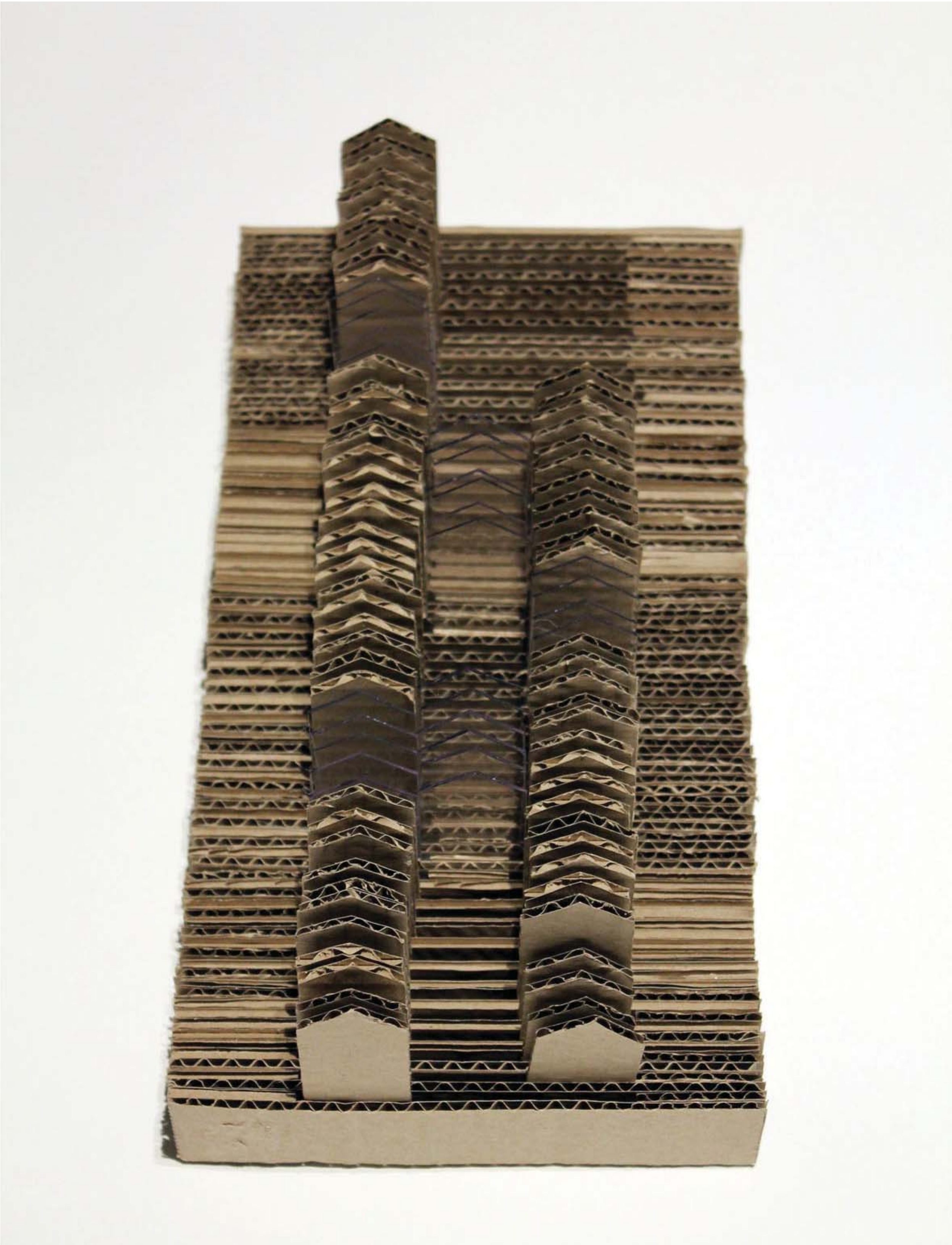






TOMOGRAPHY MODEL: DRYING SHEDS
SCALE 1:200

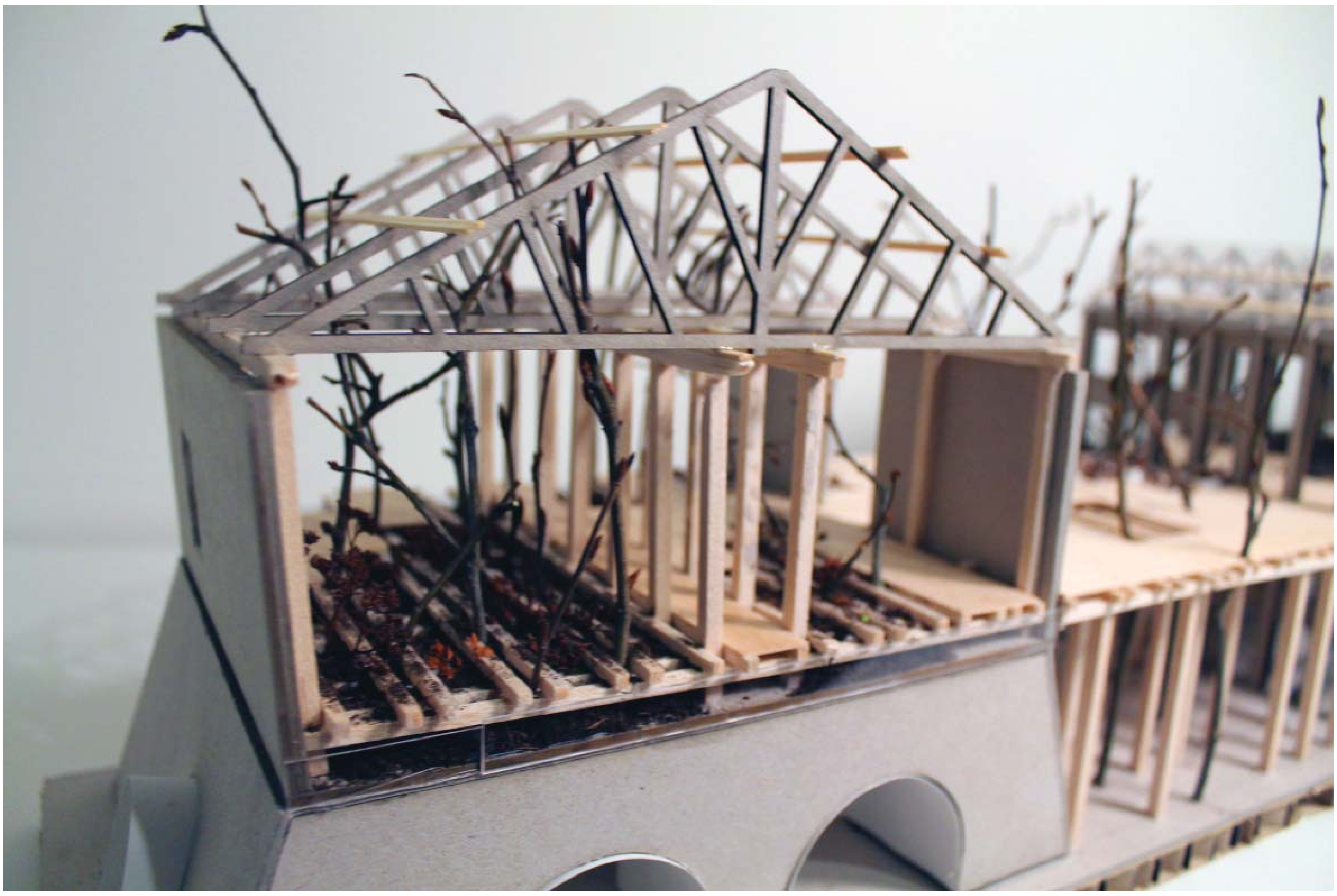


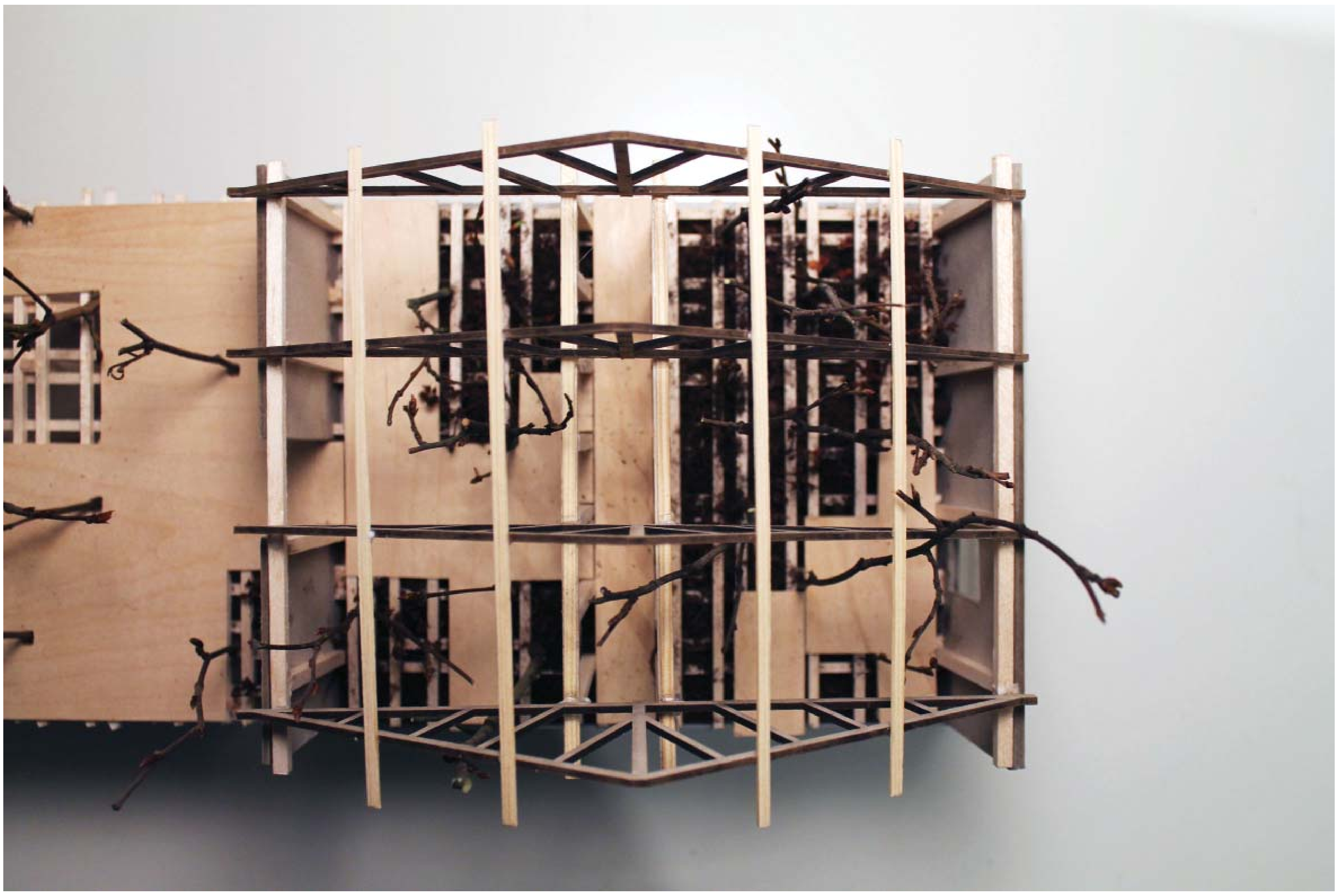


FIRST STUDY MODEL OF PLAZA MODULE

SECTION MODEL
SCALE 1:50

SECTION MODEL - KILN
SCALE 1:50


perspective view

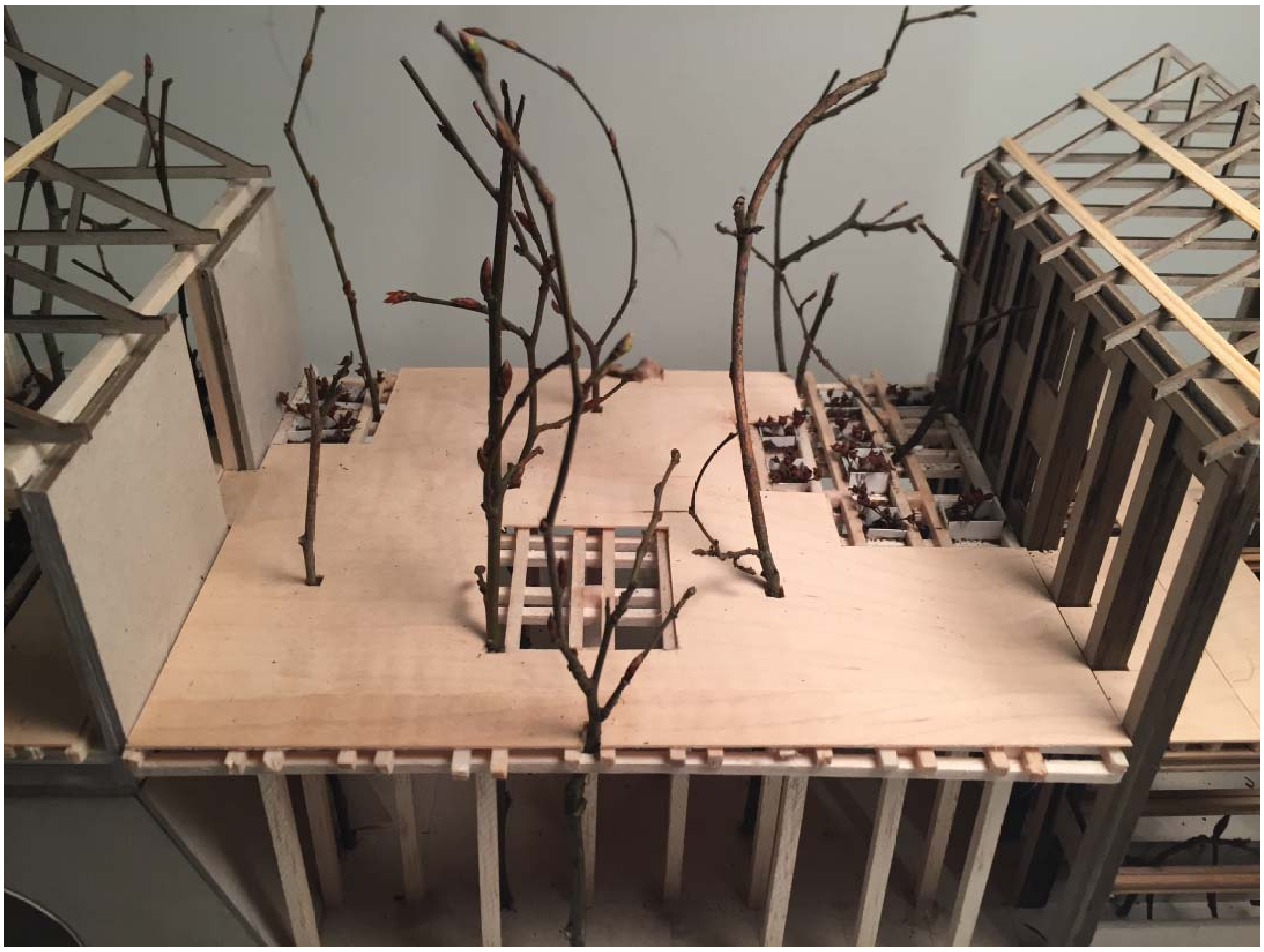

plan view

hidden ruin garden

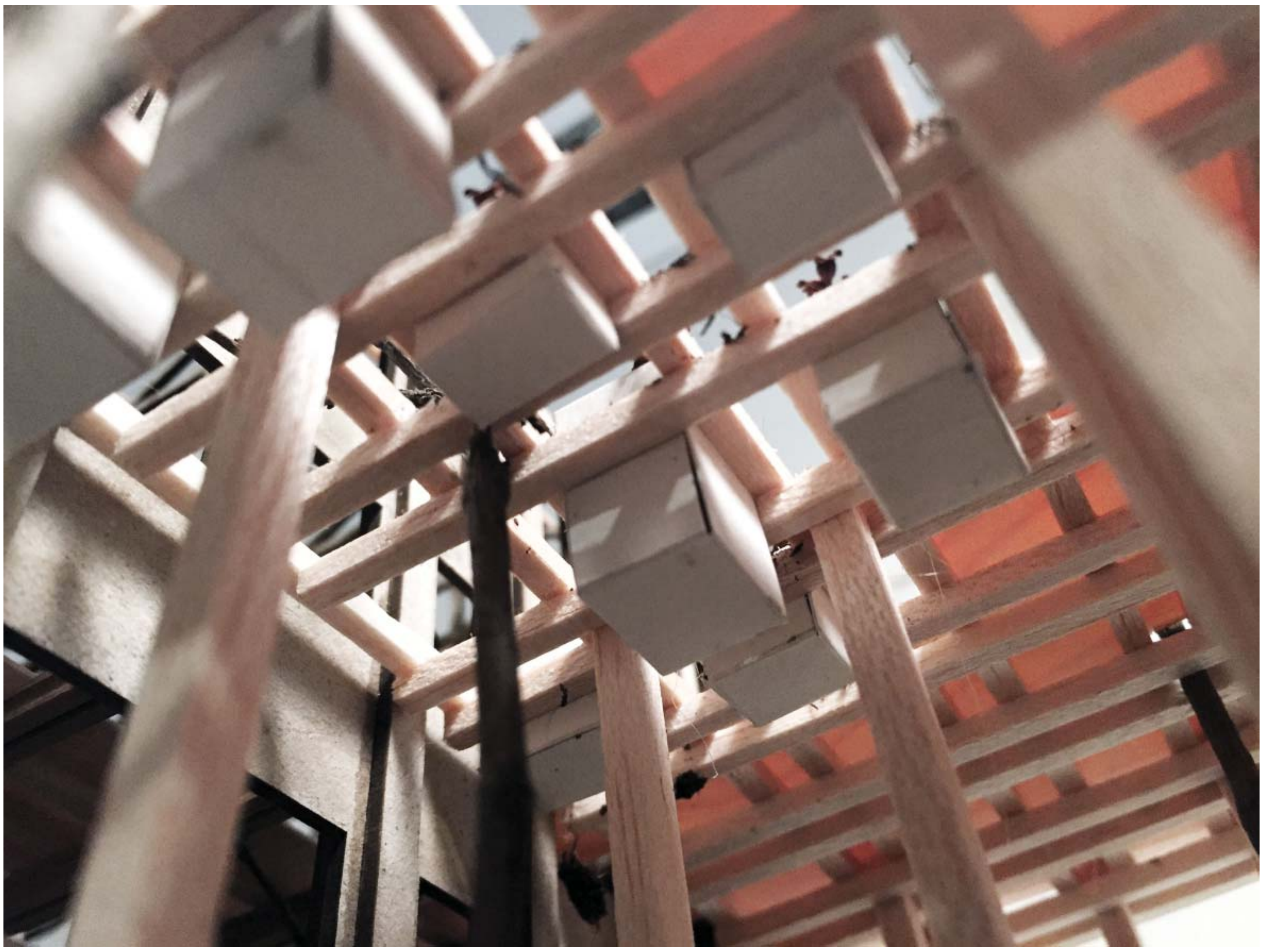
entrance to the kiln

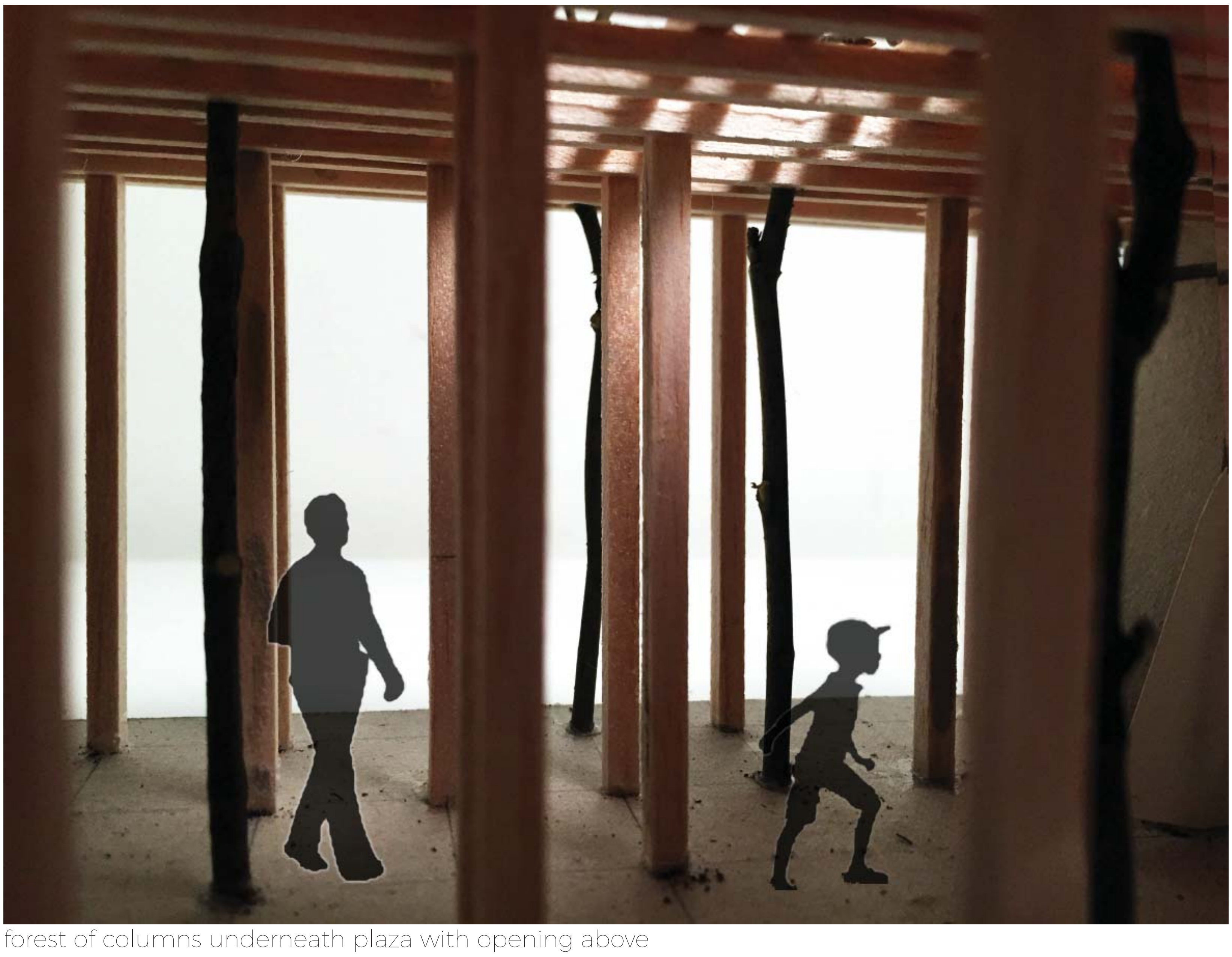
view inside kiln showing circulation

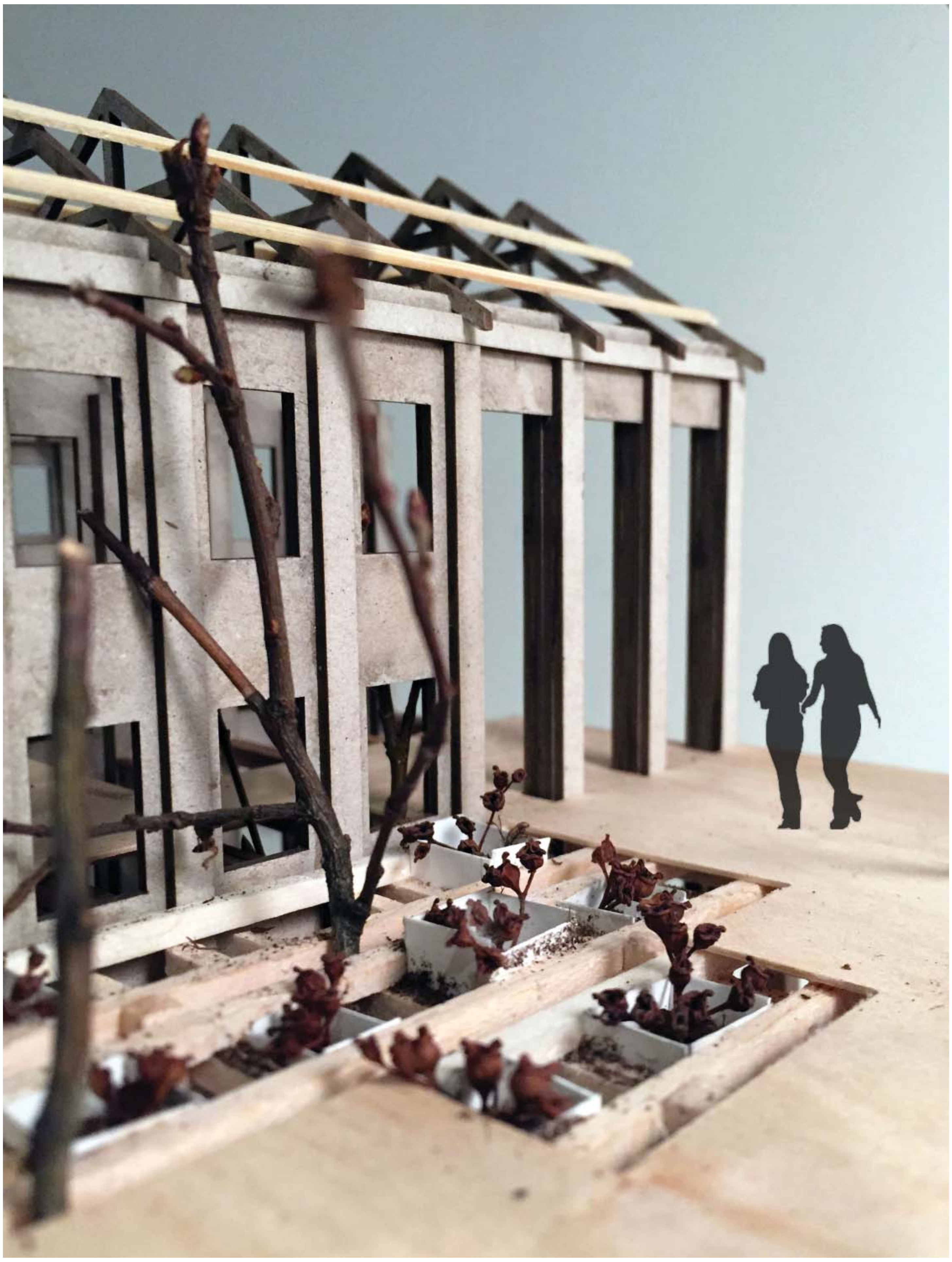
SECTION MODEL - PLAZA
SCALE 1:50


perspective view


forest of columns underneath plaza


view looking at underside of plaza

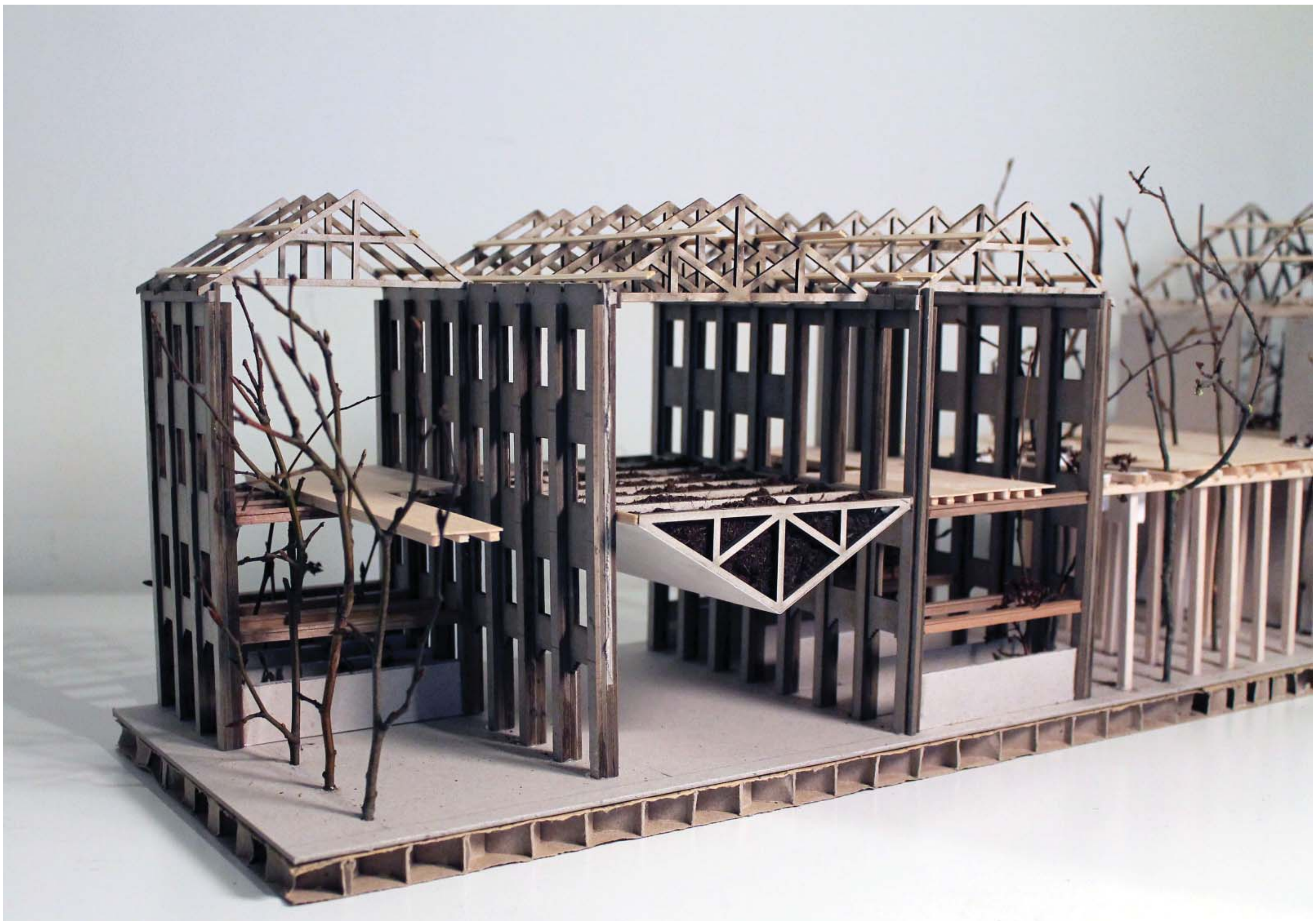

forest of columns underneath plaza with opening above

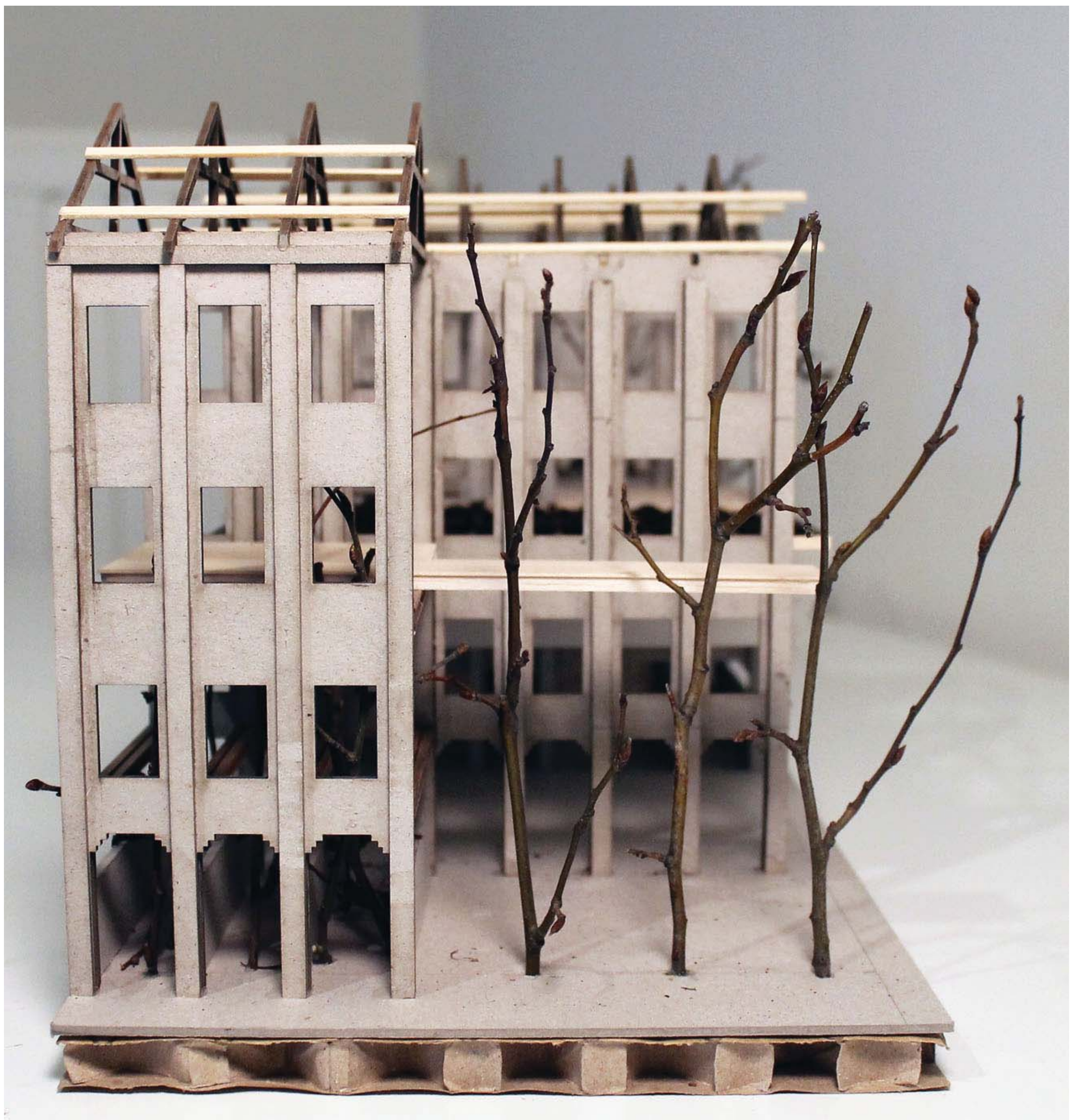


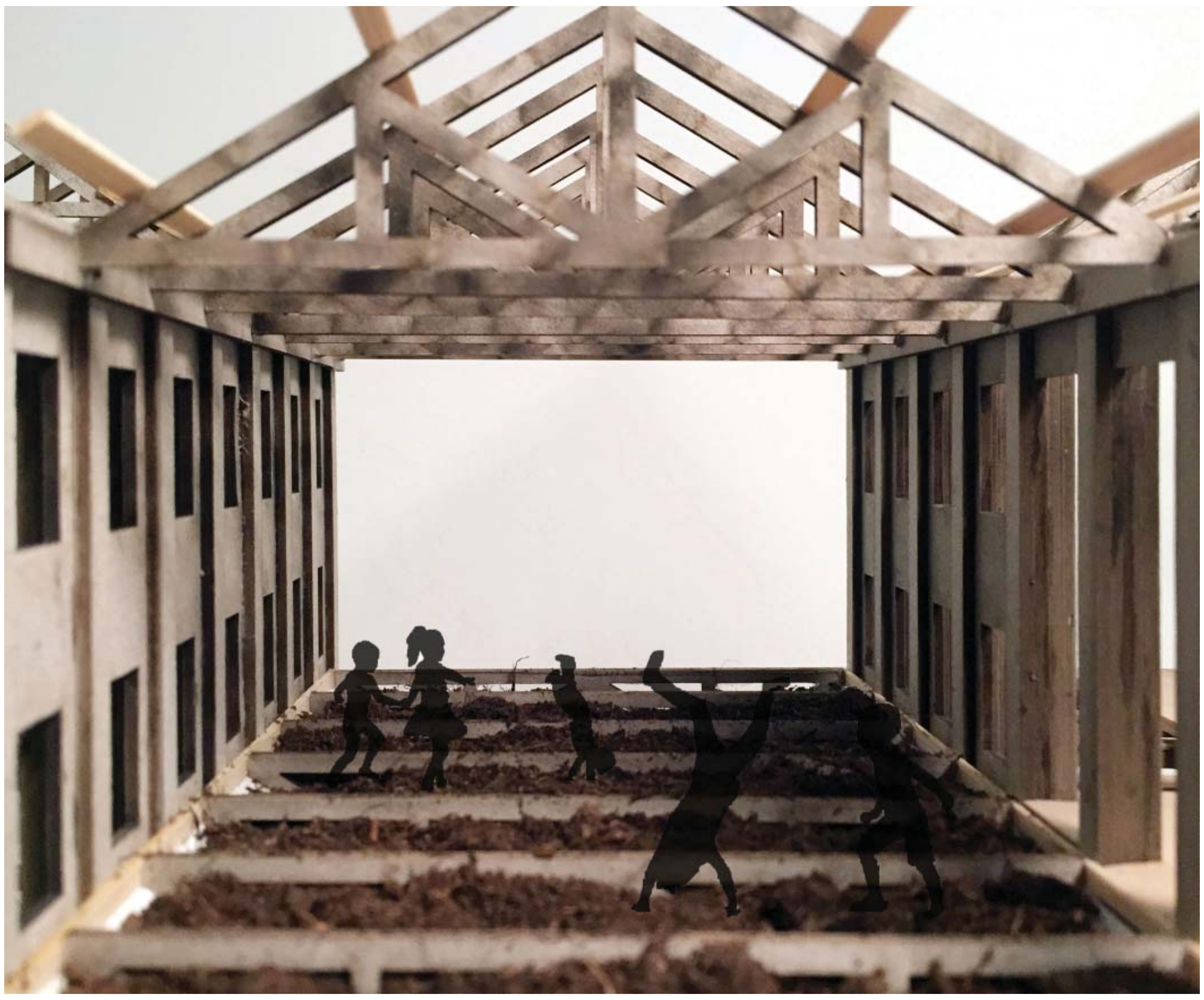
perspective view on the plaza

perspective view on the plaza

SECTION MODEL - DRYING SHEDS
SCALE 1:50


perspective view of the drying sheds


partial elevation of drying sheds


perspective view on elevated lawn


perspective view inside drying sheds looking onto plaza