

Revitalizing Pepperell Mill Town by recreating social values: Post-industrial landscape design approach

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Chapter 1

Post-industrial Landscape

Post-industrial landscape

Post-industrial landscapes are abundant areas were used to be used for industrial or commercial purposes. Regenerating post-industrial landscapes has become a topic of great interest in landscape architecture for about 20 years [8]. Post-industrial landscapes may be located either inside or outside of urban areas. Post-industrial sites are usually tied to the residents' history and culture. This connection is more obvious in small towns or mills. These sites are often contaminated by several chemicals used in industrial and commercial activities. The current appearance of these sites are usually unpleasant and their structures are being demolished. Landscape architecture began working on redeveloping and revitalizing post-industrial landscapes at the end of twentieth century. The main goals of designs have been creating new ublic spaces while preserving the historical background of the site. The revitalization design ideas have been different and highly depended on the sites characteristics such as location, size, shape, topology, level of contamination, functionality, reusability, land value, ecosystem, community perceptions and social needs. Three internationally well known examples of post-industrial landscape desin are explained in the following section.

The landscape park Duisburg Nord

The landscape park Duisburg Nord is one of the outstanding post-industrial revitalization projects located in Duisburg-Meiderich, Germany designed in 1991 by Latz + Partner. The main design idea was to redevelop and inter-connect different elements of the post-industrial site to create a new 180-hectar public landscape park. Individual elements of the design like the low-lying water park, the single fields and clumps of vegetation, the promenades, and the railway are linked through series of walkways but operate independently [9]. The landscape park Duisburg Nord is considered to be a large scale revitalization project which astutely links all spaces together and impressively preserves the industrial heritage of the site.





The Jardin Rosa Luxemburg

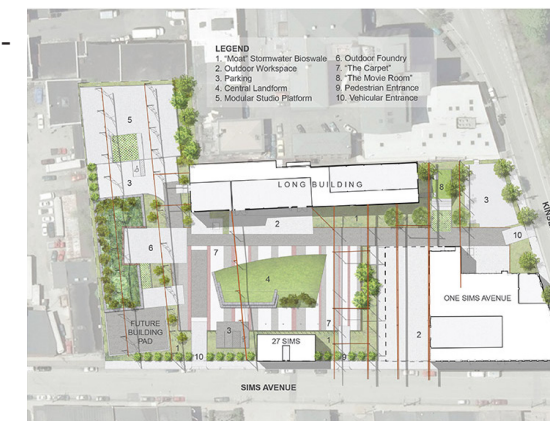
The Jardin Rosa Luxemburg is a unique example of post-industrial landscape architecture designed by In Situ Architectes Paysagistes in 2014. It is located on the edge of a boulevard which encircles Paris and separates the city from the outside suburbs. The design idea was to redevelop a train warehouse and create a pleasing urban public space. This project is successfully connected to surrounding streets and attracts people to walk through the site. Sustainability was another main design concern. Therefore, almost all of the building materials used came from the old warehouse [10].



<http://www.latzundpartner.de>

The Steel Yard

The Steel Yard is another successful example of post-industrial landscape architecture designed by Klopfer Martin Design Group in 2009. It is located in Providence, Rhode Island. The design idea is to regenerate the fabrication site and creating an environment friendly public space. The design was successful because it was inexpensive, adaptive, and preserves historic landmarks of the site. Moreover, it provides specific spaces and facilities for outdoor activities and hosts many popular and growing-in-attendance public events [11].



<http://www.latzundpartner.de>

Chapter 2

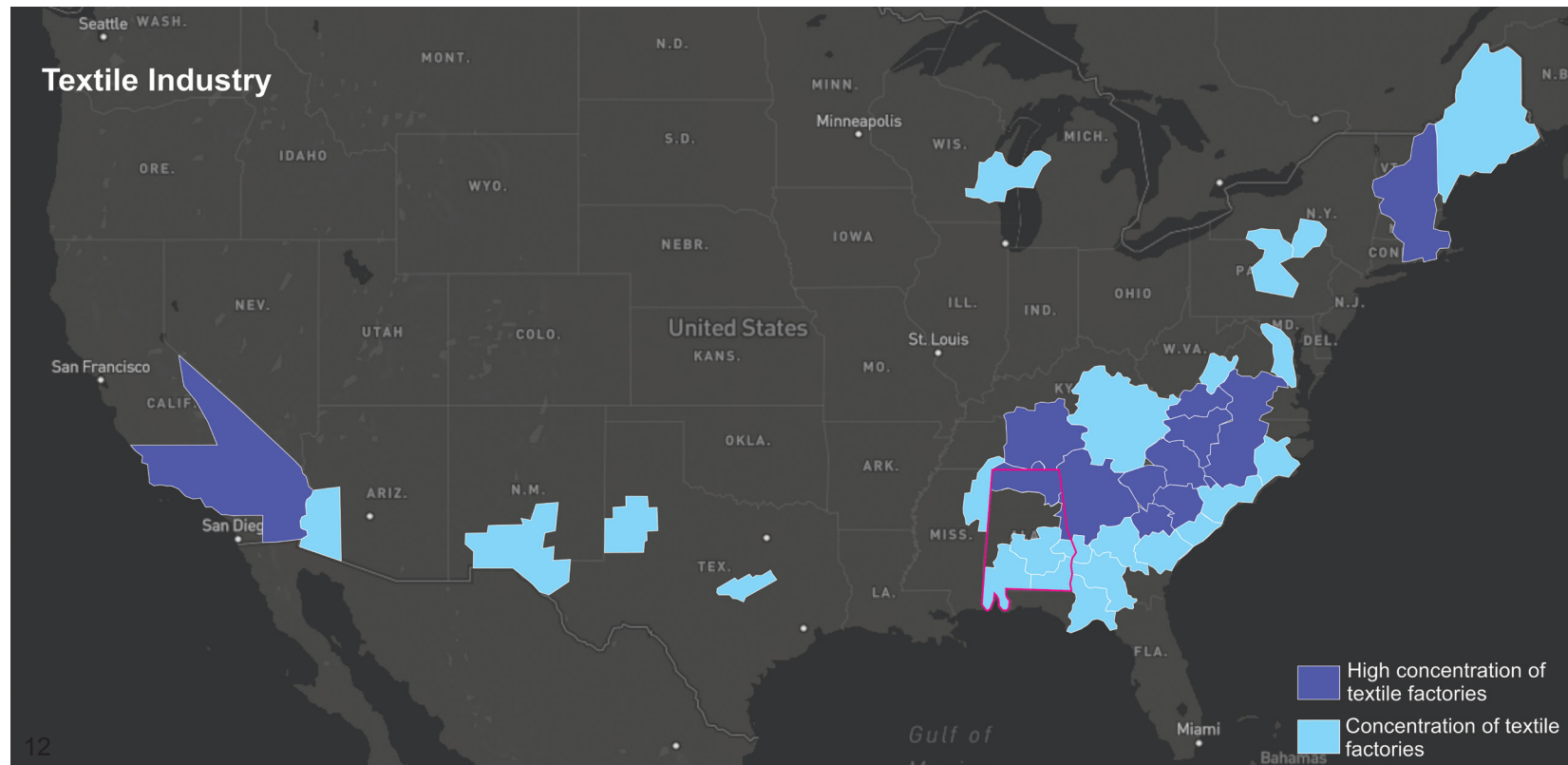
Mill town

Milltown

Mill town by definition is a settlement developed around one or more mills or factories, usually cotton factories. Mill towns are also known as factory town or mill village. Mills started to be built in the southern states like South Carolina, Alabama, North Carolina and Mississippi where labor was cheap, water was available, and cotton was grown [4]. Mills changed the life style of the farmers and encourage them to migrate and work in the factories for steady paychecks. The owner of the factory built houses for the workers. After a while, population increased and other buildings like churches, pumping station, grocery stores and hospital were constructed around the factory. People have been working, meeting each other, and making their social connections during the day inside the site. Undoubtedly, the factory was the corner stone of all social and economic activities of the community. However, the factory is stopped functioning and its appearance is dramatically changed. Hence, not only the social connectivity of the site is lost, but also it has become an unpleasant and unsafe place for the community [6].

This map shows the density of textile mills in southern states.

http://www.clustermapping.us/cluster/textile_manufacturing



Factory was the major place residents made social connections.

<http://alabamapioneers.com/early-cotton-mills-in-alabama/>



Typical mill town workers.

<http://alabamapioneers.com/early-cotton-mills-in-alabama/>



Chapter 3

Pepperell Mill Town
Project introduction

Pepperell milltown

Project introduction:

The task of this thesis is to recreate the social values of a post-industrial mill town by revitalizing its abundant post-industrial site. The case study is located in Opelika-Alabama and is known as Pepperell Mill. The mill is listed a place worthy of preservation on the National Register of Historic place on 3/31/2014 (Reference #14000090) [1]. The mill town and its post-industrial landscape is historically significant since it represents the establishment of textile industry in Alabama and its impact on the City of Opelika. Its post-industrial landscape is worthy of preservation because it was the main cause of distinct community development in the mill. The mill is primarily constructed between 1925 and 1940 to reside employees of the Pepperell Manufacturing Company. Initially, it encompassed approximately 100 houses.

The mill developed quickly in such a way that by 1946, it comprised approximately 240 buildings including a church, a school, a childcare facility, a gas station, a grocery store, a drugstore, and a barber shop. The company began selling the house lots to individual owners in 1958 and retained the mill village ownership. . The factory continued working until 2006 [1]. Jane Sanders Worthington who lived 19 years of his life in the mill has written a book – A Village Not Forgotten: Pepperell Mill Village Pepperell Mill Village, Pepperell Manufacturing Company, Opelika, Alabama: Mill History, 1926-1960 – is an outstanding reference to learn how people lived, worked, and socialized and grew up in the mill [2]. Finally, on Tuesday night, March 12, 2013, some of the buildings inside the factory caught fire and burned down [3]. Since then, the factory has entirely lost its connection with the mill community, even though the wrecked walls, scattered rubbles on the ground, the tall water tank and the brown brick chimney have been emanating the feeling and history of the mill.



Comparing these two images shows how the population and number of houses were increasing in the town.

View of the Pepperell Mill - 1926.
Houses built adjacent to the factory to reside Pepperell Mill workers.

<http://ohsclassof52.bizland.com/index.html>



View of Pepperell Village from the Water Tower

Near the Service Station - Pepperell, Al. - 1931

<http://ohsclassof52.bizland.com/index.html>

Chapter 4

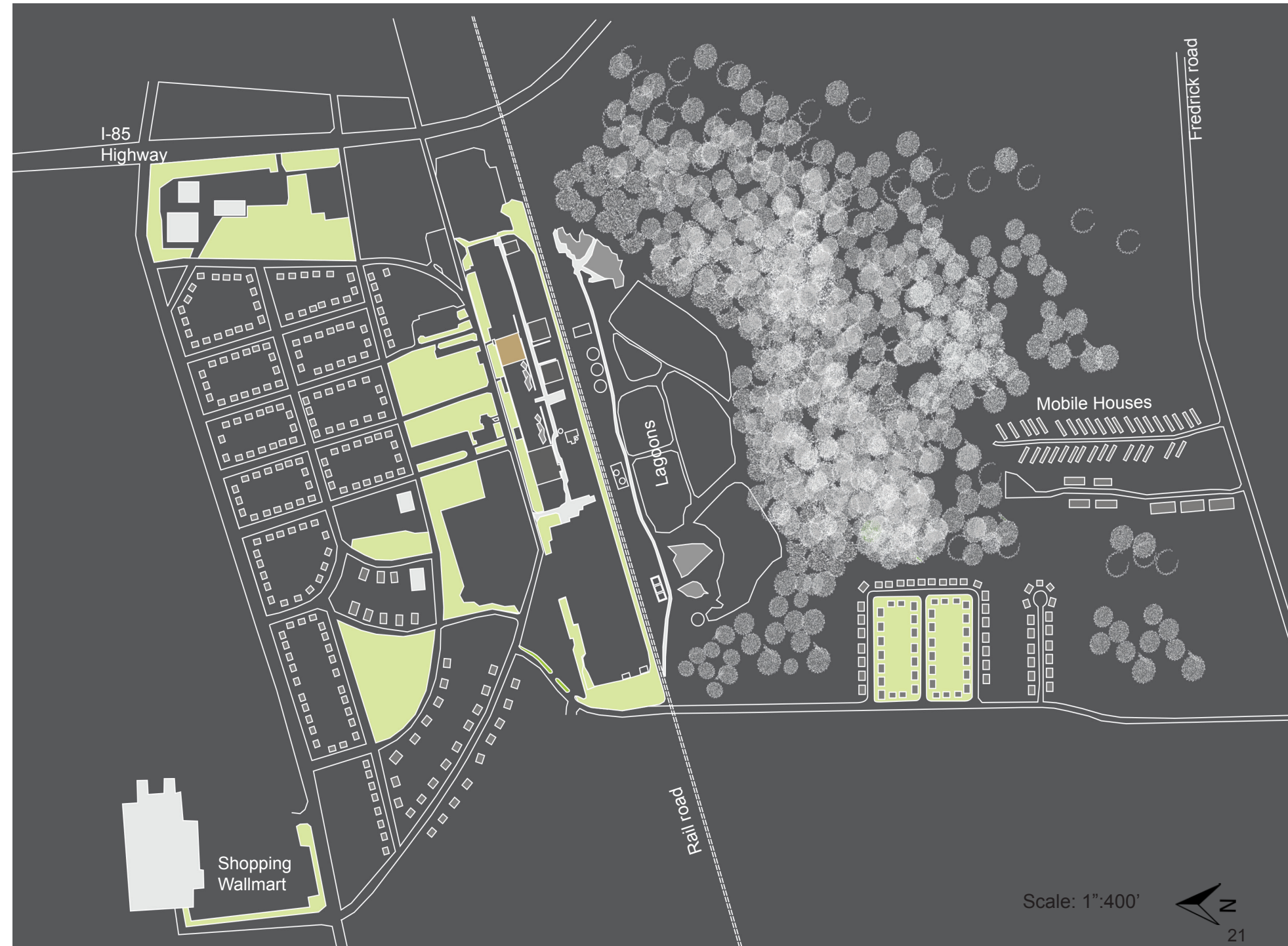
Revitalizing Pepperell Mill Town by recreating social values:
Post-industrial landscape design approach

Revitalizing Pepperell Mill Town by recreating social values: Post-industrial landscape design approach

The Pepperell Mill post-industrial site has been insulated from the community for about a decade. The main task of this thesis is to recognize the social, ecological and aesthetic potentials of the site and embrace them through a design to rebuild a meaningful connection between the site and the surrounding community to revitalize the mill town. To accomplish this goal, it is required to answer the following questions:

- (1) What are the current issues of the mill post-industrial site?
- (2) What are the current issues of the surrounding community?

Project context map showing the existing condition.



The current issues of the post-industrial site:

- **Waste material:** One of the main reasons making the site look unpleasant and unsafe is the deposition of waste materials including small to very large wooden lumbers, metal debris, asphalt and concrete wastes. These wastes are imported from other industrial or construction sites and has made the site function as a landfill.
- **Ruined buildings:** After the 2013 fire occurrence buildings and structures burned down and crumbled to the ground. Spaces are entirely ruined and unusable.
- **Chemical contaminants:** The lagoons located in the southern part of the site were being used to treat contaminated wastewater. This part of the site is contaminated and considered as a brownfield.
- **Segregated parts:** A rail road passes through the site. It divides the site into two separate sections.
- **Fading history:** Several landmarks of the site like the remained walls, columns, water tank and the chimney are being demolished. These landmarks are historically significant and must be preserved.
- **Unsafety:** The site is unsafe from two viewpoints. It is unsafe due to the deposited materials and falling structures. Moreover, criminal activities may take place within the abundant site.
- **Isolation from the community:** The site was the major identity of the town and textile industry for a long time. The history of the town is fading because the site has been completely insulated from the community.

The current issues of the milltown:

- **No public space in the community:** Approximately 2500 people reside in the surrounding community without any public space. A welcoming public space can revitalize the community, regenerate new social connections, strengthen bonds among neighbors and foster the sense of belonging.
- **Fading history:** The identity of the town is vanishing. New generations are forgetting the spaces and environments in which the generations before them lived. Preserving the history of the site is the visual and tangible conservation of cultural heritage of the town.
- **Lack of entertainment for young generation:** The surrounding community needs to provide safe entertainment and keep them away from trouble. Many graffitis in the site confirms the communities lack of entertainment and desires for wall paintings.
- **Lake of outdoor facilities:** People use inadequate and improper pedestrian for jogging and outdoor exercises and need to have an appropriate facility for such activities.

Current cindition of the site



Design Challenges:

- Dealing with waste material,
- Dealing with chemical contaminants in the lagoons,
- Beautifying the ruins,
- Connecting the site to the surrounding areas,
- Connecting different spaces inside the site,
- Public engagement,
- Changing the community's perceptions,
- Highlighting the historic and nostalgic values of the site.

This diagram shows how different spaces will be used to deal with design challenges. Detailed information of each spaces are provided in the following pages.



The task of this thesis is to recreate the social values of a post-industrial mill town by revitalizing its abundant site. Approaches used to fulfill the design challenges are:

- **Acknowledging the history of site:** This approach aims to preserve and highlight the landmarks of the site including its tall water tank, brick chimney, and the remained walls. This approach also recommends using adaptive, removable and not destructive designs. Changes made by this approach is not permanent and can be redesigned in future without damaging the historically valuable elements of the site.
- **Integration:** This approach aims to properly connect the site to the surrounding streets and significant nearby public spaces (like the adjacent addiction center) by improving pedestrians and planting trees to create shadow, to name a few. This approach encourages people to walk in the site and increases the site accessibility.

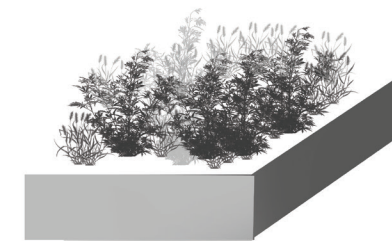
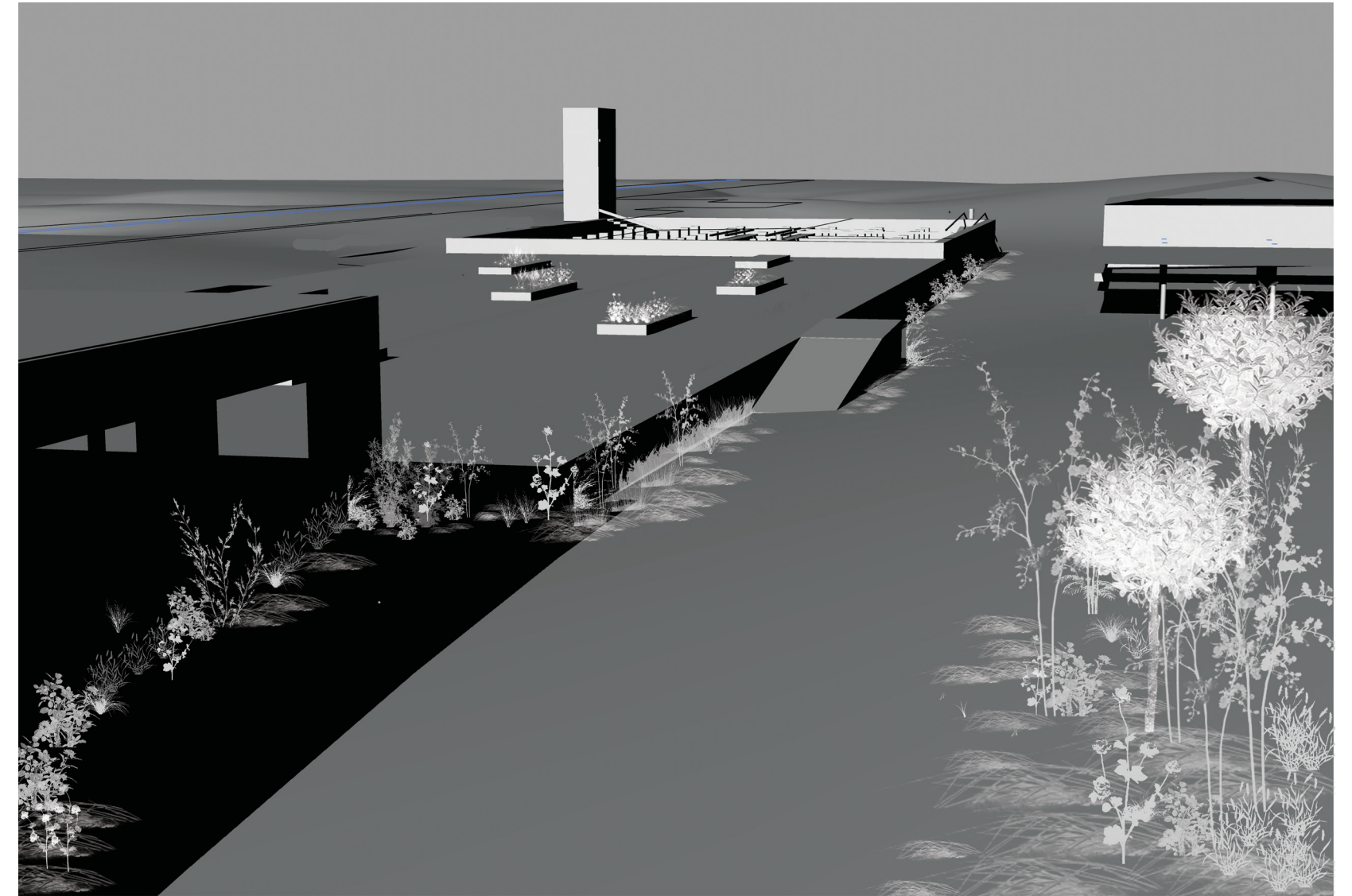
- **Educational landscape:** This approach aims to facilitate educational organizations (e.g. schools and universities) to outreach the community. The contaminated lagoons of the site provide a unique teaching and research opportunity for such teaching and research institutions. However, this approach limits regular visitors' access to the contaminated parts of the site for safety peruses. This approach raises the environmental awareness and knowledge in the community.
- **Public activity:** This approach aims to engage people to visit the site and participate in social activities. It creates comfortable and appealing spaces for children, young and old visitors by creating shadow, artificial lights, sitting places, designating specific spaces for activities like movie-night. This approach improves social activities and increase the amount of time a visitor would spend inside the site.
- **Safety and sensuality:** This approach aims to increase the sensuality and safety of the site. The design needs to create walkable and safe connections between different spaces. For example, long and dense bushes are used to keep the visitors away from the railroad. The designed bridge also provides a safe connection between the northern and southern parts of the site.

Project context map showing the design concepts.



Acknowledging the history of site:

The main part of the site are made up of concrete surfaces. The proposed design makes minimum changes on the concrete surfaces to preserve the historic context of the site. Therefore, moveable vegetation boxes are used to decorate and beautify the spaces. This design is adaptive and non-destructive and can be modified in future.



Movable vegetation boxes

Integration

Two types of integration are considered in this design, (1) integration of the entire site with the mill town, and (2) integration of different spaces inside the site.

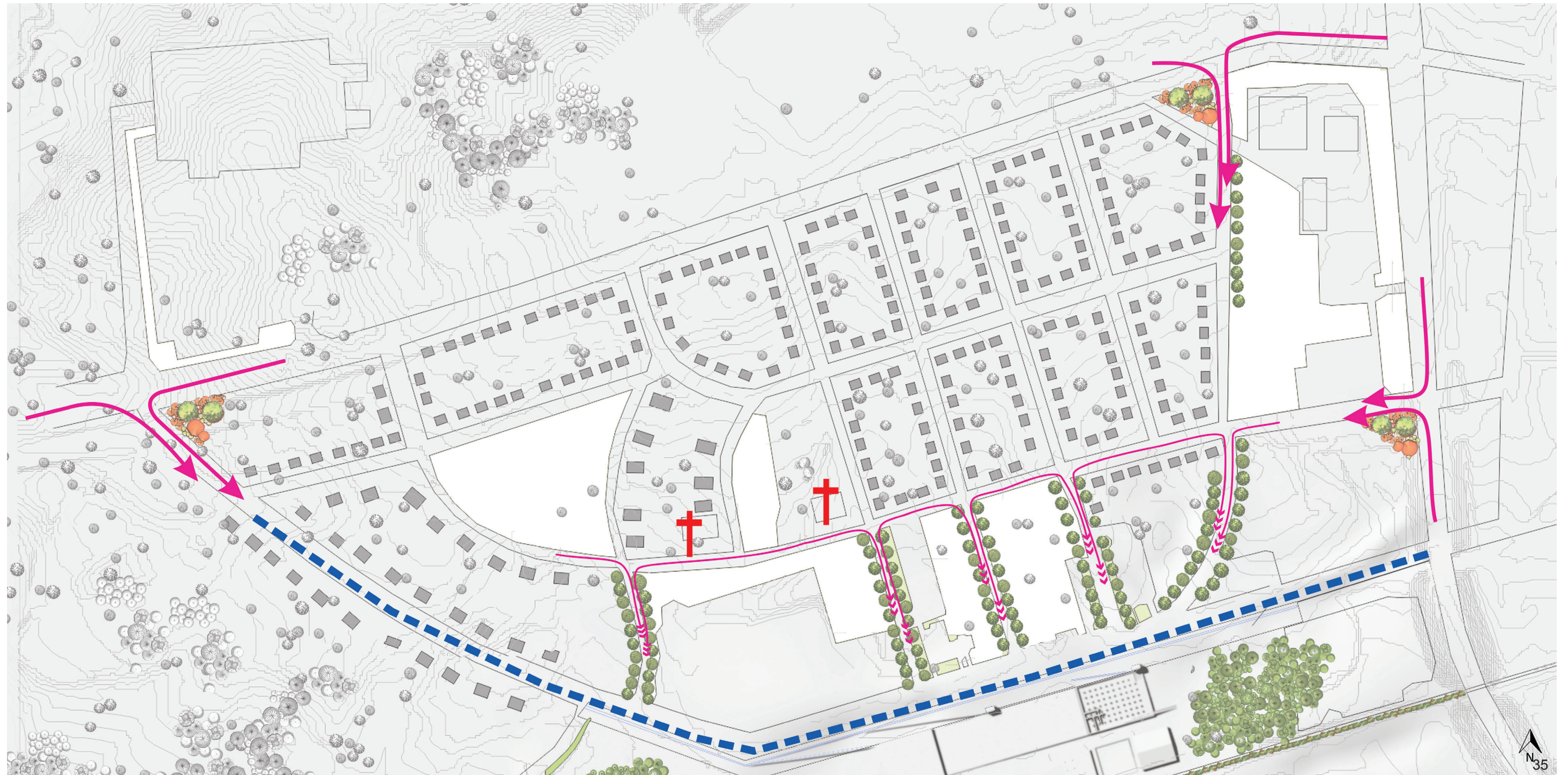


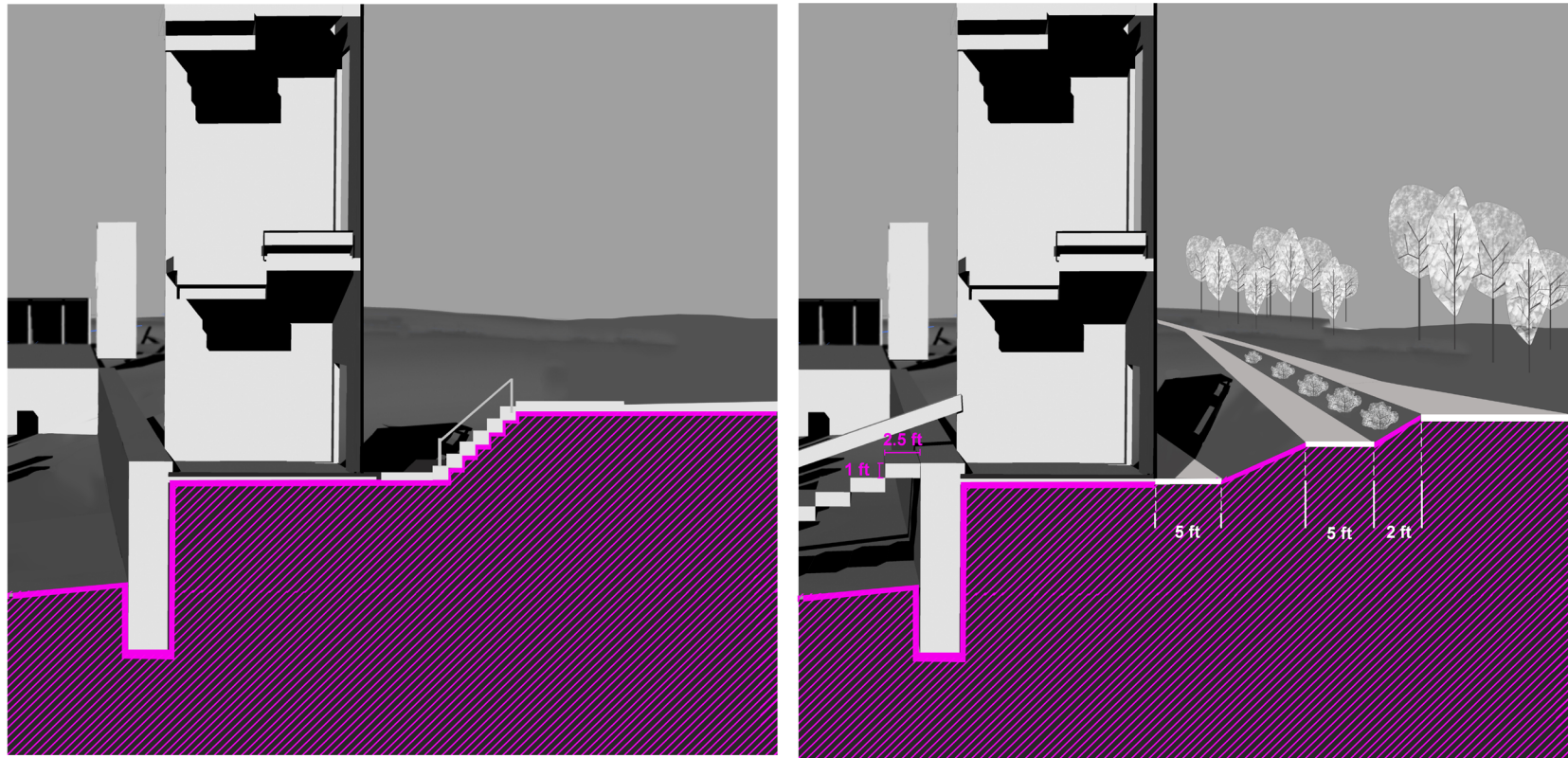
To integrate the site with the mill town the design should improve the adjacent streets to encourage people to visit the site. The above picture shows the current condition of the adjacent streets. The below picture shows how planting trees and creating shadow can increase the walkability of the outside pedestrians.

This master plan shows the connectivity of different spaces inside and outside of the site.

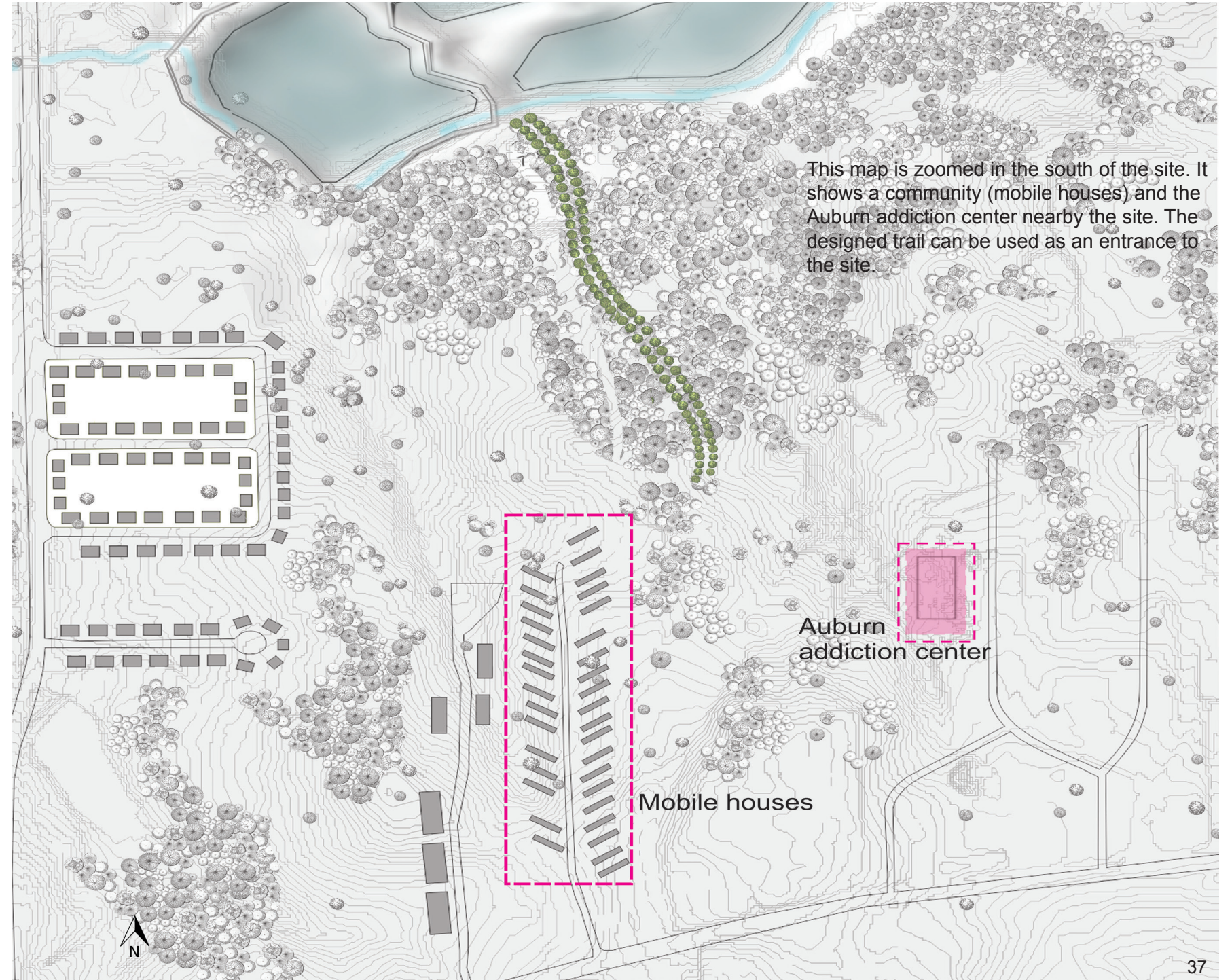


This circulation map shows how vegetation work as guiding signs to direct people to the site. Purple lines represents transportation directions.





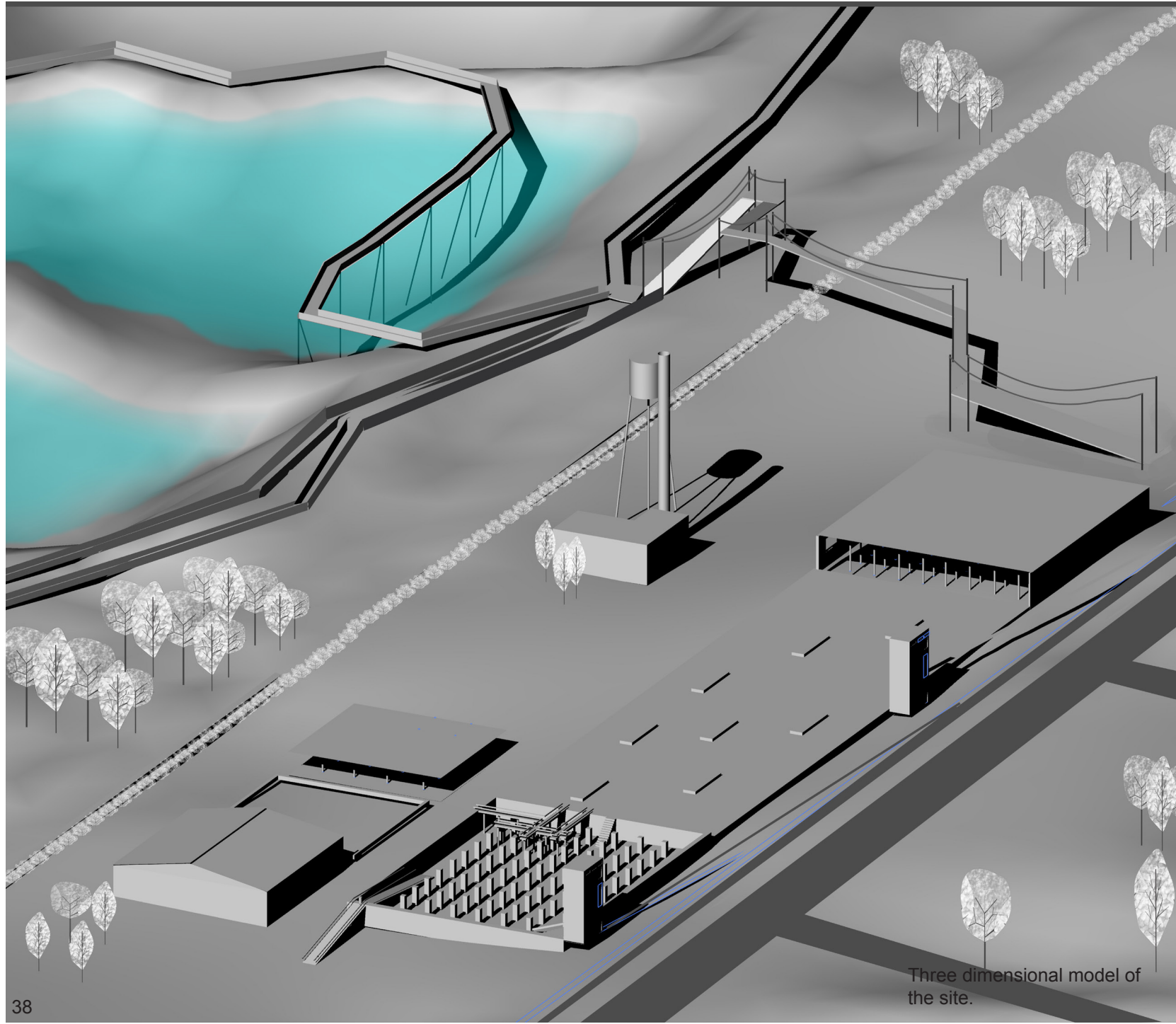
The site is below the outside pedestrian level. A gentle slope ramp is used to connect the pedestrian to the site. It will increase walkability and accessibility of the site entrances, especially for old people and children.



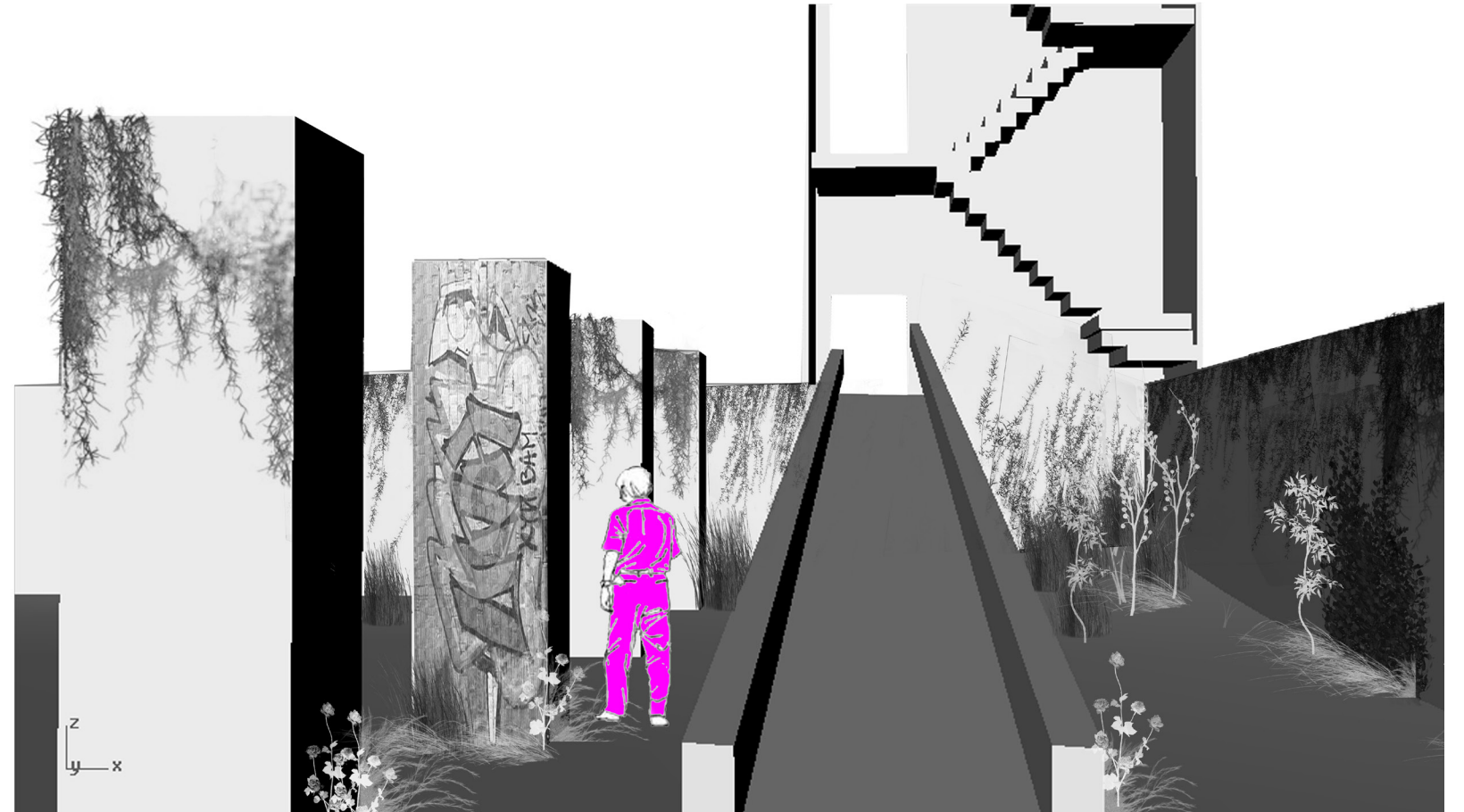
This map is zoomed in the south of the site. It shows a community (mobile houses) and the Auburn addiction center nearby the site. The designed trail can be used as an entrance to the site.

Mobile houses

Auburn
addiction center



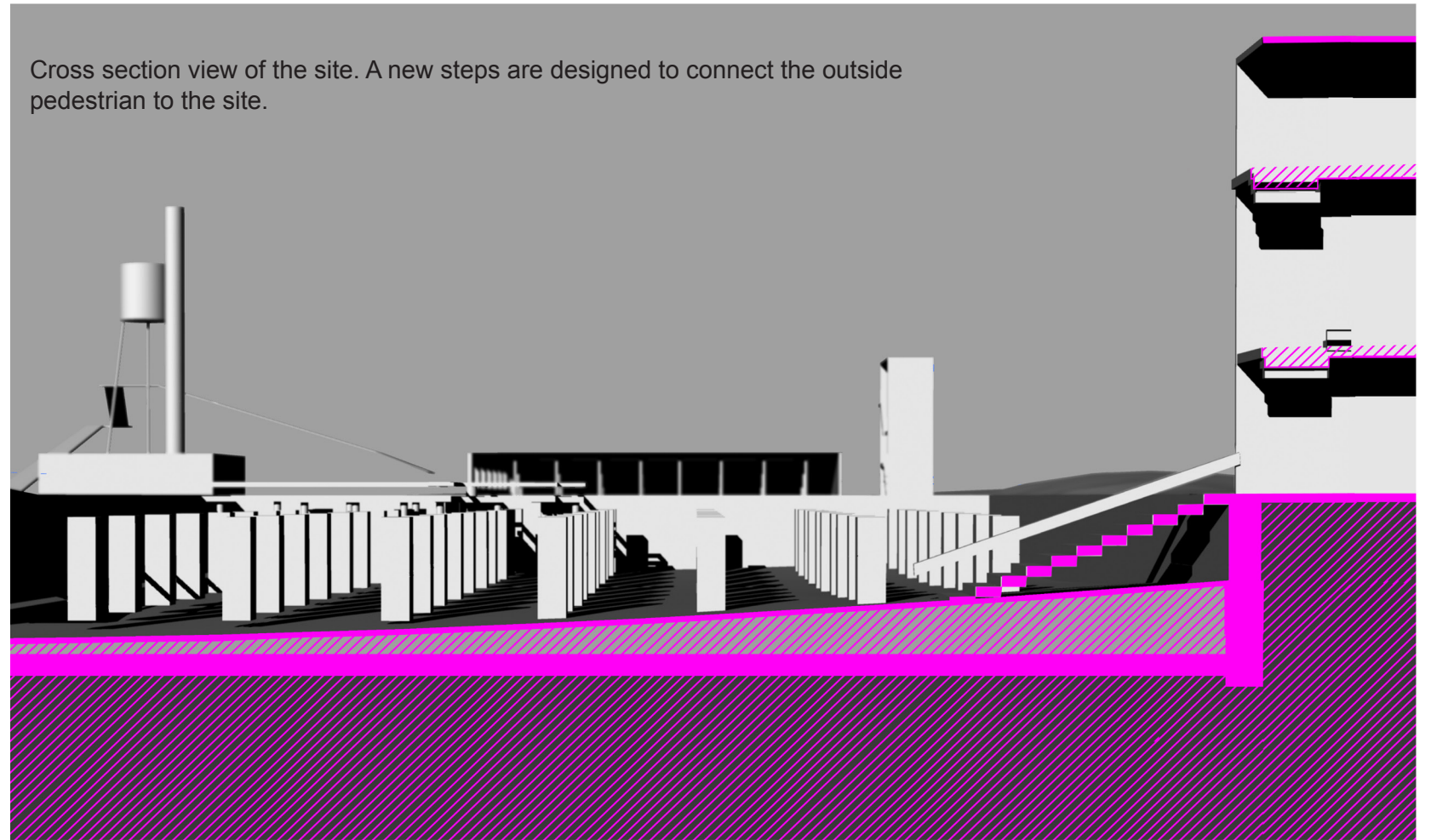
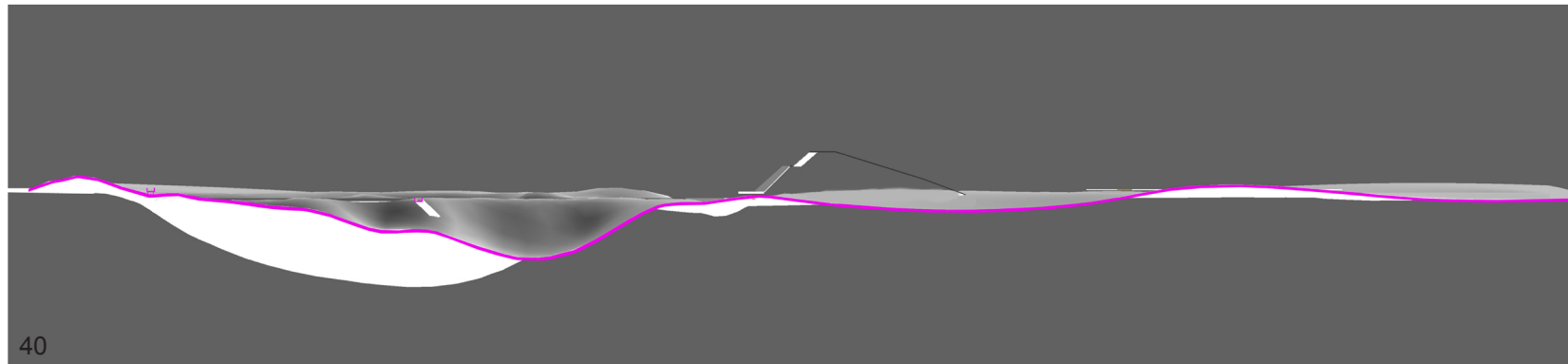
Three dimensional model of the site.



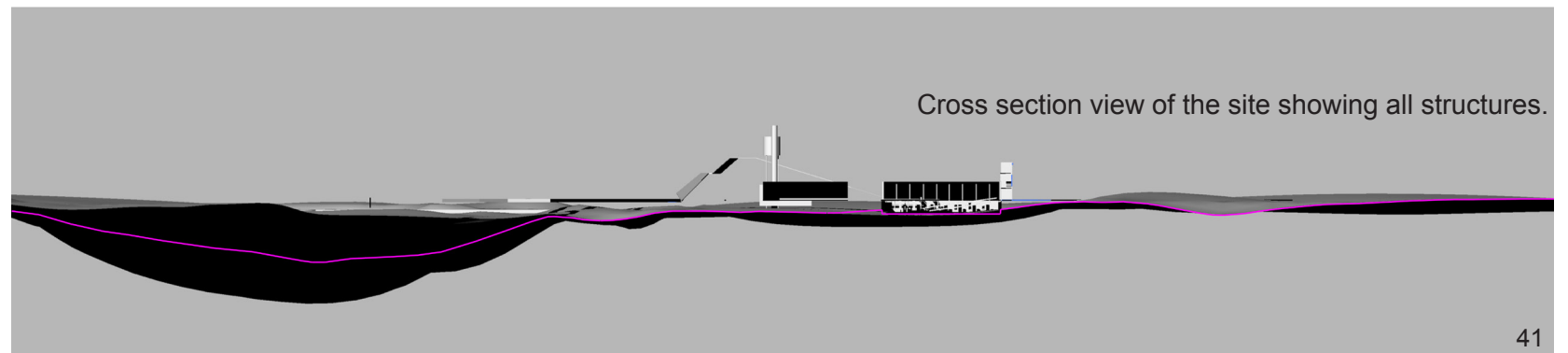


The railroad divides the northern part of the site from the southern part. A bridge is designed to connect these two parts together to create a safe connection.

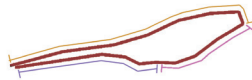
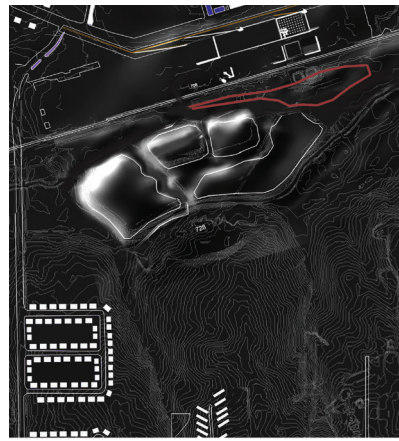
Cross section view of the site showing the bridge.



Cross section view of the site. A new steps are designed to connect the outside pedestrian to the site.

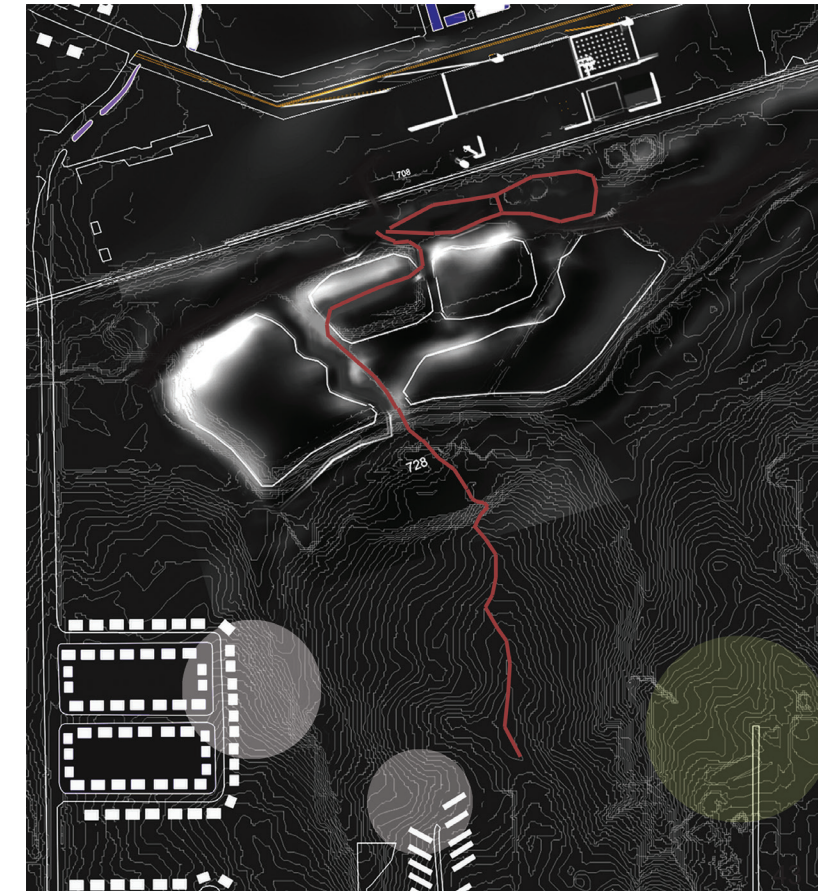
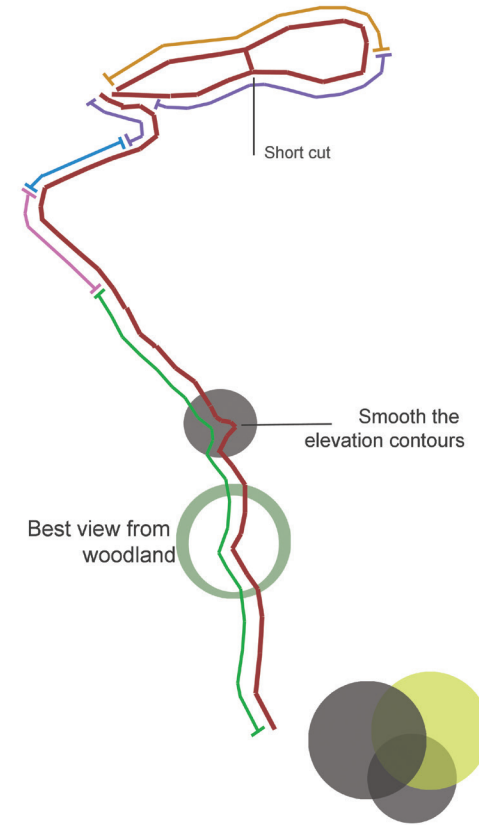
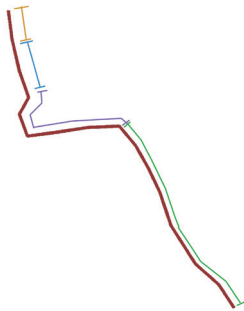
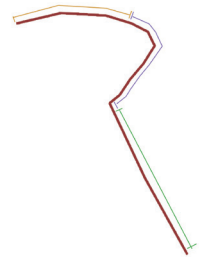
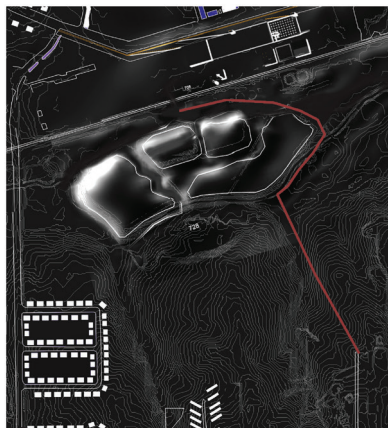
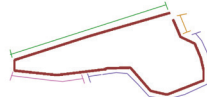
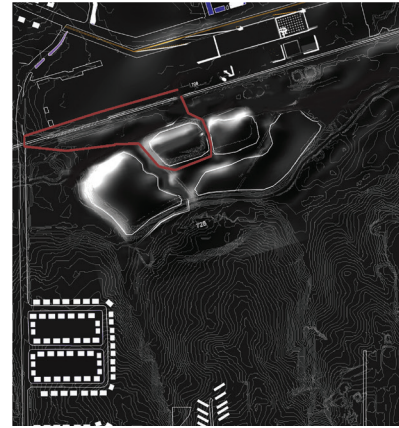
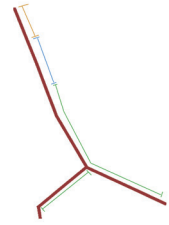
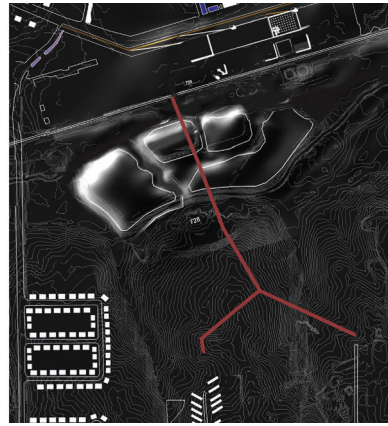


Cross section view of the site showing all structures.



These figures are used to analyze different possible trails in the site. Each trail can give specific feeling and experience to the visitors. The final trail designed has maximum accessibility to the spaces inside the site, maximum connection with outside of the site, and provides more different feelings and experiences. The final trail is shown in figure below.

- Experiencing the water front
- Walking on top of the water body
- Feeling same as walking within the site
- Having a wide view of the landscape
- Walking in the woodland

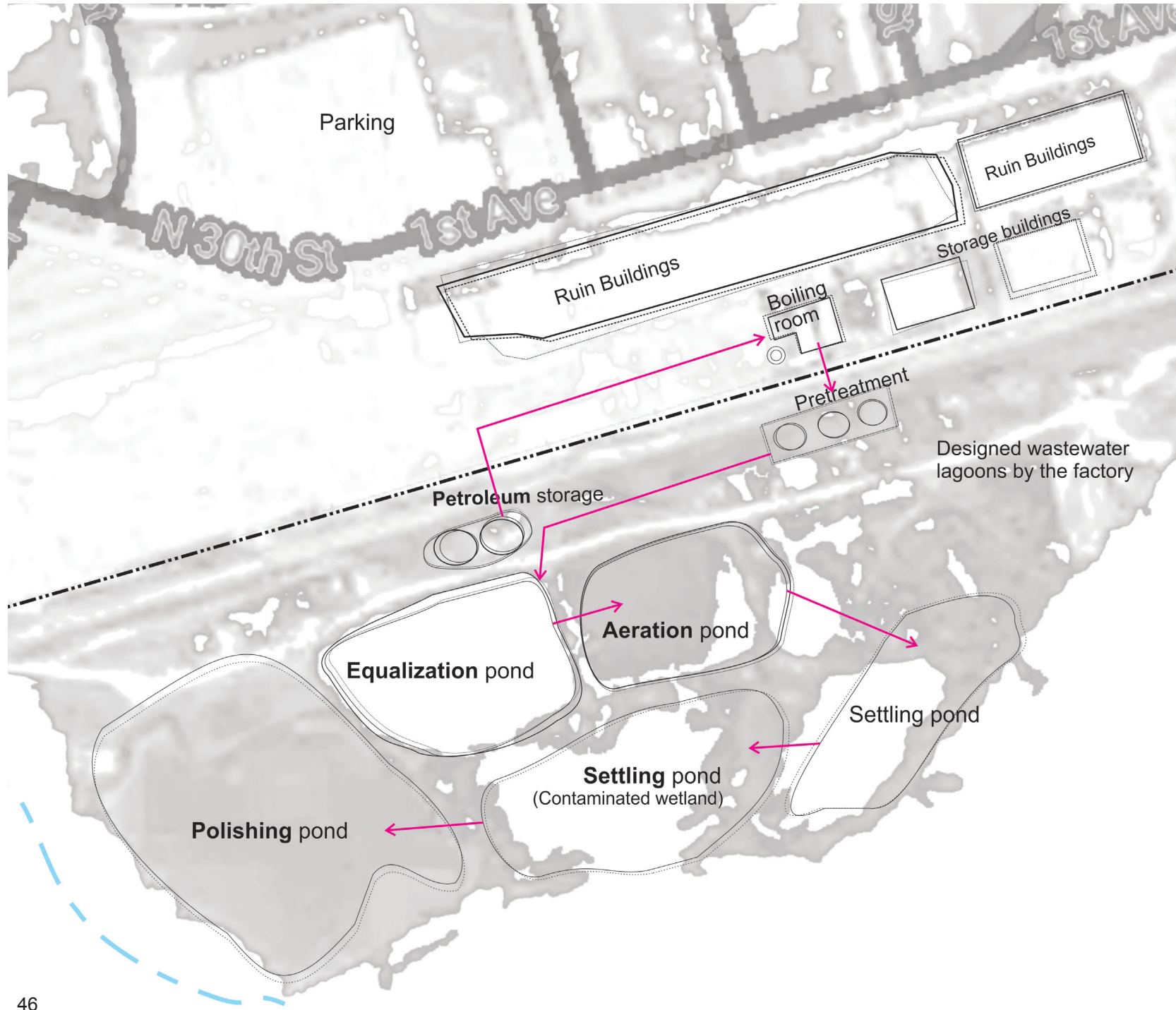


Educational landscape

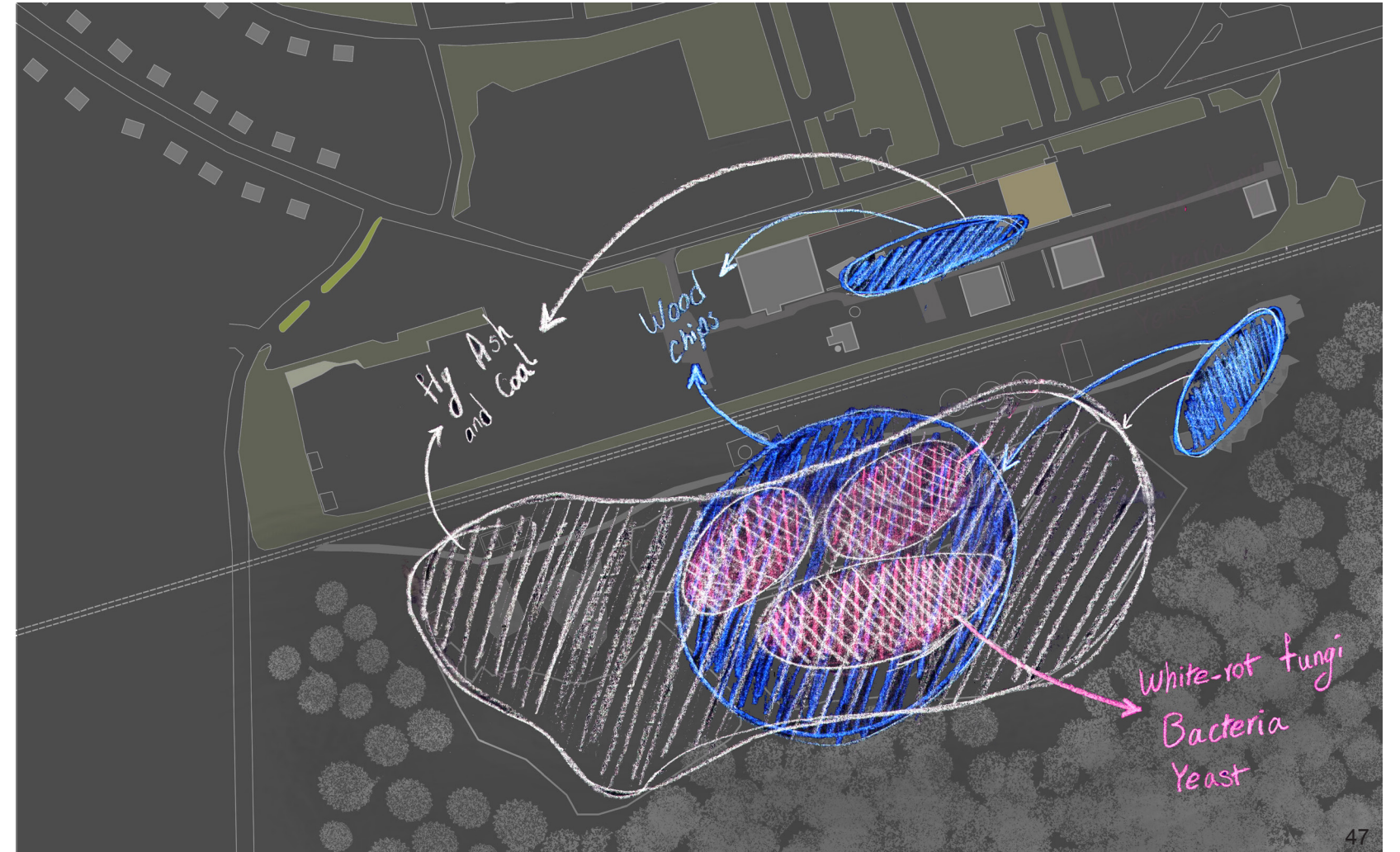
Due to previous industrial activities, lagoons of the site are considered as the contaminated area. This part of the site is designed to be an educational landscape. This area can be used by schools, universities and research organizations to outreach the community and increase the environmental awareness in the society. This area can also be used for scientific studies. These studies can lead to contaminant removal from the site.

This map shows different forms of contaminants in the site. Solid contaminants (north part of the site) will be removed during redevelopment construction. However, the chemical contamination (southern part of the site) requires times and specific treatment techniques.





This map shows the chemical contaminate circulation through the site. It represents the contaminated areas inside the site.





Contaminated area

The contaminated area is a unique opportunity in-situ treatment application/research. Phytoremediation techniques used in this area can remove contaminants from the soil and water. Different vegetation for periods of time can enhance rate and range of contaminant removals.[12]

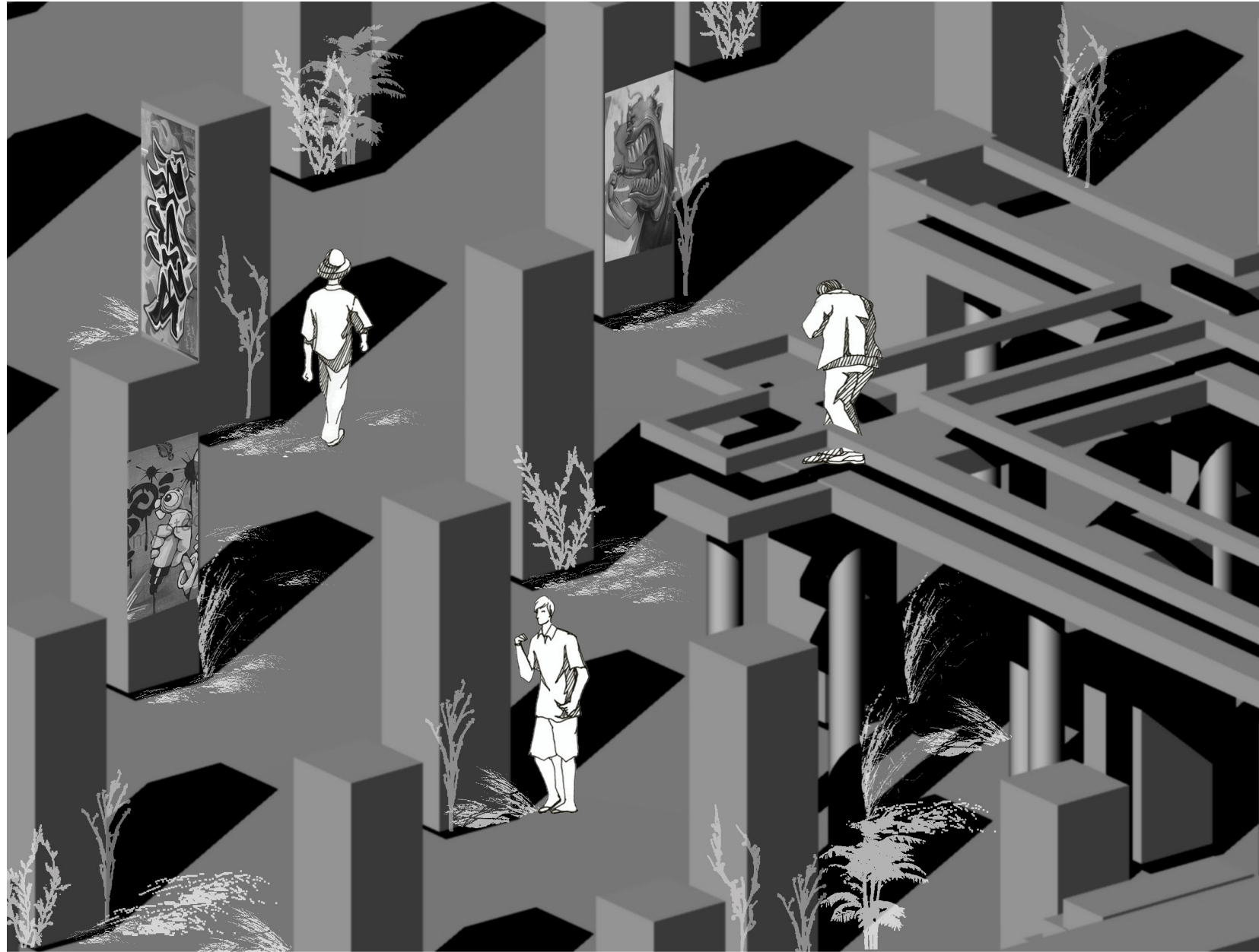


Public activity

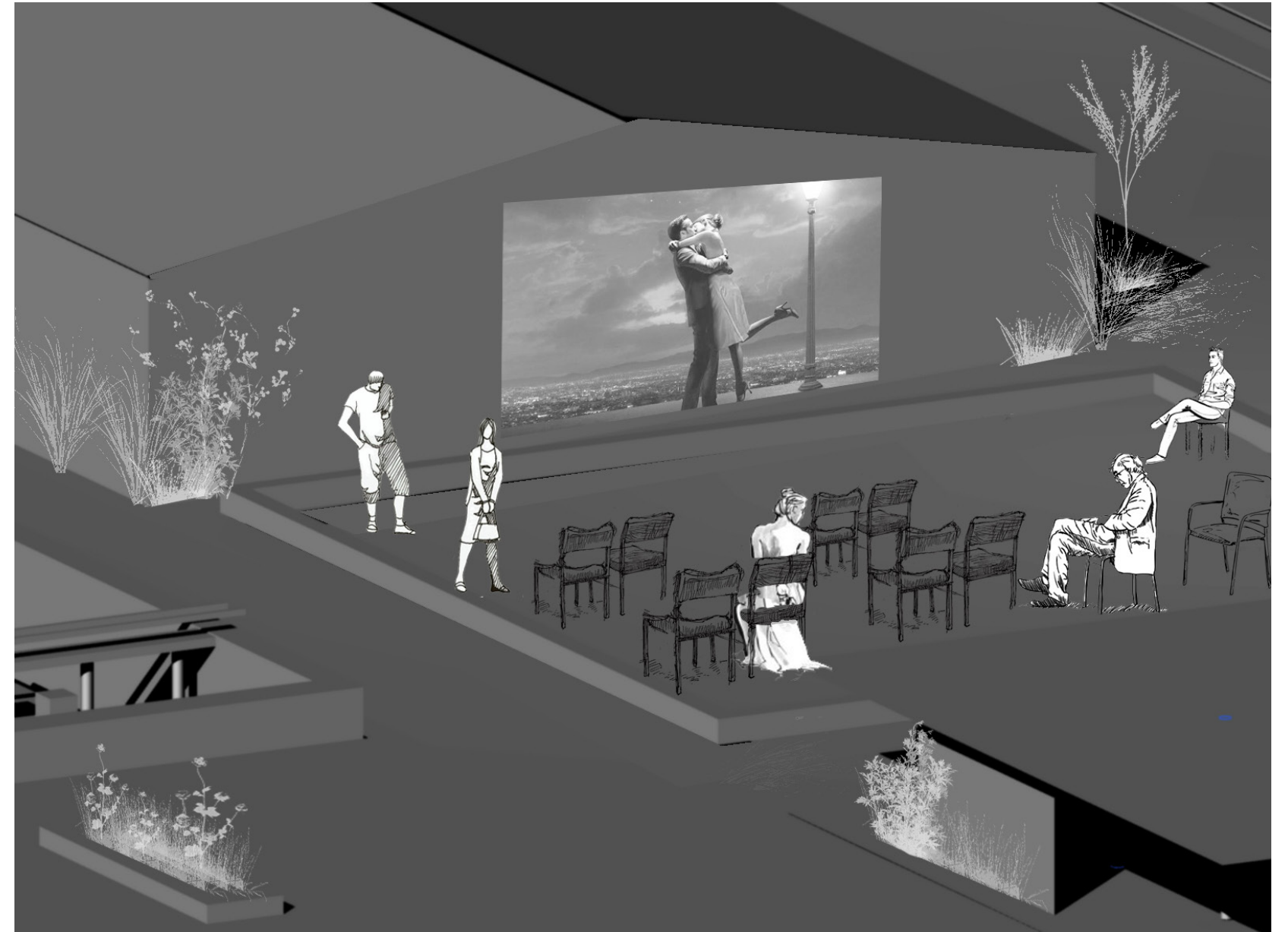
The design aims to encourage visitors to participate in social activities, spent more time inside the site and create social connections.

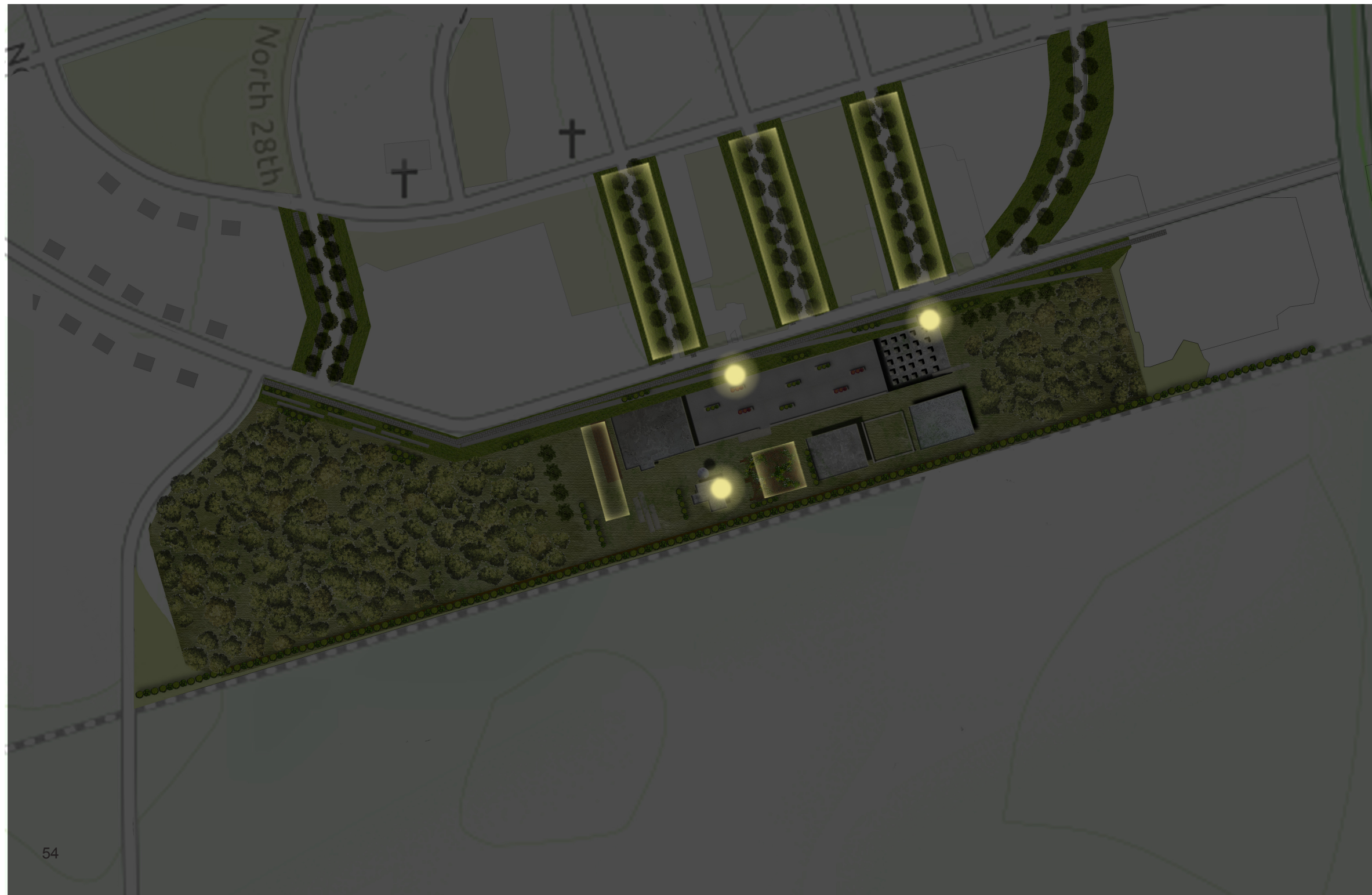


The design provides different views from the site. It provides several spaces for artistic activities like wall painting and photography.



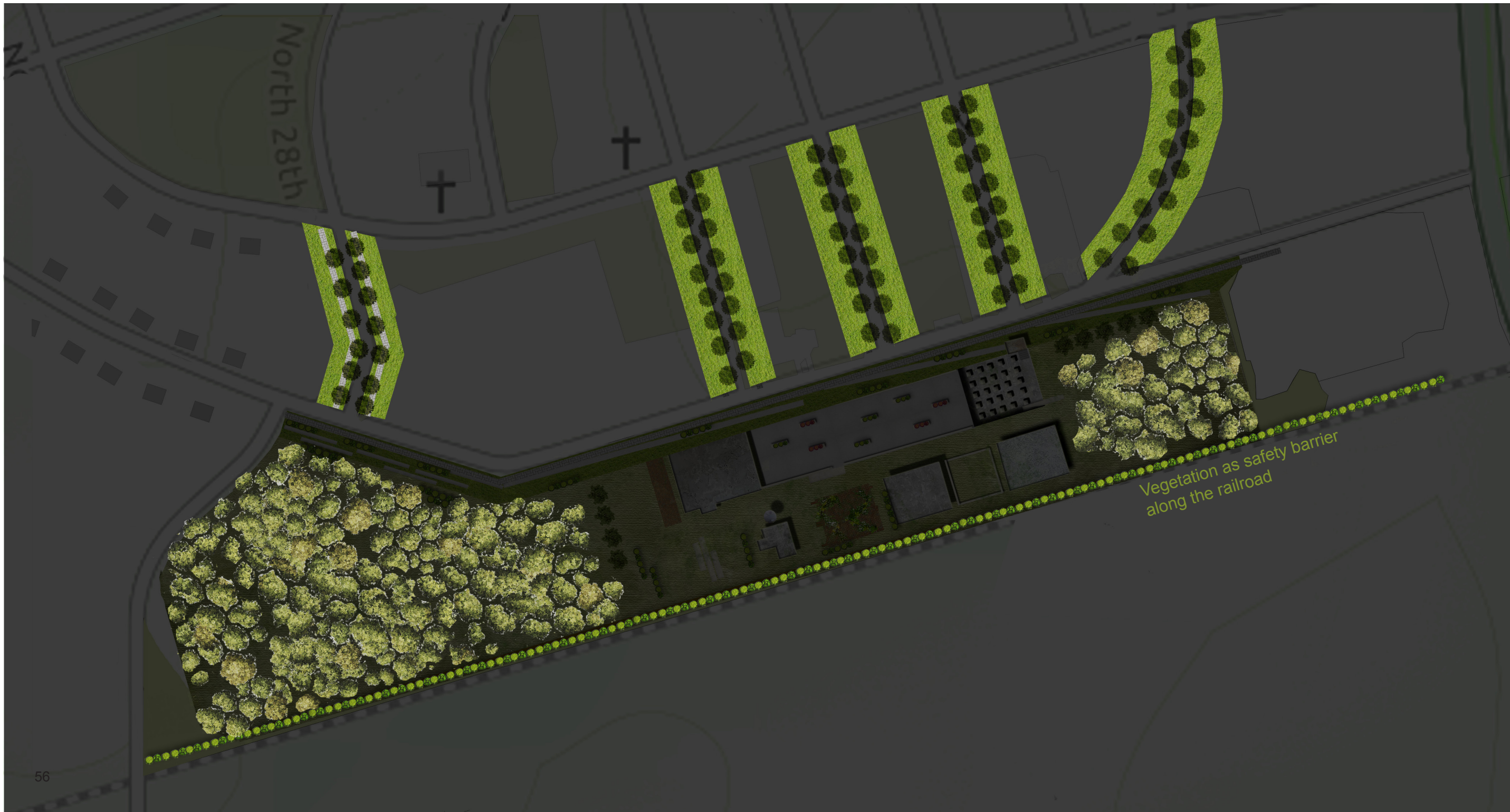
The design provides spaces for public events and movie-night.





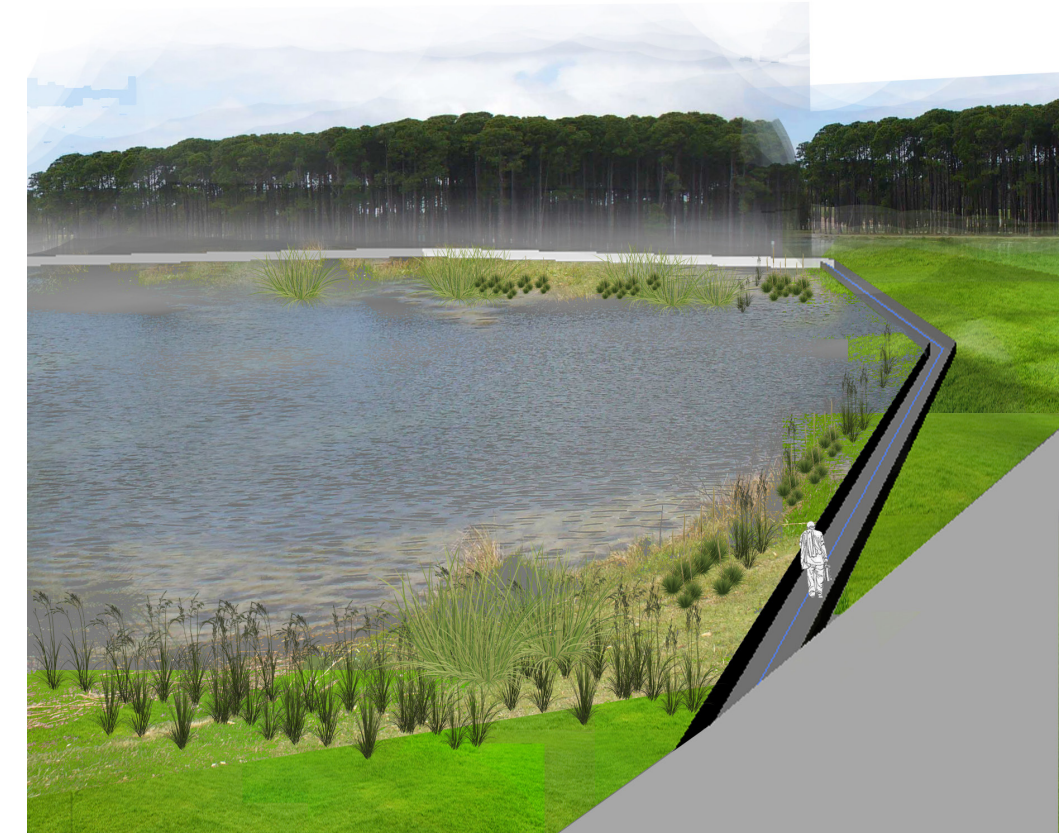
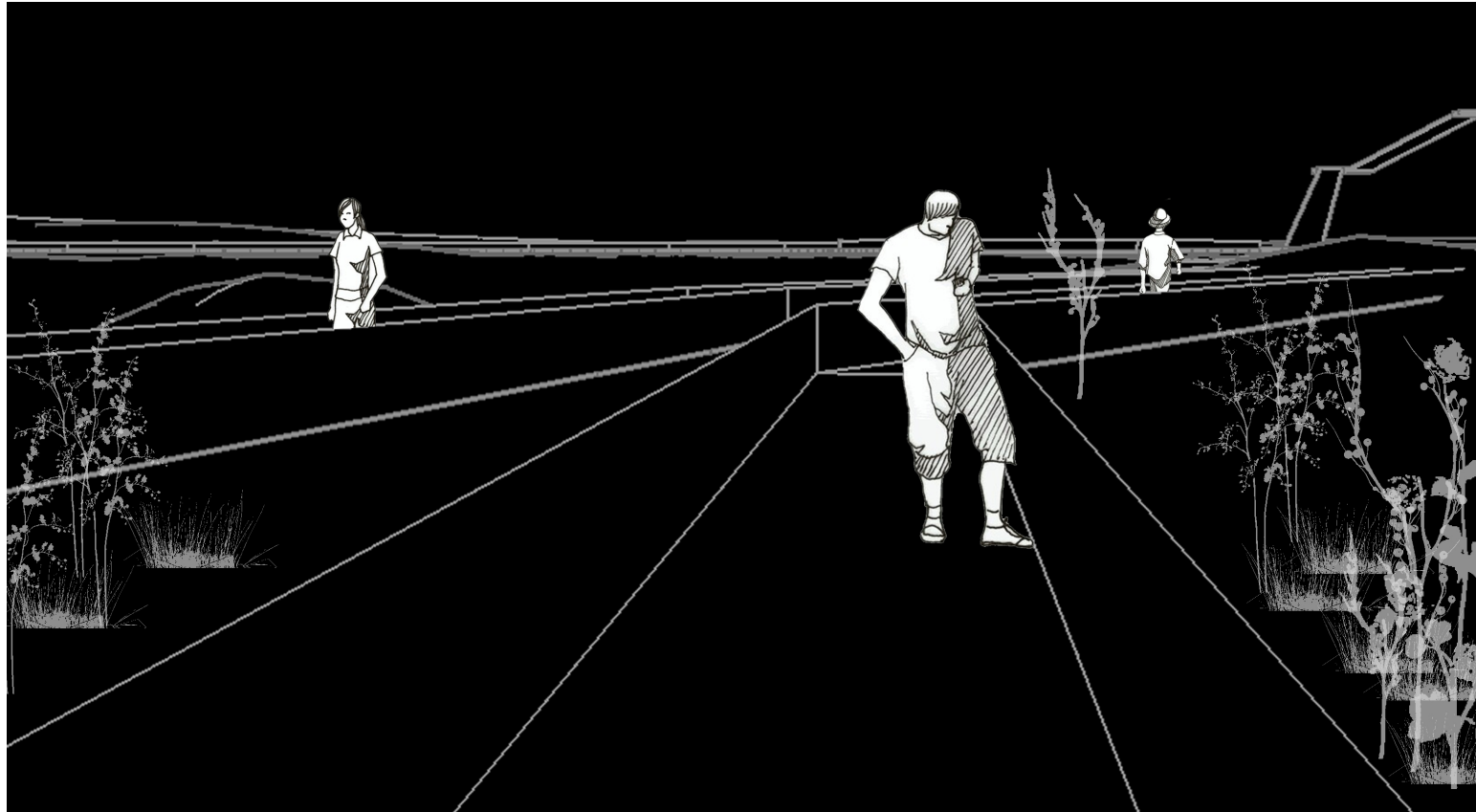
Safety and sensuality

Lightings are designed to increase the safety level of the site. They are also used to highlight the historical landmarks during the nights.



Vegetations are used as a cost-effective approach for beautifying and creating safety barriers.

The trails in the contaminated area keep the visitors away from the contaminated soil and water.



Chapter 5

Conclusion

Conclusion

The main task of this project is to revitalize the Pepper Mill town by regenerating social values in the adjacent community. Due to former meaningful interconnections between the residents and the abundant post-industrial site of the town, we propose to redevelop the post-industrial landscape of the site. The idea is to design a pleasant public space which, firstly, preserves the historic and cultural heritage of the site, and secondly, attracts people to spend considerable amount of time inside the site. The design, on one hand, restore the fading history of the town and makes the site an invaluable asset for the future generations of the community; and on the other hand, it solves current social issues which originate from lack of public spaces, lack of facilities for social activities and entertainment, and weak social connection opportunities in the community. The design aims to solve these issues by increasing the sense of belonging among the community and increasing the social connection opportunities by hosting the visitors inside the site. The unsafe and ruin buildings along with all associated contaminants and wastes are replaced by multifunctional and pleasant public spaces. The key points to achieve these goals are to preserve the historic landmarks, increase the time of visit, and above all to encourage the residents to walk from further locations into the site. Therefore, this design optimizes the integration of the landscape with the town and its adjacent areas.

It also provides safe and attractive trails which integrates several unique spaces inside the site. Other key points include beautifying, increasing the walkability and using non-destructive and adaptive decorations. Designing specific spaces for seating and participating in social activities like wall painting and watching movie are among other aspects of the design which increase the site attraction. The design shows that inexpensive and cost effective approaches can be applied to preserve the historic and cultural values of the site, and also to solve some social issues associated with the landscape of the town.



Chapter 6

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