

2023-01 UCSI SEM 5&6

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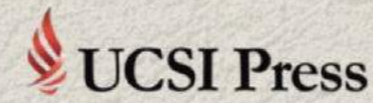
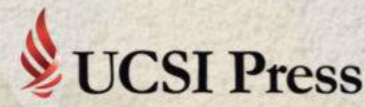
The Black Diamond

Batu Arang

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PREFACE

by James Lim

THE UNIT

Degree Unit A addresses urban and architectural conditions in locations undergoing critical change and over the years. Through a combination of research and creative practice, the Unit proposes interventions, which respond to urban challenges and introduce elements of cultural and imaginative vigor. We explore extremes of interrelated scales, from urban geographies through to the immediate and personal, to develop uncommon propositions. In this process, strategies formulate responsiveness to global and site conditions, understanding of scales, architectural sensibilities, as well as structural and material realities, to create social, spatial and time-based habitats and environments.

Batu Arang is a town in Gombak District, Selangor, Malaysia, that is located about 50 km (31 mi) from the capital Kuala Lumpur. Coal was first discovered in the region in 1908, when British authorities found large deposits of coal reserves that could be commercially viable and fuel a railway system. The town was established when the British started mining operations. In 1915, a railway system linking Batu Arang and Kuang was built to transport coal to the rest of the country. As coal output and demand increased, rail services to and from Kuala Lumpur expanded. The demand for coal from Batu Arang skyrocketed due to the First World War, which led to a reduction of coal imports. The local coal was frequently sold to the railway companies, power stations, tin mines, dredges, and end customers.

After the closure of the mine, many miners and workers moved out of town and many buildings became ruins, the coal mine filled with water, land faced soil erosion, and the railway line from Kuang was dismantled, effectively ended railway service in Batu Arang. Despite this, some residents remained in the town and shops, facilities, and amenities continue to operate. On October 16, 2011, the town celebrated 100 years since its establishment and was granted heritage town status to boost economic prospects of its residents and make it one of the most important tourist attractions in Selangor.

METHODOLOGY

To allow answers to questions and permit designs to come into their own expression, we apply diverse methodologies to articulate student's individual briefs, programs, and spatial propositions.

Working both collectively and individually in various locations and scales, we attempt to develop a complex ability to engage in critical design discourses. In this process we use drawings, models, photography, and film. Through an intense series of rational and intuitive explorations we find and articulate an inherent appropriateness and appearance to our self-defined objectives.

This practice helps to enhance our intellectual, creative, and sensory skills, to be able to shape tangible and intangible urban conditions. The methodologies will guide the work through its various stages of researching, designing, representing, and testing.

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3D Models Pictures of Former Workers' Sports Club

06

01 | INTRODUCTION

An introduction to the Semester 5 & 6 Unit A batch of 2023-01 and a reflection of the coal mining history at the chosen site; Batu Arang.

The history of a place is always present, and it's something that we need to work with." Peter Zumthor



Drawing by Chia Gyun Yuen, Unit A SABE UCSI University 2023/01



UNIT A's MANIFESTO

by Sarah Gwen Sathyamoorthy

In the Unit A Studio, we cultivate our own approach towards creating architecture by addressing urban and architectural conditions in locations which have undergone the transformative nature of time and celebrate stories embedded within the site's history. We combine research, creative practices, experimentation and interventions which respond to social, economic, environmental, and urban challenges locally.

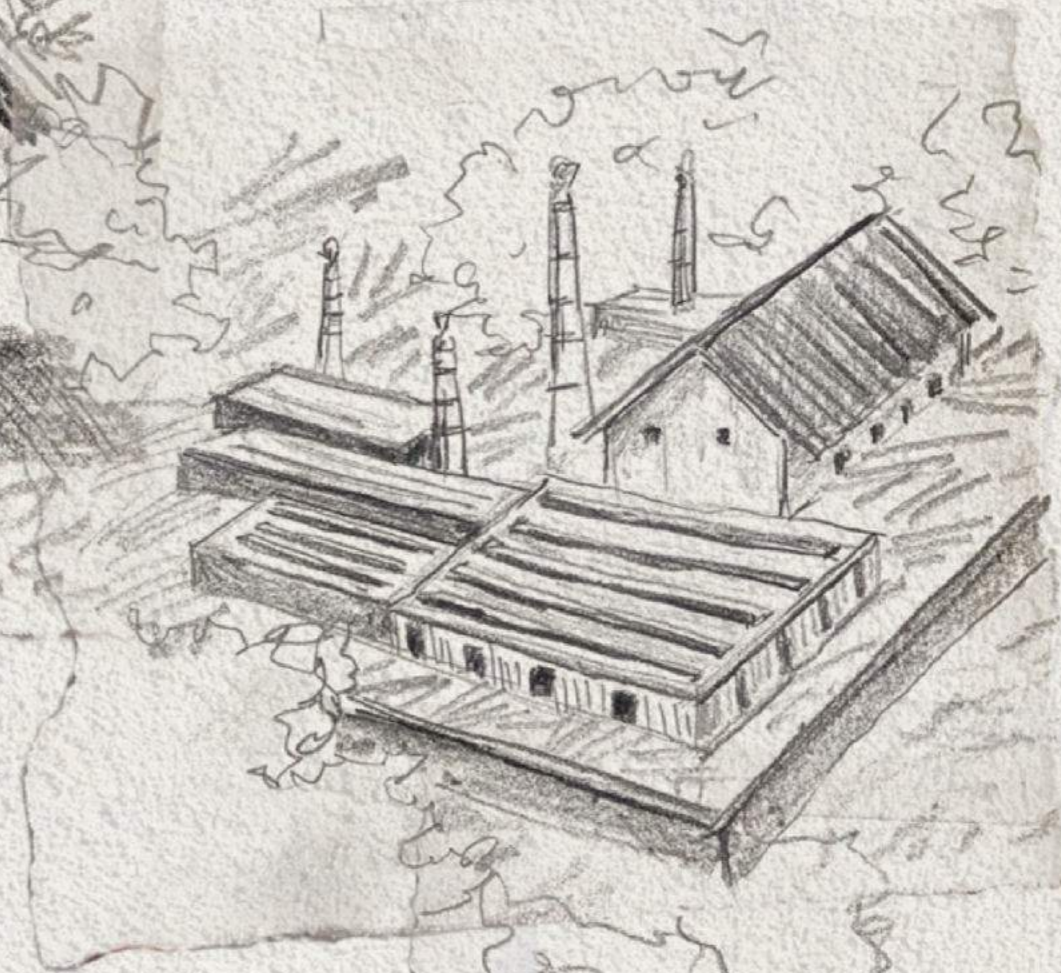
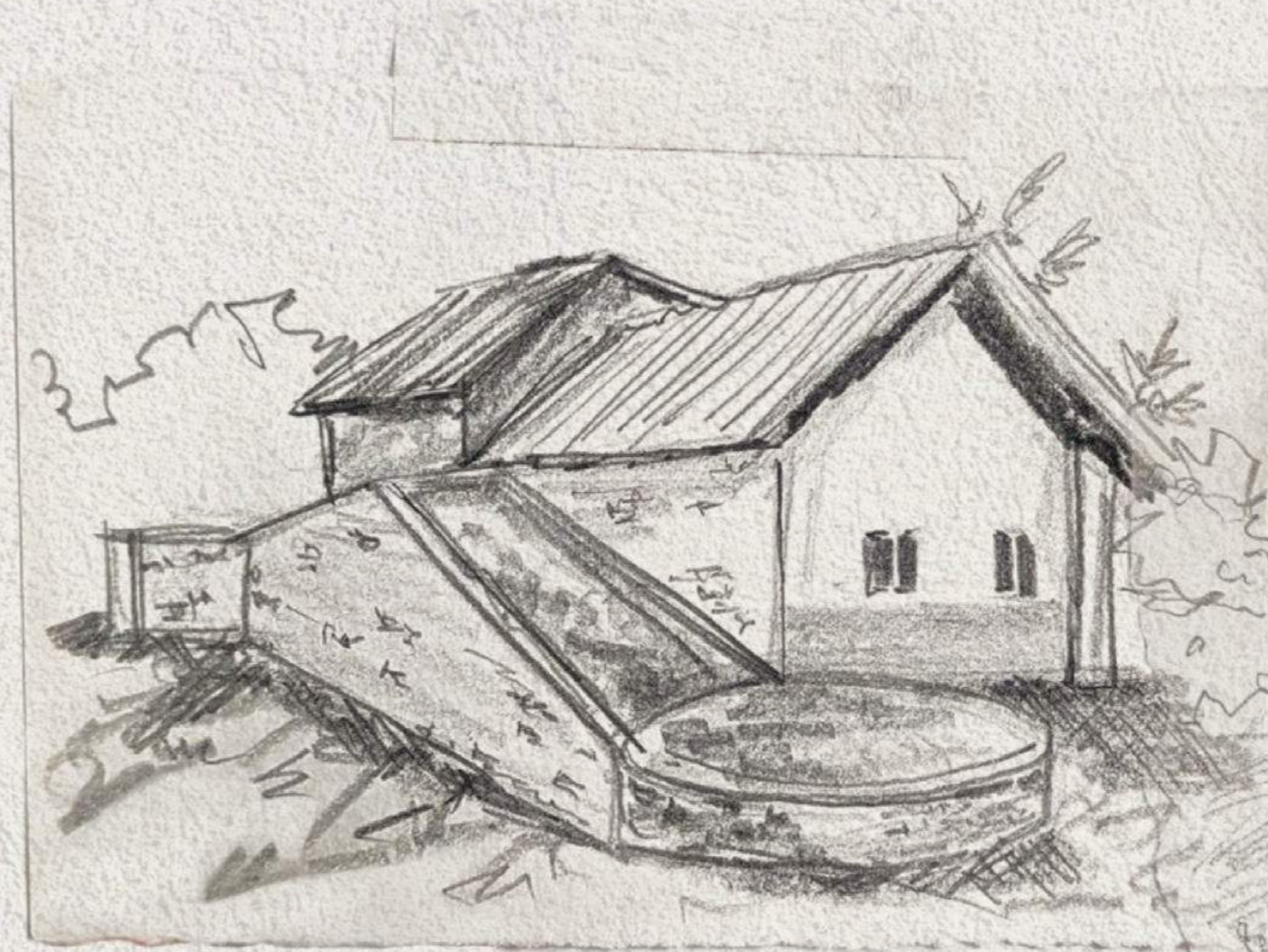
Our site is explored through interrelated scales, from urban geographies to personal, which help develop uncommon propositions. Processes involve strategies to showcase the understanding of the site, scale, architectural sensibilities, structural, material realities to create social, spatial, and time-based habitats. We make references to two essential books this semester: 'A Feeling of History' by Peter Zumthor, and 'Non-Referential Architecture' by Valerio Olgiati.

Exploration, both in terms of materiality and meaning, is used to craft spaces that evoke emotions and inspire communities. Through a profound understanding of context, our studio intends to extract hidden components at a site, used to interweave into the fabric of our designs. We aim to make a lasting impact on the social community, experimenting with manual techniques and compositions. Utilization of various mediums such as drawings, models, photography, film, mixed media and related expressive approaches allows to create architecture that enhance our intellectual, creative, and sensory skills, to be able to shape tangible and intangible urban conditions. Through an intense series of rational and intuitive explorations we find and articulate an inherent appropriateness and appearance to our self-defined objectives.

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02 | THE MORPHOLOGY OF BATU ARANG

A recollection of data involving inner works and the riveting timeline of Batu Arang. Unit A intends to work with Batu Arang due to the critical change it has undergone over the years. Through interviews, prior research, and site visits, the Unit A batch compiled the essentials to understand the site in detail.



Sketches by Chia Gyun Yuen,
Unit A SABE UCSI University 2023/01



Past ...

Batu Arang is nestled in the lush suburbs on the west of Gombak District, Selangor. Directly accessible through Jalan Ijok and Jalan Rawang, this heritage town inherits its name from its geological traits and socio-economic impact on Malaya from 1913-1970. A bustling coal mining town and industry was established here when it had been discovered, garnering 25000 workers who found their sustenance here. From 1950, the demand for coal increased, hence mining hours, manpower, and the economy grew with it. Batu Arang had experienced the effects of power and occupation of the British and Japanese. During British rule, Batu Arang was one of the busiest towns in Selangor and populated majorly by pupils of Chinese ethnicity. The largest railway transport system belonged to the town from 1950-1960, reflecting the importance of coal mining at the time. The brick industry was also the spur of Batu Arang's prosperity. However, the splendor of Batu Arang sank in 1961 after Malaysia regained independence from the British due to the introduction of diesel industry.

Present ...

Currently, the complex history is found in traces at the site in forms of ruins and buildings, which attracts visitors annually to discover the Innerworks of a once thriving town. The chimneys of the brick factory are kept undemolished as an emblem of the site's history. The population majority includes the elders and youth, as most residents move away seeking for jobs and a quality lifestyle. Due to the lack of activity in modern times, most stores will close at 3pm, residents will then enjoy leisure activities. Since the Malaysian independence, residents had demolished all wooden structure in their homes to renovate with brick and concrete. Over time, Batu Arang has been gradually overlooked even by locals, stopping by at neighbouring towns like Rawang. Perhaps Batu Arang is more attractive towards those who seek a city getaway and adventurous souls.

1910s

Batu Arang's coal mining industry continued to grow, with the town becoming a major center for coal production in Malaya

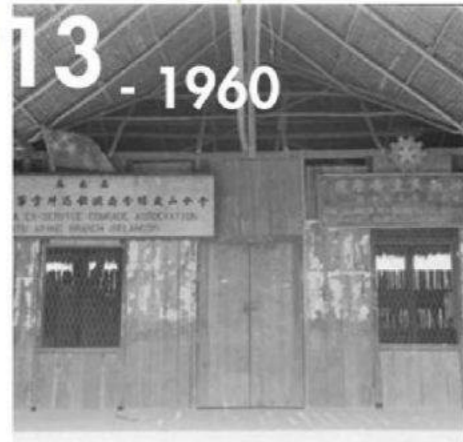
The industry employed thousands of workers, including many Chinese immigrants.

1915



First coal release from the Kuang-Batu Arang (KTM) railroad construction.

1913 - 1960



Malayan Collieries Ltd. is a coal mining company founded by John Archibald Russell.

At that time, coal was the main source of energy, besides charcoal and firewood.

1920s

The town of Batu Arang grew rapidly, with new shops, schools, and residential areas being built to accommodate the growing population.

The MCL also built amenities for its workers, such as a hospital and sports facilities.

The town of Batu Arang is named based on the coal found.

Founded of Batu Arang Heritage: The late Haji Ahmad Rafie bin Yab.



1908

1930

The coal industry is Malaya's largest industrial organisation.

1937

The miners managed to retake control of the mine from the British masters for a short time.

1942



Japan took over rule of British. Batu Arang Town was bombarded by the British in an operation to reclaim Malaya from the Japanese army during World War II.

Workers' organisations went on strike, and 6000 people demonstrated in public.

1936

During World War II, Batu Arang was occupied by Japanese forces, who used the coal mines for their war effort.

Many of the local workers were forced to work in the mines under harsh conditions.

1941 - 1945

1948



Batu Arang Town was bombarded by the British in an operation to reclaim Malaya from the Japanese army during World War II.

1950s

After Malaysia gained independence from Britain in 1957, the government began to nationalize the country's natural resources, including coal.

The MCL was taken over by the government and renamed the Malayan Collieries Corporation (MCC).

1960

Coal production ceased due to dwindling economic resources.

The industry was facing competition from other sources of energy, such as oil and gas.

1949

The Coal Workers Trade Union became an affiliate of the Malayan Trades Union Congress (MTUC) when the latter was formed.

The Federation government hired a consulting firm, Messrs Power Duffryn Technical Services Limited, to investigate the demand for Malayan coal, economic reserves of coal at Batu Arang and coal extraction methods.

1954

1980s

The coal mining industry in Batu Arang was in decline. Many of the remaining mines were smaller and less profitable, and the town was beginning to experience an economic downturn.

Now

Batu Arang Town has over 10 tunnels and air shafts for workers in tunnels with a depth of 300 meters underground.

Due to the importance of geological and historical heritage, Batu Arang is developed as a geo site for geotourism within the Gombak Hulu Langat-Geopark.

1970s

The global oil crisis of the 1970s led to a decline in demand for coal, and many mines in Batu Arang were forced to close.

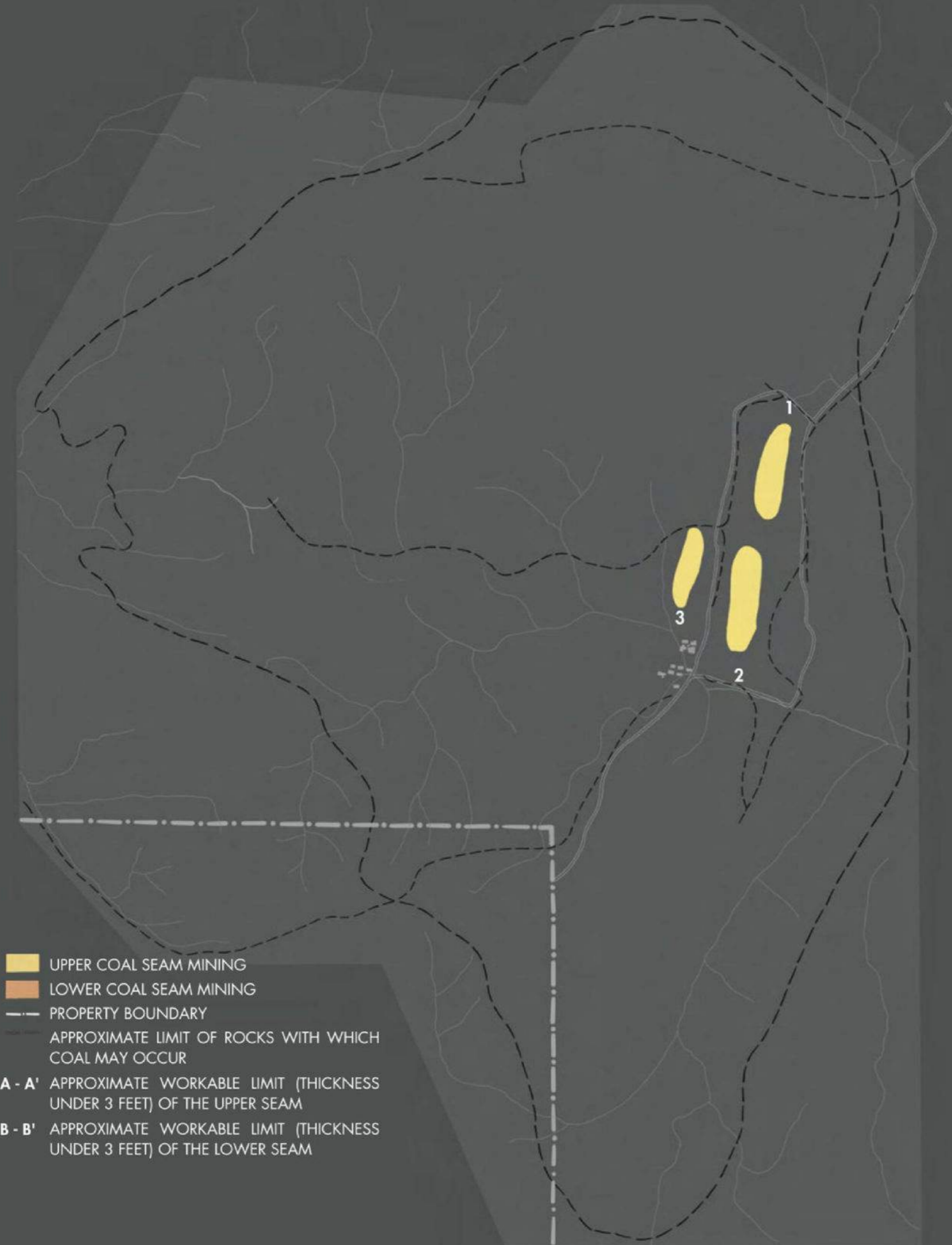
The MCC struggled to remain profitable, and the government began to consider diversifying the local economy.

The last coal mine in Batu Arang closed in 1997.

The town has since transitioned to a residential area, with many former mine workers and their families remaining in the area.

The local economy now relies mainly on small businesses, agriculture, and tourism.

1990s



- UPPER COAL SEAM MINING
- LOWER COAL SEAM MINING
- PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF ROCKS WITH WHICH COAL MAY OCCUR
- A - A' APPROXIMATE WORKABLE LIMIT (THICKNESS UNDER 3 FEET) OF THE UPPER SEAM
- B - B' APPROXIMATE WORKABLE LIMIT (THICKNESS UNDER 3 FEET) OF THE LOWER SEAM



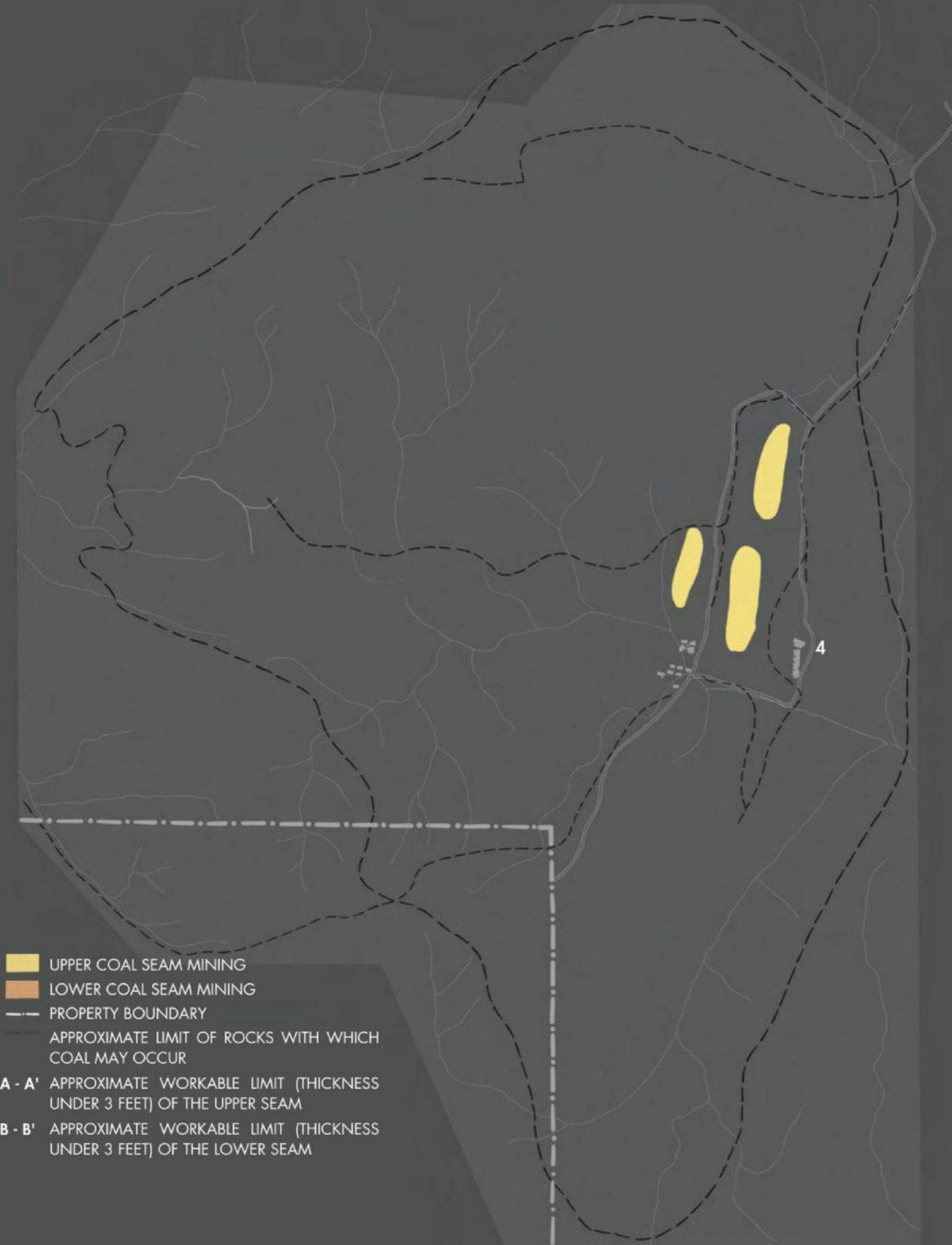
1 Old roundabout
 The old roundabout was built for the 3 main directions during then. One direction towards the North connecting with the railway tracks.



2 Coal Mining Area
 This is the overground coal mining area that they started at first.
 When the Japanese occupied the area, they repaired the damaged equipment and hired more people to mine coal. Their mining methods, however, have left a devastating effect on the coal mine because they only focused on surface mining.

3 Former Mining Workers' Settlement
 It is a settlement for coal miners and their families.

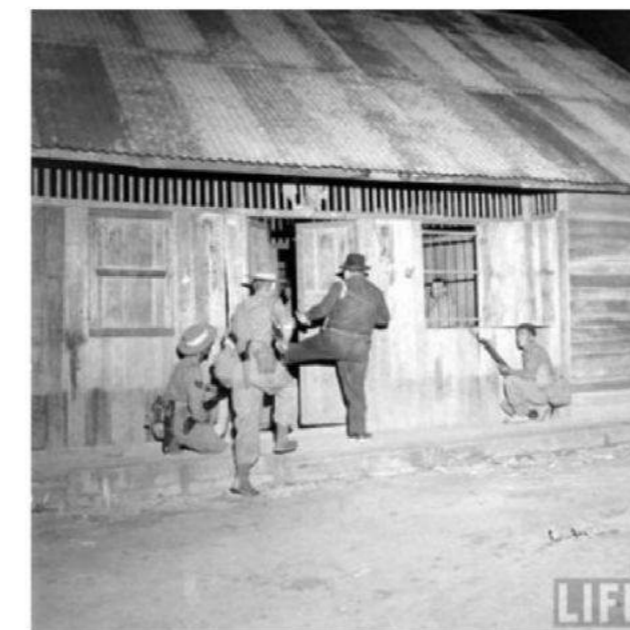
Semi-detached Houses for Senior Asian Staff.



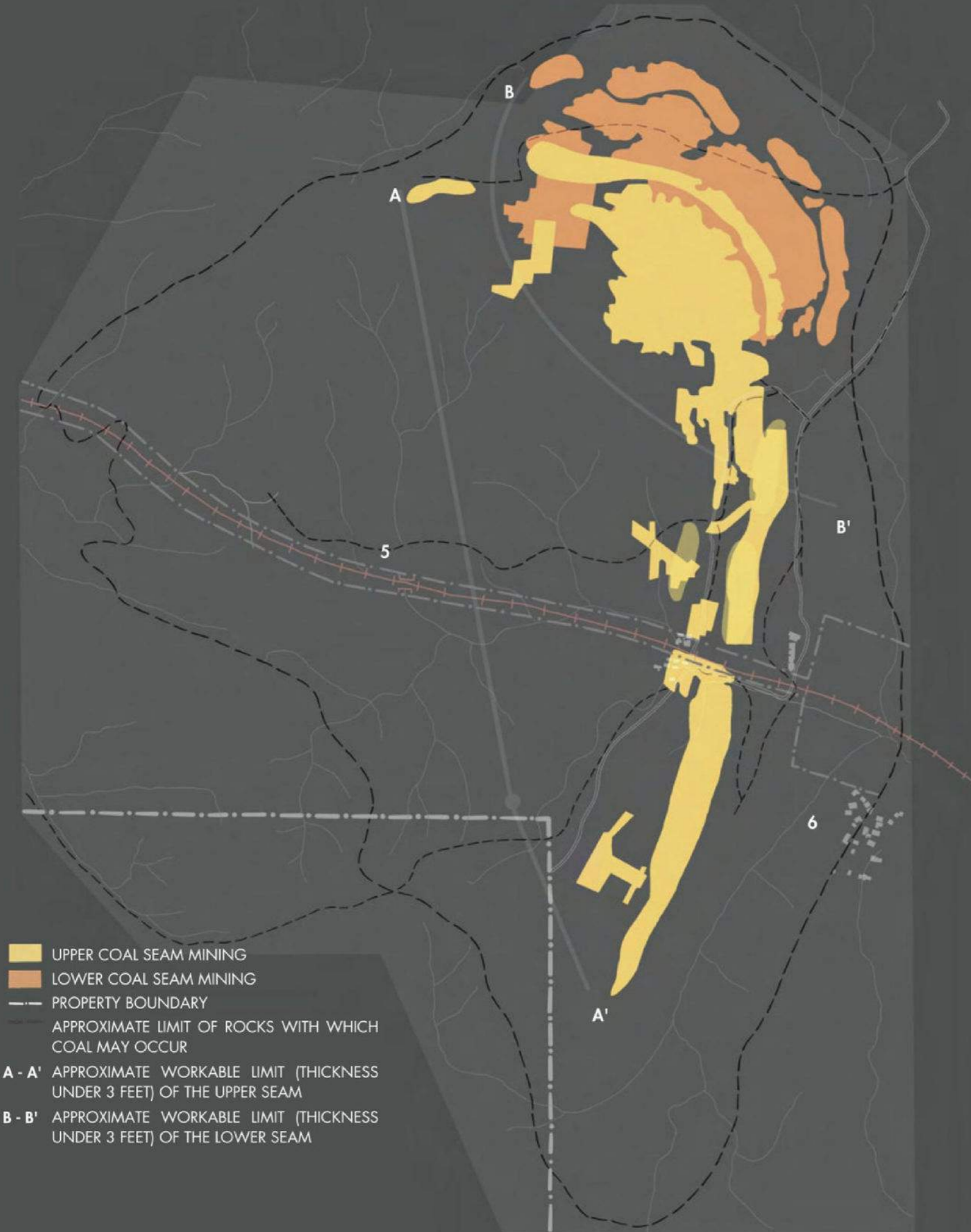
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4 Malayan Collieries Ltd Shophouses

The Company was founded in June 1913 by the late J. A. Russell, to whom a Malay brought the first sample of coal. Mr. Russell's vision and initiative were mainly instrumental in transforming the jungle site into a thriving industrial centre which, eventually, became the second most populous town in Selangor.



Police Forces, Gurkha Army and British Security Forces conducting Military Operations in combating insurgency and terrorist activities by PKM.



- UPPER COAL SEAM MINING
- LOWER COAL SEAM MINING
- PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF ROCKS WITH WHICH COAL MAY OCCUR
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5 Batu Arang Railway Station

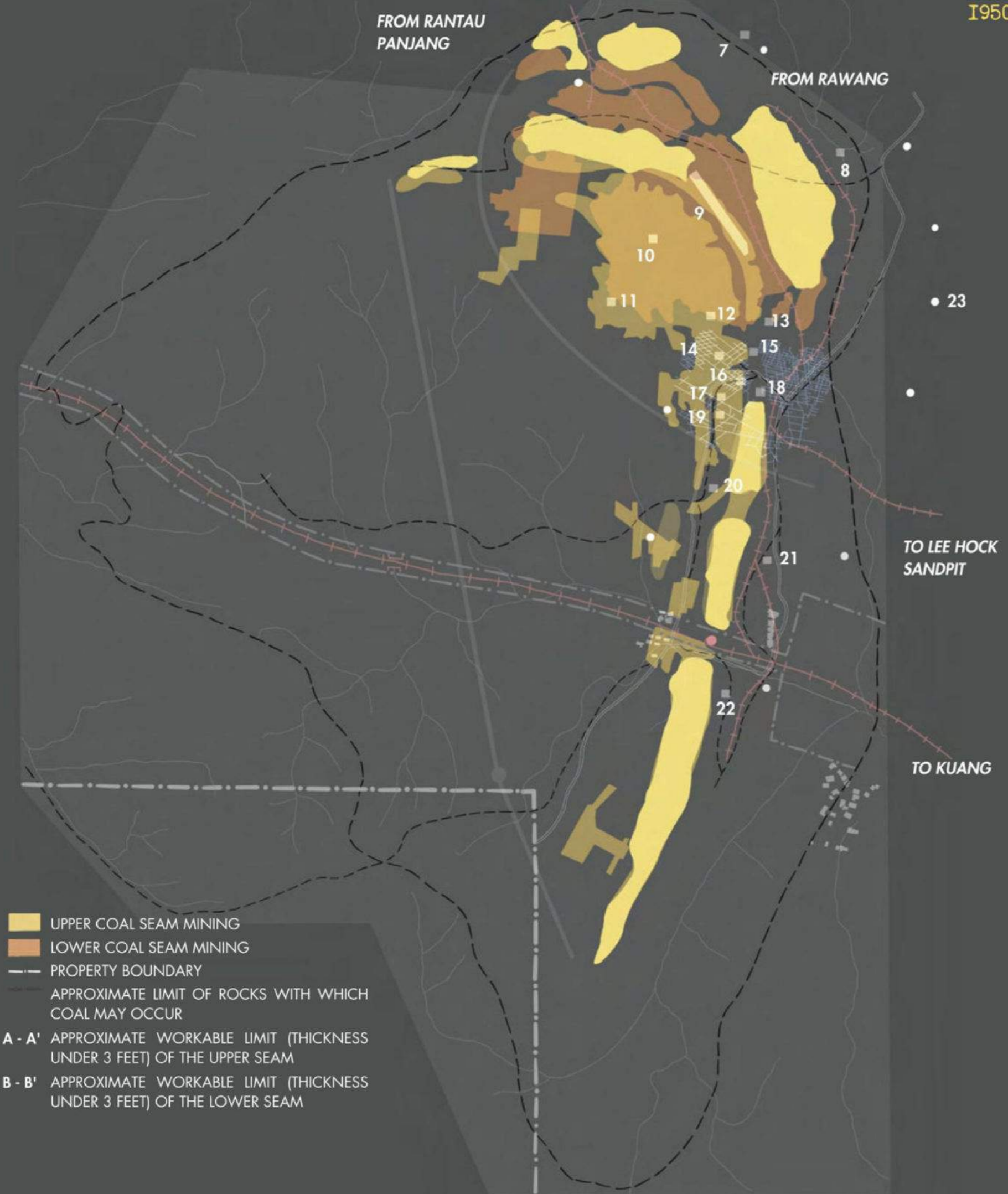
This was built for the transportation of coals from mining site back to the collieries warehouses.
Former Batu Arang railway station was demolished in 1971.

6 Small Town

It was developed into an accommodation town. Anuar Resort, which is a country house can be found here.



The destruction caused by sabotage by Terrorists from the PKM in the Emergency era in 1948.



9 Air Shaft

This building houses one of the former entrances to the disused mine shafts.



There was a communist attack on the colliery in July 1948 which together with the attack on an estate at Sungei Siput marked the beginning of the Emergency. The photos shows machinery which was wrecked by pushing it over the edge of the opencast workings.



14 Brick Factory

There was a large brick factory in the town and three of its tall brick chimneys can still be seen, together with the walls of the compound and other remnants.

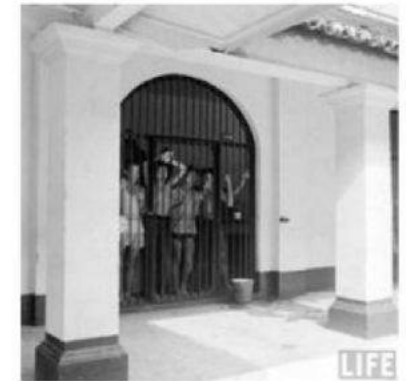
More Mining Area

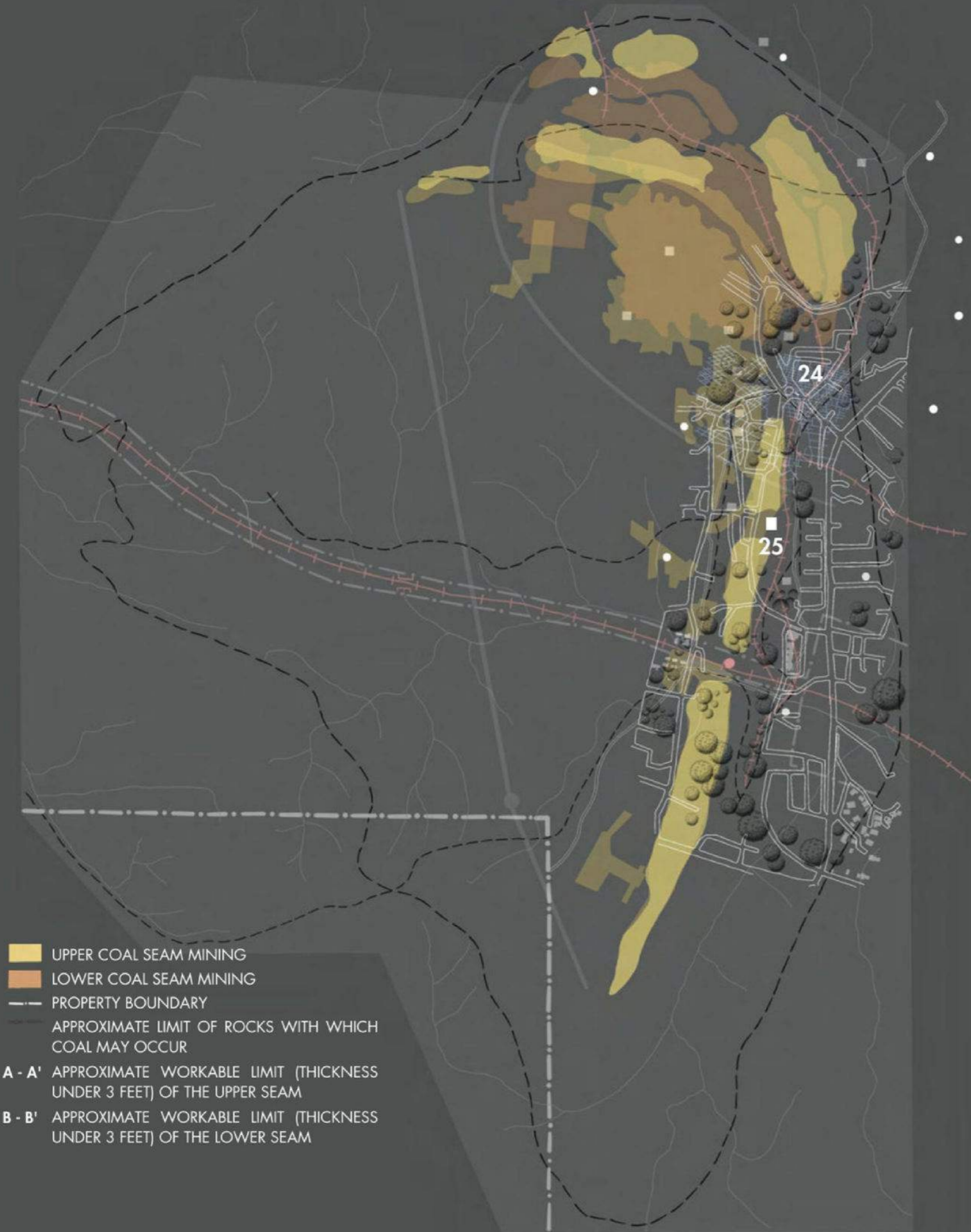
During Japanese Occupation (1941 - 1945), more and more overground mining happened.

People who took part in insurrection and terrorist activities were caught in prison.

LEGENDS

7	MAGAZINE
8	SAWMILL
10 / 11	RESERVOIR
12	HOSPITAL
13	POWER HOUSE
15	MAIN OFFICE
16	POLICE STATION
17	CINEMA HALL
18	ENGLISH SCHOOL
19	SPORT CLUB
20	CHINESE SCHOOL
21	TAMIL SCHOOL
22	WASHERY
23	OBSERVATION TOWER





24 New roundabout

The new roundabout was built for the accessibility to 5 directions. It is more functional compared to the old roundabout that only linked to 3 directions in short distances.

Old roundabout

This 1910 roundabout was dismantled after the railway service in Batu Arang was being stopped.



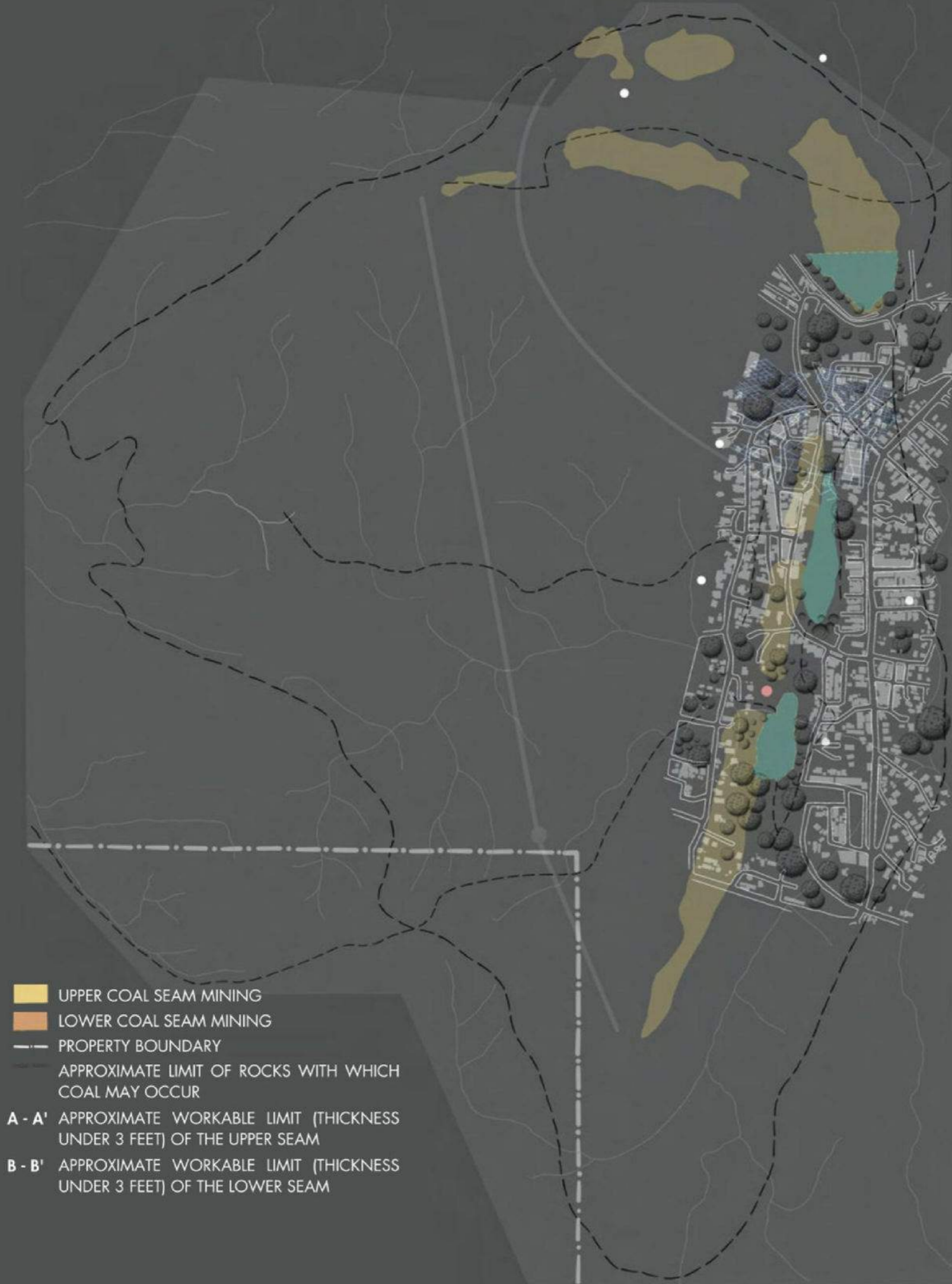
25 Sin Fatt Bakery & Confectionery

The shop was opened in 1965. It was now turned to sell online as well to increase their sales and improve their business.

Nowadays, they are no more providing dine-in service maybe due to Covid-19 pandemic even currently everything already back to normal.

They found people hiding in the forest.





Housing Area

Existing mining area converted into housing area and labelled according to the mines sequence O.C. (Opencast).

This place was previously one of the mining sites. It has been turned into housing area to accommodate much more residents in Batu Arang.

Heritage Town

After the closure of the mine, many miners and workers moved out of town and many buildings became ruins, the coal mine filled with water, land faced soil erosion, and the railway line from Kuang was dismantled, effectively ended railway service in Batu Arang.

Batu Arang to be prompted as heritage town.



Post Office

The post office was badly damaged in 1955 by subsidence in a disused underground mine shaft.



A geologic threat is a geologic condition or geologic process which can cause threat to health, life, limb, or property. (BC Land Use Department)



Sinkholes



Subsidence



Swelling of soil and rock



Landslides

Coping with geologic hazards:

1. **Avoid developing infrastructure or human settlements** the areas where known hazards exist. Such areas can be converted into **parks**.
2. Evaluate the **potential risk** of a hazard, if activated.
3. Minimize the effect of the hazards by **engineering design** and **appropriate zoning**.

It is generally not recommended to build permanent buildings or structures. However, there may be some types of buildings that can be built in these areas, provided that they are designed and constructed to withstand potential geological hazards.

1. **Temporary structures** such as tents, prefabricated buildings, or portable cabins can be used in areas prone to geological hazards. These structures can be easily moved or dismantled in case of an emergency.
2. **Low-rise structures** such as single-story buildings or bungalows may be more suitable in areas prone to geological hazards as they are less likely to suffer severe damage compared to taller buildings.
3. **Eco-friendly buildings** such as earth-sheltered homes or green roofs can be constructed in areas prone to landslides as they are designed to blend in with the natural environment.
4. **Earthquake-resistant structures** designed and constructed with earthquake-resistant materials and techniques such as reinforced concrete, steel frames, or seismic isolation systems can withstand the forces of an earthquake.



There are 9 zone categories that were used for RKK Batu Arang 2030, which are listed down below.

Residential Zone

- i. Providing various types of housing to meet the needs of the population's future locale and society.
- ii. Realizing a more quality housing environment.
- iii. Realizing harmony between new development and the region's existing residences.

Commercial Zone

- i. Preservation of commercial area zones in Bandar Batu Arang
- ii. Reserve a new commercial zone that acts as a commercial center and a new service that offers various types of business. This also provide opportunities for the provision of various types of commerce and hospitality to residents in Batu Arang in accordance with the zoning reserve housing area.

Industrial Zone

- i. Preservation of industrial zones based on RTMPS 2020.
- ii. Trends in industrial development outside of the 2020 RT MPS industrial zone requires re-examination of industrial zone reserves in particular east area of RKK Batu Arang.

Community Convenience Zone

- i. Provision of a multipurpose board to meet the needs of residents in Batu Arang.
- ii. Preservation of community convenience areas such as schools, mosques cemeteries, police stations, clinics and churches to provide services to residents.
- iii. Existence of cemetery area.

Recreation Zone

- i. Reserves for expansion of field and recreation zones focused on around bodies of water.
- ii. Takes into account opportunities to maintain OS6 water bodies that are has been identified as a Geopark Area. Therefore, the area is spacious this is allowed for limited activities to support reserves Geopark Center.
- iii. Any activity within the field area needs to refer to Class Land use that has been determined

Water Body Zone

- i. The preservation of the water body zone to maintain the natural environment and preserve the resources naturally found in Bandar Batu Arang.
- ii. The water body zone may be used optimally according to suitability:
 - OC7 is justified for the development of solar fields.
 - OC6 is reserved for appropriate water recreational use.

Legends:

- 1. Batu Arang Heritage Town Column
- 2. Row of Old Shops
- 3. Chinese Traditional Shop House
- 4. Former Mine Worker Sports Club
- 5. Chap Khuan Chinese Primary School
- 6. Remains of Charcoal Mining Tunnel
- 7. Former Asian Officer's Residences
- 8. Former Mine Worker's Settlements
- 9. Green Avenue
- 10. Remains of Batu Arang Railway Station
- 11. Remains of Railway Bridge
- 12. Former Charcoal Mining Site
- 13. Historic Post Office
- 14. Tuanku Abdul Rahman Secondary School
- 15. Former Malayan Office Collieries Limited & Gurkha Soldiers' Barracks
- 16. Remains of Brick Factory
- 17. Air Shaft Building
- 18. Former European Club





1. Batu Arang Heritage Town Column

The Town Column sits at the center of the town as it resembles the chimney at the nearby brick factory.



2. Row of Old Shops

The remaining two rows of old shopping streets that were built from the era of the 1920s.



3. Chinese Traditional Shop House

More shop houses at the other side of the padang sports field, as well as the public market.



4. Former Mine Workers Sports Club

A sports club right beside of a padang sports field for the mine worker to have their entertainment or workout, currently are only used as a gathering space.



5. Chap Khuan Chinese Primary School

With the material come from the brick factory, the primary school still standing still to provide educational service for the children in Batu Arang.



6. Remains of Charcoal Mining Tunnel

Looks like a normal grassy field if observed from afar, the inner part of the mining tunnel are already flooded and cannot be accessed.



7. Former Asian Officers' Residences

The houses built for senior local staff at the colliery to live, now most of them are served as normal residential houses for local people.



8. Former Mine Workers' Settlement

The barrack-style blocks for the ordinary miners to live, now serve as the location of the visitor center.



9. Green Avenue

The old railway line is located here but was demolished after the mining site closed down.



10. Remains of B. Arang Railway Station

A branch of the KL-Rawang railway connected to Batu Arang to transport the coal mine, it was no longer existed and nowadays are occupied by a farm.



11. Remains of Railway Bridge Primary School

With a signboard to commemorate, the railway bridge are no longer existed.



12. Former Charcoal Mining Site

The signboard nearby the scenic lake, it is where the open charcoal mine used to be existed.



**13.
Historic Post Office**

The post office are used to be heavily damaged but repaired and be reused till nowadays.



**16.
Remains of Brick Factory**

Used to be a large brick factory in the town, now only the chimney and brickwall can be seen.



**14.
Tuanku Abdul Rahman Secondary School**

The building was originally a English School by Malayan Colleries, now is a governmental secondary school.



**17.
Air Shaft Building**

This building are where mine workers used to be an entrance to mine tunnel, now appears to be used by a political party.



**15.
Former Malayan Office Colleries Limited & Gurkha Soldiers' Barracks**

One of the building are served as the office for the Malayan Colleries officer, but abandoned and unuse today.



**18.
Former European Club**

Located on a hilltop having the best view to look into the town of Batu Arang. Used to be a gathering space for Former European, now are occupied by local residences.



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03 | FILM DOCUMENTATION THROUGH FILMING & MODEL MAKING

"Cinematic architecture is the art of creating spaces that not only serve as a backdrop but actively participate in telling stories, setting moods, and immersing viewers in a narrative." - Bjarke Ingels

This film uncovers the hidden tales and rich history of this remarkable town from its beginnings as a coal mining settlement to its transformation into a captivating destination, this documentary delves deep into the layers of Batu Arang's past, present, and future.

The film captures captivating landscapes, charming streets, and intriguing remnants of its industrial heritage. Be transported back in time as we unravel the stories of the coal miners, their toil and triumphs, and the enduring spirit of a community shaped by the coal industry.

Witness the architectural treasures that have stood the test of time, bearing witness to the town's glorious past. Through interviews with local residents of Batu Arang, we piece together a tapestry of memories, anecdotes, and insights.

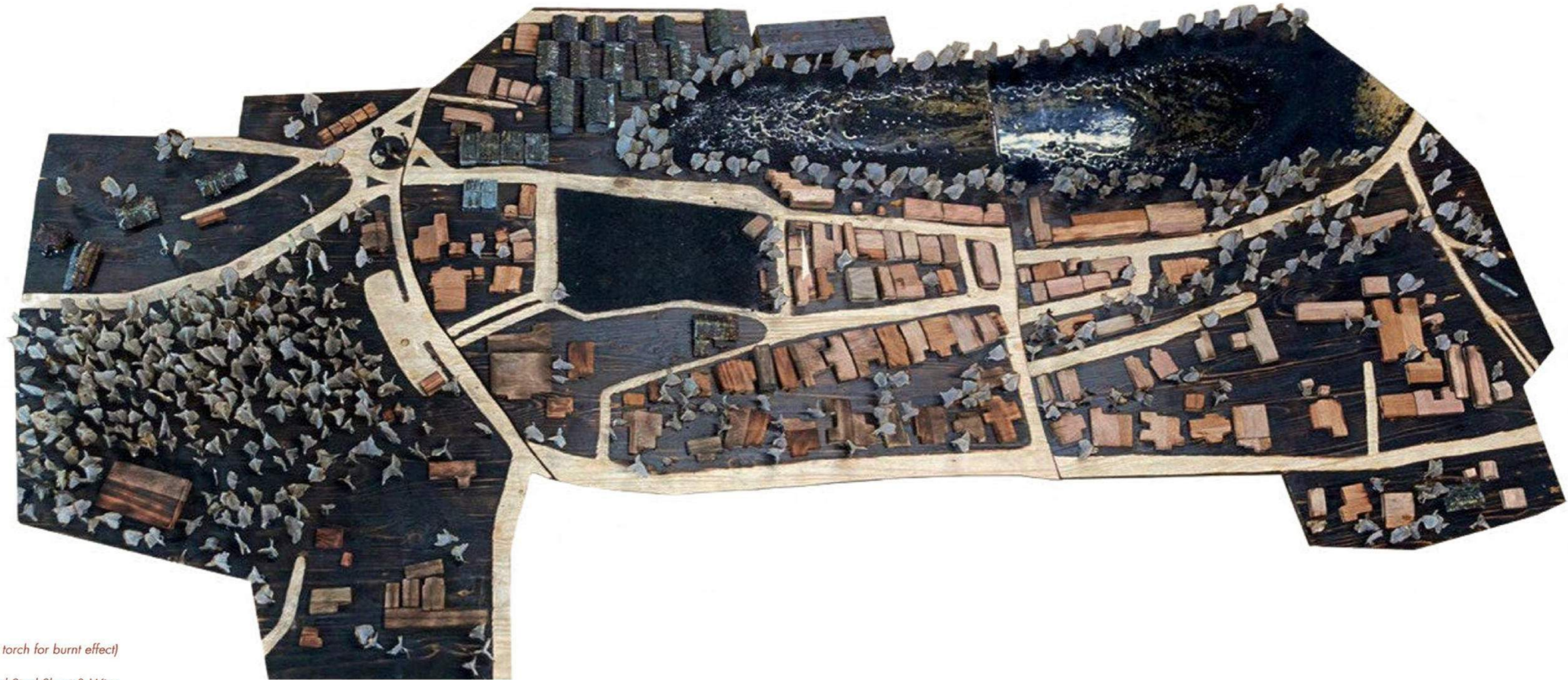


Painting by Yip Le Yi, Unit A SABE UCSI University 2023/01

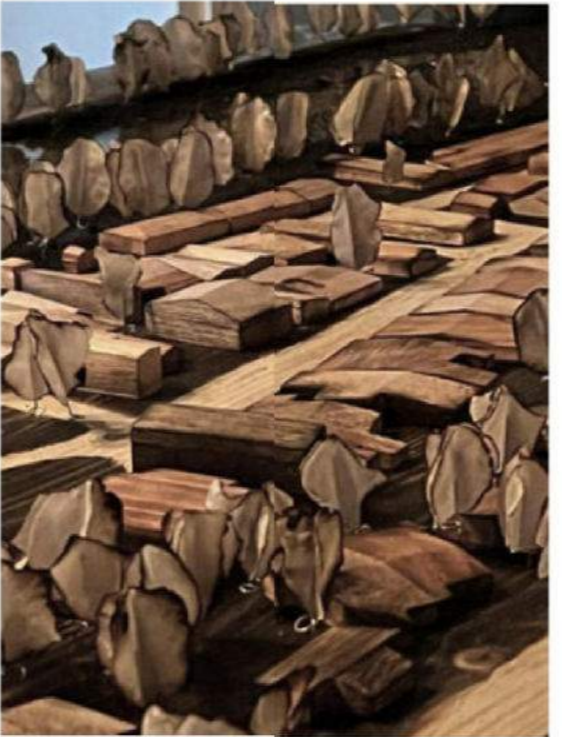
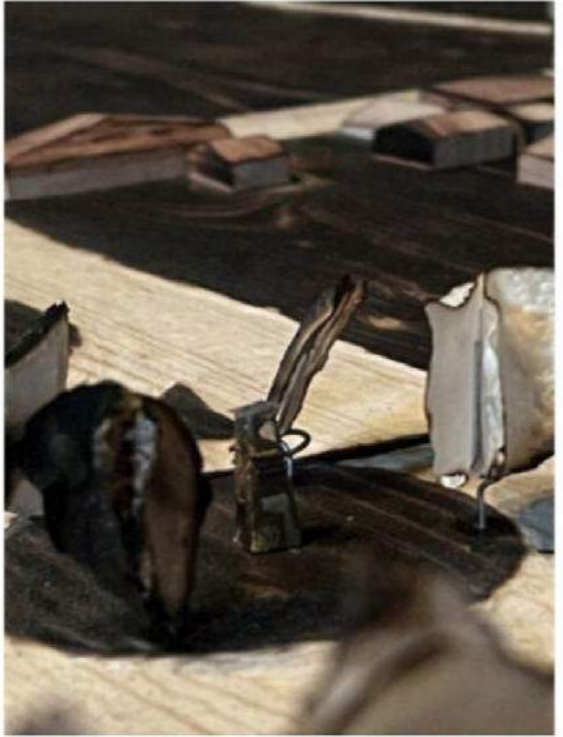
A tactile prototype of the focused town area, intentional with materiality.

"We don't create architecture for the sake of beauty. We create architecture to articulate ideas."
Valerio Olgiati





Site Model
Group Work
Materials
Base: Pine Wood (blow torch for burnt effect)
Street: carved into base
Important Building: Rusted Steel Sheet & Wire
Tree: Tracing Paper, Steel Wire



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04 | THE FEELING OF HISTORY

"The task of architecture is to evoke a sense of place, a sense of belonging, and a sense of respect for history."

Peter Zumthor

Unit A focuses on proposing responses to the site offerings, Project 1 combines research and creative practices to introduce elements of cultural and imaginative vigor through manipulation of light, space, and form.

"The city is not just a physical entity, it's a complex and contested social space that reflects the struggles and aspirations of its inhabitants."

Edward Soja



Painting by Yip Le Yi, Unit A SABE UCSI University 2023/01

His Monologue

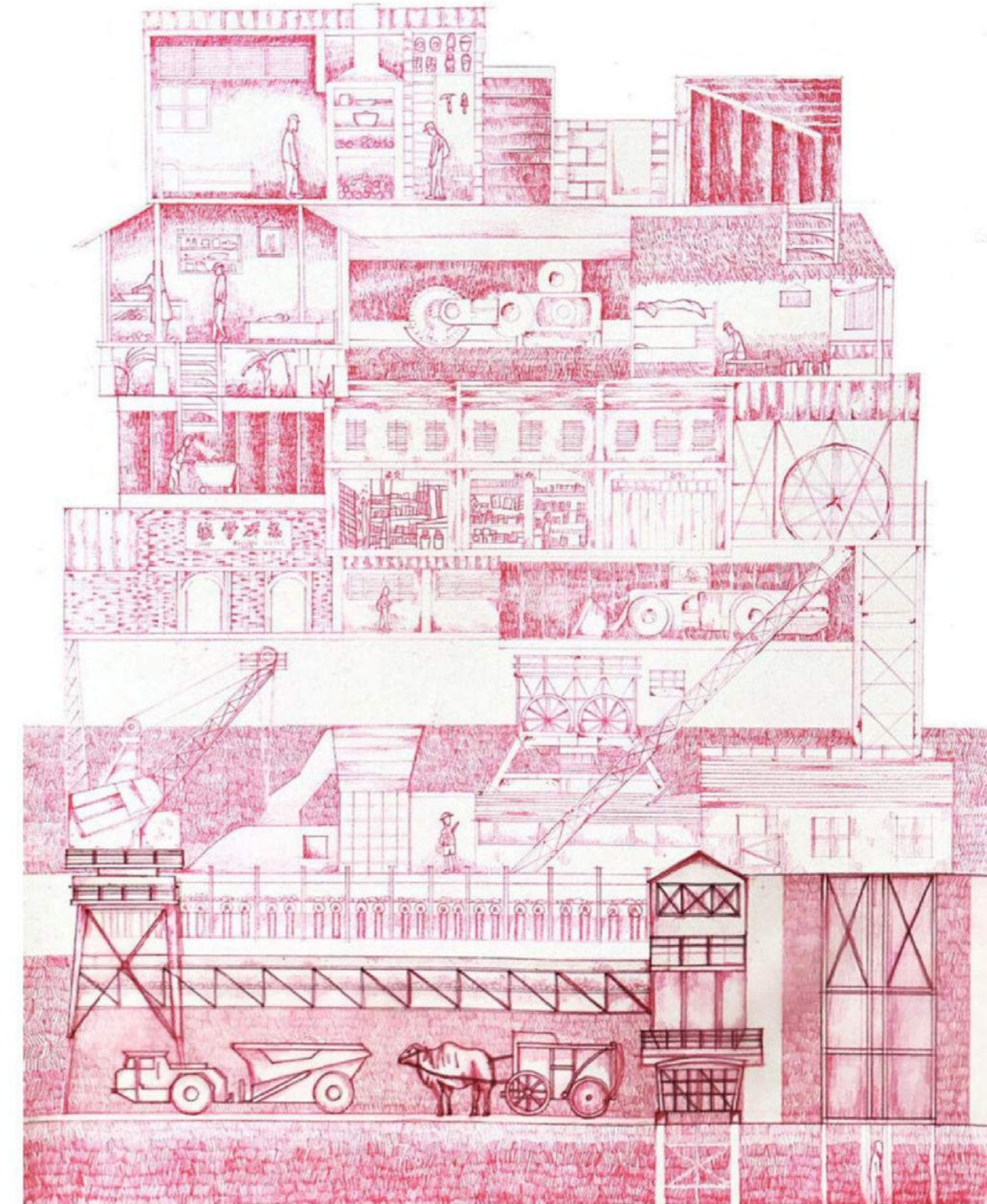
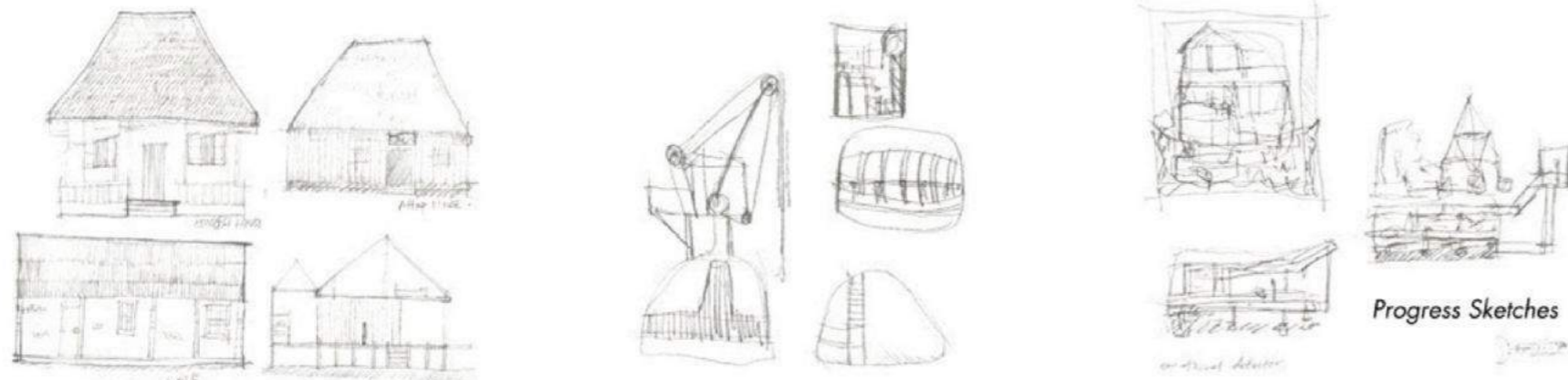
This story is about a coal miner who writes his diary after learning to write from a letter writer. The man's son discovers his father's diary, which reveals the anguish of his life as a child laborer and coal miner. This story emphasizes the hardships faced by coal miners, the impact on their families, and the theme of hidden truths.

He worked as a child laborer at a coal mining site when he was 15 years old and was brought from China to Malaya. The workers initially lived together in the former worker settlement or kongsi house. Once they got married, they were provided with atapp squatter huts to live in.

In 1942, the Japanese plundered the mines, taking 1,366,440 tons. Anti-Japanese sentiment began to grow in Malaya. To destroy the Communists, the Japanese general was extremely cruel. He was taken to an underground mining site and murdered by them. The incident was disguised as an accident by the Japanese.

His son grew up, and one day, when he decided to move their home, he discovered an old metal box. Inside the box, he found his father's diary and his old equipment. During that time, he had learned to write with a letter writer. As his son opened the diary, the words revealed his father's anxiety and despair during his life as a child laborer and coal miner.

The abstract model simulates the anxiety and the feelings of coal miners when they work in a narrow, underground coal mining site that is full of risks.



Abstract Model

Territorial Mapping

When I speak of emotional reconstruction, what I mean is enabling and stimulating feelings of empathy, maybe even compassion, but also playful curiosity in experiencing a place.

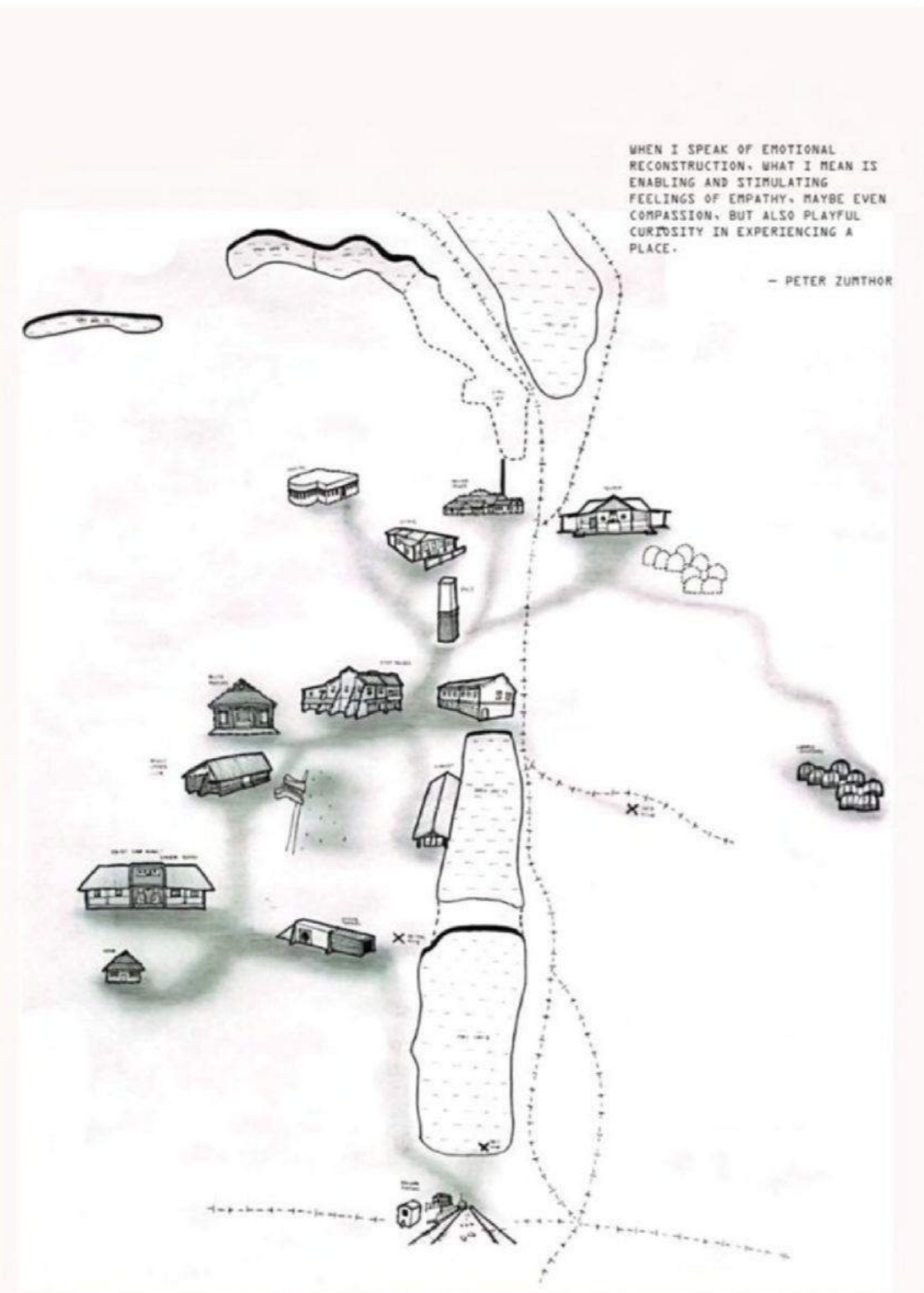
— Peter Zumthor

Starting with the reading of Peter Zumthor — A Feeling of History (The Allmannajuvet Zinc Mine Museum), which has the similar mining background to the site — Batu Arang. It is to learn the passionate and dedicated way in understanding a site, immerse deeply to the local culture and past stories.

The reading of Non-Referential Architecture by Valerio Olgiati contributes in the development of architecture with distinct quality of re-invent and re-innovate a typical design building into something exciting

Tolerance - to be able to link, connect, and suture the parts together. Tolerance is both a question of material; of technical precision and connected to political and social structures at a wider level.

Participation - to have a share or to take part. It is a form of being together that enables integrative social and spatial processes, and addresses design, planning, decision making, building and management



WHEN I SPEAK OF EMOTIONAL RECONSTRUCTION, WHAT I MEAN IS ENABLING AND STIMULATING FEELINGS OF EMPATHY, MAYBE EVEN COMPASSION, BUT ALSO PLAYFUL CURIOSITY IN EXPERIENCING A PLACE.

— PETER ZUMTHOR

TERRITORIAL MAPPING

OF A TECHNICIAN WORKING IN BATU ARANG THROUGHOUT 1900s TO 2000s

"The experience of space is something we would like to call a 'basic feeling'. This basic feeling is common to all human beings."

"The only possible way to end up with a whole is to begin with a whole."

"Newness is the initiator that provokes the viewer of a building to engage in a discourse with the building and, therefore, with the world."

Representation Models of Emotions Experienced in Places

Table made according to the frequency of visits to places in different life stages of a technician in Batu Arang.



Shades of Coals

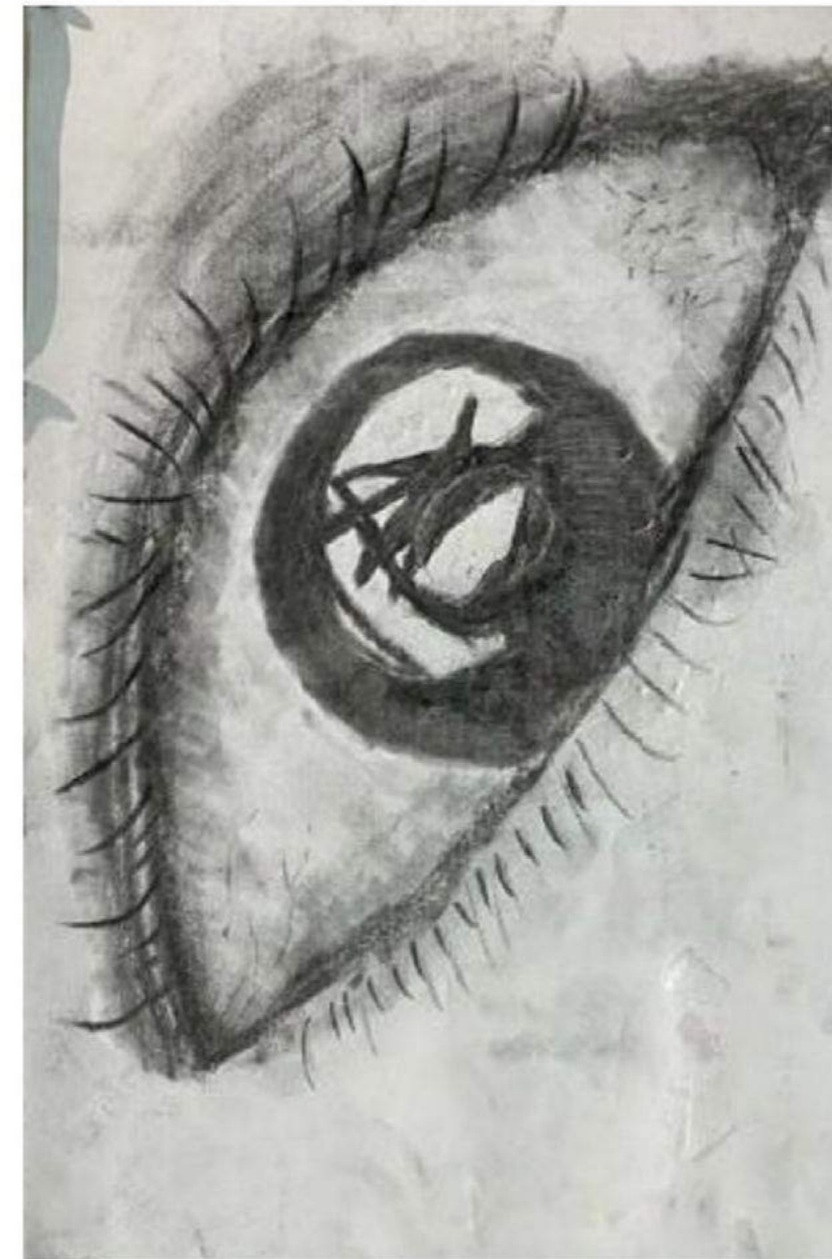
History and Memories are not the same.

— Peter Zumthor

I always think that whenever an architect construct or create a space, feelings come at first. These feelings could be spatial, lights, environmental, materials or even landscape. Feelings brings out the shape of buildings and the idea of the buildings to me.

Everything begin with feelings, when the feeling slowly eating you, what you gonna do? This project are trying to reveal the feelings of mine worker during a 24-hours scenario. Each of the drawing represent the mine worker feelings and mood during the mining. It could be fear, lonely, anxiety, lost, depressed, helpless or any negative emotions.

These emotions can be happened at anywhere or by anything but the this project are to describe or voice out the feelings that these mine worker have been experienced through the mine working in the coal cave.



The enormous monolith of a coal mine lay in the centre of a craggy, forgotten valley. Day after day, a man named Jack worked within its shadow, his hands blackened with soot and his spirit hardened by the terrible depths below. He had known no other life since the age of fifteen, abandoning his goals for the sake of his family's survival.

Every morning, Jack descended into the depths, negotiating perilous tunnels whispering ancient tales of sacrifice and perseverance. The coal dust clung to his sweat-soaked brow, reminding him of the price he had to pay to put food on the table. The labour was exhausting, but Jack's dedication was unwavering.

Years passed into decades, and the coal mine resonated with a labour chorus. Despite the difficulties, Jack discovered rays of hope. He made friends with other miners, their companionship a light in the darkness. They told stories about their life and dreams they dared to dream.

Coal Dust Chronicles

The delves into the historical accounts and stories of the community, giving a glimpse into the past. It implies a collection of tales, anecdotes and personal experiences that capture the essence of Batu Arang. The emotion felt by the miners, such as fear, sacrifice and sense of belonging to a tight-knit community

Peter Zumthor is known for his minimalist and experiential approach to design. It is subjective and personal to interpret the emotions evoked by his architecture and elicits a sense of serenity, contemplation, and introspection. The use of natural materials like wood and stone and the play of light and shadow contribute to a sense of harmony and calmness.

Batu Arang was once a prominent coal mining town in the early 20th century. Batu Arang is recognized for its coal mining heritage. The use of the material coal represents the remainder of the brick factory. The use of mixed-media materials of stone and wood represents the new intervention of material in a new era.

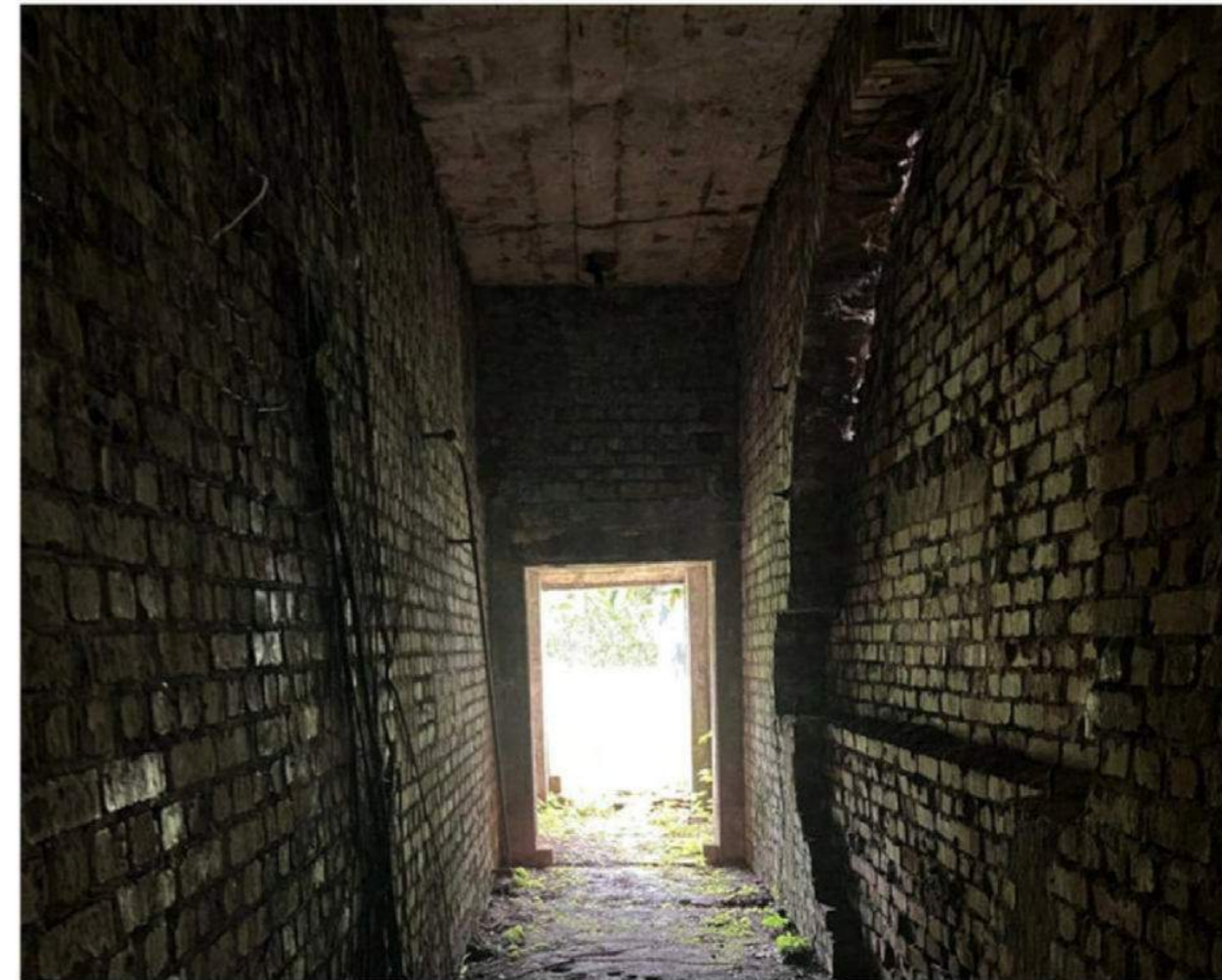
The use of color, and composition to evoke the emotions and atmosphere of the coal miner's world. the effect of light and shadows creates a sense of depth, dimly worn by the miner cast uneven, flickering light, highlighting their surroundings and creating contrasting areas of light and darkness.



Illustration about the emotion and life in Batu Arang



The condition during the coal mining and the darkness and depth of the air shaft buildings.



Ashes to Dust

The focus of this board is on the rich history of Batu Arang from the discovery of the coal to the shut down of the mining factories. The board also takes one through the deep and emotional experiences of the miners and the hardships they faced down in the mines.

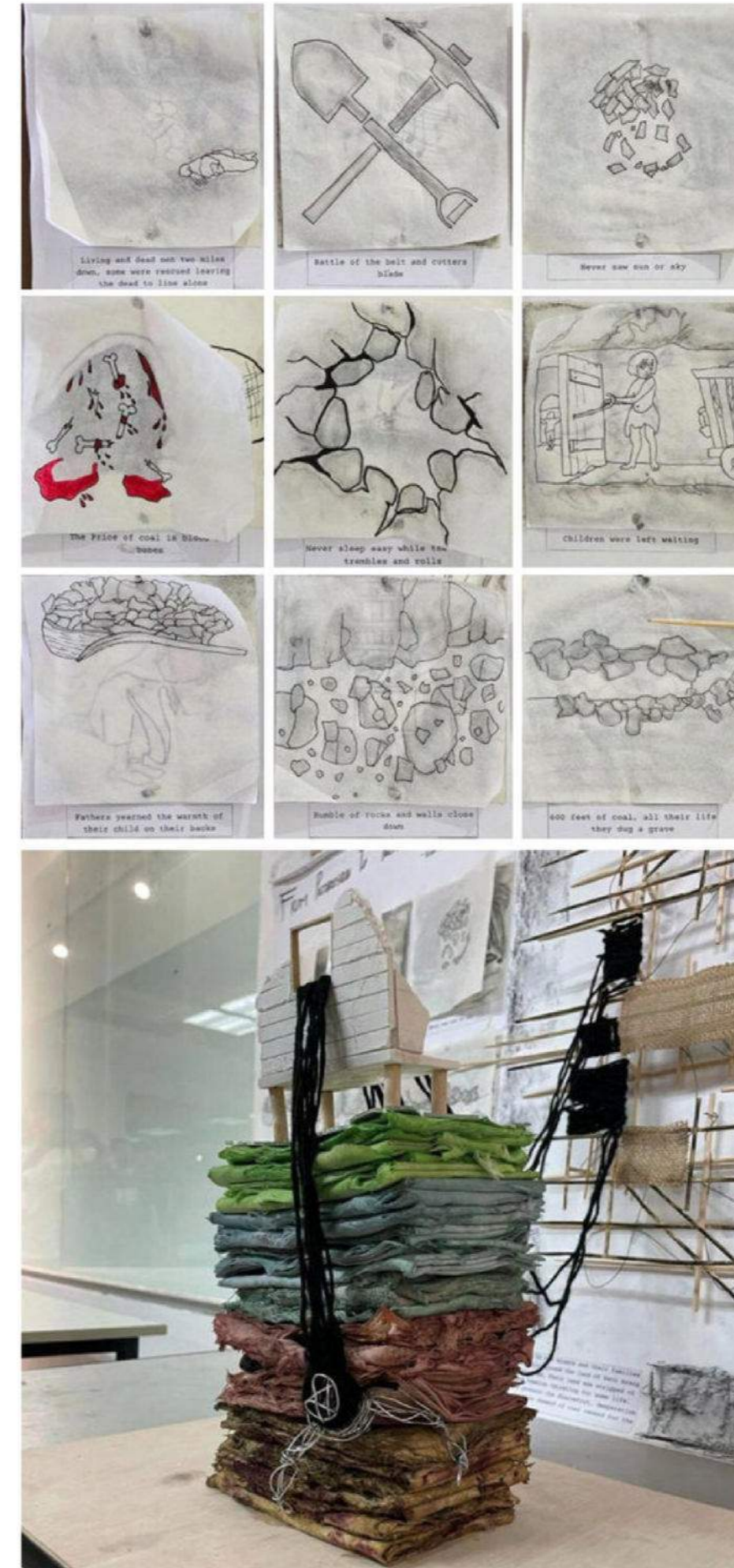
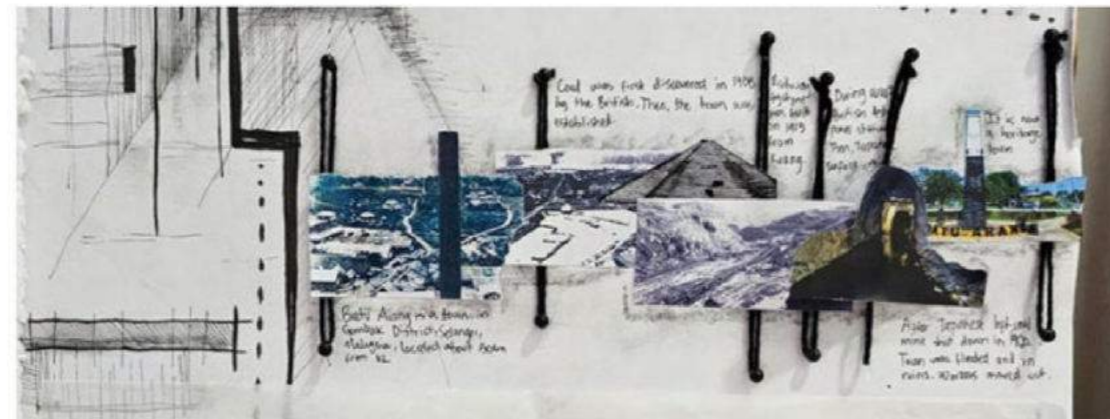
The board focuses on 4 major historical timelines of Batu Arang;

1908- coal was first discovered by the British on the region, around 50km from Kuala Lumpur. The coal reserves provided enough to fuel a railway system and be commercially viable.

1915- a railway system was built which expanded the services from the town. The railway system linked Batu Arang and Klang and it transported coal to the rest of the country.

1942- during world war II, Japanese forces approached Batu Arang forcing the British to halt the operations and destroy power stations.

Today- the town is now a Heritage town in Selangor.

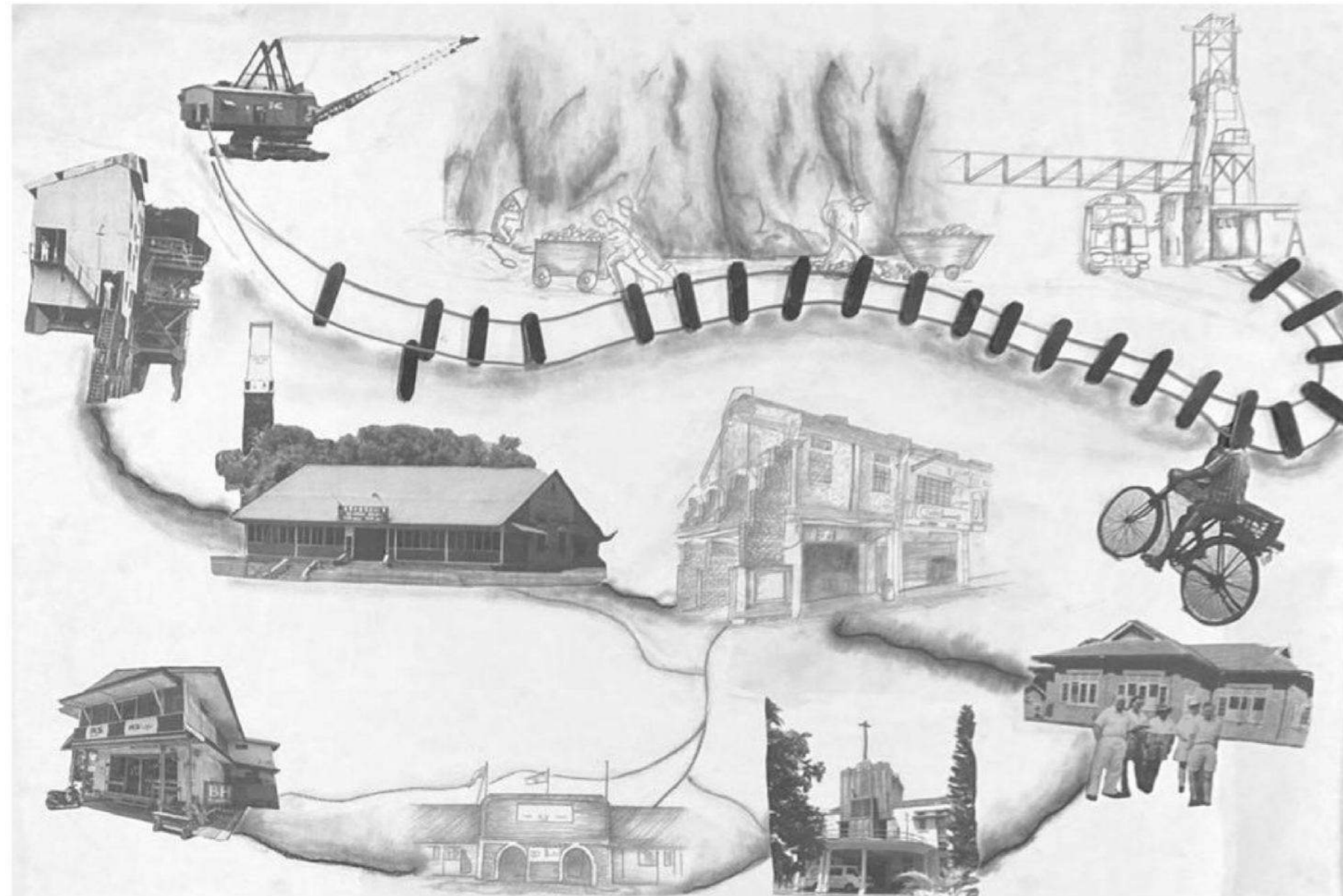
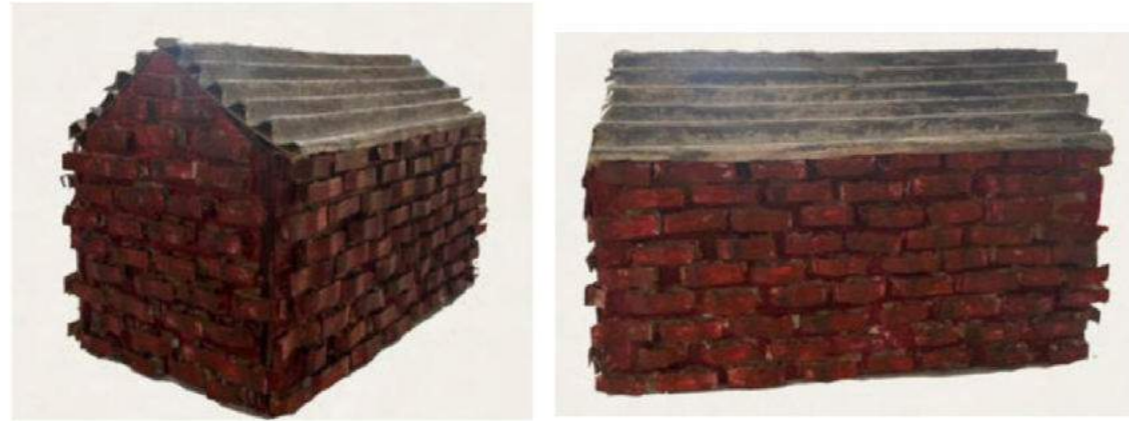


The tragedies faced by the miners and their families in the community built around the land of Batu Arang will never be forgotten. Their land was stripped of all its glory and remains thirsting for some life. The models shown present the discomfort, desperation and dominance that the demand of coal caused for the people.

The sketches express the harsh conditions faced by the miners in the mine.

Batu Arang Now and Then

"Memory is now, a kind of happening at this very moment. Memory and history are not the same, yet they might merge on a personal level"



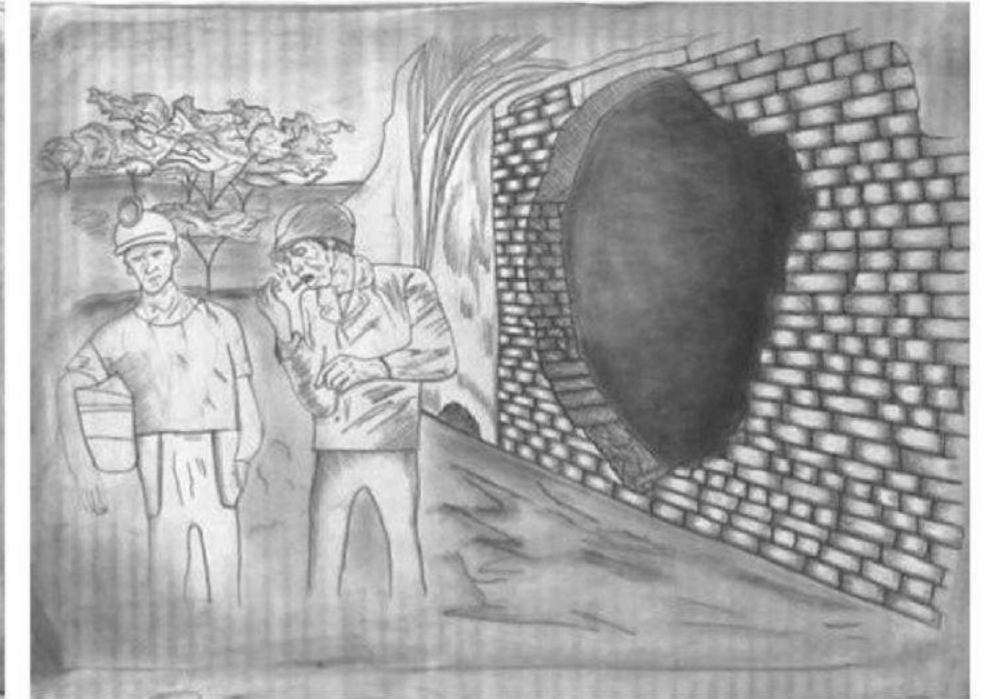
project is identifying Batu Arang Community in the past using imagination while considering present-time community. From the quote mentioned above, this project aims to let people live the the memory of the old community with the present memory, showing a map of the heritage building, and the way they used to live.

Then



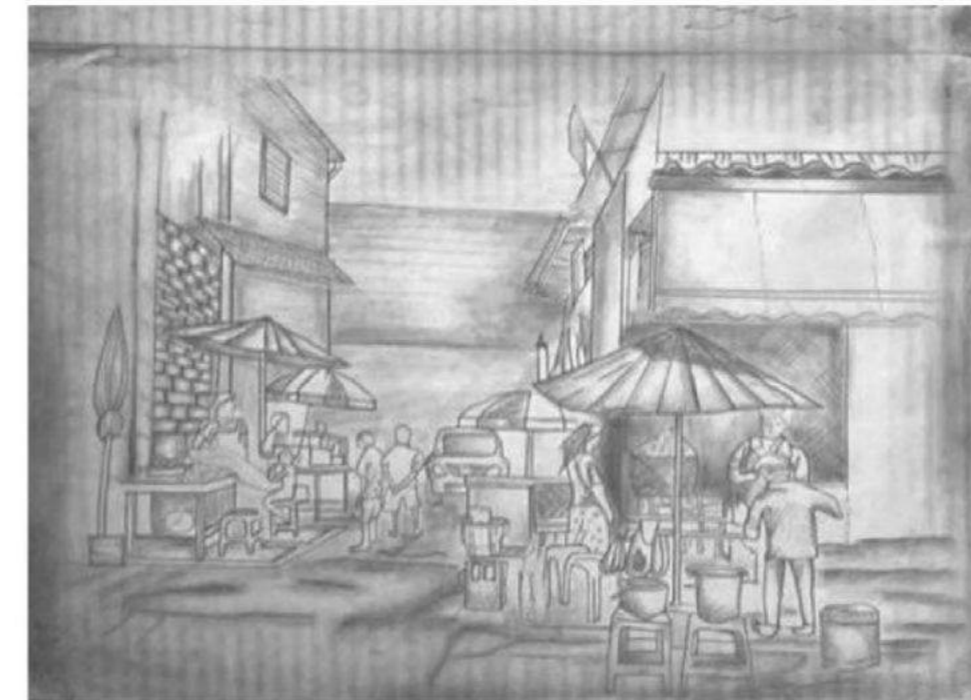
Batu Arang contain large number of Chinese besides the colonialists, and who were famous for gambling and playing cards. This scene is a figment of imagination describing a group playing cards in their free time.

Then



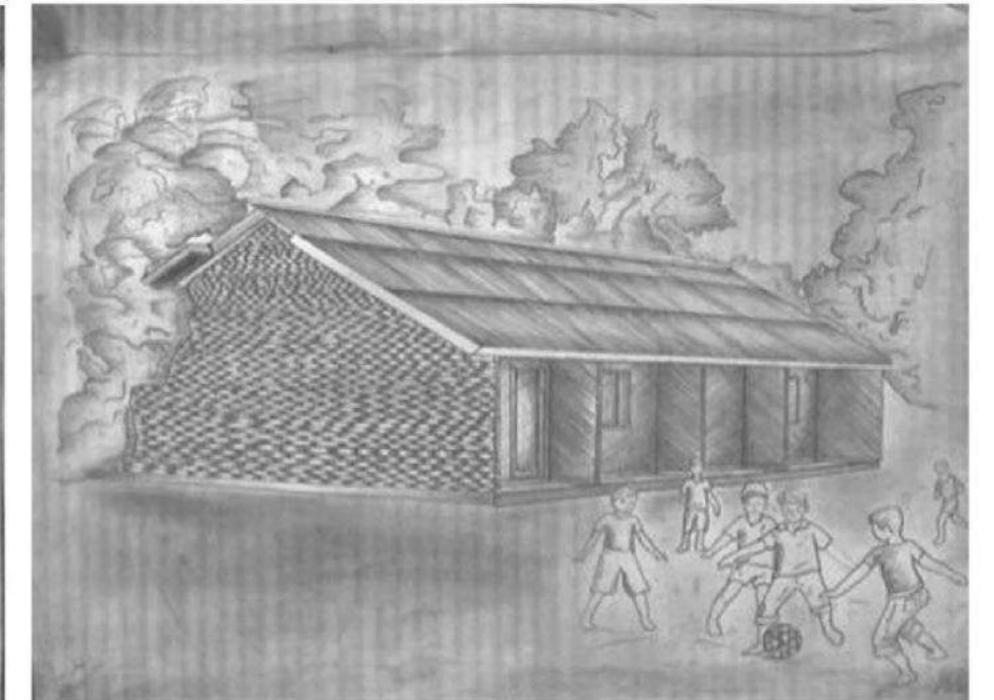
Batu Arang is famous for its coal mines. This scene describes the miners talking and smoking in the break time, this scene is fictional

Now



This scene is the only scene that expresses the current community. The scene describes the morning market in Batu Arang, which takes place every Sunday morning

Then



The last scene was took place in the afternoon in front of the miners' settlement, the children were playing football after returning from school, as one of the images of community

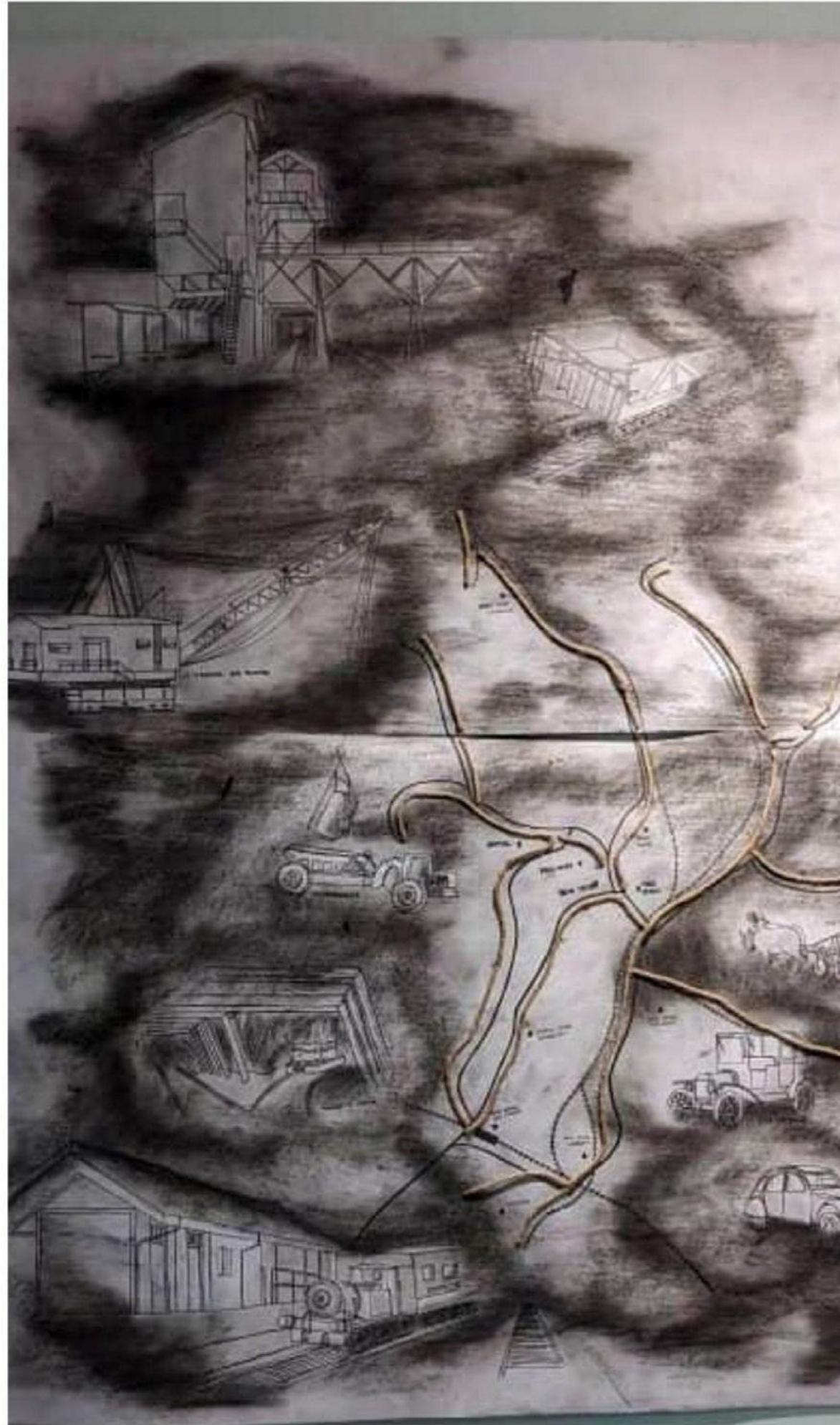
Trajectory of Batu Arang

Let's trace the history of architecture in the Western world, beginning with the first known structures made by humans up to the soaring skyscrapers of the modern era.

When the coal deposits in Batu Arang were discovered during the British colonial period, open pit and underground mining began. However, the mining company has a reliable railroad line that runs directly from Kuang to Batu Arang, allowing the simultaneous transportation of goods.

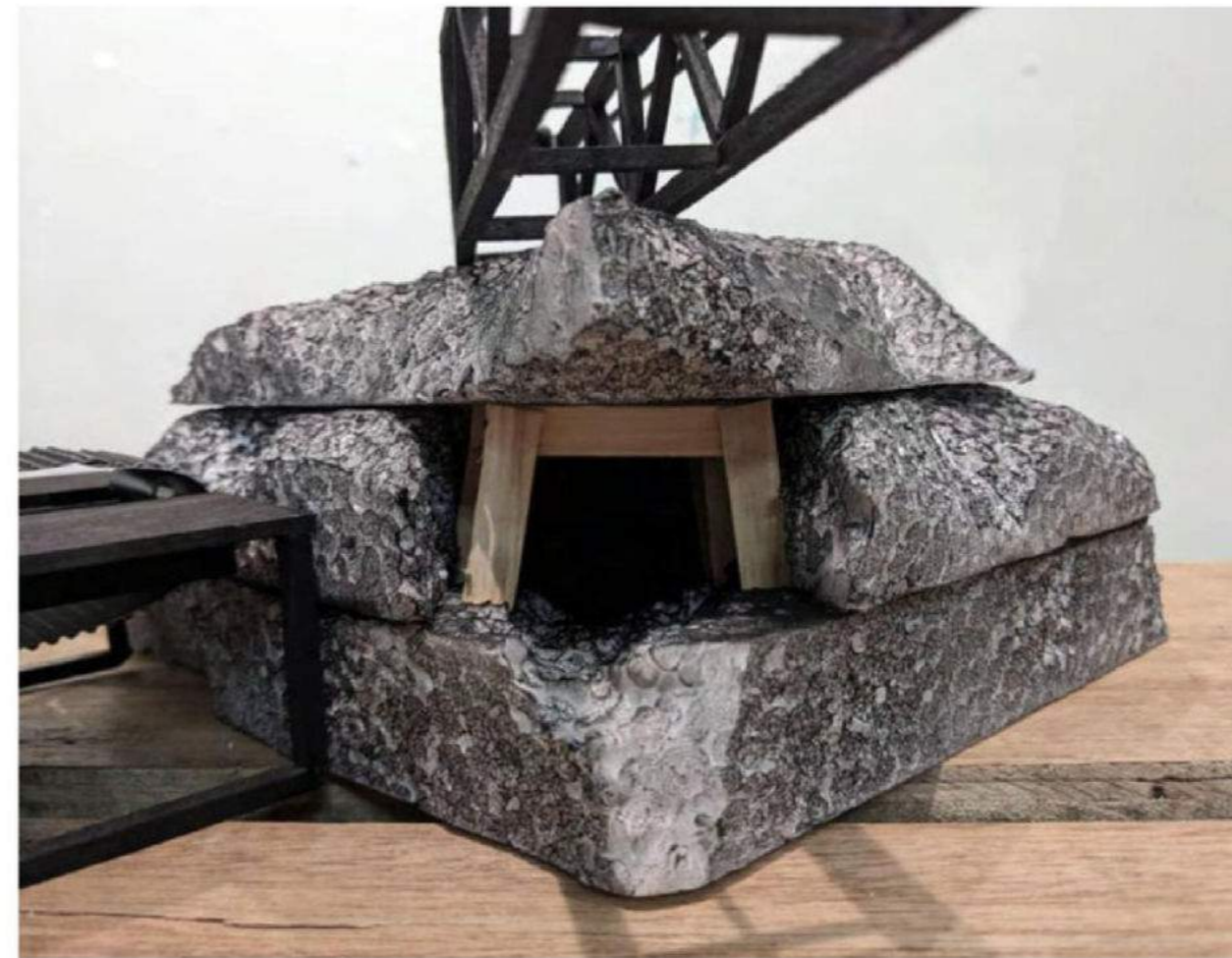
The central mine was the first site to be developed. The largest of four draglines, the Bucyrus-Erie 200-B, which has a 137.12-foot boom and a 4.12 cubic metre bucket, is used for mining. Dragline bucket excavator loading shale into a tountrailer for disposal.

Coal can also be loaded into a hopper, transferred to a conveyor belt, and then transported to rail cars by an excavator. In addition, coal is transported to other locations in tunnelling operations.



For model part would like to express these mechanical and transport properties on an element in a certain way for the model part. To demonstrate a different way of mining, I connected the conveyor belt to the dagger of the 200-B Bucyrus-Erie machine.

The construction of the tunnel was then included in the expression of the model, which supports the internal structure of the tunnel with wooden elements.



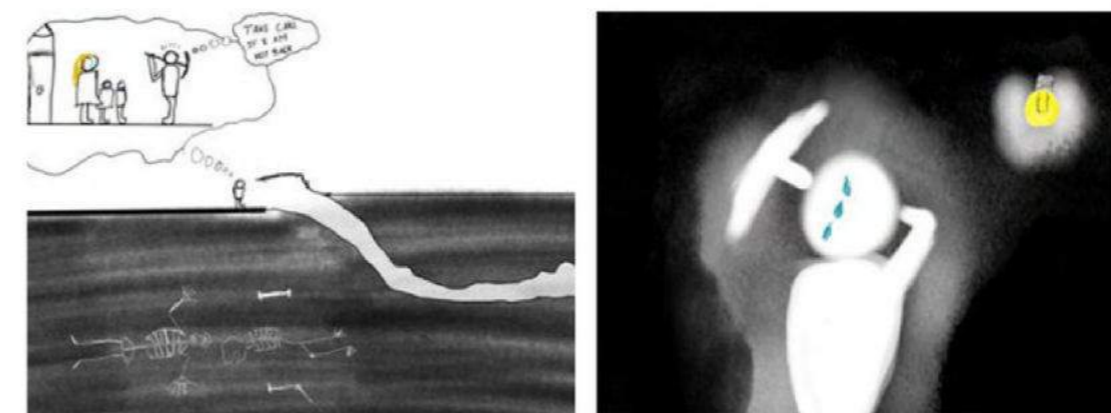
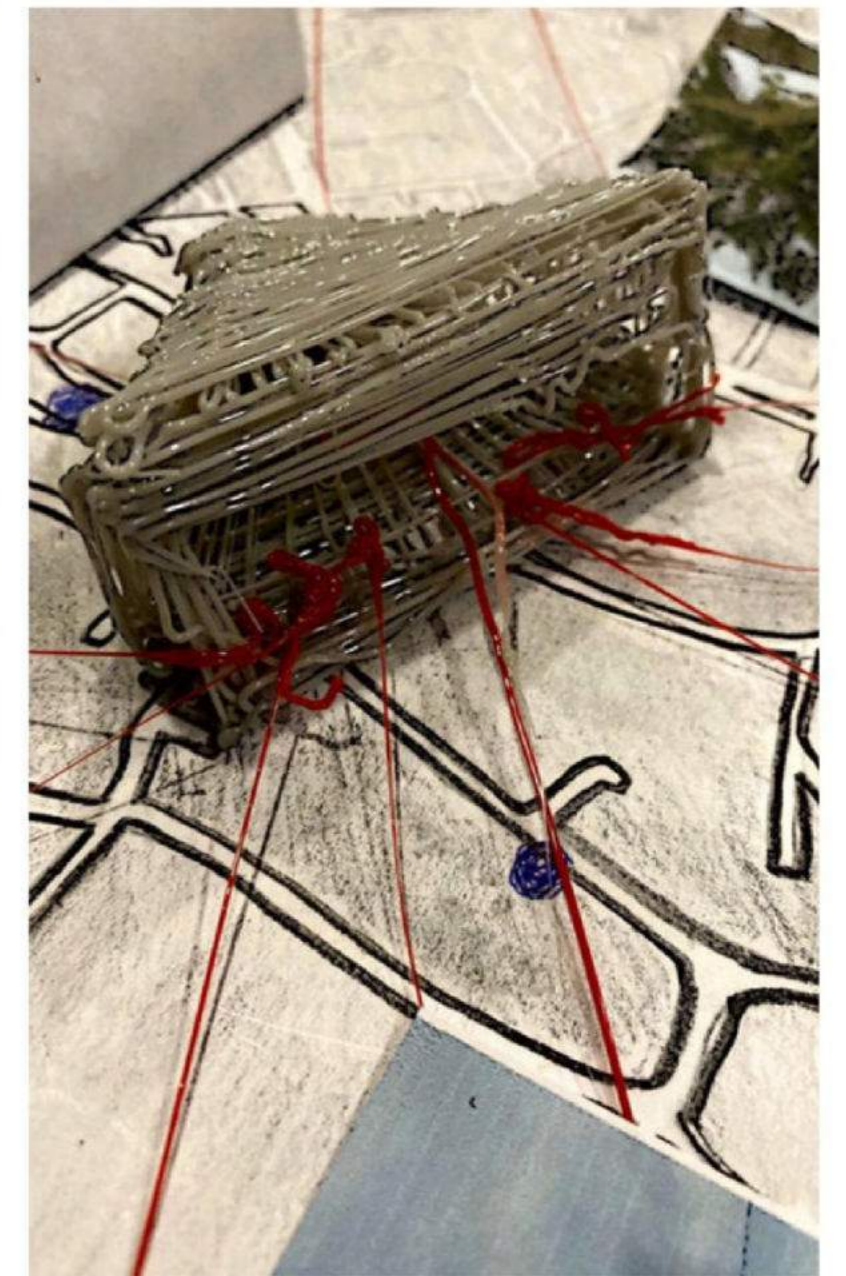
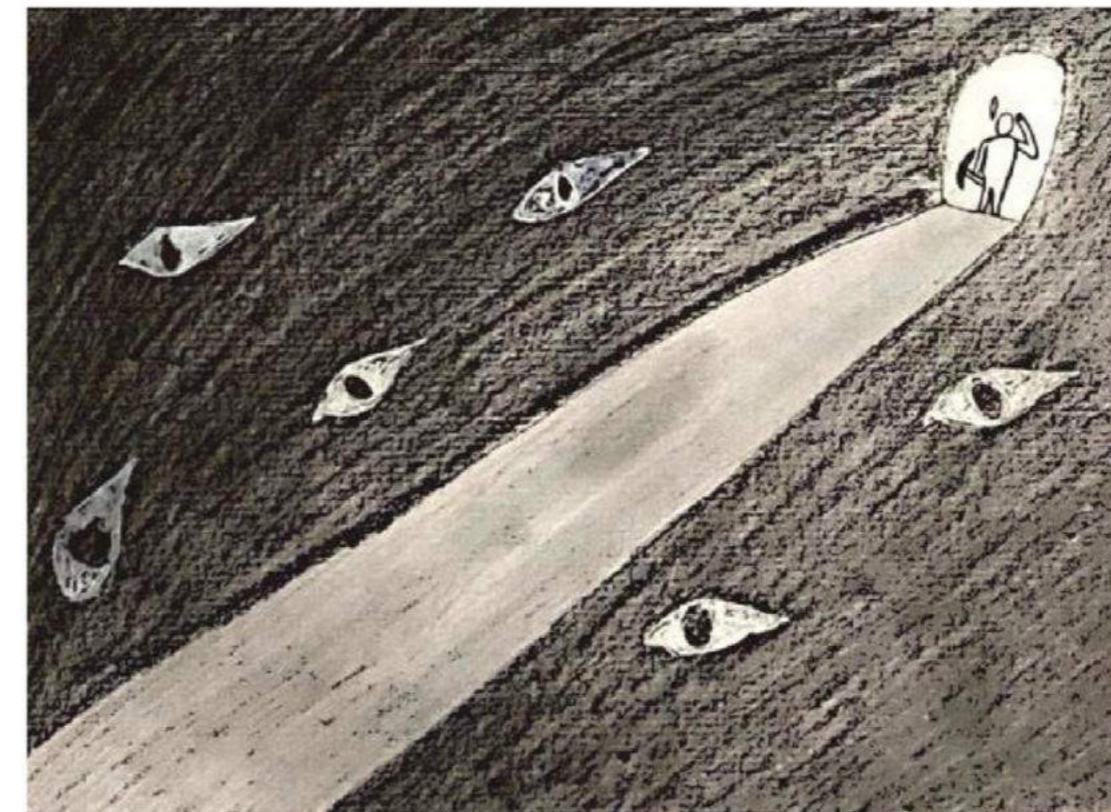
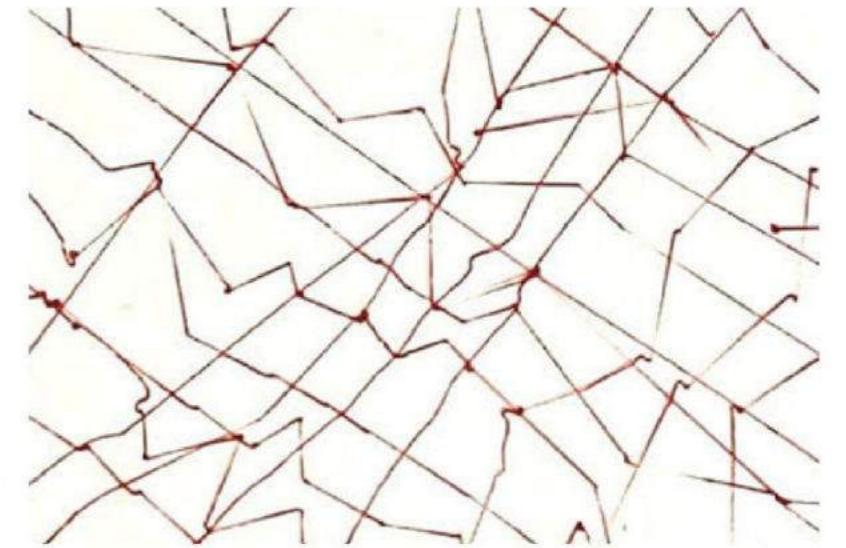
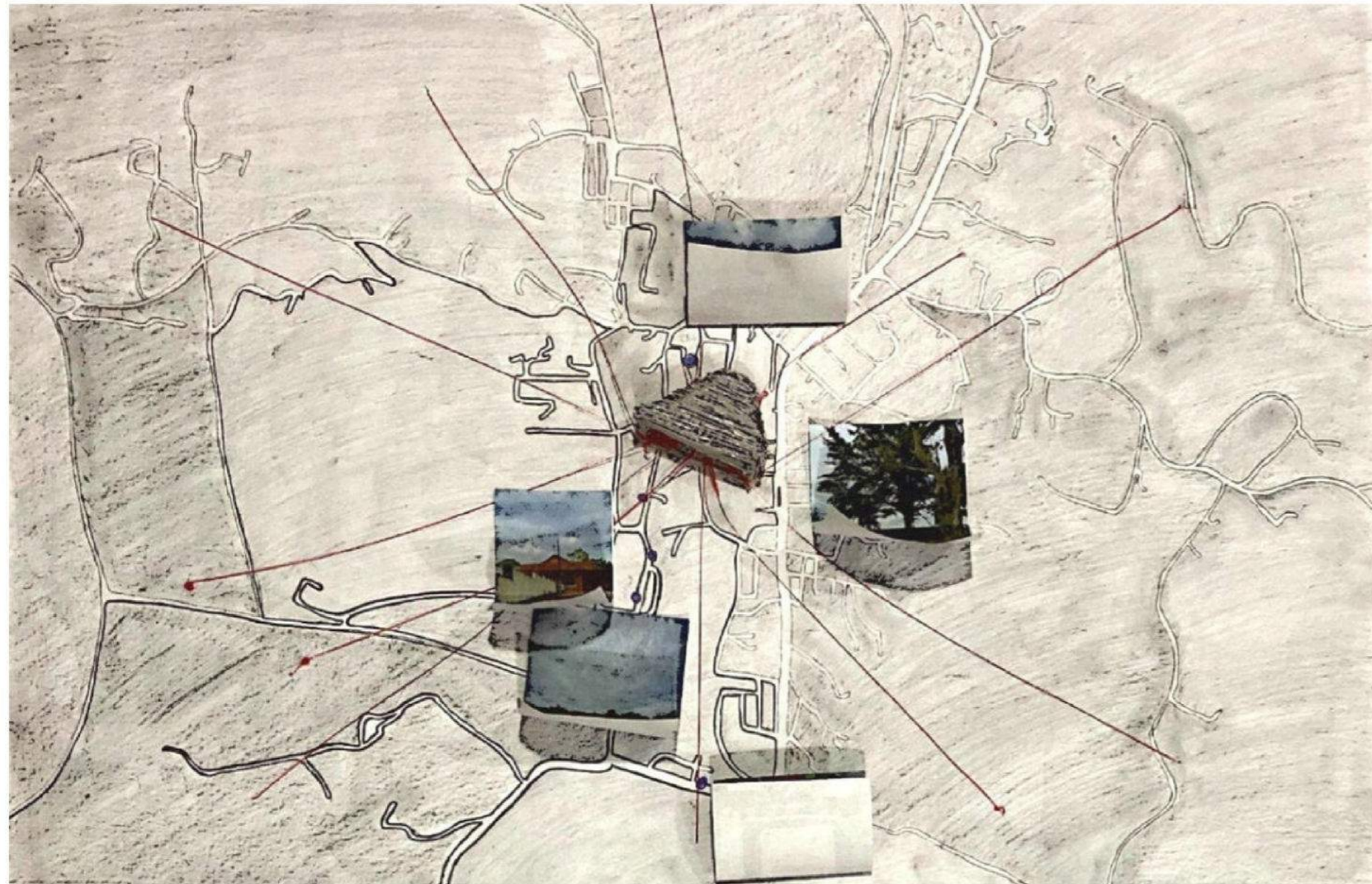
Darkness In the Tunnels

"A miner is always dressed ready for his own funeral" wrote by Peter Zumthor in his book *Feeling of History*. He added explaining: "Early in the morning a young miner kisses his bride to be before leaving for work in his black miner's suit and at the same day the miner meets his foreshadowed fate after the women has spent more than fifty years in quiet mourning"

This board is for the first project in semester 5, and it is expressing the theory of Peter Zumthor from his book, *Feeling History*, which is representing the stories that happened in Batu Arang in the past and express it by art and illustrations.

So, for the big map at the top it is showing Batu Arang and the small model in the middle is the tunnel that miners used to get through to practice their job of coal mining as it was representing something big and valuable in the town. Hence, the red lines are spread around the map coming from the tunnel as it shows all the suffering that happened to the locals in Batu Arang was from the coal mining tunnel.

The second part is telling the story of the suffering in Batu Arang. At the beginning started from the colonials, depression, death and lastly darkness. Lastly, the darkness and fear that the miners used to live it during the working time and the normal lifestyle was just hectic



Old Day Trip

In the Roman Forum. It is believed that architectural form can externalize thoughts, that architecture can shape feelings and history, especially that architecture can bring dead material to life and stimulate emotions, memories and associations.

When a work of art or architecture lets your memory speak to you, as Nabokov put it, it mixes with the world or whatever you know and can confuse reality with fact. Memory is the present, something that happens in the here and now.

Architecture is about history when it connects to the world in the here and now. Places and buildings are real, they are concrete, they are here.

Architecture is closely related to people, history and environment. I can know that from the books History refers to the expression of words into architecture, because architecture gives people a stronger sense of presence, which makes people more impressive. It can be associated with architecture by listening, smelling and so on.

It almost feels like a record of the historical appearance of an era, but it is transformed from the style of text into architecture.



What I can learn from the story is that it has to strike a special chord for the memory to speak. I was inspired by his quote to create this model. Through this model, people have the reason for this model is to make people feel like they are in the scene, as if they can enter the tunnel.

The oppression and suffocation of the coal miners working in the tunnel is what I want to express. The painting reflects the hardships and dangers of coal miners at that time. I want to describe the Chinese people in the past through the form of painting, so as to let people know and understand that the Chinese people who went to Malaysia to work in the war were treated unfairly and led a difficult life. They thought the leaves would go back to their roots, but the leaves have taken root since then and they want to stay in Malaysia and have been in Malaysia until now.

The Struggle Underground

In the depths, coal miners endure, their toil rewarded by meager wages. The air they breathe, heavy with dust and despair, shadows their health. Yet, their spirits persist, seeking fairness and solace beyond the darkness.

This story revolves around the 24-hour journey of coal miners. It begins in the early morning as the workers gather and prepare at their designated location before walking toward the mining site. As they delve deeper into the treacherous depths of the mine, a sudden and unexpected event unfolds. Panic ensues as the miners scramble to escape the danger lurking in the dark tunnels. Miraculously, they find their way out and gather together in a safe place, unharmed.

The story builds up to a thrilling climax, filled with unexpected twists, ultimately culminating in a satisfying resolution.



Former Mine Workers' Settlement

I'm an experienced coal miner. Everyday at 5 early in the morning, the rooster will wake us up from bed. After washing up and put on working attire, my colleagues and I will eat some bread and biscuits to keep our stomach warm before going to work. Else, we will just grab some pancakes for breakfast or buy some food in the Sunday market while walking to the mining site. Some of the workers cycled there as they stayed far away from the workplace.

Former Coal Mining Site

The route took us about half an hour. At 7:00am sharp, we started working. All of us had to walk to the underground mining area through a tunnel to do what we should done everyday. The underground mining area had no wind or any ventilation, we couldn't even imagine how hot it was down there back then. Hence, we decided to took some rest and got some water to replenish energy. Around 12:30pm, we having our lunch.

Coal Mining Tunnel

After finishing a satisfying lunch, we had to work our fingers to the bone till 5.30 in the evening. Suddenly, the lighting direction of my headlight switch from up to down but I didn't notice it which accidentally lead to the explosion of the toxic gas while mining. We were so panic in that kind of situation but for safety we just ran out the mining site without any hesitation.

Former Mine Workers Sports Club

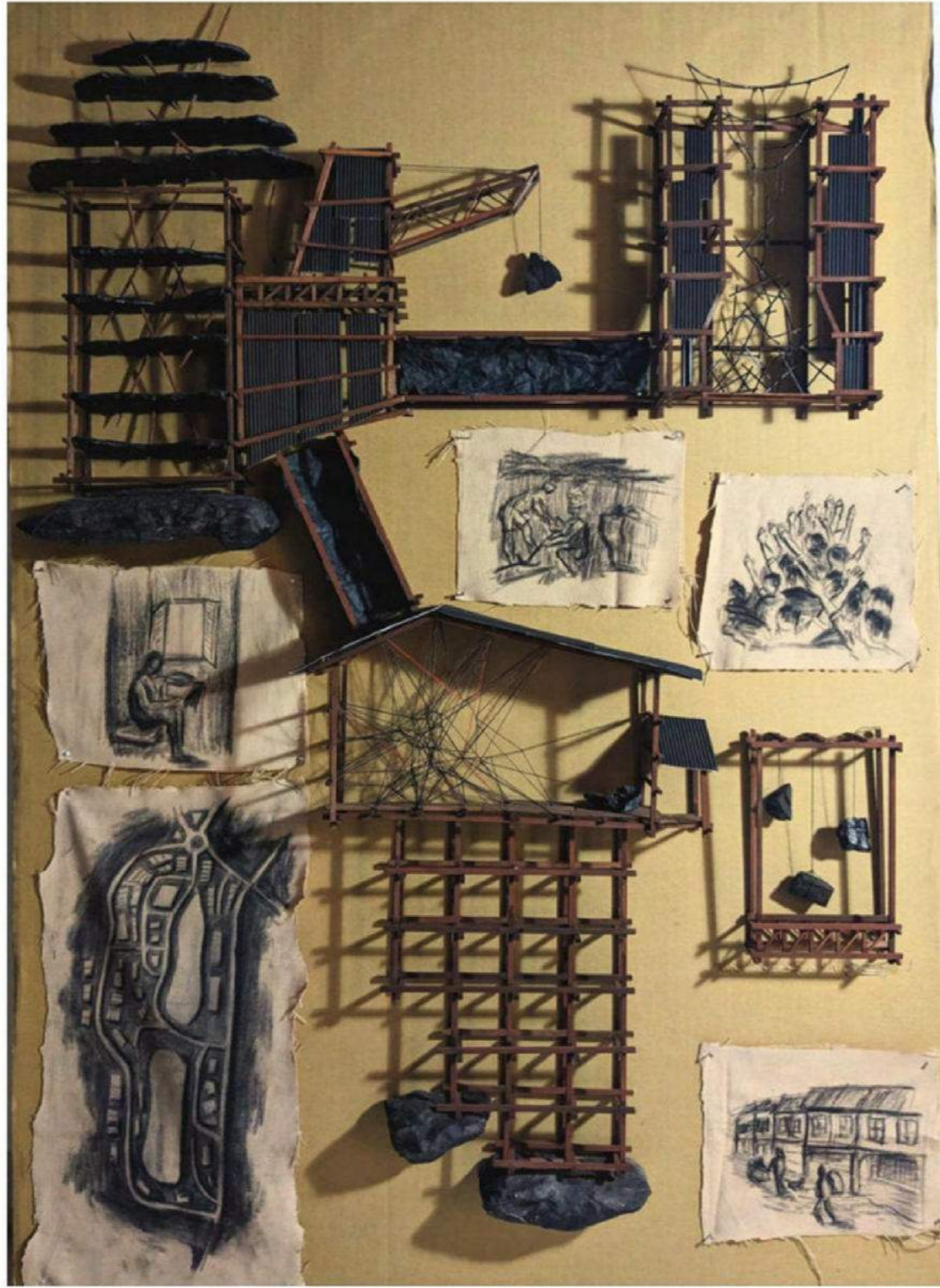
We gathered at the sports club to make head count and had an immediate discussion with the supervisor. Eventually, the exploded area was not able to continue for mining, so it ended up with "soil burying". And fortunately, no one was hurt.

A Miner's Tale

Uncovering the inner thoughts and emotions of a young coal miner in past Batu Arang

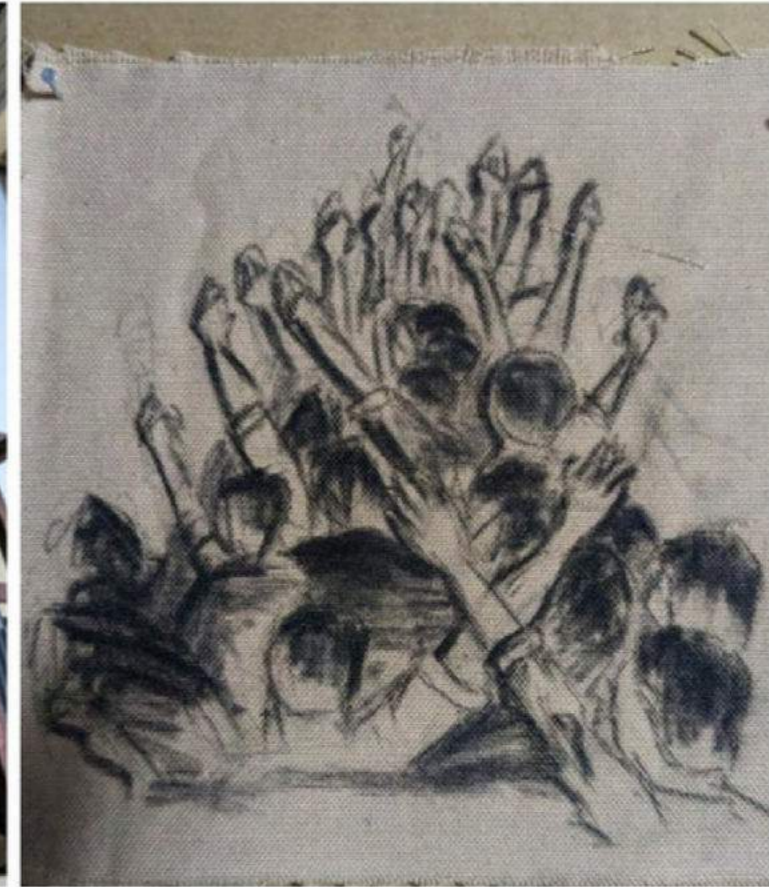
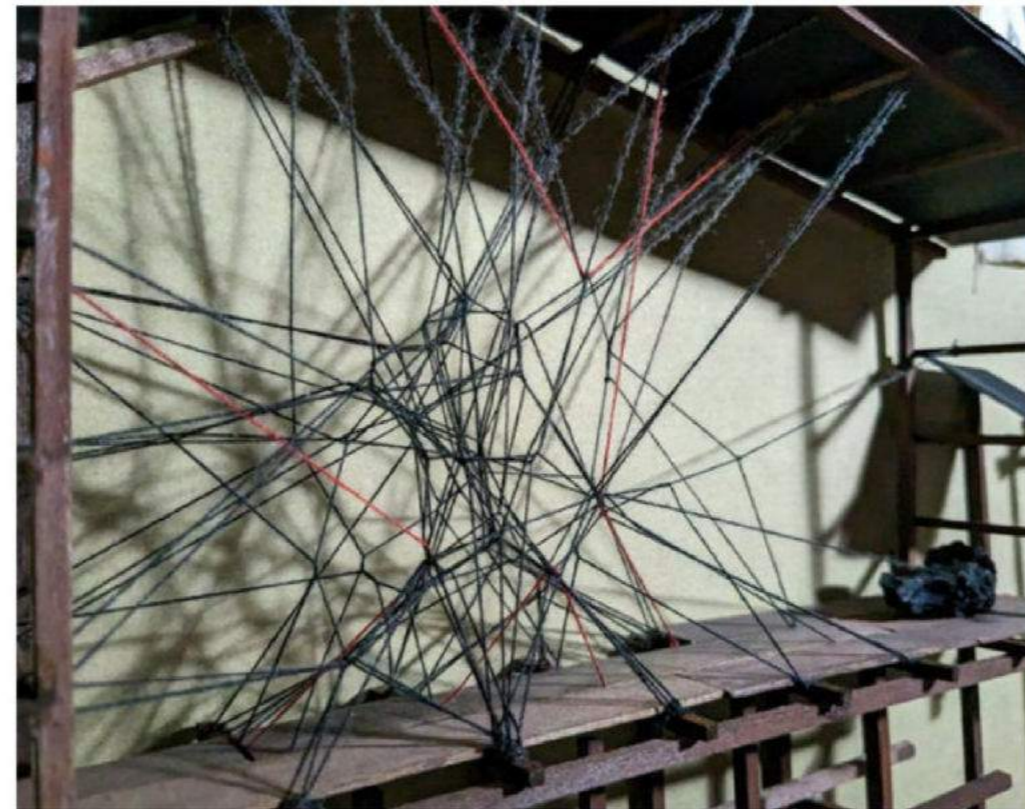
Underlying Danger

Coal mining begins at 8.00 am, and the young coal miner meets up with his team and heads down into the mines. His captain says: "Run if you dig into water, it floods so quick", "Watch out for flammable gases, they will explode if left ignored"



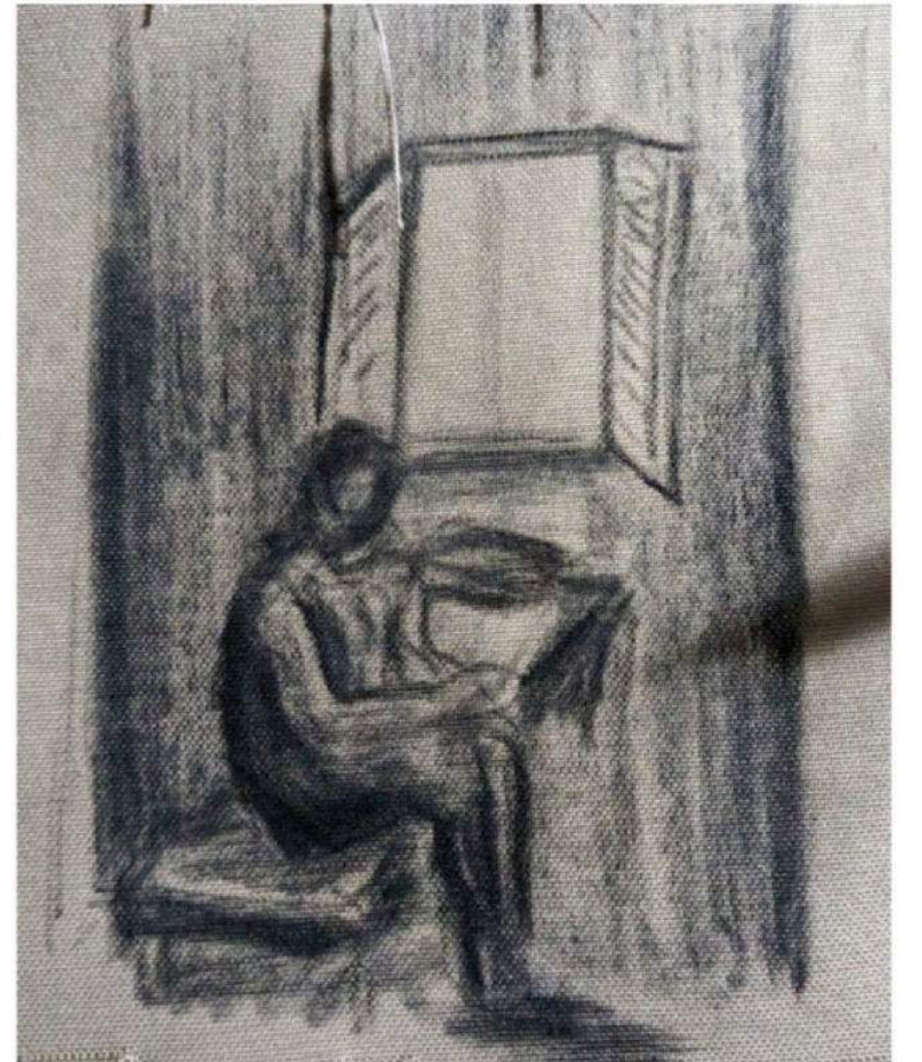
Inner Thoughts-Uncertainty

Alone in his room in the Miner's Residence, the feeling of uncertainty and confusion floods the inner mind of the young miner. "Will I survive tomorrow's mining session?" "What is my future in Batu Arang?" The young coal miner questions as he falls asleep.



A Fight For a Better Future

After a 8 hour mining session, the young coal miner joins his first strike to fight for better pay and welfare. After a long session, the protest request were ignored and the crowd was laid off. Feeling disappointed and depressed, the young coal miner questions the effort of the fellow miners.



Rupture

In the belly of the earth,
Where darkness reigns supreme,
Lies a world of fire and stone,
A miner's daily dream.

With picks and shovels,
And sweat upon their brow,
They delve deep into the earth,
To bring its treasures out.

The coal lies hidden deep below,
A black and shining prize,
And though the work is hard and long,
They know it's worth the price.

For in the heart of every miner,
There beats a fiery pride,
A sense of duty to their work,
And to their town besides.

The pits are dark and dangerous,
And death is always near,
But still they toil and work each day,
Without a trace of fear.

So here's to the coal miners,
The brave and true and bold,
Who dig deep into the earth,
To bring forth its hidden gold.



"Somebody who dies young remarks young. The body is protected and embalmed by minerals"- Peter Zumthor

Land evolution



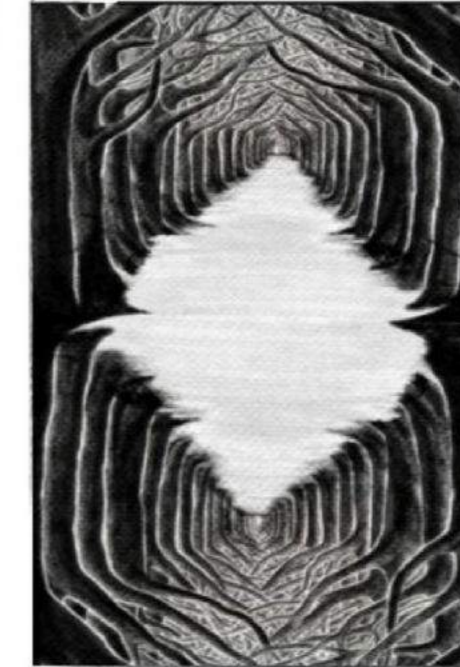
Overall model interpretation



The sketch shows the inner emotion of the miners during the day to day life. The nail represents danger



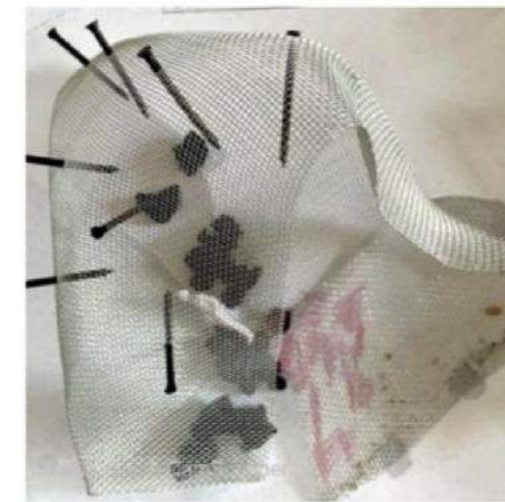
The sketch shows the breaking of terrestrial globe and the bravery of miners with the support of the community which is represented by the hills



The sketch shows an abstract imagination of claustrophobia within the intertwining branches which create a dept perception of the dark underground tunnel

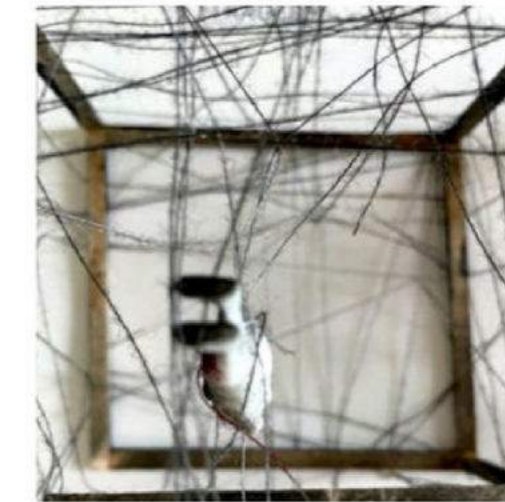


The sketch shows an abstract imagination of situations taking place during the mining process.



Claustrophobia

"If you throw branches deep into coal mines, they come out with sparkling crystals, but miners come our ragged!"



Tragedy

"A miner is always dressed for his own funeral!"



Darkness

"In architecture, the beauty of darkness is just as important as the beauty of light. Darkness can be a powerful tool to create mystery, depth, and intimacy in a space."



Unity

"Fragile ruins in brutalist structure"

SEMESTER 5
CHIA GYUN YUEN

When Coal Meets Light

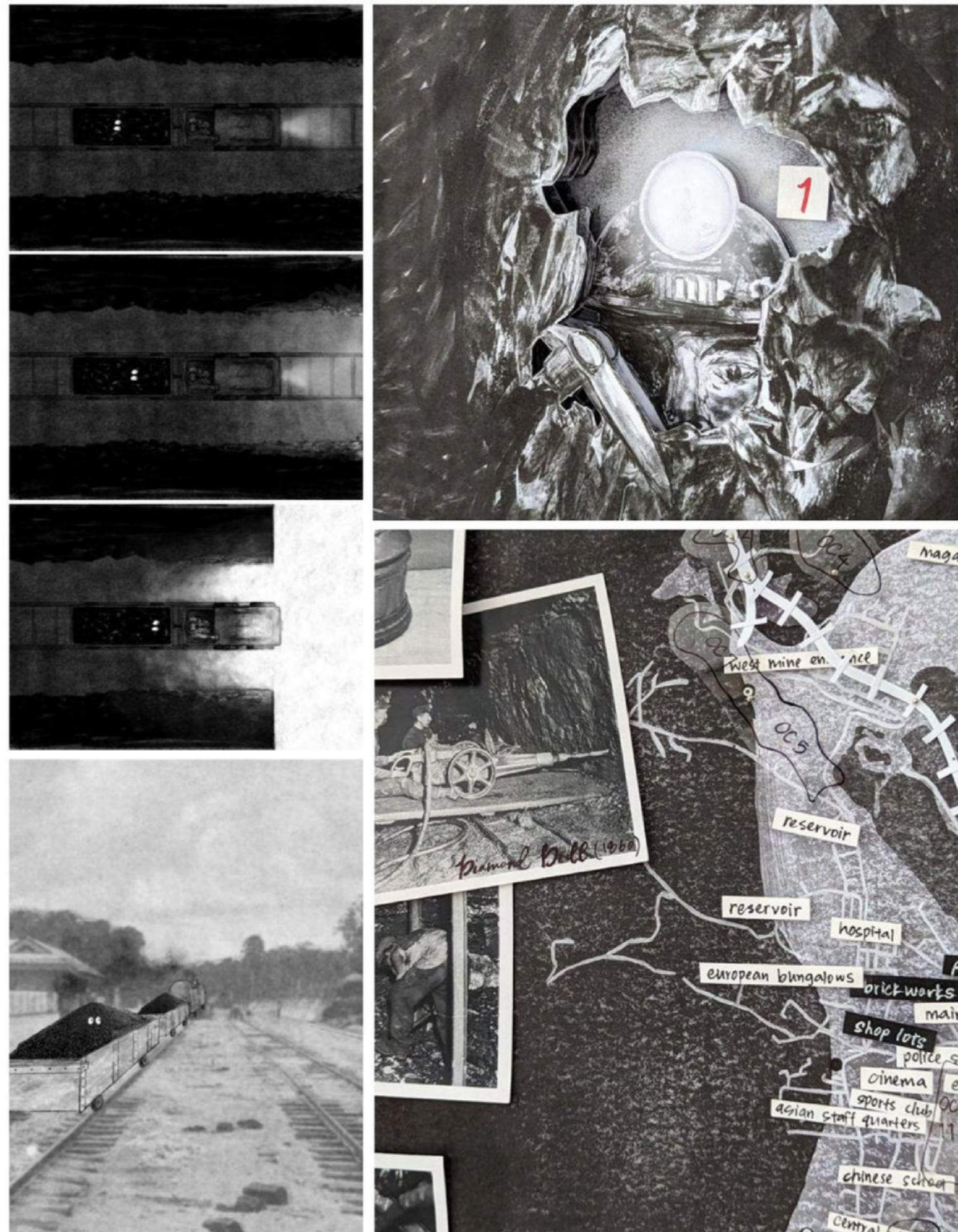
*When coal meets light,
A transformation takes flight.
From darkness and despair,
A shining hope begins to flare.*

*For when coal meets light,
A new world it begins to claim.*

This is a story about a lump of coal. It never saw light, or rather, knew what is light. Until one day, it heard a loud sound. "BOOM!" Through the small crack, something amazing, something... far more than what it could comprehend, was waiting for this humble lump of coal. It could finally see the world with its own eyes, discovering new things every moment, every second.

Through this story, where coal finally meets light, people could understand more about coal mining and how it has been an important event to the small town, Batu Arang.

This story is also to commemorate the beautiful legendary No.9 lake that the locals have mentioned. However, now, the lake is contaminated because of one's irresponsible and inconsiderate actions. I still remember vividly the angry, sorrowful, and regretful faces they had while reminiscing the good times spent there. We could only imagine what Batu Arang would be like if it were still "good as old".

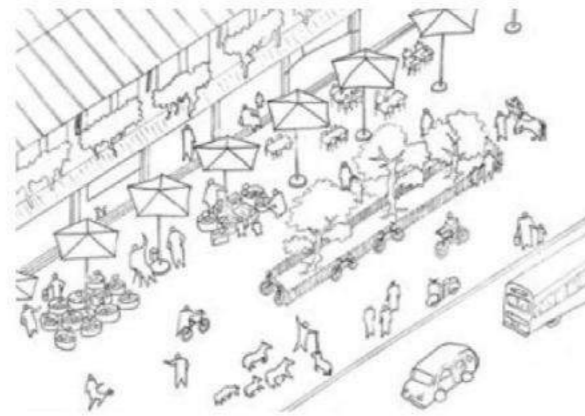


Cut and layer: This technique is used throughout the whole board to emphasize important details.

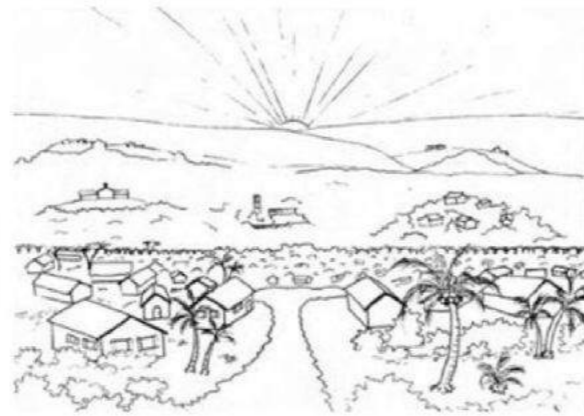
Numbering: The numbers are linked to the pictures tacked at the left side which have information written at the back of them for readers to get an idea of the background of the old Batu Arang.

Restoring the History of Batu Arang

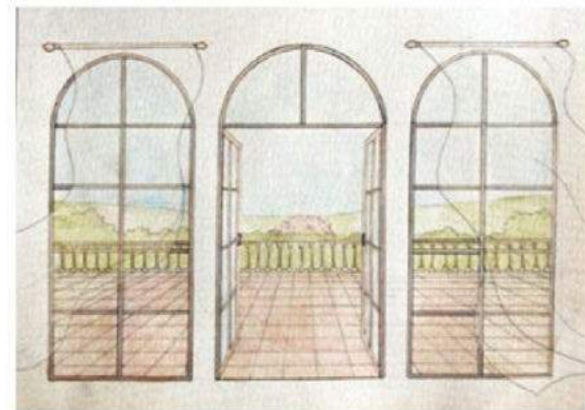
6 significant locations are reflected through drawings and models, to recall what once existed at the site. Each drawing and model evokes specific emotions associated with these locations.



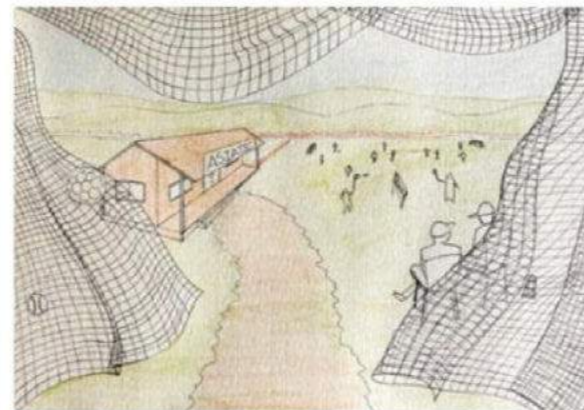
Town Center & Market A thriving town needs a space for its inhabitants to gather, trade, socialize, play, carry out necessary activities. Active during the morning and night.



Mine Workers' Settlement Homes of labourers, who worked in difficult conditions at the mines. A safe space for them to rest and recharge, where they weren't restricted or under supervision.



Officers' Residence Located on the hills and away from the main town, viewing into the town, showing level of authority. Arches are used in a new context and perspective of the officers, viewed arches through a different lens.



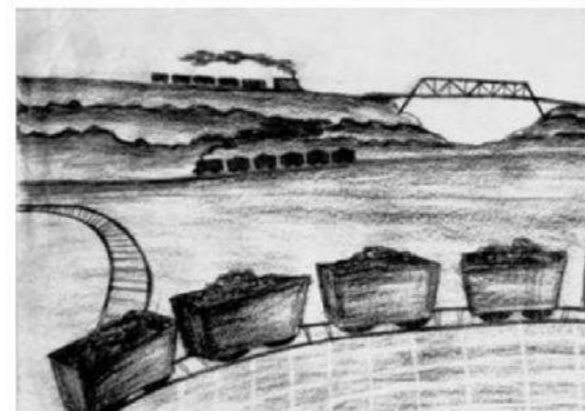
Mine Workers' Sports Club Local workers came here to rest and feel free from the mines. Net Games: football, badminton, tennis. The nets refer to these sports, flowing in the air to represent freedom

Located 50km from Kuala Lumpur, Batu Arang is an established heritage town (as of 2011) characterized by its coal mining history throughout 1908-1970.

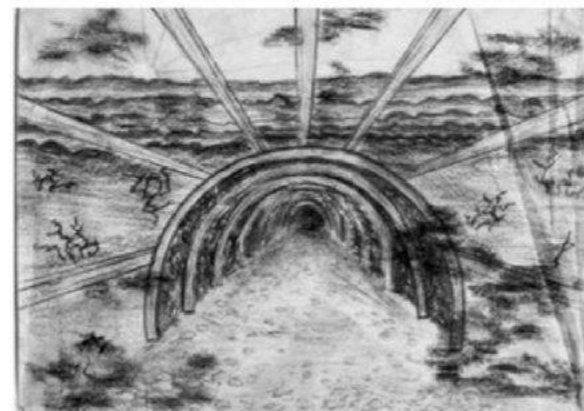
Since the closure of the mines, Batu Arang has decreased in population and activity, leaving behind remnants of the coal mining facilities in which past memories are stored.

At current, the town is deserving of more recognition as a travel destination due to existing historical buildings reflecting the town's heritage. Combined with the local community and serene environment, the site holds great potential for future development.

Reviving Batu Arang's socio-economic conditions is the main priority of its development.



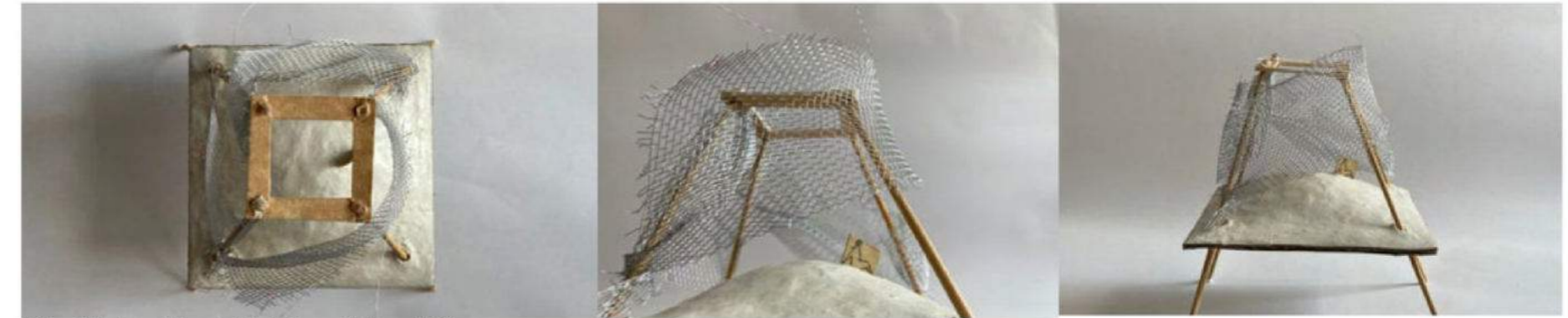
Railway Station Represents the dependence on and importance of coal. Coal helped to grow the economy by providing fuel for technology and electrical supply. An influence to the changes in power (British, Japanese).



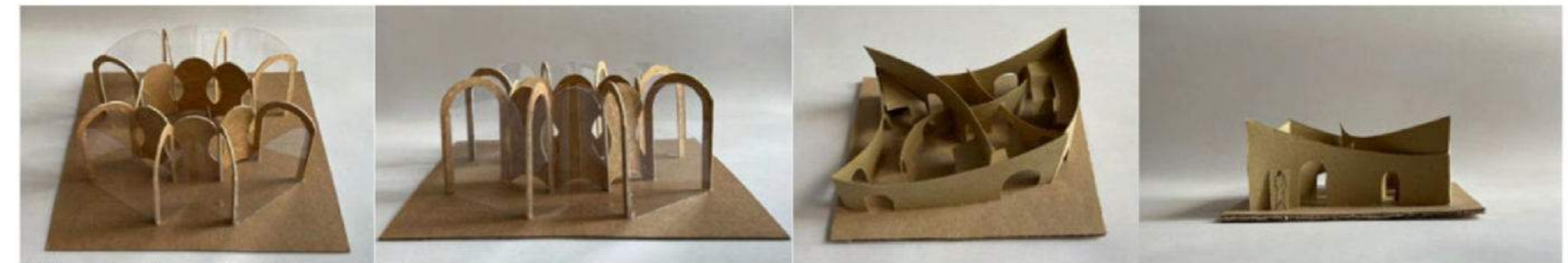
Coal Mining Site Miners had to risk their lives everyday working in the coal mines, from unstable ground, limited light and air, to heavy machinery. Reflects the perspective of a coal miner.



Mine Workers' Settlement Community, Safe, Compact



Mine Workers' Sports Club Free, Relaxed, Open



Officers' Residence Grand, Secure, Power



Batu Arang Railway Station Industrial, Unstable, Dynamic



Coal Mining Tunnel Suffocating, Confined, Void

Fragments

"It is invoking something might otherwise be incomprehensible, illegible, lost and forgotten. You do something with architectural means that makes an obsolete reality present again."

from *The Feeling of History* by Peter Zumthor



Made with paint, balsa sticks, air dry clay, black cloth and fragments of papers of paint

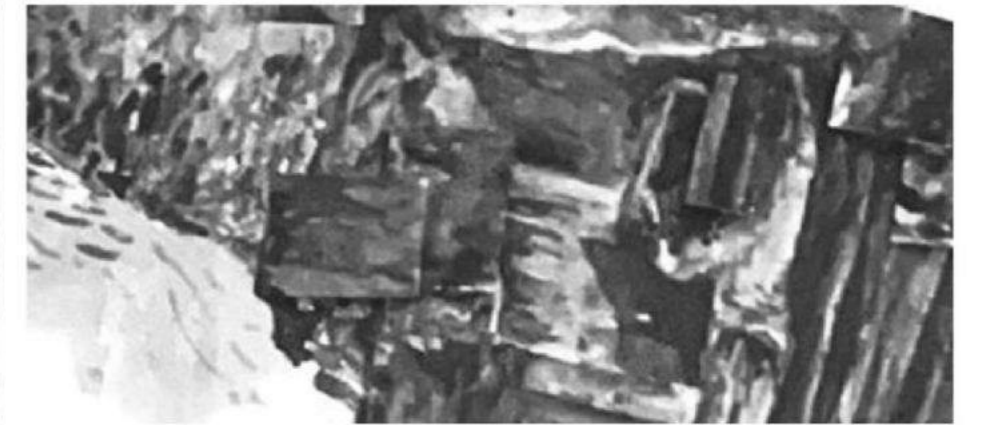
This project visualises that the architectural interventions at this particular site have curved among many unheeded remnants of the mine and mining culture, which have long since vanished, which are now forgotten.

The physical gestures of this manifesto evoke a mapping of primal connection to the sensory capacities of past memories, surpassing thoughts and words, and stirring a profound sense of history and absence of Batu Arang.

The popped up objects or the appearance of objects on the manifesto serves as a sensory manifestation, reflecting the events and surroundings of that particular area of the past intangible experiences as well as the present.



Immerse or listen to the sound of the cacophony of chaos



To commemorate miners wearing black attire every day, as if solemnly attending their own perpetual funeral while carrying out their duties.



"Speak, memory" figure, crystallizing from paper, paper, paper...



Scent of air filled with the unmistakable scent of burning coals and smoky aromas.



Framed memories that are now forgotten

Unforgettable Memories

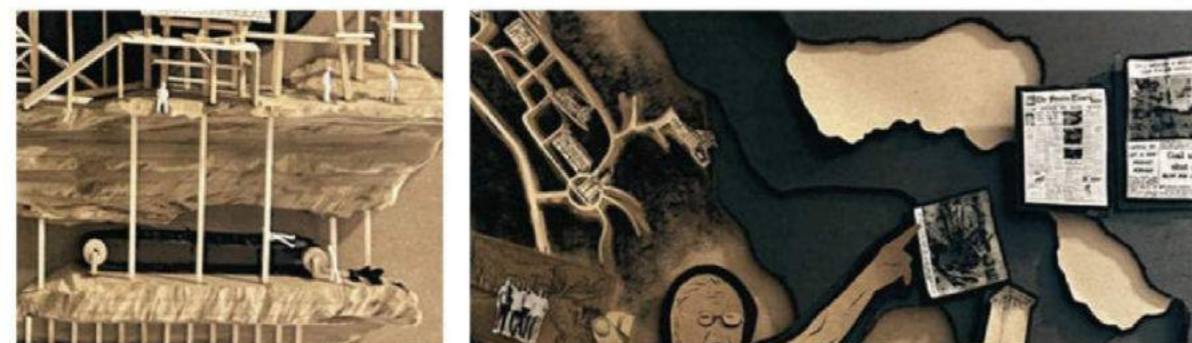
"It is impossible to create oneness through an additive-compositional mode : a whole cannot be made out of parts. The only possible way to end up with a whole is to begin with a whole."

from *Non-Referential Architecture* by Valerio Olgiati

This project is the manifestation tells a story of a former residence of **Baatu Arang, Michael** and his grandfather's tragic death. The layering abstract above visualizes the journey that Michael brought us visiting the town, from the old traditional shophouse, the formal white house to the underground mining tunnel. Each location has its own back story during the Japanese time.

Besides there was a graphic showing the story of a friend of Michael, Uncle Bang. His whole family was captured by the Japanese soldiers when they occupied the town and sent them back to China as they were accused to be one of the communis. Luckily the aunt of talked and reasoned to the soldiers, only Uncle Bang himself was saved and is able to stay in the town. Moreover, the section below also tells the story of Michael's past grandfather from bombing the machinery to the tragic death on the conveyor belt.

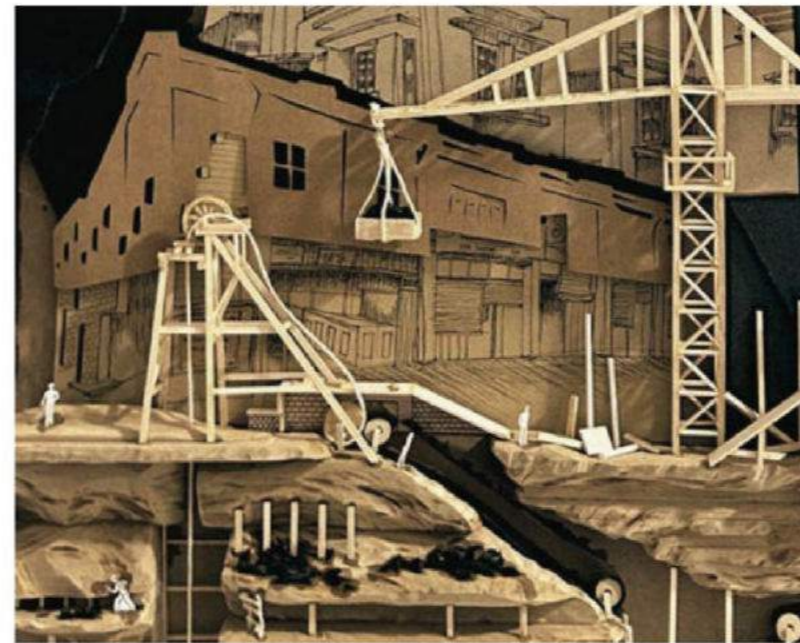
This manifesto visualizes different pieces of flashed memories when the Japanese occupied but it acts as a whole (**oneness**) for the precious memories of Michael.



Unforgettable Friend: Michael shared his commemoration towards his past classmates who had recently passed away



History Behind The Tunnel: News on the walls of the tunnel telling how the bomb occurred and the tunnel was demolished when the Japanese occupied



Tragic Death of Michael's Grandfather:

Was asked to take attendance of the current underground shift workers, but he refuses to take the task. The supervisor was furious and killed him on the conveyor belt and told the others that the grandfather was only resting on the belt instead.



Section Telling The Whole Story: This section was made by many layers of boards sticks and grind together with remnants of foamboard as coal tells how an everyday life of an underground coal miner. Stars from the first shift, they brought their own food head lamp and ride the elevator to the underground for work

Traces

"History that is stored and accumulated in landscapes, places, and things. The things I can see and feel in the landscape are physical and real, no matter how mute, hidden, and mysterious they might first appear."

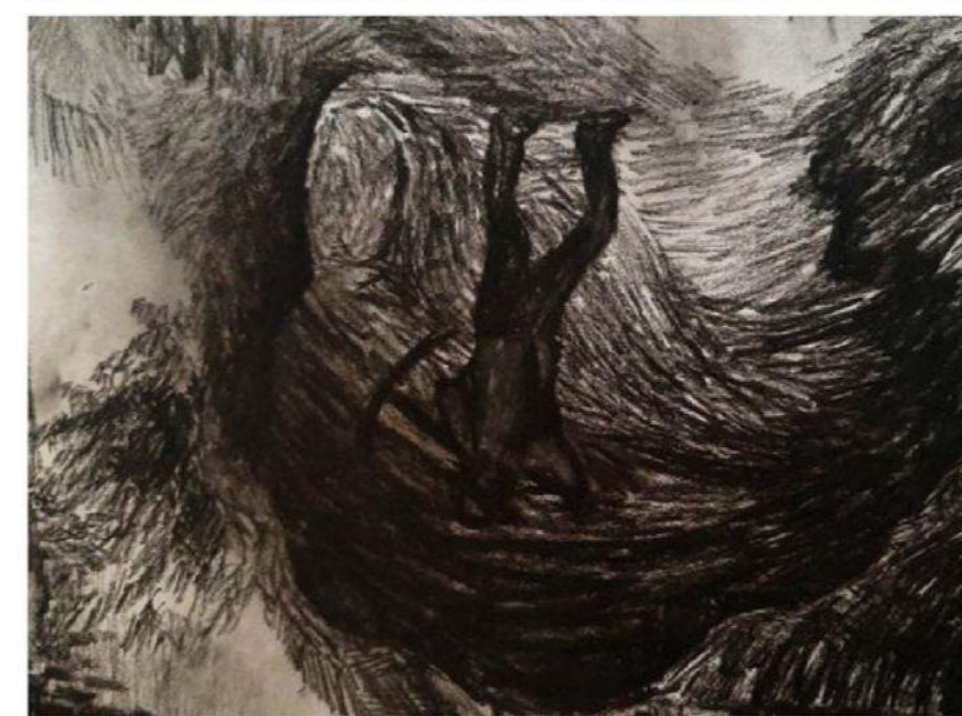
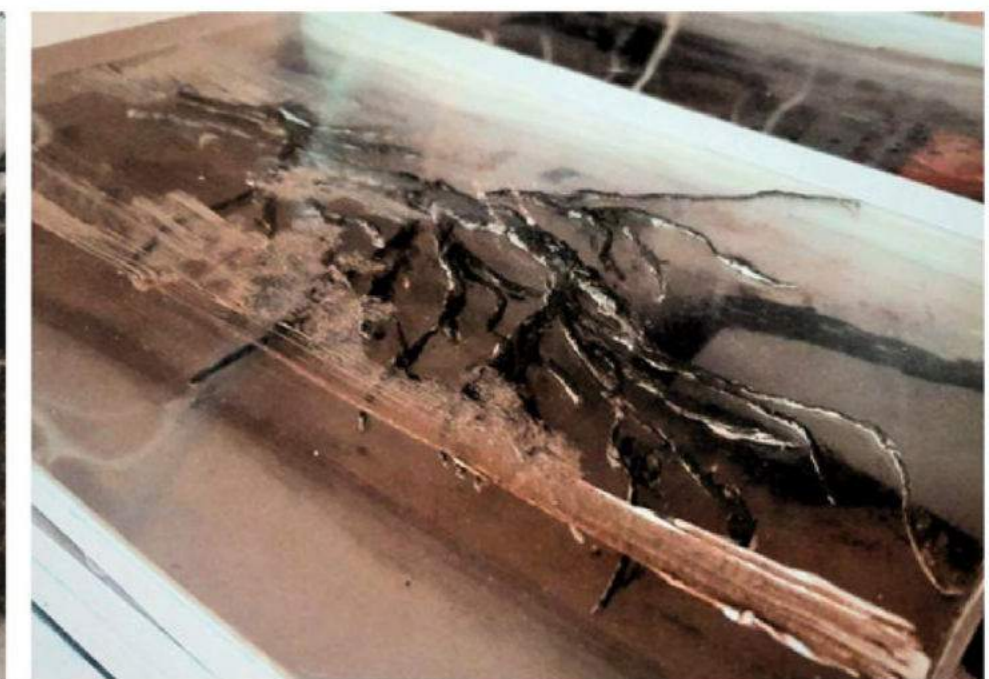
-Peter Zumthor

The project is inspired by the significant growth occurred in Batu Arang: growing shrubs, lakes formed due to the open cast mining. These changes show the real experiences of people left behind as footprints. The project talks about leaving traces and turning remains into new elements.

Using the principle of newness, the project describes Batu Arang's mining activities lead to a new change in the area. Around the wall, ceiling and floor of the area we found are traces left from the past. These traces display the experiences of people who used to live there.

Especially for the mining activities, it has led towards a new and different experience, like how the lakes were formed above the open cast minings.

The project is made to be shown in layers where it represents the change as time passes by



Layering of Time

"I think it is important to include traces of the past, to weave them into a new building, integrating them, overlaying, or absorbing them. The palimpsest is a nice metaphor for this kind of architectural layering on historical ground."

Based on that, the history of brick buildings is chosen to be the focus because of the changing in material, from shale to brick. Yet, it occurred during the mining of coal. Time link them together and become the story of Batu Arang.

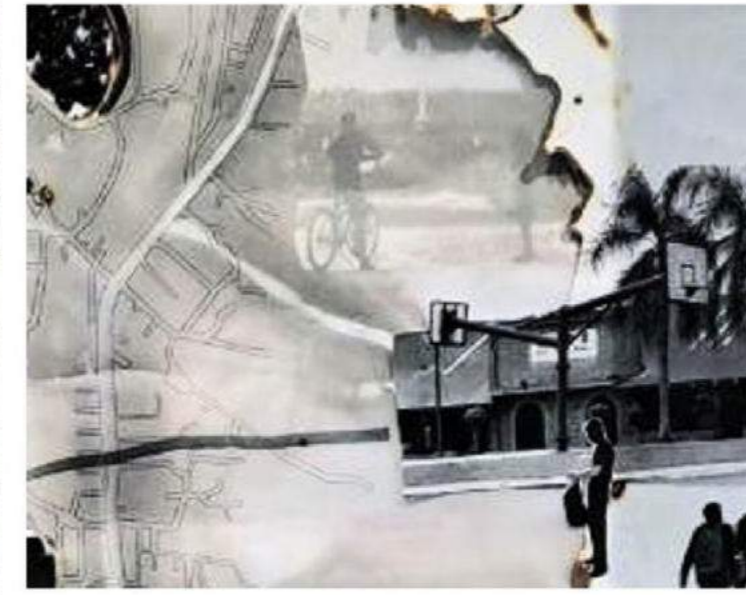
What is behind the tracing paper represented the past of the brick building. The activities, occupants and building appearance. Now, the events and occupants has shifted within the buildings. Some abandoned and some remained. A new story has created.

The Abstract Model

Linking of overcast mining lake to brick buildings.



I think it is important to include traces of the past, to weave them into a new building, integrating them, overlaying, or absorbing them. The palimpsest is a nice metaphor for this kind of architectural layering on historical ground.



Forgotten Darkness of Batu Arang

"Architectural work is about sensing the history of the place and trying to make things visible in a way that allows people to respond to them emotionally" from *A Feeling of History* by Peter Zumthor



Art work which discusses light and darkness of batu Arang and the emotions of the miners



Spatial models into the context of a coal mine.

openness

sense-making

experience of space

This project is the manifestation of the historical and emotional reflection on Batu Arang. The dialogue is mostly focusing on the darkness of history and the deep emotions felt by the coal mine workers in Batu Arang.

The top portion of the board is a speculative mapping of light and darkness on the old map of Batu Arang. The light and darkness are based on historical events, the locations of British and miners' settlements, and the locations of the mines.

The middle artwork is the representation of the emotions felt by a coal miner in Batu Arang until he passes away in the depths of the mine. Based on the emotions and historical events, 6 levels of darkness were extracted and presented in this artwork. Texts from parts of history and Peter Zumthor's *Feeling Of History* were collaged in this work.

Finally, the bottom portion is how a space can be perceived in terms of the experience of space, openness, and sense-making in the context of a coal mine.



WEARING OF DARKNESS: the miners carry the heavy burden of responsibility and emotions before departing to the mine.



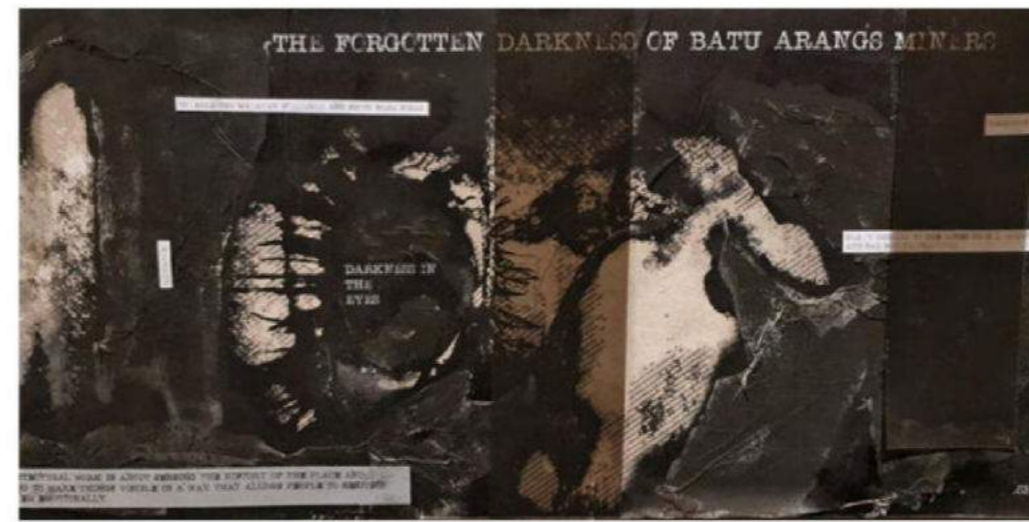
DARKNESS OF THE HEART: the manifestation of darkness within their heart as result of the untold misery caused by the british



WALKING THROUGH DARKNESS: Despite knowing the outcome of protesting, fighting for their rights, and continuing mining, they still go through them as they have mouths to feed and responsibilities to fulfill.



DARKNESS OF FACE: fear and distress appear knowing the fact that death is at their doorstep in the mine and their dignity are humiliated by the British employers. Therefore, a smear of darkness on their faces.



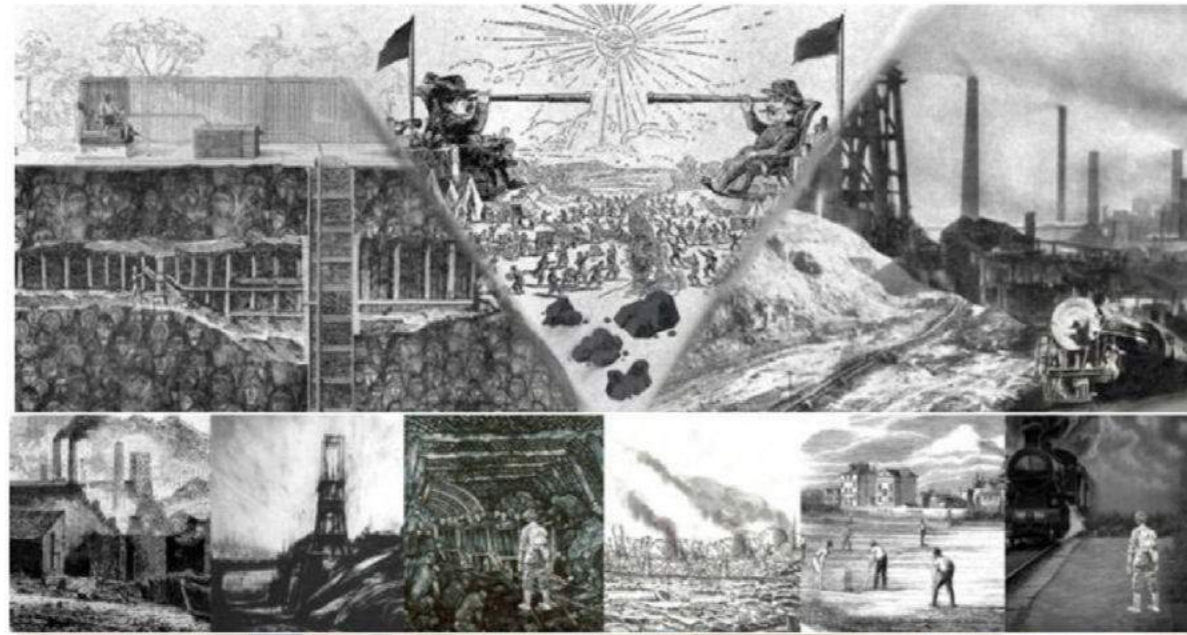
DARKNESS OF THE EYES: The agitation that is felt moments before death as the light of the soul is disappearing from their eyes.



SHROUDED BY THE CLOAK OF DARKNESS: The miner passes away and their body is never recovered hence their shroud is the darkness in the depths of the mine.

The Flow of Darkness in Batu Arang

"Architecture is about feeling the place and try to make it to see throw people's history " from A Feeling of History by Peter Zumthor.



The history of the drak on Batu Arang is portrayed in this pursuit. This mainly concentrated on the beginning and the end of history's gloom as well as the sights experienced by the Batu Arang coal mine workers.

The top portion of the board displays the three main sources of darkness. Historical occurrences, as well as the sites of British and miners' communities, served as the basis for the being of the gloom.

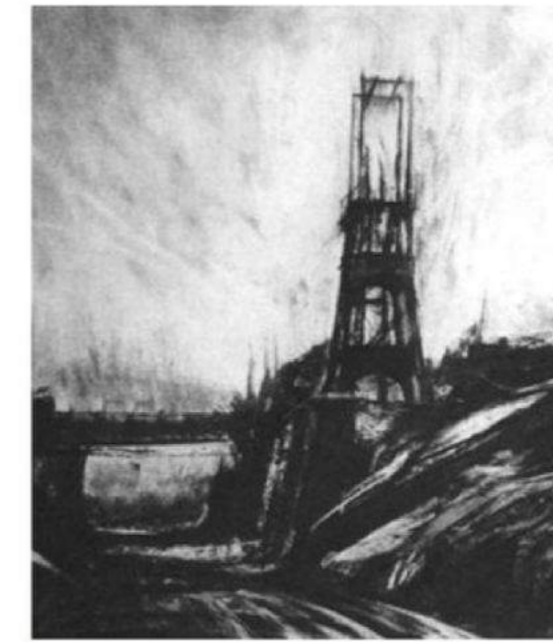
The artwork in the upper middle depicts the scenes that the Batu Arang workers experienced, including the scenes where they were hidden deep within the action. Six scenes from six decades of gloom were taken and presented based on feelings and historical occurrences.

A hypothetical mapping of the three main dark locations on the historical map of Batu Arang represents the emotions experienced by a coal miner in the second half of the artwork. This piece was collaged using texts from historical events as well as Peter Zumthor's Feeling Of History.

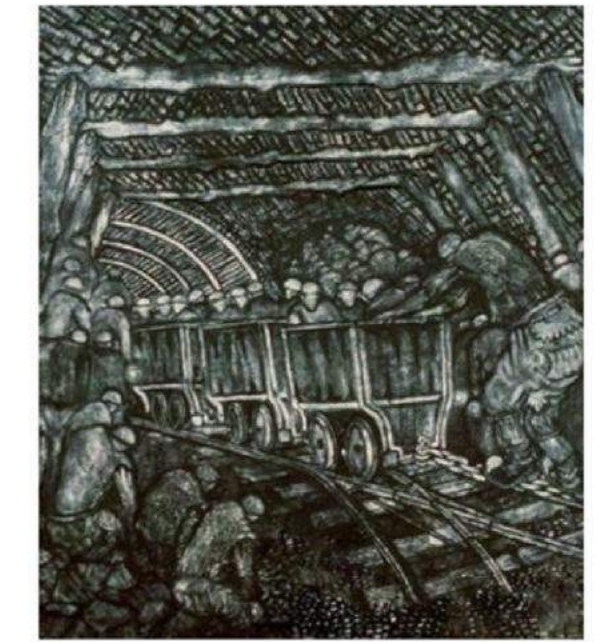
The former hub of Malaysia's coal mining industry was the little town of Batu Arang. When it came to tarin, cannon power, and many other projects during World War 2, coal was the primary ingredient. The majority of the coal shipped from this area during World War 2 served as fuel for the British and Japanese.



Scene 1 : The people were Separated from there homes and brought them to batu Arang.



Scene 2 : The people were forced to work in the factor under the white rulers in batu Arang.



Scene 3 : The people had no choice but to work underground to dig charcoal in mines of batu arang.



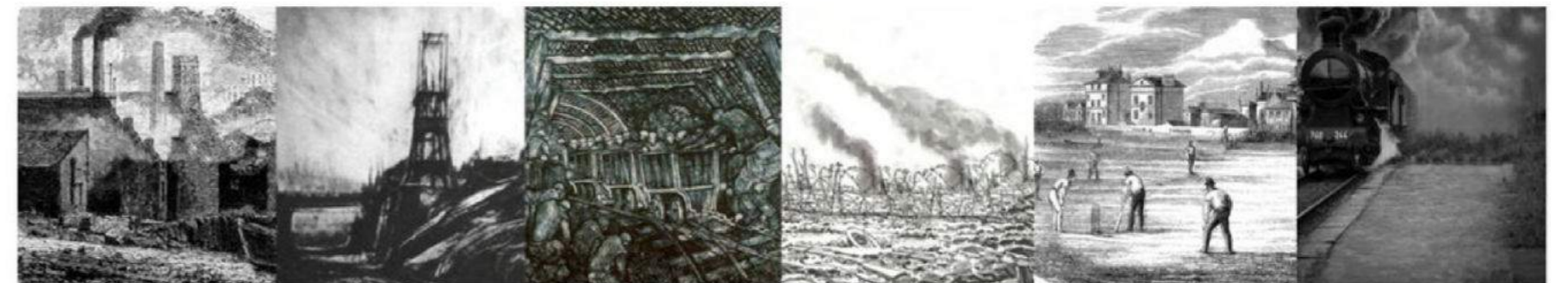
Scene 4 : The people were sent to world war II to defend the British .



Scene 5 : The people later tried to cheer up by playing some sports in though movements.

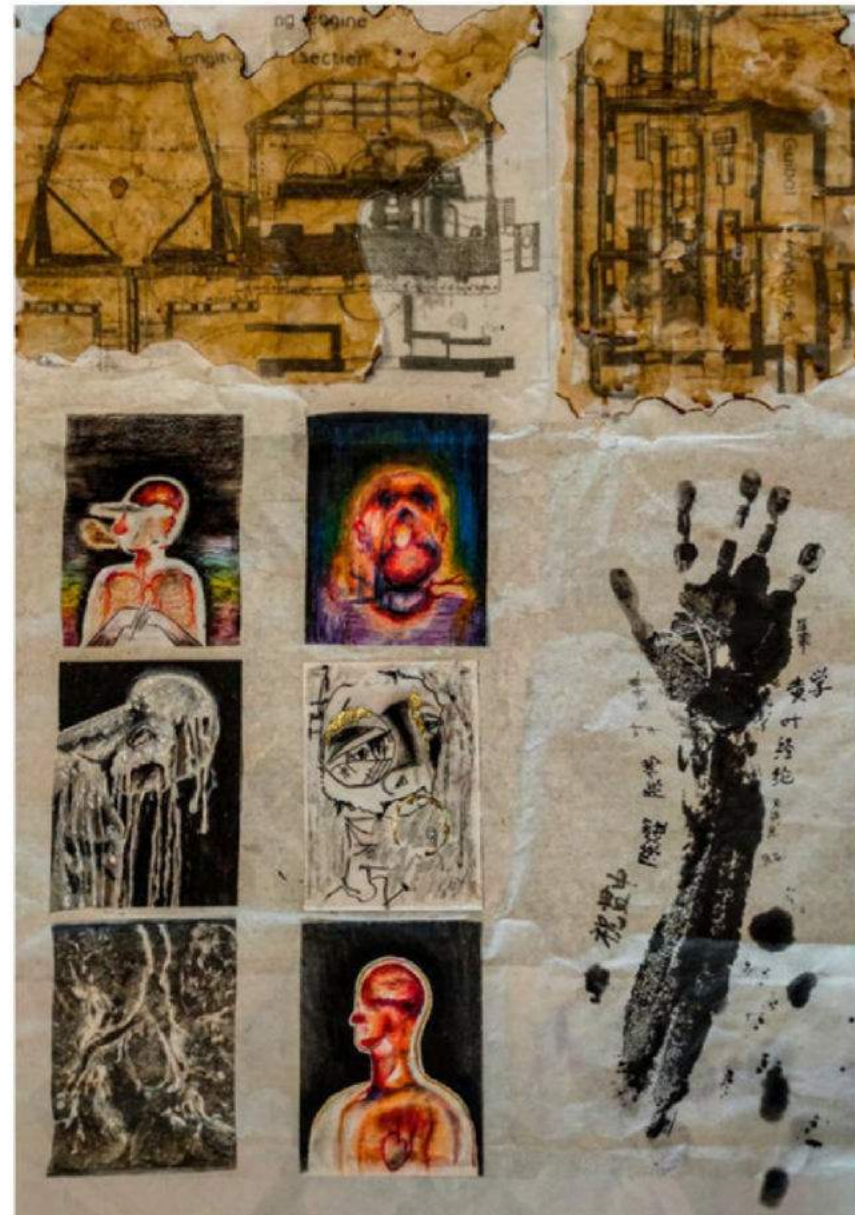


Scene 6 : The people were forgotten with history when charcoal minings were shut down.



THE FLOW OF SIX DECADES

The Shattered



*In Batu Arang, the land of coal,
A history of fear and oppression took hold,
Where miners toiled in suspenseful toil,
For the black gold that lay in the soil.*

*The darkness of the mines was deep,
The fear of accidents always did creep,
With every swing of the pick and shovel,
Their lives were always in peril.*

*Day in and day out, the miners would toil,
With the weight of the coal taking a toll,
Their lungs would fill with coal dust,
Their spirits would be crushed with each thrust.*

*But they were a proud and resilient lot,
Who worked hard in this unforgiving spot,
For the coal that was the lifeblood of the land,
And the prosperity that it brought to hand.*

*Batu Arang, a place of history and strife,
Where the miners worked with all their might,
To bring forth the coal from the depths of the earth,
And give their families a chance at a new birth.*

*So let us remember the miners of old,
Their courage and strength in the face of the cold,
And the legacy they left in the mines they worked,
For it is a history that should never be shirked.*

Life Above and Life Below

"History is a Feeling of a place which is stored in the Landscape"

The history of a place are the memories of the past which are real and authentic but are mute, hidden and mysterious. This can be related to Batu Arang, as the history lies in its landscape and deep below the surface which is mute, hidden and mysterious

Making use of a Map dated 18 April 1949, this project maps out the estimated locations of all important buildings, roads and railway lines which contributes to the speculation of how former workers used to live. This board also indicates the locations for all mining sites, mine entrances and open casts.

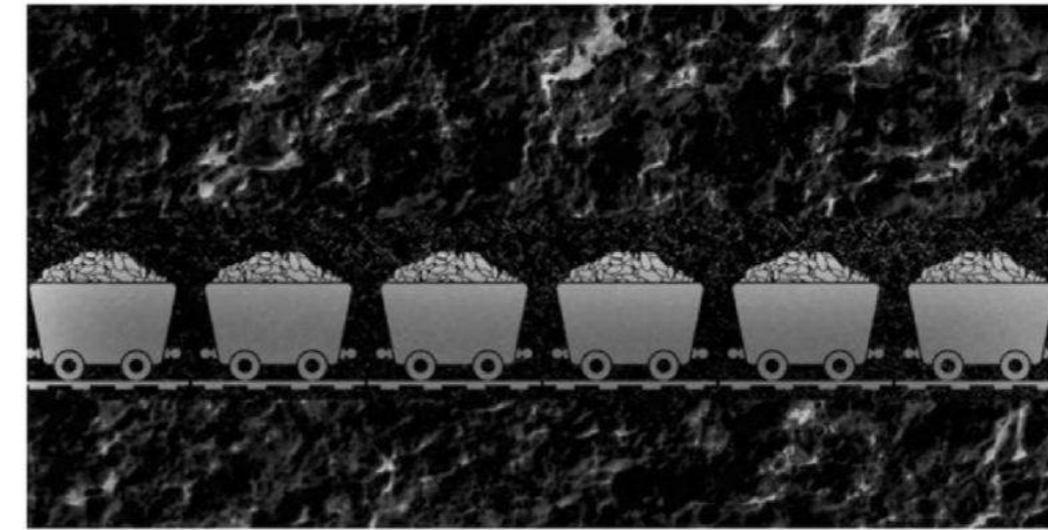
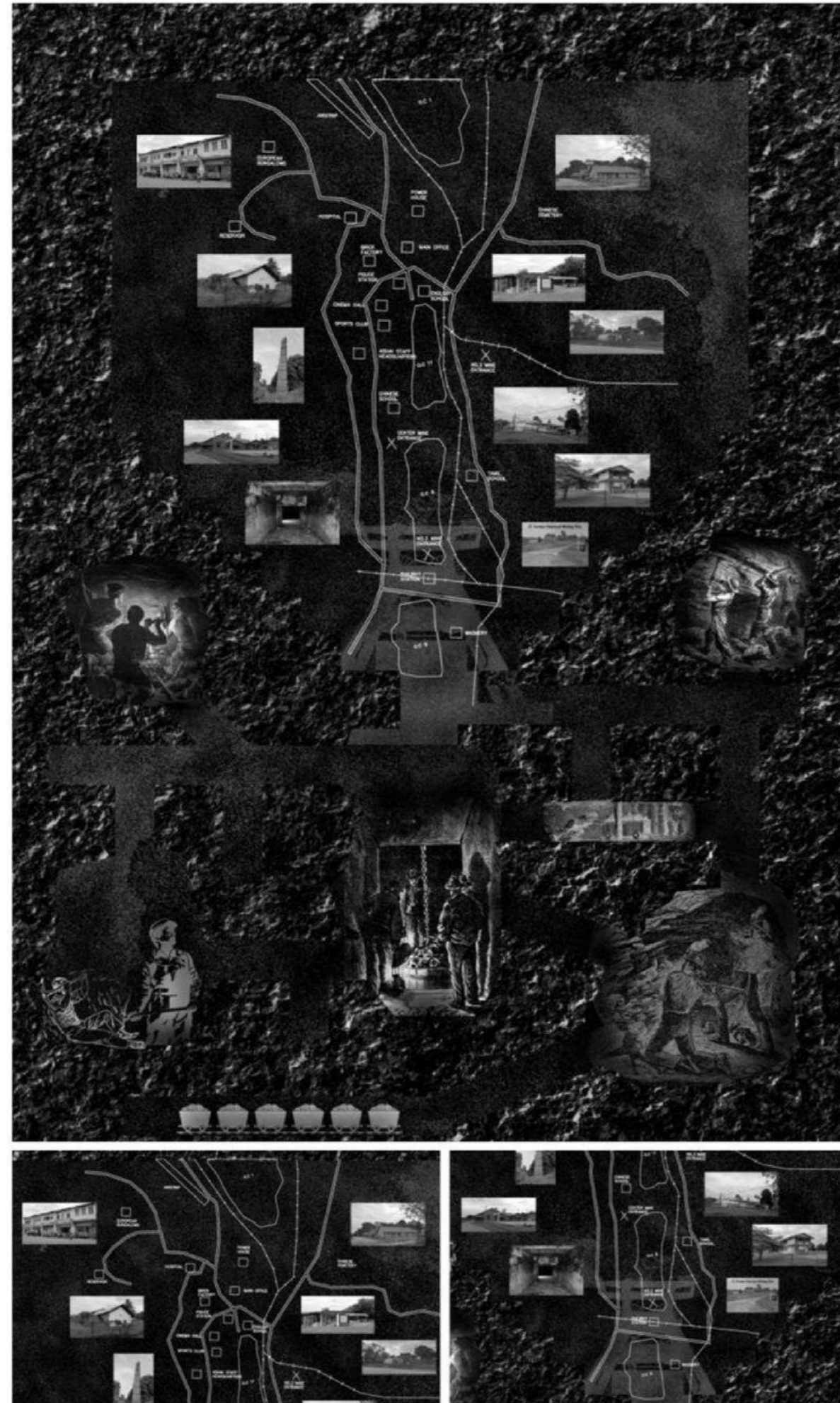
The life of a miner can be divided into two categories:

- Life Above

Highlighting the open cast work locations and possible places miners may have used when their shifts ended. Possible leisure activities that miners may have participated in.

- Life Below

Highlighting the tunnel entrances, locations and what remains. Speculated working conditions shown by the various tunnel routes, lack of lighting and fresh air. Showing the hard work and long working hours the miners had to work in that time.



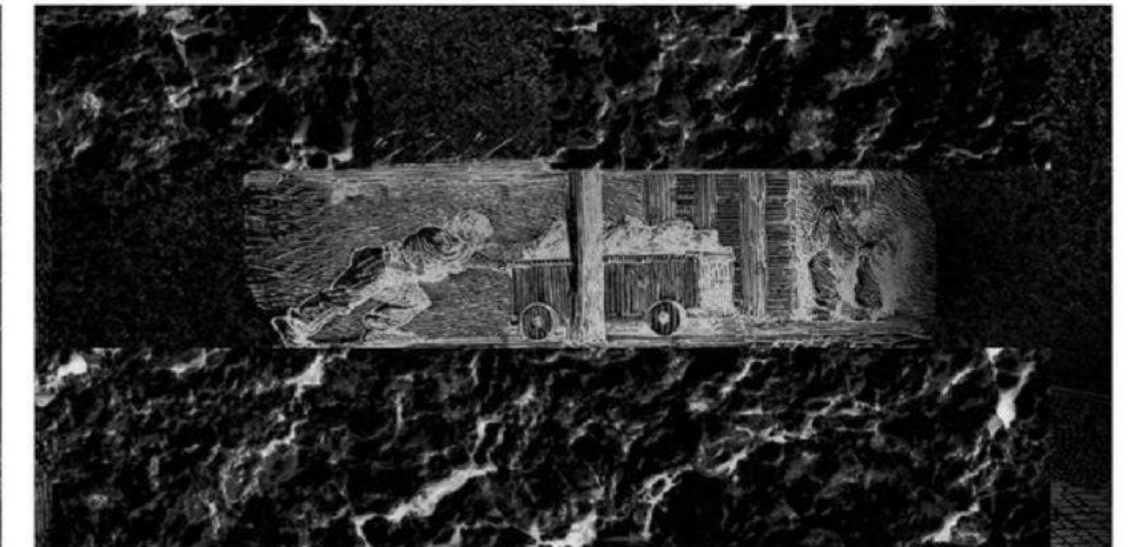
COAL EXTRACTION: Mine carts used to extract large volumes of coal from through the tunnels.



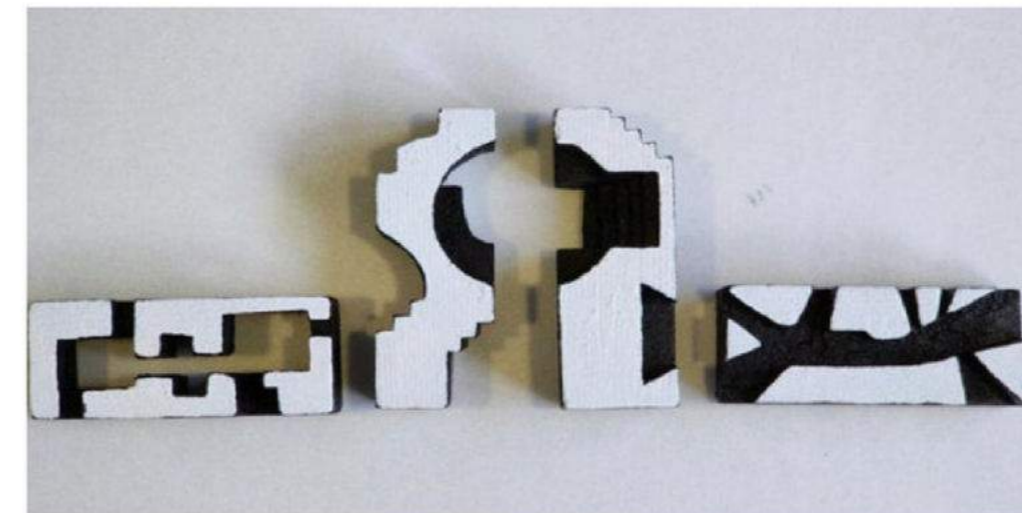
TIGHT SPACES: Showing the small/tight spaces and working conditions of miners.



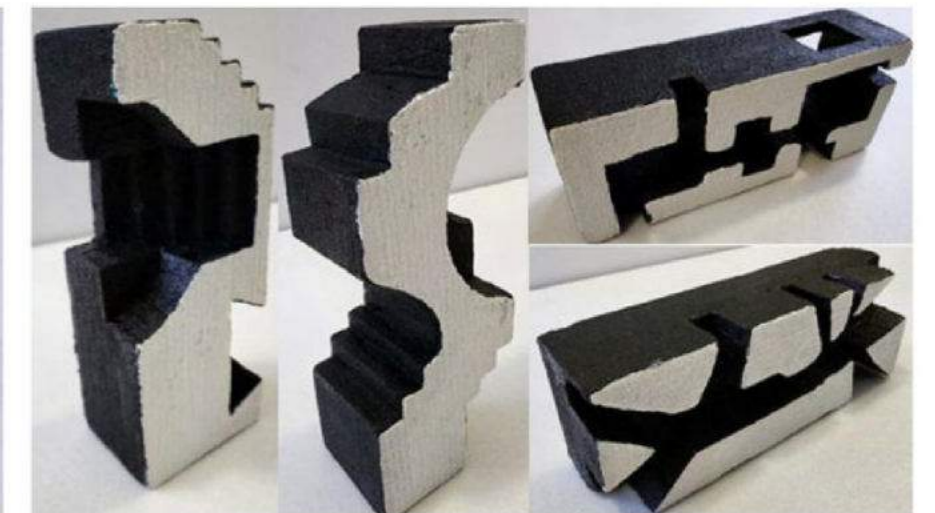
DARKNESS: Lack of lighting, showing how the miners worked in darkness



STRENUOUS WORK: Intense labour and long hours of work they had to endure to be able to earn an income to provide for their families.



EXPERIENCE OF SPACE - ONENESS - CONSTRUCTION



Using a brick, spaces are carved out in different shapes and sizes. All spaces are different however, the borders of each each brick allow these spaces to form as one continuous space with different experiences.

Nostalgia of Material

"History is a Feeling of a place which is preserved to this day and remains with us."

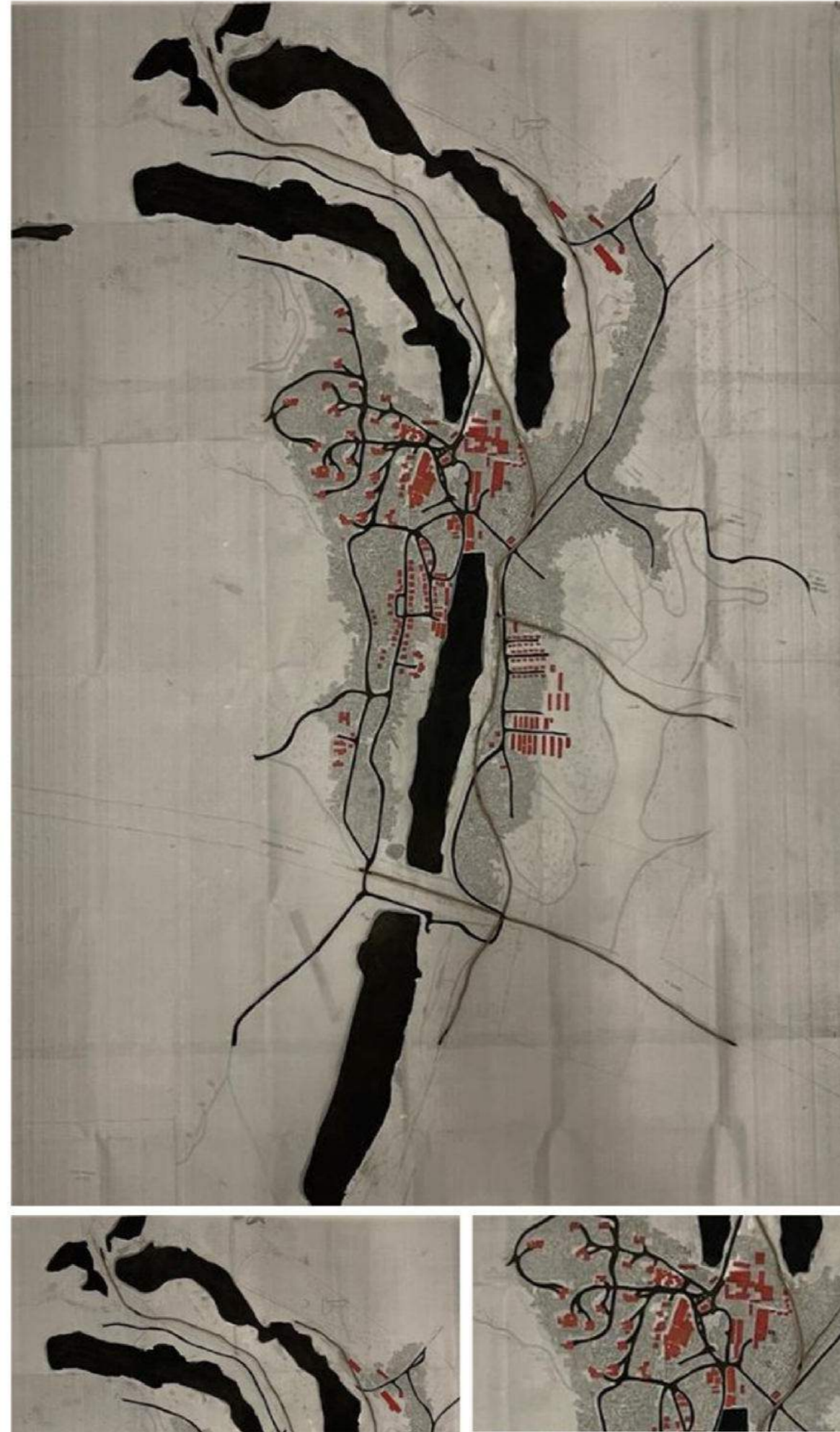
The first project is focusing on the historical elements of the building. Batu Arang It's a place where the history of important industry development showed. Referring to my butt means the message that I would like to cover the material that truly exists on the site. Batu Arang is a place where the history of crucial industrial development showed. The main messages that I would like to highlight Black regions, red regions, and railways.

-Black region had a coal mining area which showed them in supporting activities for residents during the historical period

-Red regions repeat send that brick built building with brick become popular building materials in the most area in Batu Arang

-Railway is the main transportation of raw material across, and within the town

In an impression, it reflects that the central axis of mining in the local area runs through the entire city, and also brings different industrial development to the city. At the same time, using the railway as an excuse to drive industrial activities in the entire area can help us understand the industry developed in the area at that time sign.



A collection of different materials In order to reflect different space atmospheres, the importance of building materials has been learned.



New materials, steel as a whole support point can also be translated as an important material connecting the whole batu arang.

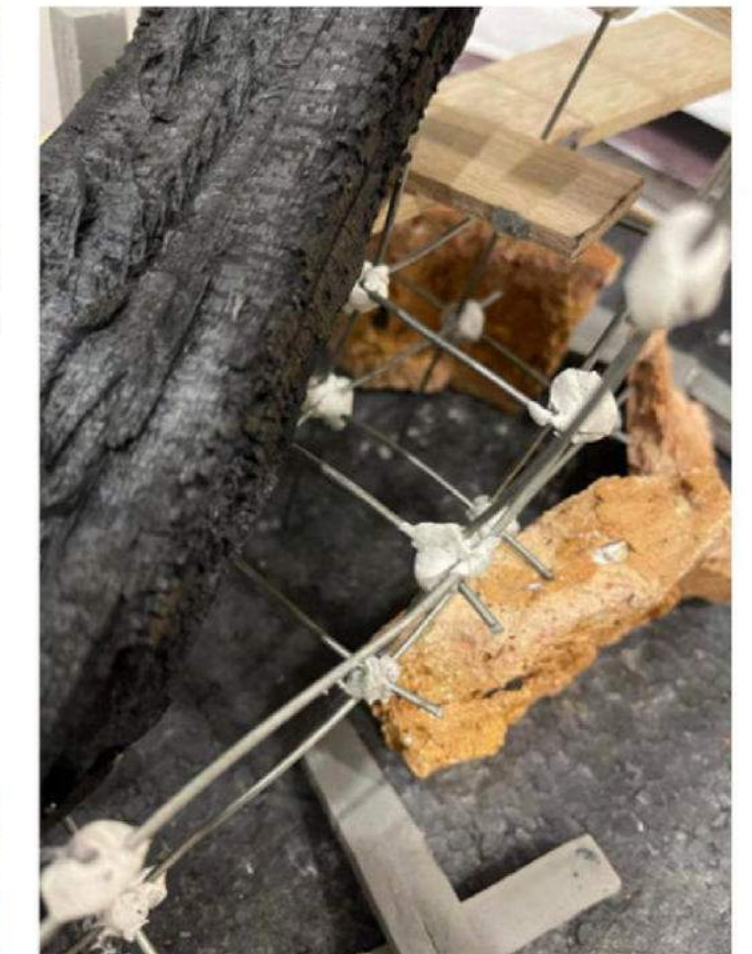


Using a brick, spaces are carved out in different shapes and sizes. All spaces are different make a variety of comparisons without removing the original building materials.

TIMBER
RED BRICK
CEMENT
STEEL



As an important supporting structure, steel can be seen to connect the materials to form different spatial elements while retaining the original materials and innovative spatiality.



Memories of Chaos

"Memories of chaos, a whirlwind of emotions and time, a symphony of emotions, a tale that cannot hide."

"Landscape and places store memories, they save traces of lives long gone" Peter Zumthor. In the early 20th century, Batu Arang was a bustling center for coal mining, attracting workers from all over the region. The town was built in a functional style, with narrow shophouses lining the streets and a railway station that served as a hub for transportation of coal.

The black and white photographs of Batu Arang from this time period capture the harsh realities of life in a coal mining town. The people in the photographs are often dirty and tired, evidence of the long hours and hard work that went into mining coal.

Besides that, in the early 1940s, the world was engulfed in the darkness of war, and the small town of Batu Arang was no exception. The town's residents, living in constant fear, sought refuge in the shophouses and the nearby jungle. The nights were filled with the sounds of gunfire, screams, and the incessant hum of fear.

The town's residents faced the brutality of war, but they also demonstrated a remarkable resilience and determination in the face of danger. Today, Batu Arang stands as a testament to the power of human spirit in the midst of darkness.



Drawing painted with charcoal, spreading the darkness emotion of an echoes of the past serving, the sensation and feeling of being in the town.

" Memories of chaos "



Obstacle: The obstacle facing by the miners.



Journey: Into the death once you enter the coal min tunnel.



Glimpse: sight of light, a sensation of hope that kept the miners going.



Commute: Long away from home to work in danger for surviving.



Tunnel: Irrational fear of confined spaces.



Hope: Hope is the light of willpower of a miner to work for their family.



Resilience: The one who fight their mind for living and out from mining.



Sacrifice: Serve as a reminder of the sacrifices for the asset for surviving.



Survival: The only few of them are survived till the end of coal mining.

Forgotten Darkness of Batu Arang

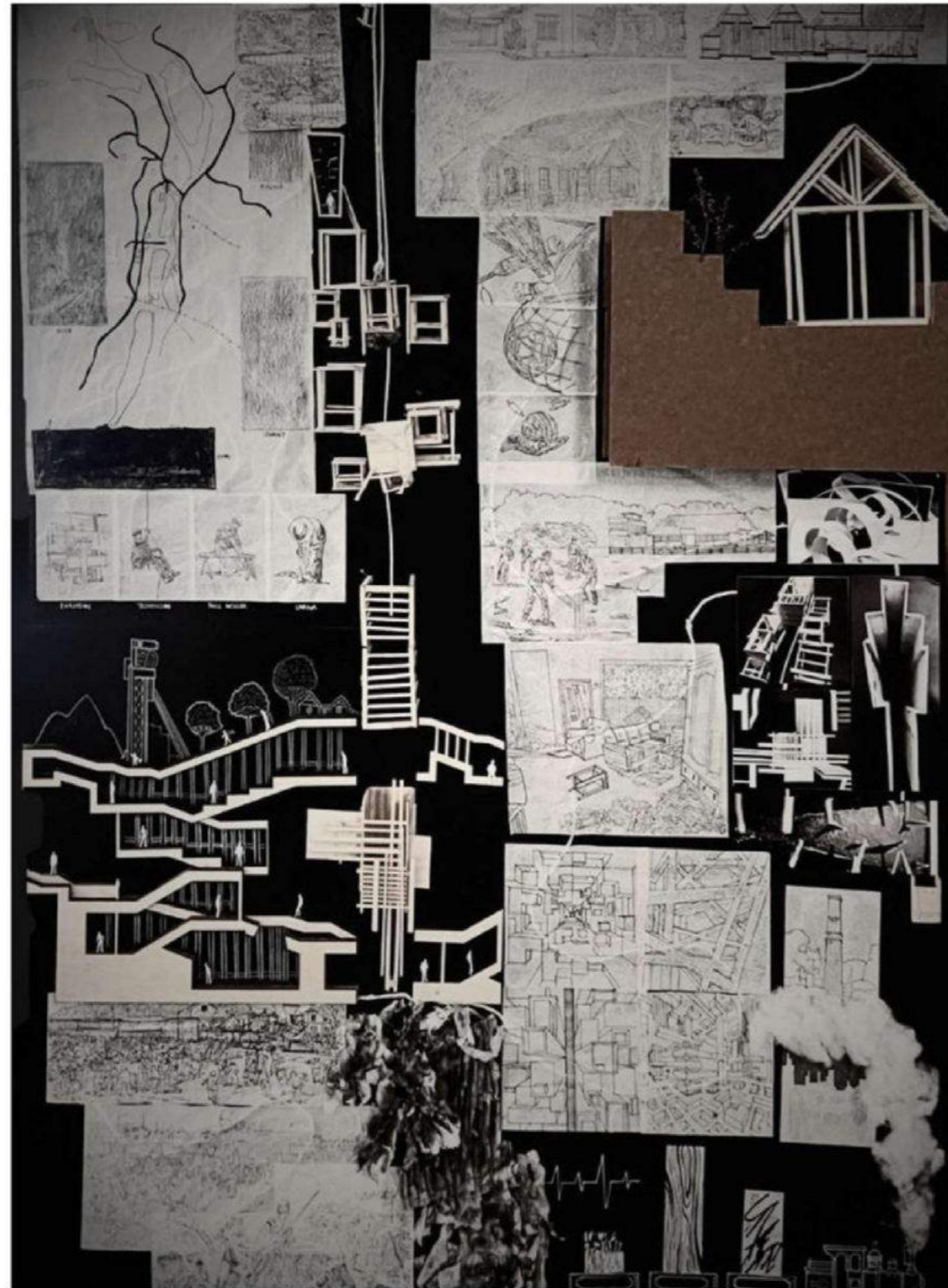
"Good architecture enhances the quality of life, evokes emotions, and tells a story."

from *Non Referential Architecture*
by Valerio Olgiati.

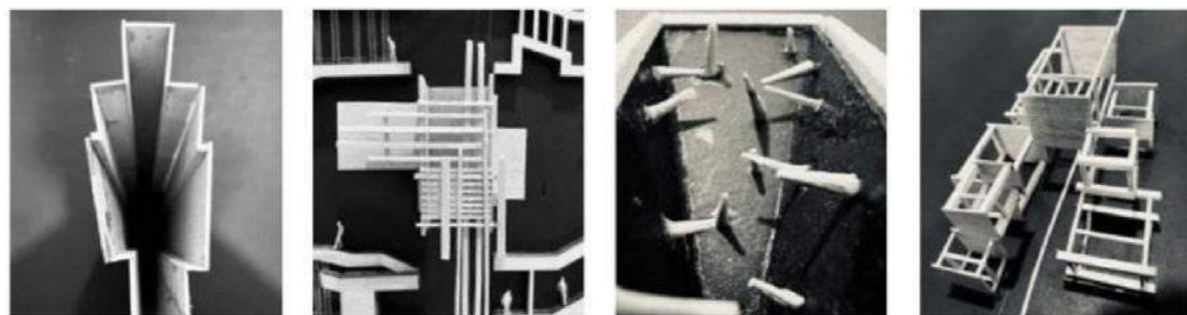
This project is based on a true story, Aunty Sue which used to live in Batu Arang for 30 years before. On that time, PKM had lost to British and Aunty Sue's husband was dead during the war. Although they were now in the city for 20 years, but Aunty Sue is still very missing her hometown, Batu Arang.

These drawings and models are representing the villages' experience. It's a human shape which emphasizing on the villages's life in Batu Arang is actually been planned. For example, the job and works of it, like the male need to get into a dangerous work, while for the female, they only can be a hawker, or people to service for the European. It shows the unfair phenomena, confusion, anxiety and no choice chosen feeling that created by the outsider.

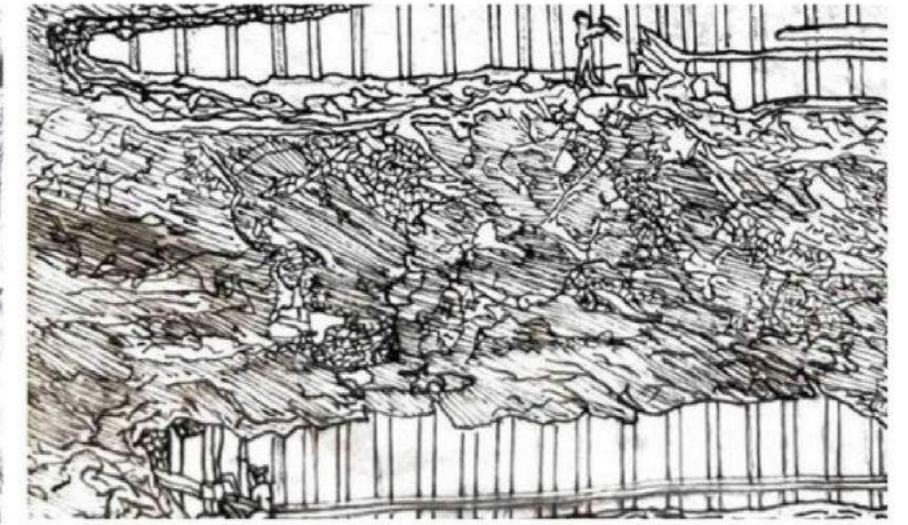
Today, as the world transitions away from coal towards cleaner energy sources, the experiences and feelings of coal miners have evolved. The decline of the coal industry in some regions has brought about economic challenges leading to a mix of emotions such as nostalgia, concern for the future, and a desire for new opportunities.



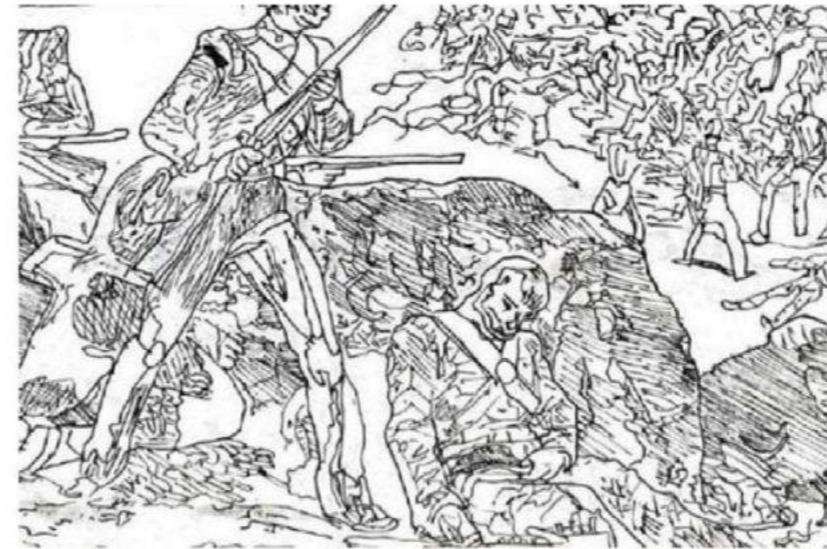
Historical & Emotional Expression Storyboard to reflect the coal miners in the past history.



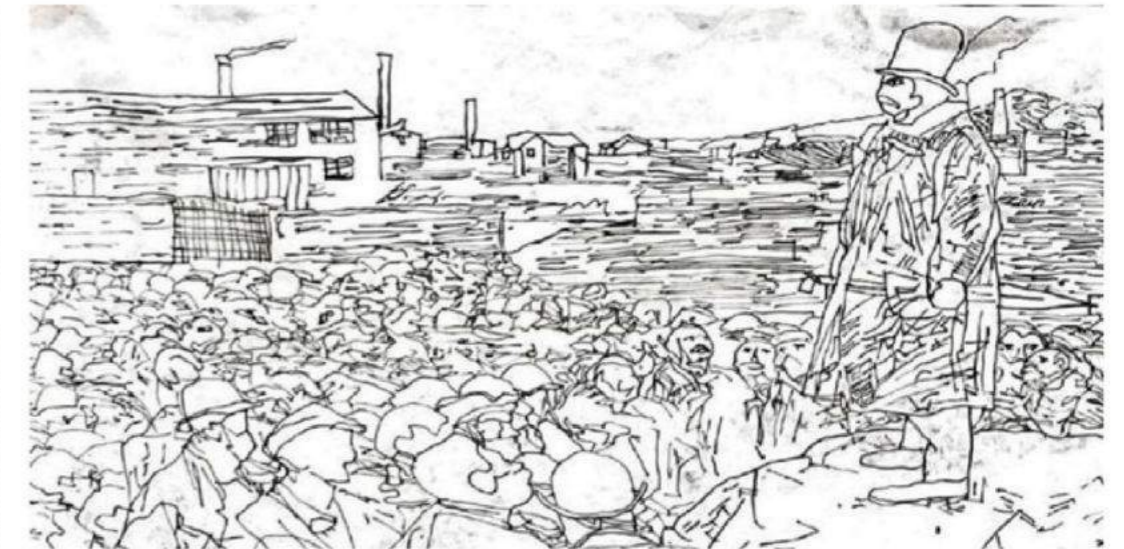
Cultural Residential Houses: the Indians live in barrack houses which totally make out of bricks.



Mining Activities: the coal miner's willing to work due to the wages of RM20 perday.



War of Malayan Emergency: PKM and British war happening in Batu Arang.



Strike Action: 6000 people work stoppage and British dispatch 300 police to settle this issue.



The Great Escape: Residents in Batu Arang escaping from their hometown due to the second world war, the crops and plant destroyed, equipment immobilized and resulting the Cessation of Mining. Other than that, competition with oil fuel and Batu Arang coal was inferior (not as good as) to imported coal is also one of the reason of declination of coal industry in Batu Arang.

Echoes of Batu Arang

"Architecture to be linked to layers of life and time."
from "A feeling of History" by Peter Zumthor

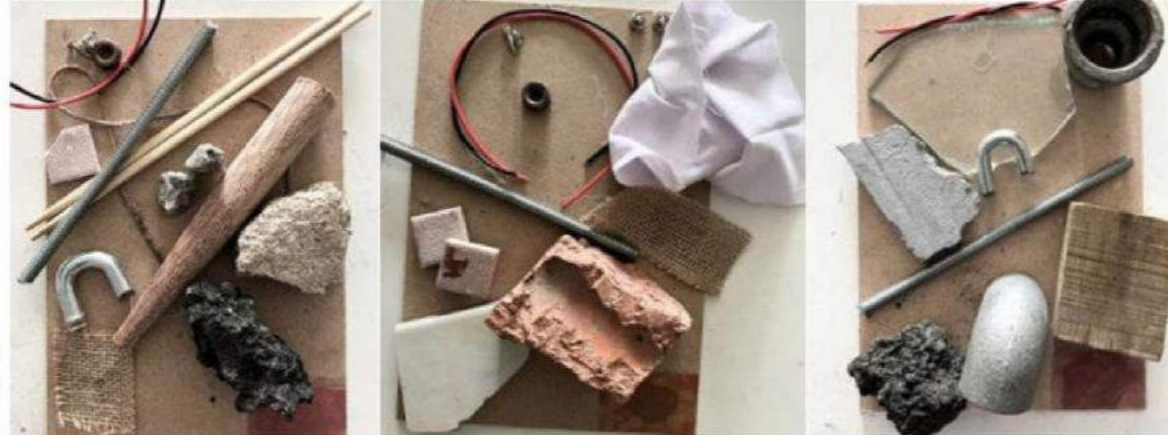
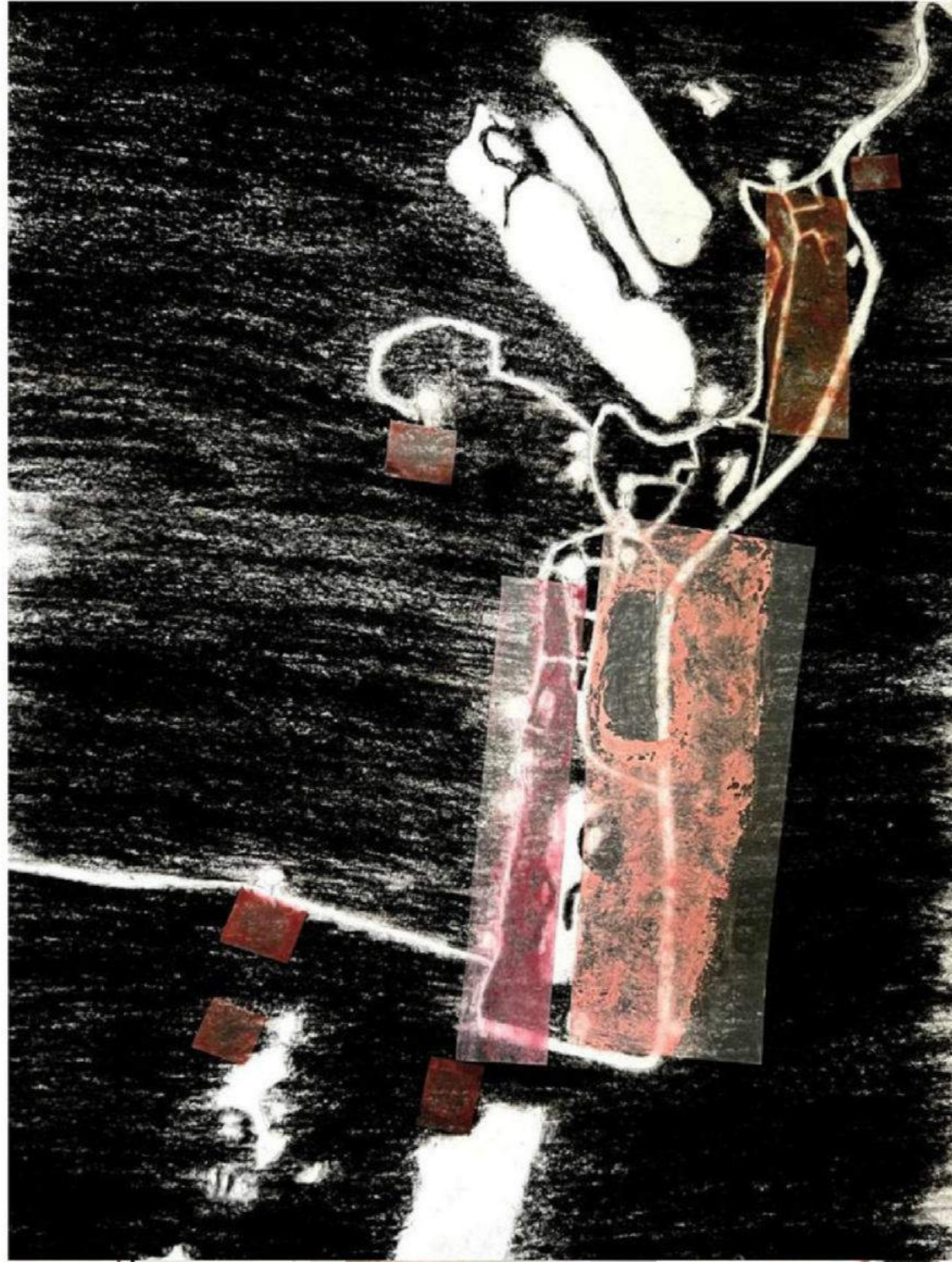
The story of the overall project begins with the history of Batu Arang and the significant role of Chinese workers played in the development of the town.

Corresponding to the historical map of Batu Arang on the left side, below shows the construction material of the existing buildings available in different areas of the town. In conclusion, **Steel, Brick, Concrete,** and **Timber** are the common construction material that can be found in the town.

Manual drawings represent several meanings which are Migrant, Hustle and Bustle, Adventures, Devastation, Martyrdom, and Pioneers respectively. Furthermore, each of the drawings is to bring out the relevant emotions felt by the miners in the past.

Let's reflect on the question thoroughly: What is the meaning of life, and where answers are found? In the journey we commence, with hearts unswerved, for life is to be understood backward, yet lived forwards.

To analyze the construction material of the existing building available at the site.



Migrant: The miners carry their own culture from their hometown to Batu Arang.



Hustle and Bustle: The traditional Chinese culture, indicating the daily routine of labour in the past.



Adventures: Chinese workers trying their best to survive in the strange town in order to give the next generation a better life.



Devastation: During World War 2, Chinese workers get killed without any reason.



Martyrdom: Soldiers fight for their own country whilst ordinary people fight for their better future.



Pioneers: Life can only be understood backwards; but it must be lived forwards.

Hidden Scar

" The things I can see and feel in the landscape are physical and real, no matter how mute, hidden, and mysterious they might at first appear..."

I learn about the history of Batu Arang and explore the past of the people at Batu Arang and the feeling of people that live there. I have explore the history of Batu Arang by understanding different part of thing in the coal mining. The tunnel, the machine, the airshaft, they make me feel oppression, narrow, darkness, looking forward to the bright. these word and feeling will be my inspiration throughtout the project.

Abstract Model

By understanding the history of the site, I have made some model to shows my feeling to the certain item. The spinning wire represent the speed of development of Batu Arang and risk. The cubes model and model with human figure and fabric represent the strong and the weak as the British company and the workers. In the creation of these model can inspired me the spaces that i wanted to create in my further project.



Morning Market: A place with human touch and warmth.



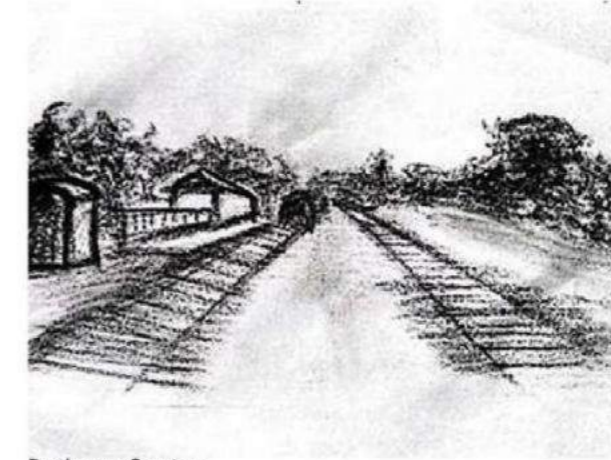
Abstract Model



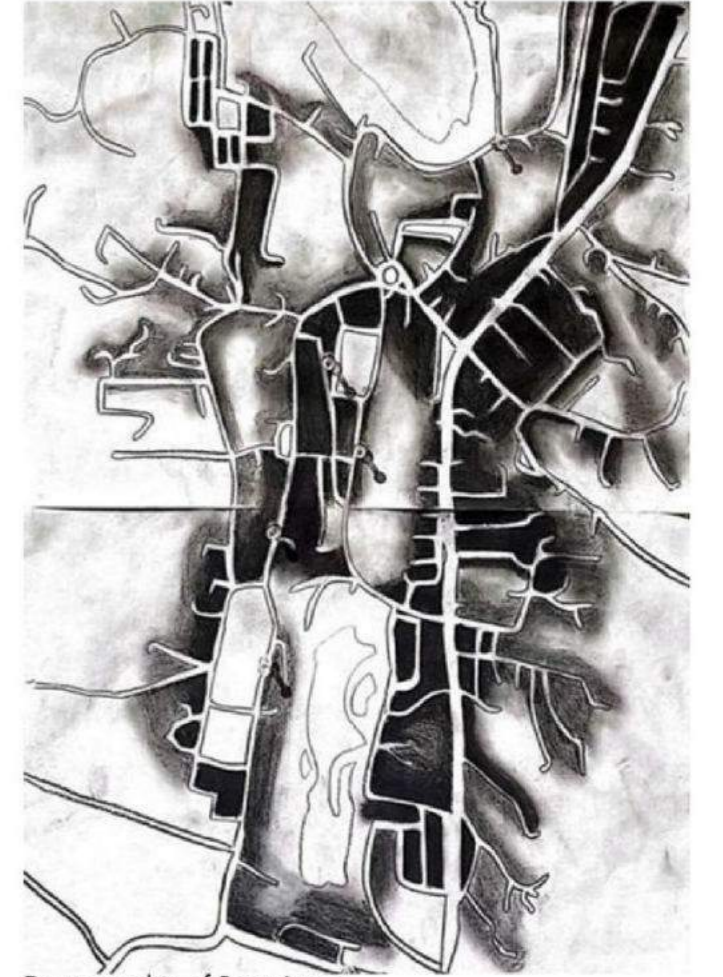
Abstract Drawing



Abstract Model



Railway Station



Demographic of Batu Arang



Abstract Model: Try to create the feeling and experience of people that working in the tunnel.

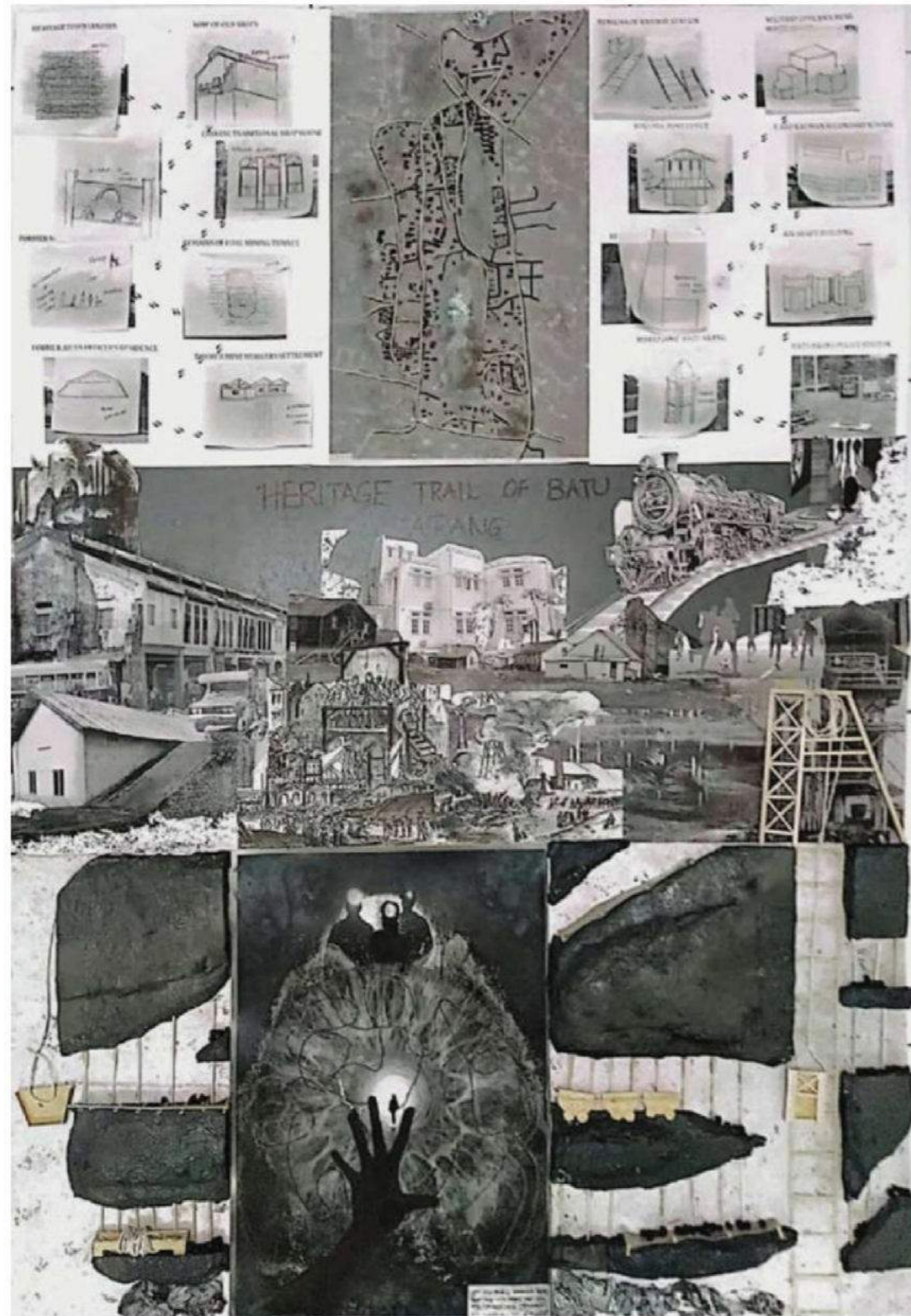
Absurdity of evil

"our individual memory is based on visuals, not on information. What we view often causes memories-related images to pop into our heads. Additionally, the reverse is true. We always associate sentiments and emotions with the visuals we recall.
Peter Zumthor"

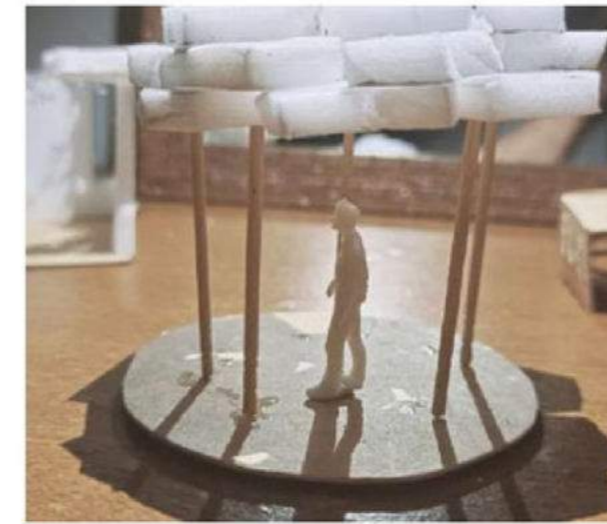
According to historians, Batu arang is the well-known towns in Malaysia with most significant eras in history that has taken place, there was the discovery of coal, when the British discovered the potential of the business and began to immigrate laborer's for the mines.

This journey began with observing a few of the selected heritage buildings that are significant to the site. The heritage trail began close to the air shaft and ended with a railway track on the corner of the boundary. As we explored the site, we discovered various elements such as patterns, the roof's structure, historic architectural styles, the use of materials, etc.

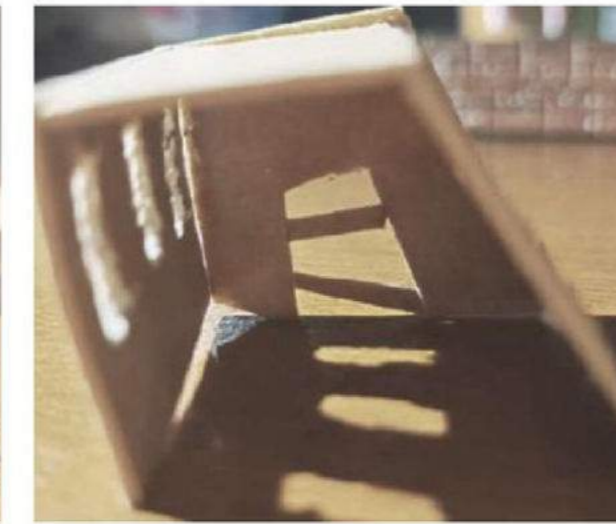
Regarding the Conquering and World War II events that occurred in this area, We felt the ambiance and emotions that permeated those historic events. By examining the coal mine site and looking at the shaft that is utilized for mining operations, and were exposed to the dark, cramped and damp working conditions that coal miners once endured. Most mining villages and camps consisted of timber structures or canvas tents. There were many of fires. in which the miners are mentally and physically devastated, yet they are still searching for hope and trying to provide for their family by attempting this, even though they were are unsure how they would survive for the day.



Textures And Pattern's Found In The Batu Arang And Found Different Kinds Of Materials Like Brick, Pebbles, Steel. Timber Etc.,



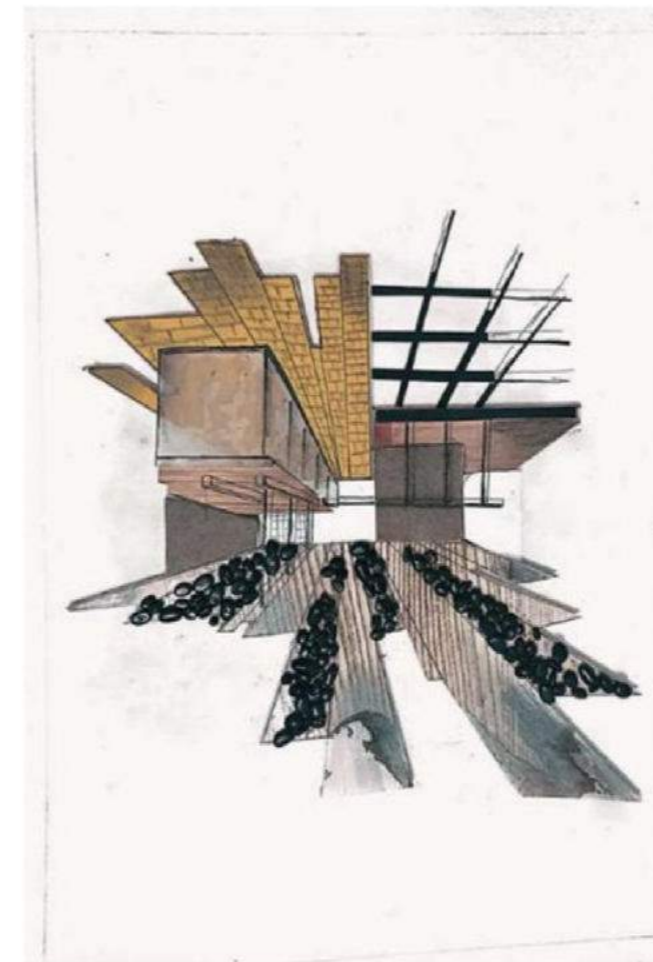
A Space Created For The Shade But Actually It Will Give The Users A Feeling Of Weight That We Gonne Carry While Walking Or Staying Beneath It



Playing With Voids To Have Different Angles Of Light Entering Into The Space



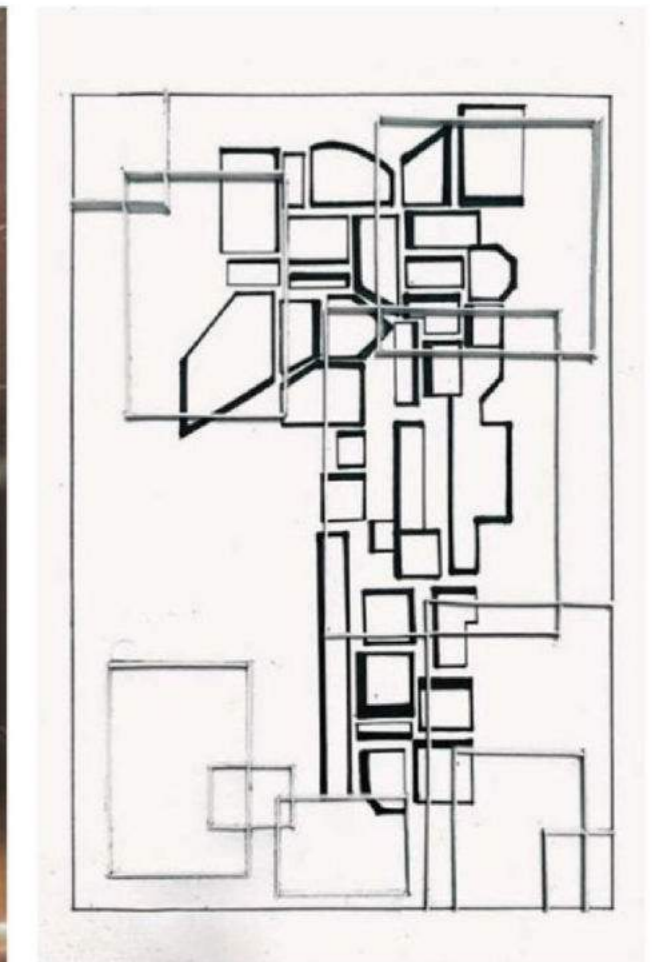
In this the texture for the wall itself gives senses of being in the mine and light entering through texture void from top is like haunting effect.



Textures And Pattern's Found In The Batu Arang And Found Different Kinds Of Materials Like Brick, Pebbles, Steel. Timber Etc.,



It is a clay model where the tunnel experience will be seen while walking down through those spaces which are interlinked to one another



Observing And Interlaying Different Tunnel Shapes

Batu Arang in One Glance

"Mining in the nineteenth century, was a locus of Love"
from A Feeling of History by Peter Zumthor

Batu Arang was made by discovering a coal inside of it. Coal reunited so many of the industries at the time and brought workers inside the Batu Arang. Train Rails, Brick Factories, Power Stations, timber impregnation plants and sawmills all came to Batu Arang due to the existence of Coal mines and coal convergence the goal of all these activities into one thing: coal extraction. Coal metaphors the nature of Batu Arang as an industrial city. The result was all linear but centralised around the goal.

Oneness is the key to understanding Old Batu Arang. Batu Arang should be looked at as one and then divide into different parts. During the golden era of Batu Arang workers went through so many ups and downs but mostly down. Their Work & Living Condition wasn't easy. The nature of mine was extremely deadly. All the work in high temperatures, damp and dark spaces under the ground, carrying heavy coal and carriage wasn't paid with a good salary and benefits. As a result, workers were on too many strikes which had a big effect on the whole Malaysia workers union.



A0 Board which shows life of Batu Arang workers during city mining era



Layers of burnt paper with sewing with the context of coal, workers' pain and scars and their fight process to deal with difficulties and solve existence problems.

experience of space



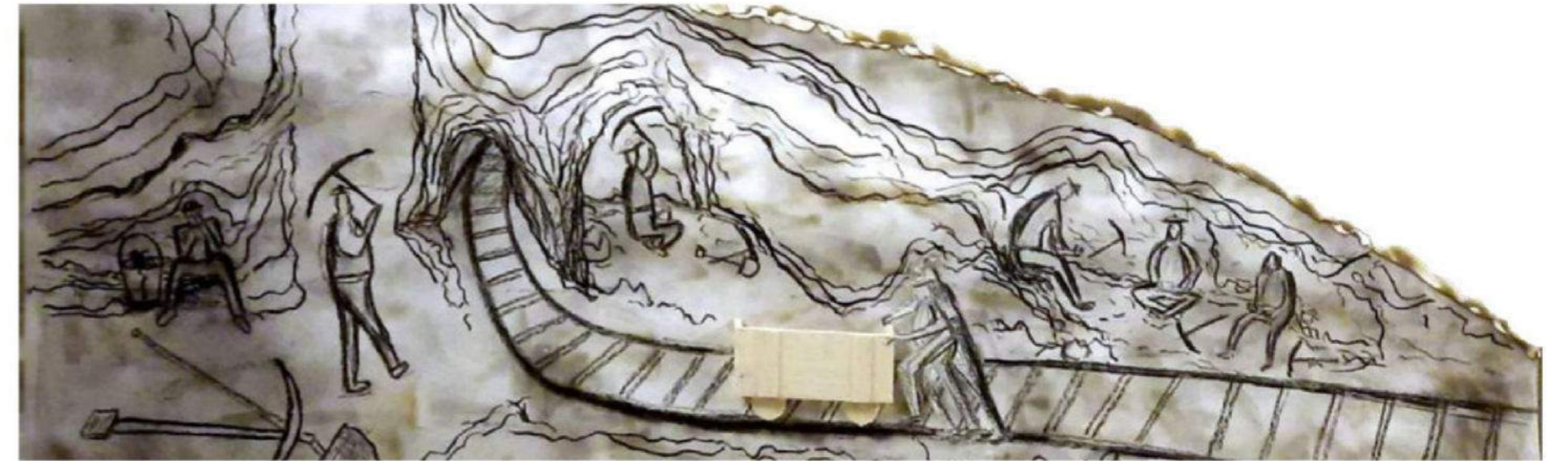
Healing the Scars Layers by Layers: Over the years all strikes improved workers' life gradually and their problems were solved one by one.



Life in a Big Prison: The entire city was surrounded and restricted with fences and watchtowers. No one could enter without the special ID which has given to workers and no one could exit without checking.



Fight For Life: From Nov 1936 to Mar 1947 Batu Arang saw several strikes and death. Those strikes were by workers to demand their rights one by one. These strikes at the same time had a big influence on the Malaysia labour community as well.



Dark Days: Miners should work 2 shifts of 4 hours or even sometimes for 12 hours inside underground mines. Inside the underground mines usually were dangerous, hot, damp and with a low amount of oxygen..

Our Sense of Time

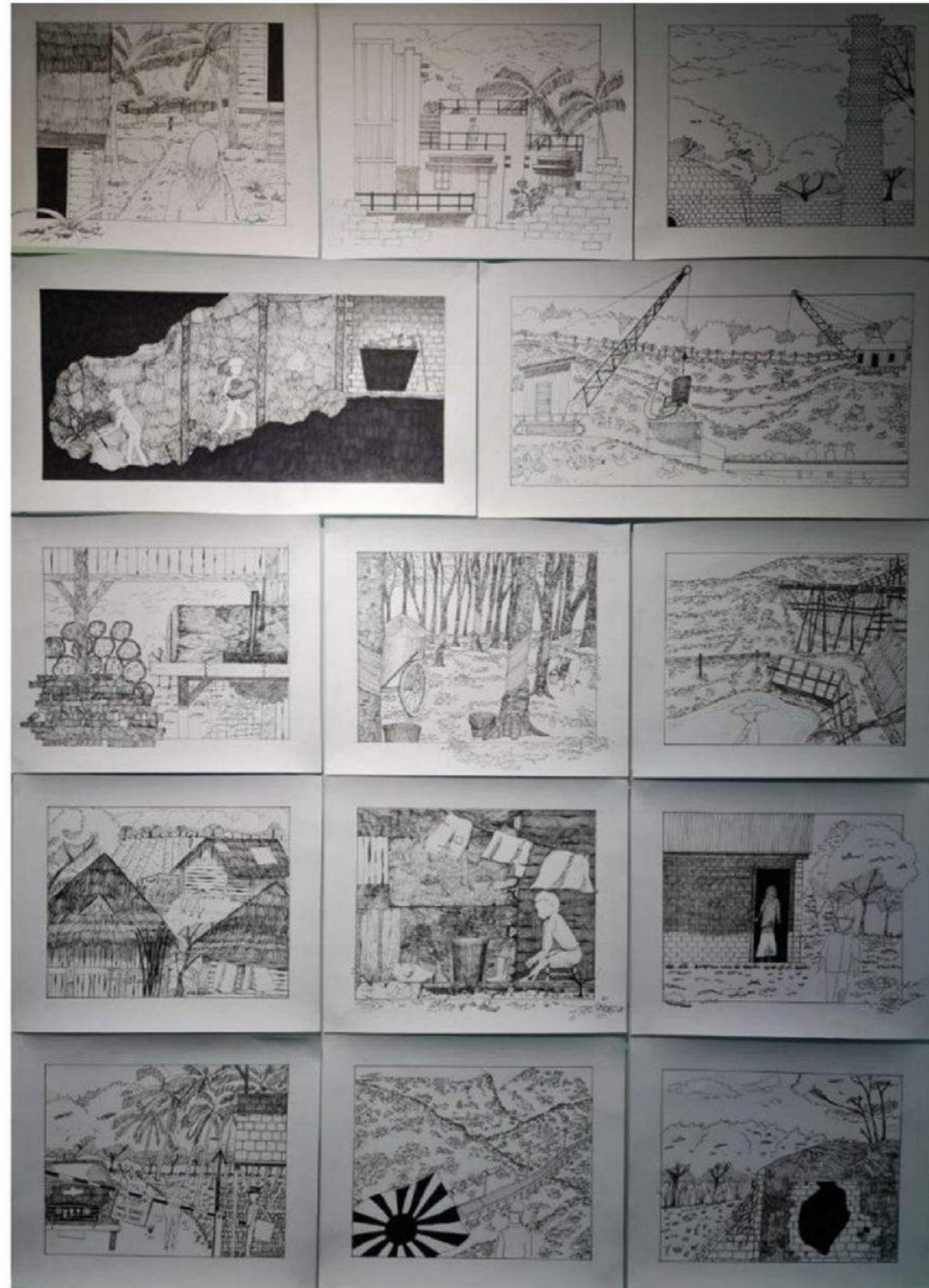
"... our personal memory lives from images, not from facts. Often, what we see will evoke images in our minds that are associated with memories ... And it works the other way round, too. The images that we remember are inevitably related to feelings and emotions."

Peter Zumthor

Senses and memories are associated. The moments that made us feel, our mind will take a "screenshot" of said moment. And at the time we stumble upon this situation again is when we will look back at the past, as if history is being relived.

Materials and textures are everywhere. As we go by our everyday lives, we tend to overlook most of our surroundings as we focus on our tasks at hand. Even though we do not consciously see them, our mind still records them. It is the combination of our surroundings and the things we directly see that becomes part of a memory that is associated with certain circumstances.

The project aims to capture certain moments of different perspectives in the history of Batu Arang by emphasizing the textures that are apparent but usually overlooked as well as those that can directly be seen. It strives to bring back different memories of different times from different perspectives that we are not aware of.



1) Pre-1908. From the perspective of a villager in a Malay dominant village before coal was discovered in the area.

2) 1915. View of the White House. The usage of bricks for building construction started to become more prominent at the time as the British colonizers started invading the area after coal was discovered.

3) View of the bricks factory before it was abandoned. From the perspective of a worker from the bricks factory.

4) 1915 - 1960. The boulders and coal revealing their black and earthy texture under the dim light as the miners work in the coal mine.

5) 1915 - 1960. The coal quarry was filled with stones and pebbles on the ground, the entire area was filled with gravel textures.

6) View of the sawmill. The sawmill was filled with timber of all shapes and forms, from chopped logs to finely polished timber.

7) The grass on the rubber tapping field was filled with fallen leaves and the never-ending amount of rubber trees in sight serve as a memory for the workers of when they were tapping rubber.

8) View of the tin quarry. Workers mine tin with water in sight while surrounded by the gravel texture of the quarry.

9) View in front of a miner's residence. It depicts a miner leaving his family and home to work, unaware that whether his doom was fast approaching.

10) The squatter huts village comprises roughly constructed houses made of various materials. They symbolize the tough living condition of the villagers back then.

11) There was a time where workers were contractually obliged to stay in kongsu houses. The poorly constructed houses made of worn-out materials and patchworks were a symbol of workers' exploitation during the time.

12) 1941 - 1945, Japanese Occupation. The coal quarry was taken over and full of the Japanese Imperial flag that symbolizes the fear and anguish of the citizens at the time.

13) 1948 - 1960, Malayan Emergency. The village was surrounded by barbed wire fence with the only means of entry being in front of the police station in order to weed out the communists.

14) Post-1960. The abandoned mining entrance left a historical mark after the coal mining business ceased. The surrounding nature eventually spread their roots all over the former brick constructed entrance.

Memories

"Nothing is more powerful than the historical substance itself"
from *A Feeling of History* by Peter Zumthor

After reading "A Feeling of History", I was amazed by the way how he designed his project, evoking people's memory. So I am trying to learn more about the history of Batu Arang and how people's feeling about this town and I do have a better understanding of how to express feelings and memories through architecture after reading the book.

We went to Batu Arang for our first site visit. We had a lot of fun and we learned more about the town from the local's perspective. This experience helps me to complete my Project 1 which is all about the memories and the history of Batu Arang.

The old man in the middle is Michael Chin Yew, we called him Uncle Chin. It's our honor to have him share with us his precious memory since he was a little boy growing up in this historic old town. He is willing to spend the whole morning telling us his story in the Kopitiam. He told us about where the miners used to work and the 'White House' used to have a guillotine. He even told us how it feels like when his nearby area getting bombed when he was a kid. He also shared a lot of personal perspectives on the mining work in Batu Arang. And my job is to keep all these memories in my artwork.

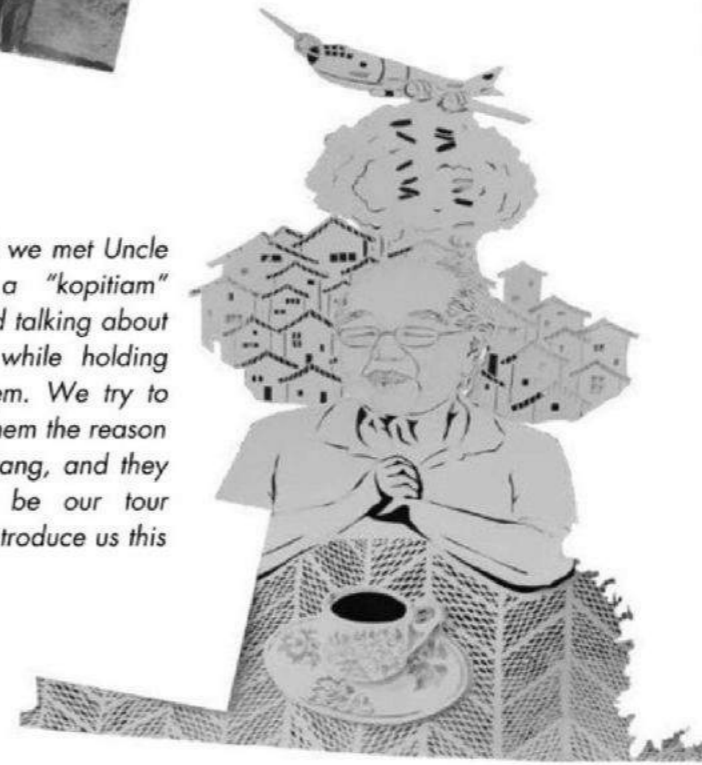


Experience of space



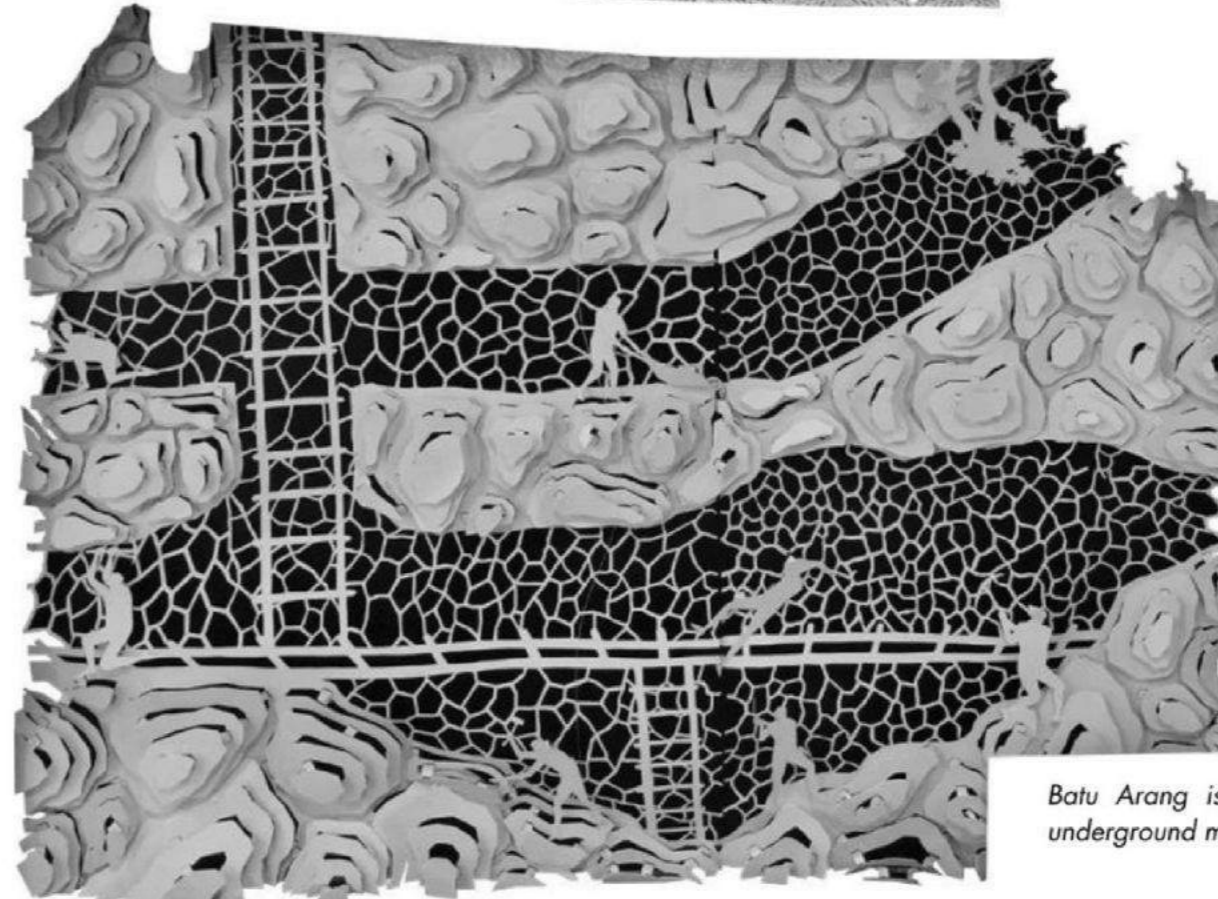
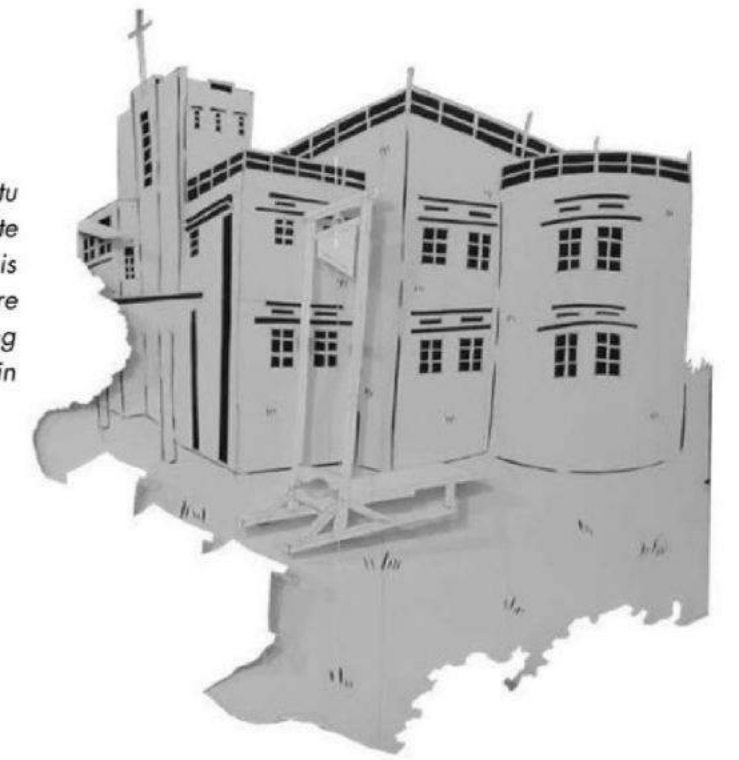
Uncle Chin brought us to a "kopitiam" and start telling us his story and some myth around Batu Arang that only locals will know.

The story begins with we met Uncle Chin in front of a "kopitiam" chatting with his friend talking about their old memories while holding this old photo of them. We try to talk to them and tell them the reason of us visiting Batu Arang, and they immediately wanna be our tour guide of the day to introduce us this historical old town.

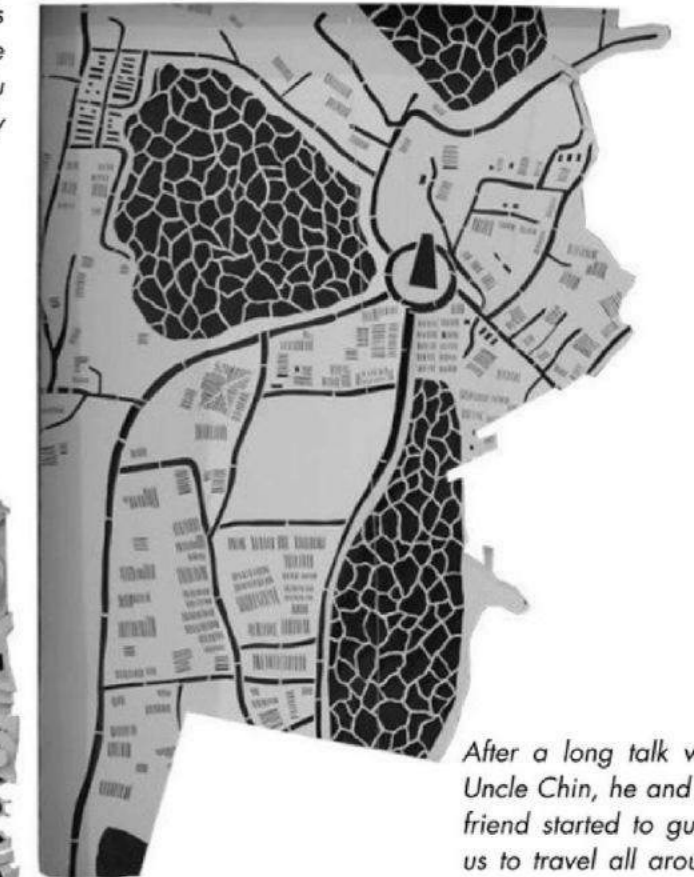


There is a rumour in Batu Arang about the "White House" is haunted. There is a saying said that there were a lot of people being killed by the guillotine in the building.

Uncle Chin brought us to a "kopitiam" and start telling us his story and some myth around Batu Arang that only locals will know.



Batu Arang is famous with its coal mining history. There are a lot of underground mining tunnel spreading out underneath the whole town.



After a long talk with Uncle Chin, he and his friend started to guide us to travel all around the historical place within the town.

The Usual and Unusual

"Contradiction is defined as two or more parts that require each other but do not require each other at the same time."

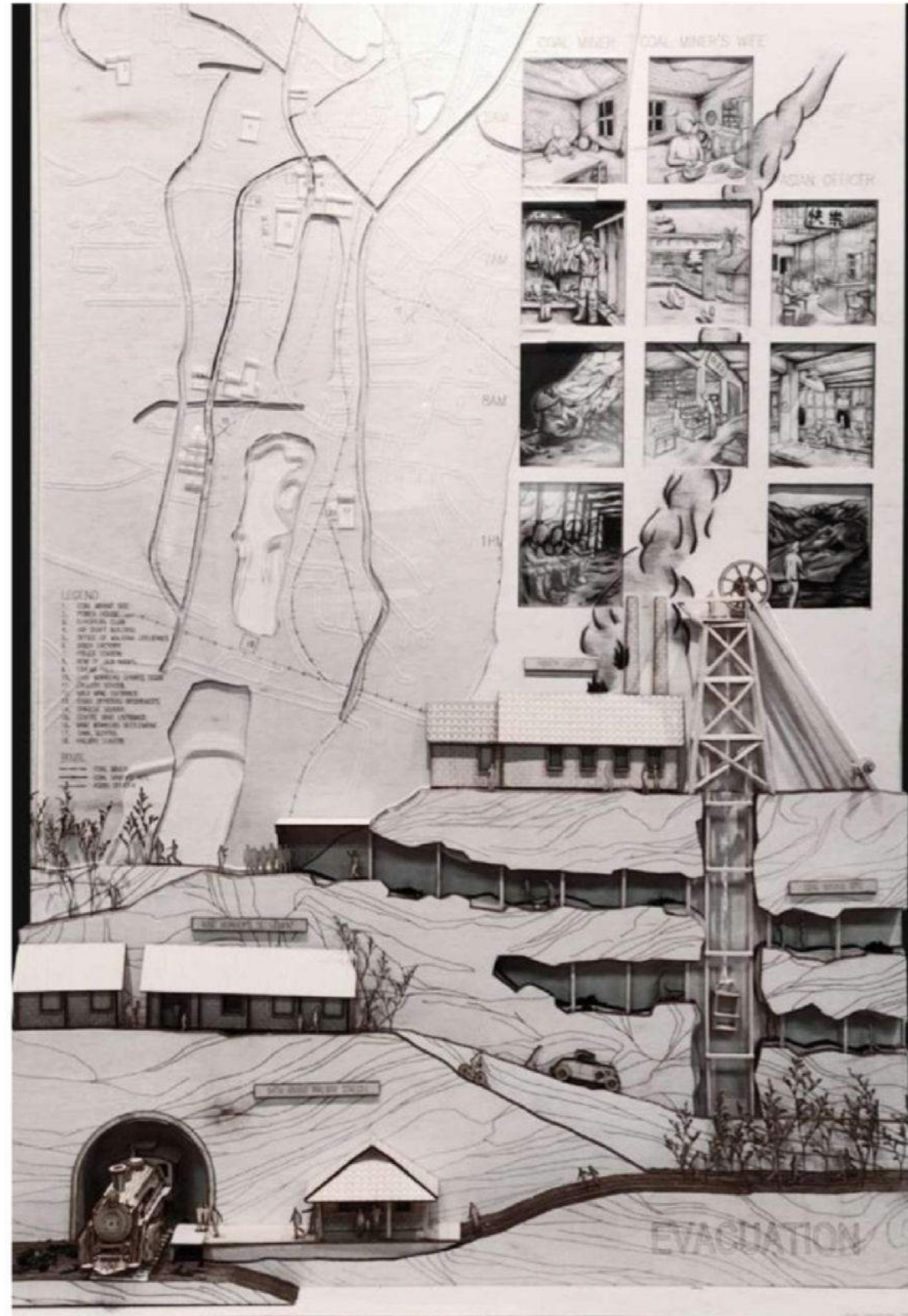
from *Non Referential Architecture*
by Valerio Olgiati.

A story about a day of a coal miner, a coal miner's wife and an Asian officer in Batu Arang on 5 January 1942, during the Japanese invasion of Malaya.

On this day, the collieries company decided to evacuate as the Japanese advanced southwards. The news was announced by the officer at the coal mining site. In order to prevent the Japanese from utilising the mines, the military destroyed the electric power station and main substation. The plant was destroyed, and the equipment was immobilized. The majority of the miners gathered at the tunnel entrance to collect their wages before leaving, but some of them were too terrified and ran away into the jungle.

The whole village was in consternation. To escape from Batu Arang, some of the European officers left by car, some of the workers left by train, and some of them hid in the jungle.

The storyboard depicts the contradictions of the lifestyle of the coal miner and Asian officer, their live/work environment through the **usual and unusual** events of their lives in Batu Arang.



The storyboard was done with the aid of laser cutting and the drawing was done with charcoal pencil.

It is separate into two parts where the top part was the usual event (daily routine), while the bottom part was the unusual event (the evacuation).



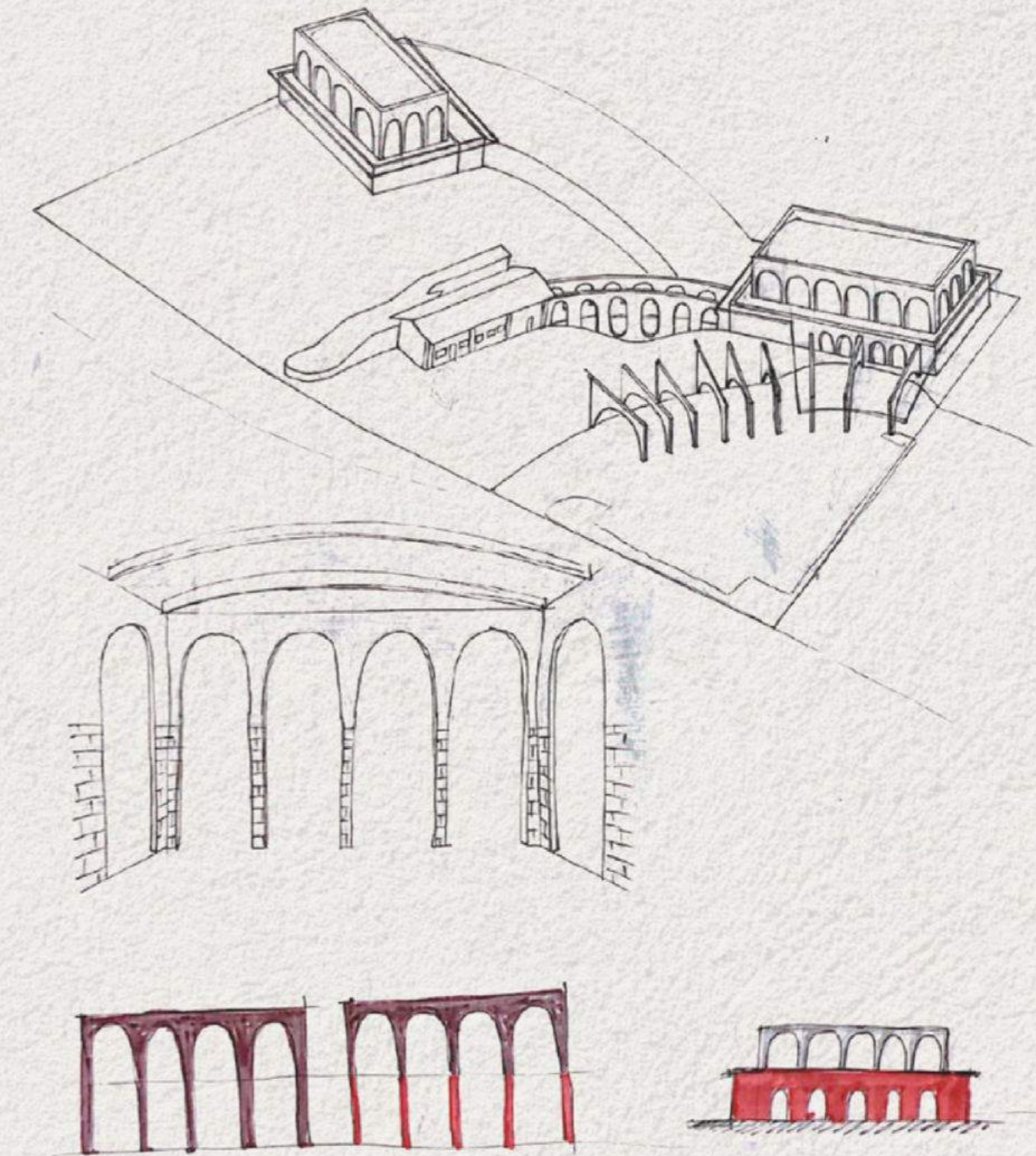
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05 | CONTEXT & ADAPTIVE REUSE

"The contemporary architect should struggle for a more meaningful architecture, to go beyond the technological and rational and embrace the poetic."
Rem Koolhaas

Unit A addresses urban and architectural conditions, highlighting on change throughout time. Through a process of various stages of researching, designing, representing, and testing, an intellectual, creative, and sensory ability is used to shape tangible and intangible urban conditions. Extremes of interrelated scales, from urban geographies through to the immediate and personal, to develop uncommon propositions.

The students worked on two consecutive projects, using manual, digital, or a combination to showcase their understanding of the Batu Arang as a township and propose relevant future interventions. With a focus on urban and building scale, a legible project articulates its impact to the site and uses spatial and atmospheric properties appropriate to the local context.



Sketches by Sarah Gwen Sathyamoorthy, Unit A SABE UCSI University 2023/01

The Local Shortcut

The project aims to uncover and develop the local routes, revealing undiscovered areas known as "The Local Shortcuts". The Building Strategies encompass a creative exploration of form and circulation through sketches and watercolors.

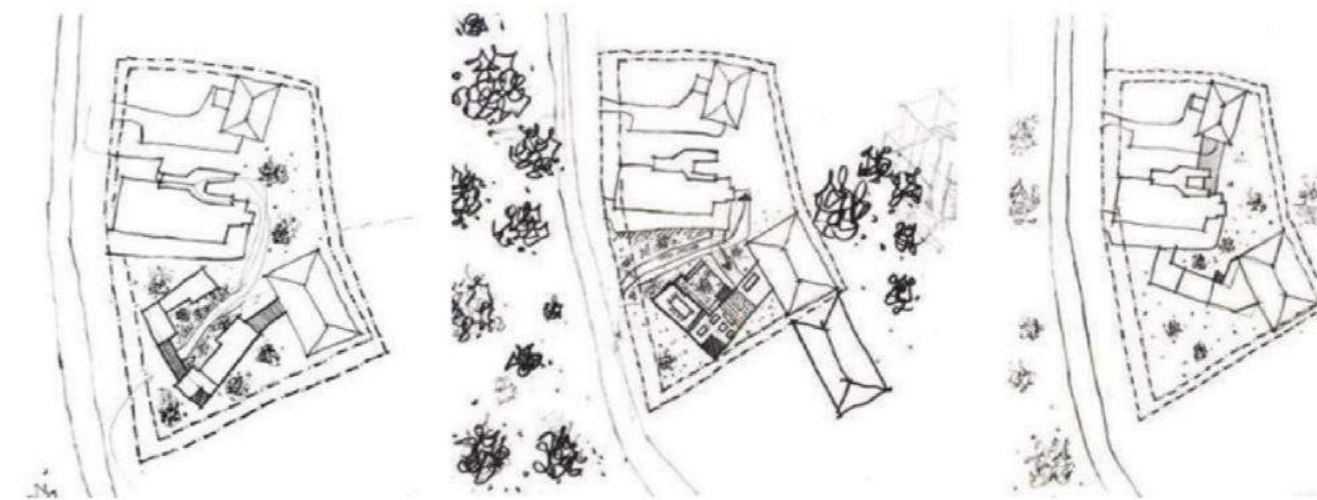
The intentions of these Urban Strategies are to uncover the local routes in Batu Arang and discover pristine locations that have yet to be developed, offering the potential for interventions that showcase the unique identity of the area, known as "The Local Shortcuts."

These interventions are designed with humility, seamlessly blending into the local environment while preserving the natural beauty. They include repurposing an Abandoned Bricks Building as an Outdoor Museum, constructing a Memorial Wall using Bricks from an abandoned Bricks Factory, establishing a Green School in "The Lord's Garden," revitalizing an Old Shophouse, creating a Cows Feeding Station, designing a Lake View Pavilion & Squirrel House, transforming an Abandoned Rusted Vehicle into a Recreation Garden, framing the view with a Bricks wall along the road leading to the Sunday Morning Market, and installing railings for a route to the remaining coal mining tunnel.

Regarding Building Strategies, the sketches focus on transforming the building's form and exploring its circulation. The watercolor method was employed to express interior perspectives and abstract diagrams. Sketch models play a crucial role in defining spaces and exploring the building's form and circulation, aiding in the decision-making process for the floorplan and other orthographic drawings.



Sketch Models



These interventions are designed with humility, seamlessly blending into the local environment while preserving the natural beauty.



The sketches focus on transforming the building's form and exploring its circulation.

The watercolor method was employed to express interior perspectives and abstract diagrams.

Mining Memories

Batu Arang's coal mining museum is creatively repurposed, offering an immersive experience that educates visitors about the industry's history while preserving its heritage. Through captivating exhibits and sustainable design, visitors explore the underground mining scene, ensuring historical significance and minimizing environmental impact.

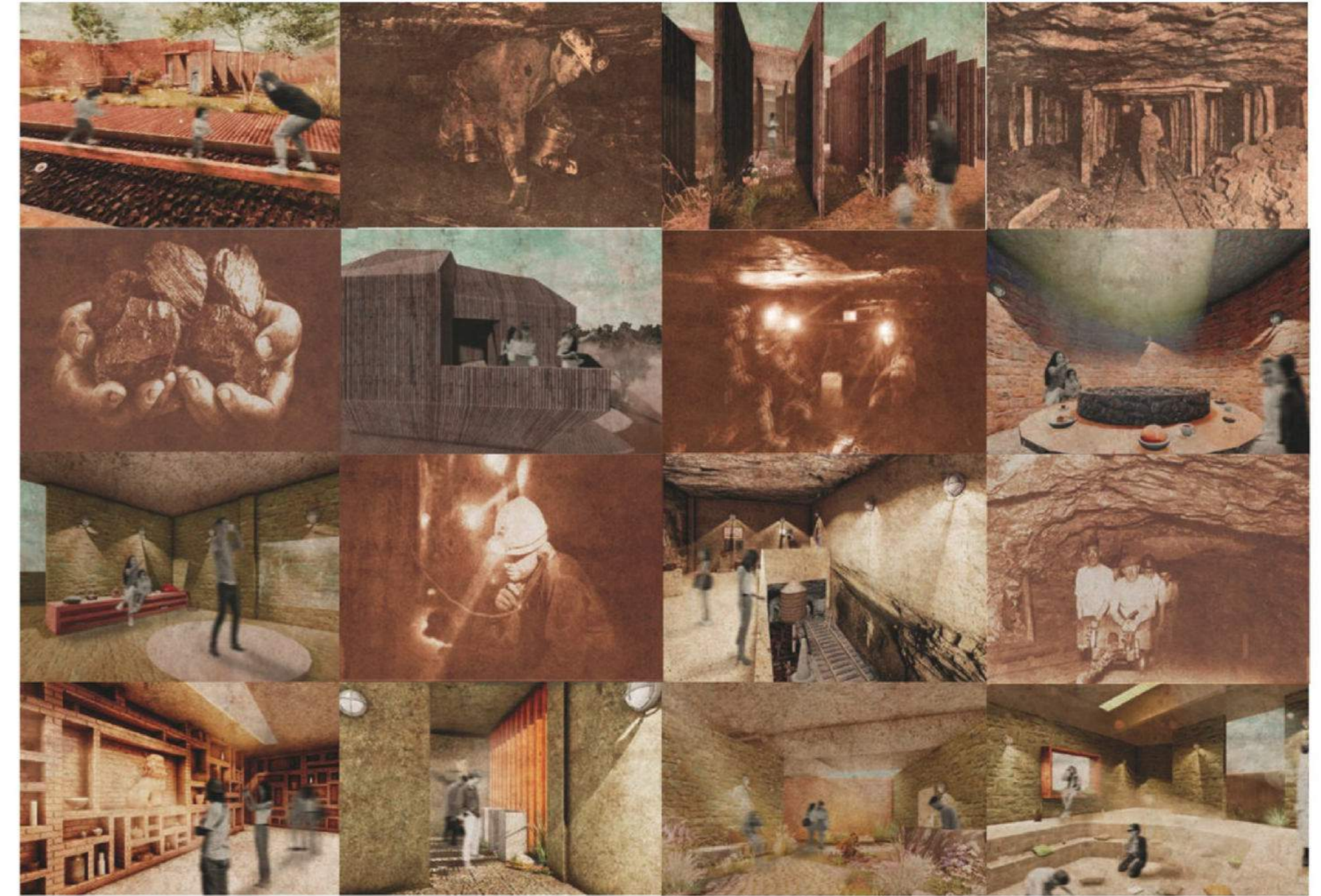
The coal mining museum at Batu Arang is being adaptively reused to provide a unique and immersive experience, educating visitors about the history of the mining industry while preserving its heritage for future generations.

The project aims to transport visitors back to the underground coal mining scene through six captivating themes. The design concept revolves around creating a stimulating architectural space that blends modern elements with the rawness and ruggedness of the mining industry.

The museum's design will feature an interactive experience, allowing visitors to explore the coal mining process and the challenges faced by miners underground. Multimedia displays, interactive exhibits, and live demonstrations will bring the history of coal mining to life.

The museum's architecture will include large, open spaces that mimic the underground tunnels of a coal mine. The use of steel, concrete, and coal will add to the industrial feel, while incorporating natural elements such as wood and stone will provide warmth and contrast. Bricks from the brick factory will also be repurposed as building materials, further enhancing the connection to the past.

Sustainable elements such as natural ventilation, energy-efficient lighting, and rainwater harvesting will be incorporated into the museum's design, reducing its carbon footprint. The adaptive reuse of the existing building will preserve its historical significance and minimize the environmental impact compared to new construction.



Above The Ground

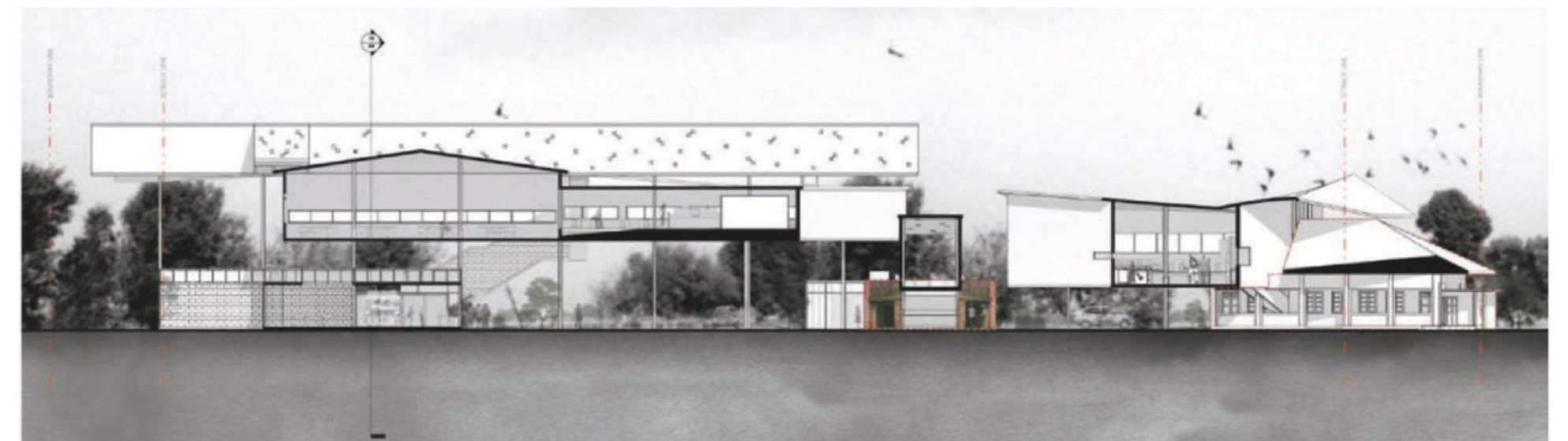
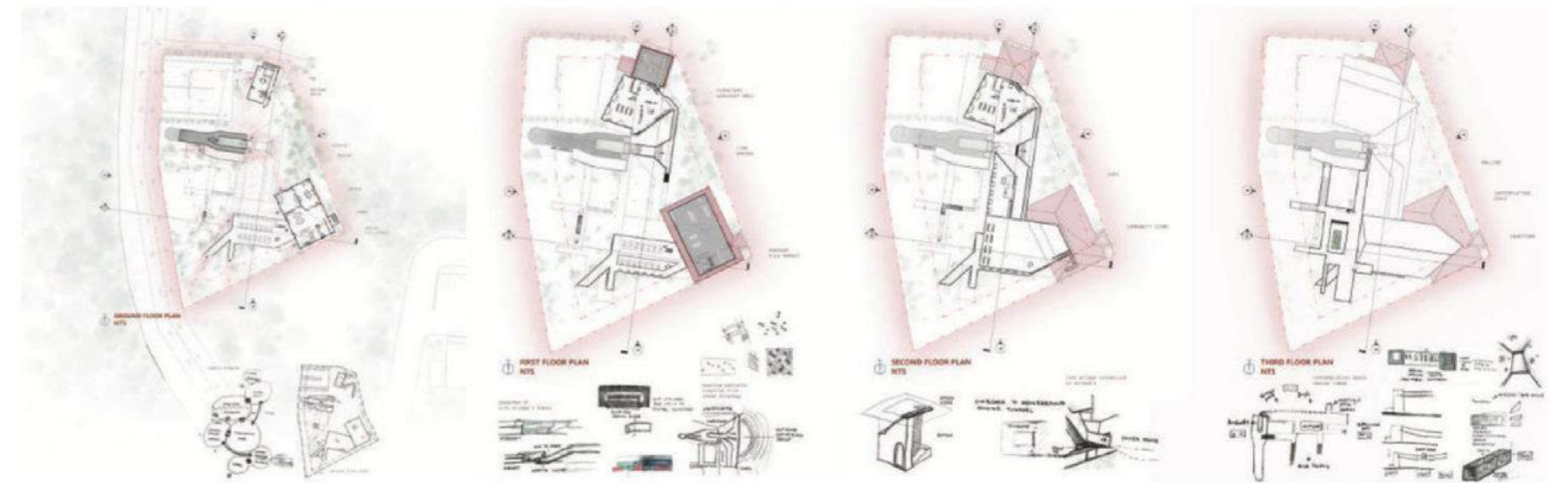
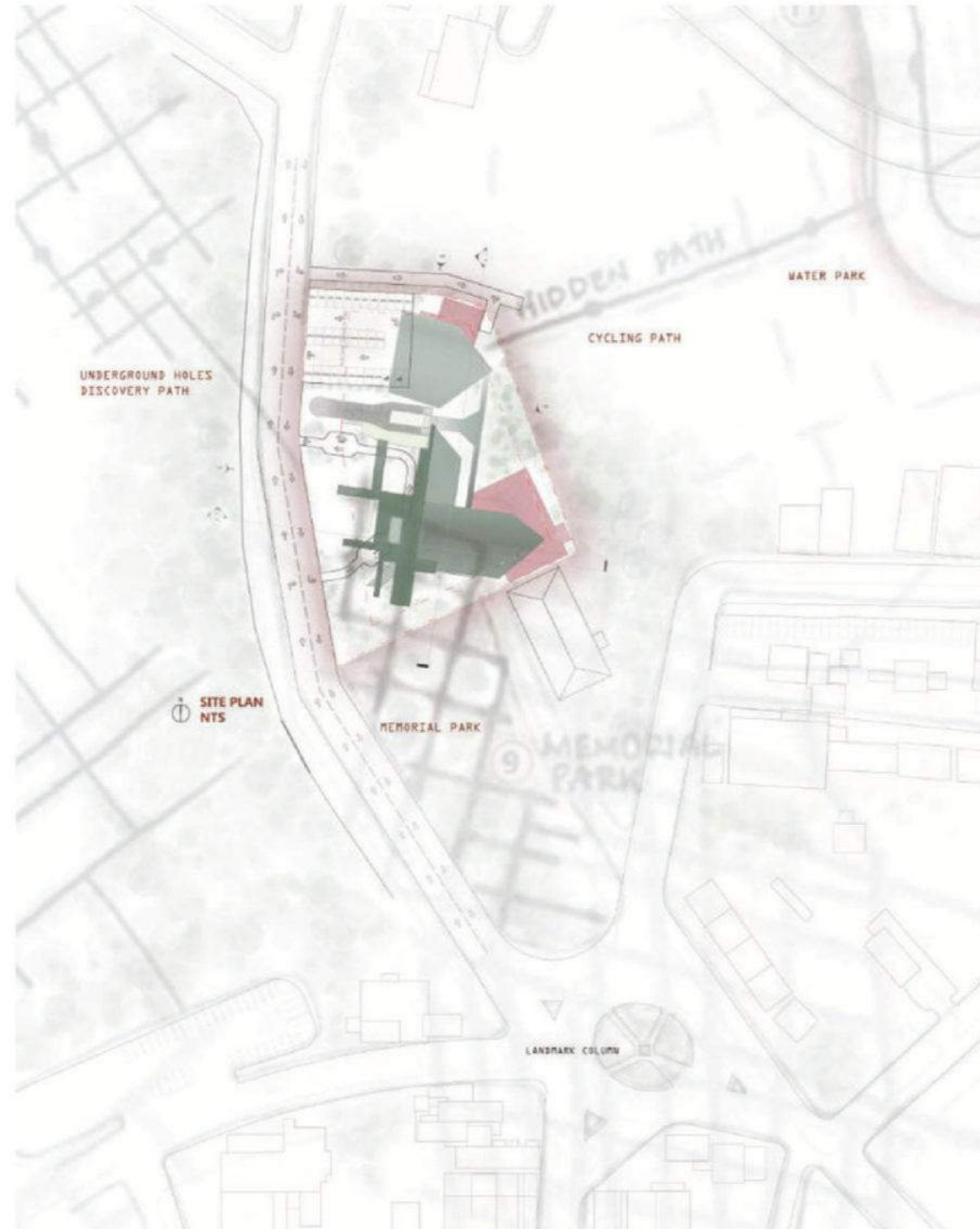
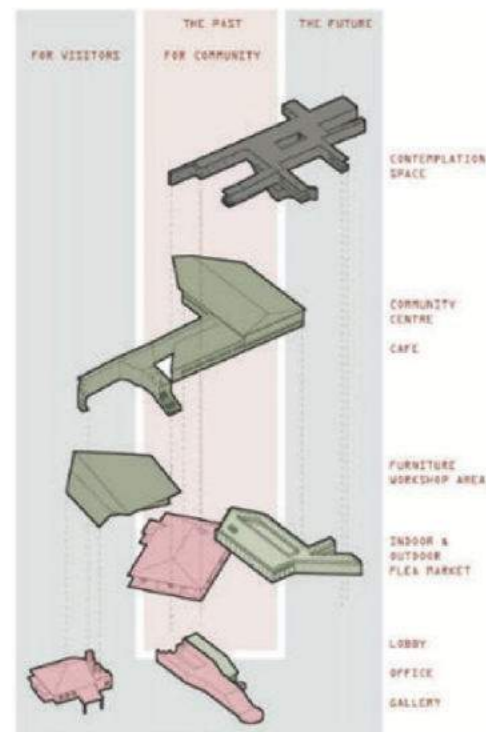
By embracing the existing buildings that contain the memories and stories of the residents of Batu Arang, proposal has the intention of mimicking the mining work inside the underground tunnel in the past.

The existing buildings consist of the airshaft, Gurkha soldiers barrack and the police station, where all of them are abandoned and have lost their functions.

Developed from the axis of the memorial park path, which directs people from the shophouses hot spots to the site.

Linking to the underground holes discovery path on west as well as to the water park on north-east.

The proposal encourages visitors to walk or cycle around the town.



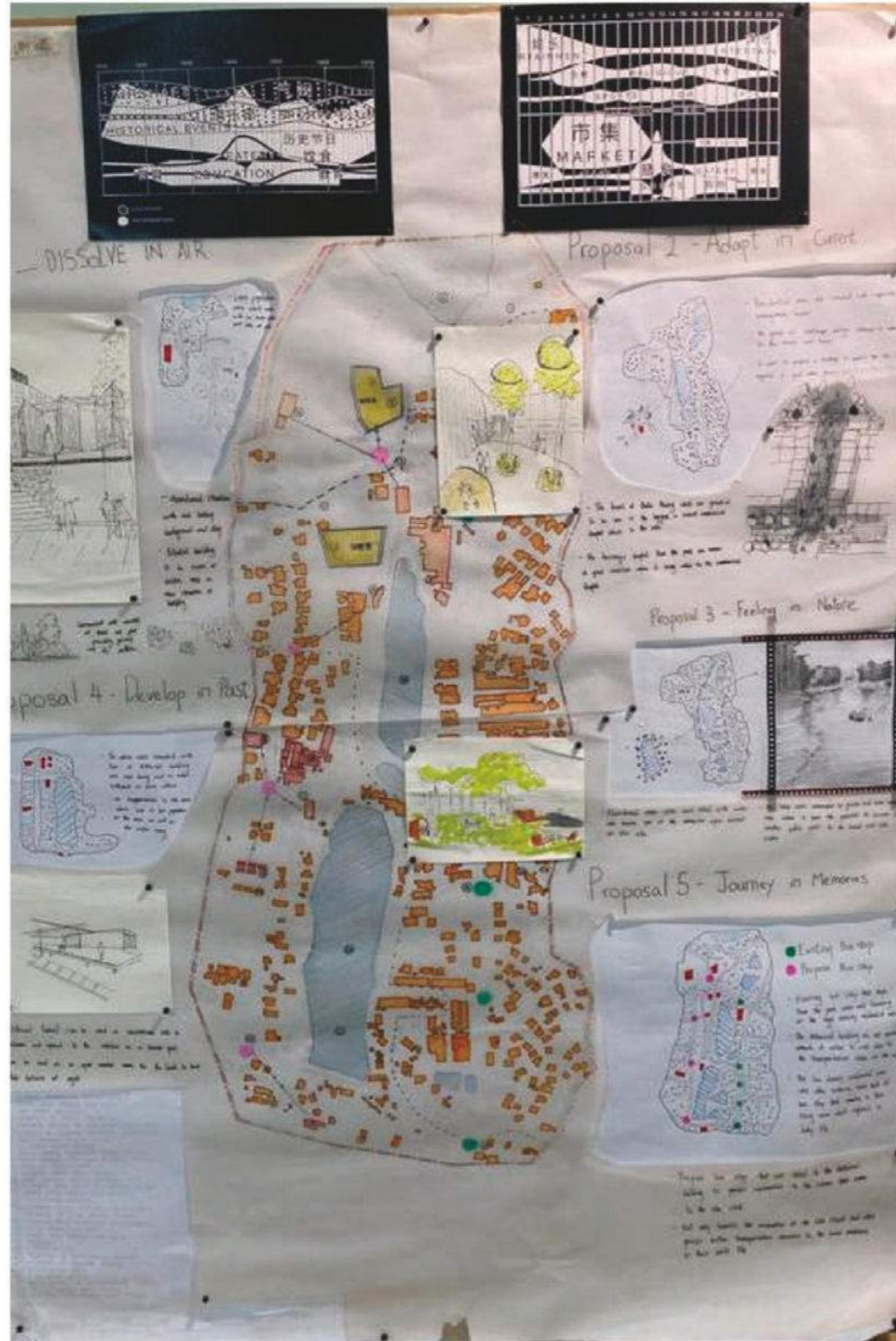
Light of Town

"Hey, wake up! You will not left on the train, hurry up we still have to catch up the next train! We can still be fresh, aesthetic as long as we don't give up!" A project to explore the potential looks of the town based on the historical buildings and spot.

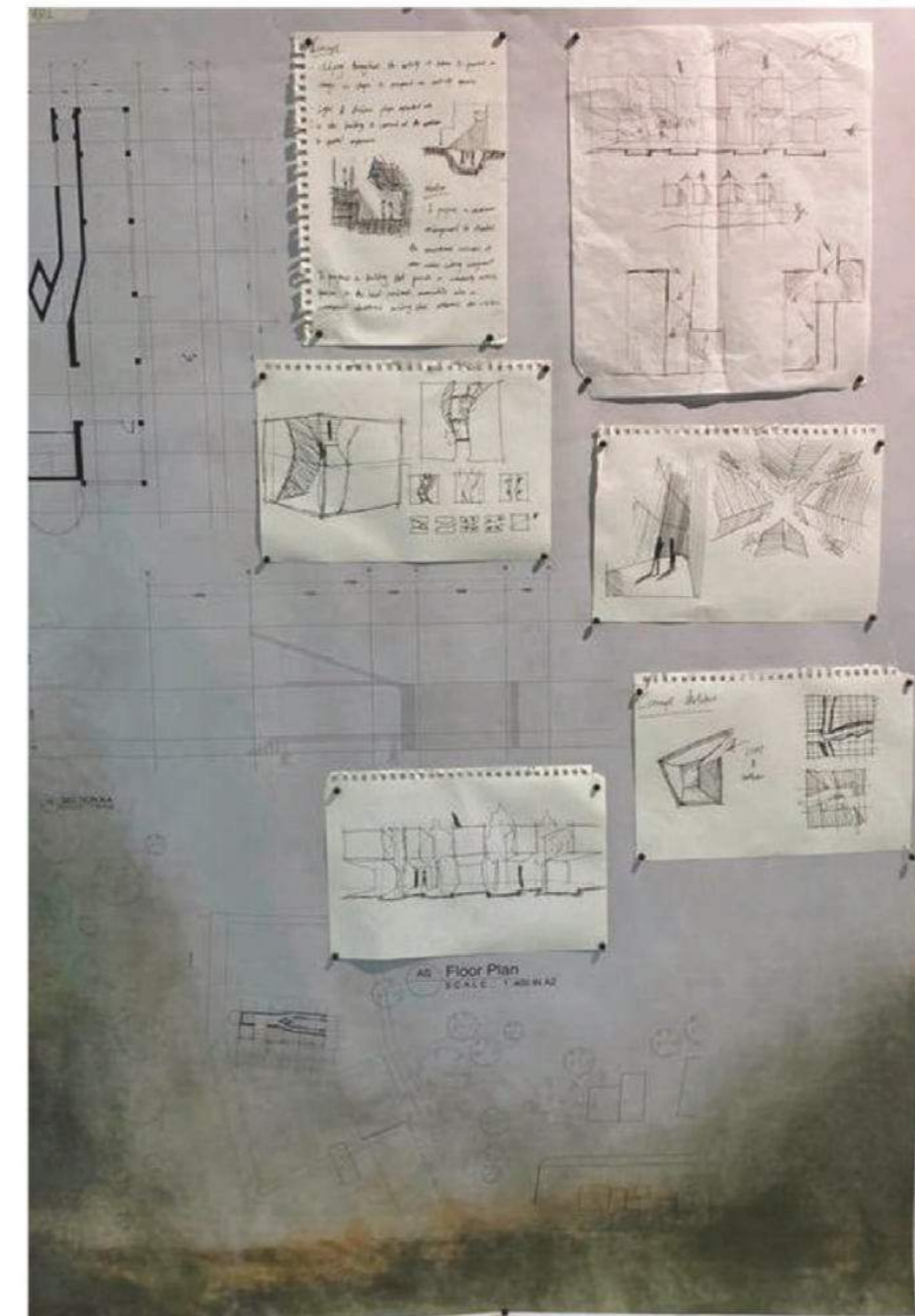
Why destroy or demolish an existing historical building just to construct or build a new building on top of it while we can just utilize it to become a travel or community spot with its original looks of it? This project is to determine and explore the potential of the historical spot on the site, Batu Arang with a detailed proposal of how the chosen spot can be constructed into such as a museum, community center, park or even food & beverages.

The first thing here I did was to observe the activity status of the people in the town. The diagram here are to show that the overall activity status of the people in the town in 24-hours scenario. This help to determined what sort of activity that the town are lacking and what can we provide to help certain activity growth on the site.

By the end, this project comes up with 4 different proposals on different location in the town. Some of the proposals are to help the locals while some are to attract visitors come to the town. While the building strategy part are based on the proposal, how does the buildings shape according to the site itself and also the requirements.

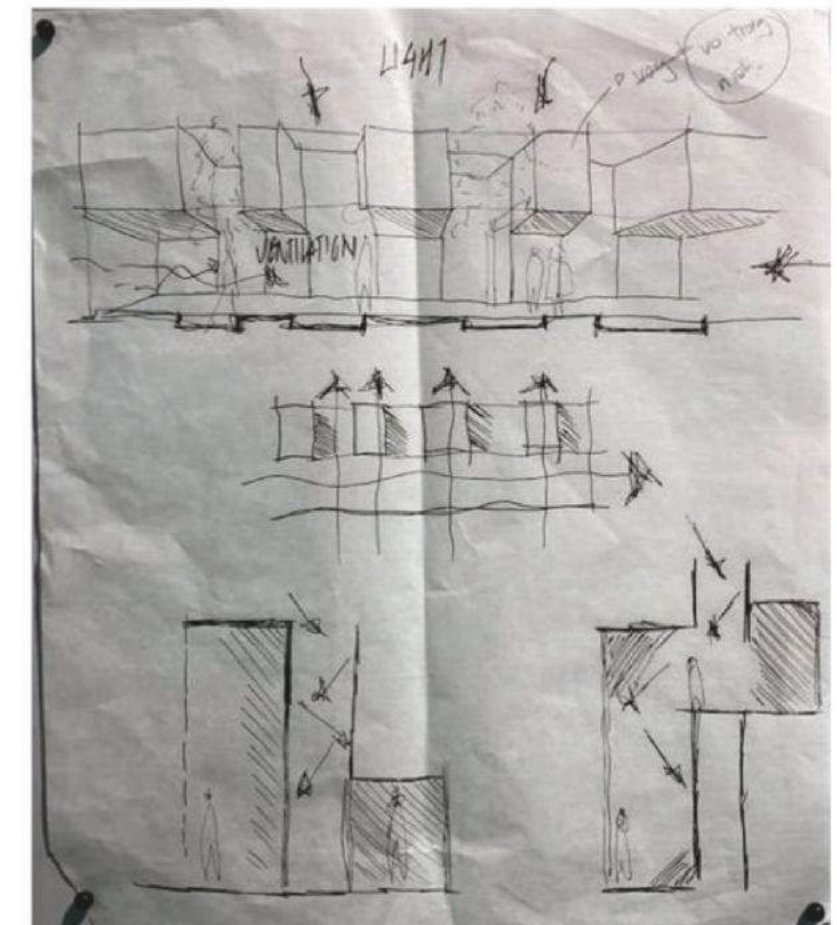


Glimpse of potential area looks alike



The building strategy part was mainly focus on the interior of a underground spaces, how does it interact with lights and existing surrounding context. The idea was to present the scenario and scene inside a cave or mining shaft which was related back to the coal mine worker scenario. This is to help the guests have more resonance with the feelings the emotions of the coal mine worker

Idea / concept of building development underground with natural lighting and ventilations



Heritage Haven

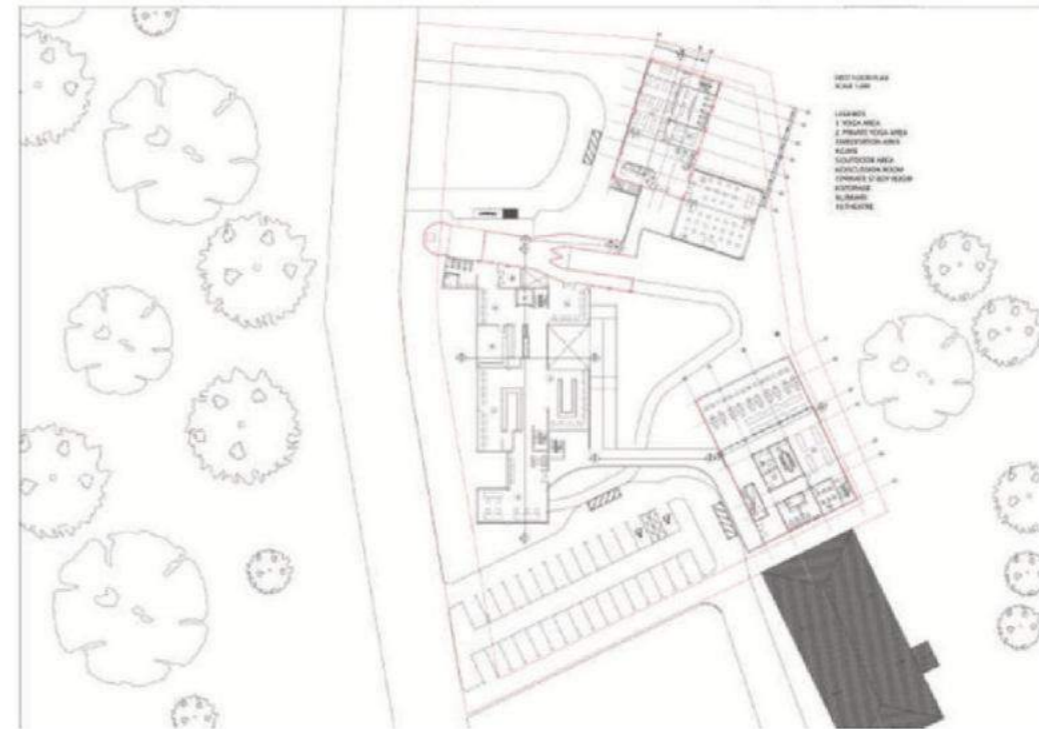
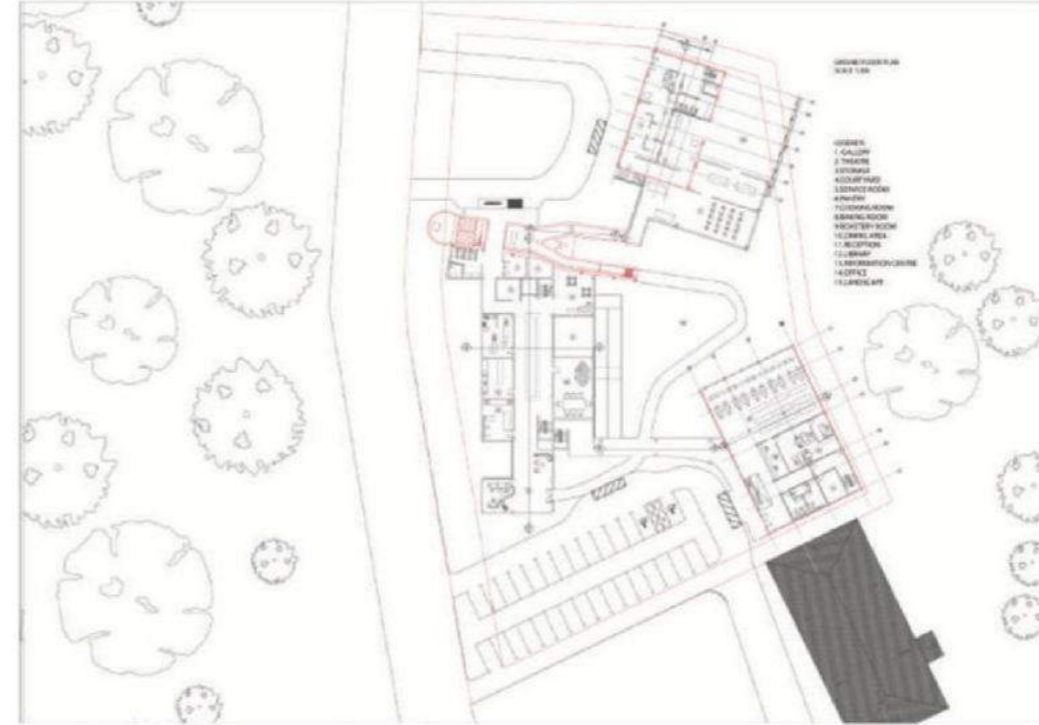
A buildings carries the memories from the past merge with a new story begin. The buildings transform from a historical memory to a new modern community centre.

This project is about how to restore a place or a building that carries bad historical background to the locals into a whole new building that brings out life on the site with existing structure.

There are 3 different area within the site boundary, each of this building brings our different activities such as meditation, cafe, learning classes & library.

The meditation and learning class were meant to be a part of healing program for those elder that had suffered from the past mine worker memories and experience, hope that they could heal from mentally and physically throughout the programs.

The library is meant to serve the local students on the site with variety of books for them to study to help them in the future while they leave from the town.



Exterior



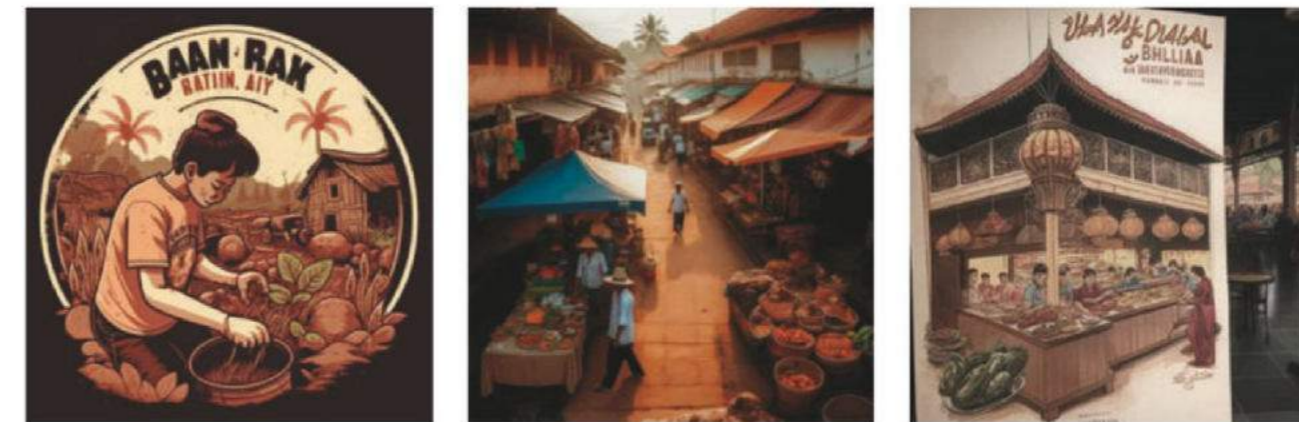
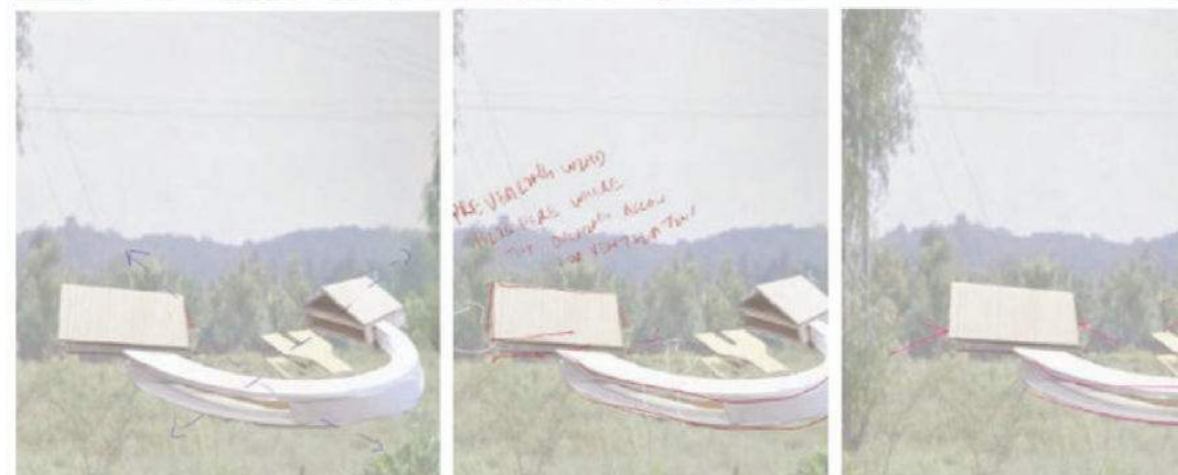
Inviting the Future

Revitalization and Redevelopment that could benefit from urban revitalization initiatives to enhance its physical infrastructure. An involves envisioning a sustainable, vibrant and resilient town leverages its unique heritage while embracing modern advancements.

Sustainable development that minimizes environmental impact, promotes energy efficiency and preserves the natural beauty of the surrounding area. Implement green buildings encourage renewable energy and foster sustainable transportation options.

Preserve and showcase Batu Arang's coal mining heritage as a key attraction. Restore and repurpose historical mining structures, create a coal mining museum or interpretive center, and develop guided tours to educate visitors about the town's history. This would not only attract tourists but also instill a sense of pride and identity in the local community.

Enhance the overall quality of life for residents, and develop parks, recreational facilities, and green spaces to promote health and well-being. Foster a sense of safety and security through community policing initiatives and improved lighting. Provide access to quality education, healthcare, and other essential services.



Idea of improvement on the existing site and opportunities to become an interactive point to attract more visitor

Urban Strategy of provide more route for easier access and travel

Coal Veins : A Journey Through Mining History

It evokes the imagination of the underground passages where coal was extracted, symbolizing the deep history of coal mining—the educational and immersive aspect of the museum. To delve into the captivating world of coal mining.

By repurposing the building, we aim to preserve and showcase local history, create an engaging educational experience, and contribute to the cultural enrichment of the community and visitors alike. The aim of the building is to foster a deeper appreciation for the heritage and create a lasting legacy for future generations.

'Beneath the Surface: Uncovering Coal Mining Heritage'

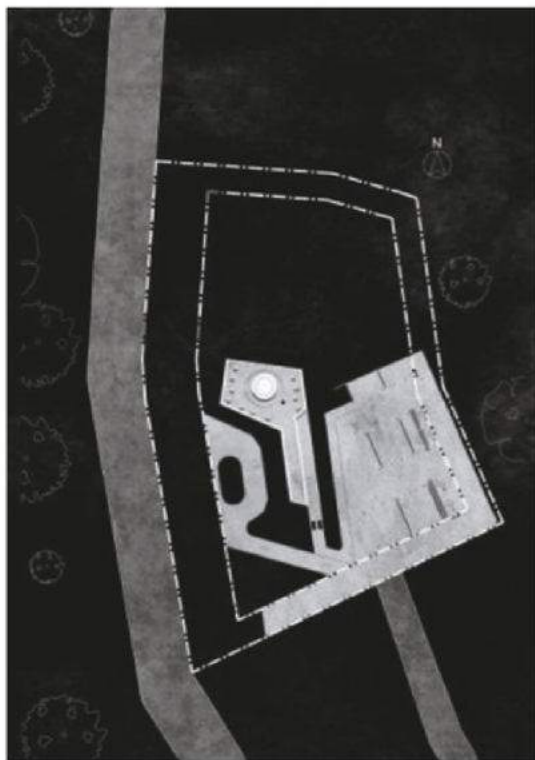
Invites people to explore the rich heritage and stories of coal mining communities. Highlights the human aspect of coal mining, shedding light on the lives, struggles, and achievements of miners and their families.

'Coal Chronicles: Fueling Industrial Revolutions'

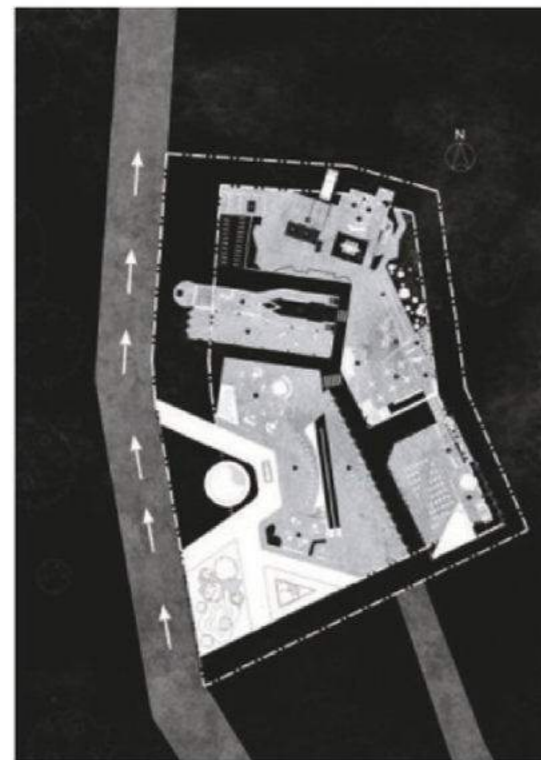
Explores how coal became the primary source of energy that fueled the rise of industries such as manufacturing, transportation, and electricity generation.

'Beyond the Black Gold: Coal's Environmental Legacy'

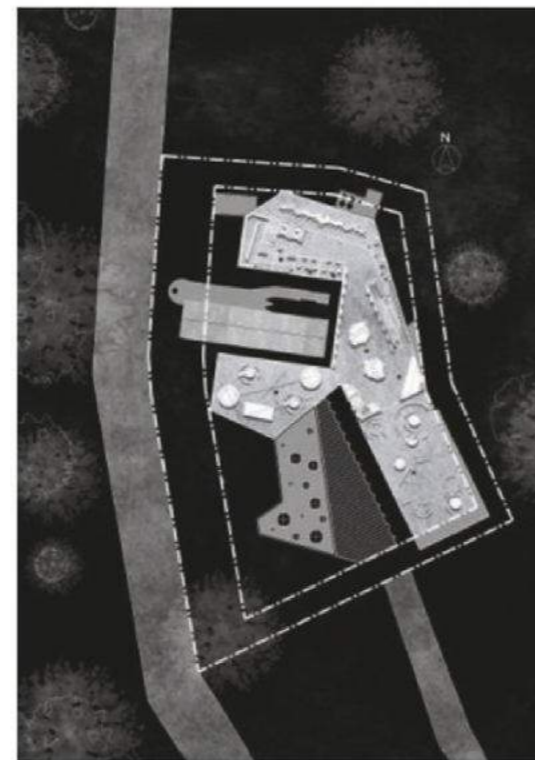
Delves into the environmental consequences of coal extraction, including air and water pollution, deforestation, and carbon emissions. It raises awareness about the need for sustainable energy alternatives and the transition towards cleaner sources. It showcases the evolution of mining practices, and advancements in renewable energy.



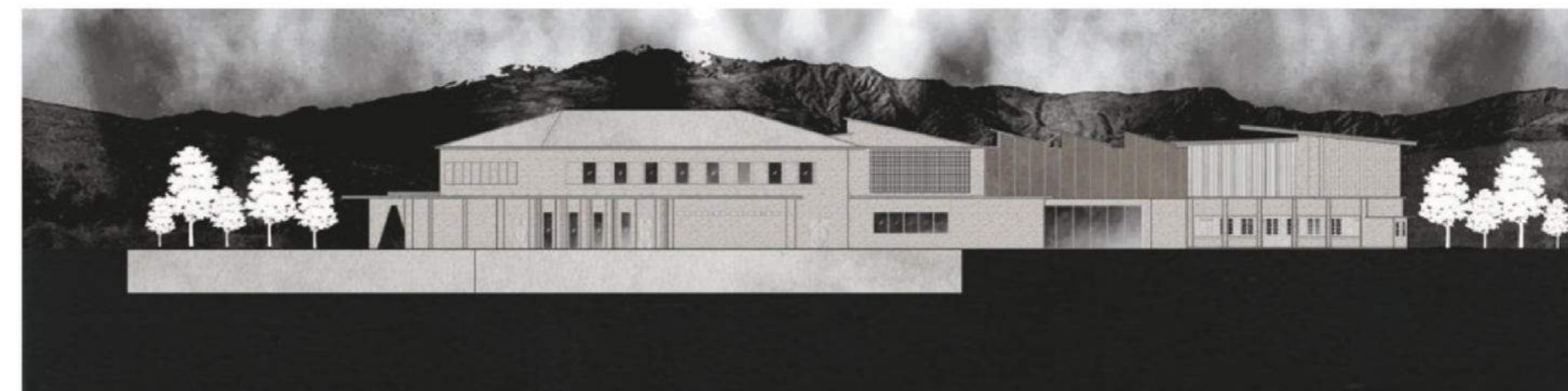
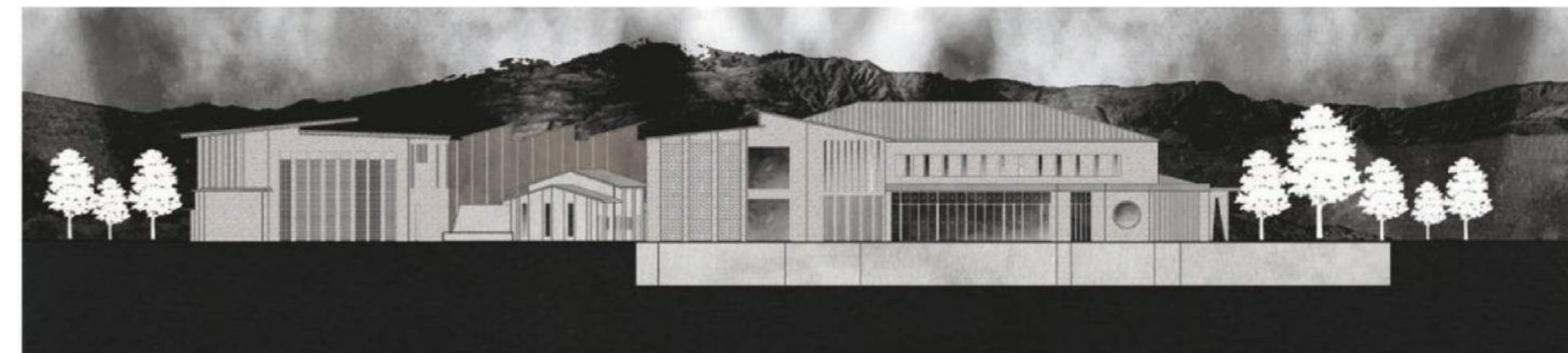
Basement Plan



Ground Floor Plan



First Floor Plan



Flower Path

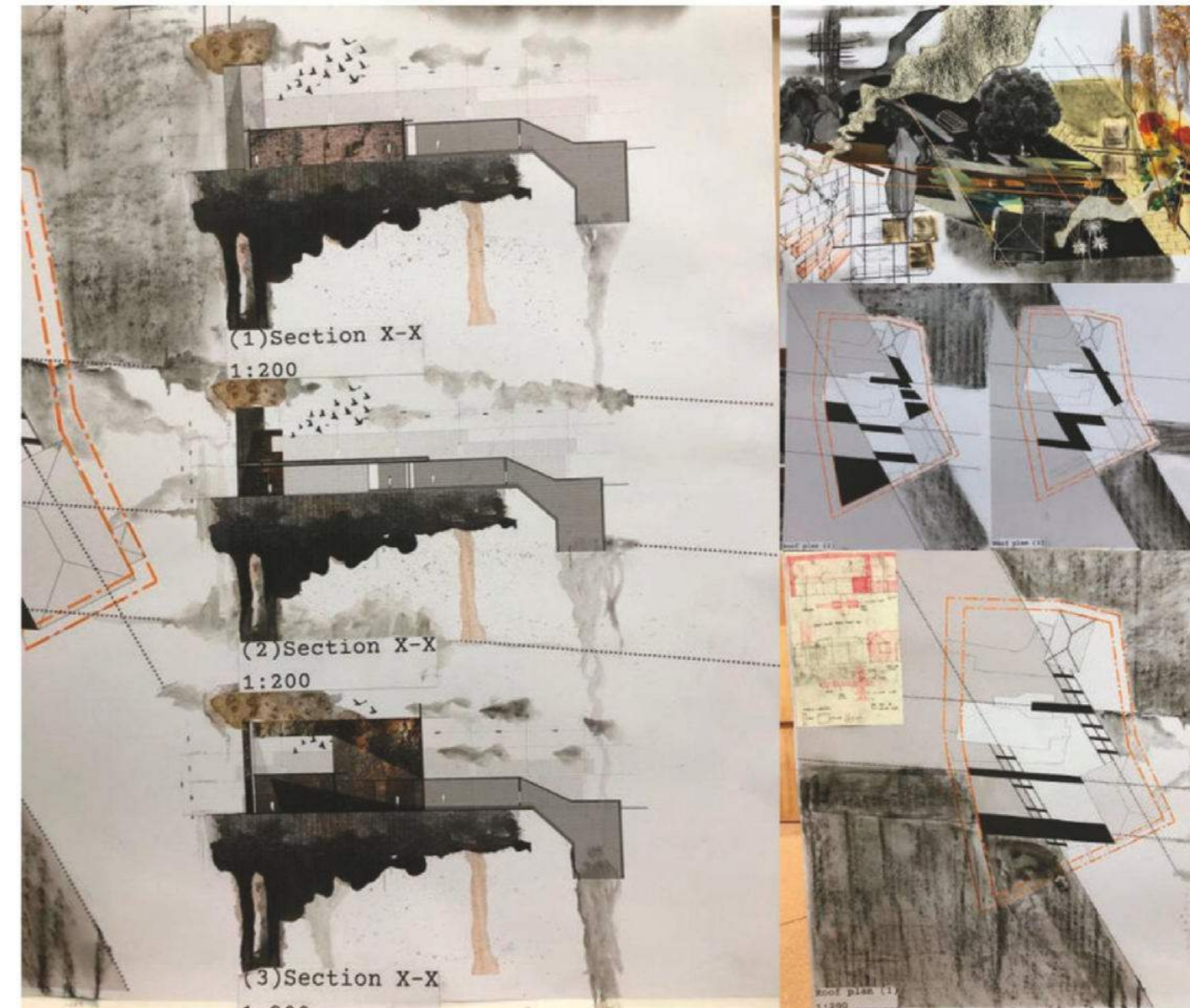
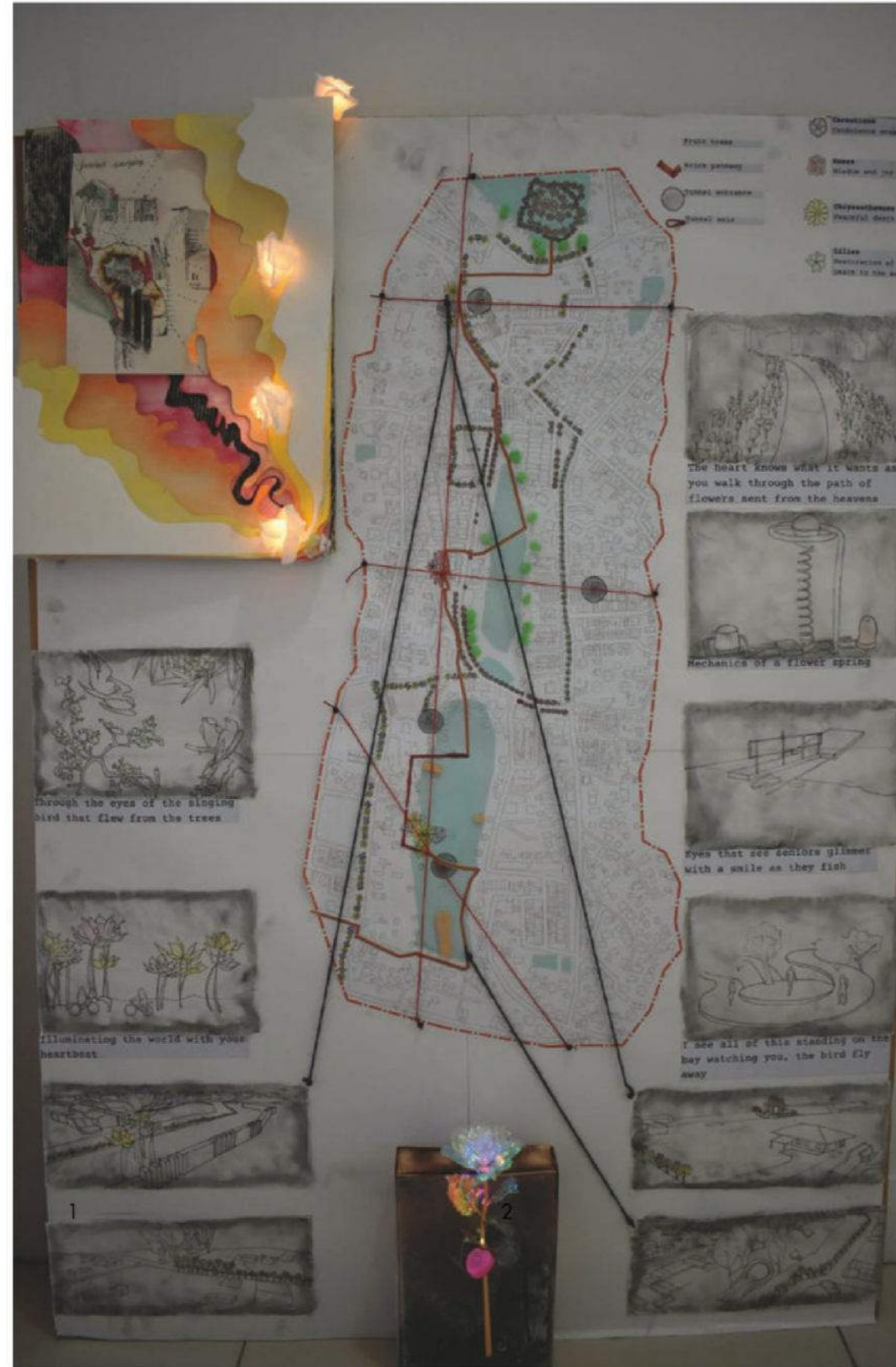
This project focuses on revamping but still keeping the rawness of Batu Arang. This revamp would aid visitors to take a tour of the town and learn about the culture and history to its depths. The Building Strategy is then the fruit of the Urban planning leading visitors to the chosen site

The method chosen for the Urban strategy makes sure that the natural and raw landscapes of the town are well preserved.

The urban strategies board presented to the right demonstrates the proposal of flower installations throughout the whole town.

The arrangement of the installations are done with two placement strategies;
The first one follows the different parts of town and the concentration of activities. For example, lilies are representation of the restoration of peace to the soul. Therefore, these are placed around the residential part of Batu Arang, while roses represent wisdom and joy, which are placed around schools.
The second one on the other hand depends on the axis used for the project. The axis lays on the tunnel mapping from the past. At each intersection of an axis, there are tall flowers placed which, if touched and held, sync up to the heartbeat of the person.

The flowers are a representation of the spirit of the miners. All flower installations light up to the sense of touch. At night, the town is lit up with the spirit of the miners.



The form explorations are all based on the axis used in urban strategy. The form is manipulated and played around with to create the most efficient space planning.

The chosen forms represent different material explorations and views as well as circulations that would be most efficient for the users. The chosen materials to be used are brick, concrete and steel to represent the industrial time of Batu Arang.

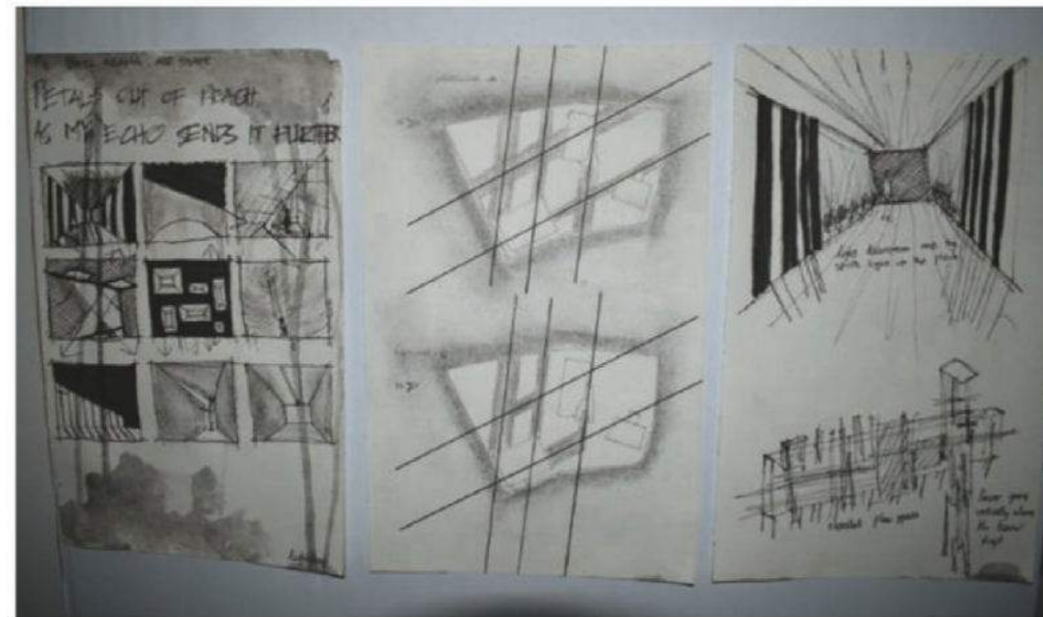
Centennial's Capsule

The coal mining museum designed here ensures efficient usage spaces that include cafes, walkways to mourn the miners, workshops and libraries for the aid of the locals.

The coal mining museum is an adaptive reuse project that provides a unique experience through different spaces. Each space takes you back to a different feeling and timeline of Batu Arang.

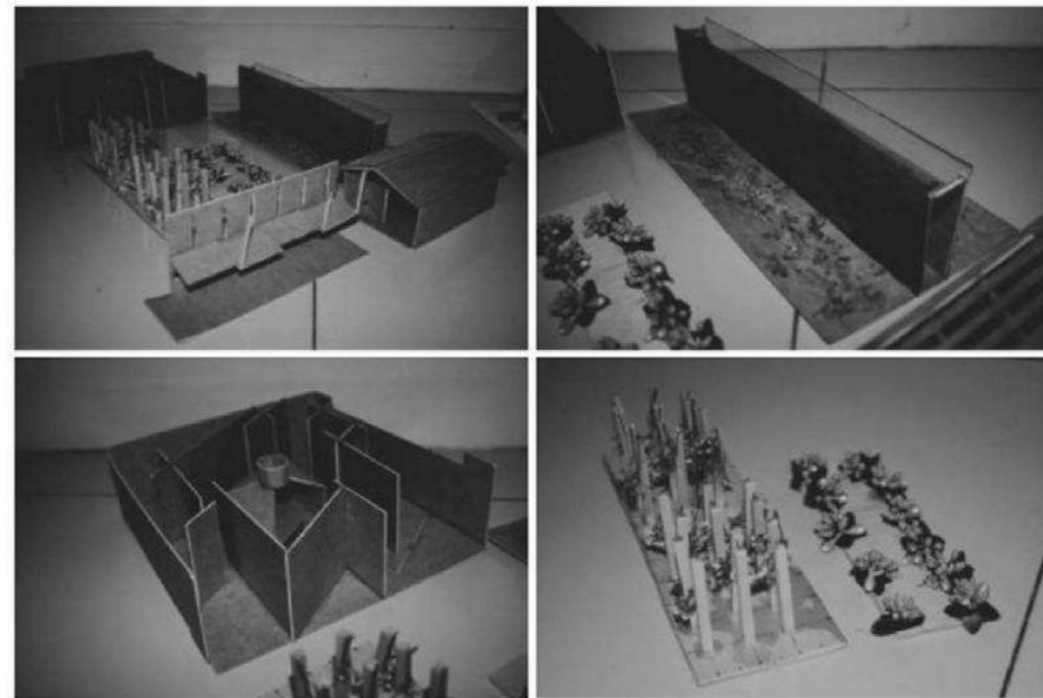
As mentioned above, the spaces are designed according to different parts of the timeline. The design focuses on 4 different parts;

- 1908 Tunnel of Discovery
- 1915 Tunnel of Convoy
- 1942 Tunnel of Conquest
- 1960 Tunnel of Woe
- Today Tunnel of Tomorrow



As the name suggests, the first tunnel is the **Tunnel of Discovery**, which is designed into a library. The purpose of the library is to allow the visitors to "discover" the past. The space is built with perforations in the wall and an opening across the ceiling, allowing maximum light into the space.

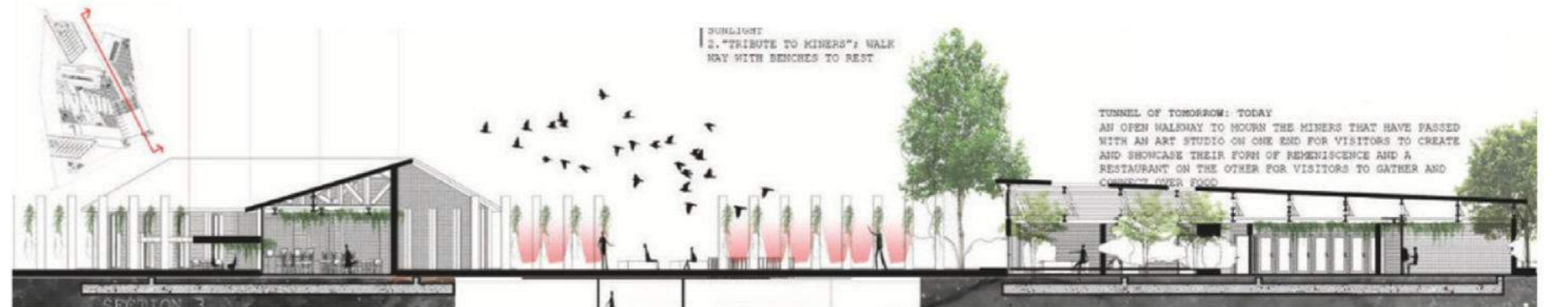
The next tunnel, the **Tunnel of Convoy** represents the time in history when the services expanded and a railway system was built, hence the name. This space is used as a workshop, to represent the busiest time of Batu Arang. It includes archeology workshops to allow scientists to research the accurate tunnel mapping on the heart of the mine in order to allow further developments in the future.



Tunnel of Conquest was the phase when Japanese invaders approached, and the British destroyed all substations. This space is a gallery surrounded by metal walls and thin slit at the bottom of the wall to light up the floor representing the struggles of the miners' lack of vision in the mines. The interior is designed as a maize to allow the visitors to "get lost" in the tragedy.

Tunnel of Woe represented the time period when the soil was destroyed due to Japanese surface mining and all workers moved out of town. This space is underground. It is a meditation space one has to pass by before entering the mine. It is surrounded and lit up by thousands of roses, representing the spirit of the miners.

The Tunnel of Tomorrow is a refreshing phase having Batu Arang as the Heritage town of Selangor. The space is filled with green columns and included open spaces for a Cafe and an Art Studio.

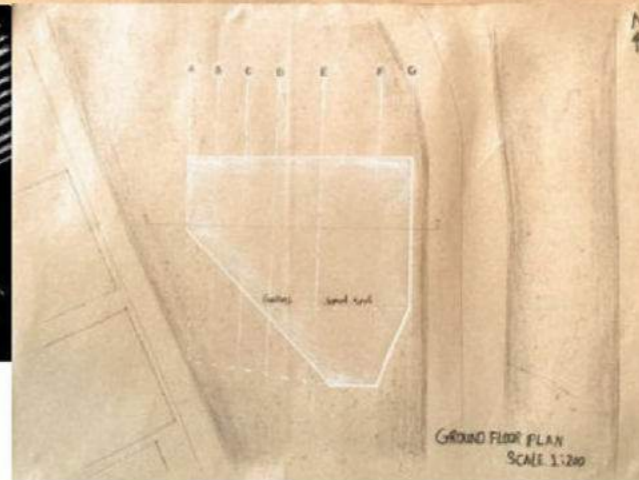
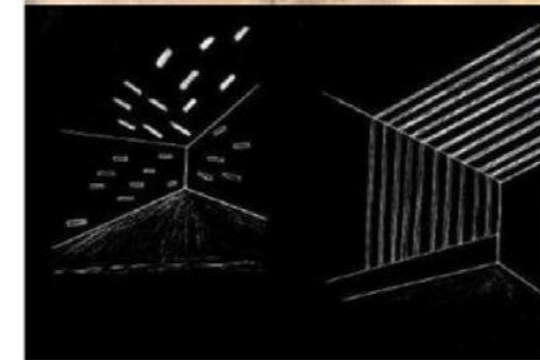
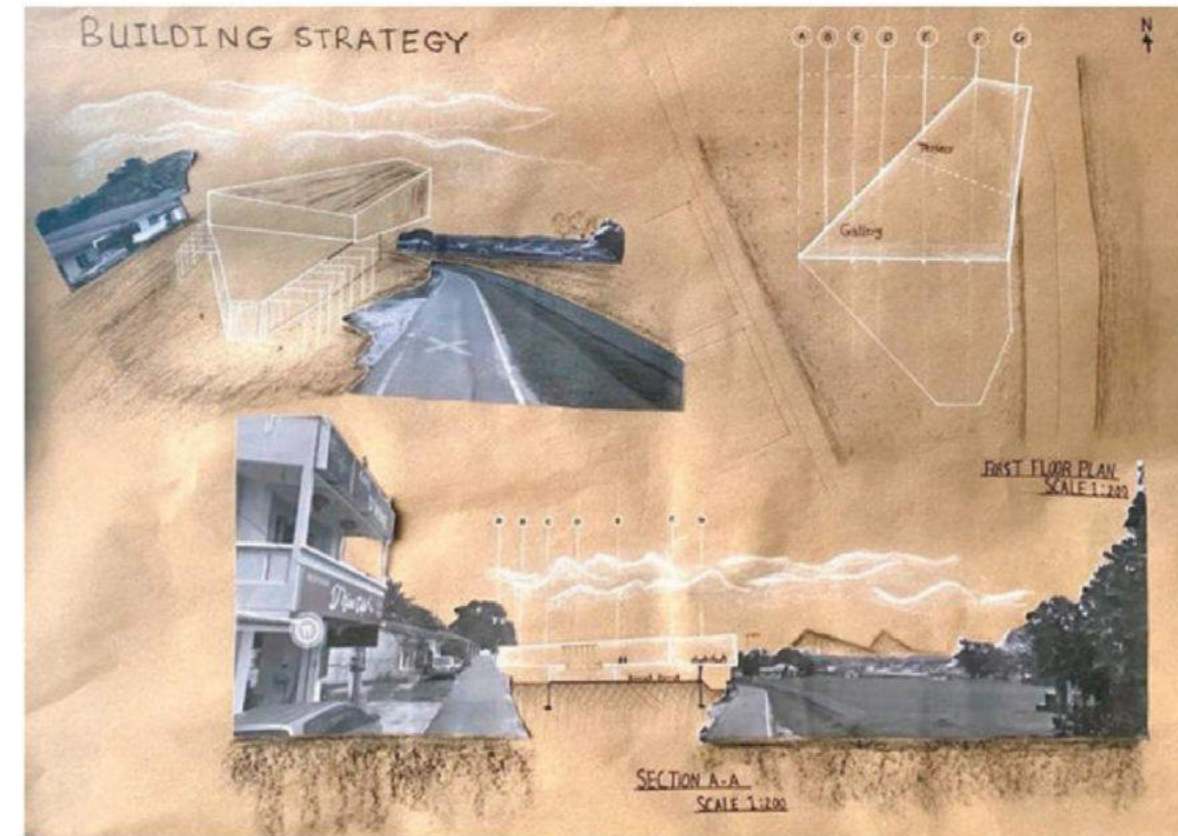
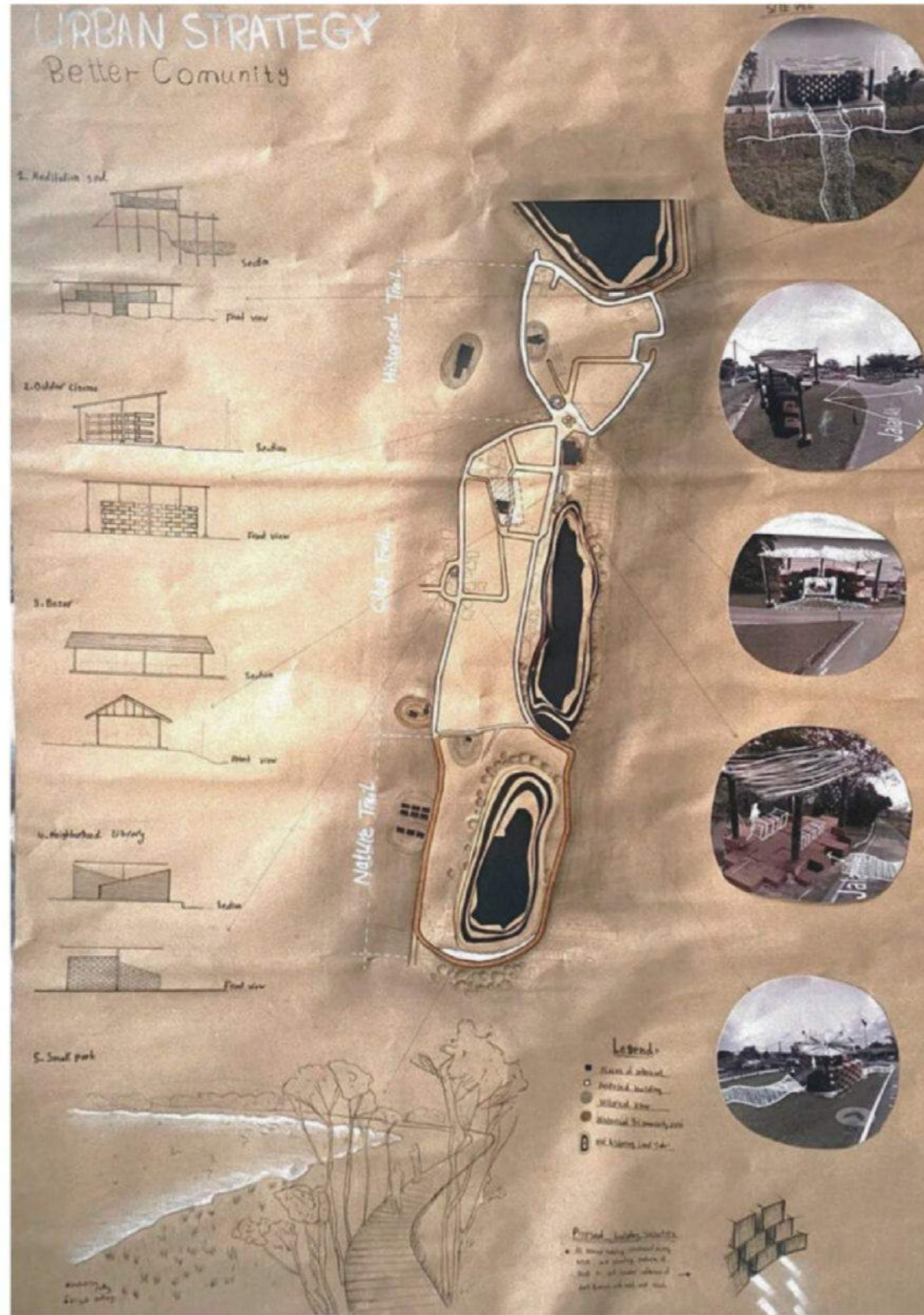


In The Loops

Creating an interesting path for people and finding a good strategy to link the buildings the base of this project, to let people enjoy walking around the heritage town by designing a path.

The project focuses on the area of interest which is mostly the heritage and abandoned places like (mining areas, settlements, officers' houses, the remains of the railway, air shaft and sports club, and the heritage column) linking these places to each other and activating the surroundings. Also, providing development and enabling the transition from non-place to place, to create a new area of interest linked to the heritage. And ultimately providing locations for further development along the heritage zone. Using **three different loop Historical, City and Natural loop**.

The proposed places were distributed to form closed trails with the historical places, which consist of five buildings, the first is a Meditation Spot, located in the historical loop in quiet area, view to the bond. The second an Outdoor Cinema in the historical loop, located near to the heritage column. The third is a Bazar in the city loop, near to center as continuation of the market shoes and the Morning market. The fourth Library located in the city loop. The final one is small biking Park located in the natural loop, to provide nice view.



Site Model

The proposals forms emphasizes creating access lines connected to the most famous community spots in Batu Arang.



Selected Site
Site B

This Site include the former sport club and field which located in residence area.

Building Strategy Proposal

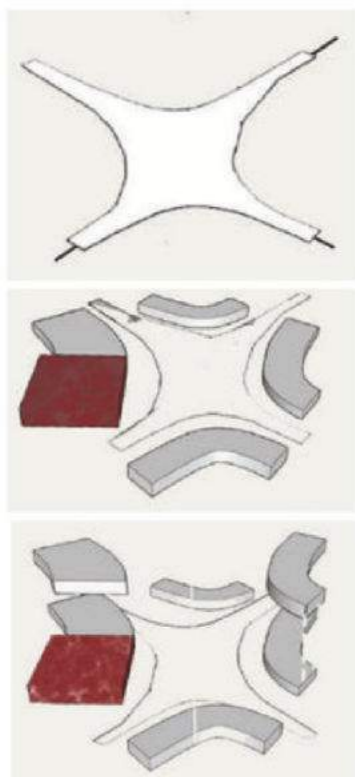
the main concept is to create access for people to encourage community spaces, this is draft proposal for community musume, created by using a proposed street link urban strategy building to the site



“What We Lived Through .. Is Living In Us

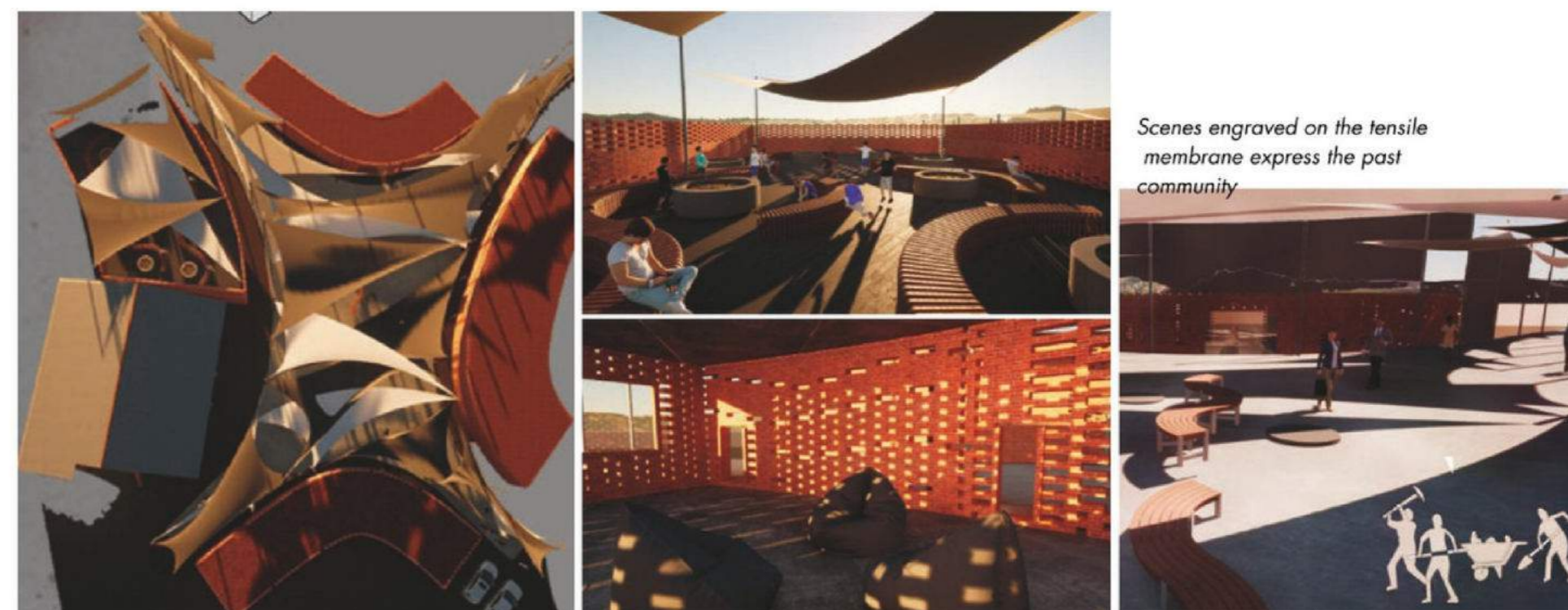
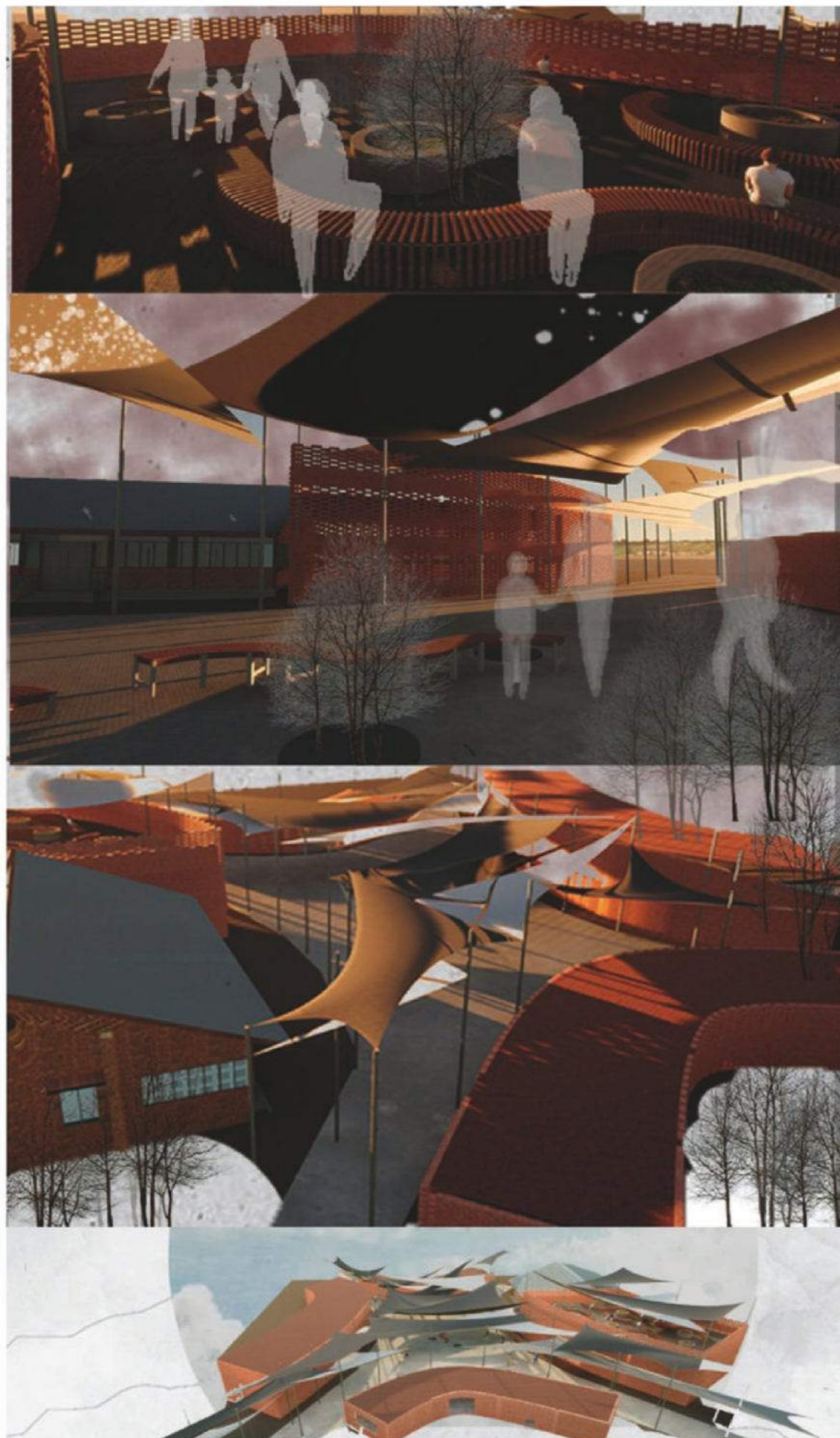
The title symbolizes the memories immortalized by this site, as it witnessed many historical scenes, this building presented and merged these memories with the present.

'Community' is the key word for the project, which is based on linking community buildings and creating access form these building to the community museum. Chosen site is the Sports Club building, which is reflecting the feeling of the community in the past, reusing of this building adds value to the community museum.



The access lines direct people from the most visited community buildings to the former sport club building , creating this shape.

The programs chosen based on the most community activities they need, between mixing past and present which consist of sports, gathering areas and a community museum.



Scenes engraved on the tensile membrane express the past community

On the Move

For the idea of the path taken by Batu Arang. The idea is to utilise travel to conjure up local memories. This town is well-known for being a coal mining town. This contributes to Batu Arang's status as one of Malaysia's wealthiest towns in history.

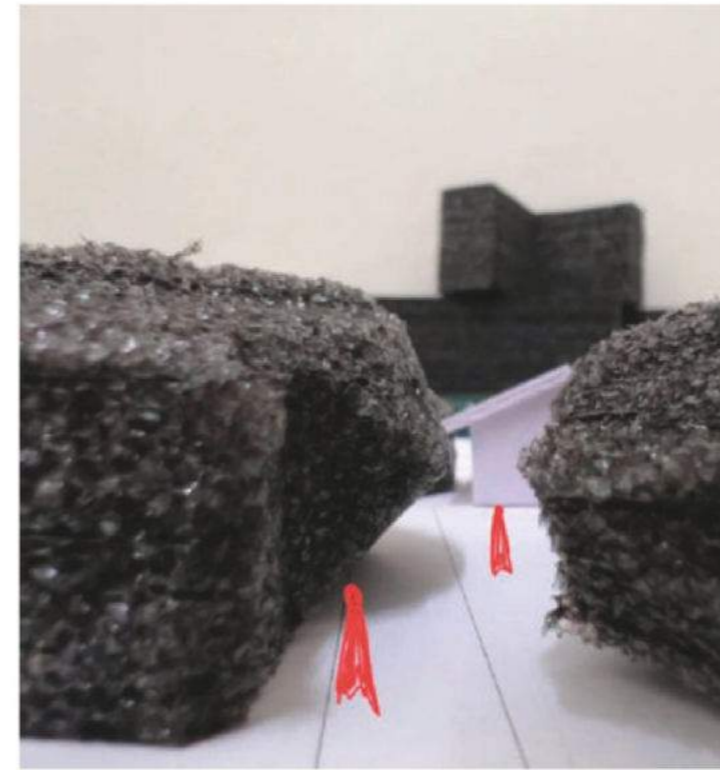
I thus provide many recommendations to raise the town's quality. According to the red line, which represents the track that can reach the historical spot, the first suggestion is to reconstruct the railway station and utilize the mining car as the primary mode of transportation in Batu Arang, providing experience when workers walk inside the tunnel.

The second is to suggest adding a bicycle and pedestrian path next to the vehicle track.

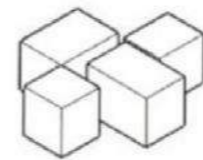
The third is to build a terrace that is situated between a lake and an old Sunday morning market.

The fourth idea is to move the center from the old shop to a field in order to establish a new focal point that includes a theatre, an outdoor movie theatre, a shopping area, and an activity area.

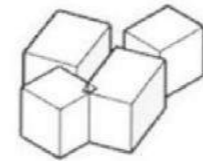
The final one is the sky bridge, which I wish to construct so that people may access abandoned buildings.



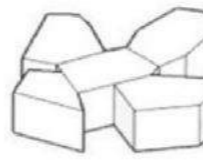
Sense of Arrivals: The concept of sense of arrival. It means that when visitors arrive, they can feel the origami shape on the surface of the building (I choose the origami shape to resemble the experience of the miners when they were working tirelessly in the tunnels).



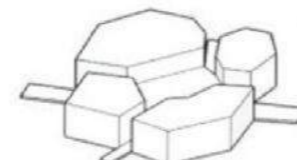
- By rebuilding into 3 sensible structures



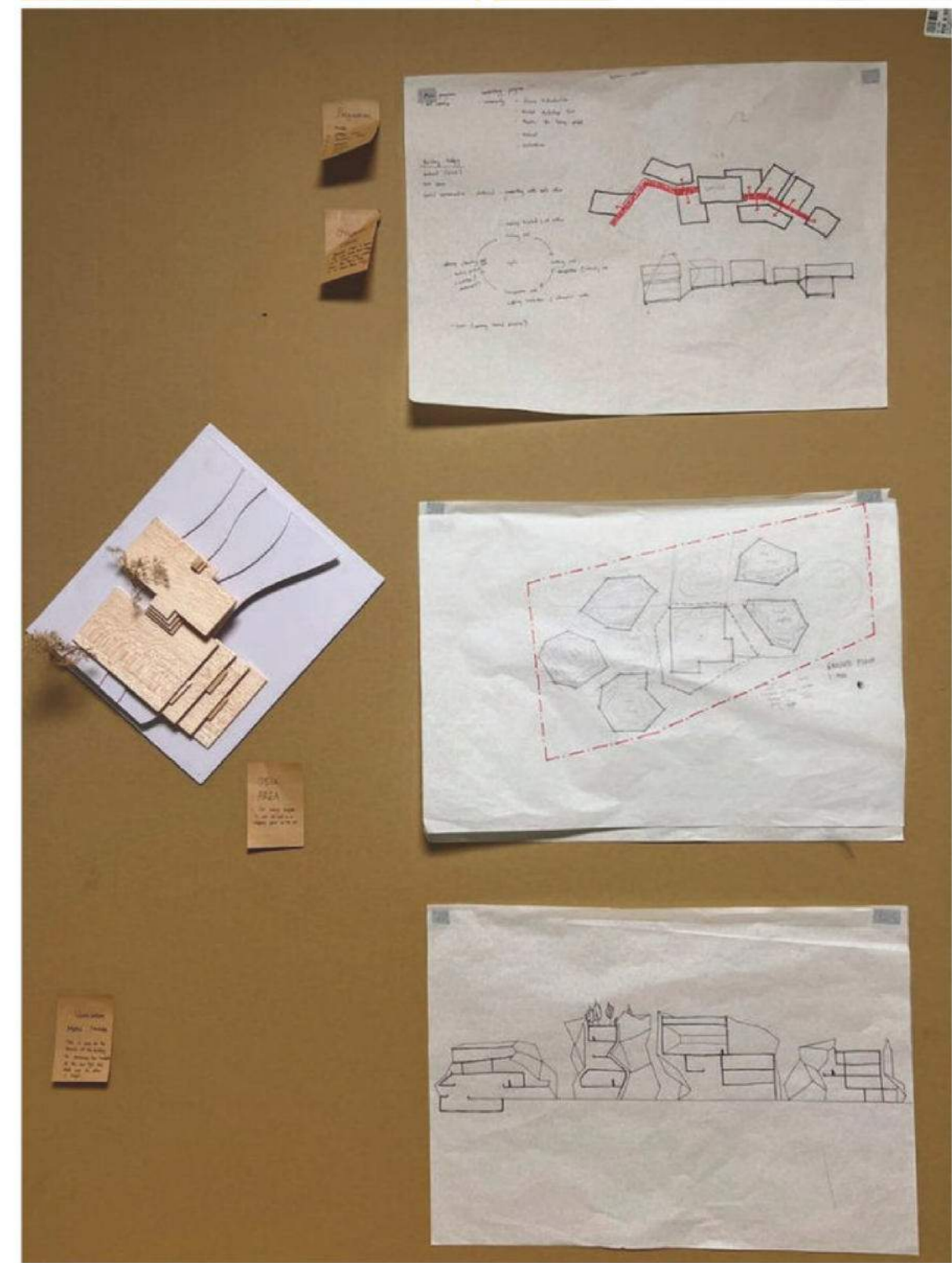
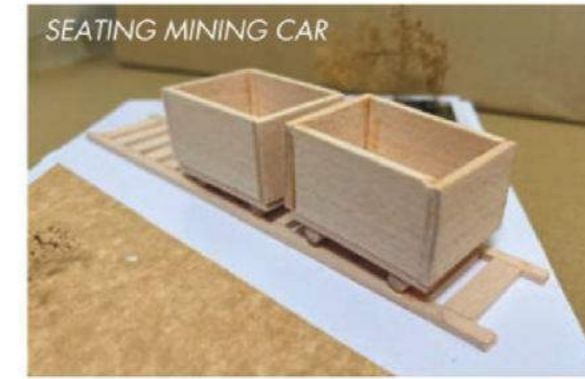
- Rotated to adapt to the site and surroundings



- Shaped to create a clear arrival connection Shaped to create central and connecting indoor and outdoor spaces



- Shaped to create a clear arrival connection Shaped to create central and connecting indoor and outdoor spaces



The Crystalline

Sense of Arrivals

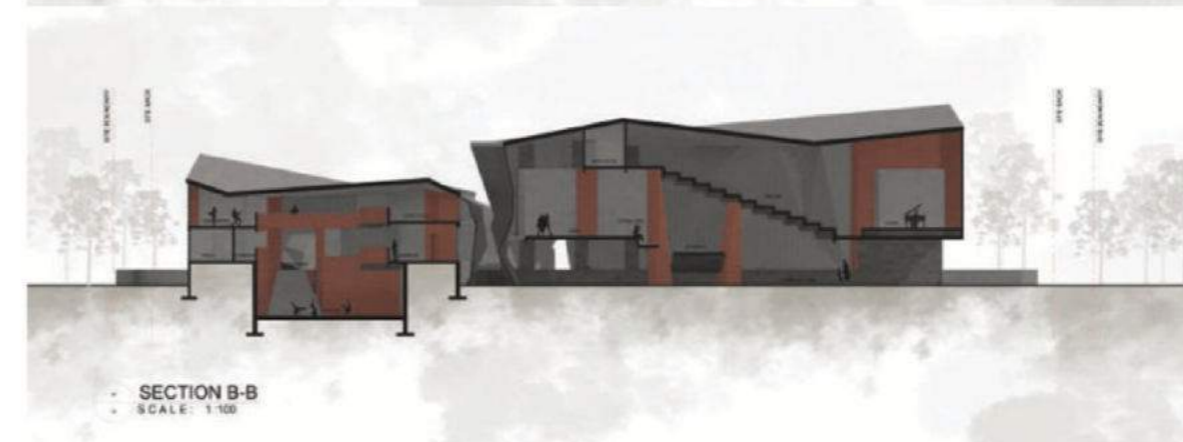
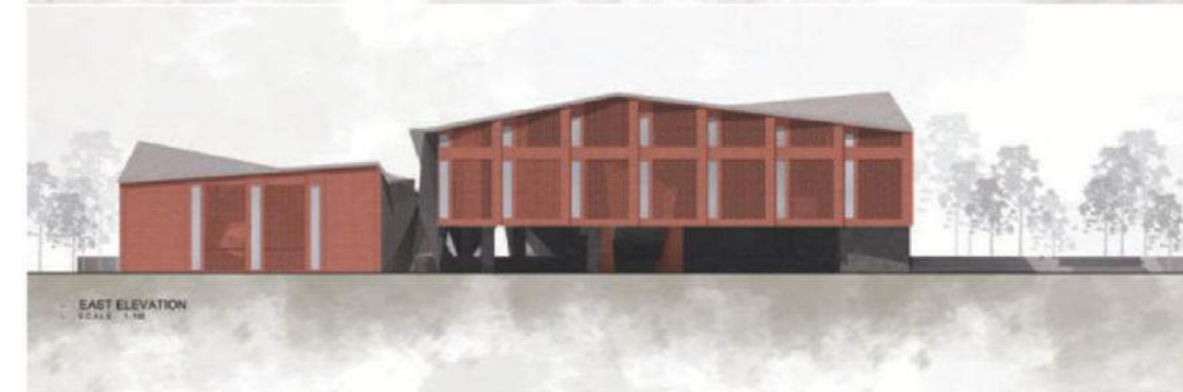
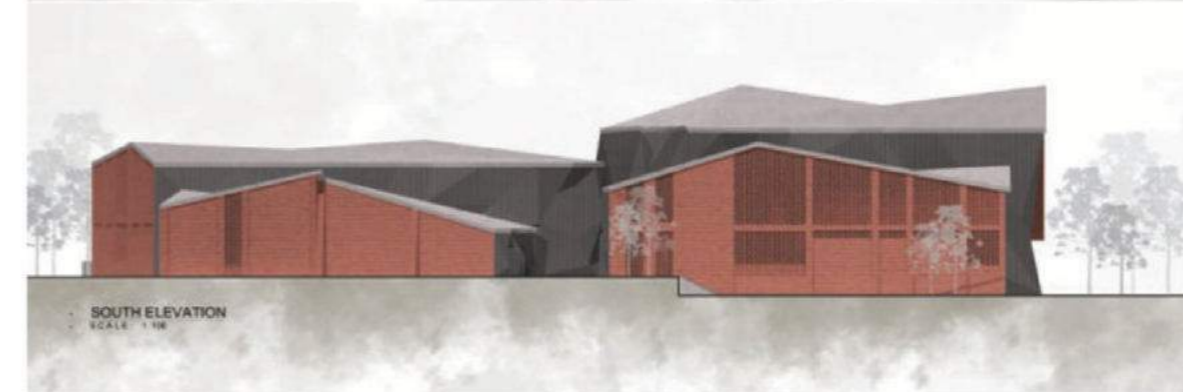
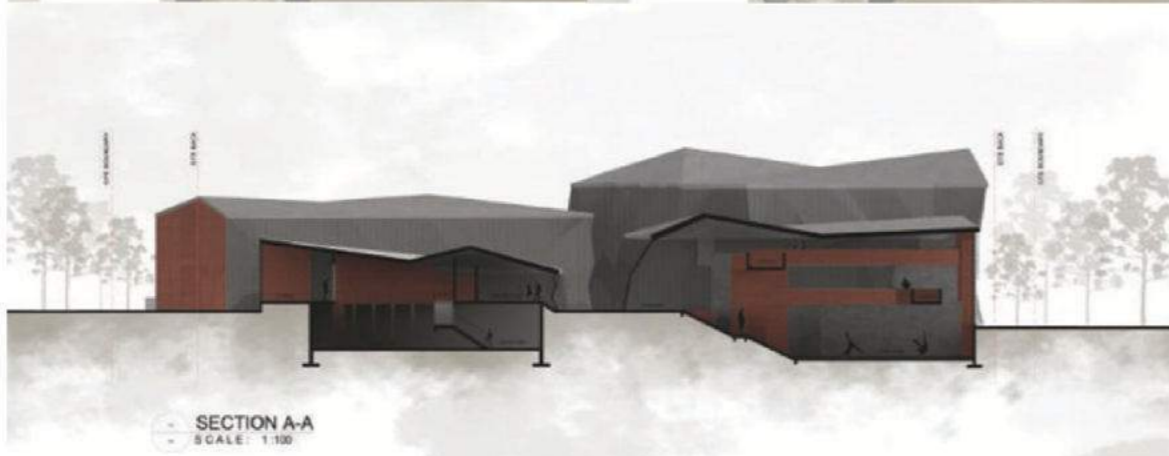
The fluid whole, which interacts with symmetry without upsetting it and draws guests into another by opening many fissures and portals, undulating pattern and eye-catchers, is not an independent, singular architectural item. areas that are crowded and very public as a result of the inner world's shadows.

For The Crystalline Hall's sole goal is to enhance the art of Malaysia combined with the local history of Batu Arang uniquely. With a philosophy of being open and welcoming to all walks of life, we are committed to nurturing new talent and promoting appreciation of the arts.

We also offer a variety of developmental programs, opportunity-oriented platforms and educational programs for budding performers and those who want to enhance their understanding and passion for the arts.

The Crystalline are offers a wide range of events, including memorial museum, dance, theatre, concerts, and musicals. We debut a lot of new works and fresh talent that have been created by Malaysians for Malaysians and the globe. There are frequently open auditions.

It has served as a home for the artistic community and a safe haven for visiting troupes, but it has also evolved into the very lifeblood of Malaysia's artistic and cultural life.



Historical Buildings and Tourism

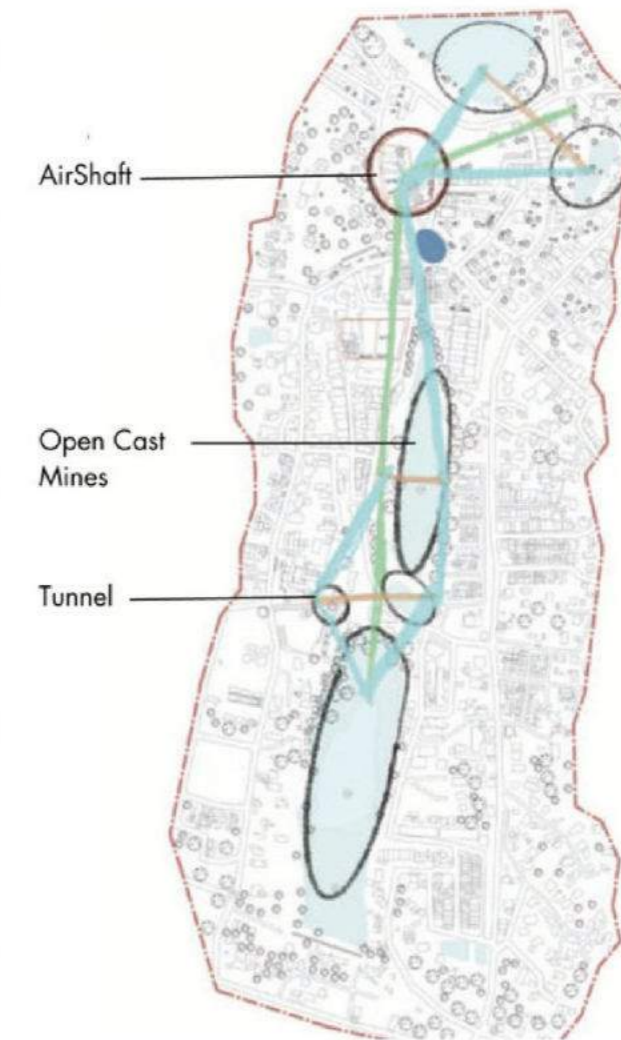
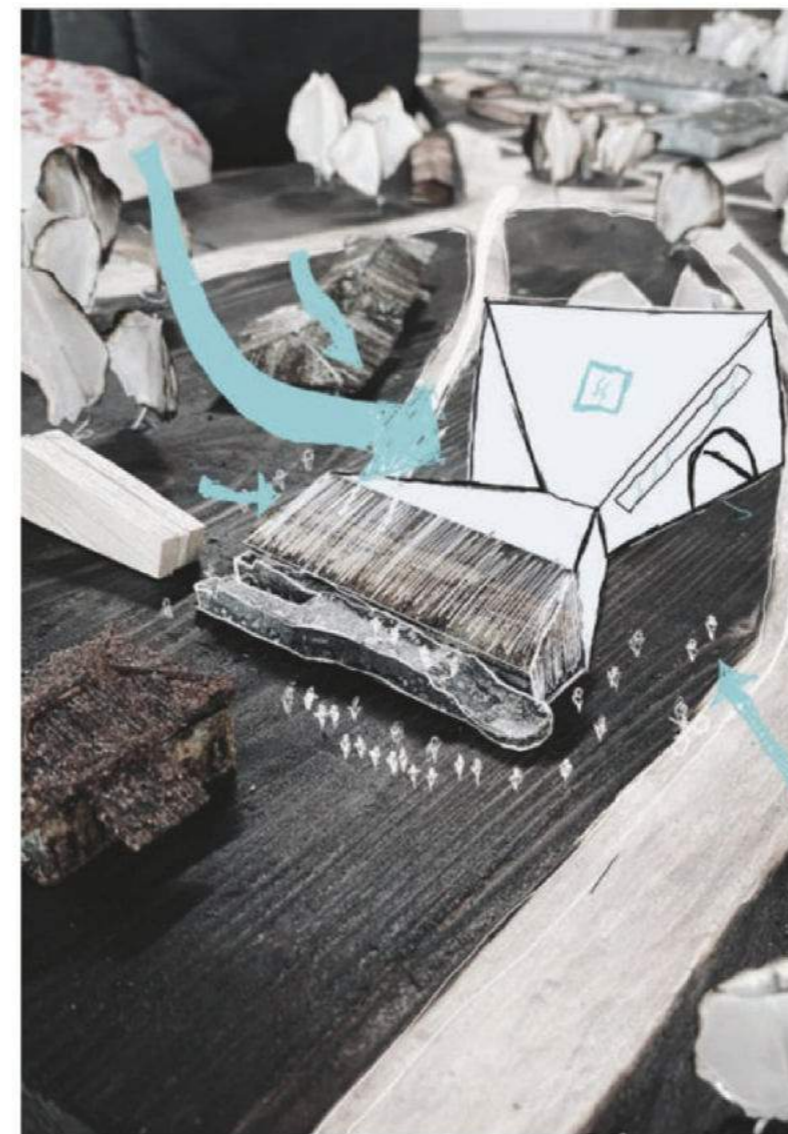
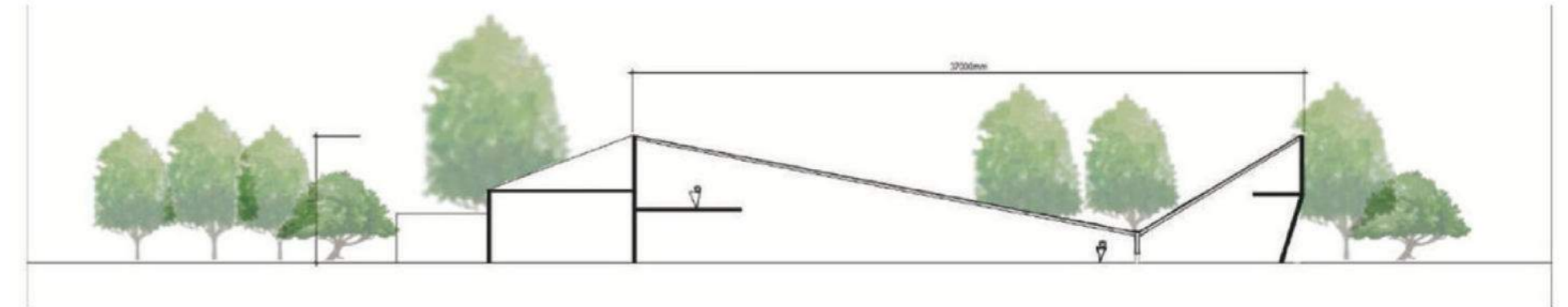
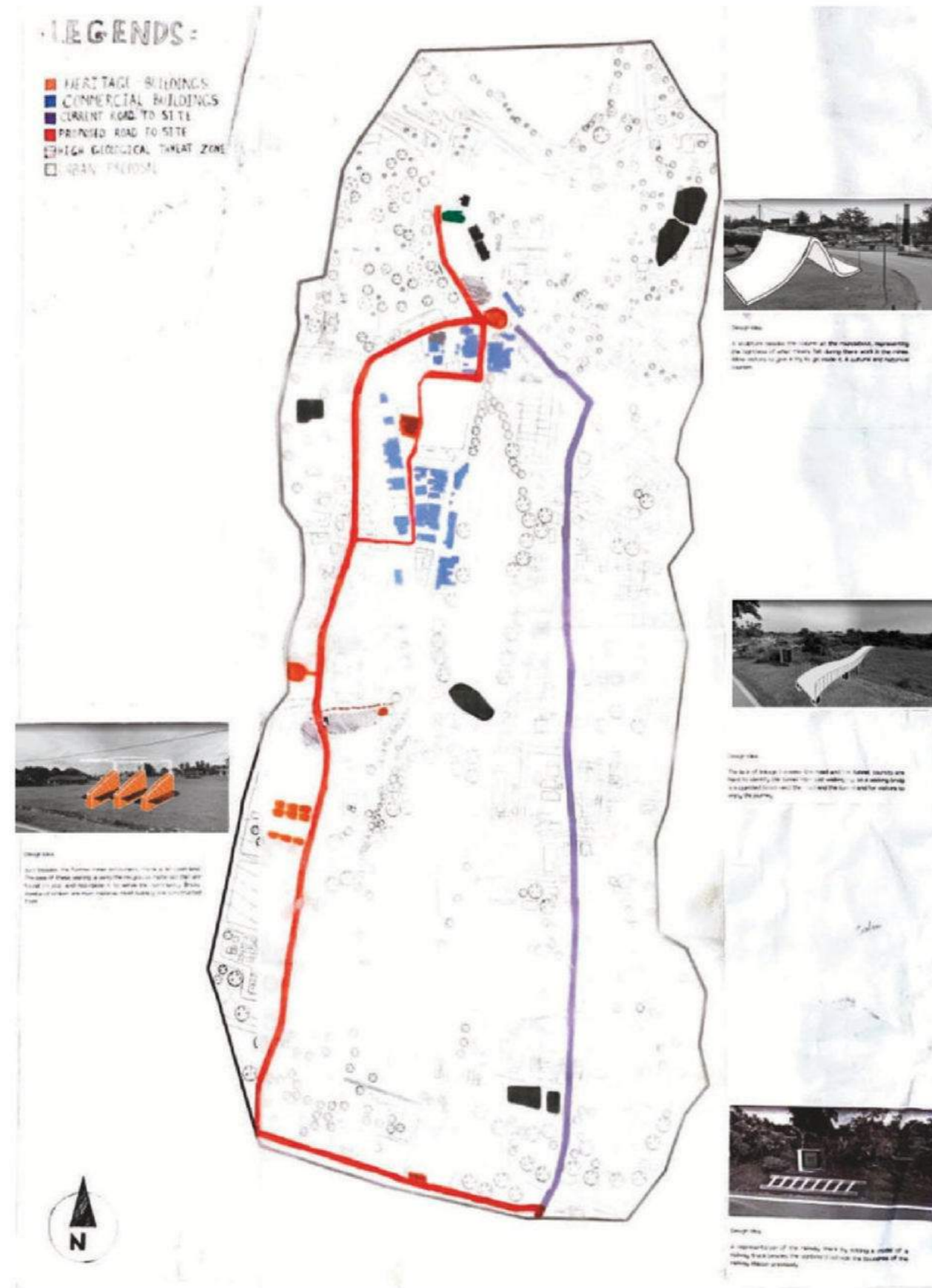
Hence for project 2 is split to two tasks, which is Urban Strategies and Building Strategies. The focus of task 1 was about giving solutions for the site issues after site visit. Where task 2 is Building Strategies, which is giving ideas for form making of the building of the design and relate the urban strategies to that.

For the Urban Strategies was mainly to create a better place for new visitors to experience the site and the past of the town.

An site issue was that some of the heritage sites and buildings are not easily identified by outsiders and the access to those sites were not clear. A proposal of new path -red path- that takes visitors to pass by all the heritage buildings and sites and that is to ease the access to the heritage sites by outsiders.

The highlighted buildings based on the legends is showing where the commercial, residential and heritage buildings and sites on the map. Then, the proposed sites for the design proposals to enhance the site's condition and situation.

In terms to enhance the site by those solutions, the idea is to use recycled materials that was found on site that in open to the public, rather than to be thrown away and wated, it can be used to rebuild and enhance the experience of people.



For the Building Strategies task, the idea of designing a building form and a conceptual design of the upcoming building to be designed on project 3.

So, the idea of the fear, darkness and tightness of the tunnels and mines, I wanted to reflect that inside the building for people to experience that.

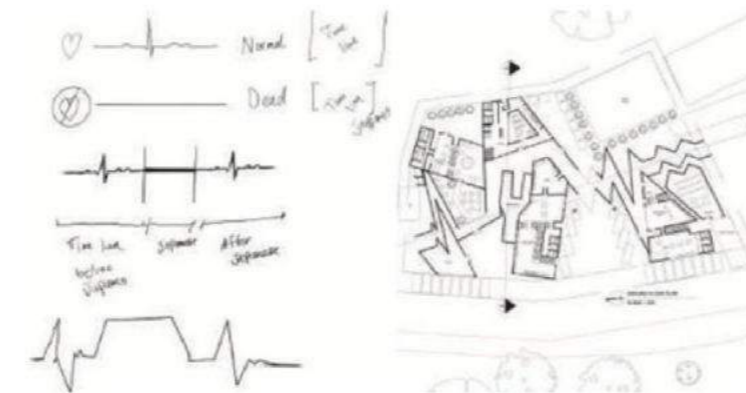
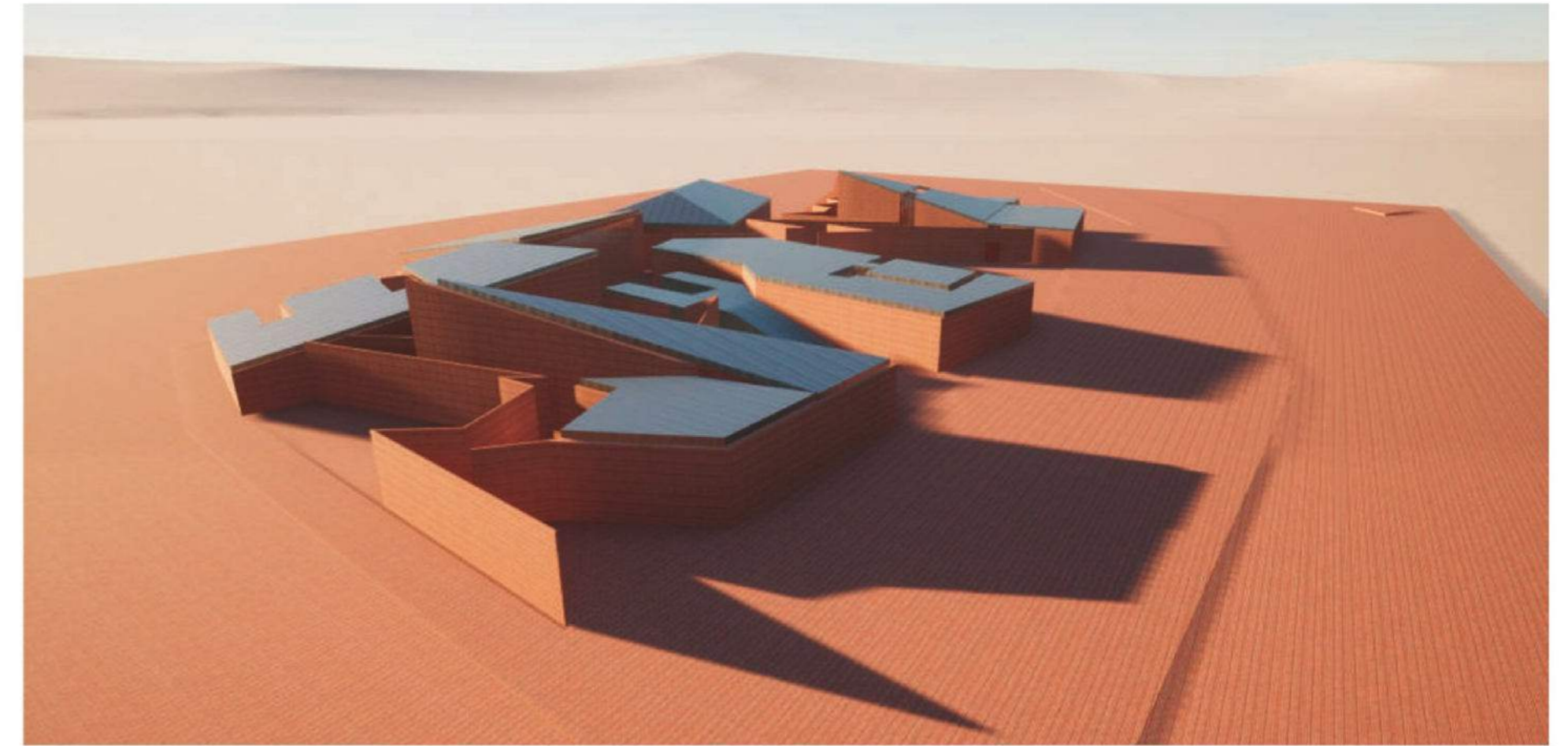
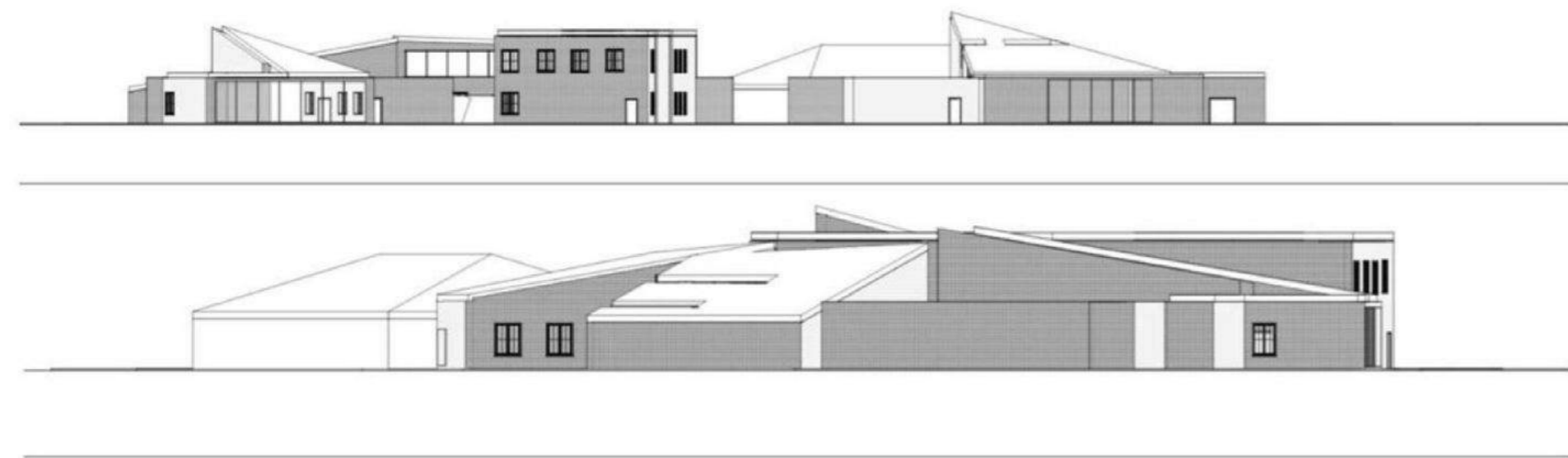
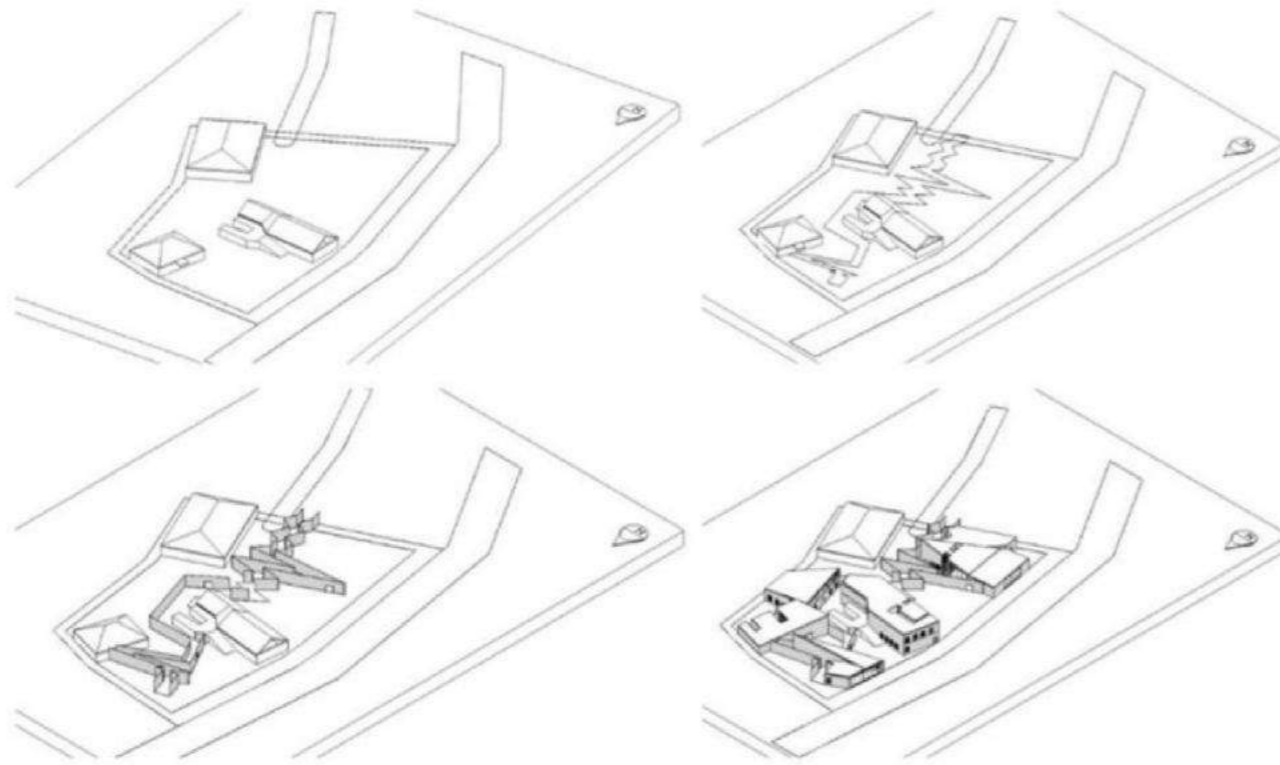
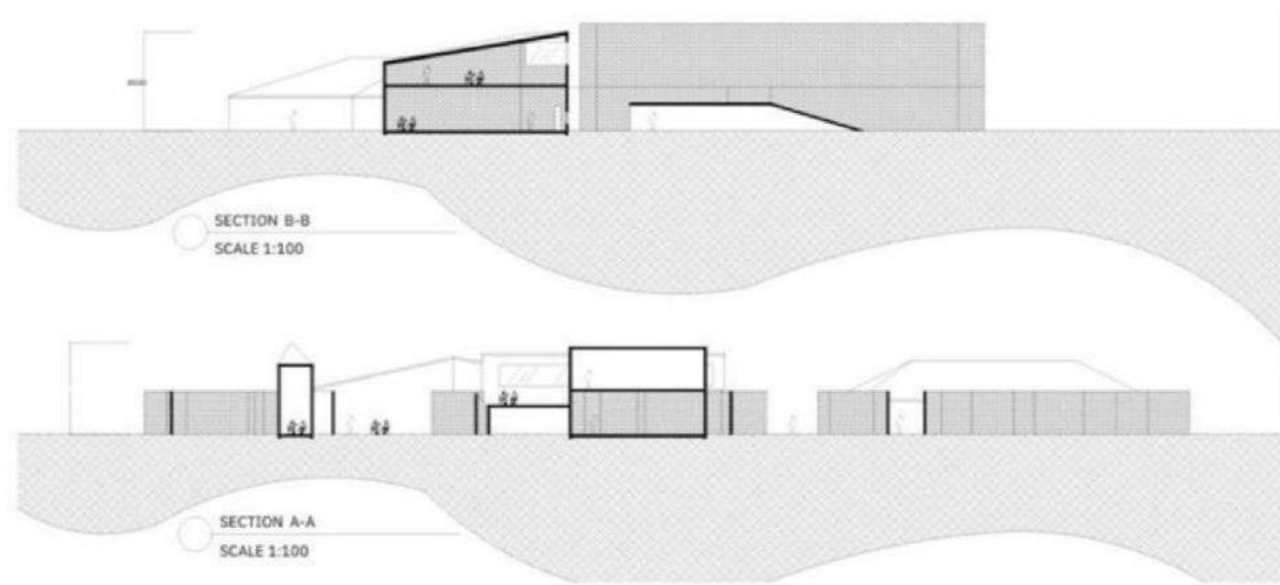
So, as it was shown in the section, the decline of roof gives the impression of instant tightness and darkness to the visitors as a person enters a tunnel or a mine. So, going from a space to another takes the visitor to bind over to go from space to another.

The Pain Hall

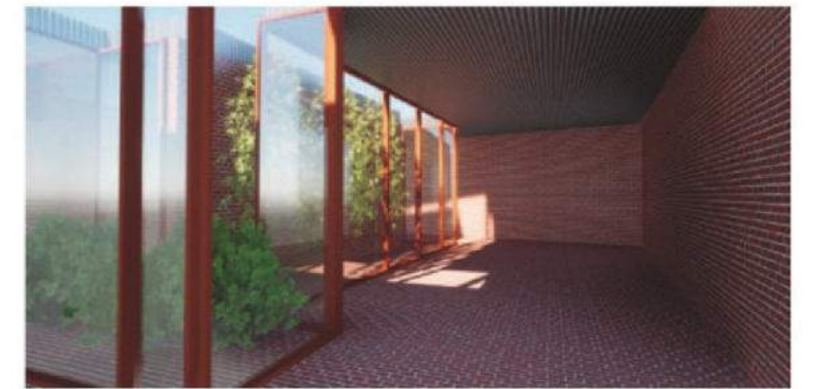
An inspiration came from the "Memorial Hall of the Final Battle", in China, by TJAD, as well as the "Jewish Museum", in Berlin by Studio Libeskind. And the inspiration was taken based on the senses, touch, see, and hear, but hearing is hearing the inner sounds.

This project is focusing on designing a place where to gather local people and internationals who are interested to know about Batu Arang and its history and make people feel and experience what people in the past used to feel in their daily life.

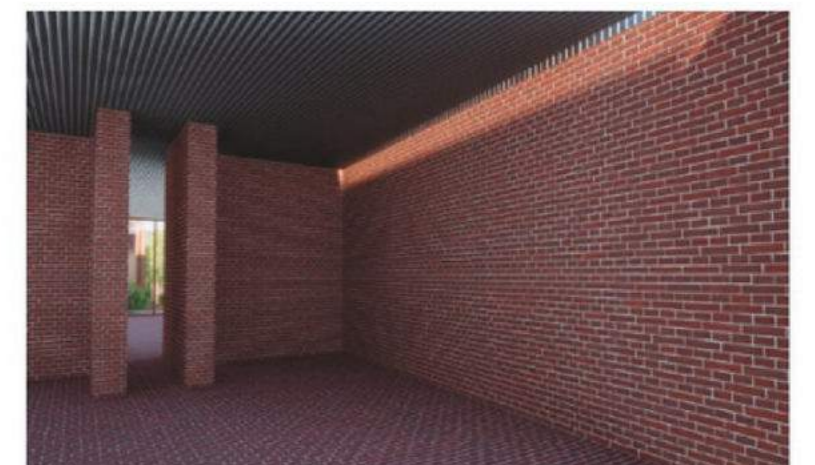
The Zigzag path is a shape representing the Heart Beat of the locals specifically the miners and how they felt during their life throughout the past years from 1908 to 1958 and above. As life during the coal mining operations was going up and down before and after the Japanese Colonial, however, during the Japanese Colonial, the life was as similar as life was stopped.



The interior of the whole building is all in bricks resembling the main material on the actual site and local materials. As the idea was to make the place dark, some places I wanted to allow natural lighting to go in to apply the concept of ups and downs, dark and light.



The paths through the site is tight and long walls to make the scale of the visitor smaller compared to the building and the walls. The walls will be telling the story of Batu Arang locals during the past years while people are walking by sculptures and arts.

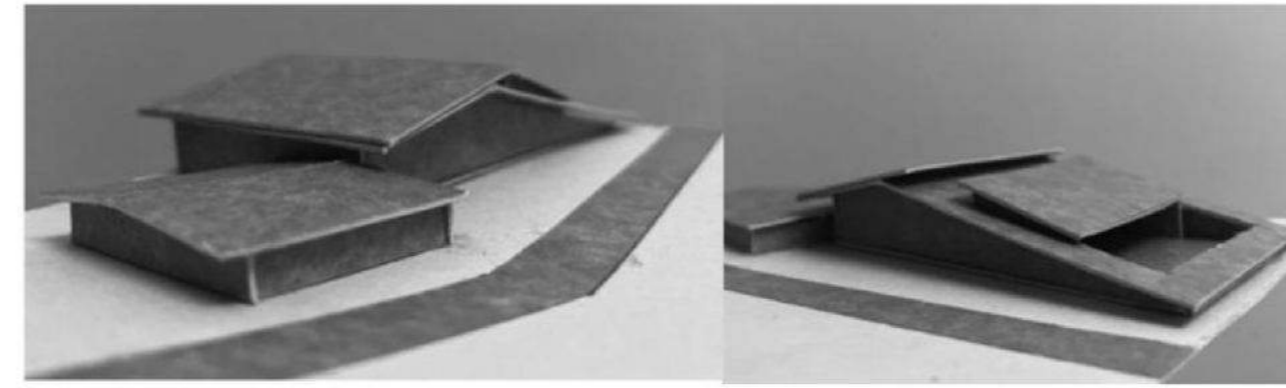
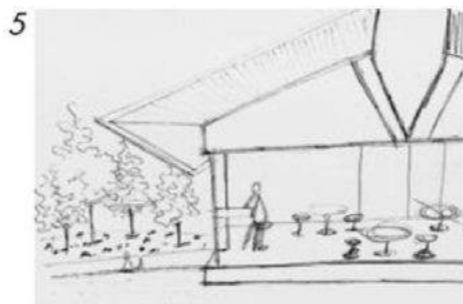
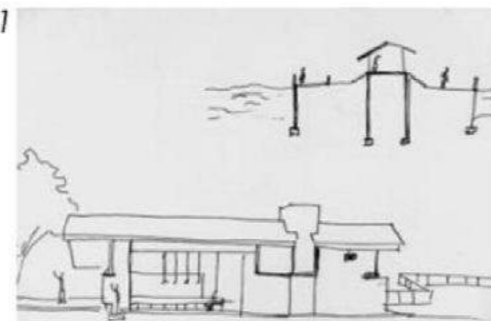
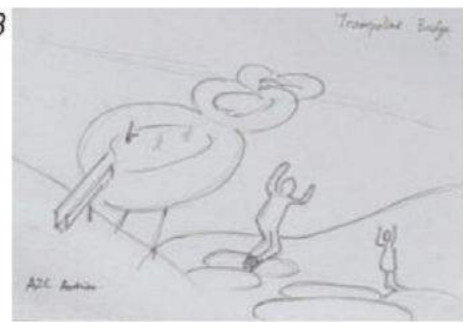
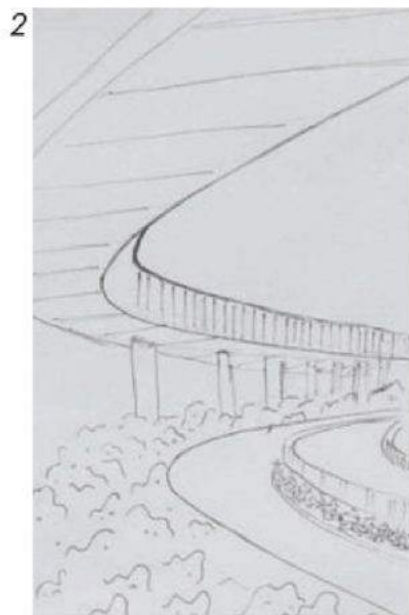


Bridge Link

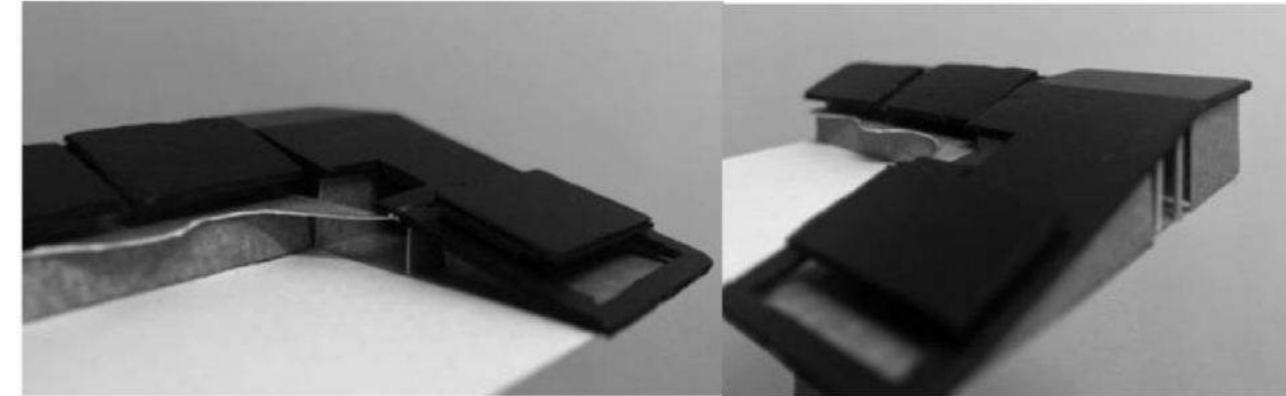
Historical heritage contains the culture and memory of an era. Is the precious wealth of mankind. Historical sites serve as important symbols of a sense of local belonging, so that young people who are away can come back. Awaken the memory in their hearts. I built a bridge in the middle, a bridge between the past and the present and the future.

After learning about the site of Batu Arang, my goal is to drive the flow of people in Batu Arang and make local residents know more about the history of Batu Arang in order to better develop it. The site is divided into two parts, left and right. The area on the left is full of historical sites, and the area on the right is mostly residential. The right side is not very active. In this study, it was found that many local residents did not go to or did not know the history of Batu Arang at all.

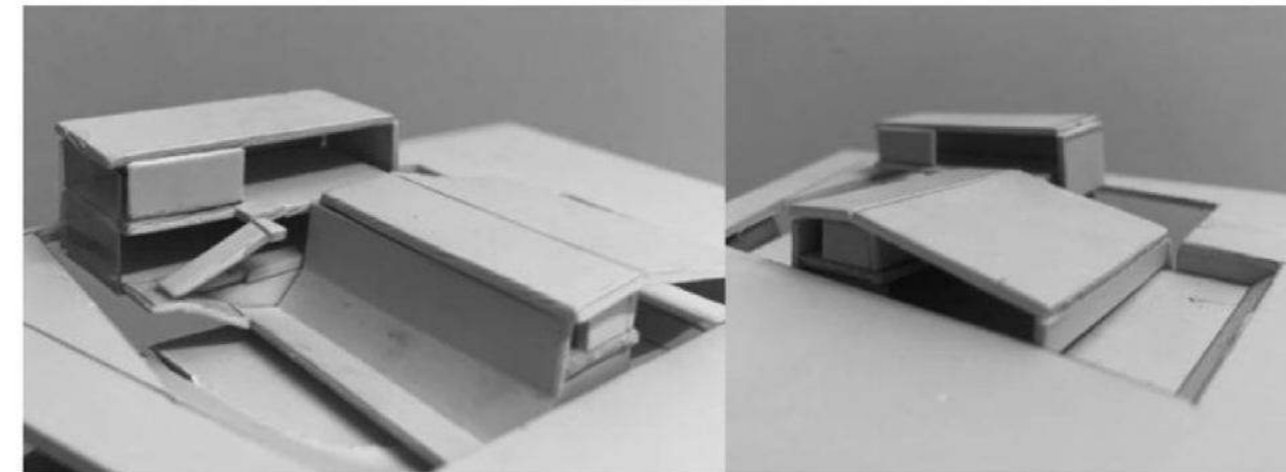
I built two kinds of Bridges in the middle area: the underground passage and elevated walkway bridge. The underground passage allows cyclists to travel. Local residents can not only walk but also cross the bridge to the area on the left to learn about the history of Batu Arang.



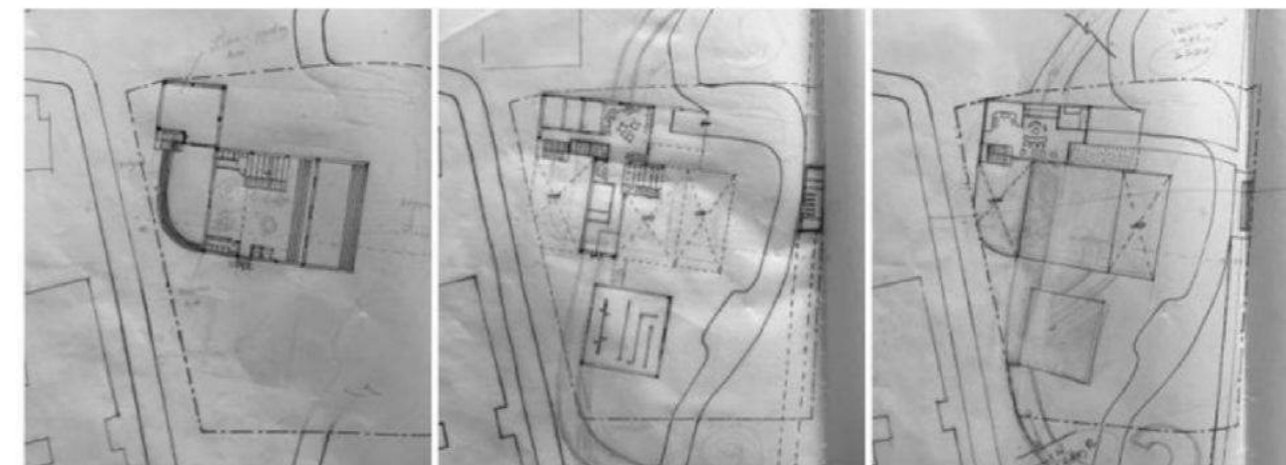
Proposal 1



Proposal 2



Final Proposal



Final Proposal Plan

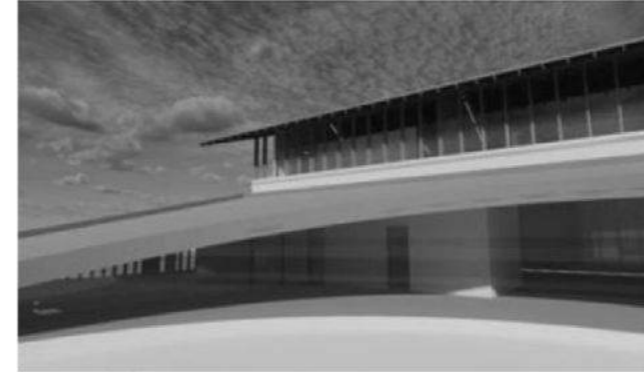
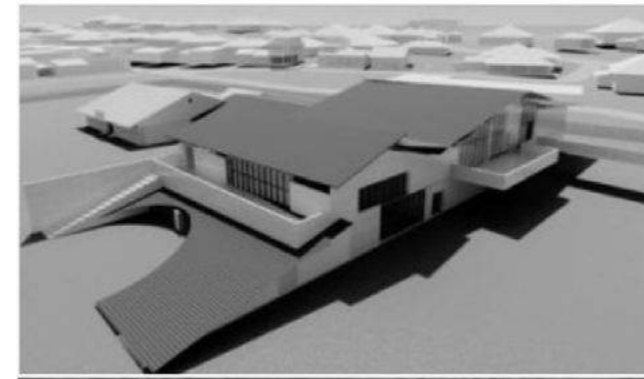
Agora

The combination of history and architecture makes the architecture more meaningful. In order to embody history in architecture, I wanted to create an important public building that speaks to the city. The building allows people to understand the past history of Batu Arang.

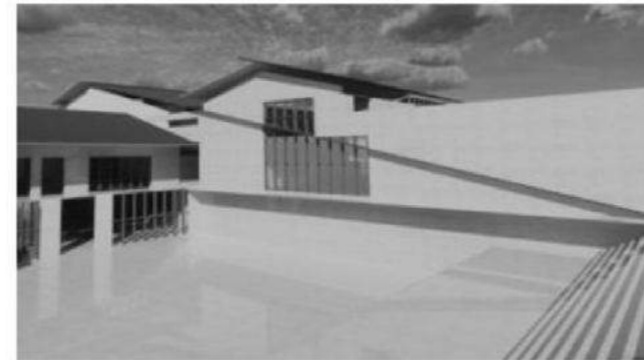
The focus of the project was to create a building that would be integrated into the local community environment, with the aim of attracting a strong interest in Batu Arang and its local history. So that people can feel and experience the hardships of people's lives in the past.

The site chosen for this project is the Sports Club building, which reflects the present situation of the past community, and the reuse of the building adds value to the historical memorial of the community. Activities are determined according to local community activities, including memorial hall, exhibition hall, library, activity square, leisure area, children's library, children's entertainment area, cafe, etc.

Agora is accessible to visitors as well as local residents through a bridge designed in the city plan. A sunken activity plaza at the entrance of the building leads into the foyer to visit the memorial and library.



Curved Library Entrance



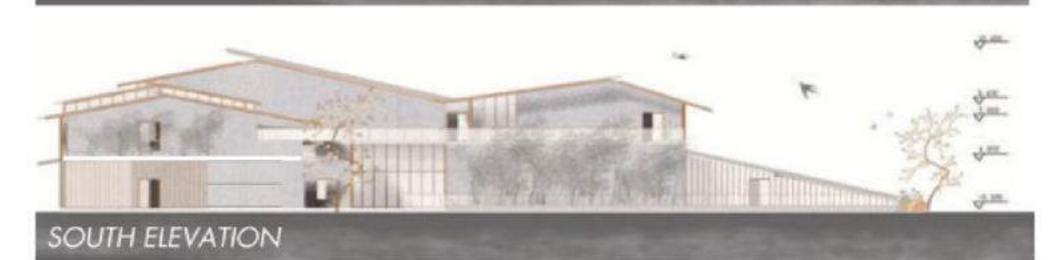
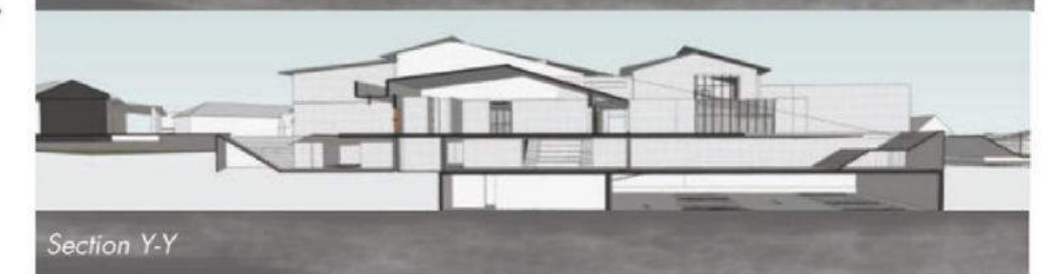
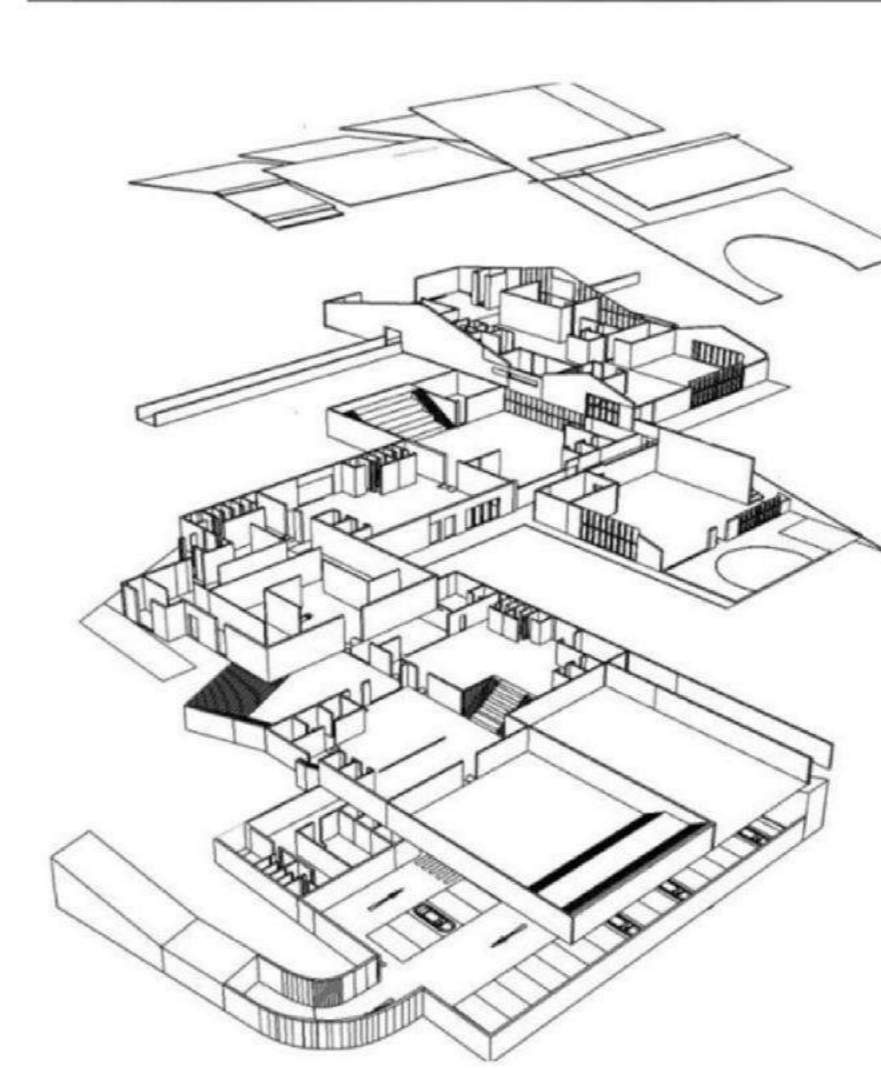
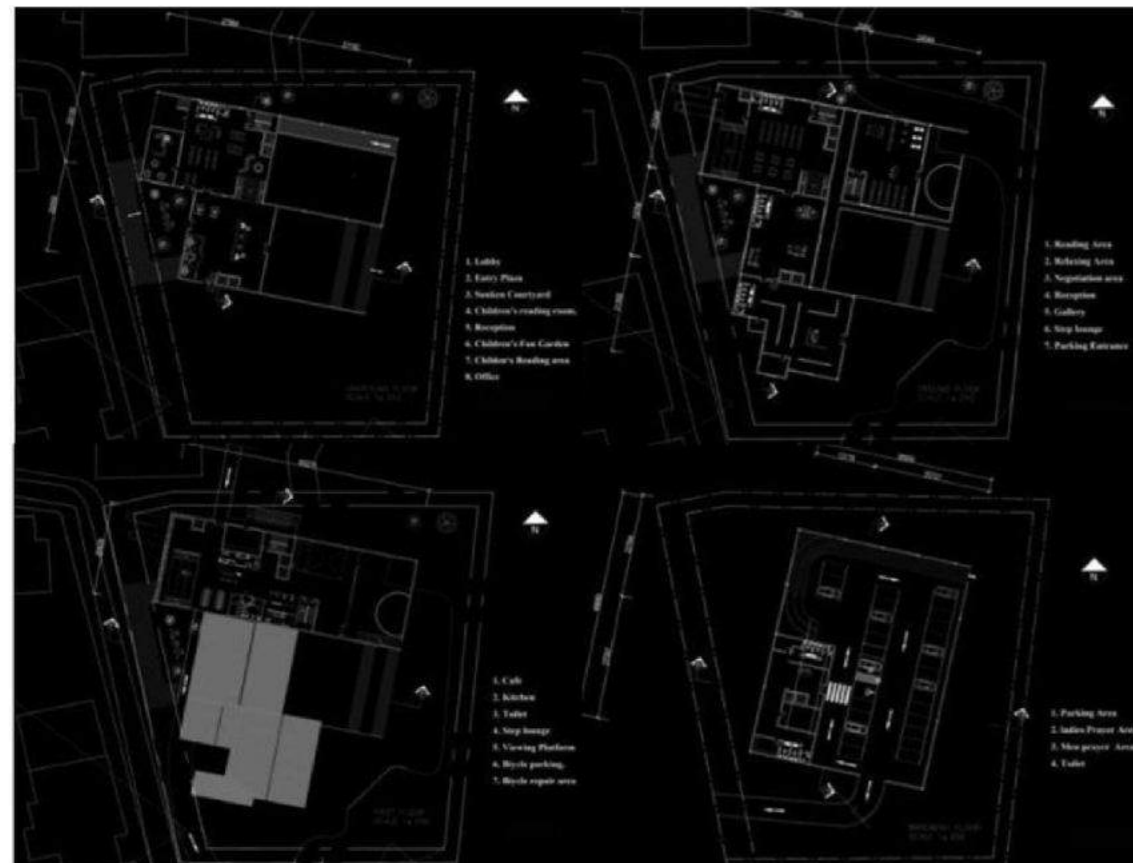
Entrance Plaza



Cafe



Library



Weaving Community

With the sincere goal of fostering warmth and inclusivity, Batu Arang gathers residents and visitors alike. Through vibrant events and initiatives, the town becomes a hub of community, forging bonds and creating cherished memories. In its embrace, Batu Arang blossoms as a welcoming place that unites people with shared experiences and a spirit of togetherness.

The new bicycle line in Batu Arang is designed to offer visitors an immersive experience of the town. By cycling through the town, visitors can feel and experience the daily life of the residents, explore the unique character and history, and interact with locals to learn about their traditions and customs. It promotes eco-friendly tourism, and healthy living, and showcases the cultural heritage of Batu Arang. It's a must-try experience for anyone visiting the town.

The central area is the heart of the town, linking different areas and serving as a hub for social and economic activities. It offers various amenities, including a park, market, and playground, suitable for all generations. Its importance lies in catering to the needs of the residents and fostering a sense of community.

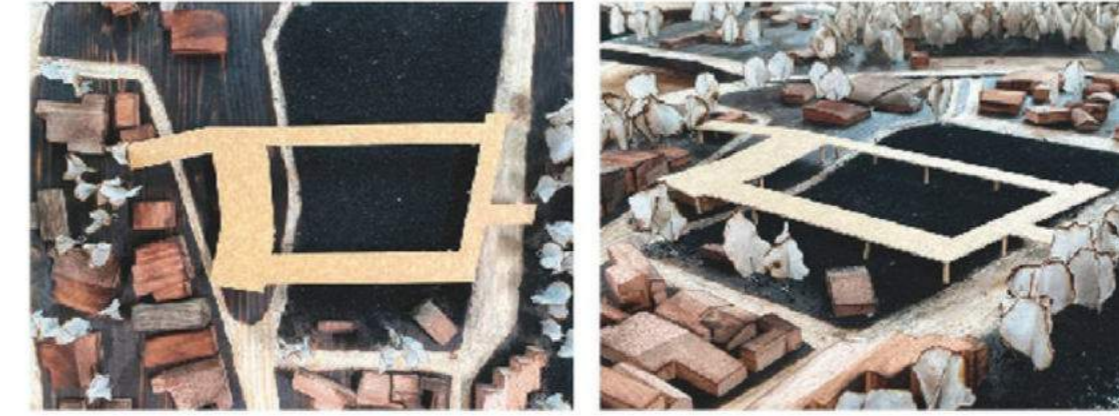
The museum is a unique experience for visitors, offering a glimpse into the mining industry of the past. It is designed to be an experiential museum, where visitors can go down to the mining site and immerse themselves in the working environment of a mining worker in the past. This museum provides a valuable educational opportunity to learn about the history and culture of the town's mining industry. By offering an interactive experience, visitors can gain a deeper appreciation for the hard work and dedication of those who worked in the mines. Overall, this museum provides an immersive and educational experience that is not to be missed by anyone interested in the history and culture of the mining industry.



The hostel is a renovated former mine workers' settlement, providing visitors with an authentic experience of how mining workers lived in the past. Guests can stay in the original housing units and get a glimpse of the working-class lifestyle of the past, making it an excellent choice for those interested in history and culture.

The coal mining tunnel connects the tower to the mining site, allowing visitors to experience what it was like for mining workers to make their way down. It offers an immersive experience of the challenging conditions the workers faced, making it a must-visit attraction for anyone interested in the town's mining history.

Proposal 1



My design bridge is a unique structure that serves as a levering up point, connecting the middle area of the town to the residents. The bridge is not just a practical structure but also a work of art that welcomes visitors to the site. The bridge is designed to create an attractive entrance to the town, enticing people to come and explore. It also serves as a symbol of the town's progress and development, providing a link between the different parts of the community.

Proposal 2



My design bridge is a circular structure that encircles the middle of the site, providing easy circulation for people. The bridge is designed with a central pathway that shortens the distance and makes it easier for pedestrians to cross.

Proposal 3



My design bridge shares similarities with proposal 1, but with a unique feature that sets it apart. The bridge has a different levering mechanism that allows people to experience what it was like for coal mining workers walking the tunnel in the past. This feature provides a glimpse into the town's mining history, allowing visitors to appreciate the hard work and dedication of the workers who built the town. While the bridge is designed with practicality and functionality in mind, this unique feature adds an educational and historical dimension to the structure.

Final Proposal



My design bridge incorporates geometric design principles and is a combination of previous proposals. It connects different parts of town and gives residents an efficient and practical way to get around. The bridge also has various levers that allow visitors to simulate walking through the tunnel in the past. The bridge's geometric design adds an aesthetic and modern touch to the town's infrastructure, making it a visually appealing feature of the neighbourhood. This design also ensures the bridge's stability and safety for both pedestrians and vehicles.

Gathering in Motion

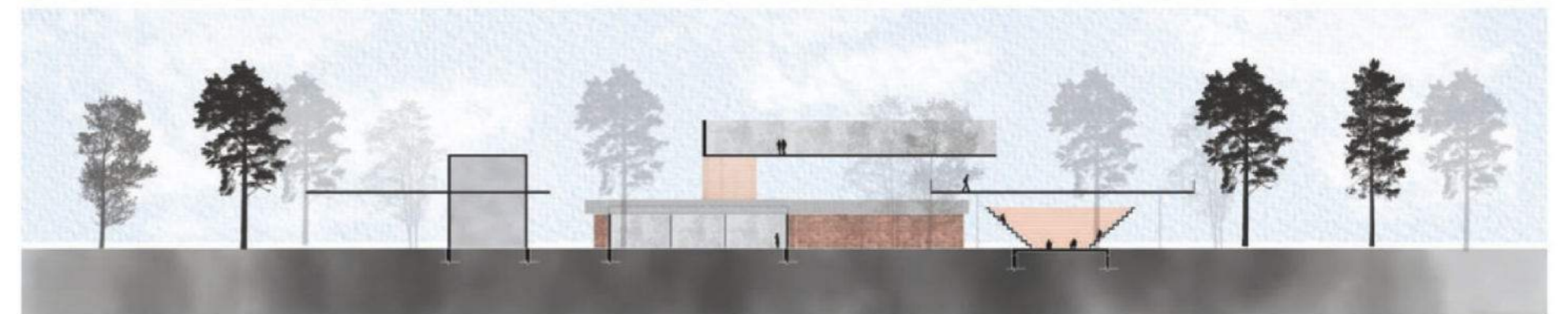
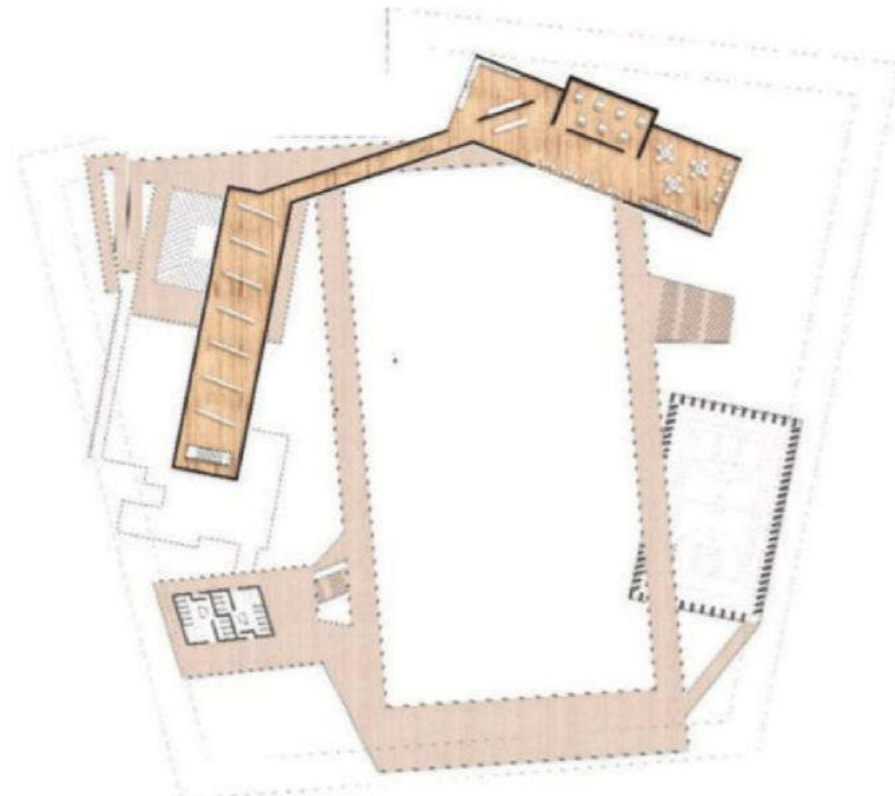
In Batu Arang, community convergence comes alive. Through curated events, engaging activities, and welcoming spaces, residents and visitors unite, forging bonds and fostering belonging. Anticipation fills the air as Batu Arang becomes a thriving hub of social interaction, where friendships form, stories are shared, and togetherness thrives.

At the vibrant center of Batu Arang, an array of courts entices players to partake in spirited games of football, basketball, and badminton. The atmosphere crackles with competition as athletes showcase their skills and determination. Amidst the dynamic movements, the surroundings offer moments of stillness, inviting contemplation and gratitude for the vibrant energy that permeates the air. While the courts pulsate with physical prowess, Batu Arang extends beyond athleticism.

A museum stands as a gateway to the town's storied history, immersing visitors in tales of triumph and resilience. The gallery showcases captivating artworks that capture the essence of Batu Arang's creative spirit. And on the performance stage, anticipation lingers as talented individuals take the spotlight, captivating audiences with their remarkable talents.

This multifaceted space intertwines athleticism, cultural heritage, and artistic expression, forming a rich tapestry that reflects the essence of Batu Arang's captivating story. Serving as connecting threads, a network of bridges span the town, seamlessly linking the courts, museum, gallery, and performance stage.

These architectural marvels not only physically connect the spaces but also extend a warm invitation to residents from surrounding neighborhoods. As they cross these bridges, a sense of anticipation grows, knowing that a world of sports, history, art, and culture awaits their exploration. The bridges symbolize more than mere connections; they embody a heartfelt embrace, welcoming the community to immerse themselves in the collective spirit of Batu Arang.



Old Brick - New Brick

In need of an economic revival to reignite the burnt out town, Batu Arang possesses a rich history and many potentials to bounce back to its former glory.

This Urban Strategy focuses on three fields, Bio-Fabrication of Mycelium Bricks, Tourism in remembering the past and Communal Welfare.

Local Run Plantation Fields

Illustration of local run Bamboo Plantations which the crop waste is an important material for the creation of Mycelium Bricks.



With such efforts aims to transform Batu Arang into a sustainable and future ready town. Transitioning from the old economy to a new and ready economy.



Research & Development

Illustration of researches exploring the possibilities of Mycelium Bricks in Batu Arang. Research facilities open up possibilities for professionals into the town.



Application

Illustration of a playground made from Bamboo and Mycelium Bricks. Newly researched materials are put into use to construct infrastructure that benefit the locals.



Resorts and Local Run Homestays

Illustration of local run accommodations built along the overcast pond. Community involvement is crucial for a sustainable future.



Cultural Street and Markets

Illustration of a busy cultural event happening along the main town of Batu Arang, exposing the local culture and specialties to tourists.



Proposal 1

With Batu Arang's unstable soil condition in mind, Proposal 1 (Site A) explores the use of lightweight structures on the site.



Proposal 2

Proposal 2 (Site B) which location is suitable for a community hub explores axis lines that are oriented toward the neighboring residential clusters.



Proposal 3

With inspiration from the underground grid mining system, this proposal explores the use of a series of gridlines to define the overall form and layout of the massing. A series of undulating surfaces aim to capture the constant elevation change of the past miners moving up and down, in and out of mines everyday.



A New Hope

A space to remember, a space to foster, the project serves as a multi-use space for the community, tourists and more.



Outdoor Plaza for markets, cultural events and more



To walk forward we must look back at our past

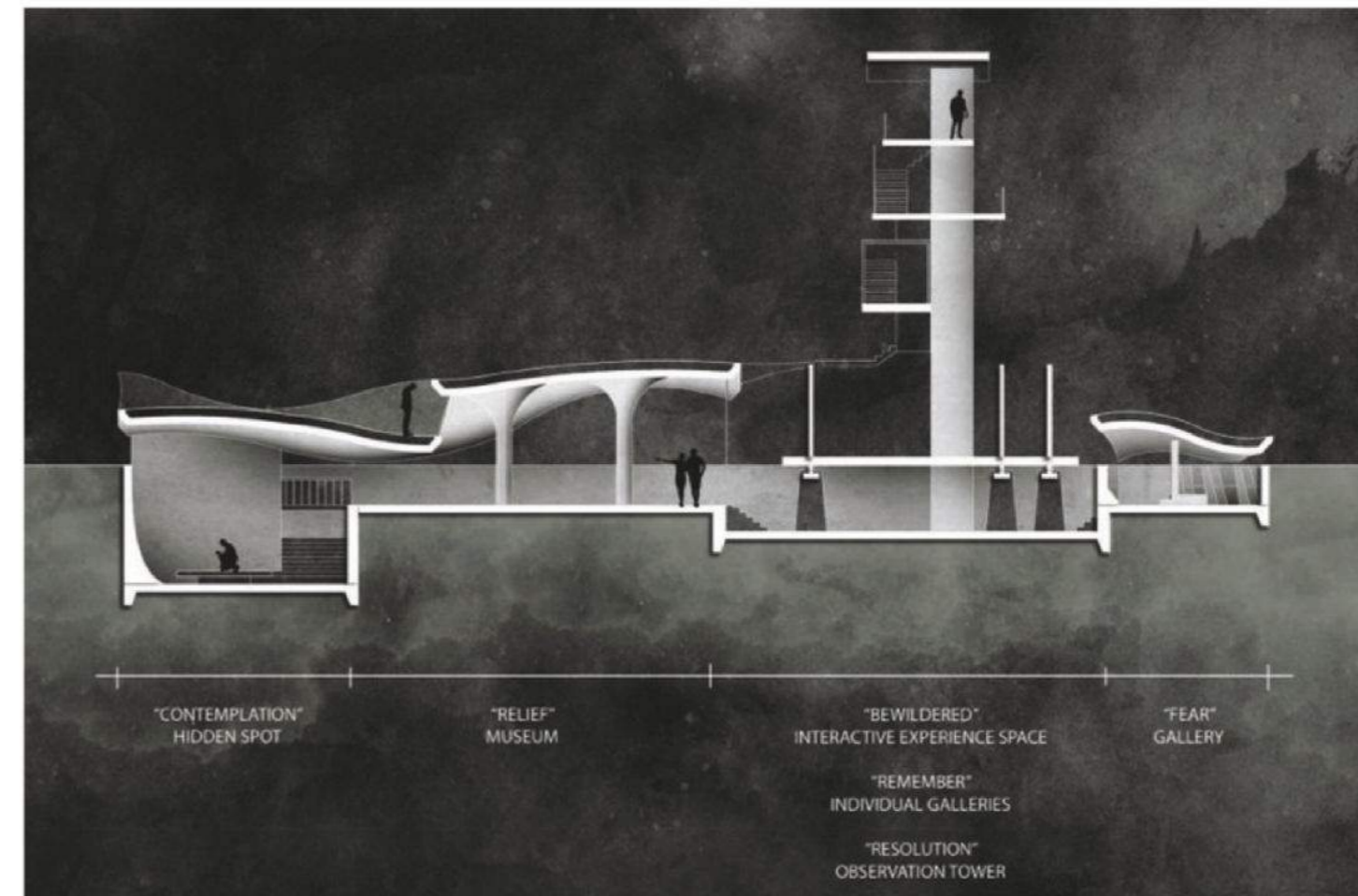
Featuring a Museum and Gallery that leads the visitor along a linear experience of emotions evoked through spatial qualities, interactive installations, and exhibitions. Derived from Project 1, the visitor experiences the emotions of a young coal miner in past Batu Arang.

The present is defined by the people living here

A community hub to foster engagement and unity of Batu Arang's locals. The community hub includes an open plaza for cultural events and night markets, a co-working space for the locals to work, a cafe catering for both locals and museum visitors.

A future to fight for

A research facility is proposed to facilitate research of the bio-fabrication field as well as an experience and demo space to promote the use of bio-fabrication technology in Batu Arang. The transformable co-working space also functions to accommodate research groups conducting field trips to Batu Arang



The Museum

A linear journey of emotions

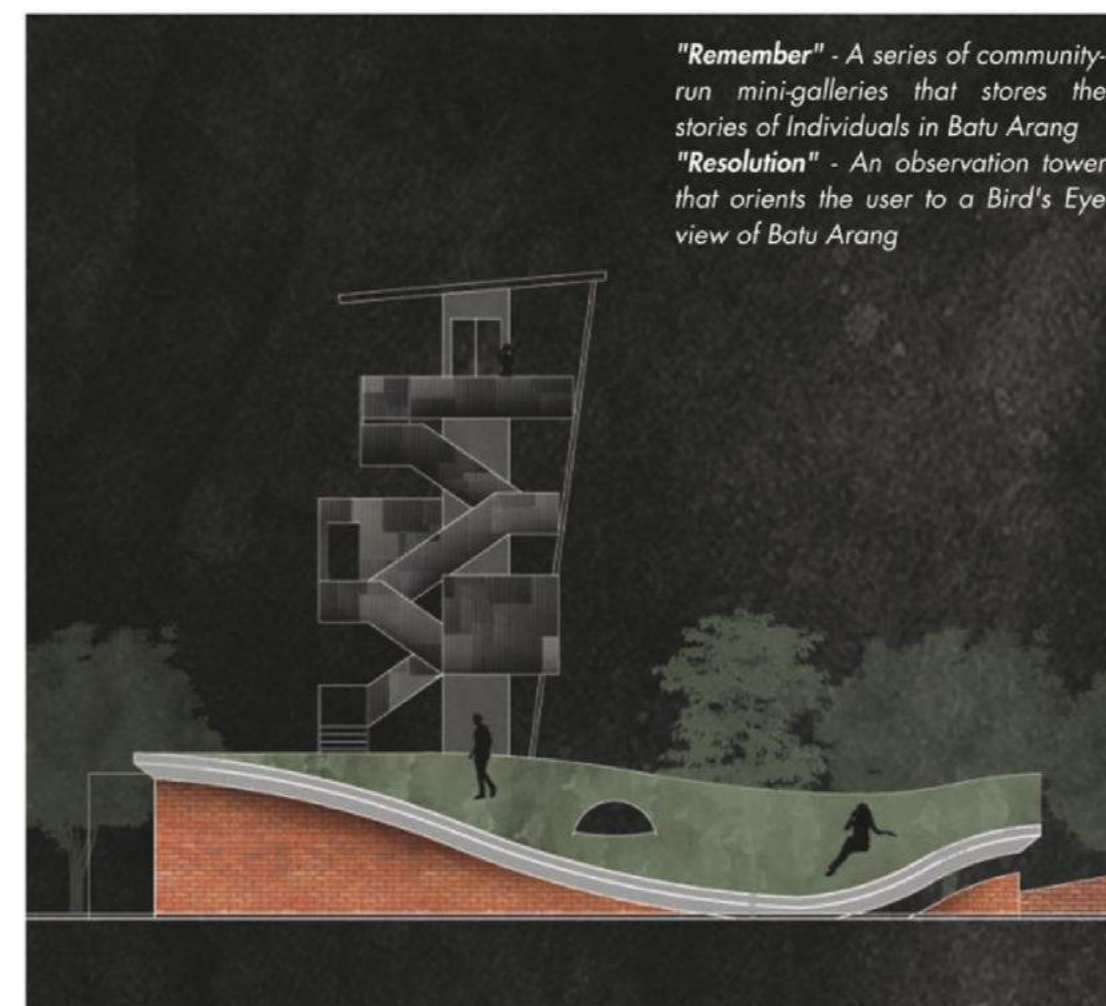
"Fear" - museum space that evokes the emotion of fear

"Bewildered" - A fabric maze where visitors have to physically fight through the layers of fabric.

"Relief" - A large museum space with openings allowing light to enter

"Contemplation" - A hidden space that acts as a plot twist to the journey

"Commemorate" - The journey then leads the visitors to appreciate the large opening in the ground of the Air Shaft Building.



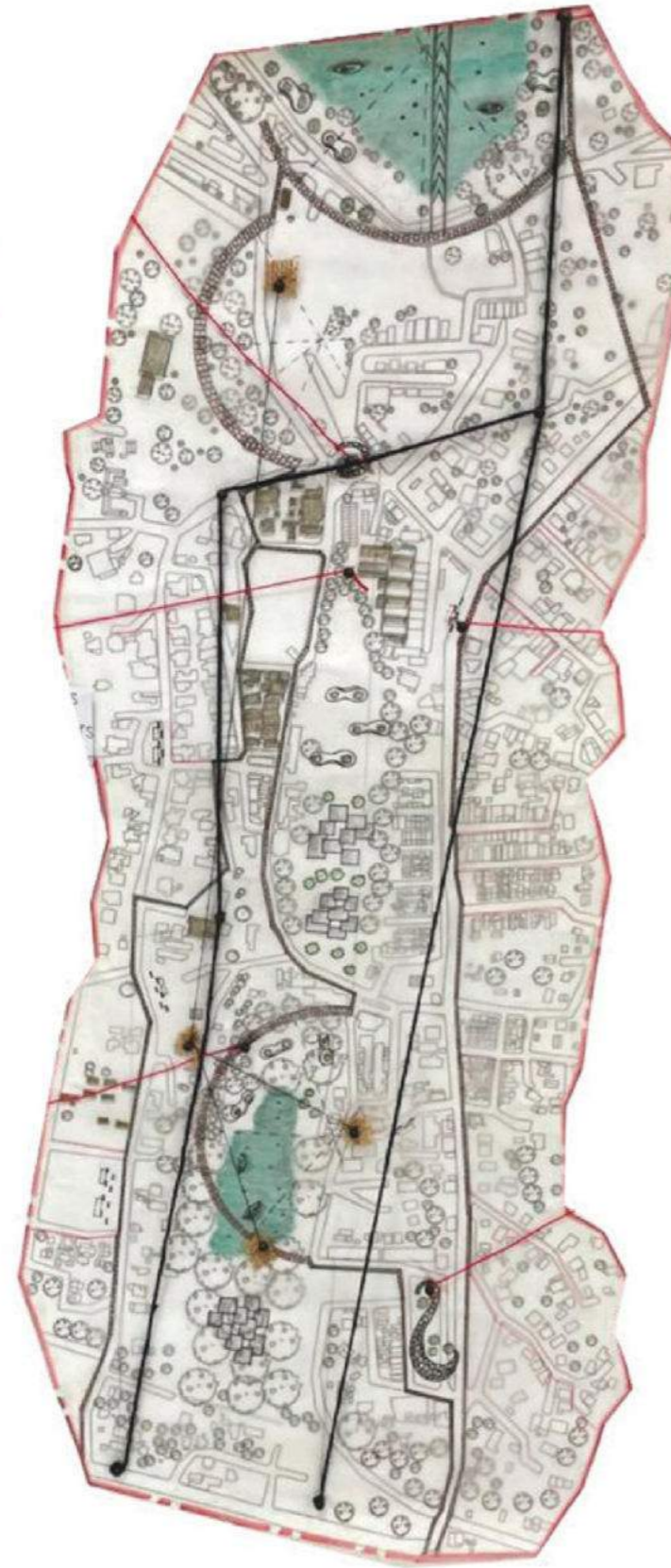
Research Hub w/ open event space at Ground Floor



Existing Police Station repurposed as community hub

Heritage Walk

The heritage walk signifies the interventions that enable users to be able to walk from one heritage site to another in order to allow users to connect to the past of Batu Arang.



The urban strategy map shows a pathway that connects one site to another centering to the sports club which is the main site showcasing a museum and a community hub.

In each intersection on the map, an intervention is developed to allow a pedestrian friendly environment.

The black thread represents the entrances to the mining tunnels while the red thread represents the each of the urban interventions.

These interventions bring communities together and allow users to feel safe in the main town creating an impact of each area in the town.



Urban Seating



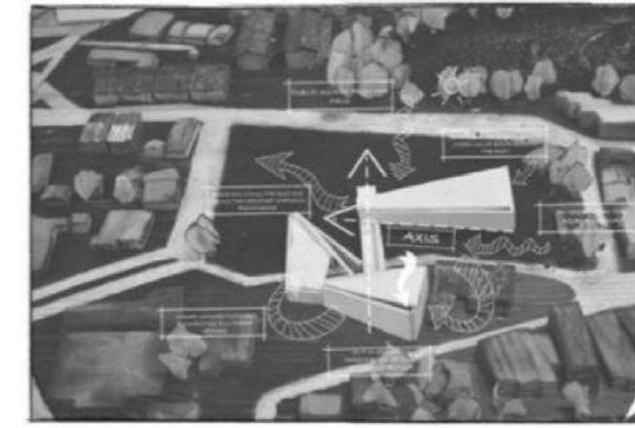
Brick Pavilion



Brick Pathway



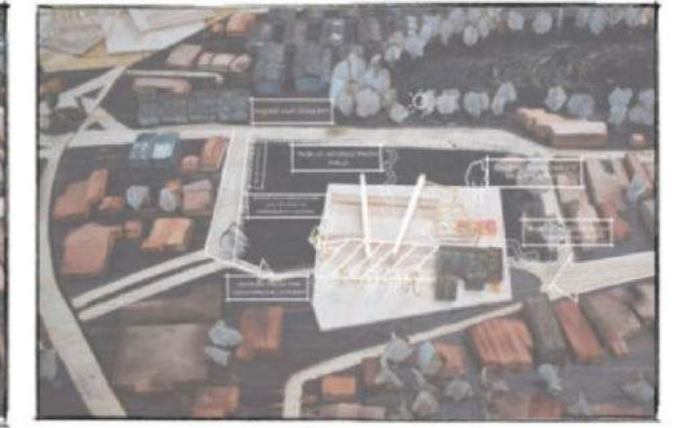
Observation Tower



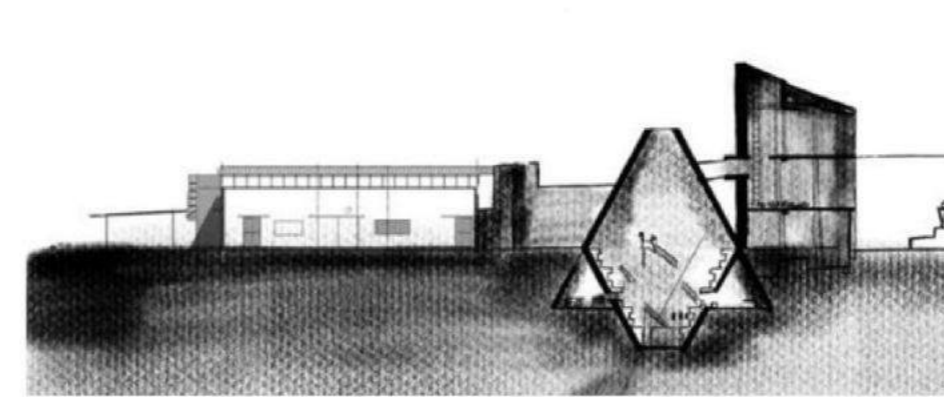
Building Strategy 1



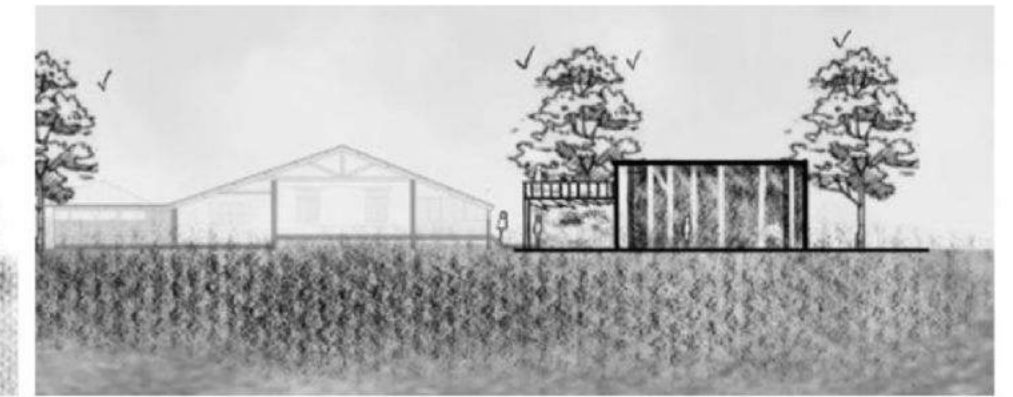
Building Strategy 2



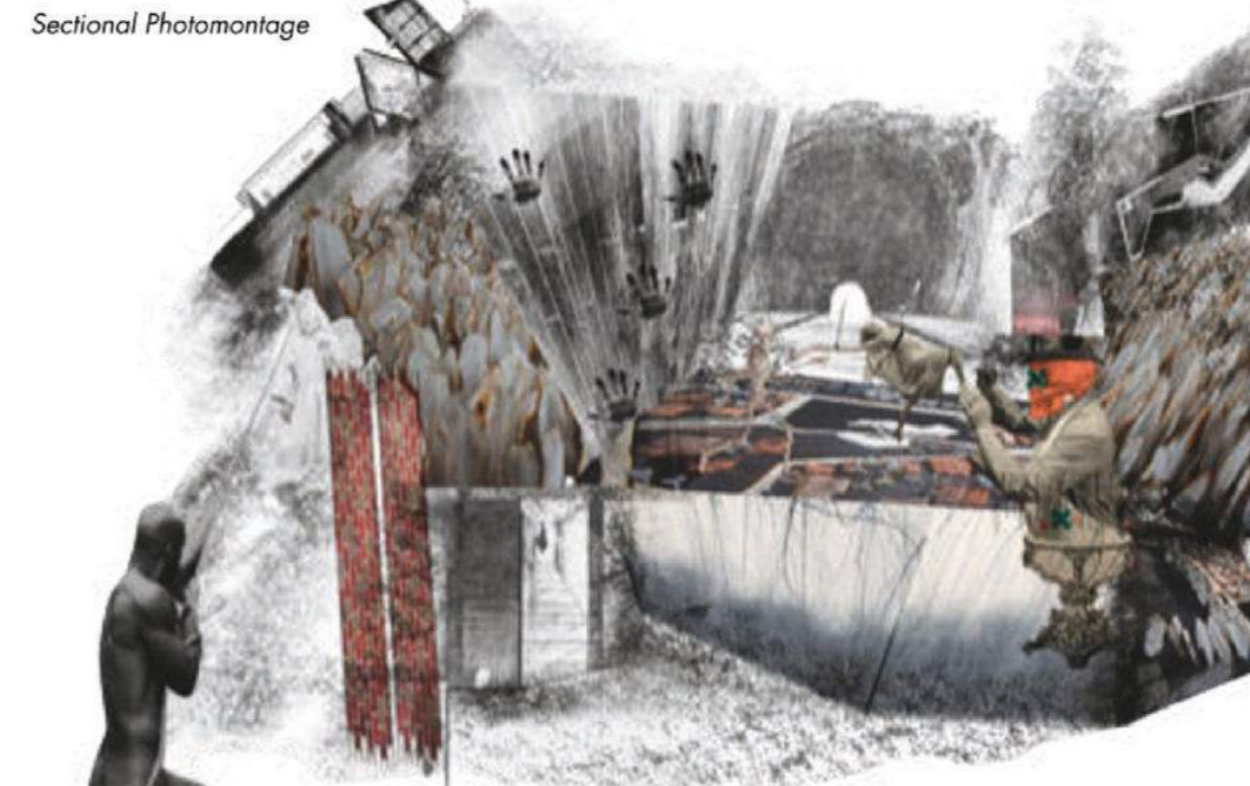
Building Strategy 3



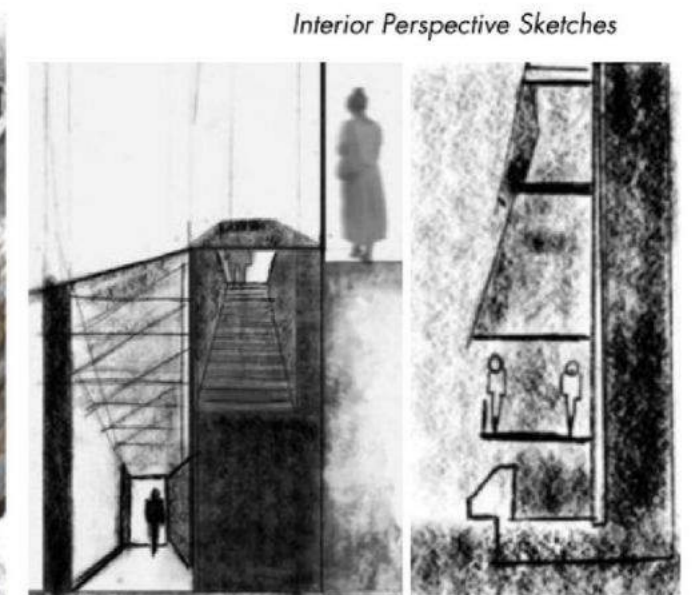
Section Sketch 1



Section Sketch 2



Sectional Photomontage



Interior Perspective Sketches

Life, Death and the Thing Between Life and Death



Gallery



Stills of Light

The proposal is designed to give back to the community of Batu Arang and allow users to experience past scenes. The design has three discrete spaces. Life, Death and the thing between life and death.

The spaces are designed to create some sort of jagged and labyrinth effect to create a feeling of uneven sharply edges and feeling lost to define the concept of uneven mining tunnels in the past.



Brick Texture



Narrow Spaces



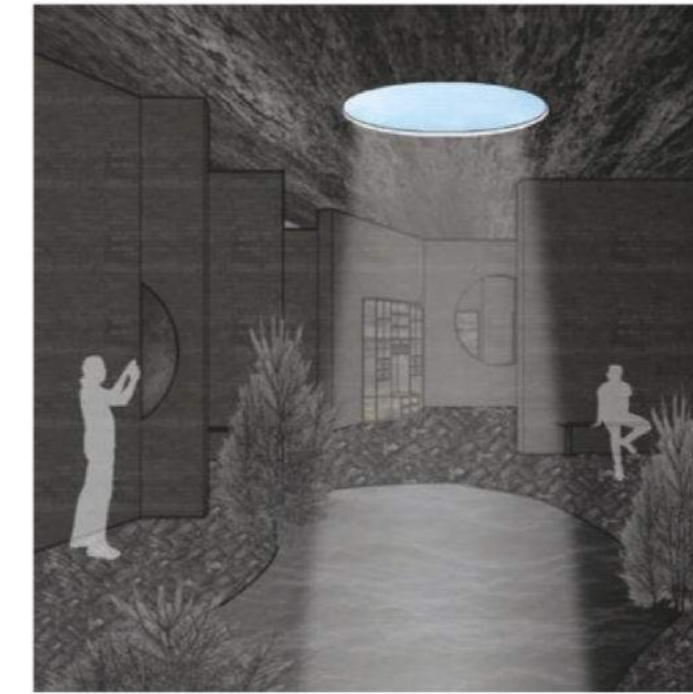
Perspective of the Community Hub

Proposal of Spaces

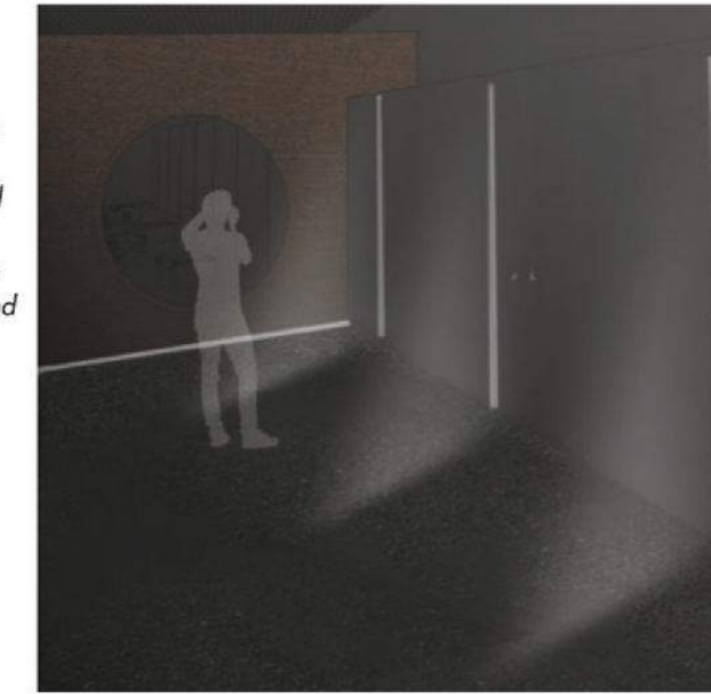
Life: The life is the community hub. Shows life of people in Batu Arang.

Death: The death is the open space at the end of the journey. Death is symbolized as 'peace' and connecting to heaven.

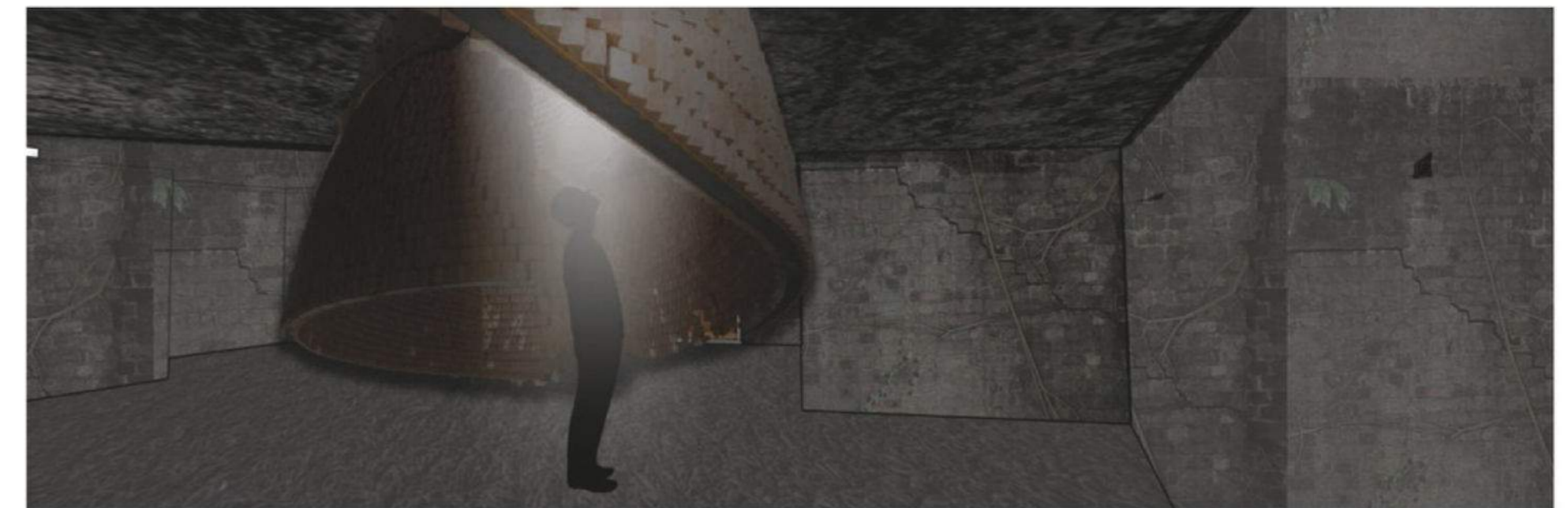
The Thing Between Life and Death: This space is the gallery. Labyrinth architecture is used to create a space of feeling lost'.



The architectural render showcases a captivating open courtyard at the end of the labyrinth gallery, designed to provide a serene and inviting space allowing users to connect to the sky symbolizing "PEACE" which represents death.



The architectural render portrays a visually striking and thought-provoking image of the interior of a cafe, combining the innovative design of the building with the allure of a carefully crafted slit of light.



Interior Perspective of A Suspended Brick Pavilion

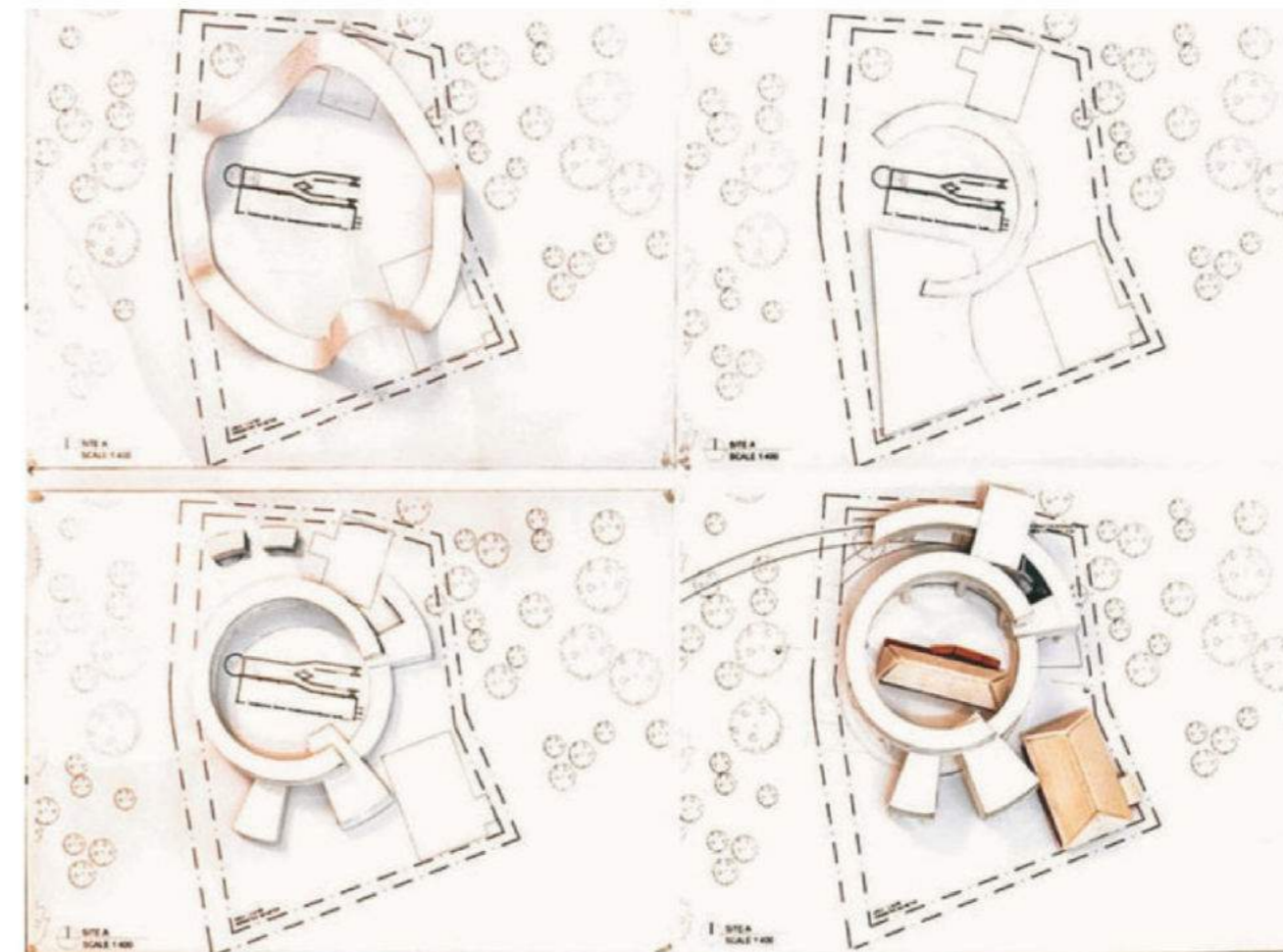
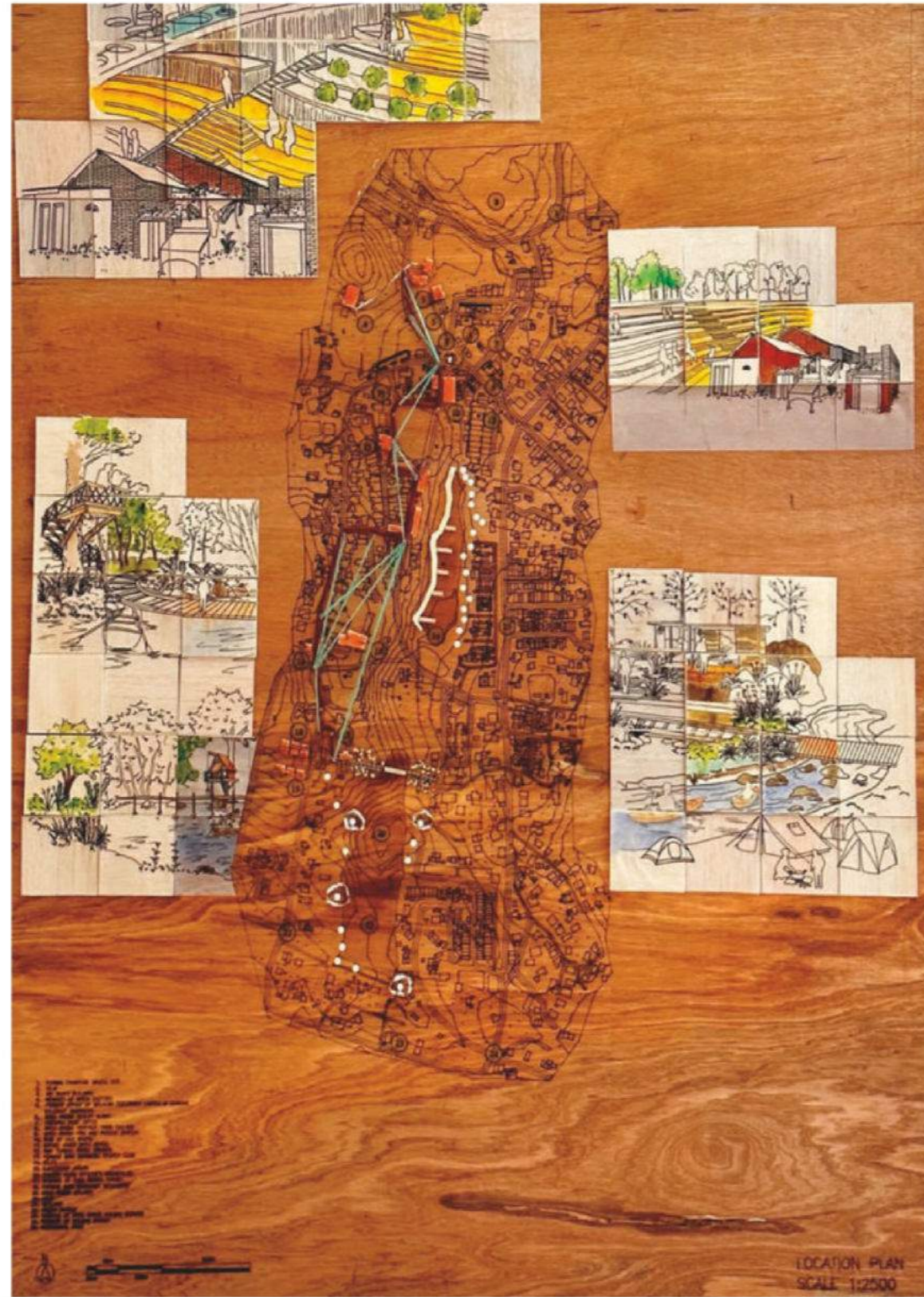
Historical Trail

Historical Trail that separates the past and present of the Batu Arang, where left is the past and the right is the present. Both sides create the historical elements that full with stories of the past and present.

The trail created is a historical trail surrounded around the historical building and view them as artifacts.

Each of the locations of the buildings being marked and those buildings were separated by district, the industrial district, commercial district, residential district and accommodation district.

Some of the points throughout the whole journey own its attractive value which is they are the nodes to the site. People will gather there and this characteristic brings benefit to the place where one can make use of the value to develop the strategies for the whole town.



Site A was chosen as it has more opportunities to blend the manmade with nature due to the forest in front of the air-shaft and behind of the air-shaft opposite from the main road.

OPTION A: A ring landscape surrounded the air-shaft with different levels to create different leveling perspectives for visitor to view the air-shaft as artifact.

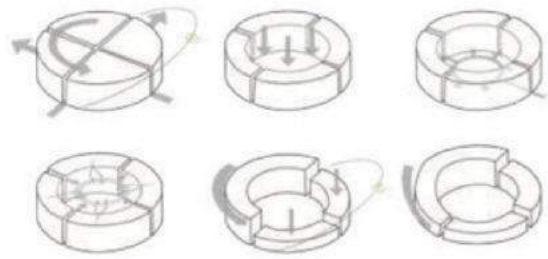
OPTION B: The land used to hold the air-shaft was dugged down to create landscape steps surrounding the air-shaft, providing not only the 360 degree of views of air-shaft at the same time provide spaces for outdoor activities such as jogging.

OPTION C: An elevated ring structure was implemented into the site, surrounded the air-shaft, to create the view from higher level. A pathway was created to pass through the building on the left of the air-shaft and the whole journey will end at the point where people come out from the covered pathway.

OPTION D: An elevated ring structure was created with a few of spaces protruding out from the ring to provide pathway surrounded the building artifact at the same time provide few activities when they travel through the ring pathway. An elevated pathway passes through the left building of the air-shaft to connect the pathway to the brick factory on the other side of the road.

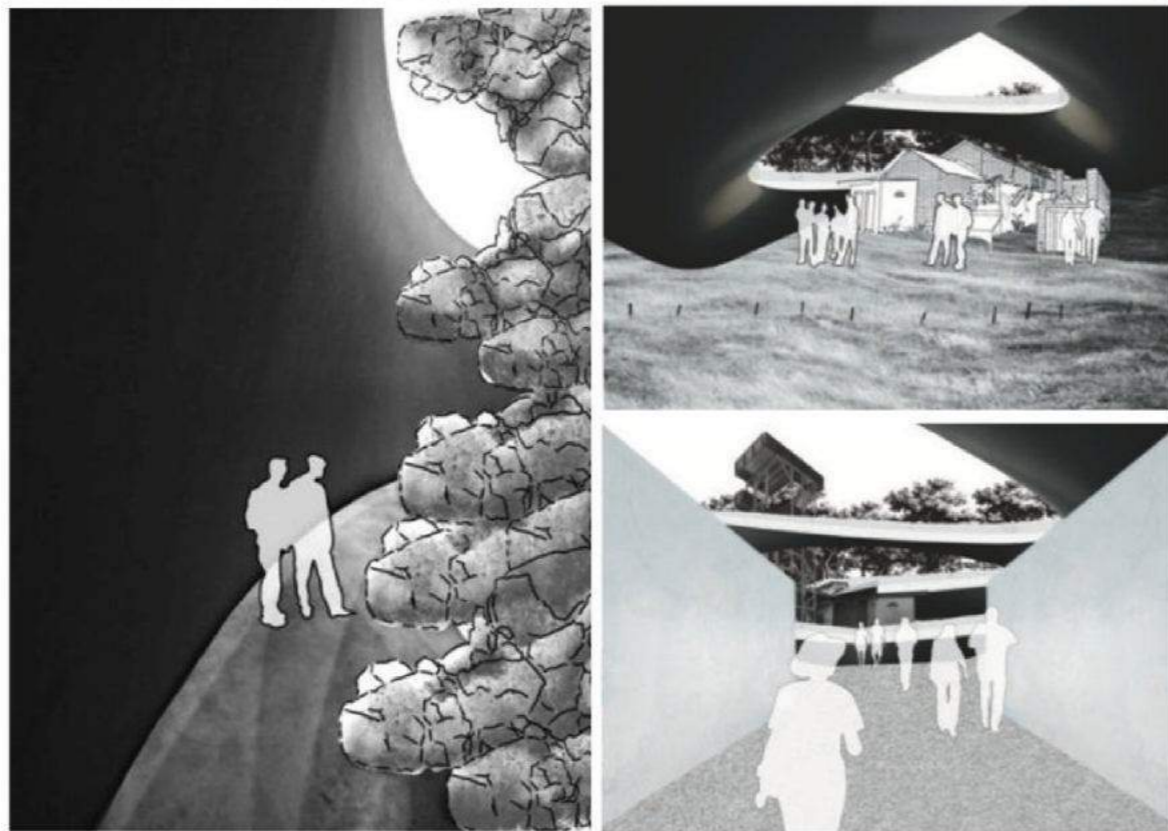
Blend

The ring architecture being used as the main idea of the whole design as this is a way to create the historical building as an artifact. People can walk around the building artifact and experience the beauty of it at the same time have a 360 degree of view on the site.

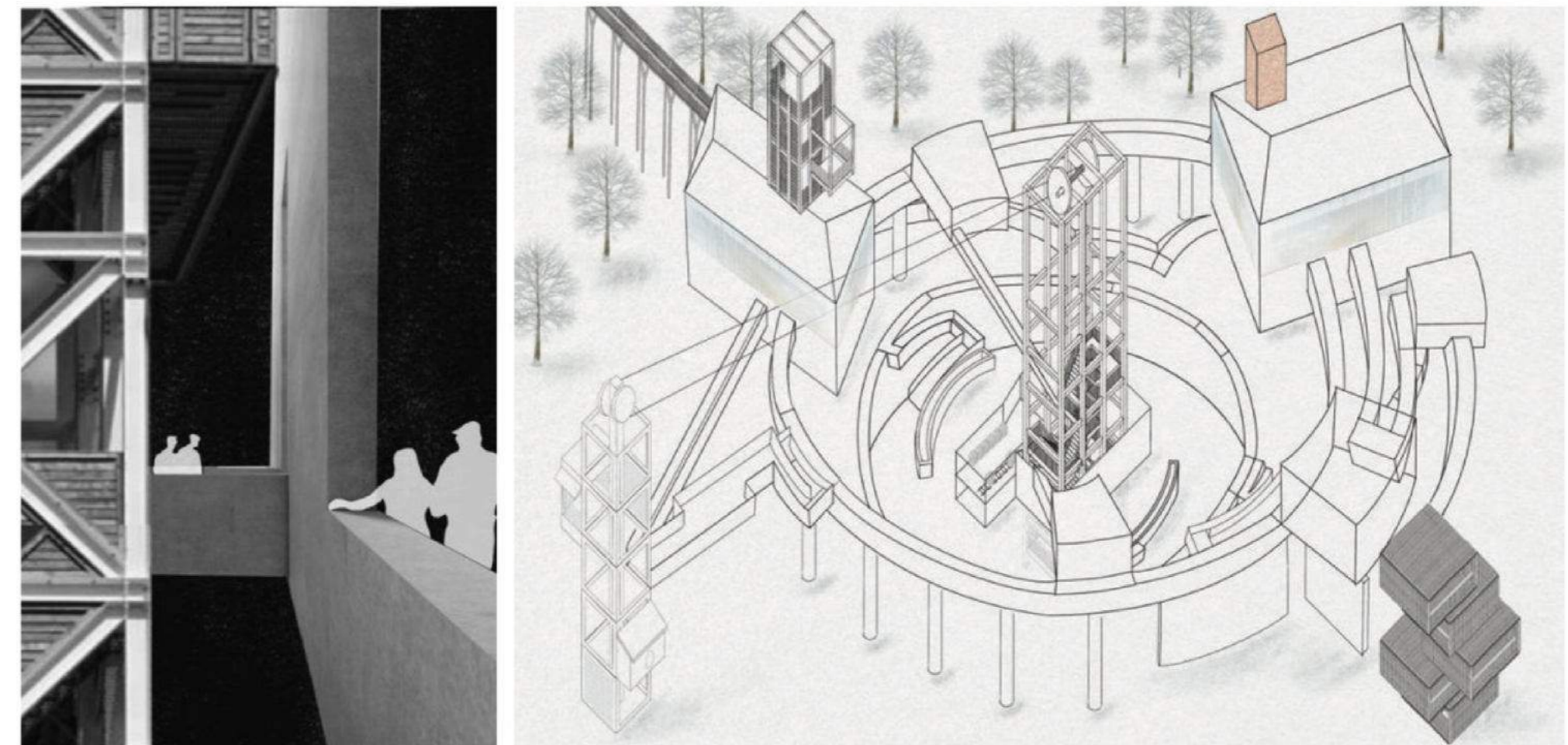
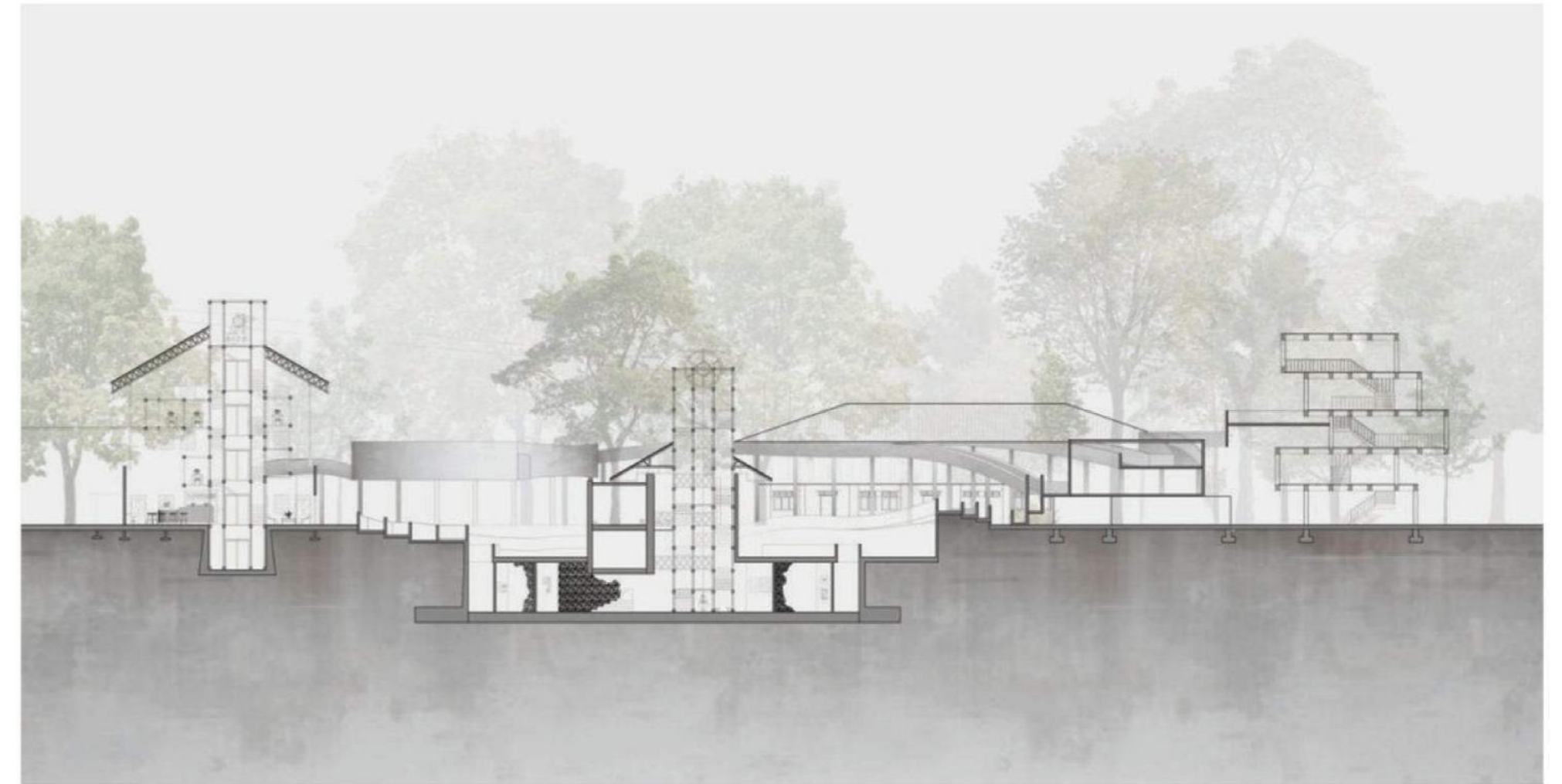


- 1 Clear axis for entrances / exits
- 2 Central plane pushed down, to allow open plaza for artifact
- 3 Circular shape allow intuitive way finding
- 4 Circular shape allows 360 degree of views
- 5 Step down to allow different levels of paths surrounding the plaza
- 6 Slope down to create ramp

Museum is the main space in the building. However, it is not an ordinary museum just displaying the arts, it is a living museum for visitors to experience the coal: the different temperatures between underground coal mining and on surface coal mining, the mechanism work of the coal mining tunnel and the crane tower, the sequences of the work at the coal mining site, etc.



Besides, after done with the experiential museum, the activities that provide interaction with the nature which is the observation tower for collecting insect samples, provide the visitors the insightful knowledge about the site and the nature elements surrounding the site.



Rejuvenating

"I don't believe architecture has to speak too much. It should remain silent and let nature in the guise of sunlight and wind."

— Tadao Ando

Batu Arang was once a happening town with people coming all over the world to obtain the inconspicuous yet a very useful and powerful material - Coal. Human, after digging out what us needed, the town was abandoned without hesitation, leaving a scarred land behind.

The land has been generous and is still providing us so much more without any demand. Our greed and selfishness have brought upon destruction and disaster to not only Batu Arang, but also the world. It is our turn to give back what we have taken before it is all too late.

Nature and Human could be, and should be existing in harmony. Either one is less and either one is more. This project aims to create a balance between Nature and Humanity, giving the land a chance to recover, and therefore can continue to provide its abundance to us.

LITHO: LAND/ROCK

EXTENDING & RESURRECTING



Observation Tower
Natural Stone Bench
Ceramic Mining
Underground
Overlaid by Nature
Space within Nature
Nature Playground
Materiality
Understanding Coal

BIO: LIFE

FROM THE RECOVERY



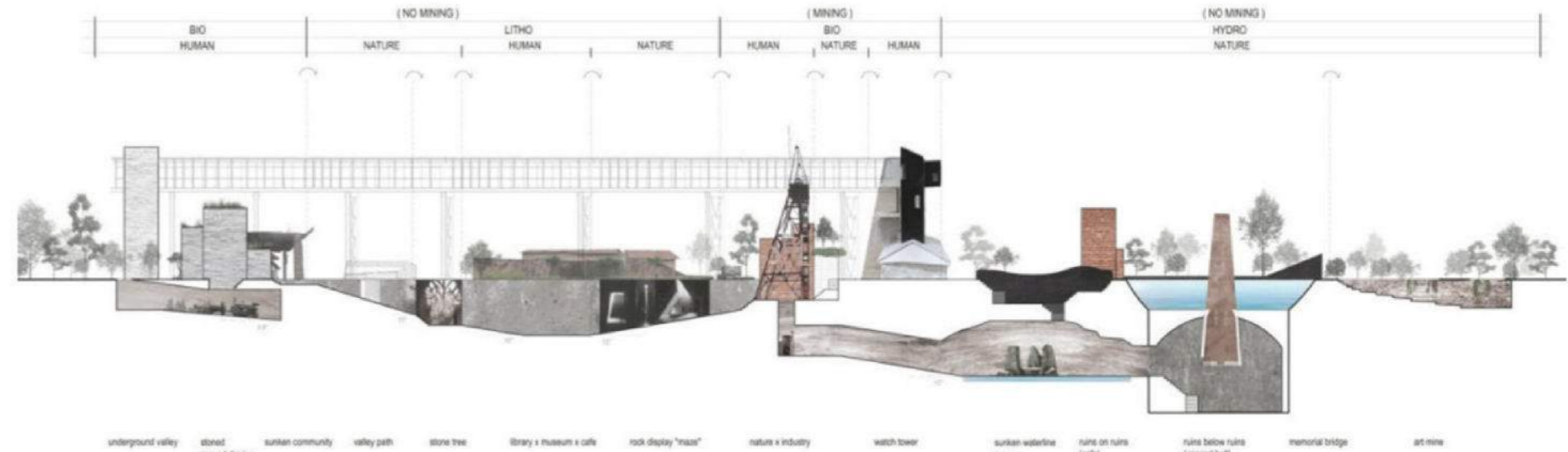
Knowledge
Stories
Architecture Language
Old Shop Lots (R&R)
Cycling
Tailor Shop
Chee Cheong Fish Stall
(B&B)
Residential Housing
Sports (Recreative)
Farmer Settlement
Cows (Orang)

HYDRO: WATER

STAYING AS IT IS



Nature Park
Less is More
No Trees
Contemplate
Water-Related Activities
Strolling
Walking
Calmness
Healing
Sight-seeing
Boat



Historical Places & Mining Region

The sketched-out historical places are the more important sites that I intend to connect. The orangy highlighted spots are the mining regions since the 1910s. Some of them turned into lakes after being abandoned.

Linkage, Connections & Materials

The mine site would become a place for each of the schools nearby so it can serve more purposes other than a historical heritage. The students could use these mine sites for events like cultural festivals, art exhibition, music performance.

Intervention

In parallel with the concept Rejuvenating, the interventions are made from raw materials from the nature but at the same time it serves a lot of functions to the people in Batu Arang



The Buried Gold

"Adaptive reuse is a conversation with the past about the future."

— Brie Hensold

It is not only to save old buildings, but also a way to breathe new life to them. Adaptive reuse projects require more thoughts, wisdom and knowledge than to build a completely new building from scratch.

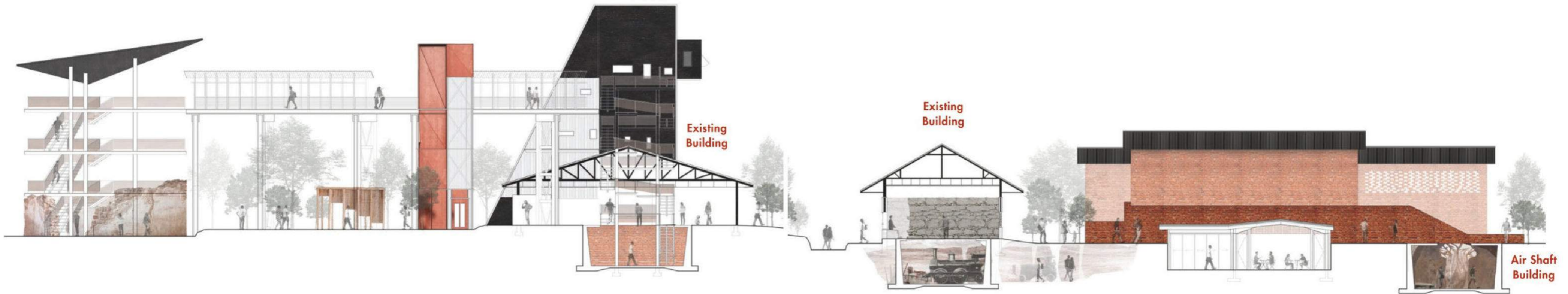
The Buried Gold emphasizes on 2 concepts, Nature and Human Activities. People can experience a journey of walking inside of Nature and at the same time, experiencing Human Activities. They are different yet designed to be tightly integrated with each other in this project.

This concept is being put together while honoring the heritage of the site. Heritage building or site should not merely be a place to visit but also should a place that could continue to contribute to the community in a meaningful way.

The museums are placed throughout the whole building so even if those who come for leisure will consequentially have the opportunity to learn about the history and background of the former mining town — Batu Arang.

The 3 towers in The Buried Gold are connected with a bridge covered with black steel roof, namely, the Reflecting Bridge. It does not only provide access from one tower to the other, but has a deeper purpose to let people

The Buried Gold is a fascinating combination of the journey from the upper to the underground, and from the depths to the surface of the land. Interesting spaces offers the glimpse of the mining period and evoke the feeling of working inside a mine.



Radial Connection

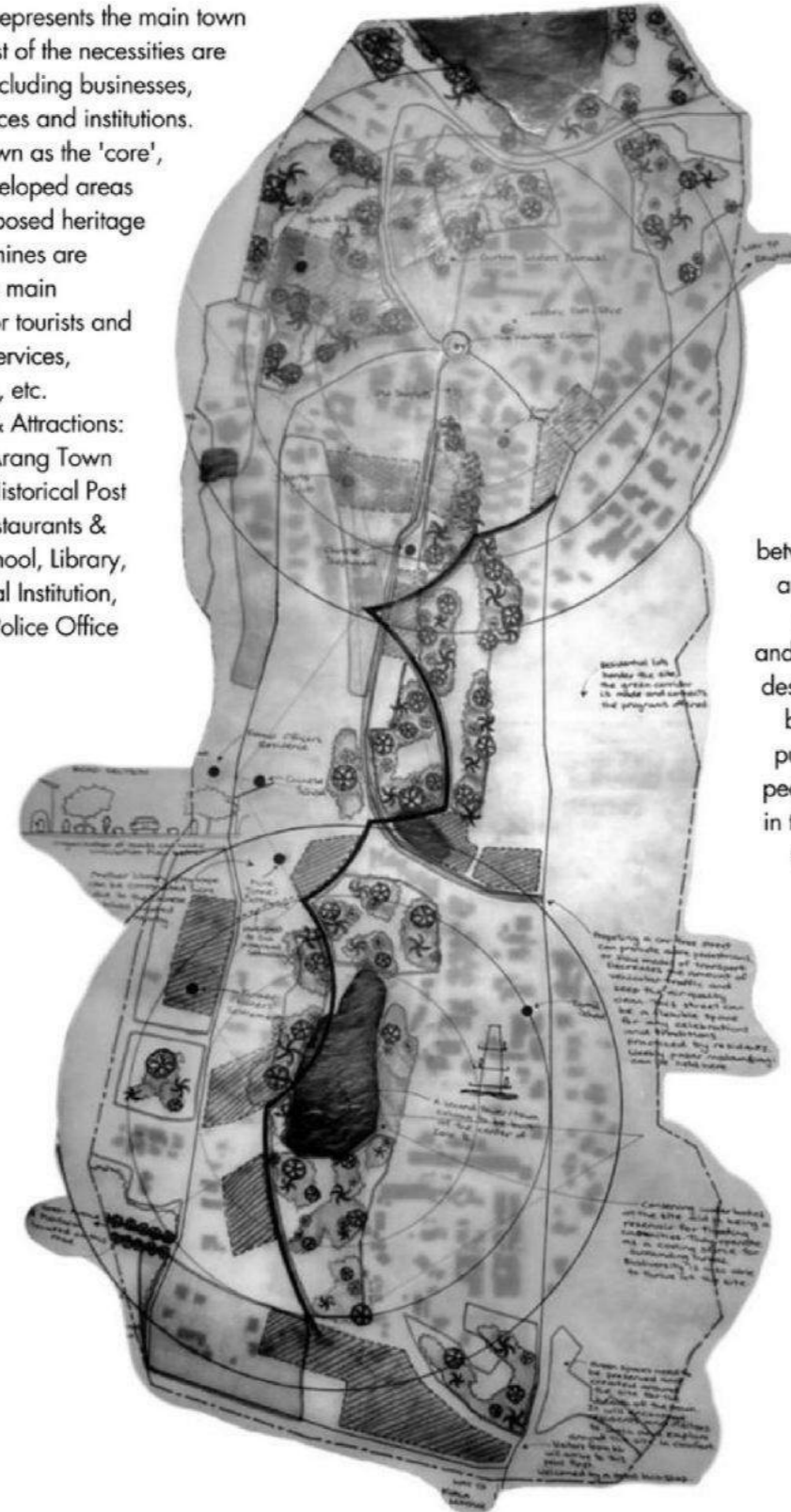
The urban intervention is made of a steel constructed pathway, the form being derived from radial boundaries drawn from key locations on the map. At each intersection is a point of interest for locals and visitors to experience what the site has to offer.

Zone A

This area represents the main town where most of the necessities are located, including businesses, public spaces and institutions. To be known as the 'core', where developed areas and repurposed heritage sites and mines are found. The main attractor for tourists and provides services, residences, etc.

Activities & Attractions:

- Batu Arang Town Column, Historical Post Office, Restaurants & Shops, School, Library, Educational Institution, Hospital, Police Office



Connection

A connection is made between the two zones by a street, also functioning as a commercial zone and a community-centered design. Infrastructure must be developed to ensure public spaces promoting pedestrian habits. Activity in this area brings people together and keeps the street safe and lively.

The first step was identifying the current major sites and buildings which are important connector nodes for the community, and future development hotspots.

The 15-minute city is an urban strategy which helps to make a city more walkable, make amenities more accessible to pedestrians, and connect the residences with the activities offered.

From the red dots, four radial boundaries were drawn (200m, 300m, 400m, 500m). 500 meters is the maximum distance for a comfortable walk.

Finally, the radial boundaries were connected to form one linked intervention, which would be constructed using steel stairs, steps, and platforms.

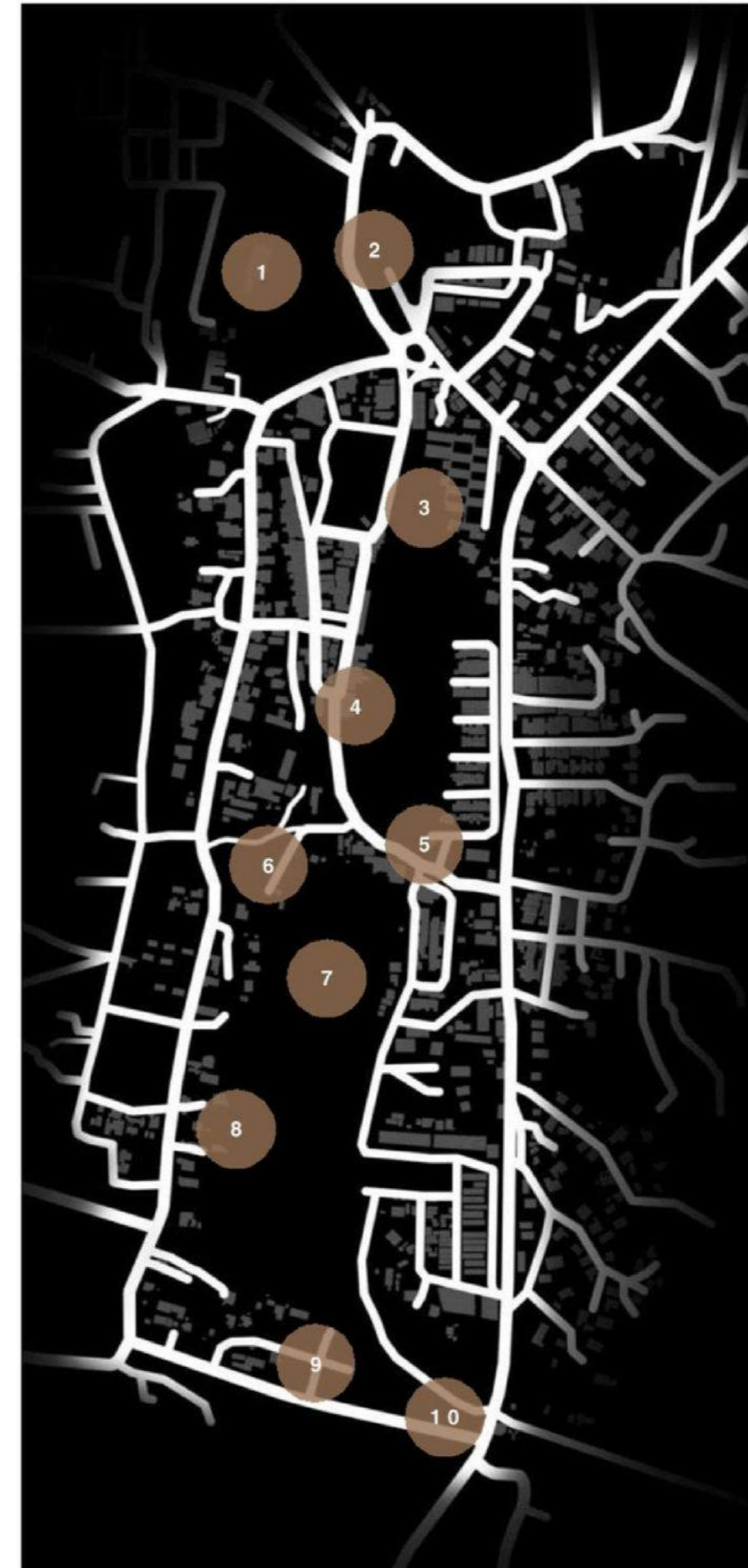
This intervention links the site together, constructed by metal grill platforms and steel construction, along this new street will be the interventions.

Zone B

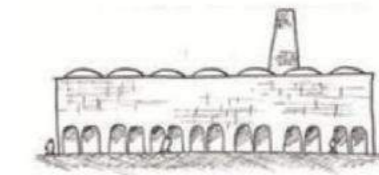
This area represents the second focused area for visitors and locals to inhabit. To make the most of the site area and to spread out programs, this zone is created. Helping to reduce heavy traffic in and around the main town.

Activities & Attractions:

- Accommodation, Residences, Market & Park, Green Spaces, Transportation Hub, Former Mine Tunnel

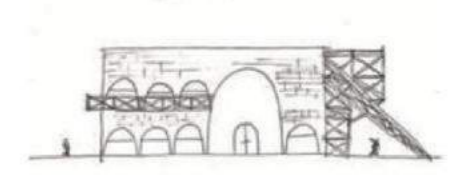


1



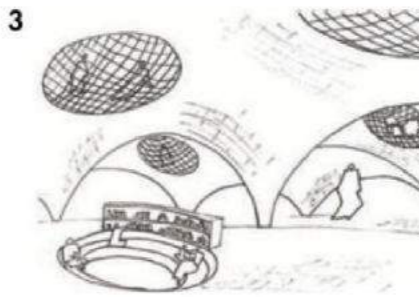
Educational Institution & Offices

2



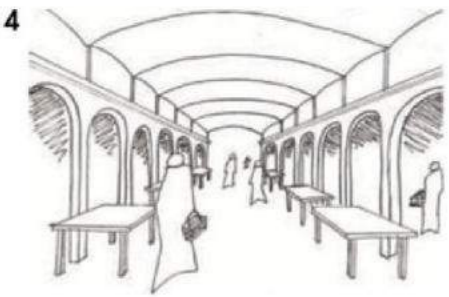
Gallery & Exhibition Space

3



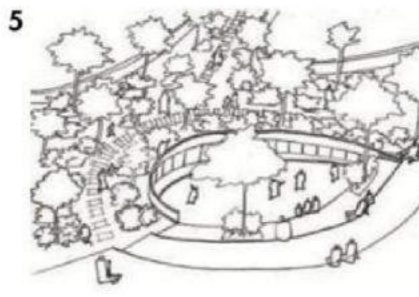
Library & Playscape

4



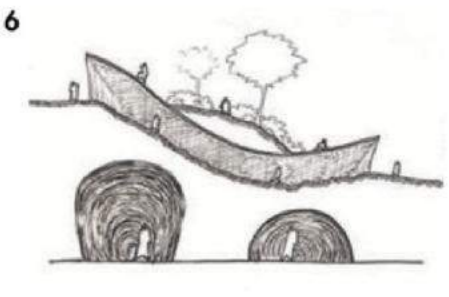
Arts & Crafts Market

5



Community Center & Edible Garden

6



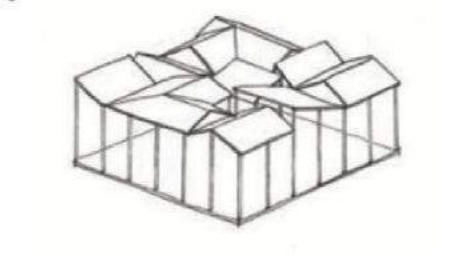
Mine Tunnel Entrance

7



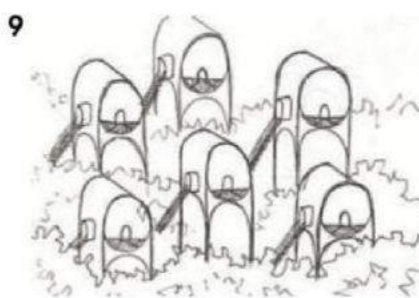
Cendana Plantation & Public Park

8



Wet Market

9



Accommodation

10



Transportation Hub

Air Shaft Community Museum

An adaptive-reuse proposal is made at the Air Shaft Building to benefit the local community and socio-economic conditions of the site. The air shaft building is main attraction, the design will lead the visitors through the air shaft to experience it safely.

The building typology is an institutional building with main programs being a community center and museum with gallery spaces. The goal is to create a building that not only fits in seamlessly while highlighting the air shaft, but attracts more visitors to Batu Arang whilst empowering the local community. The site is located in the Northern area of the site in the main town, making it relatively accessible. The arches reference those found beneath the site in the abandoned coal mines, the arches help breathe new life into the spaces whilst keeping focus on the air shaft building.

The visitors are first lead through a series of arches that link up to the drop off and reception. From there, they can access the basement gallery space or take the tour through the museum and air shaft building. A restaurant, gift shop, market area, and stage are incorporated into the space design to invite visitors to stay after their visit. Locals will be able to use the stage and market area during the course of the day to sell goods, socialize, and set up performances or gatherings. The materials of the newly introduced structures are concrete, glass, corrugated polycarbonate, and steel, all kept to necessary amounts and balancing with existing structures.

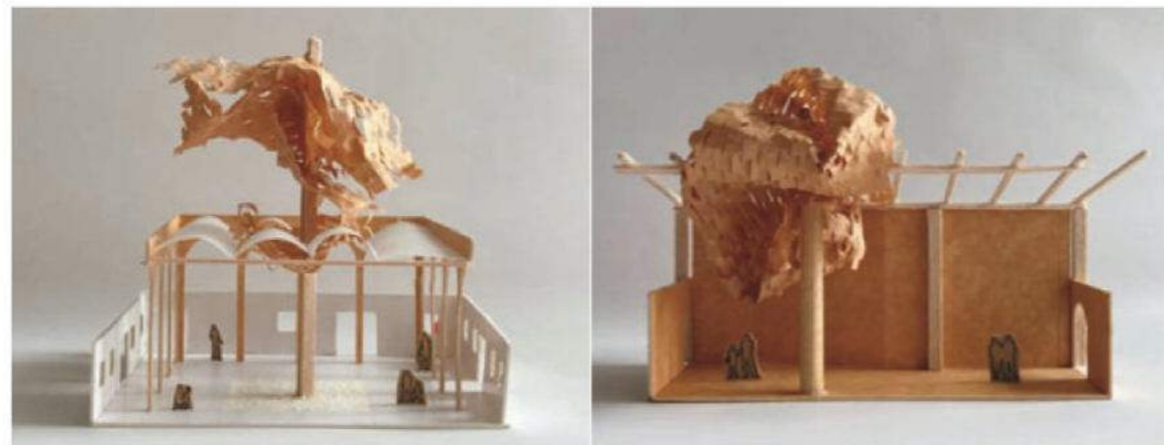


Air Shaft Platform

Air Shaft Ramp



Refurbished Existing Building & Underground Gallery



Arches & Banyan Tree

Air Shaft Building Sunken Garden



Market Space



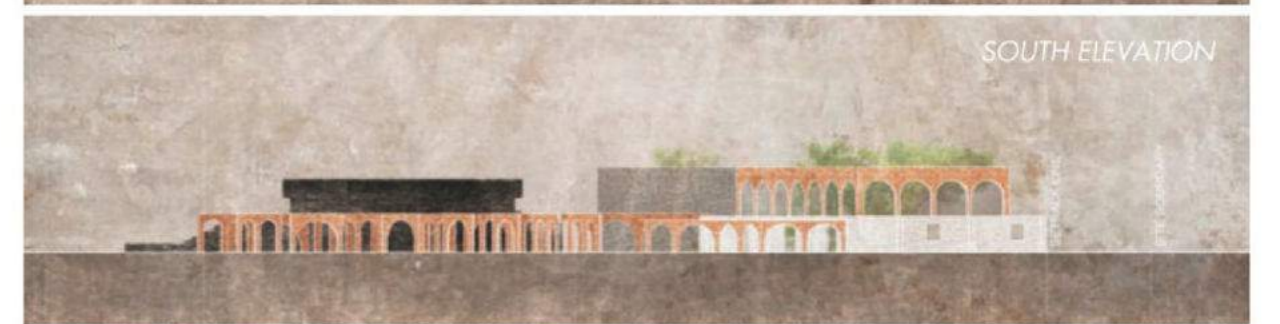
Outdoor Stage & Seating



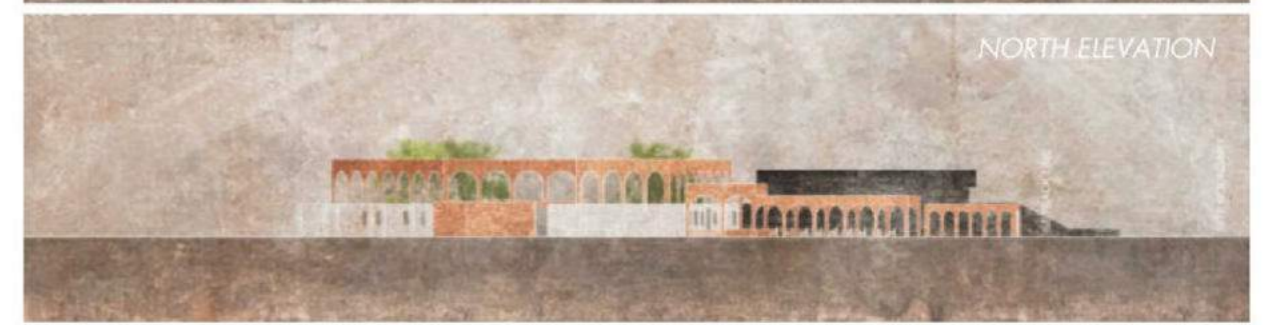
Gallery



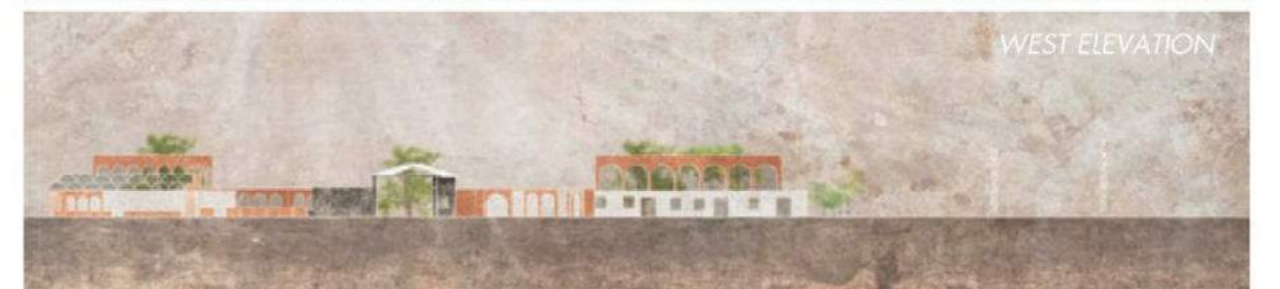
EAST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION



WEST ELEVATION

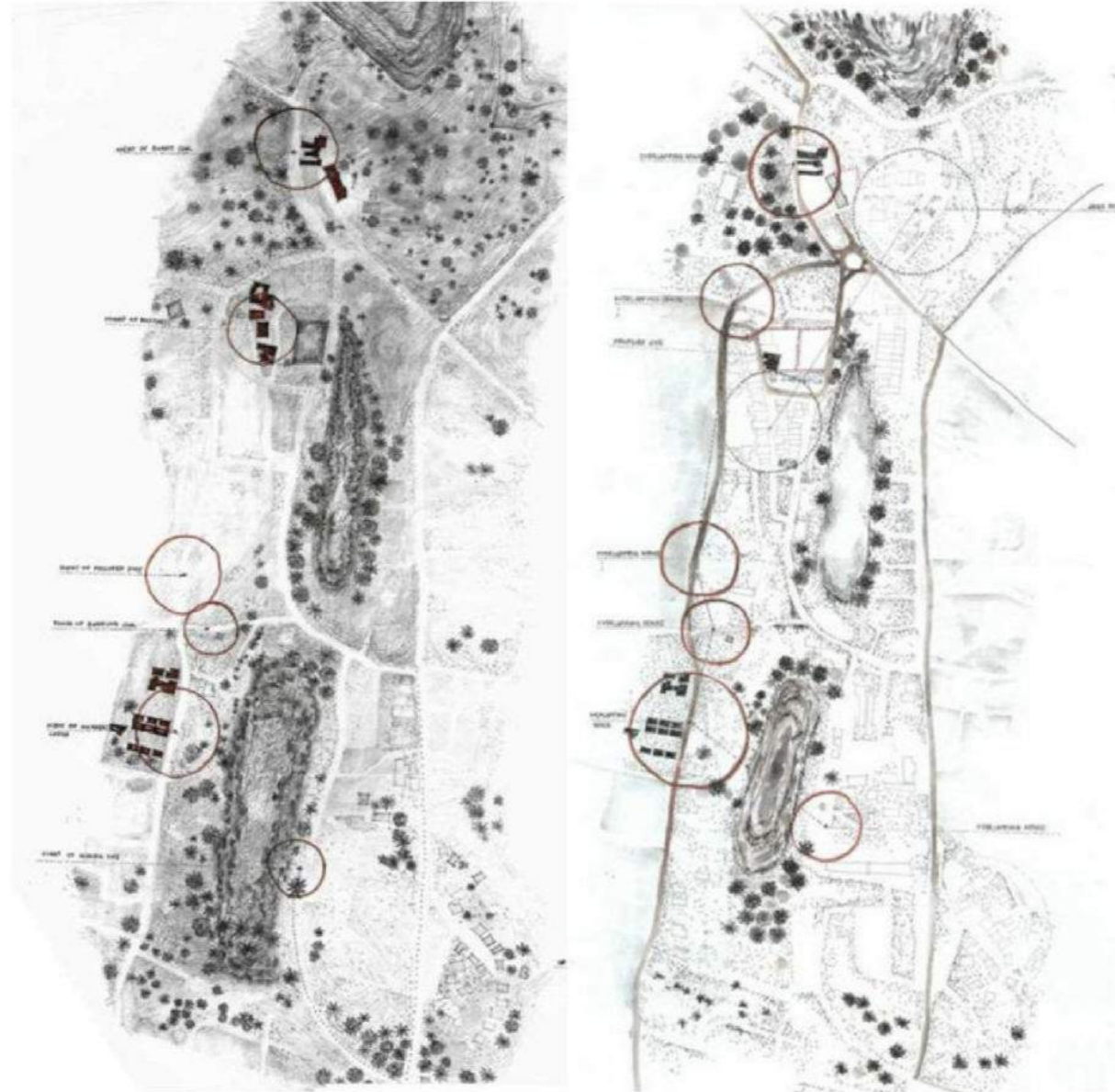
Urban Strategy: Unleashing the Enchantment of Unfamiliar Senses

In formulating my urban strategy, I meticulously documented the intangible senses of the past and present, capturing the essence of the unfolding senses.

Starting from an era entrenched in the 1920s, then, a gateway to the present, descend us into a profound empathy, where we delve into the miner's existence amidst the swirling chaos of senses - the aromatic dance of burning coals, the tainted dust of factories, the musk of their perspiration; the resonant echoes of cries and clamor, the symphony of resounding metal; the searing touch of fiery coal and more, unveiling their journey through sensory realms untold.

In the realm of forgotten intangible senses, where the echoes of the past dissolve into obscurity, a paradoxical tranquility emerges, whispering of dormant memories. Like the former miners' sports club, once a vibrant tapestry of life, it now rests in the gentle embrace of stillness, bearing witness to the enigmatic interplay between the passage of time and the silent echoes of its bygone vivacity.

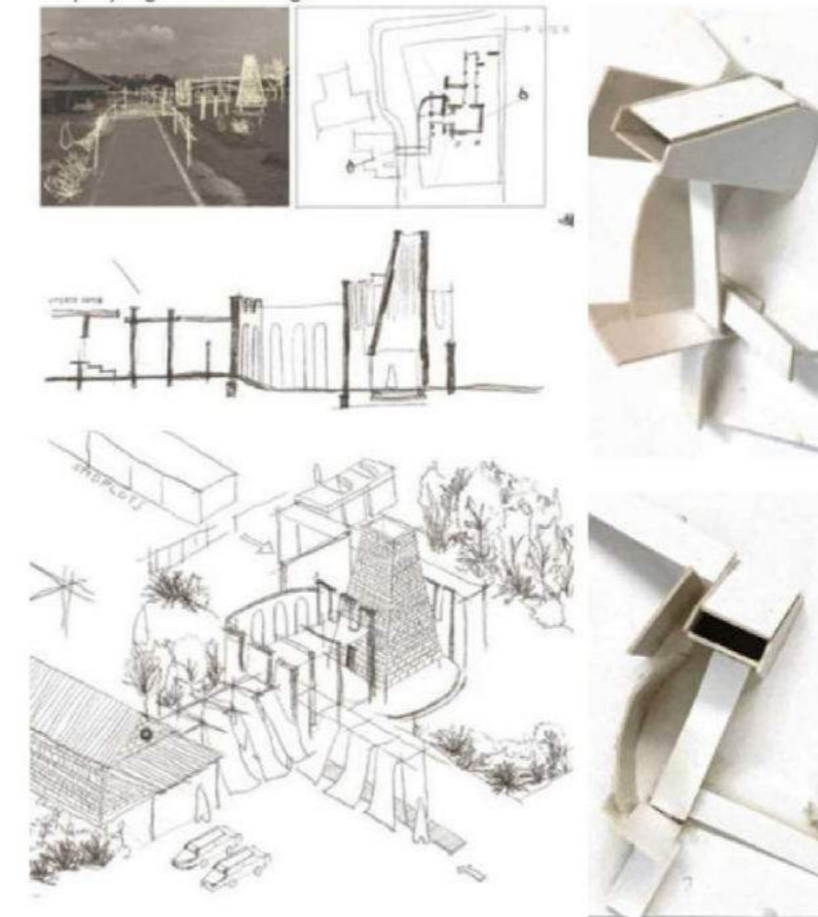
Through meticulous documentation of the multitudinous senses enveloping the site, I embarked to transcend the boundaries of conventional perception, seeking to introduce new senses that resonated with the essence of my Project 1, bridging the realms of the known and the uncharted in a harmonious dance of transformative exploration.



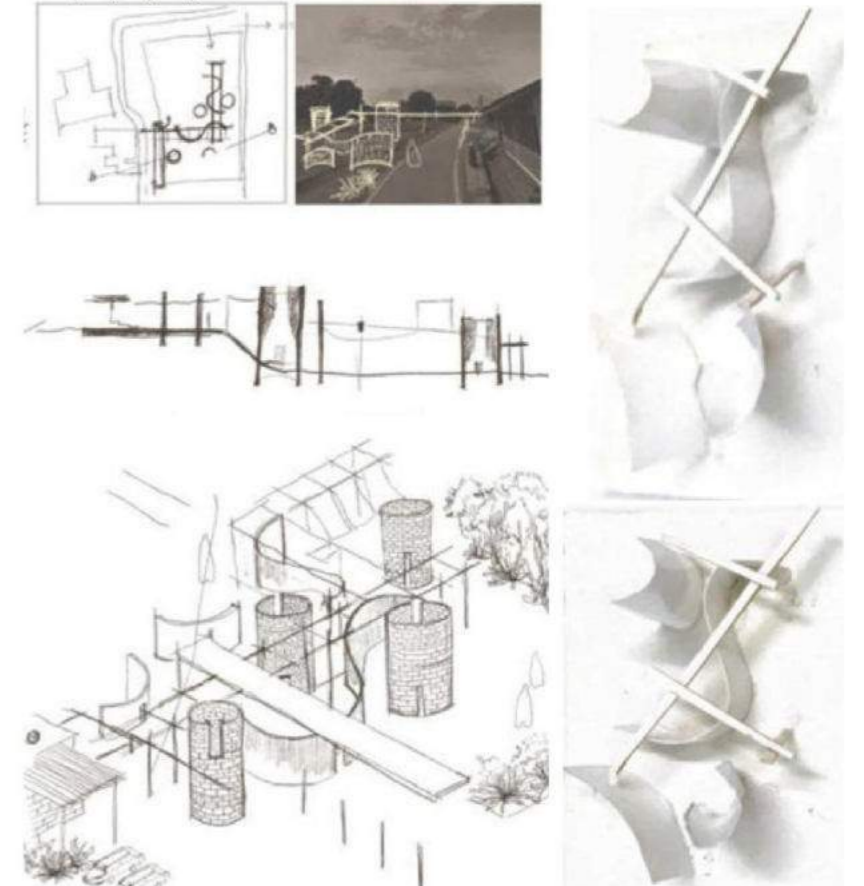
Building Strategy: Exalting the Senses

I embark on an exploration, selecting site B with deliberate intent, a nexus of three pivotal events from the past, it becomes a canvas for my endeavor to delve into the depths of specific senses and enact distinct interventions across its three zonings. This approach encompasses a profound understanding of the interplay between space, time, and perception, as I seek to unravel the intricate tapestry of human experience and foster an environment that resonates with the essence of each unique event, inviting contemplation, reflection, and a transformative engagement with different senses of the site. I embark on unveiling the axis of the main entrances, aligning the paths of arrival with the very essence and purpose of the site.

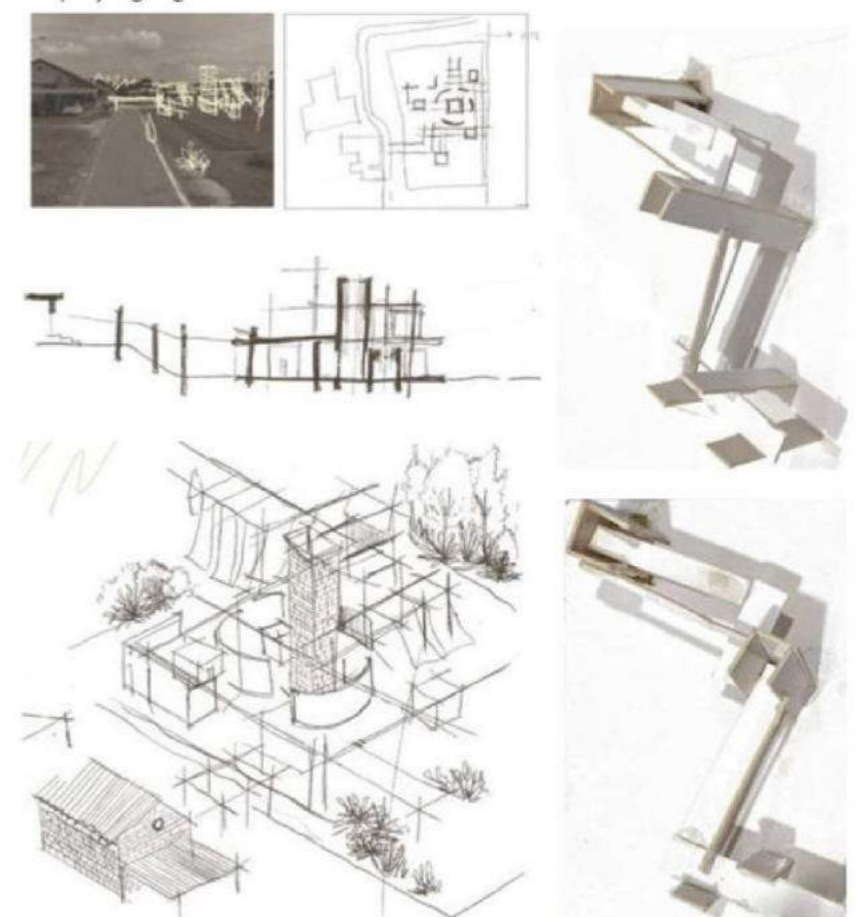
Healing - Remembrance amplifying sound & sight



Stimulative - Psychedelic amplifying sight & touch



Contact - Experience amplifying sight & touch



Grounded

"Stay Grounded" remain rooted, encompasses an embrace of balance urging us to cherish both the inner and outer of the building. By staying connected to the past, we cultivate a profound sense of rootedness, allowing us to appreciate the intertwining narratives of past, present, and future. This grounded perspective enables us to honor the building's internal sanctuary while remaining attuned to the outer space, forging a harmonious relationship between self, space, and the collective tapestry of user's experience.

Within the tapestry of this building, a philosophical purpose emerges: to alleviate the intangible burdens of the past, providing solace and release for the experiences that linger within this hallowed site. It is in recognition of the three significant events that unfolded here surrounding the former miners sports club that the building manifests itself through three distinct zonings, each a vessel for a unique narrative of human existence.

Here, a profound space intertwines with layers of life and time, weaving a delicate thread that connects the present with the echoes of the past. It is a place where emotions and memories awaken, as each spatial realm sets in motion a particular strain of sentiment, unfurling a kaleidoscope of experiences that resonate with those who enter.

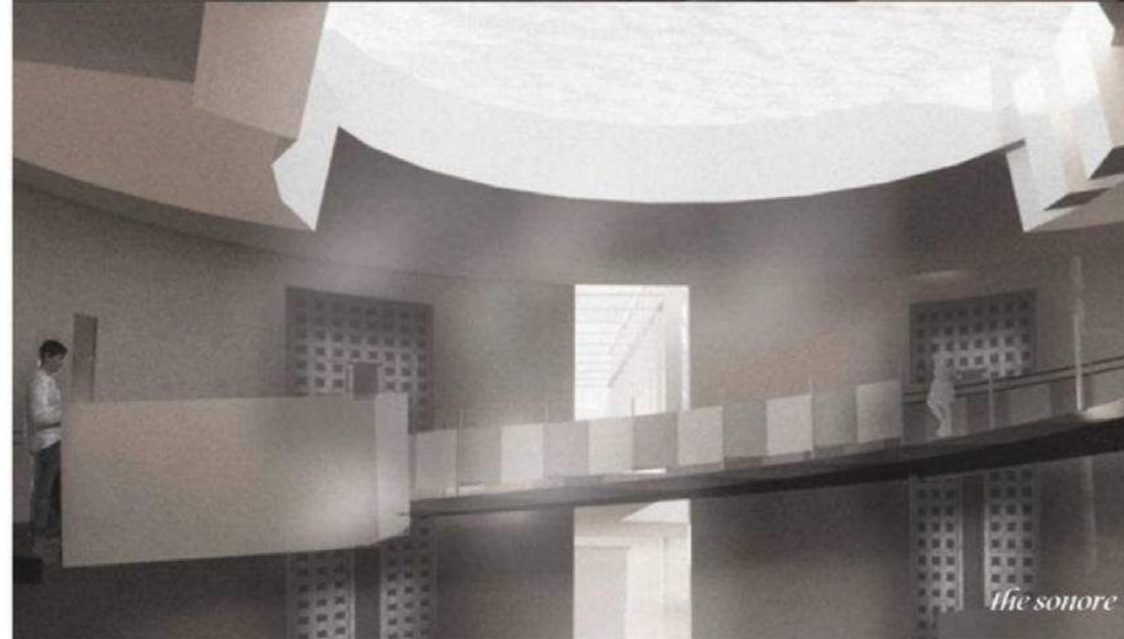
In this space of senses and intercultural, knowledge becomes an ethereal currency. It is a space of profound learning, where the fragments of zonings coalesce to create an immersive environment, evoking a palpable sense of absence. Through this interplay, the building becomes a vessel for unspoken narratives, a sanctuary where visitors can delve into the intricate tapestry of human existence and explore the intermingling realms of perception, memory, and the collective consciousness of those who have treaded upon this sacred ground.



the portals



sanctuary



the sonore



creating a feeling for the things that are absent than about creating a feeling of presence for things that are present; this project is stimulating a feeling for things that are no longer here or for the last context of things that are still here. However, invoking something that would otherwise be inconceivable, it is



Urban Strategy: Tower To Batu Arang



Tower to Gather
Tower to Commemorate



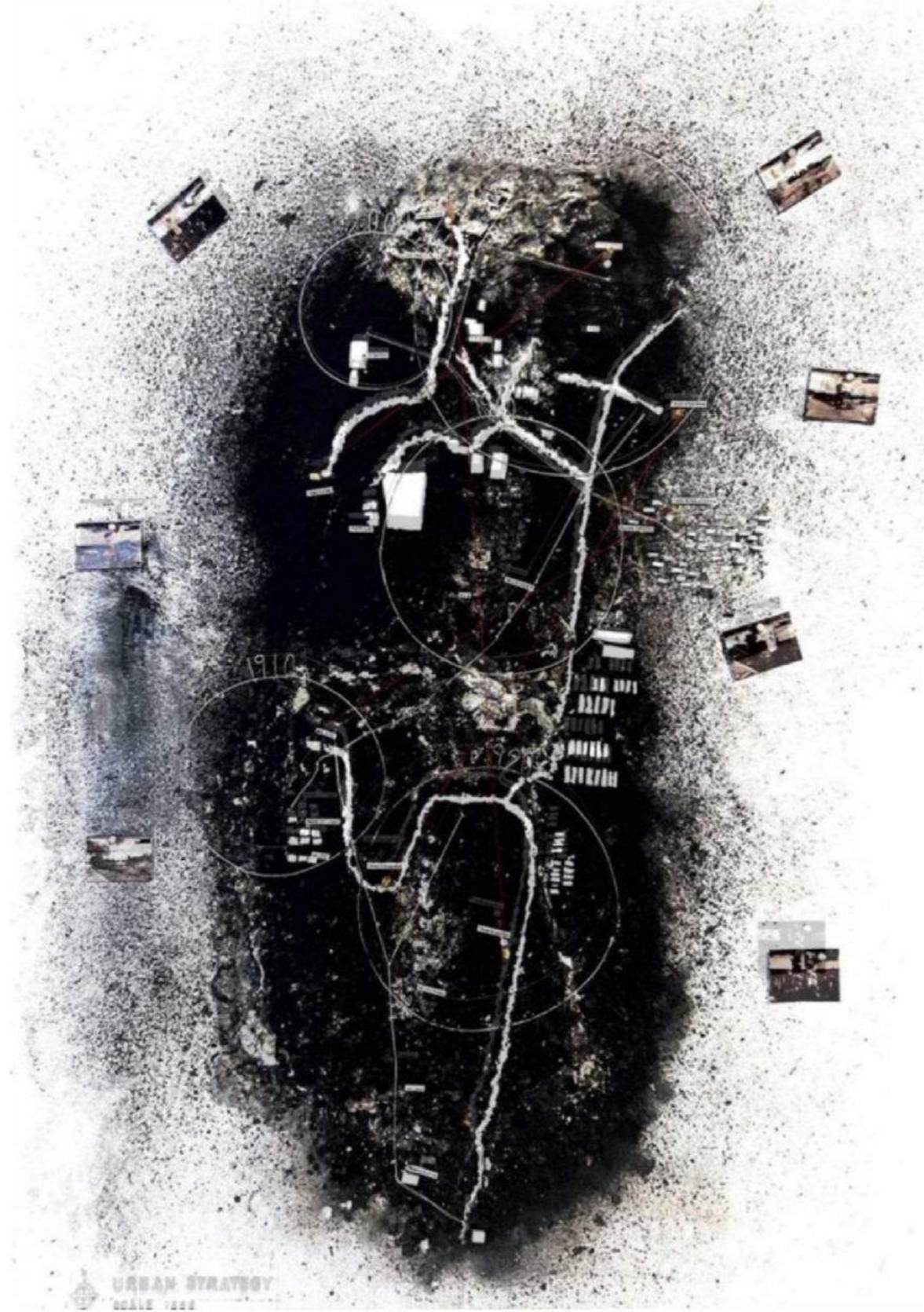
Tower to Rest
Tower to Read



Tower to Dine

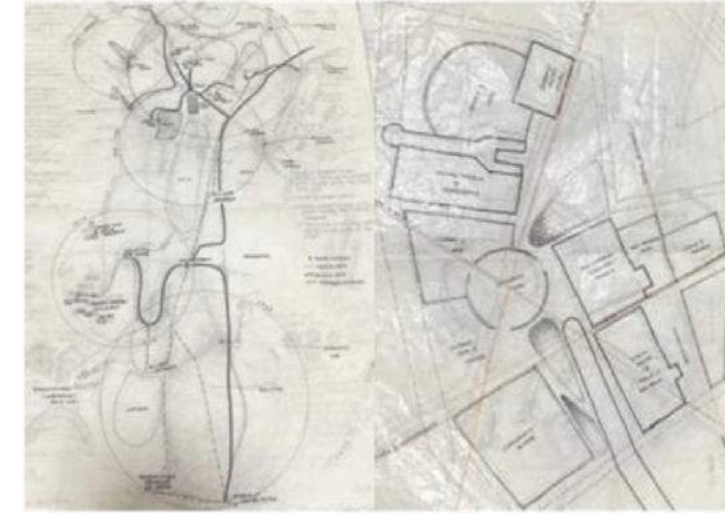


Tower to Remember

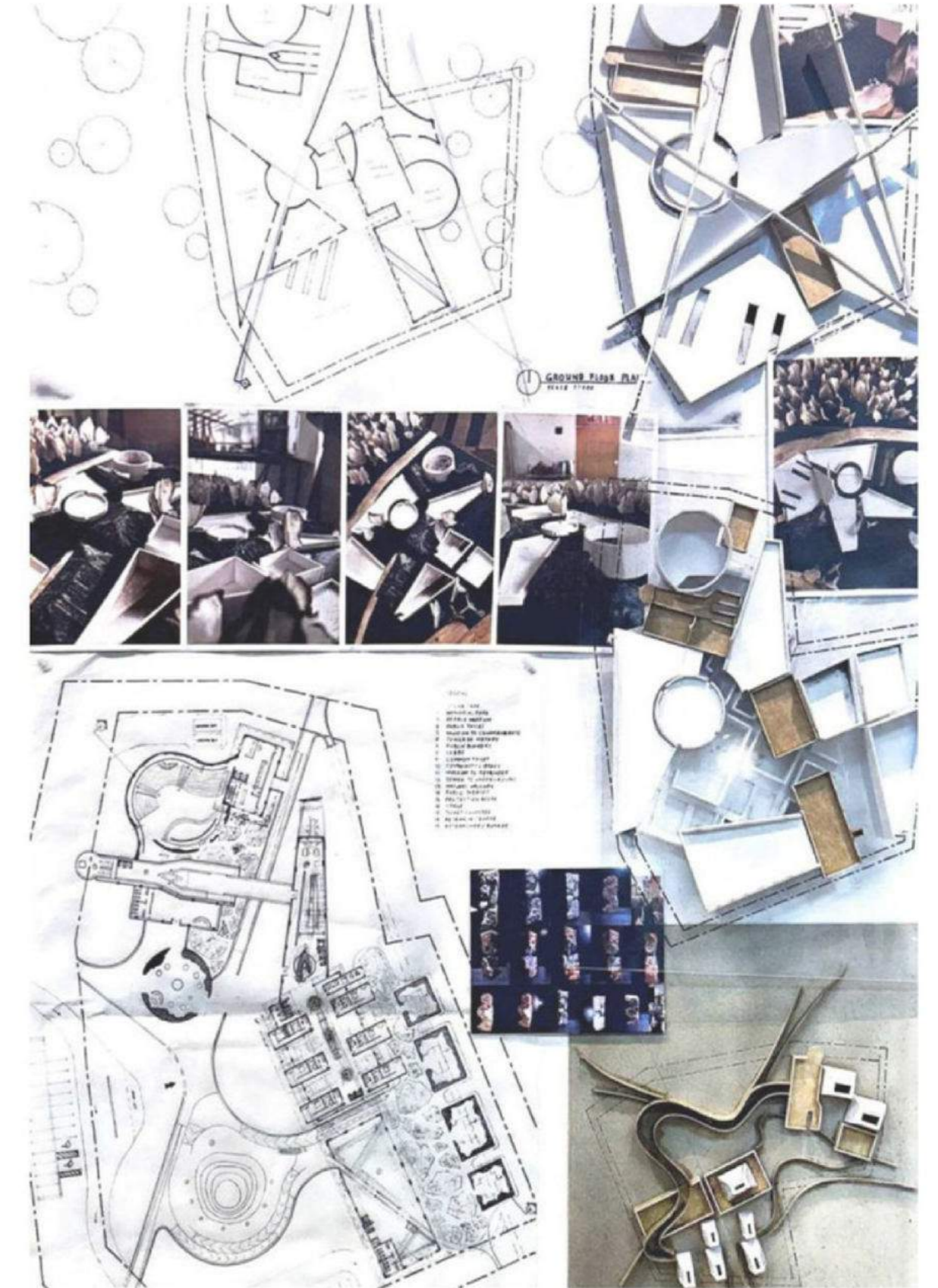
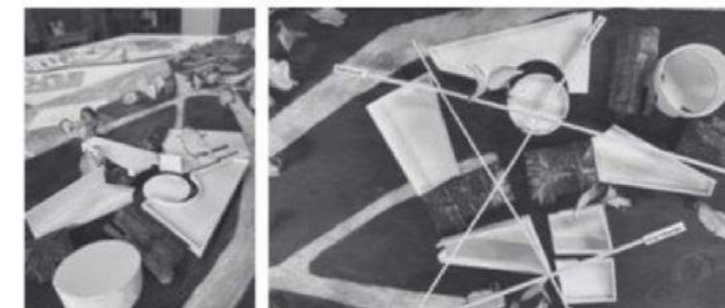
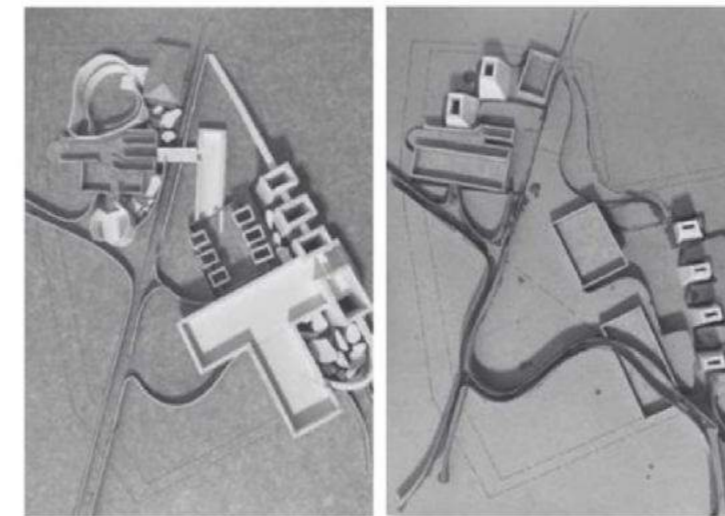


Proposed cycling lane and some **historian's pathway** to guide them through landmarks of Batu Arang like the air shaft, formal residents/ gallery, sport club, etc. Along the path there was a few past observation towers that was demolished by now, reinstall 7 towers in total (Tower to Remember, Rest, Read, Commemorate, Gather, Dine). These towers use raw materials of Batu Arang for adaptive reused purpose and relate to the site. By connecting each tower gives an axis used for space planning further in the second part of the project.

Building Strategy: The 4 Axis



With the 7 towers intersecting, gives a total of 4 axis. By rotating the axis to 25° fits the site well and the midpoint of all axis is the main space of the building which is the community hall (memorial park in Project 3). Each space relates to each axis for space programming.



The building strategy, chosen site (Site A) relates more to the first project (Unforgettable Memories) which most of the story happened to be underground the airshaft also the heart focus of the tower axis is more toward the chosen site. Ideas of different shapes and elements that follows the tower axis slowly developing a different levels and space planning with the programme of museum, community square, research hall, café, raw material workshop and gallery.

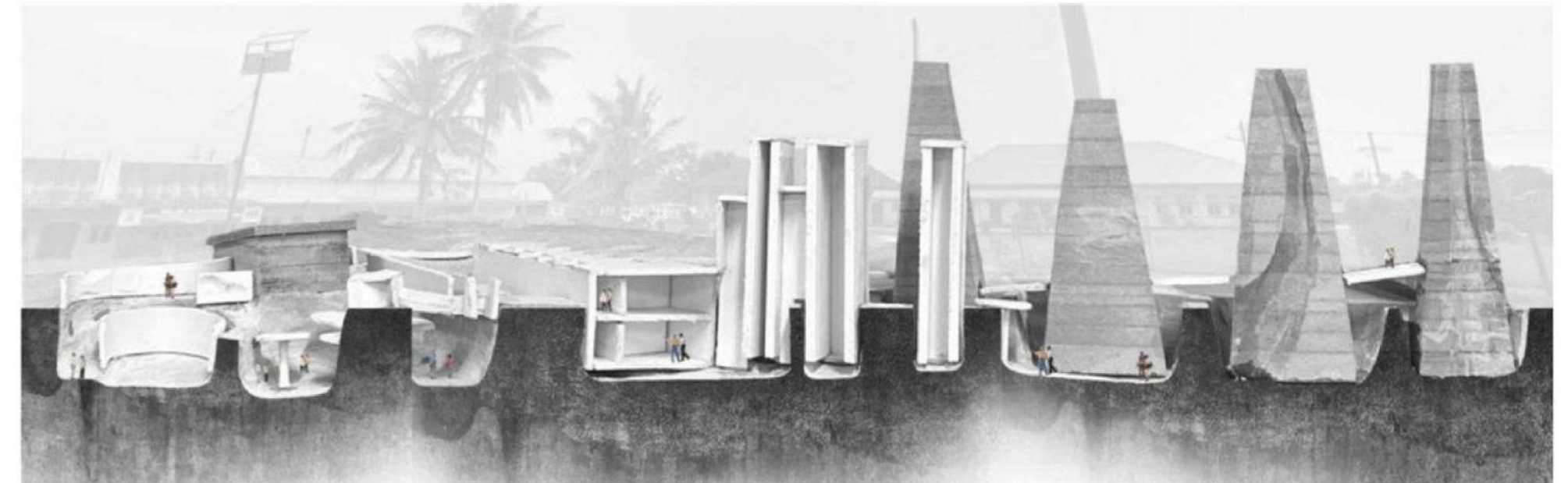
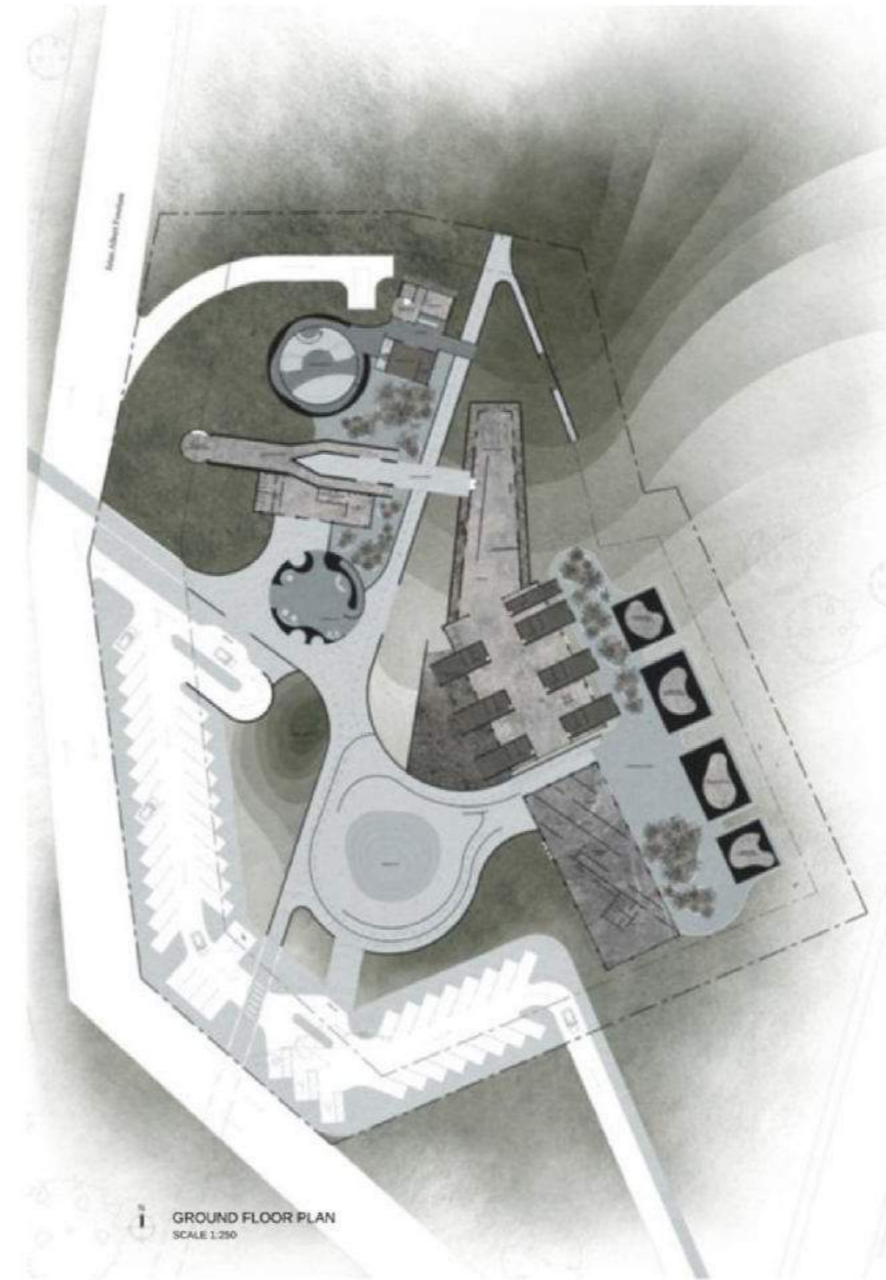
"Remembrance"

"As an architect you design for the present, with an awareness of the past, for a future which is essentially unknown." by Norman Foster

The building is built in commemoration to the past soldier of Batu Arang. The starting entrance is from the tower to dine, which is where the stone café was located, it is a dark and stone-like texture that connects to the mining museum.

Towards the east is a memorial park with statues and monuments of the great historical people of Batu Arang, Through the park is the people museum that exhibits the abstract of the past and story behind. Down to the commemorate museum is a semi-open planter box umbrella structure with 4 fine rammed earth towers but rocky cave-like interior space.

The overall organic design act as a loop with entrances from different direction of space that brings liveliness and reminds the historical memories of the project.



Urban & Building Strategies

Connecting different areas into one and letting it grow together in harmony

The urban strategy suggests that past human experiences affected the area horizontally and vertically in a natural manner and proposed a connecting walkway connecting the separated areas.

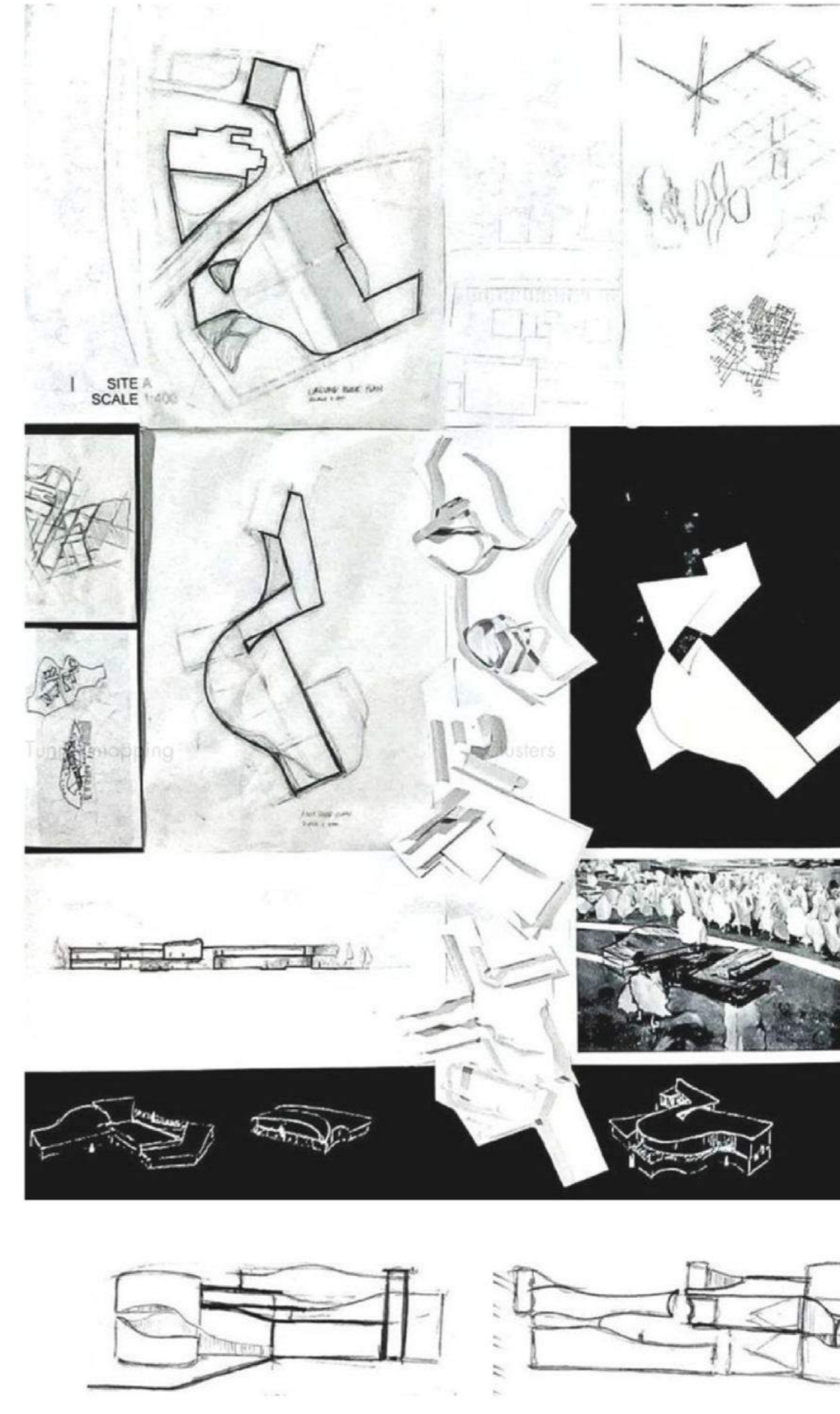
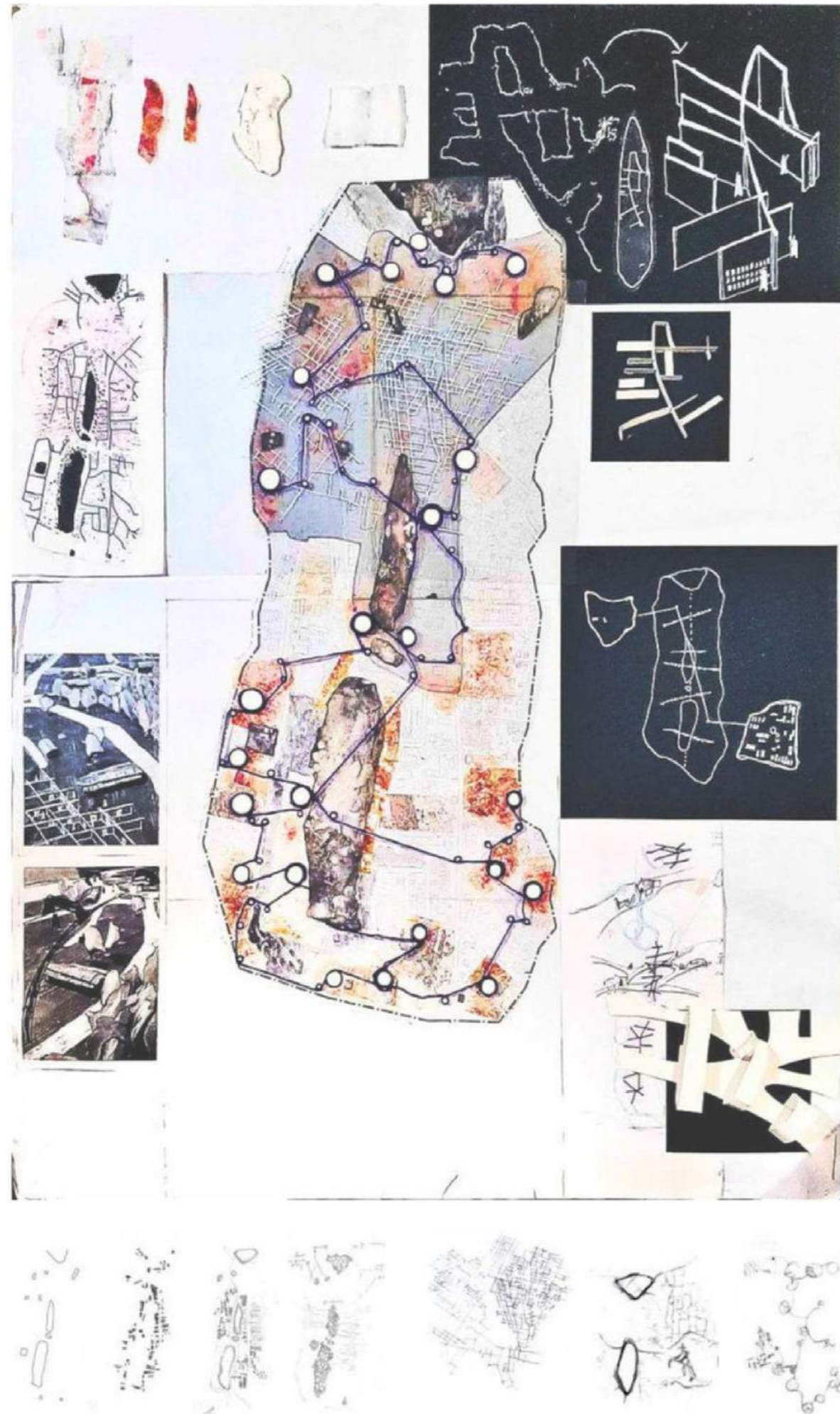
Following the concept of growth, this project uses microorganism to represent it.

Due to the changes that took place in Batu Arang, the area has somewhat become separated. Some became abandoned and some has become more popular, creating differences among them.

This project talks about horizontal and vertical connections. Horizontal connection talks about connection from underground to the surface. Vertical connection talks about walkway connections.

Horizontal: The mapping shows the rising of the old mining tunnel map to the surface into structures to provide information.

They are walls risen up following the axis of the old mining tunnel, pushing up the old to the surface and forming a new element that will impact the surroundings.

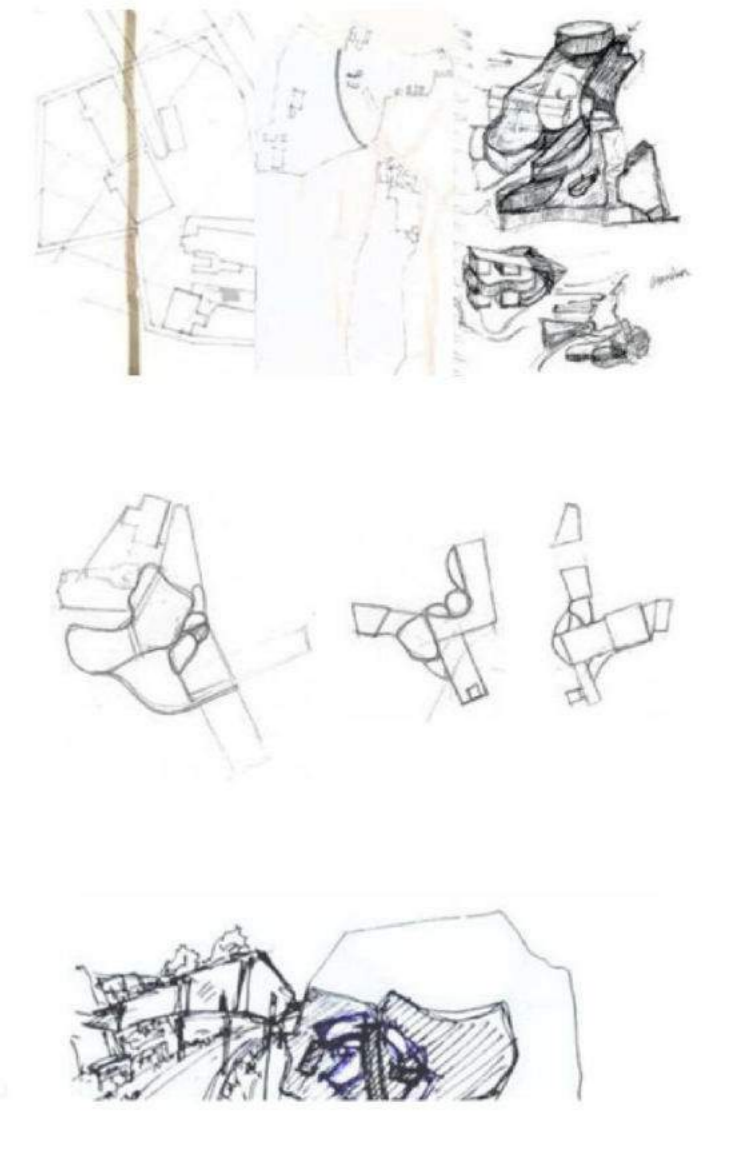


The project originates from the shaping of the old mining tunnel maps. Following its form and rising it up to the surface, an axis is created from it and a structure is formed.

Following the axis, the vertical connection of the old existing buildings and new buildings is taken into account.

These elements aid in forming the proposed building. Then, openings along the building are created for a more open building and providing easy access for the people. The openings were also created with the consideration of the walkways connection, providing an easy access from all directions.

Some sketch models and sketches were made to aid with the process in creating the building's form.



Aging Growth

A gallery of growth, connecting the old and new into one and let it grow along with time.



The building emphasizes on the growth of Batu Arang and growth itself. From the past, the area has grown and is still growing constantly. Just like Batu Arang, places keep growing and affect the surroundings.

Connection of the old and the new lead to growth of the area, where there has to be old to have growth of a new element.

The gallery focuses on the progressive growth of Batu Arang that connects to the present and to the future. There is the experiences gallery that represents the past, followed by the people's gallery and the introductory gallery that represents the present, and the people's gallery, workshop, and specially curated gallery that represents the future in the form of art and creativity.

Visitors are able to experience growth as well in the interactive gallery where they can store their significant memories and revisit the gallery and relive their memories in the future.

There is also the hotel that lies together with the gallery, connected with the gallery through the existing buildings.

The materials usage of corten steel and stone allows for the building age nicely.



Urban & Building Strategies

Linking brick historical buildings while passing by the zoning of geological paths and weave them together with the new stories, to learn about its origin- Shale.

The concept is to let locals and visitors to understand the origin of shale by studying the geological map.

Bricks and shale pavements are created around the overcast mining lake to bring out the idea of historical park, connecting to all other significant brick building all the way to airshaft and brick factory as ending point.

Along the pavement, plants are planted within the bricks. Name of species are written on it for investigator to study. It is to remind people the shale and coal mining start with the decomposition of plant and slowly shaped the underground, brought new meaning to people in Batu Arang.

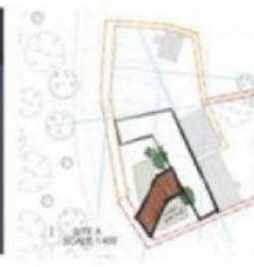
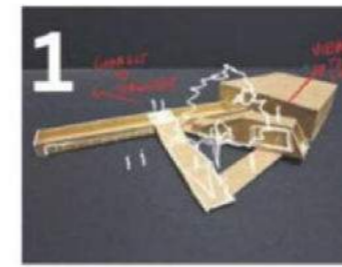
Towers and signboard are placed at each zone to indicate each geological zone.



- The brown lining represents the whole pavement linking all brick buildings:
- High treat geological zone
- Lower seam of coal
- Upper seam of coal
- Existing brick buildings
- Kenny Hill Formation
- Boulder beds



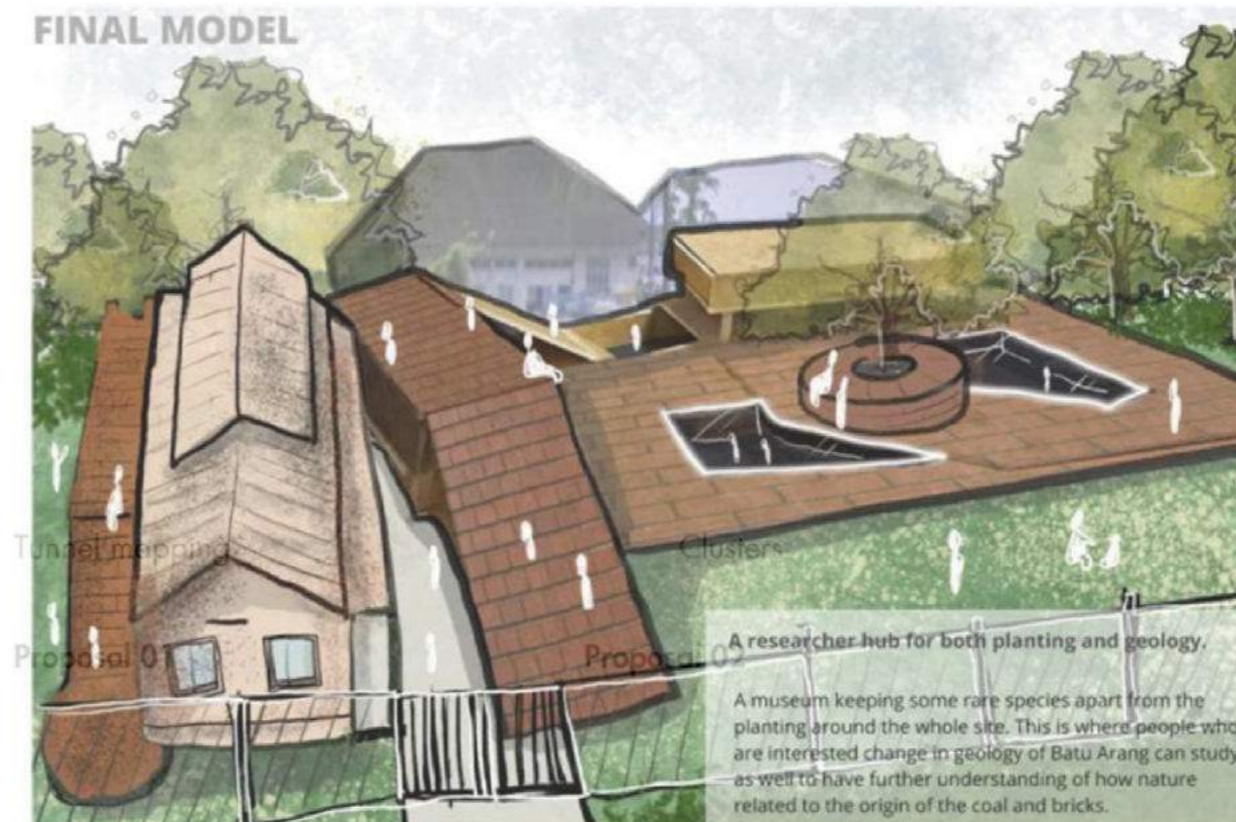
SERIES OF MODELS



The idea is to connecting the same architectural language from existing airshaft building- **the slopes** while capturing the view of further places

The issue has ben discovered such as covering too much of the existing buildings behind. Hence, to **lift up** the whole structure with columns and create more spaces at basement.

FINAL MODEL



The Weaving of the Past and Future

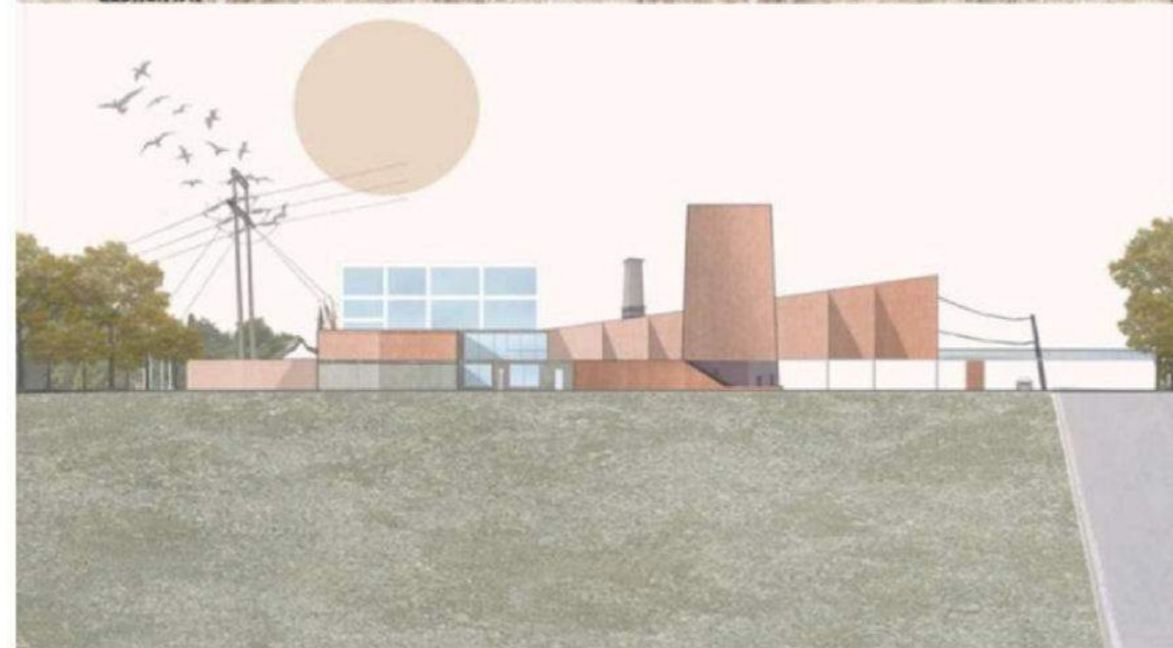
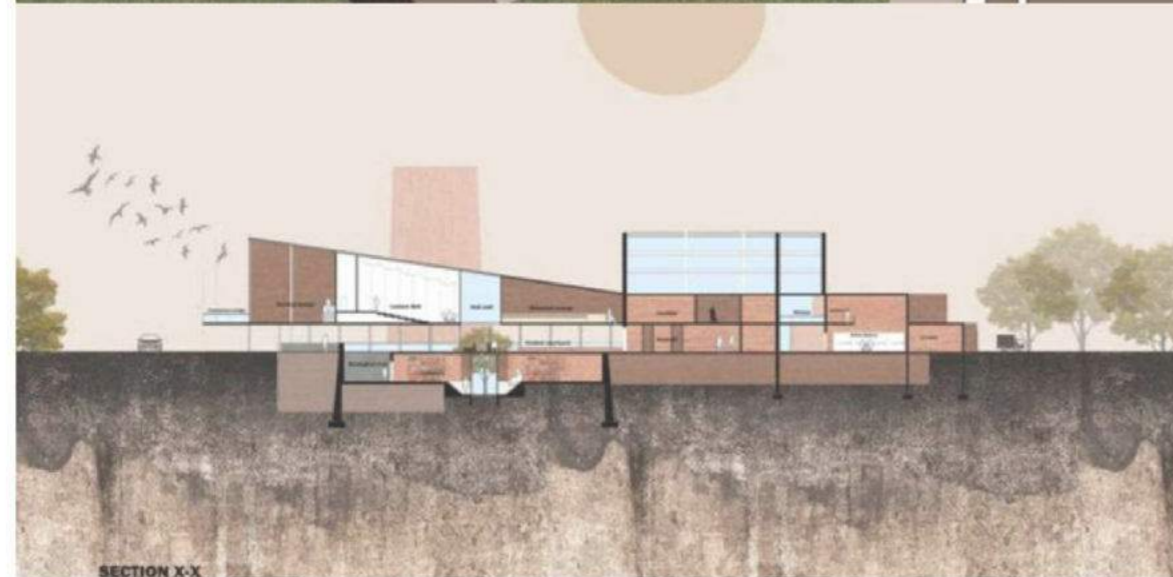
A brick production gallery / geology researcher museum in Batu Arang to revive the past, remind ones of its prosperity once has occurred and fully utilize the present to create future.

Mining coal is the past of Batu Arang. It once brought out meaningful value to the town and nourished the lives of its people. It all happened from the decomposition of nature, which slowly turned to the discovery of coal mining until it declined. It shaped the town, and weaved the story through the past to the present, waiting for the future to come. However, shale mining is the interlude that people might have been neglecting. The beauty of red bricks is everywhere in town. The beginning of brick story-telling starts with this museum.

The inspiration from geological map further extended from the origin of shale until the process of brick-making, becoming the main program of this museum. Researchers could easily visit Batu Arang in order to utilize the lab equipment. A learning space also provided within to enrich students' imagination about the source of this town. The museum is fulfilling its job to embrace the knowledge of bricks meanwhile evoking the memories behind the existing building-Airshaft.

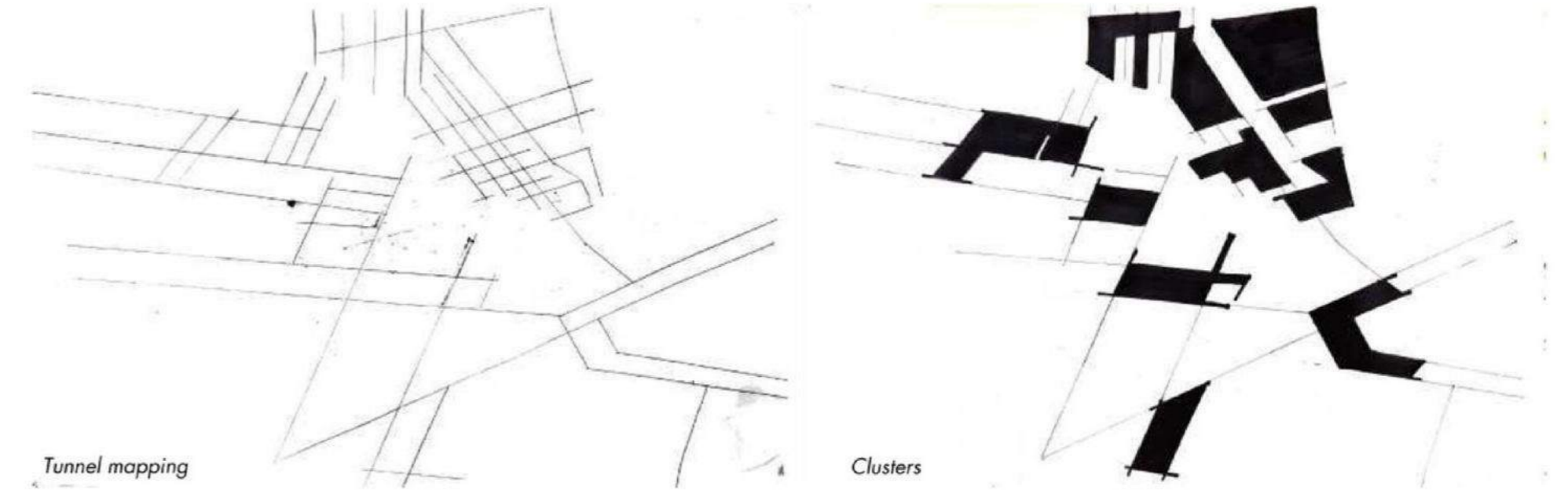
Hence, a geological trail is leading people from the present to the past by walking down the ramp until the airshaft to revive the trace of journey. As they are touching the texture of soil, slowly walking deep down to the darkness, as they getting closer to the feeling of the history

A ventilation tower is built upon the airshaft to re-create the function of the airshaft in the past where workers relying on the air that pumped from the shaft.



Urban & Building Strategies

Strategies which aim to unveil the hidden darkness of Batu Arang and to empower the youth into becoming the light of Batu Arang.

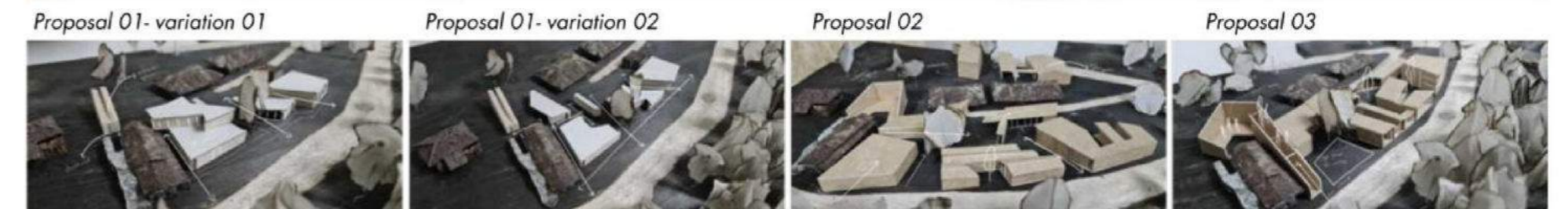
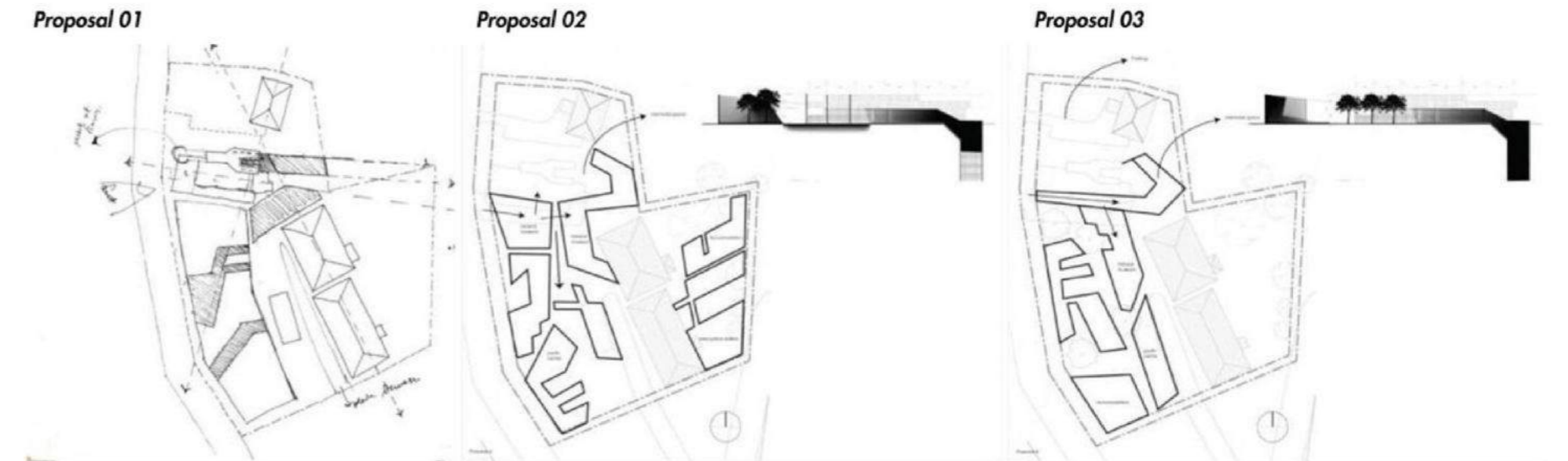


Building Strategies

The site was chosen based on the location of the airshaft and the ambiance and seclusion which gives the visitors serenity and deep reflection as the main program of the building is a museum to inform the visitors about the history and reflect on them. The subprogram is a youth center for the young generation of Batu Arang in order to bring them into the light of the future.

The form-making starts from tunnel mapping from urban strategies where the clusters of the tunnel network are merged to form patterns that signify life and death/light and darkness.

After that, the shapes are distributed strategically on the site which creates the ambiance of walking through narrow spaces transitioning to wider pathways. In addition to this, the view, context, and the airshaft building were considered as part of the strategy.



Urban Strategies

Project 2 starts with urban strategies that are targeted toward the tourists and the youth of Batu Arang.

The strategies start from identifying the point of darkness, the airshafts, and then the axis of these buildings (considered lifeline). By overlapping the axis and the Tunnel mapping the intersection points are identified and considered as the points of interest for the interventions. The proposals try to create awareness of the history of Batu Arang for the visitors and create a platform/ pathway for the youth of Batu Arang to excel as they become the light of the town.

Behind The Veil

History Museum which unveils the Darkness of covered in Batu Arang and the youth center which to bring them into the light upon the foundation of the dark history of Batu Arang

The journey of the museum begins with historical reflections of batu Arang which was done in P1. In P1 the discussion was mainly on the darkness of Batu Arang back during the coal mining times. 6 different levels of darkness were extracted from these histories and presented as a form of artwork and mapping.

In P2 the discussion further extended to the presence of Batu Arang which is peaceful and serene. The urban strategies were targeted at two groups the tourists/ visitors who do not know about the history and the youth of Batu Arang who knows about the history. The strategy is based on the idea of light and dark where the tourists are brought into the dark history of Batu Arang and the youth is brought out from the darkness into the light where they become the future/hope for batu arang. The strategies were outlined/pointed out using intersections made from the tunnel mapping and its axis to bring more historical meaning behind its form and location.

The form-making is from the tunnel mapping as a base and extracting its clusters to create the flow and shape, After that the spaces are extruded to give different emotions of darkness when one is present, through light, texture, and echo evoking different senses of the visitor.

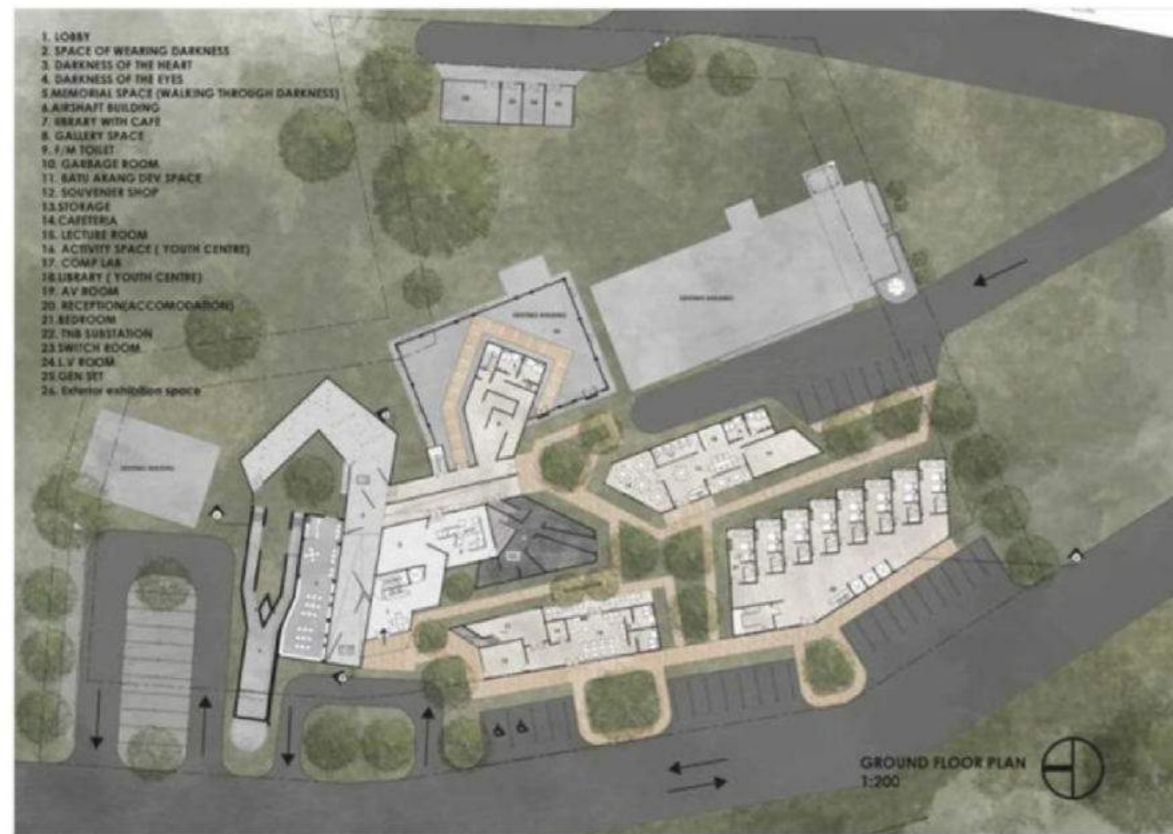


PERSPECTIVES

Wearing Darkness Darkness of the Heart Walking Through Darkness Memorial Space



Airshaft Memorial Space Outside Darkness of the Eyes & Shrouded by Darkness



Ground Floor Plan 1:200

Based on P1 and P2 the main program for the building is a historical museum and the sub-program is a youth center. The spaces in the historical museum are based on the 6 levels of darkness which has certain history symbolizing it. This is to evoke the visitor's certain experiences and emotions from each intended space. As the space circulation goes on there are buffer spaces in between to ensure that visitors do not go through all 6 levels of darkness at the same time. once the journey ends in an underground tunnel, it leads the user into the light of Batu Arang which is the future development space, and through the cafeteria which leads to a youth center. The entire flow of this journey is to bring people into the dark history and embrace it and once the emotions are felt they are brought into this light called the youth center which is the future of batu Arang built on this dark history.



SECTION A-A 1:100

Urban & Building Strategies

Strategies that seek to expose Batu Arang's darkness and interventions in potential hotspots for community empowerment.

Urban Strategies

These are little interventions which are inspired by bricks and as you can see there are various types of brick pattern shapes are been created Depends on the place that boxes are created to see certain views from different places depending on landscape.

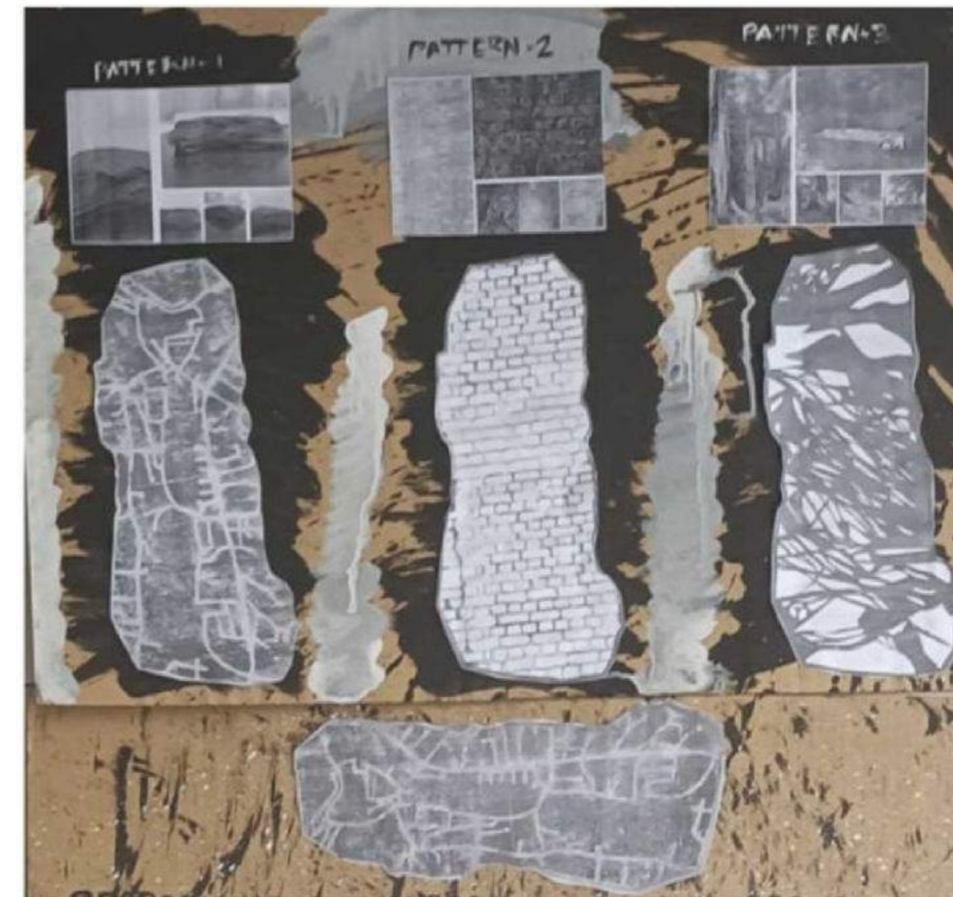
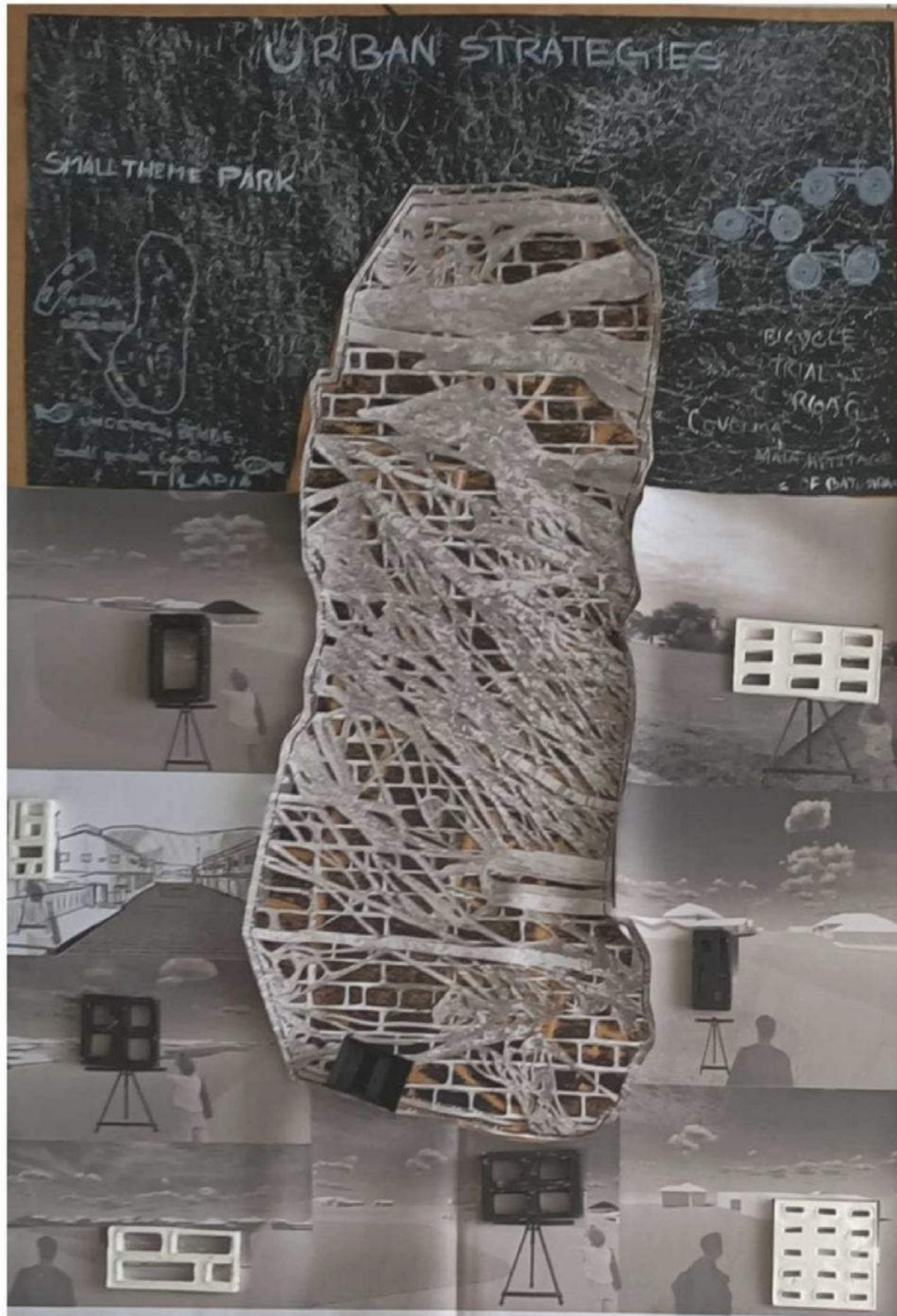


A park which unite Batu Arang people.



Fishing place at the end of the park.

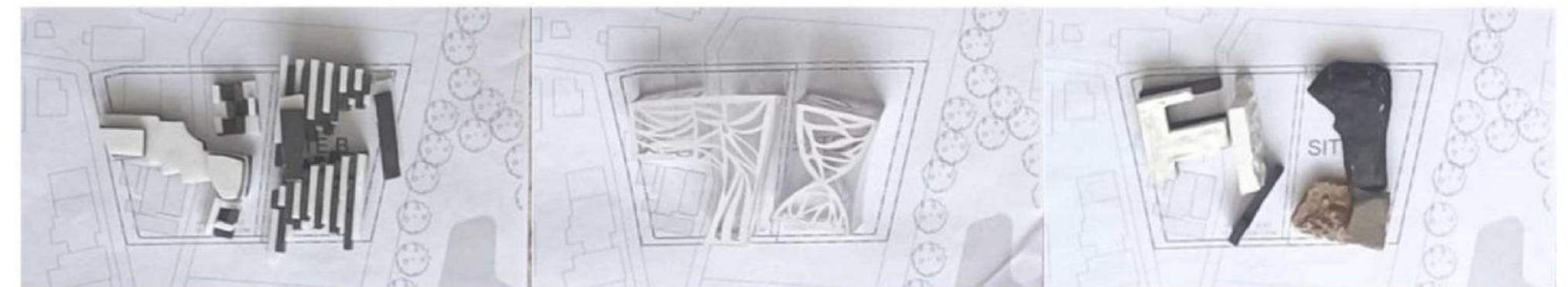
Models



Proposal 01

Proposal 02

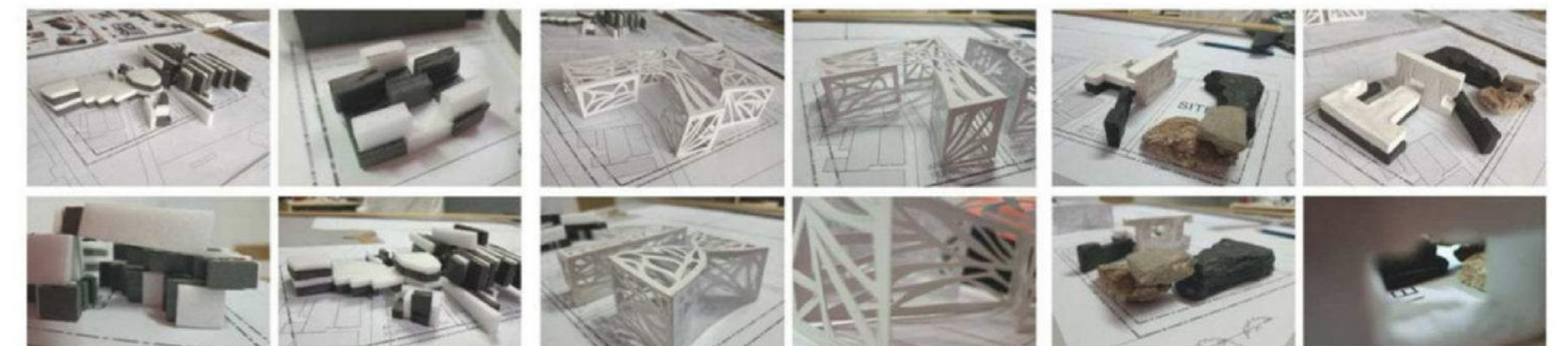
Proposal 03



Brick patterns alternating in the different spaces + behavior according to nature

Roots patterns twisting according to the places in the different spaces.

Natural rocks and artificial shape patterns which created from texture of the rocks and twisting in the different spaces.



Building Strategies

The location of the sports club, as well as the atmosphere and remoteness that fosters profound thought among visitors, were taken into consideration when choosing the site because the building's primary use is as a community centre that aids in the development of batu arang and youth centre for Batu Arang's younger generation as subprogram which as a samll exhibition.

This designs was created using the rock, bricks, and tree roots that I frequently saw at the Batu Arang construction site. The creation of the shape starts with the texture.

C²A Centre

The significance of preserving and reusing ancient structures and buildings, learn about the history of Batu Arang, and view examples of different architectural styles.



This programme aims to make it possible to translate perception into architectural forms by enhancing and replicating historical memories and experiences. Instead of just knowing about it, it provides people with an excellent taste of Batu Arang's past, enabling them to explore the experiences of the place and form their own opinions while employing patterns and shapes as they pass. By attracting visitors to the site while maintaining the historical structure and confirming the old to modern, it will establish a syncopations premises that seeks to promote intercultural understanding. As a result, it will not only generate the construction by reusing the elements.



Urban + Building Strategies

Strategies which aim to link up the historical place and interventions on potential area to empower the new community.

The urban strategy suggests that past human experiences affected the area horizontally and vertically in a natural manner and proposed a connecting walkway connecting the separated areas.

Following the concept of growth, this project uses microorganism to represent it.

Due to the changes that took place in Batu Arang, the area has somewhat become separated. Some became abandoned and some has become more popular, creating differences among them.

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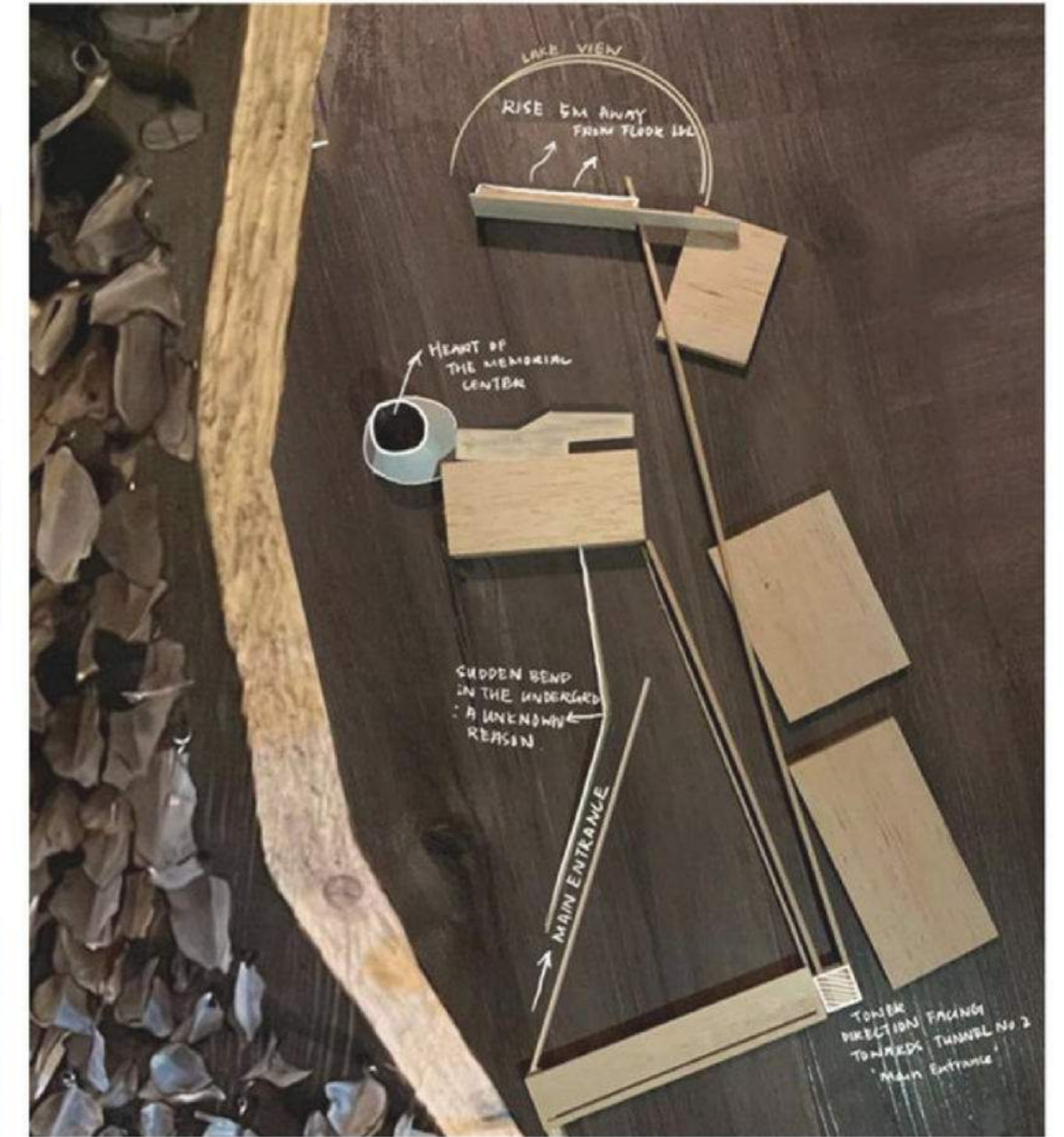
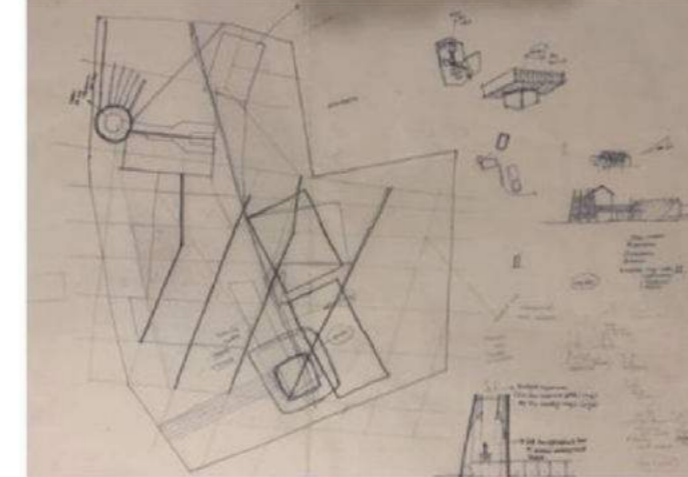
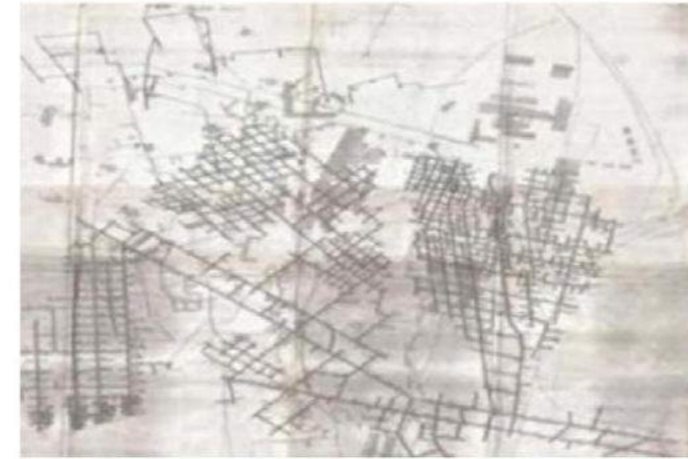
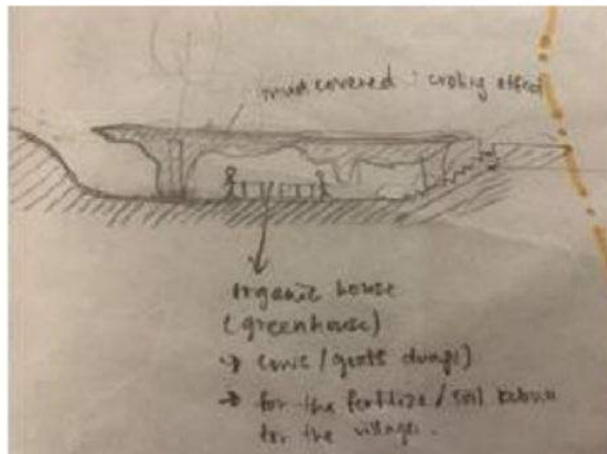


Urban strategies & intervention
Proposal 1: Brick Pathway

Indication of Collapse



Proposal 2: Organic Green House



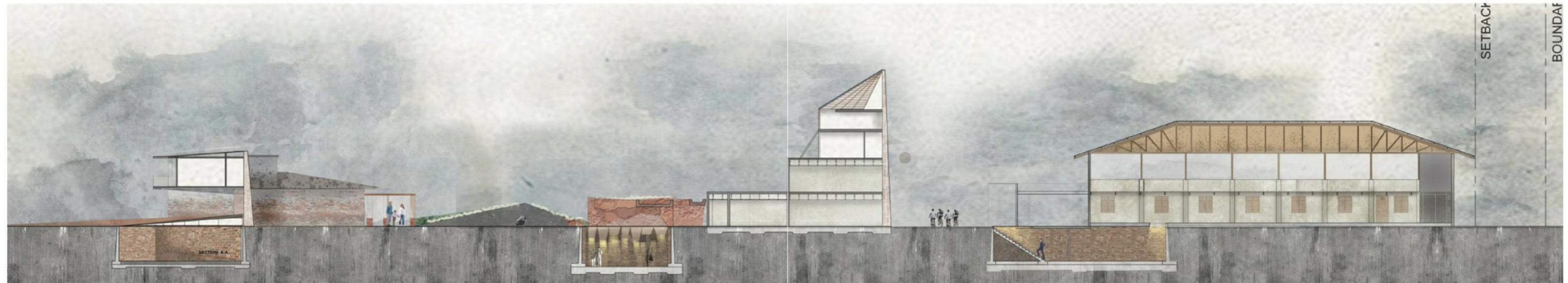
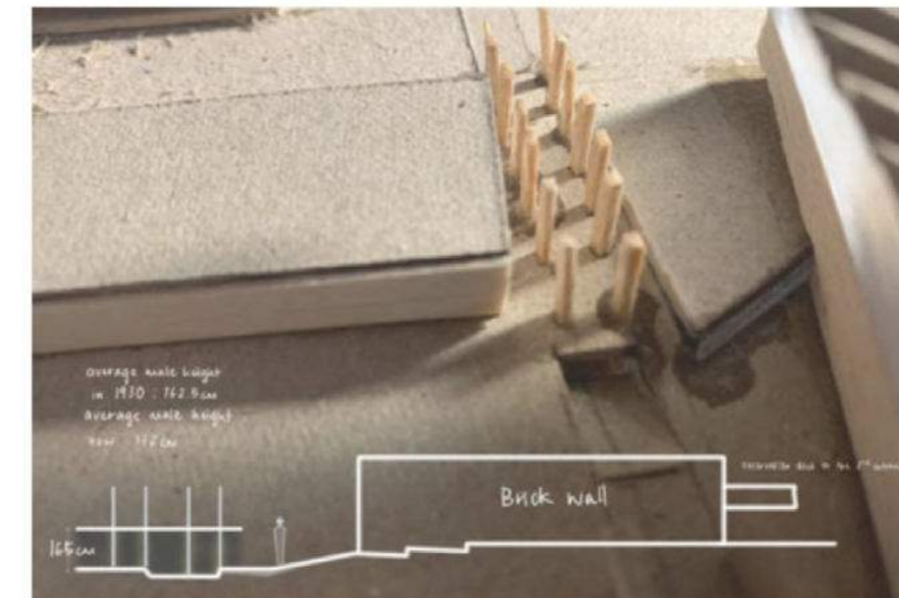
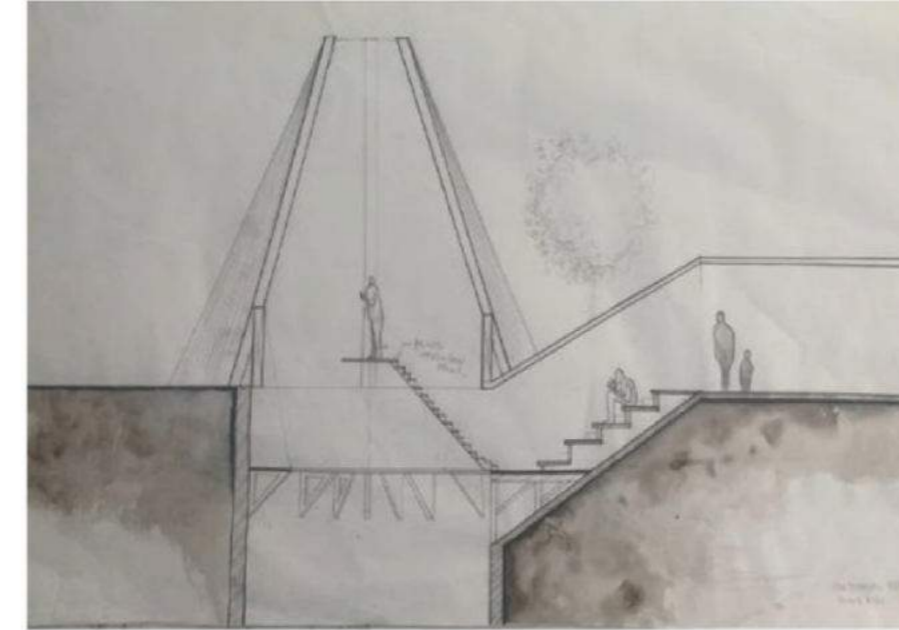
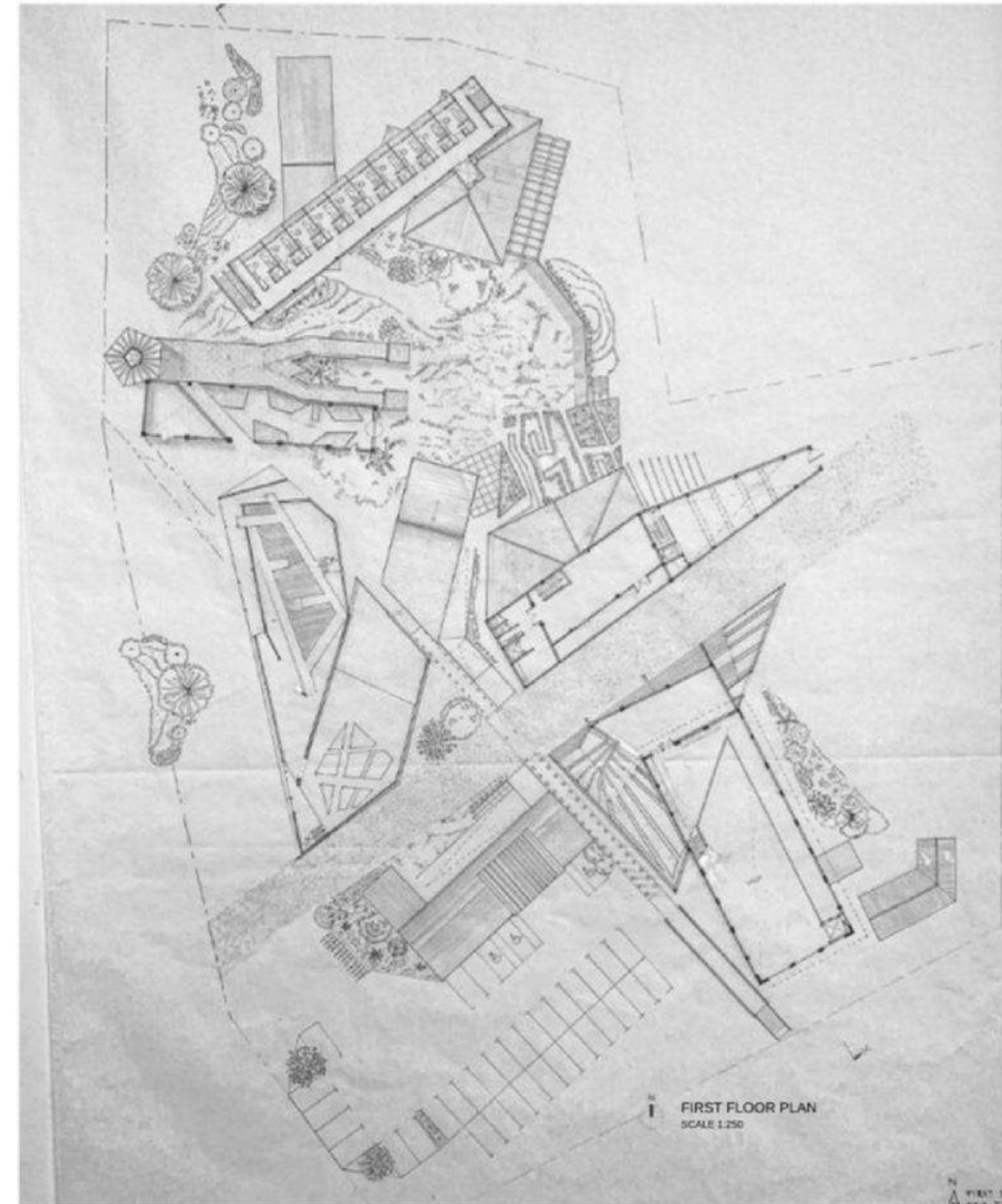
Dread of the Dark Gold

"As an architect you design for the present, with an awareness of the past, for a future which is essentially unknown." by Norman Foster

The building is built in commemoration to the past soldier of Batu Arang. The starting entrance is from the tower to dine, which is where the stone café was located, it is a dark and stone-like texture that connects to the mining museum.

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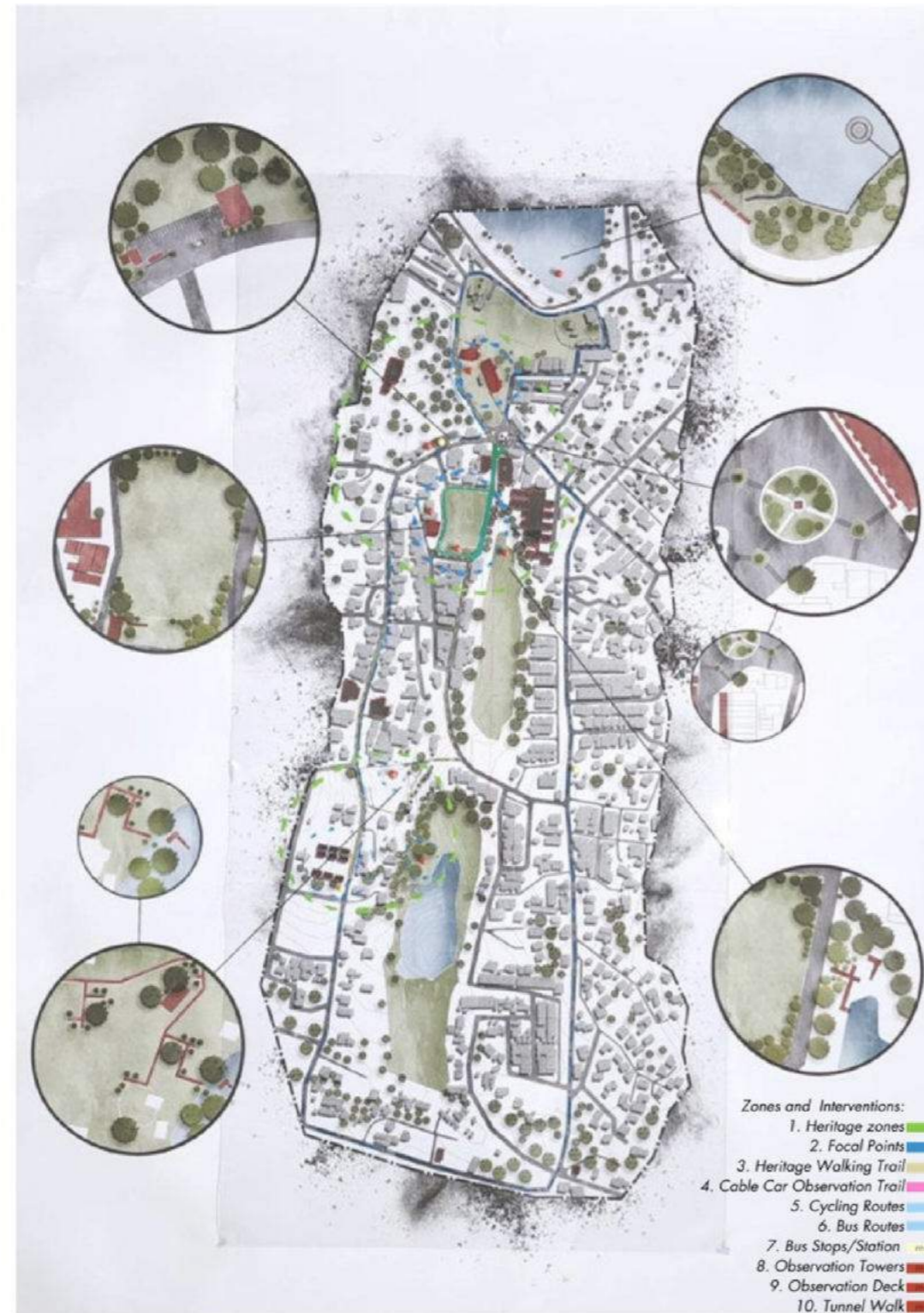
Urban & Building Strategies

Urban Strategies

During the site visit, I experienced most of the site within the site boundaries. I visited the Heritage buildings in the site and observed the day-to-day life of the locals in Batu Arang. The Urban Strategies are focused towards tourism to support the heritage program of Batu Arang. In this project I identify impending issues and propose interventions/solutions to improve/enhance social, economic and cultural aspects of Batu Arang.

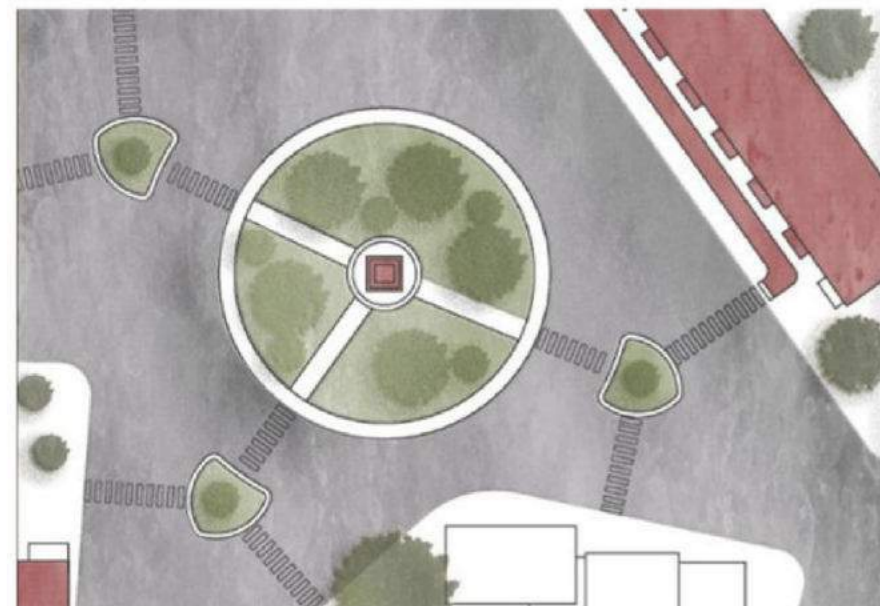
Focusing on the following site issues:

- Public Transport - Bus route
- Accommodation for tourist
- Connection between heritage buildings, open casts and other historic places.
- Pedestrian walkability
- Cycling / Walking routes



Mappings and interventions

Redesigned Roundabout - Improve pedestrian circulation / safety



Tunnel Walk/Tower (O.C 8)



Bus Stop/Station



Observation Deck on lake (O.C 1)

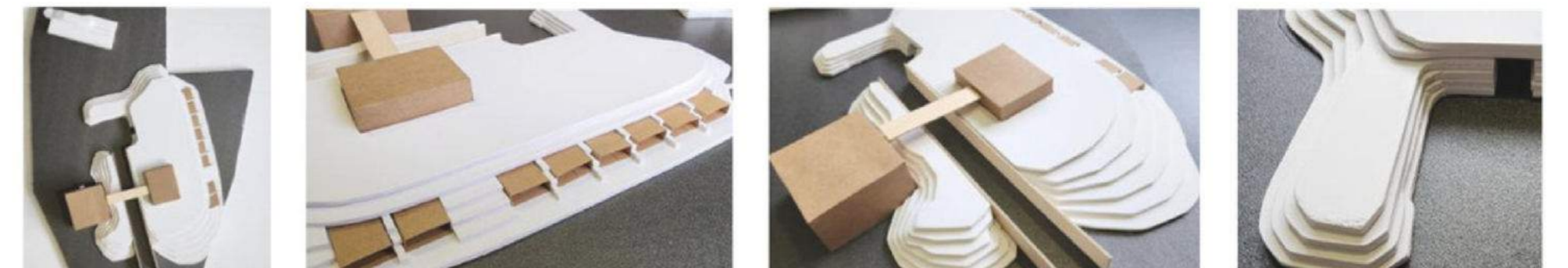
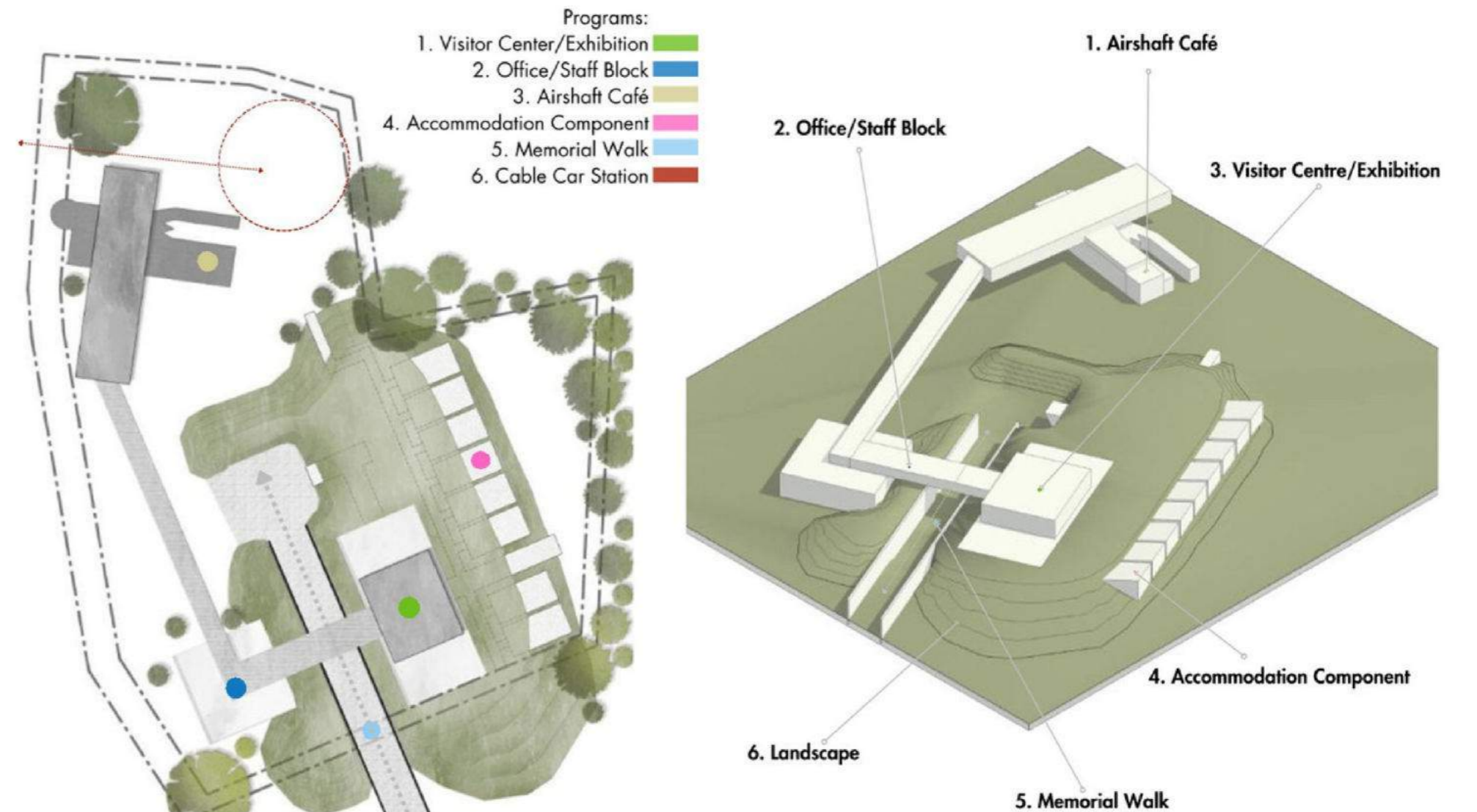


Building Strategies

The Main Program proposed is a Visitor Centre with an Exhibition, to support the Heritage program of Batu Arang by educating visitors on the rich history of this location. There is also an Accommodation Component proposed which sits within the site to create an experience relating to the mining aspect of the site by designing a tunnel system as part of the circulation.

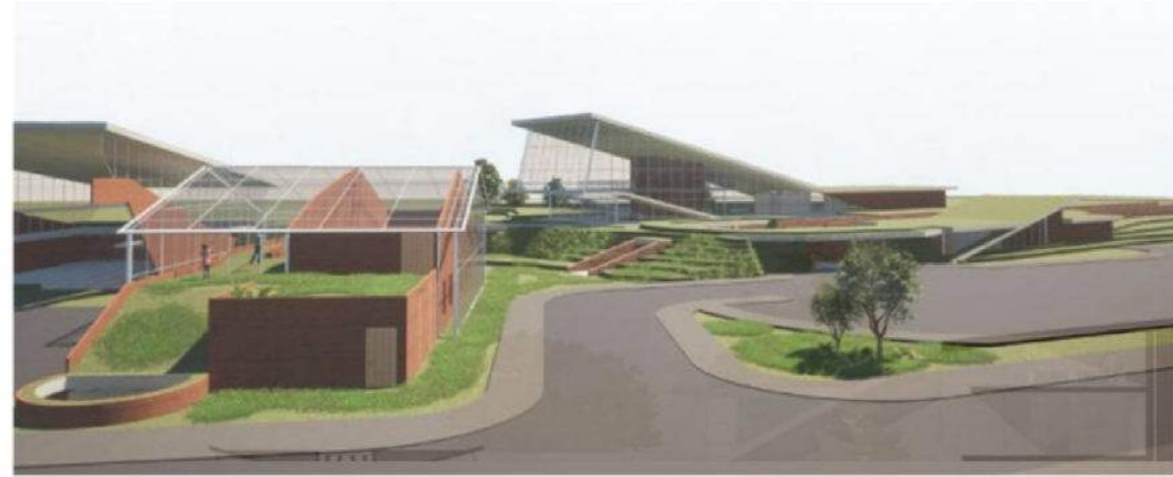
The Supporting Programs proposed is a Café, making use of the existing Airshaft Building to boost visitors to the site to experience the airshaft building from the inside-out. And using the existing road as the main pedestrian entrance and designing a memorial walk to remember and pay respect to all mine workers.

Finally a small Cable Car station as proposed in the urban strategy, to include the site as part of the Heritage Trail going throughout Batu Arang, completing the connection of historic buildings and places.



Batu Arang Visitor Centre

"History is a feeling of a place which is stored in the landscape"



Batu Arang was once the center of Malaysia's Coal Mining and now declared as a heritage town. The history of Batu Arang lies deep beneath its surface, and on the surface the remnants of what remains.

This design emphasises the landscape of what used to be, designing a landscape which replicates the look of the mining quarries which used to be in Batu Arang on a human scale, and carves out walkways as the mining tunnels were carved out to pave the way for the miners. With spaces submerged underground, as well as emerging from the ground.

Intention

This initiative intends to intensify and replicate historical memories and emotions, allowing the translation of human experience into an architectural composition. It gives them the sense of Batu Arang history rather than just learning about it, hence penetrating into the historic arsenal and creating a new experience through the landscape.

Aim

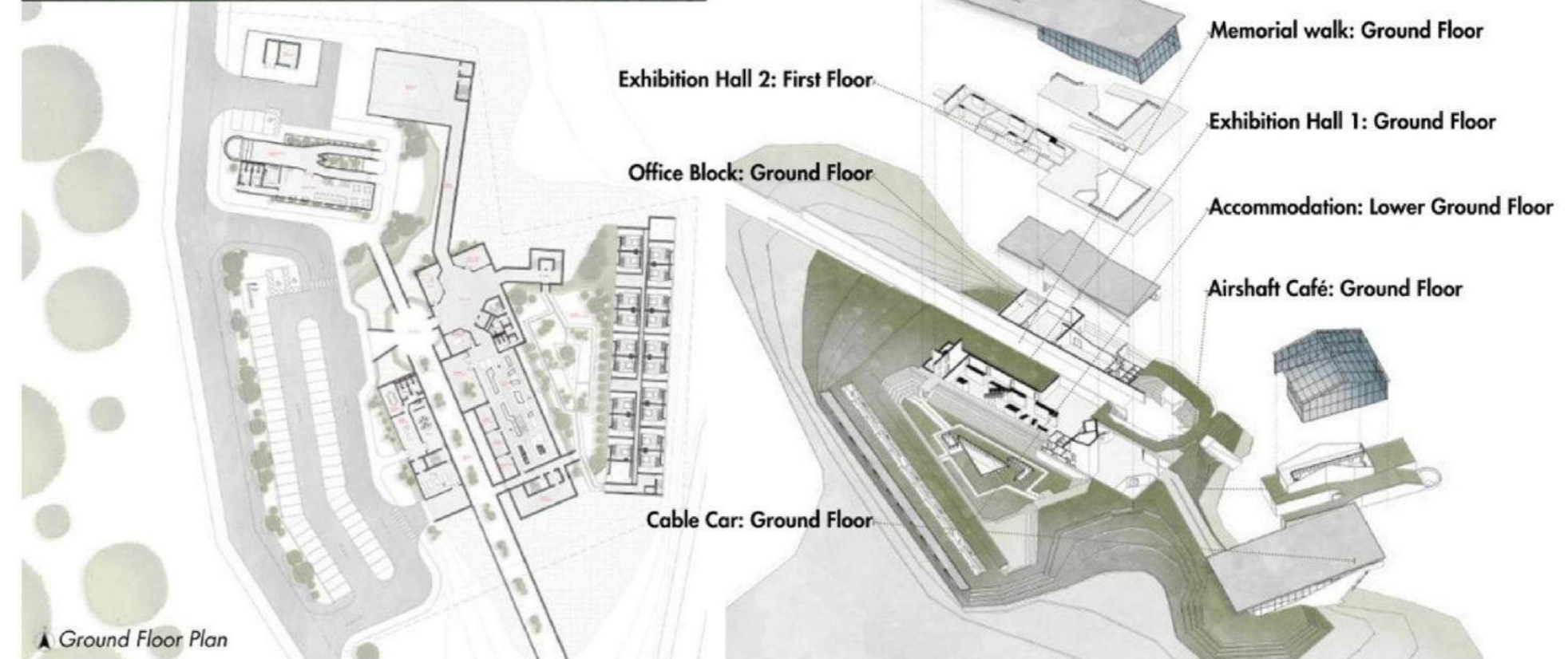
This aims to educate the visitors on the history of Batu Arang, hence raising awareness of its mining past, as well as educating on the importance of conserving heritage sites/buildings

Approach

By creating a journey through Batu Arang, for visitors to travel by foot/walk/bus to experience the heritage buildings up close and then a sky journey via cable car for visitors to experience the landscape of what once was the heart of coal mining in Malaysia.



Exploded Axonometric

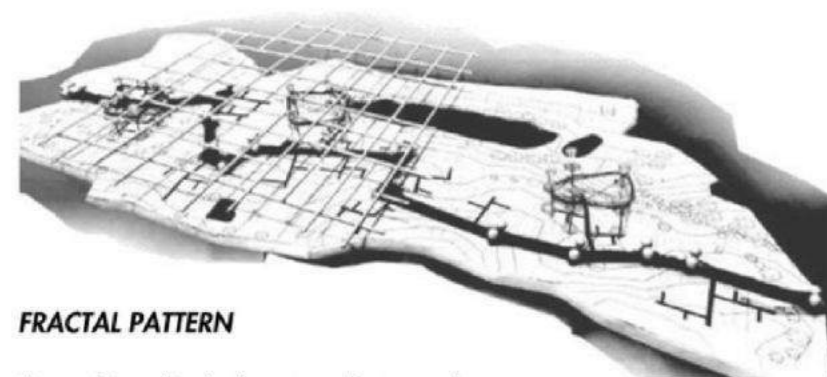


Urban & Building Strategies

Urban Strategies

My Urban strategy revolves around using different building materials to arouse one's memory of the historical facts of the place. 3 areas represent other ideas. In order to create a systematic connection relationship, I observed the design of the local mining tunnels and the unique laws of the route to create a common point that can connect the area and lead the visitors to experience a common meaning.

Batu Arang is a place where the history of crucial industrial development showed. The main messages that I would like to highlight Black regions, red regions, and railways.



FRACTAL PATTERN

Fractal is a kind of pattern that we observe often in nature and in art.



Brick factory gallery: rebuilding a Gallery for the British history in the ruins to share historical evidence building for the brick factory to make people remember the beauty of material bring back the lifestyle of a pass.

Sport club: a busy area, with wooden built shop logs during the past period in order to show the street view, apart from that building in the world and a greenery garden created. using the timber material to make it closer to nature environment to humans.

The museum mimicry plaza created in the mining tunnel retained, what most historical relics found, to share the history. In order to increase the frequency of activities in the area, it can effectively explain and allow tourists or locals to deeply understand the products left by the historical relics



Building Strategies

To start the main design project of the semester, you will have to intensively explore urban strategy and building scale on paper. Paper collages and models allow a quick repetition and variation of ideas, as well as ongoing adjustments. You will have to produce a series of WORKS IN PAPER, to be able to produce two distinct pieces of work. The connection planning of the three places is based on the fractal pattern with the existing mining tunnel as a reference, building strategy, revolved around the fractal pattern. Differentiate each region according to the system it should have



The first model is more based on the route without using the unique system of the route to distinguish different areas, changing the shape of the building according to different landscapes at the same time, and changing the connected areas.

The second model is more to learn the existing distinguish buildings according to different areas of knowledge, the external changes of the model and the use, and at the same time build a track-like route to good ventilation system have increased the activity vision and viewing.

The third model is to change the shape according to the characteristics of the city. According to the learned connect different buildings. This model has good and openness of the building.

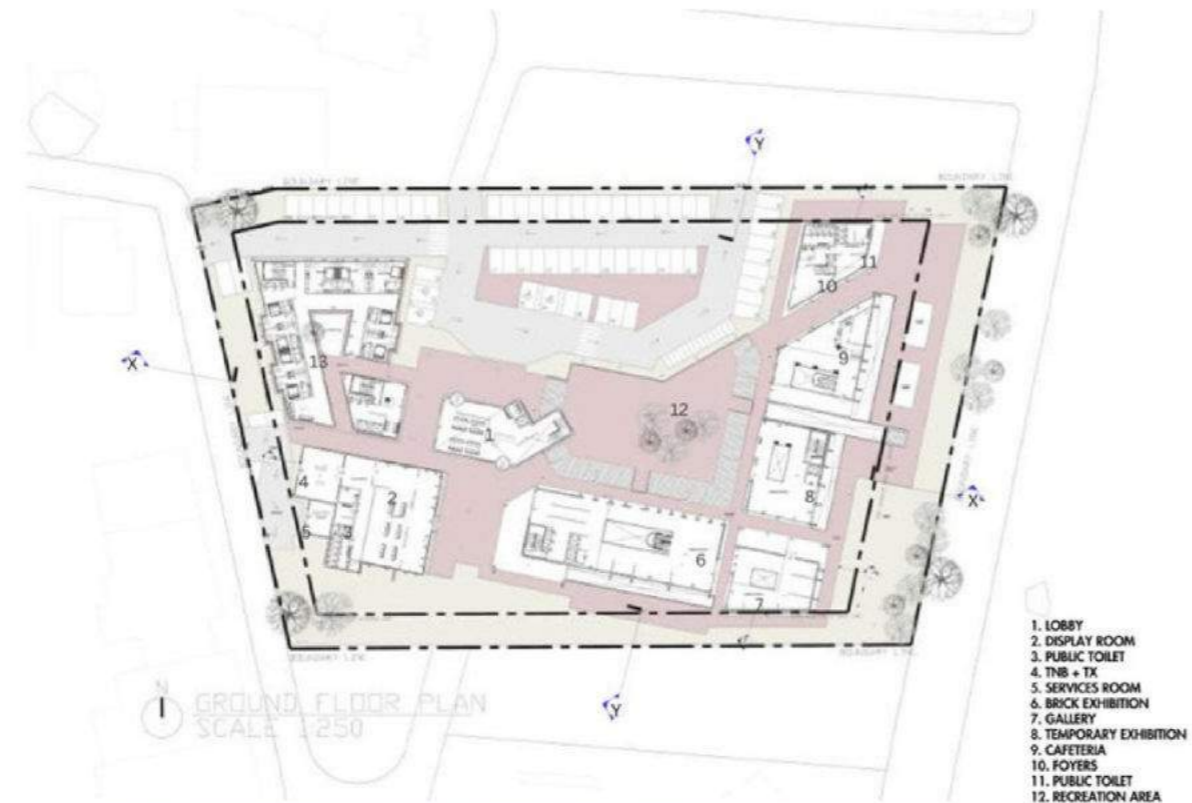
Nostalgia

"History is a Feeling of a place which is preserved to this day and remains with us."

Batu Arang is a place where the history of crucial industrial development showed. The main messages that I would like to highlight Black regions, red regions, and railways.

According to the study of the route distribution of underground mining in the old era, it can be seen that the distribution of the routes in the old era is usually set with a main channel as the main axis. However, many branches are carried out on this, and mining was carried out in different directions in the past.

In order to allow people to experience the routes that people used to go through when they were mining mines and people's settings for the distribution of routes, I adopted the same concept of distribution, so that people go to different branches to different areas through a main street. connect the regions



- 1. LOBBY
- 2. DISPLAY ROOM
- 3. PUBLIC TOILET
- 4. TNB + TX
- 5. SERVICES ROOM
- 6. BRICK EXHIBITION
- 7. GALLERY
- 8. TEMPORARY EXHIBITION
- 9. CAFETERIA
- 10. FOYERS
- 11. PUBLIC TOILET
- 12. RECREATION AREA



Facade



Models



According to the distribution of previous mining routes, it can be found that such a form is actually very similar to the design of fractal patterns. The main idea is to remind visitors of the local industrial atmosphere and the remains left behind to deepen their understanding of the area.



This area is designed to allow tourists or visitors to experience the mining and industrial activities of people in the old age to give people a profound experience, which has brought out the importance of local industry, and this area is also a multi-purpose site.



Urban Strategy: Embrace All Lands, No Realm Forsaken

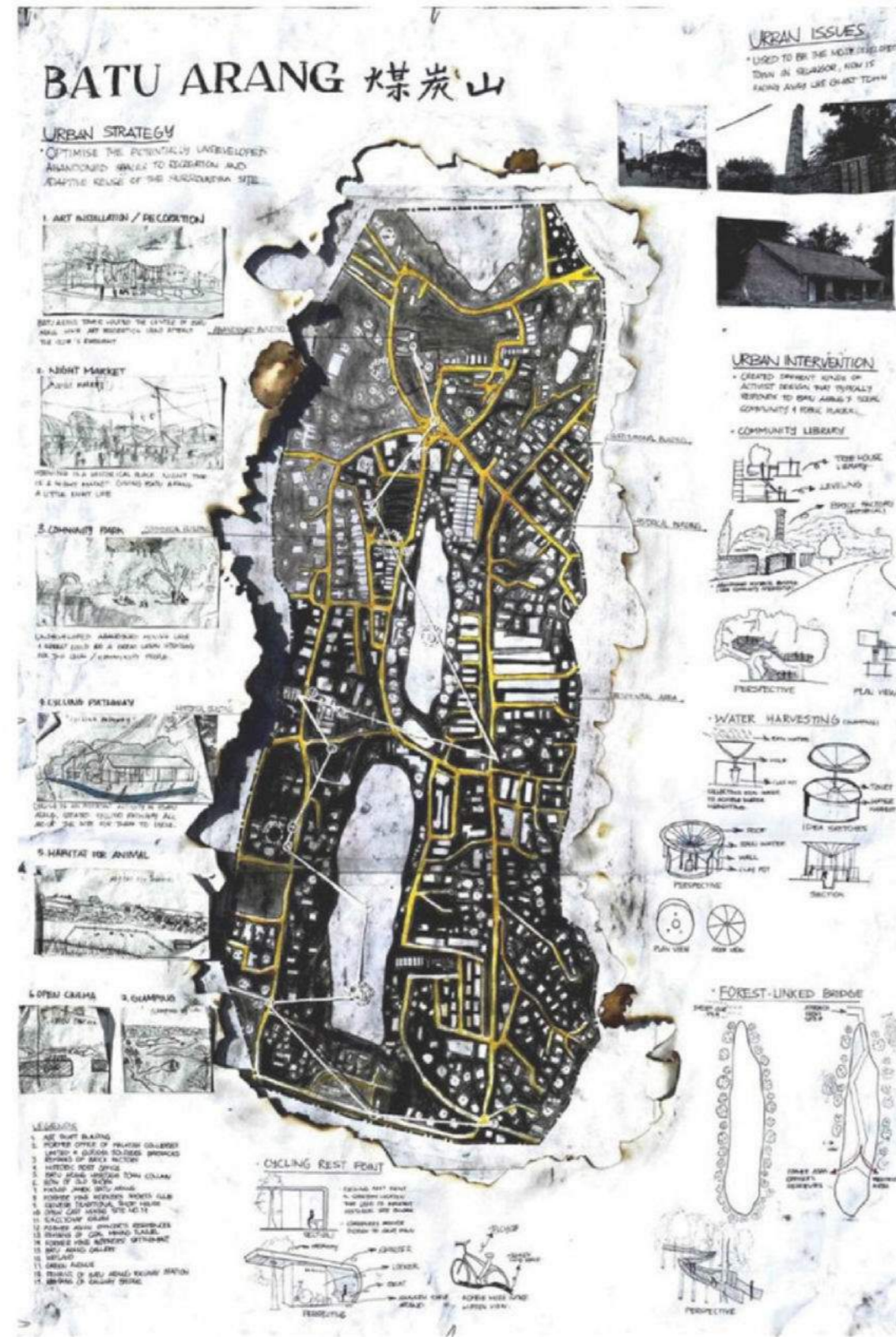
" Amidst the rush of life and time,
Let no place be left behind.
With hope and care for all we find,
No corner of the world confined.

Let the youth bring forth their bright invention, To lift up
Batu Arang with bold intention.
No place left behind, no dream too small,
A brighter future awaits us all. "

As the town of Batu Arang looks towards a brighter future, the youth have taken up the mantle of progress, determined to ensure that every corner of the town is included in the journey ahead. With their innovative urban strategy, they seek to leave no place behind and to create a community that thrives together.

Open cinema, glamping activities in the undeveloped forest, animals and framing of Batu arang's unique plant and greenery, vibrant night activities, aesthetic art installation, above all intervention is the spirit of progress and inclusivity, the youth have come together to breathe new life into Batu Arang.

As Batu Arang moves forward, it does so with a renewed sense of purpose and inclusivity, a shining example of what can be achieved when people come together to build a better future for all.



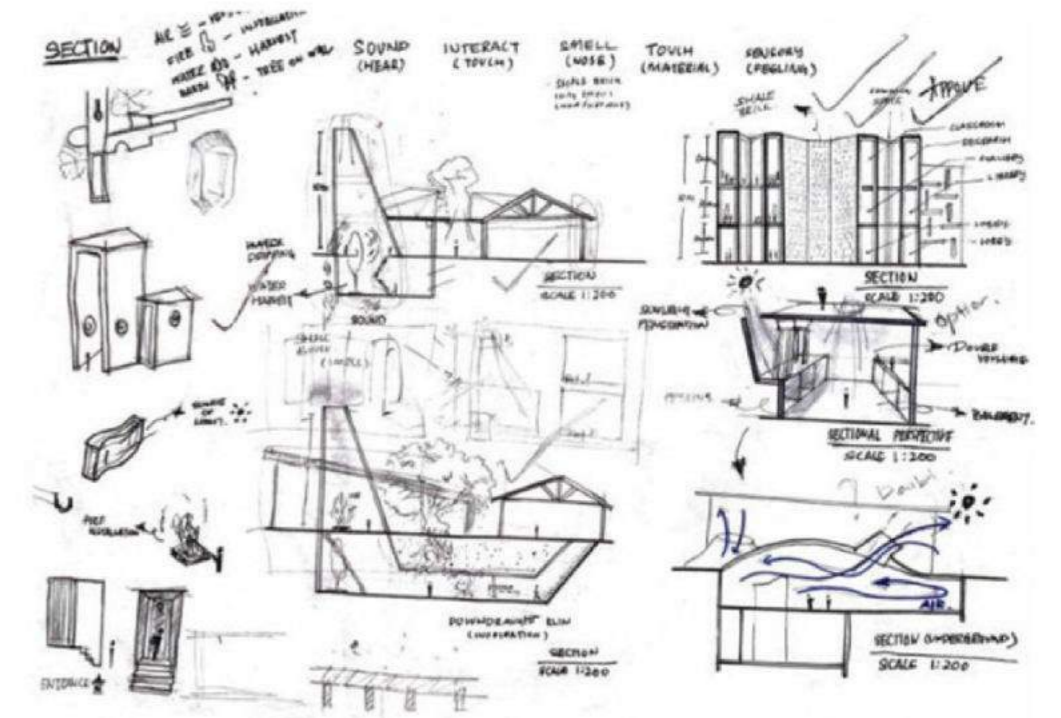
Paving the way for a united and thriving community where every corner of Batu Arang is embraced and uplifted.

" Embrace All Lands, No Realm Forsaken "

Building Strategy: From Ashes to Glory

"From the ashes of the past, a new vision takes flight,
As Batu Arang awakens to a future shining bright.
The youth bring forth their bold and innovative plans,
To rebuild the town with love and healing in their hands.

With each brick laid and each beam raised high,
The town blossoms forth with a renewed sigh.
The streets come alive with the sound of progress,
As the community thrives with unity and progress."



Design development sketches of the progress.

The building strategy for Batu Arang embraces the sense of daylight, bringing natural light into every corner of the town. As the inspiration of the concept is for people to believe in hope in the darkness, as the form is remembrance of the collapse of the brick factory of batu arang. Through innovative design and planning, the strategy aims to create spaces that harness the power of the sun, making the most of its warmth and glow. From the bustling streets to the quietest homes, the sense of daylight infuses every space with energy and life, helping Batu Arang to flourish into a vibrant and welcoming community.



Physical model photo taken from actual site model.

Coal Town

*"In the heart of Batu Arang,
Where coal once reigned supreme,
The Coal Town rises up,
A beacon of a new dream.*

*Where once the past lay heavy,
With memories of toil and strife,
The new design concept brings forth a brighter life.
"*

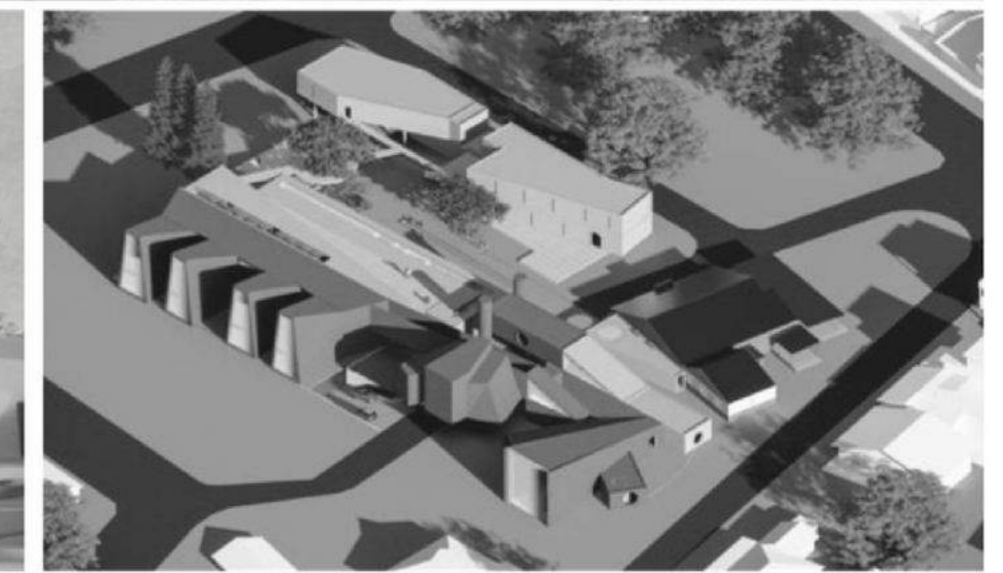
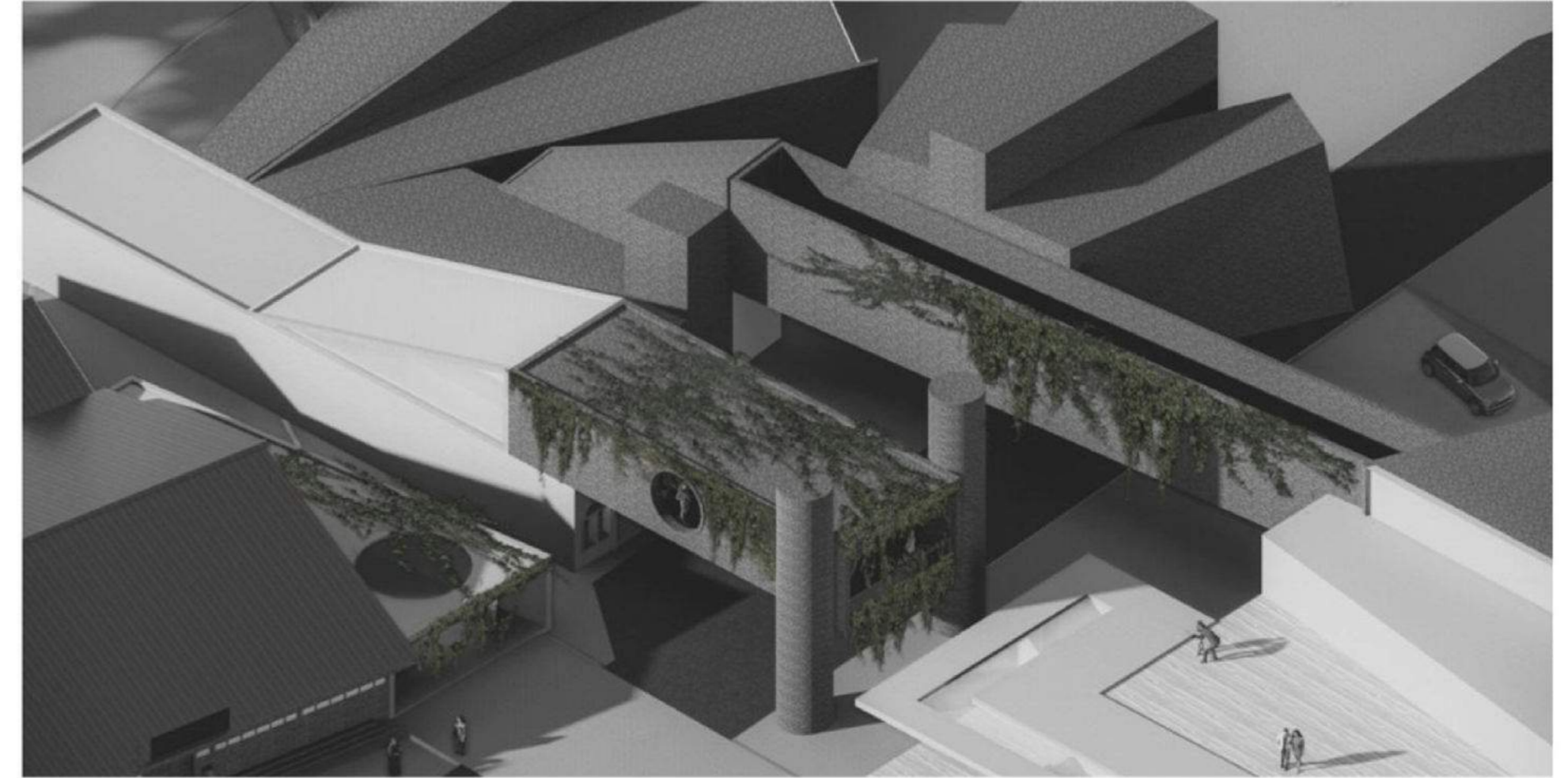
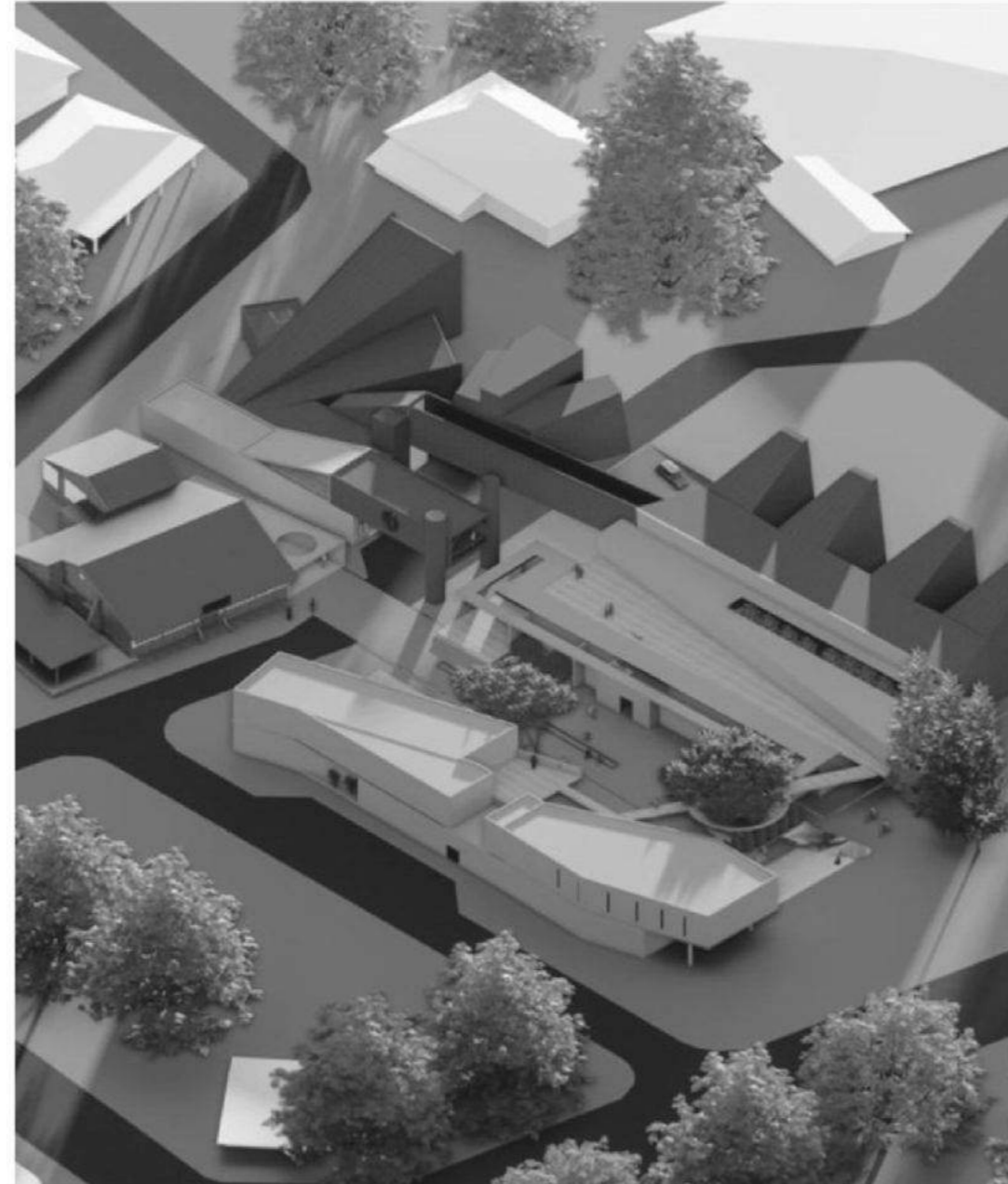
The Coal Town's rich history, with every brick and stone, is honored in the new intervention, with grace and reverence shown. The design concept embraces the town's coal mining past, while ushering in a new era, where innovation will last.

With open spaces and airy light, the Coal Town comes alive, a place where community thrives, where dreams can truly thrive. In Coal Town's embrace, a structure takes form, a fusion of materials, where design is born. With local material brick and concrete, timber's warm embrace, creating a symphony in architectural grace.

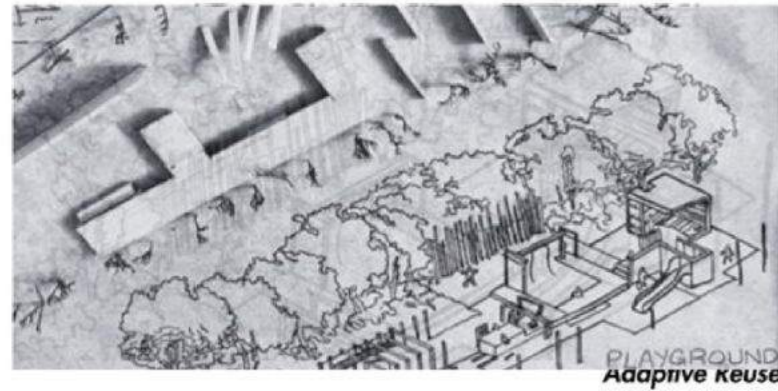
A museum resides, where stories come to life, unveiling the town's coal mining past, banishing fear and strife. The gallery, adorned with art, stirs emotions deep within, igniting imaginations, where creativity will begin. A library, a sanctuary of knowledge, holds wisdom's sacred tome, where minds can roam and wander, finding solace as they comb, and workstations, bustling with innovation and drive, unleash the power of collaboration with the local community and others, where ideas come alive.

Yet in this grand design, there lies a purpose so profound, invoking memories, stirring the depths of fright, confined spaces, curated with care, to challenge limits, a daring affair through architectural design.

Coal Town, a sanctuary of contradictions deep, where confined spaces, a treasure to keep. For within the fear, growth finds its way, emerging stronger from the shadows' sway.

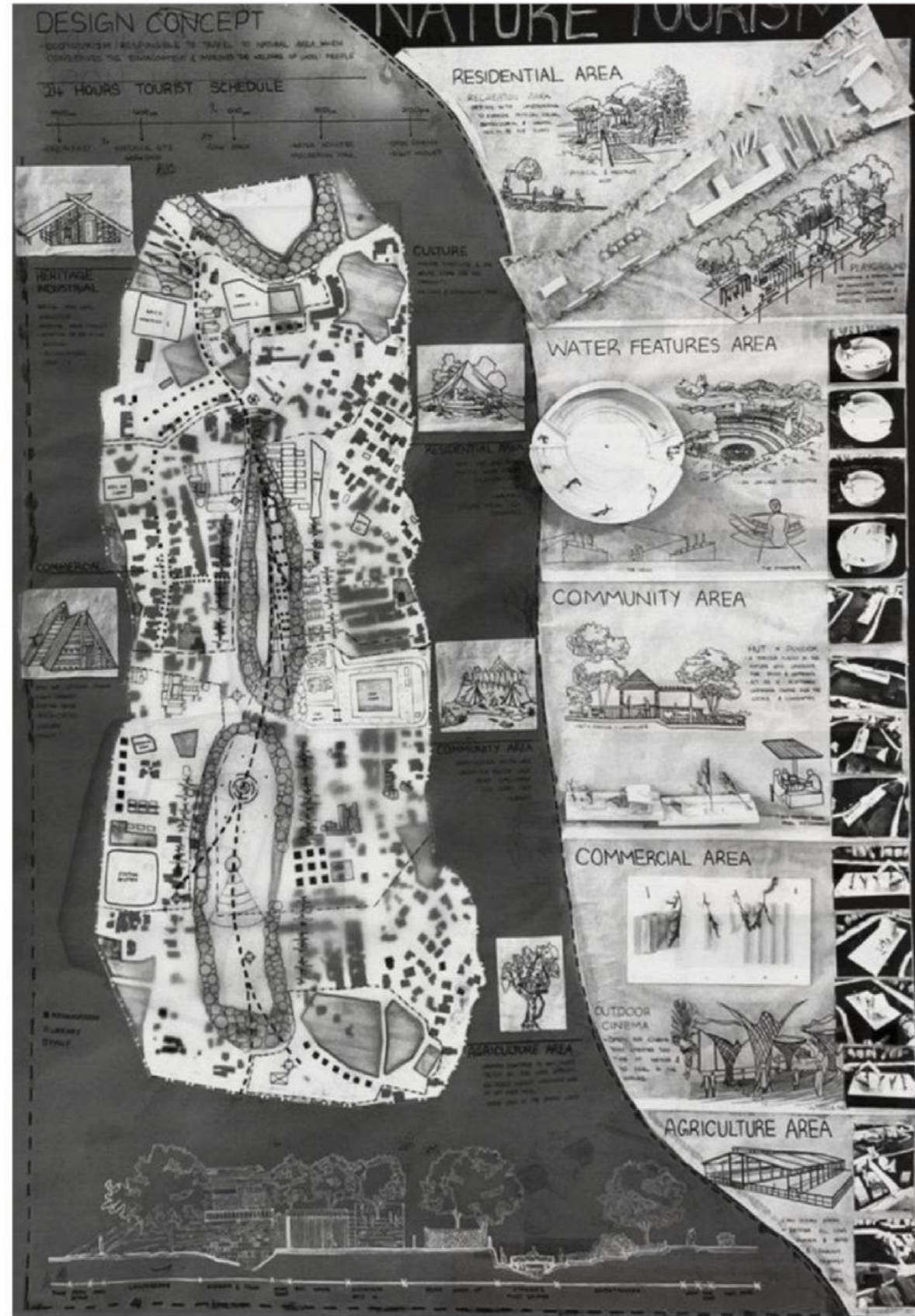
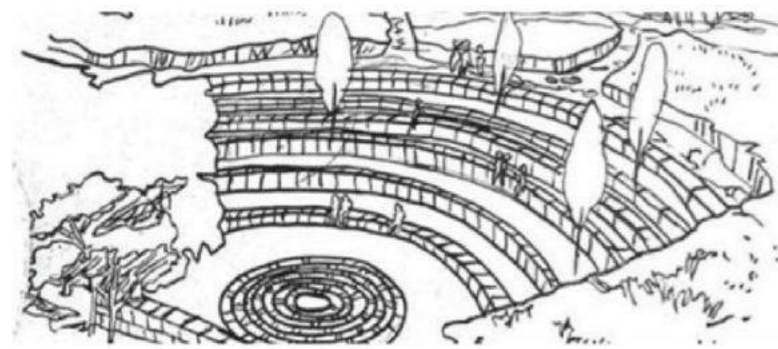


Urban Strategy: Historical Ecotourism Upon Batu Arang, Malaysia



PLAYGROUND
Adaptive reuse

New intervention on recognizing & appreciate diversity of needs, values & social patterns to the site.



It is to revitalize Batu Arang, Malaysia by building up a famous historical ecotourism such as, planning a memorable circulation, compelling feature for the community, bringing joy not to the outsiders only but the residential, water features that appeal to the audience, commercial business hour and last but no least the agriculture for the economy of Batu Arang, Malaysia.



The focussing programme of the building was historical expression museum and community center. The building is design with eight entrances that created functional accessibility for the locals and visitors in Batu Arang and each entrance is provide with specific roles of function of it. It brings back the accessibility from the existing padang of 360 degree entrances which will convenient to the people.

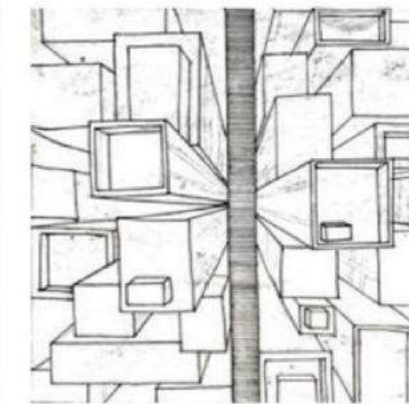
Building Strategy: Circulation & Accessibilities

To continue the design concept of urban strategy and intervention, the building design is developed based on the keywords "circulation" and "accessibility", as well as the aesthetic view towards the Batu Arang's lake.



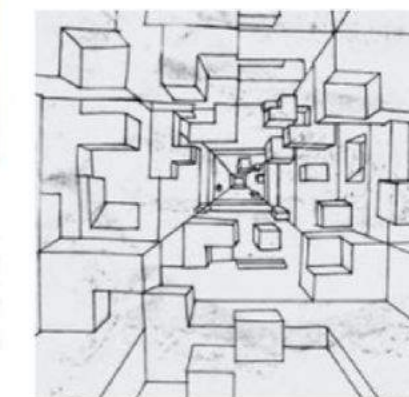
Accessibilities

Accessibility from 360 of the field considerations into architectural design, buildings can become more inclusive, ensuring equal opportunities and experiences for people of all abilities.



Path

Creating a cross that create connection:
1. Empty space - lake (connection between water and land)
2. Majlis perkubuhan Cina - old shoplot (showing history of Batu Arang, Malaysia)



Programmes

Having six different experiential rooms while the spaces and stories are organized thematically, allowing the visitors to have an experience a range of emotions such as sadness, heartbreak, anger, and hope.

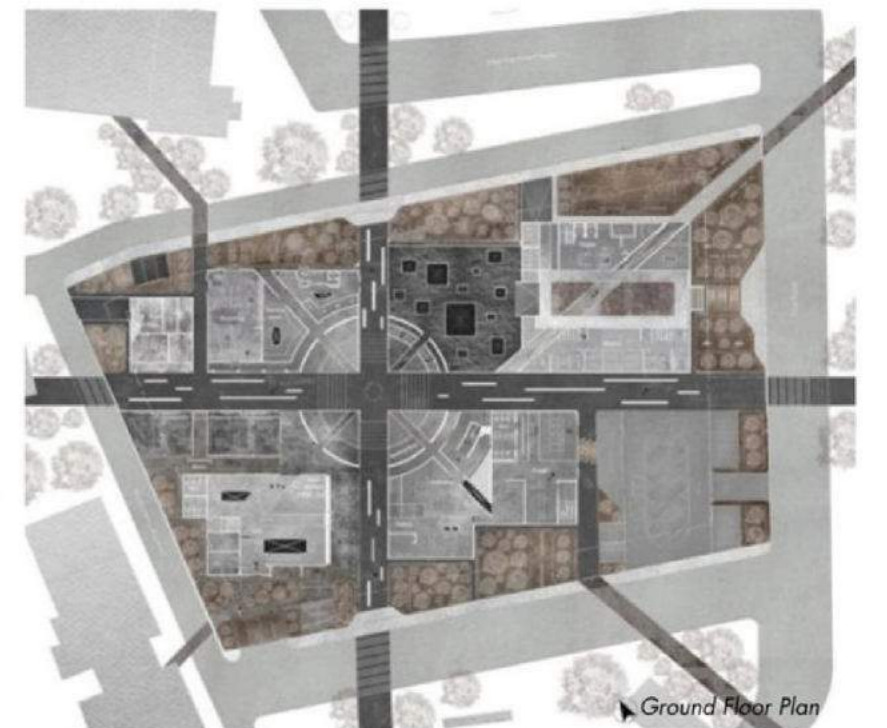
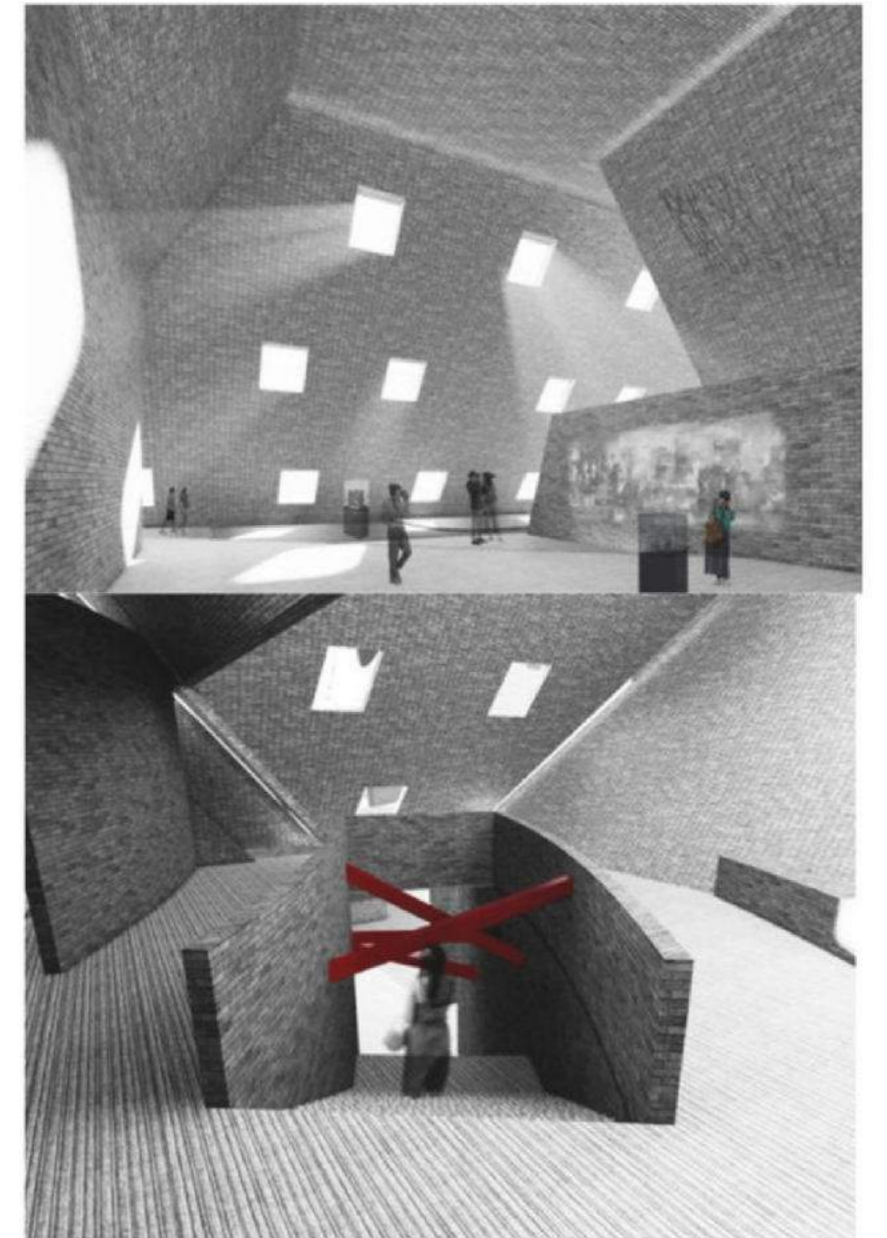
EmotionScape: A Journey Through the World of Feelings

An **Emotional museum** and community center of Batu Arang by reusing the existing building on site. The museum had six different rooms that organized thematically to allow the visitors to experience a range of emotions such as sadness, heartbreak, and anger

(To respect and emphasize on the existing building, red clay bricks were used often especially for the exterior walls and facade of the building. This is due to the reason that it unable the whole design having similar architecture language towards the existing building and the whole site in Batu Arang (Barrack Houses).

A new layer of brick wall created and act as double layer brick wall façade helps on framing and preserving the existing historical building while creating a more sensible and gigantic form. It helps on presenting different kind of bricks that showing old and new materials for the building.

The building is design with eight entrances that created functional accessibility for the locals and visitors in Batu Arang and each entrance is provide with specific roles of function of it. It brings back the accessibility from the existing padang of 360 degree entrances which will convenient to the people while visualizing building massing.



Urban + Building Strategies

In order to tackle the site issue such as:

- Aging of population
- Not enough accommodating for tourist
- Historical buildings are not accessible and not open to the public which unable to let the public to appreciate the site

The Urban Strategy is to link up the historical place, such as the Air Shaft Building, Sports Club, Former Workers' Settlement, Open-cast Mining Site, and Abandoned buildings by proposing urban intervention at the specific potential area.

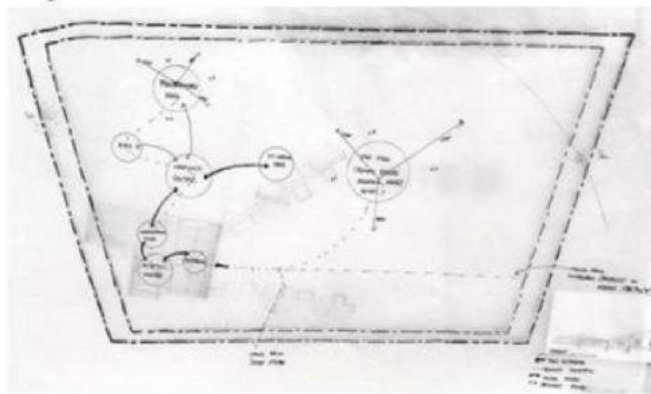
The selected site for the building strategy is located at the Sports Club of Batu Arang.

The design intention of the building is to minimize the build-up area at the field to remain the existing program at the site.

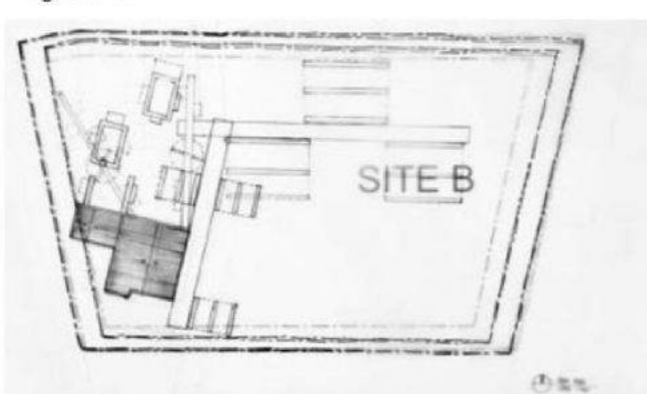
Below showing a series of the initial ideation transformations of the proposed building.

Photomontage of the building strategies by using the physical model in scale 1:400 is to show the idea of human activities and how each proposal responds to the existing site context.

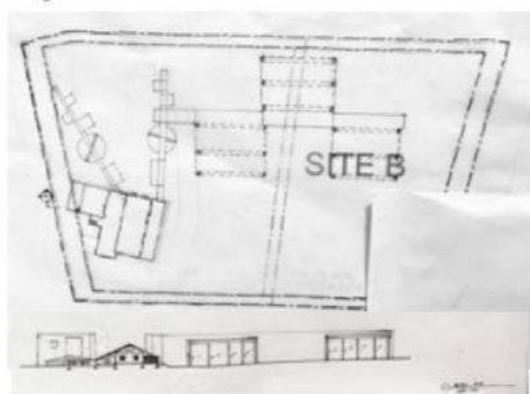
Progress 1:



Progress 2:



Progress 3:



Building Intervention initial sketches:

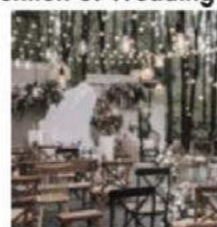
Intervention 1: Farming



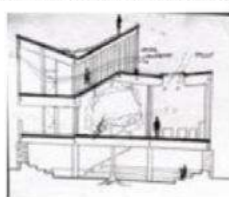
Intervention 2: Commercial Farming



Intervention 3: Wedding Space



Intervention 7: Library



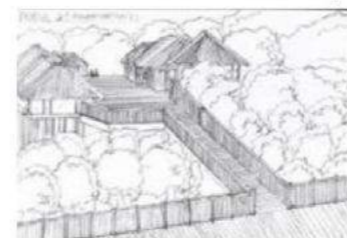
Intervention 8: Trampoline



Intervention 9: Brick Flooring



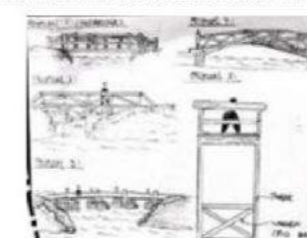
Intervention 4: Accommodation/ Resort



Intervention 5: Playground



Intervention 6: Pedestrian Walkway



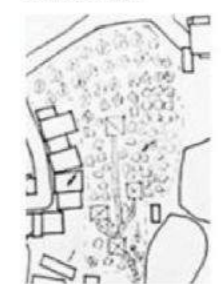
3D Collage of Urban Intervention:



Intervention 11: Community Center

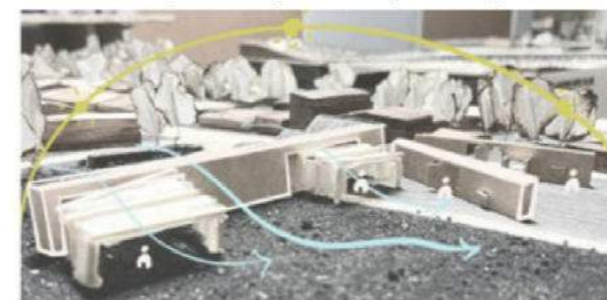


Intervention 10: Plantation



Photomontage of initial idea using physical model in scale 1:400:

Respond to the sun path diagram and prevailing wind direction:



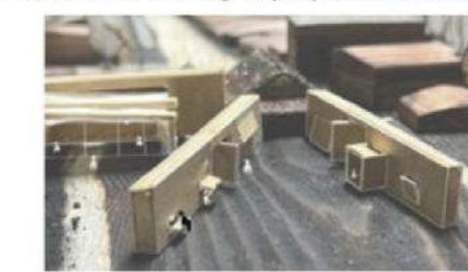
Initial idea of the façade design:



Pedestrian Circulation and the Relationship of the site and proposed building:



Human activities at the surrounding of proposed building:

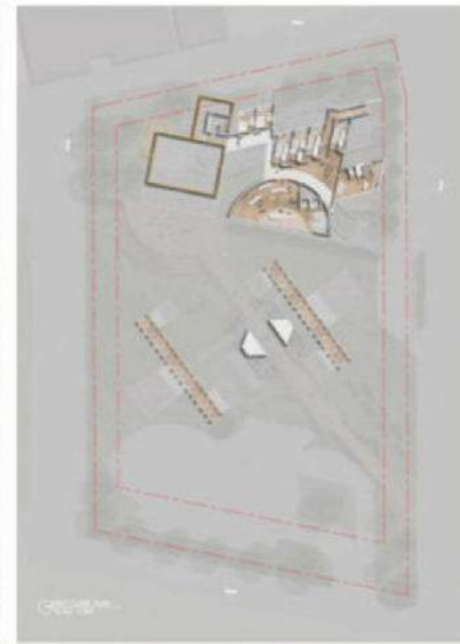
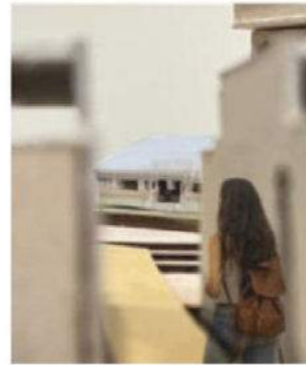


The 1950 • Reborn

"Landscapes and place store memories, they save trace of lives long gone" from "A feeling of History" by Peter Zumthor

The chosen site is located in the center of Batu Arang, which is the Former Mine Workers Sports Club. It is an existing Padang/ Field that functions as a place for locals to gather and treat it as an entertainment place, such as playing football.

ADAPTIVE REUSE is the aim of this project. Therefore, the preservation of the existing building facade was done to remind the locals about the history of the site and propose the pedestrian bridge & walkway to invite pedestrian who comes from the Old Shoplot and from the Masjid Jamek Batu Arang to enjoy nature and discover the site, Batu Arang



The whole concept of the proposal is to boost the economy at the site by proposing the event space for the Wedding Event and the Community Seedling Hub as the supporting program to the main space, Museum.

These will make the building vitalization which means the sustainability of the proposed building can be achieved and having the self-support energy. The green roof system and proposed landscape design are the main keys to the design where they are able to utilize the rainwater while at the same time appreciating the gift of nature.



It is emotional and experiencing difference when visiting from one space to another in order to express the emotional change of the miners in the past.

The spatial relationship for the proposed buildings is interrelated as most of them are open air and only the accommodation is fully enclosed due to the privacy issue. Thus, the user experience will change according to the space they visit.

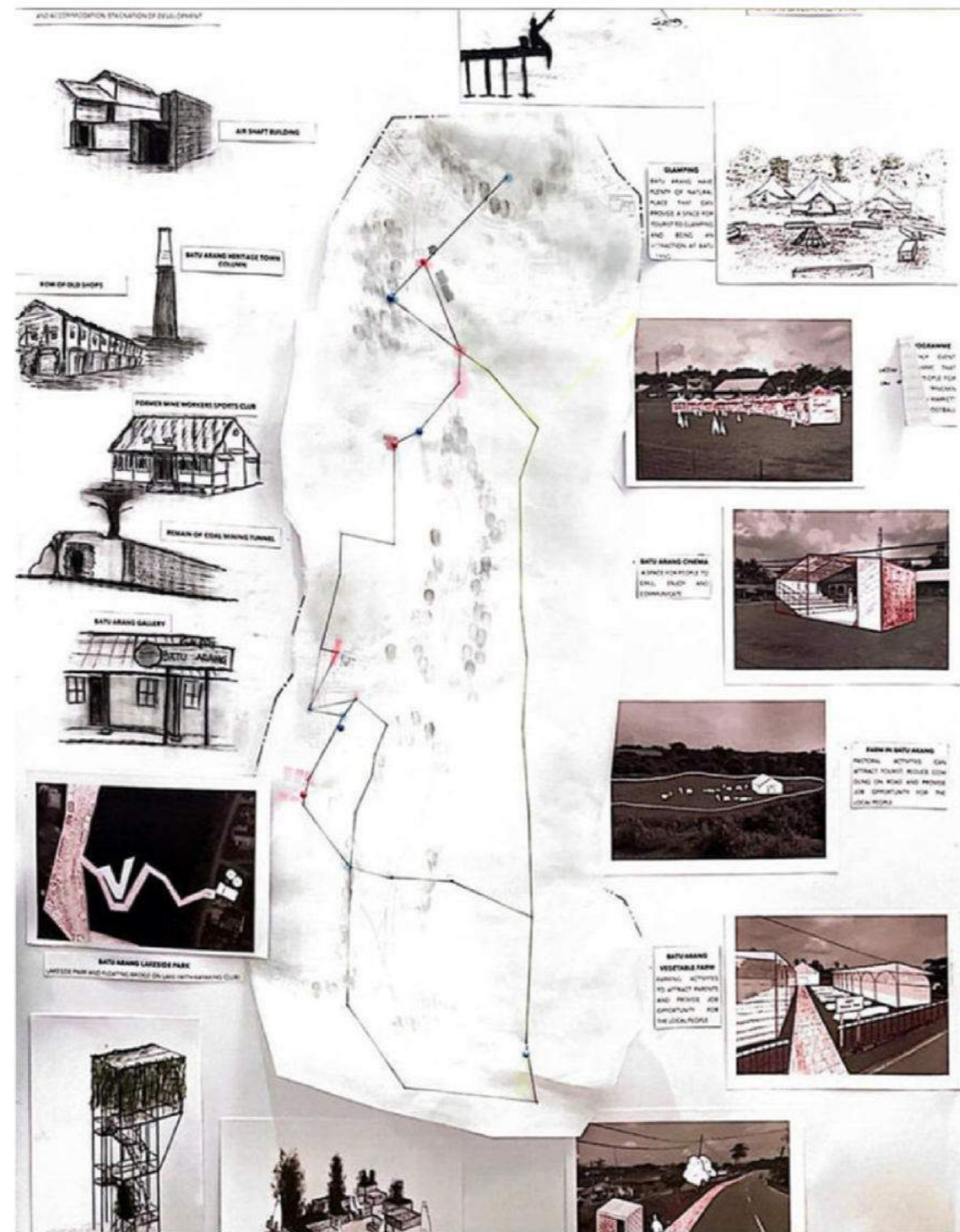
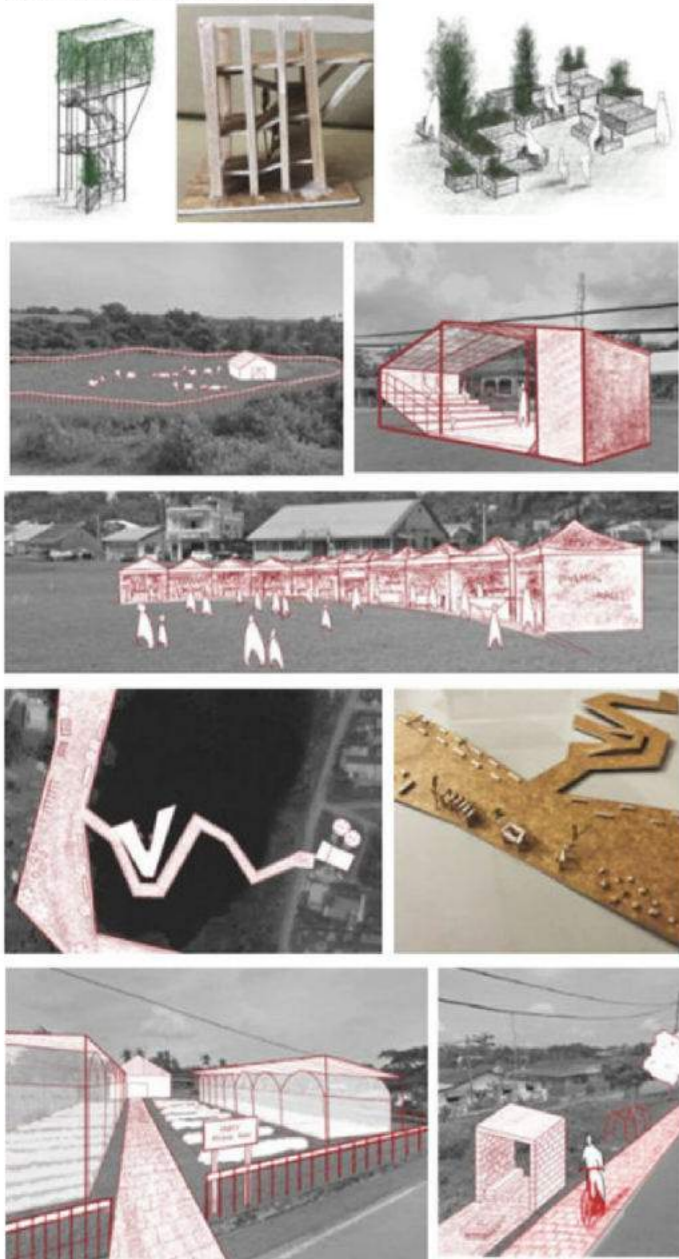


Urban and Building Strategies

"Landscapes and places store memories, they save traces of lives long gone..."

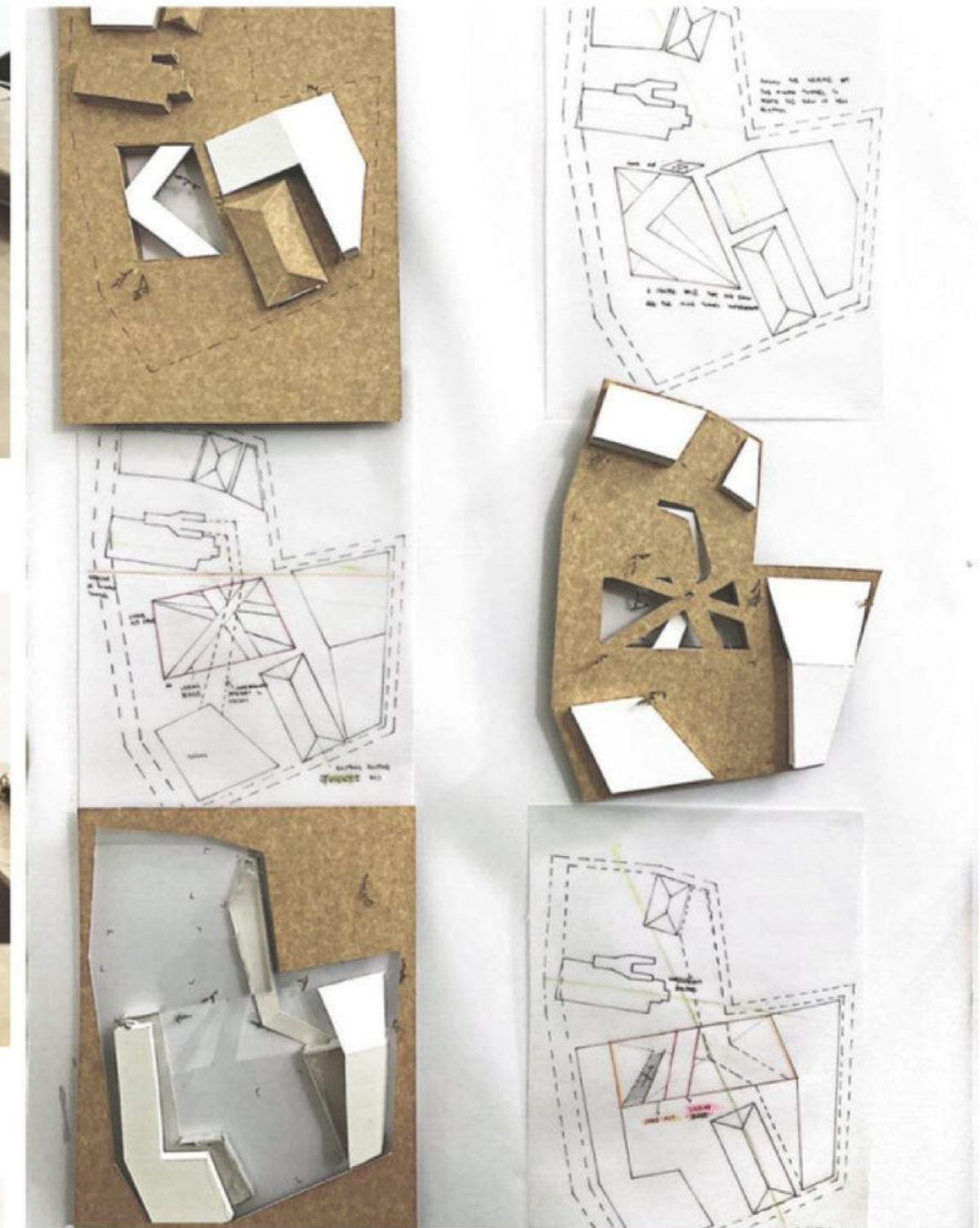
Batu Arang is a place of great historical value, which once brought prosperity through its coal mines. However, it has now declined into an area with an aging population and sparse population.

Route intervention for tourists



My urban intervention is to propose various interesting activities and facilities, combined with its existing historical relics, to turn it into a tourist attraction. Prior to this, providing more employment opportunities for local residents or migrant workers is the foundation for making this place prosperous again.

Tourists can follow this route to learn more about the history of this place and appreciate the beauty of the natural environment away from the city center. My intervention uses uniform materials to achieve consistency and coherence. This allows everyone to immediately recognize that they have entered a specific place simply by seeing the brick floor.



The reason for choosing site A is because during the site visit I was impressed by the airshaft building.

There are many tunnels hidden under the ground that everyone can't see. What I wanna do is to reveal the secrets of these tunnel by using the axis of the tunnel to design the center plaza. The form of the building is follow by the boundary line of the building to maximize the usage of space. The underground spaces is linking by tunnel to let people experience the mine workers working environment.

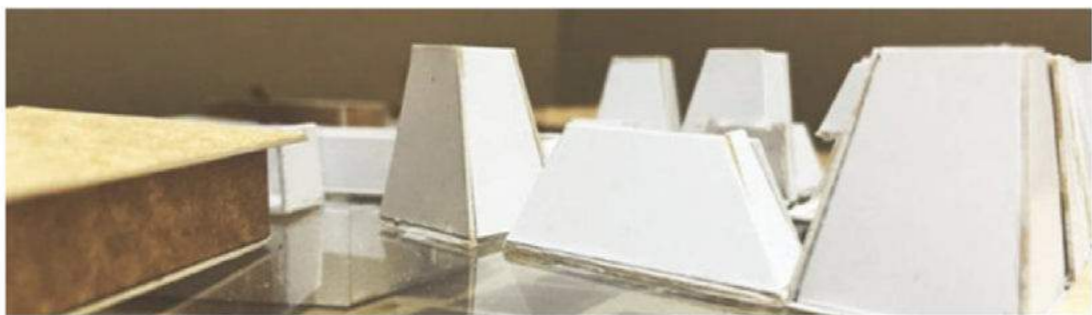
Emerge

"Historical site itself included a feeling of time travel..."

Emerge denotes the process of coming forth, appearing, or manifesting from a state of obscurity, concealment, or potentiality. It represents a transition or transformation, where something previously hidden, latent, or unnoticed reveals itself to the world which is also the main idea of this building.

Visitors are able to experience the environment of mine workers in underground when they use the tunnel underground to access one space. The form of the accommodation is having a different language compared to the museum. The form is inspired by the chimney which is one of the landmarks of Batu Arang.

Batu Arang used to be a famous place of red brick production and export. The chosen material for this museum is brick to let people experience the brilliance of this once renowned red brick exporting place.



Ground Floor Plan



Airshaft Interior



Open Art Space



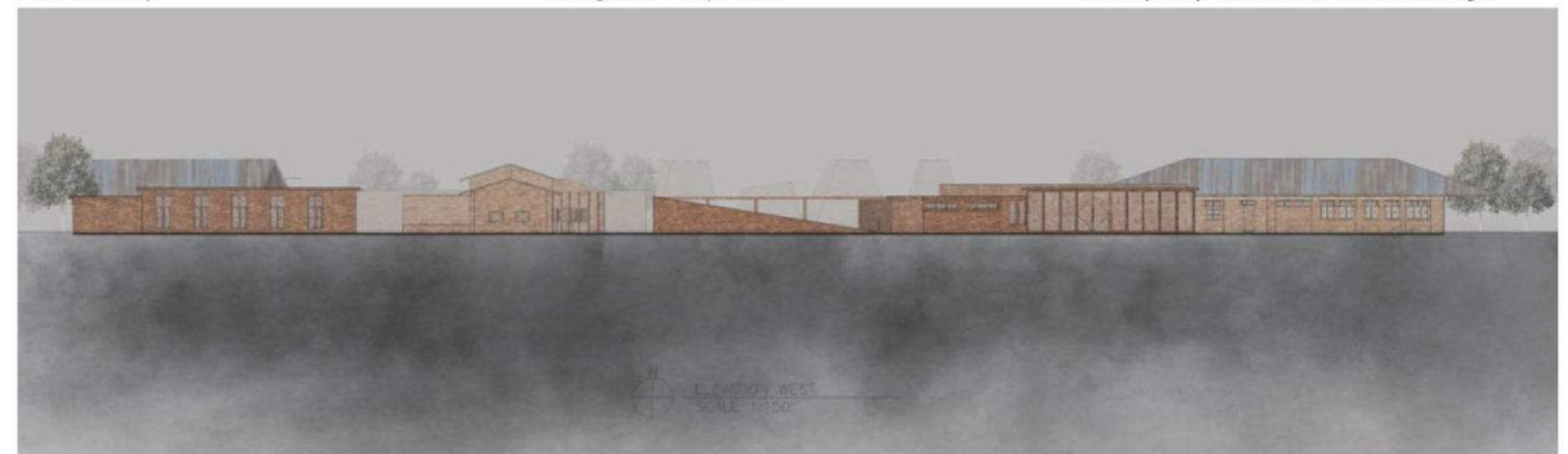
Arch Walkway



Underground Ramp Access



Contemporary Art Museum with Natural Light



Urban Strategy:

The approaches that connect the historical setting with possible area initiatives in order to empower the new community.

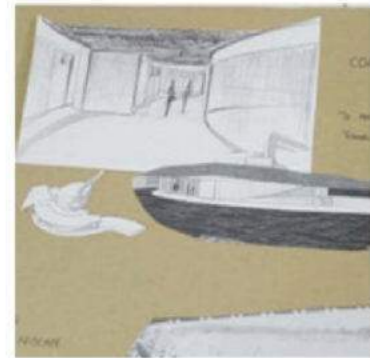
In order to make it into a popular destination for tourists my urban intervention is to suggest numerous activities to recreate the memories

In order to make it into a popular destination for tourists my urban intervention is to suggest numerous

recreational pursuits which could be connected with the space's already-existing historic monuments.



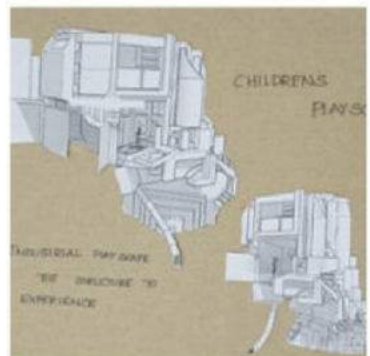
Pause spot



mining exhibition center



Coal treatment museum



children's playscape



Living quarters



Individuals who came to take this trail to learn more about the historical events and to appreciate the beauty and the landscapes that are away from the town centre. My intervention mostly symbolize industrial building throughout the site to provide consistency and organization because previously, the majority of miners employed mechanical means to extract coal. Along the way. They will come across an innovative intervention that whose purpose serves a different function and draws tourists.

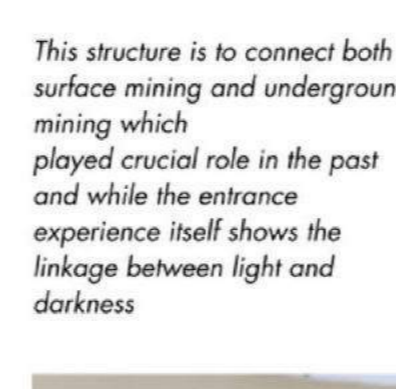
Building Strategy:

I started by choosing site B. As its the Centre for many significant historical events, it serves as an overview for me as I seek to discover the depths of certain emotions and moments to implement unique interventions.. I work to decipher the intricate framework of human experience and create a setting that reflects the essence of each special event, encouraging reflection and a transformative interaction with the site's various segments, but this has been in isolation for years that

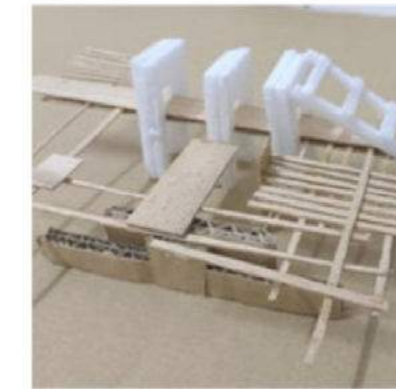
encourages deep thought among visitors were taken into consideration when choosing the site. The building design is based on the concept of using light weight material as well as the using local material for adaptive reuse and playing with the underground tunnels for ore experience where the whole concept is how the miners felt while mining



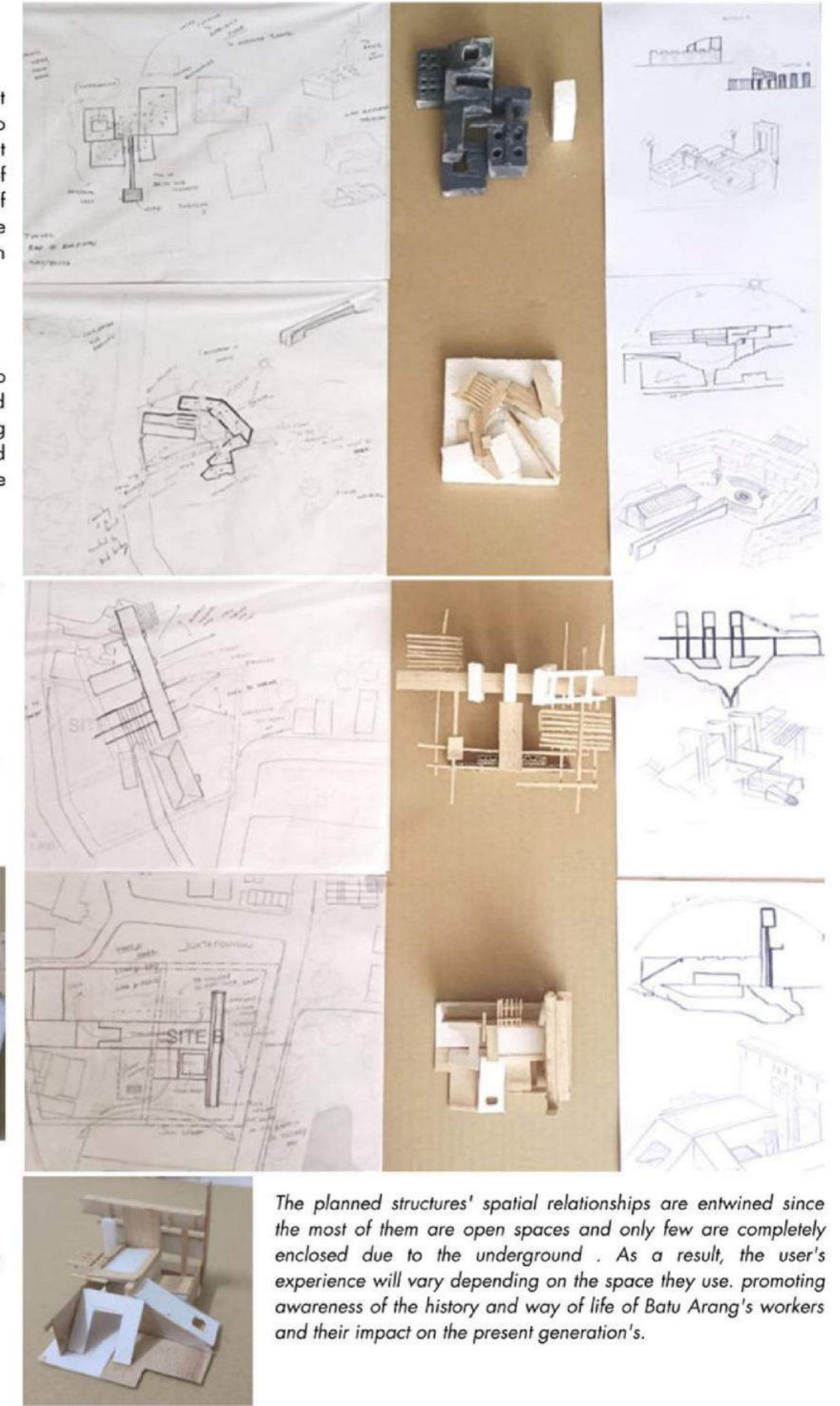
This strategy is to play with light entering the space. with that minimal light the users are guided to enter the different segments where as the blocks some are connected to ground while other floating with the support of the blocks on ground



This structure is to connect both surface mining and underground mining which played crucial role in the past and while the entrance experience itself shows the linkage between light and darkness



My intension of this design is based on the concept of using light weight material and representing the local industry where it mostly depends on coal industry so trying to imitate the industrialist look for the form



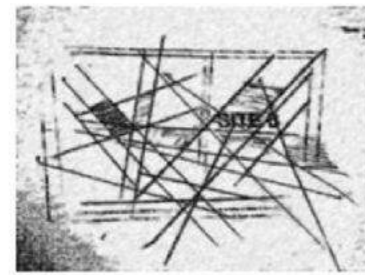
The planned structures' spatial relationships are entwined since the most of them are open spaces and only few are completely enclosed due to the underground. As a result, the user's experience will vary depending on the space they use. promoting awareness of the history and way of life of Batu Arang's workers and their impact on the present generation's.

UNDERPASS

Sceneries with a storyline and the Underpass Museum illustrate the feelings of miners and connect to the past of Batu Arang. Understanding the mindset of the populace and the causes of the various protests that took place at that time is crucial.

Intention

The design concept started with looking into the tunnels and imitating its shapes, is the ideology of the p3. Frames of visibility from the top of the ground when we scan, they are indifferent with different depths, and to make it more



interesting the caressing transition used that would make the space more livability and connectivity to the site.

Concept

Transpose of two underground and surface mining which makes the visitors experience. different kinds of space throughout the building were created to let users feel how the miners were abused, treated like slaves and how they endured all the pain with the hope that they can earn something at the last even though they knew it's risky and life threatening

Strategy

Encapsulate. The subtraction from the frames of the mines to create communal spaces that unifies the encapsulated form. The brick walls are created to differentiate/separate the programs which can be helpful for the different users for this building the programs will be museum, research center, nurse and community center along with accommodation. The voids are created in between the space that connects the amenities throughout the building, natural ventilation



Site plan

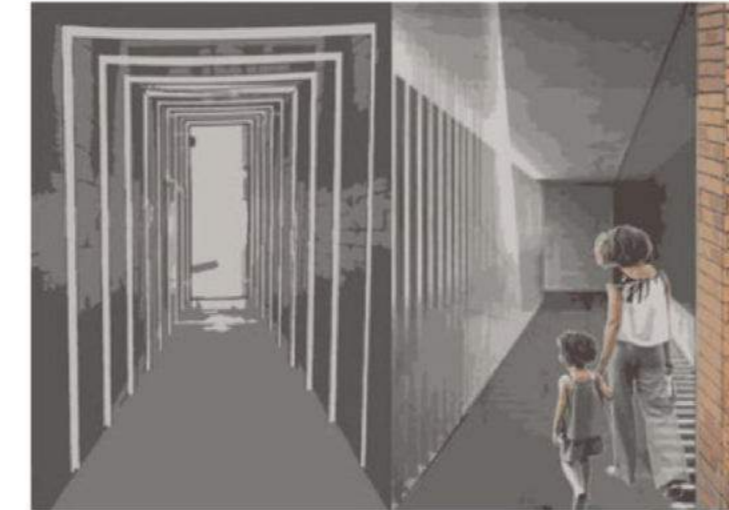
Bird eye view



Ground Floor Plan



The rock, bricks, and tree patterns that I regularly noticed at the Batu Arang building site were used with in the building. In order to provide people a meaningful experience and highlight the significance of existing building. It serves as an outdoor restaurant.



Transmute

Megalomania



Surreptitious



Pulverized

Axis



Insurgent

PERSPECTIVES

To comprehend the interconnected story of the past, present, and future, we must maintain a strong feeling of connection to the past. As a result, a dark interaction between the self, the environment, and the entire mosaic of user experiences is formed. These spaces allows us to feel many parts of what it's like to be a miner while simultaneously experiencing the mines.



Underground Accommodation



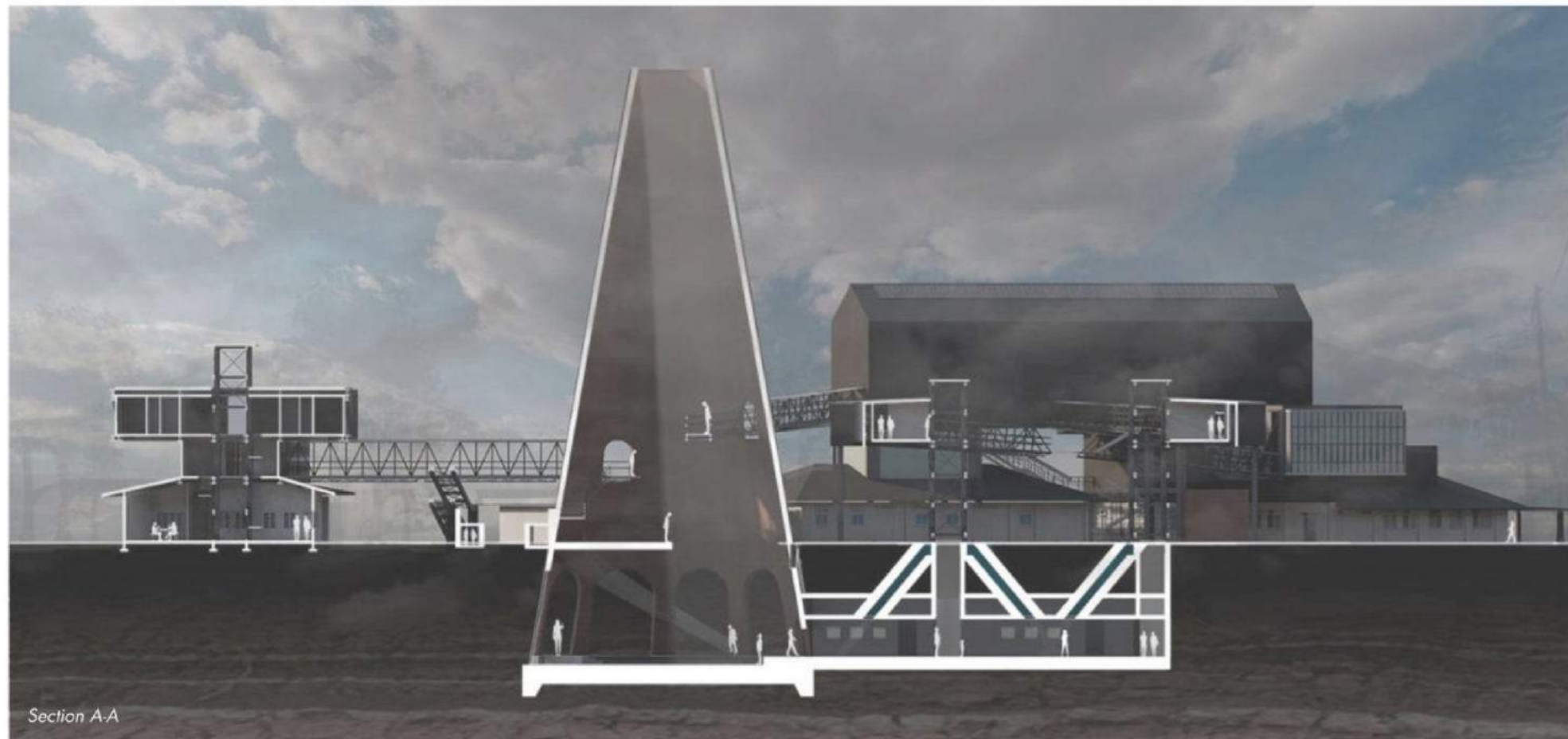
The Black Museum

History & Machinery Museum which present the life of Batu Arang workers in the past. It is to understand the feeling of people and why so many strikes happened at that point of time.

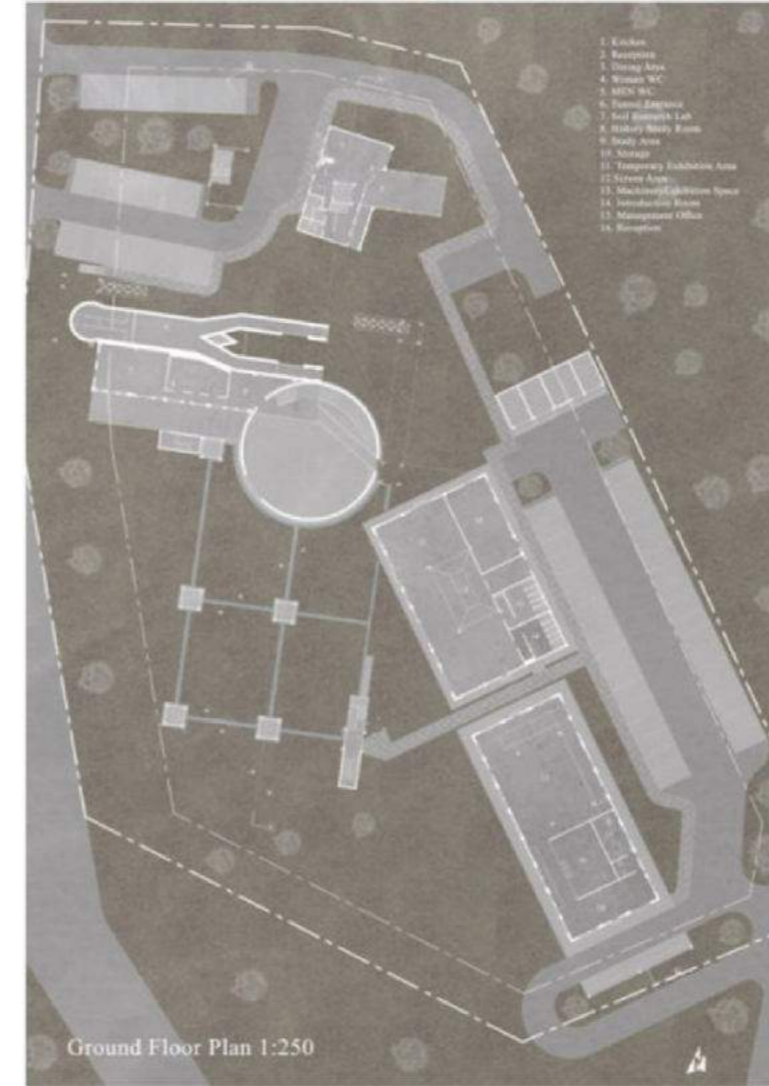
Batu Arang is a historical city which is born by finding the coal inside of it. The existence of coal brings so many industries such as brick factories, power stations, and train tracks which are all related to the colliery and altogether gave an entire industrial look to the city. In the past there the city was filled with so many rail tracks, factories, and opencast and underground tunnels mines for coal. Unfortunately, contrary to all the benefits of these natural resources and their products, workers and especially mine workers who had the most difficult work condition didn't experience a peaceful life.



From the dawn of the city to its death, Batu Arang saw so many Protests by workers due to their low salaries and poor living environment. These protests not only affected the coal mine itself but it had a big influence on the whole of Malaysia and this is what brings concern to this city. The proposed building is designed to understand the living and working condition of workers in the past with the purpose of increasing people's awareness and engaging local people to keep the history of the city alive. The museum is called the "Black Museum" with the inspiration from the origin of Batu Arang and its significance and the dark history of the past.



Section A-A



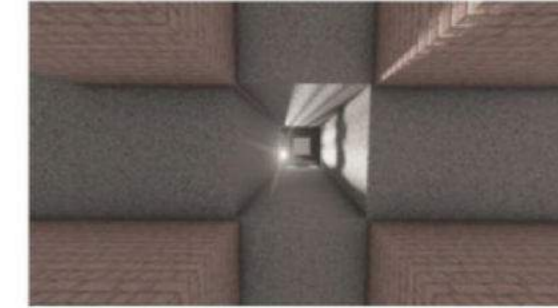
Ground Floor Plan 1:250



Building Connection to Site Context



Section B-B



From Earth to Sky (Location: Tunnel)



From Sky to Earth (Location: Art Gallery)



Towards the light (Location: Tunnel)



Dark & Light (Location: Art Gallery)



Look Up (Location: Sky/Water Room)



Look Down (Location: Machinery Gallery)



Cycle of Light (Location: Café shop)



Embrace the Structure (Location: Connection Bridge)

Memories within Senses; Senses within Memories

"... our personal memory lives from images, not from facts. Often, what we see will evoke images in our minds that are associated with memories ... And it works the other way round, too. The images that we remember are inevitably related to feelings and emotions."
Peter Zumthor

Memories lie within senses; senses lie within memories. The project aims to bring the buried history back to light through urban intervention, merging the past, present and future as people are faced with the past that are hidden through the times. Combining the materials that were dominant in the past with the surrounding nature, the people will be reminded of the past that they were not even aware of during the time.

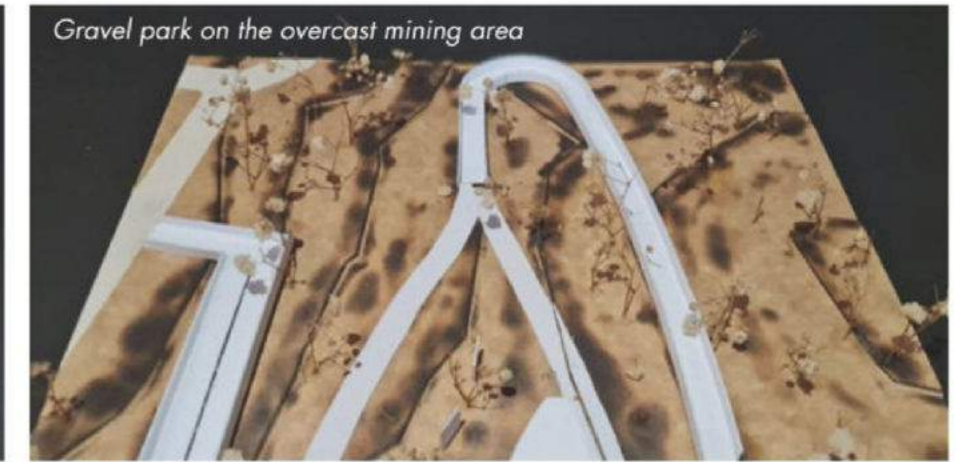
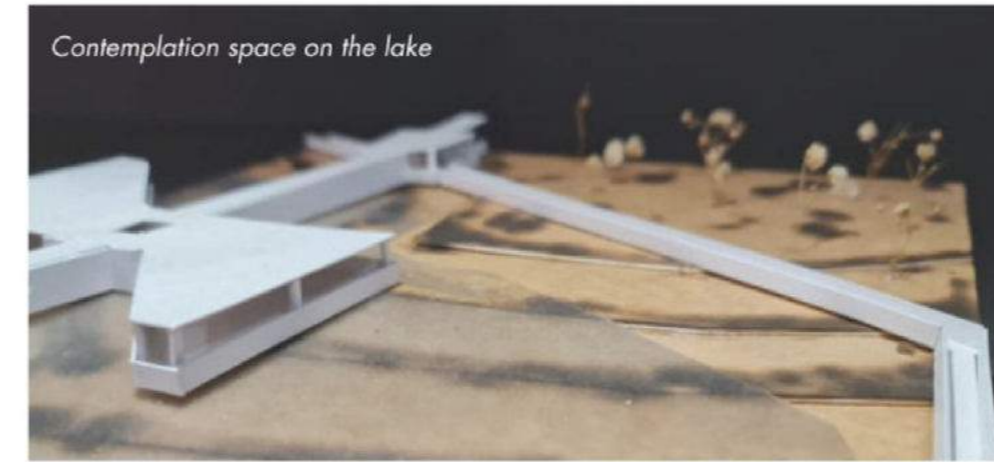
1) A small semi-open exhibition area that displays the bricks manufactured by the factory in the past as well as its history. The walkway allows intimacy between people and surrounding nature, also connects to the airshaft, providing ease of access to the museum.

2) Proposing a resting shelter in front of the mine entrance to allow visitors to stay longer, giving them more time to appreciate the historical landmark.

3) Revitalizing the abandoned brick settlements by proposing programs that caters to the quietness of the area. One of which being a library.

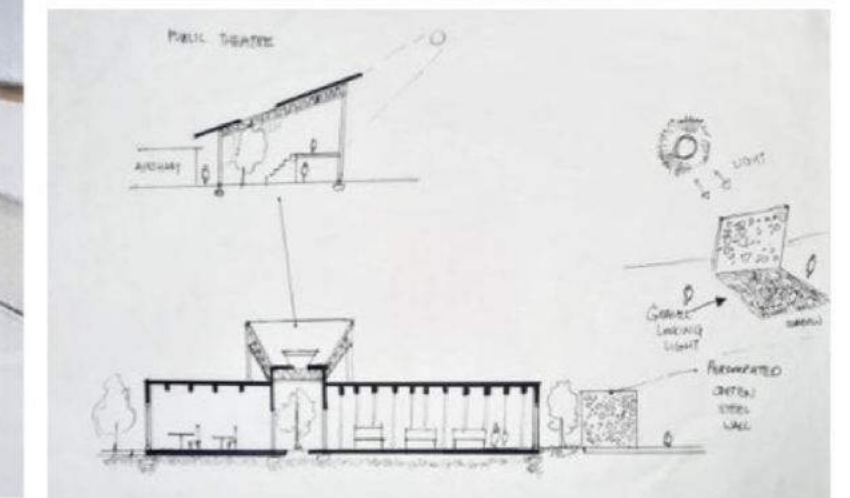
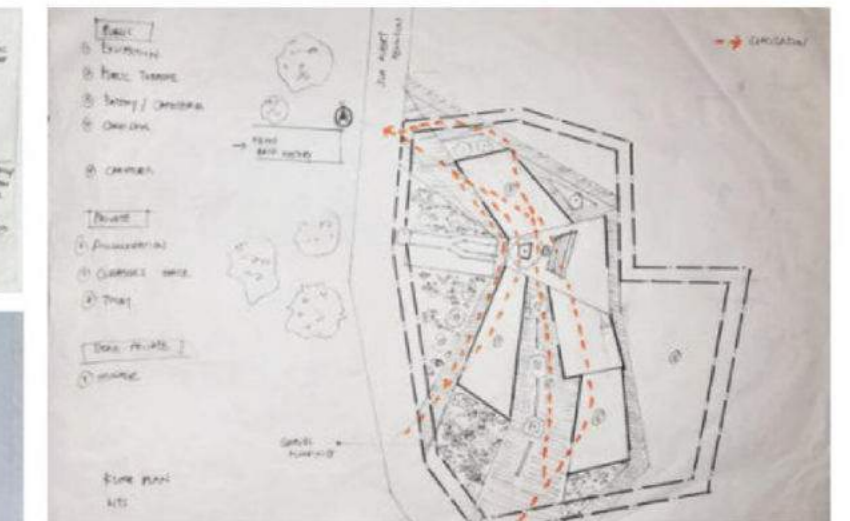
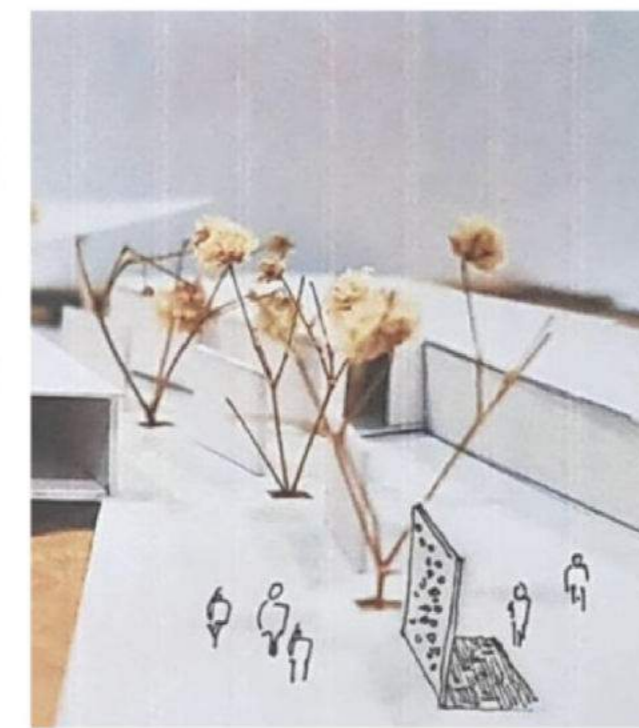
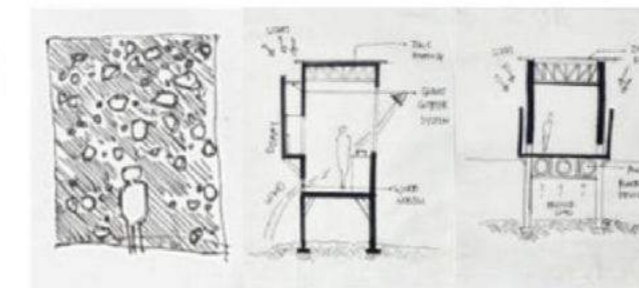
4) Utilizing the quietness of the center of the lake to propose a contemplation space with the lake in sight. A walkway that surrounds the lake provides the view of the lake with the contemplation space at the center can serve as a space for walks and jogging.

5) Proposing a gravel-themed park on the former coal quarry to mimic its environment of the past. Surrounded by residences from all sides, it serves as a nice gathering spot for community activities and others.



The building strategy is to use the intervention models as study models and extract elements of construction from each of them then to apply them into the building.

The idea is to separate the building into two parts, one for the museum, using corten steel as material to symbolize nature; the other side being the utilization and community spaces as well as accommodation, using rammed earth to symbolize the strata layers. The two sides will be connected by a hallway in the middle that can house mass gathering activities as a converging spot for both sides. The hallway also leads to the centre point of the city that is situated near the existing air shaft.



Co-Herence

"... our personal memory lives from images, not from facts. Often, what we see will evoke images in our minds that are associated with memories ... And it works the other way round, too. The images that we remember are inevitably related to feelings and emotions."

Peter Zumthor

A historical museum that displays materials in a way that evokes memories of one through the interaction between human and nature. Through the senses, our mind allows us to recall the moment where we once encountered such situations, the historical museum strives to make one recall a memory through the act of observing the direct environment as well as our surrounding.

Building Layout

Separated into two sides, AKA historical lane (Left) and utilization lane (Right). Both lanes converge to one point, which is the gathering point located beside the air shaft.

Museum Circulation for visitors

Visitors are to enter the building through the hallway (middle lane) to the reception in which they will be guided to the exhibition space (Left). Visitors will then start looking through the history of Batu Arang by slowly walking up the ramp. At the top, they will see the protruding air shaft entrance and will be intrigued to see what is inside. In there, they will observe the historical significance of the building where mining workers once utilized. As they exit the air shaft, they will see a glimpse of the theatre where people use it to perform (performances of Batu Arang's history). The light from the lightwell above would invite them to go up. Reaching the top, they will be able to observe the whole of Batu Arang, which symbolizes the present time and the end of the program.



Urban + Building Strategies



WORKERS' SETTLEMENTS



BRICK FACTORY



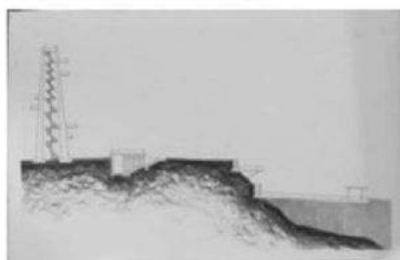
AIRSHAFT



FORMER MINER SPORTCLUB



O.C. 3 UNDERGROUND TUNNER ENTRANCE



CONCEPTUAL SECTION



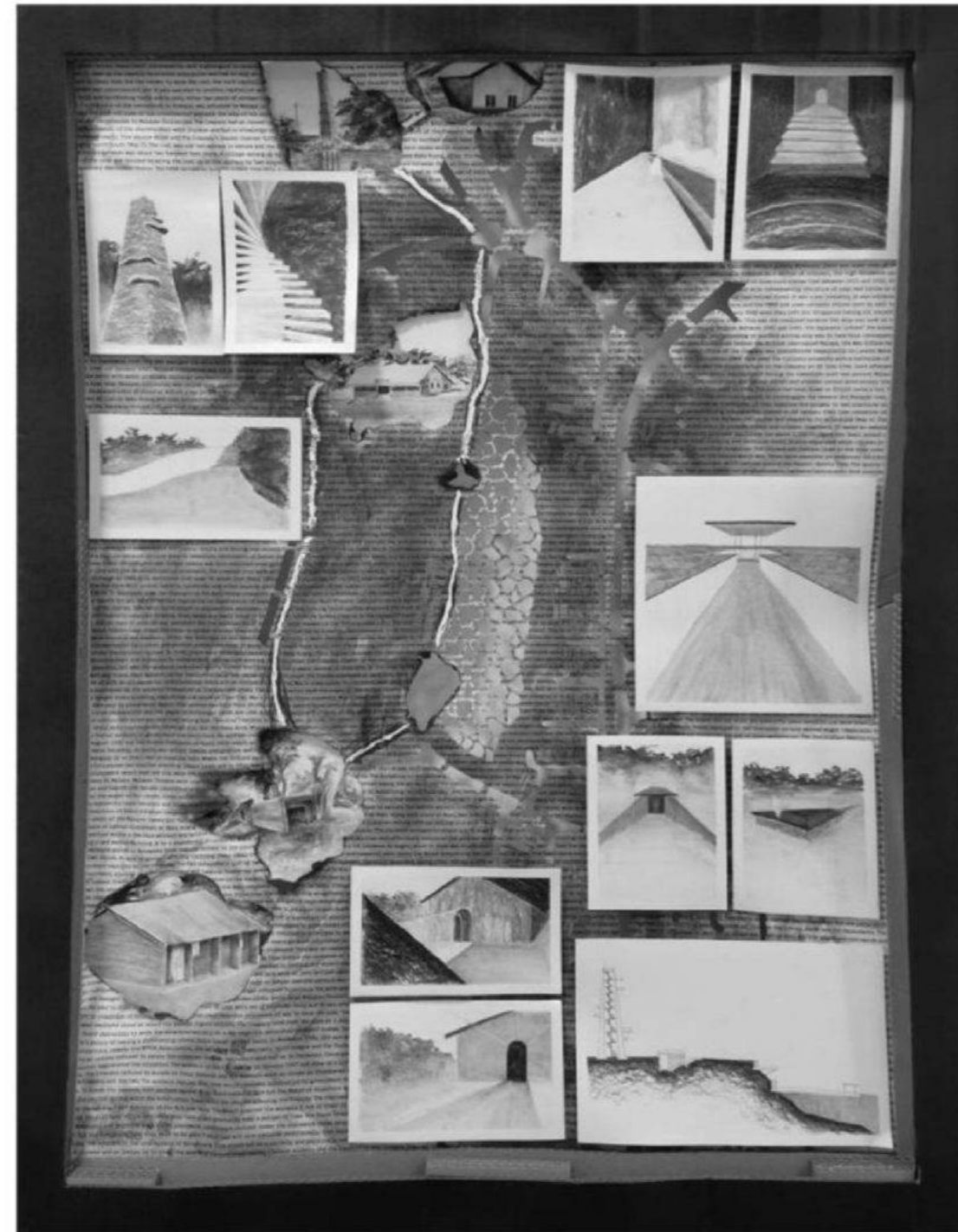
WORKERS' SETTLEMENTS: GALLERY



WORKERS' SETTLEMENTS: GALLERY



SMALL VIEWING PLATFORM TOWARDS THE LAKE



URBAN STRATEGIES

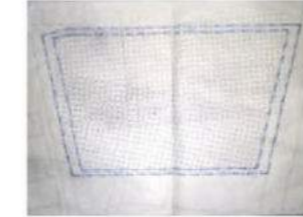
This is the urban strategies board for my P2. The white line shown in the middle, is called the "Coal Heritage Trail". It is my proposed cycling track mixing with pedestrian walkway. It surrounded the left side of the map which the area is the core area full with historical buildings while the right is mainly residential and school area.

The trail is a complete journey linking all the historical building with my proposals and leading people to the direction of my project 3 building which is at the center of the whole area.

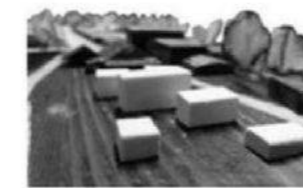
The drawings on the left is all the historical buildings. While the drawings on the bottom are the proposals that turned the historical buildings into new point of attraction for visitors.

Intervention 3: Wedding Space

SKETCHES:
GRIDLINE BASE



MOCK-UP MODELS



This is my building strategy board. This is actually a prototype for my P3 design. It is located on site B, which is the Former Miner's Sportclub.

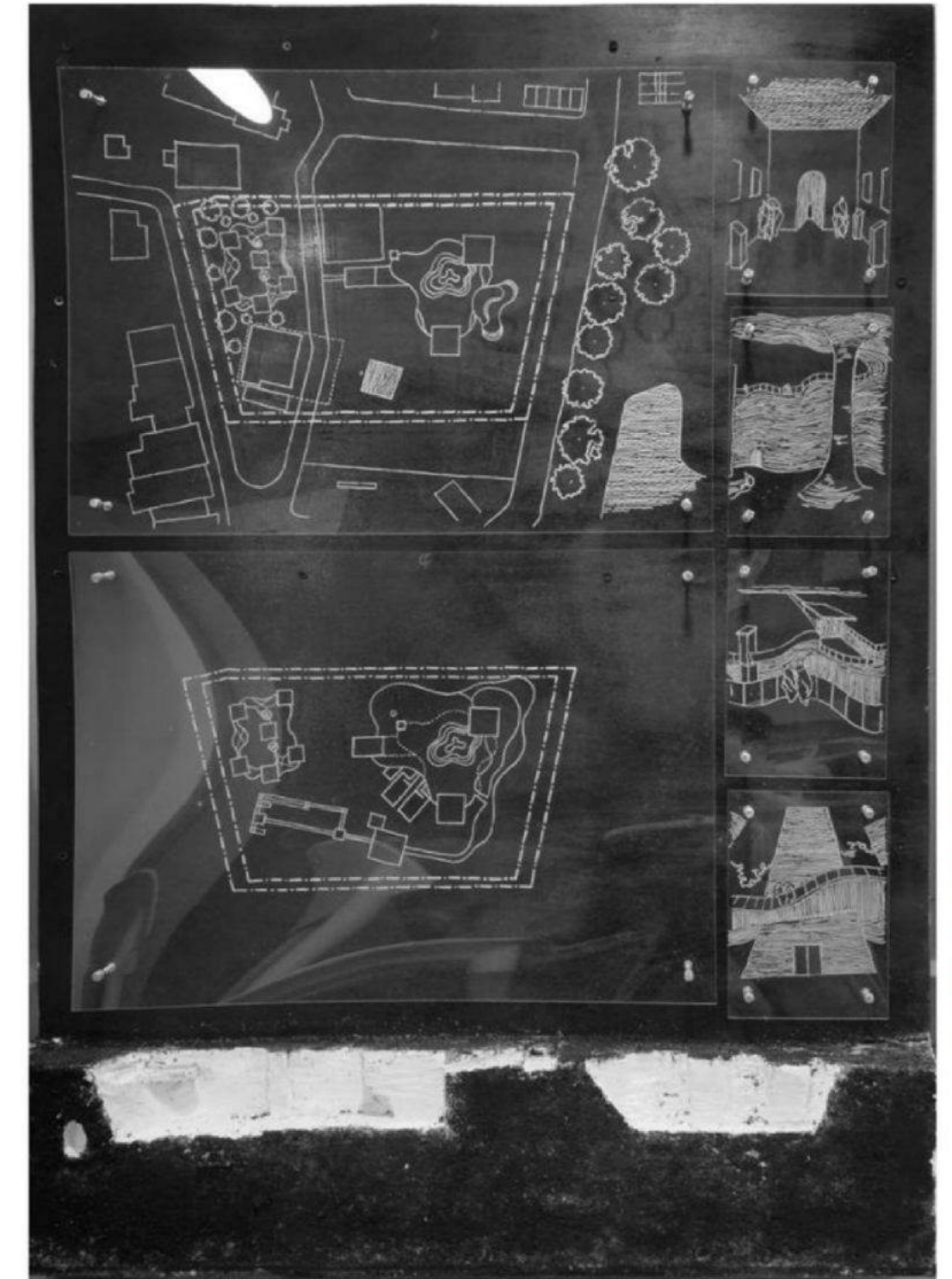
My design is aligned to the gridline base shown on the left which is created aligning the cycling track lay across the site at the middle.

The cycling track has split the site into left and right. The right side is facing the main road, so the main entrance will be on the right. Most activities will happen on the right side, while the left side is more private which having the accommodation on the top left.

I remain the only existing building: the clubhouse itself, and turn it in to part of my museum. One more storey added on top of it to make it the tallest building in the site while other spaces will be underground.

There is a two storeys deep hole on the middle of the site, which is representing the mining pit in Batu Arang. It is the community sharing area which can be used as event space connecting with library, workshop and cafe.

The photos on the left is the massing models that I made to explore the massing and also the overall layout for my P2.



Buildings Strategies



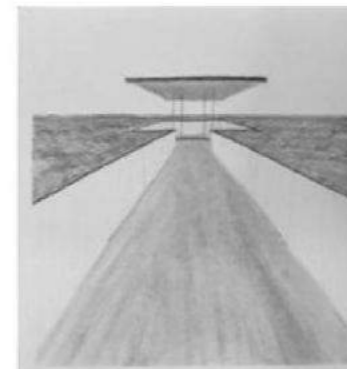
BRICK FACTORY: WATCHTOWER



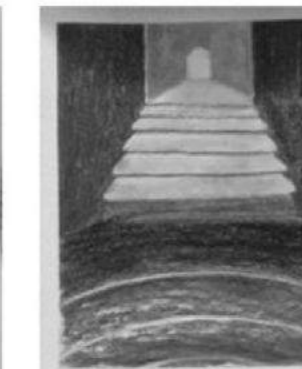
BRICK FACTORY: WATCHTOWER



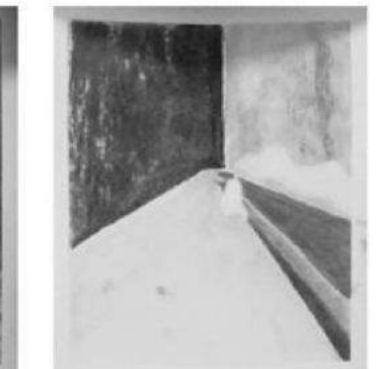
PUBLIC TOILETS



VIEWING PLATFORM: GAZEBO



AIR SHAFT: CAFE



AIR SHAFT: CAFE

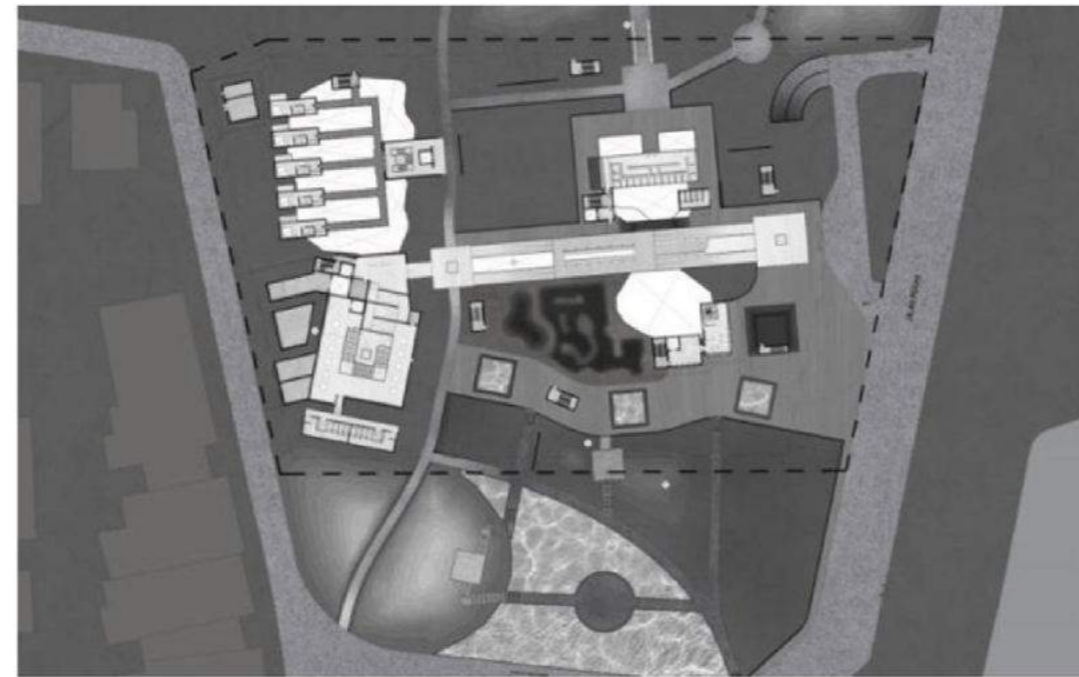
"ECHO"

"Creating a feeling for the things that are absent instead of creating a feeling of presence for the thing lost" by Peter Zumthor



SOUTH ELEVATION

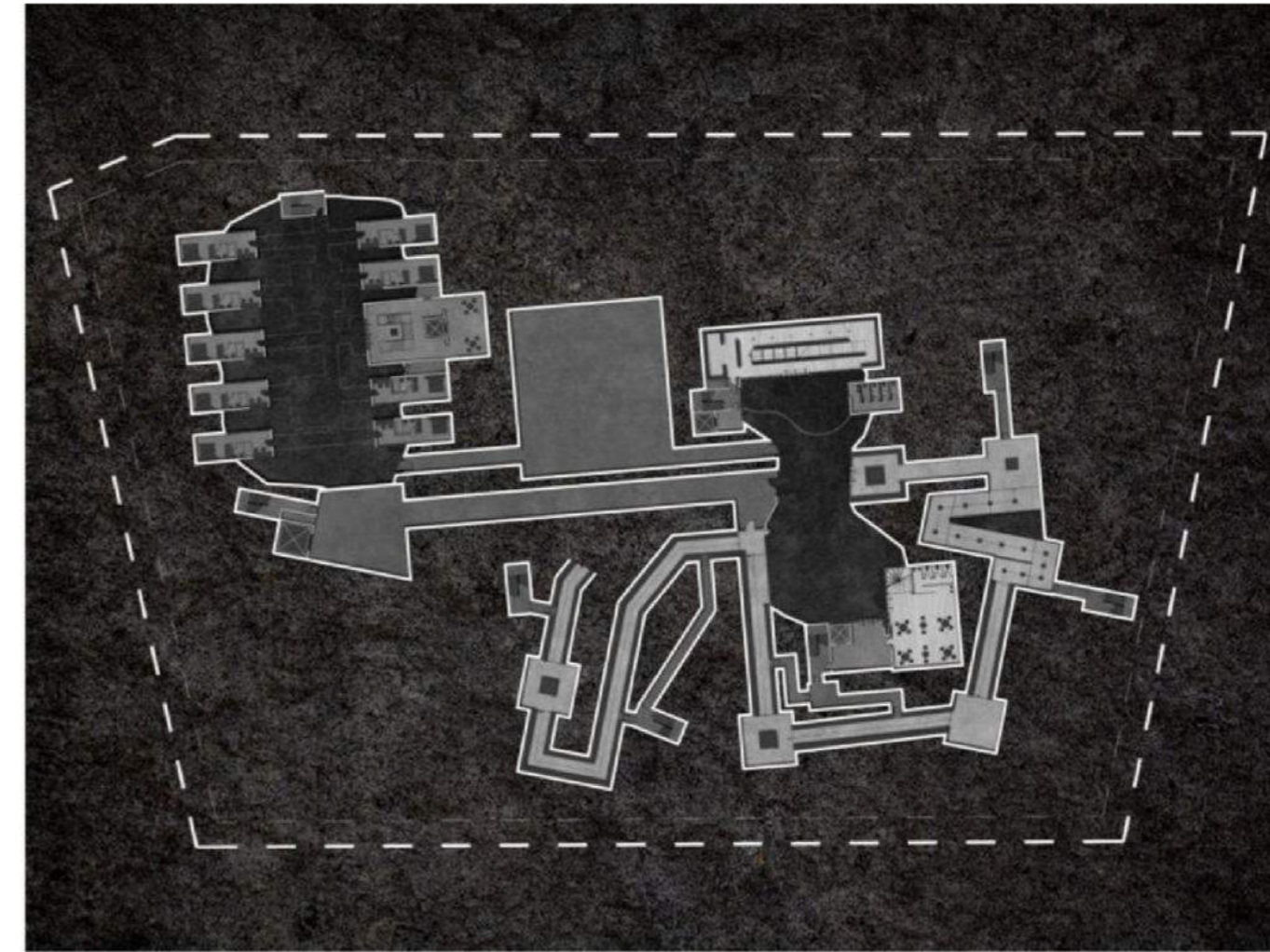
NORTH ELEVATION



GROUND FLOOR PLAN

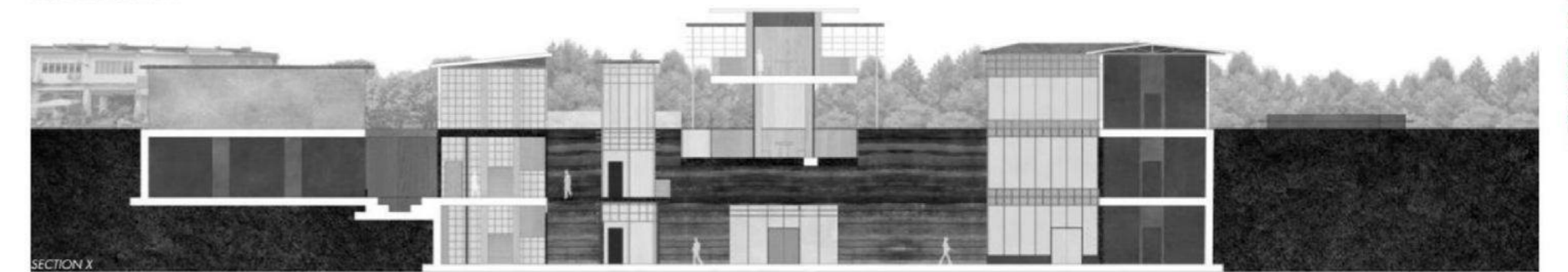
After further development of my P2, I then came out with this current design. There is the Coal Heritage Trail at the center which is linked with other historical buildings to create a complete cycle of the journey. Even though the cycling track has split the site into left and right, the community area which is the long horizontal space lay across the site, connecting the main entrance on the left to the existing building which serves as the Memorial Gallery.

This design is focusing on creating sceneries to evoke people's memory or even creating new memory from the past. Starting from the main entrance, I am playing with the levels for all the spaces. There are a lot of height differences during the whole journey from the entrance to the end of the museum.

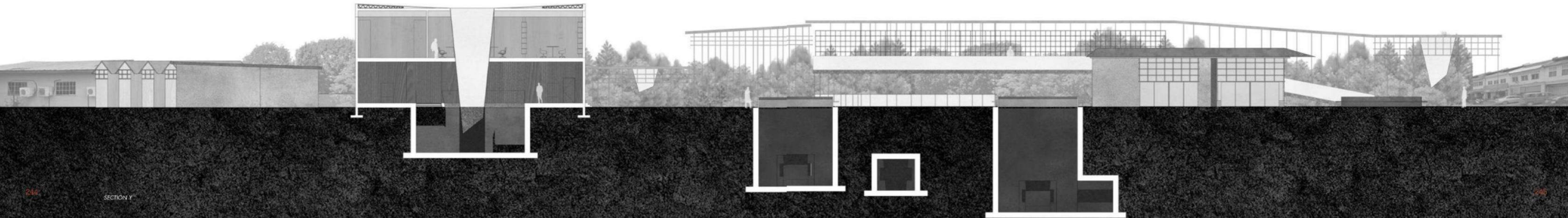


BASEMENT 2 FLOOR PLAN

Most of the spaces are located underground especially the Tunnel Museum. The Tunnel Museum is literally a long underground tunnel with different height level based on the storyline of the Batu Arang Coal Mining History. And the whole journey ended at the Open Pit area on basement 2, left the visitor to explore the rest of the spaces by themselves.

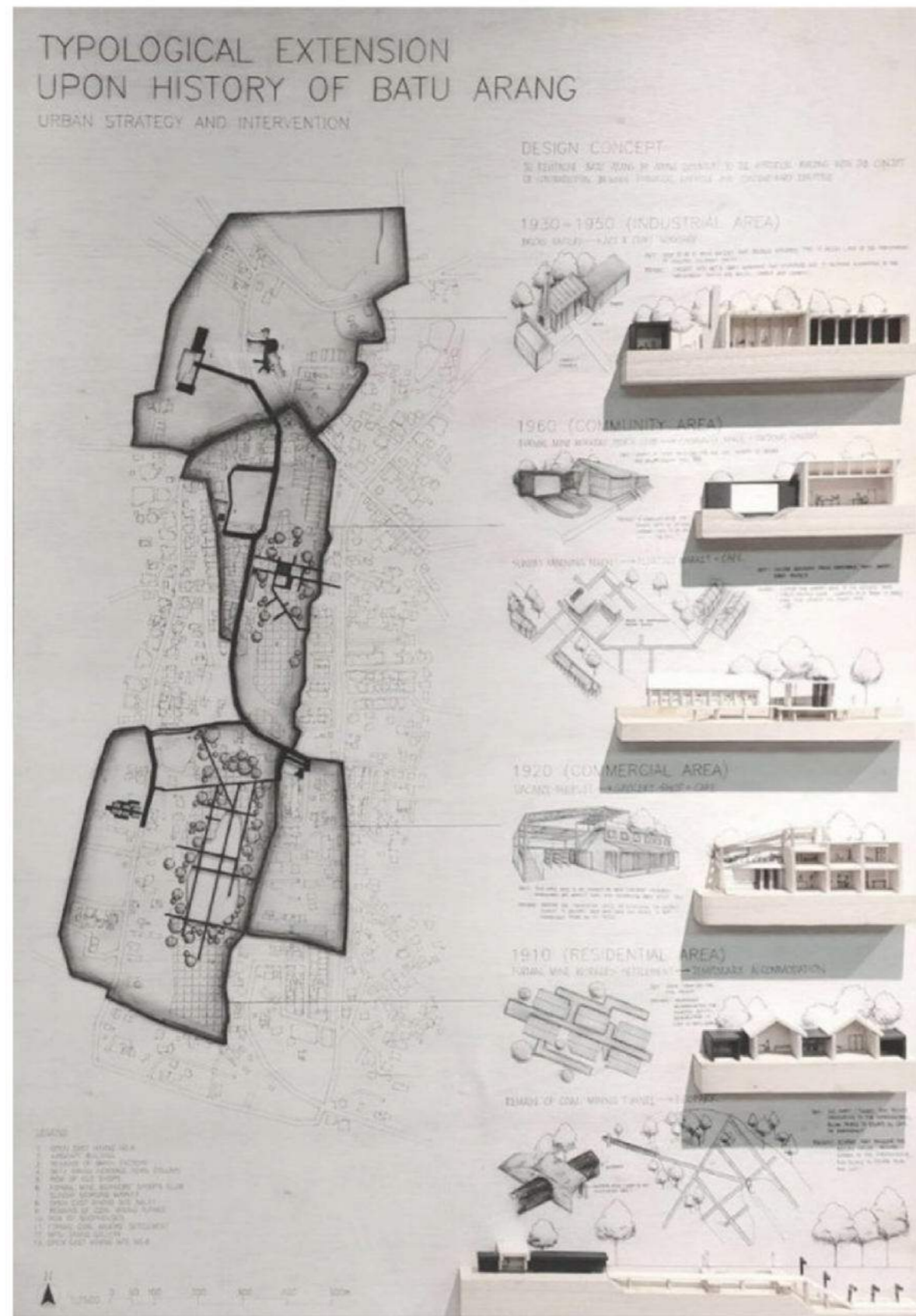
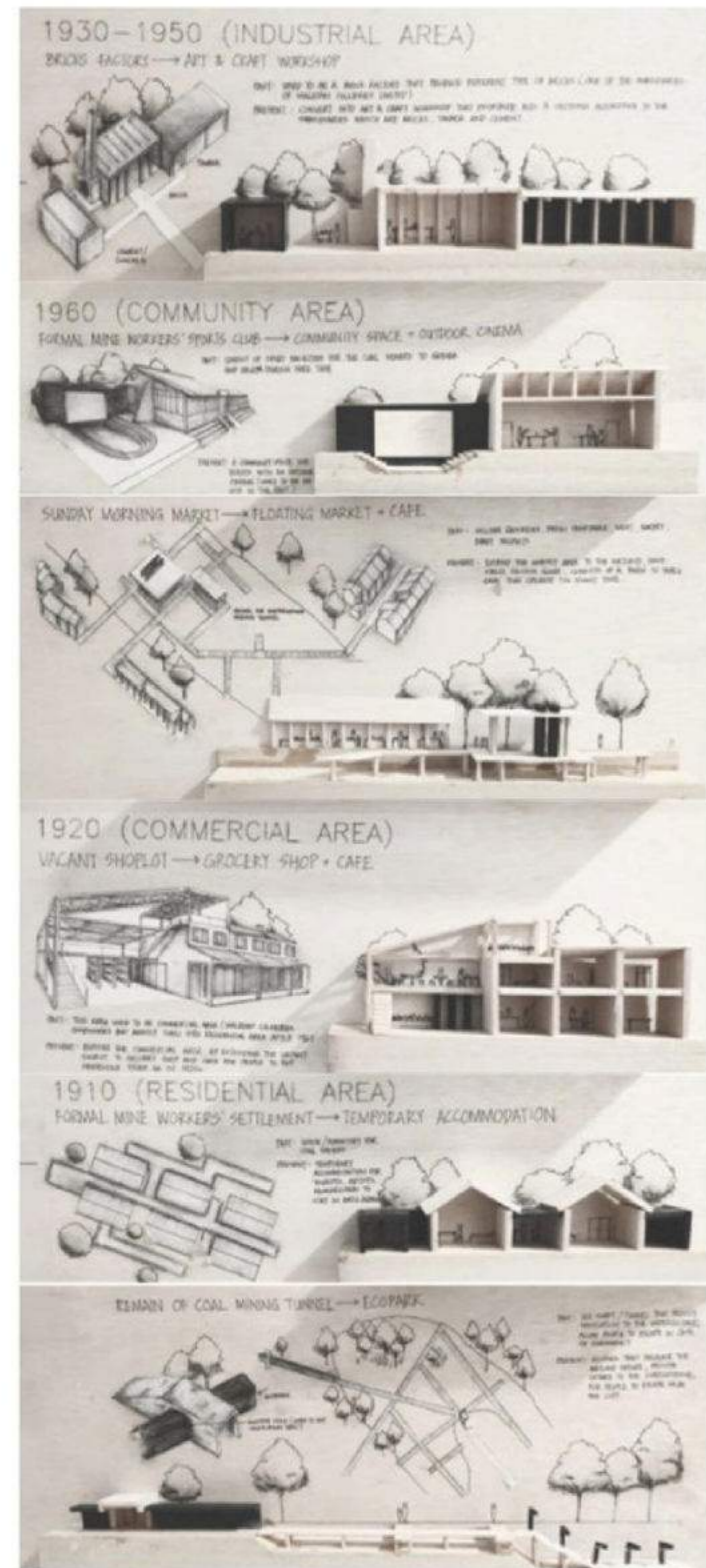


SECTION X



SECTION Y

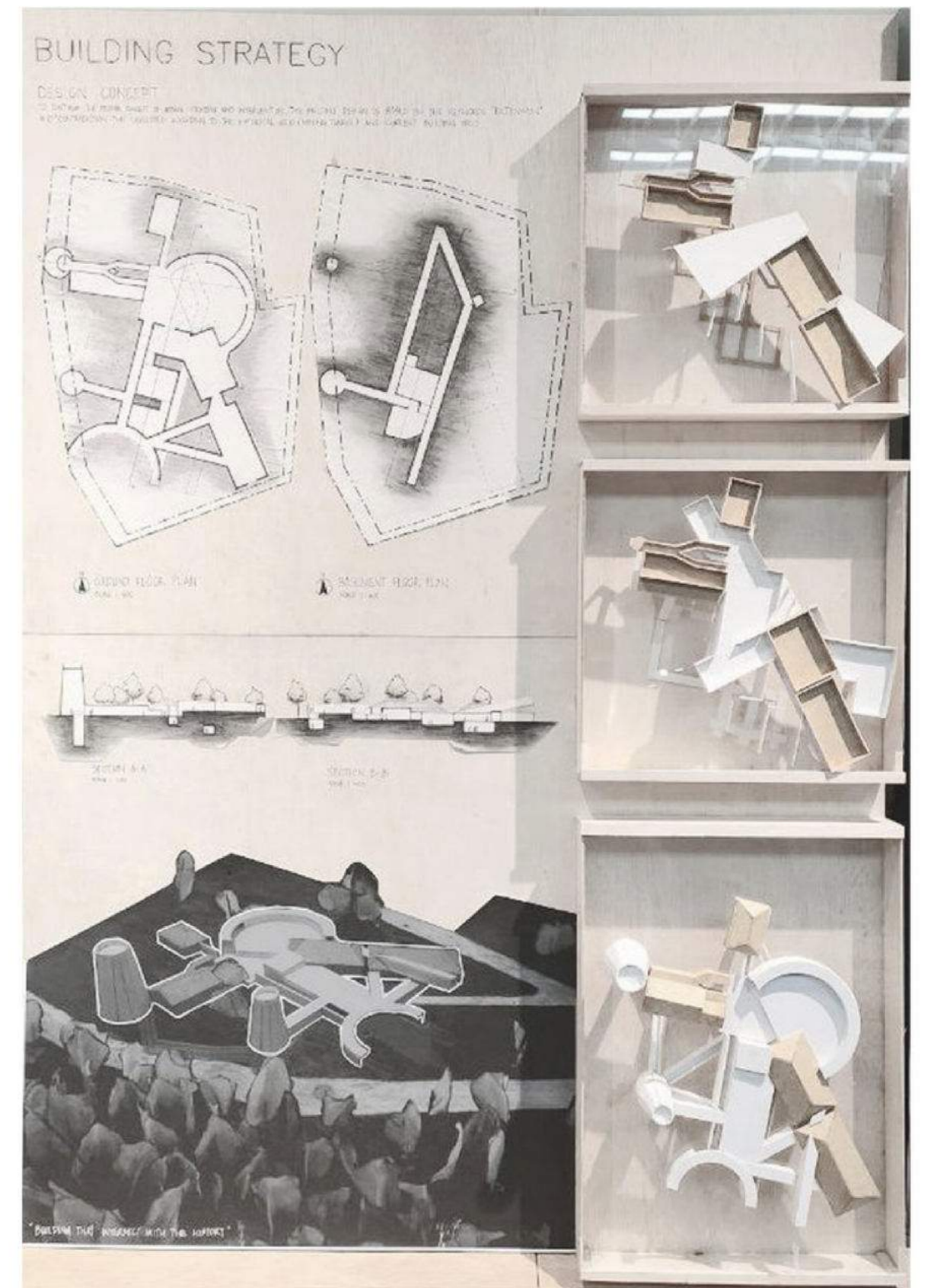
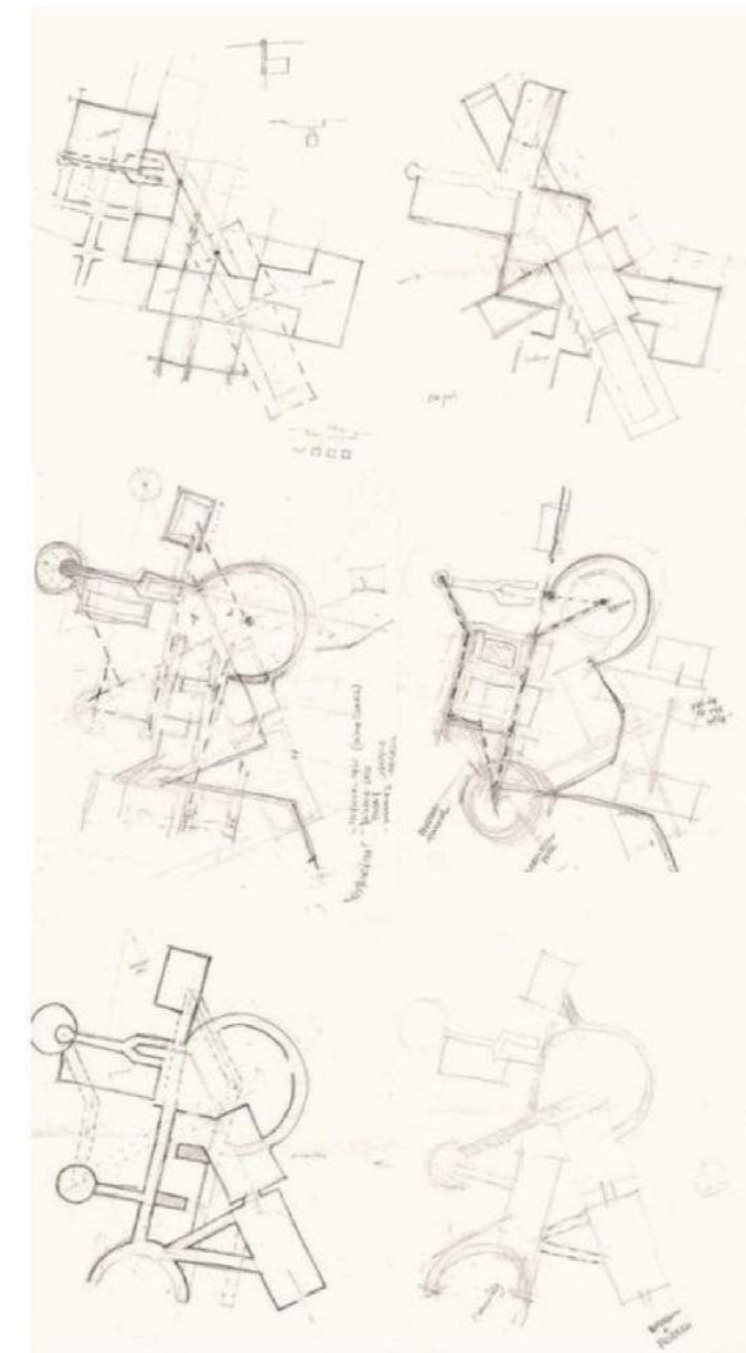
Urban Strategy: Typological Extension Upon History of Batu Arang



It is to revitalize Batu Arang by adding extension to the historical building with the concept of historical lifestyle and contemporary lifestyle. Each of the area of the map indicating the development of the town that arranged in a timeline. The intervention serve the same function as per in the past, but in a contemporary way in order to restore the lifestyle that used to be.

Building Strategy: Extension & Contradiction

To continue the design concept of urban strategy and intervention, the building design is developed based on the keywords "extension" and "contradiction", as well as the historical grid (mining tunnel) and current building grid.



The main programme of the building was historical museum and community center. The exploration of circulation, plan, and massing was done through sketches and models. The idea of intersection between historical grid and current building grid was implement in all of the three options, while the third option was bring forward to project 3 to develop further.

Exploratory

Explore and experience the history of Batu Arang
 "A building that intersect with
 the history of Batu Arang"

Design Concept

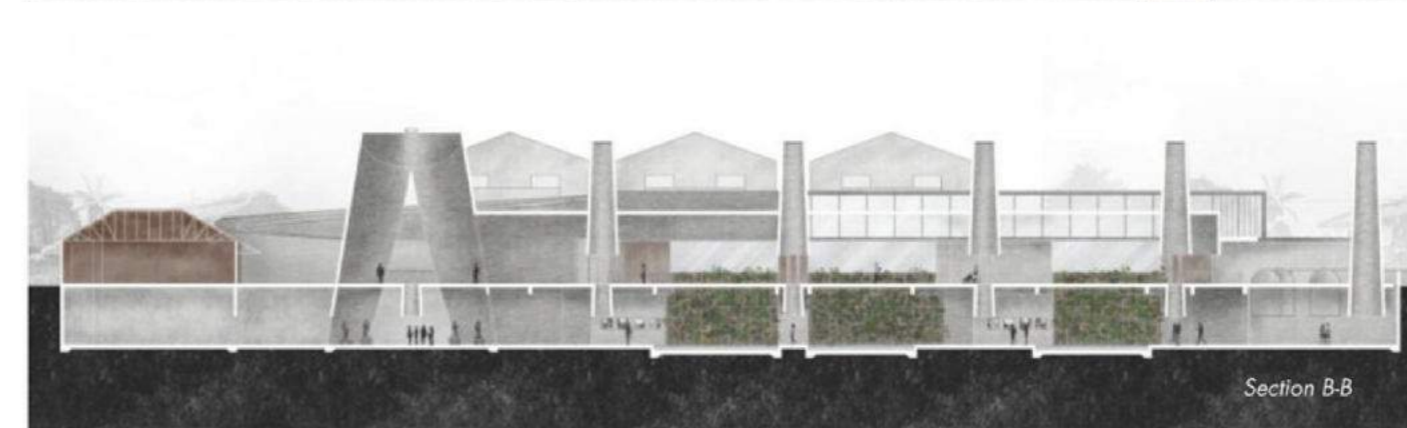
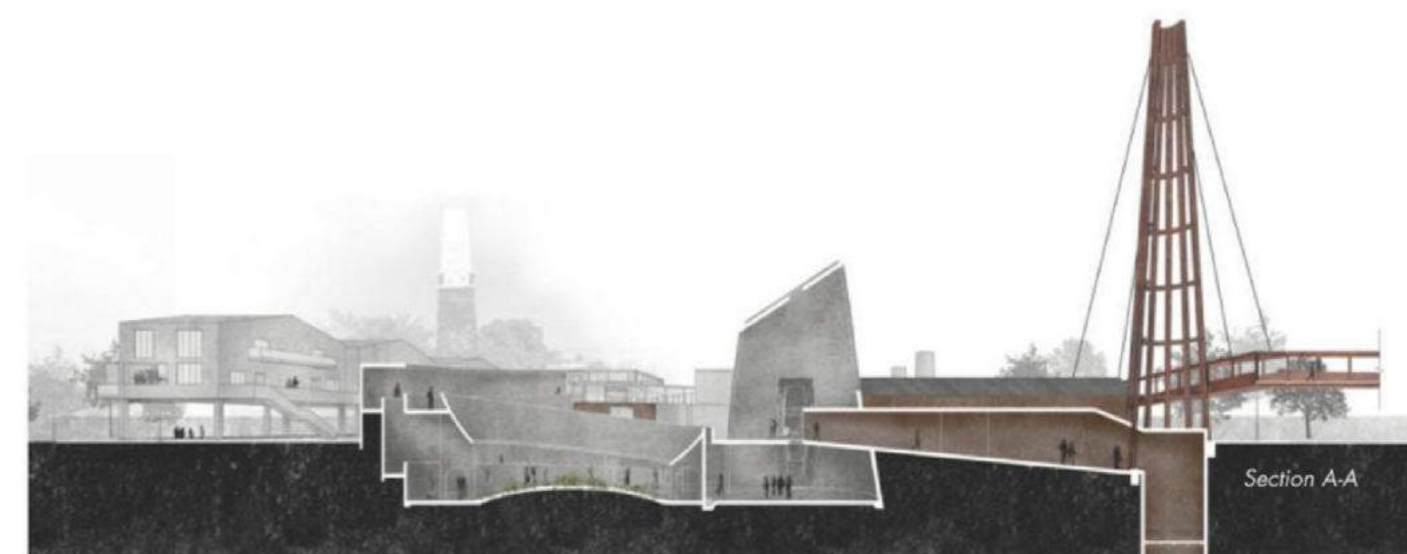
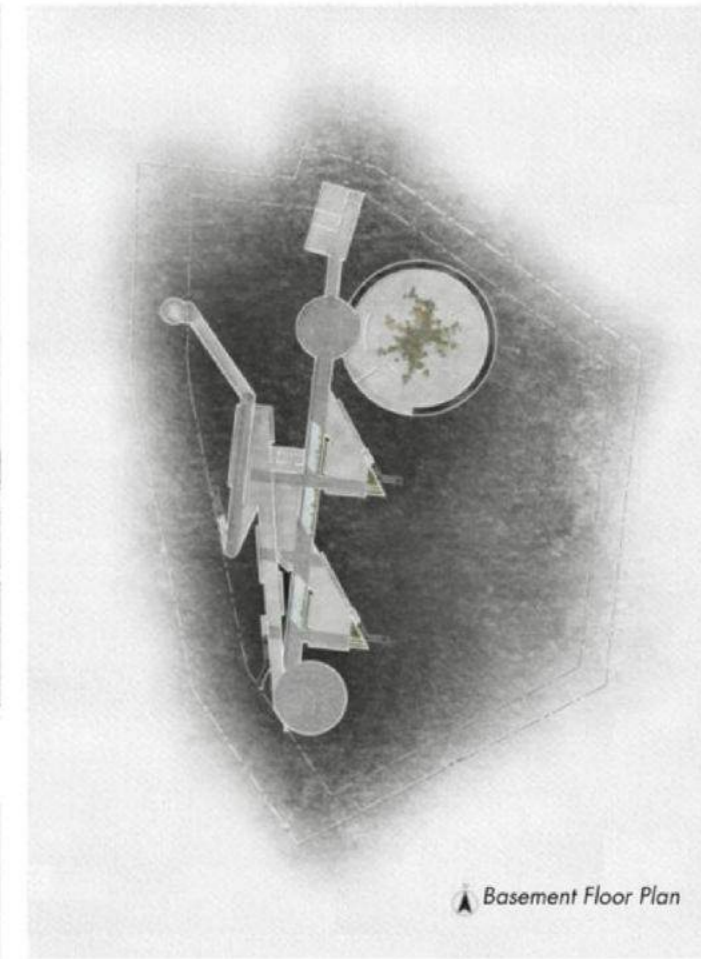
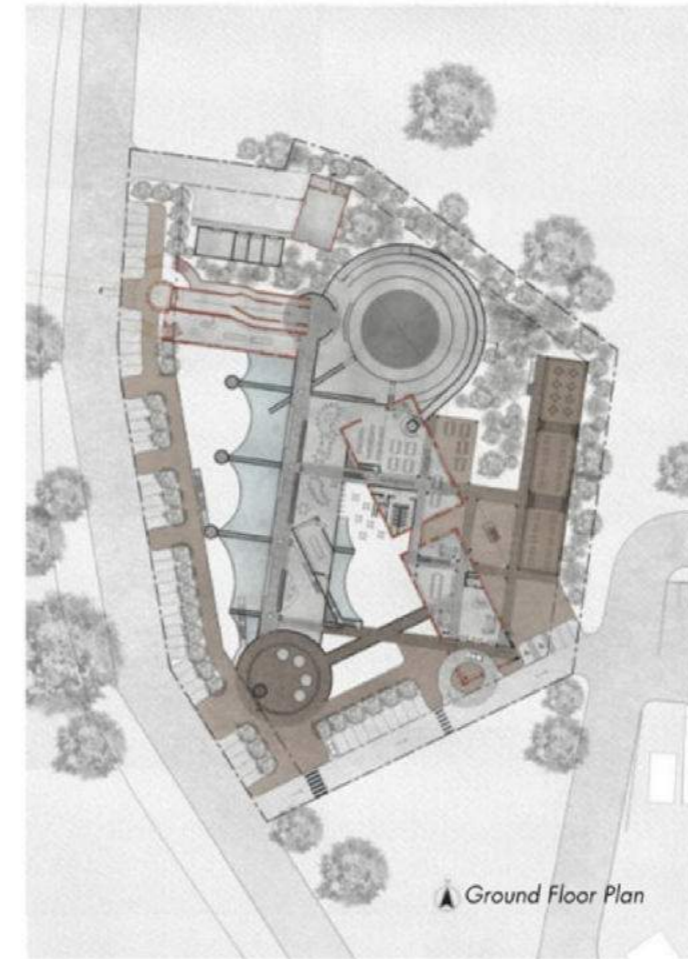
The building design is based on the keywords "extension" and "contradiction" that developed according to the grid of mining tunnel (past) and the grid of existing building (present).

The mining tunnel grid was extended from underground to overground.

Adaptive Reuse

To respect and emphasize on the existing building, a corten steel tower was built on top of the air shaft, indicate the lift core that the miners used to access to the tunnel, it is also carrying the ring that connected to the workshop.

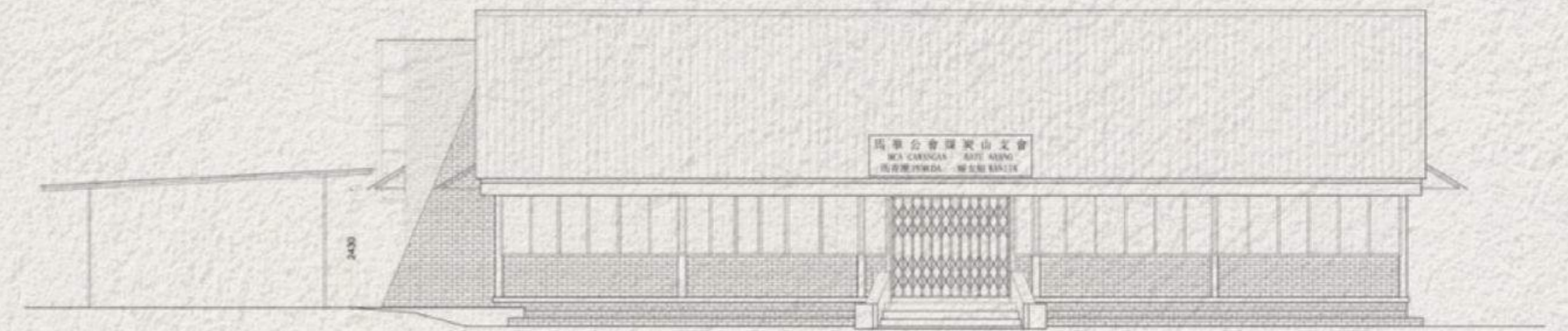
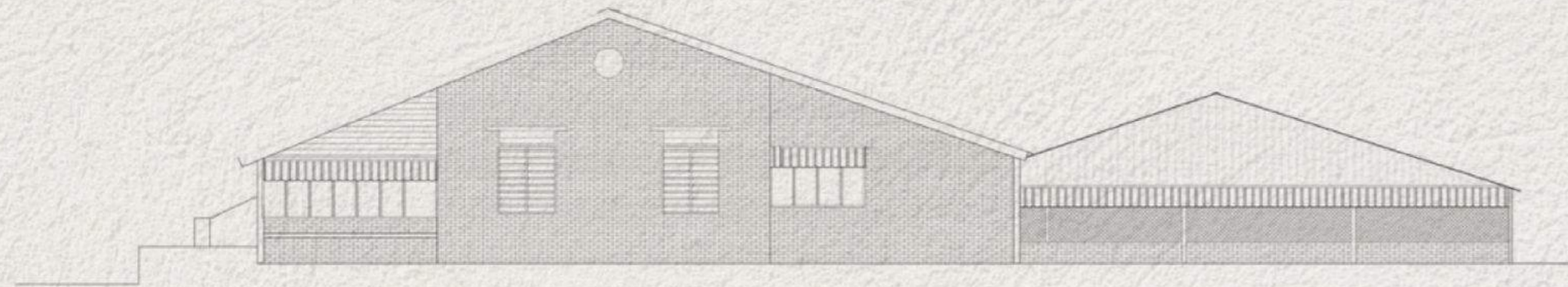
The plaster layer of existing building was removed, leaving the original brick surface, with another new layer of brick wall built as the facade, framing and preserving the existing historical building.



250

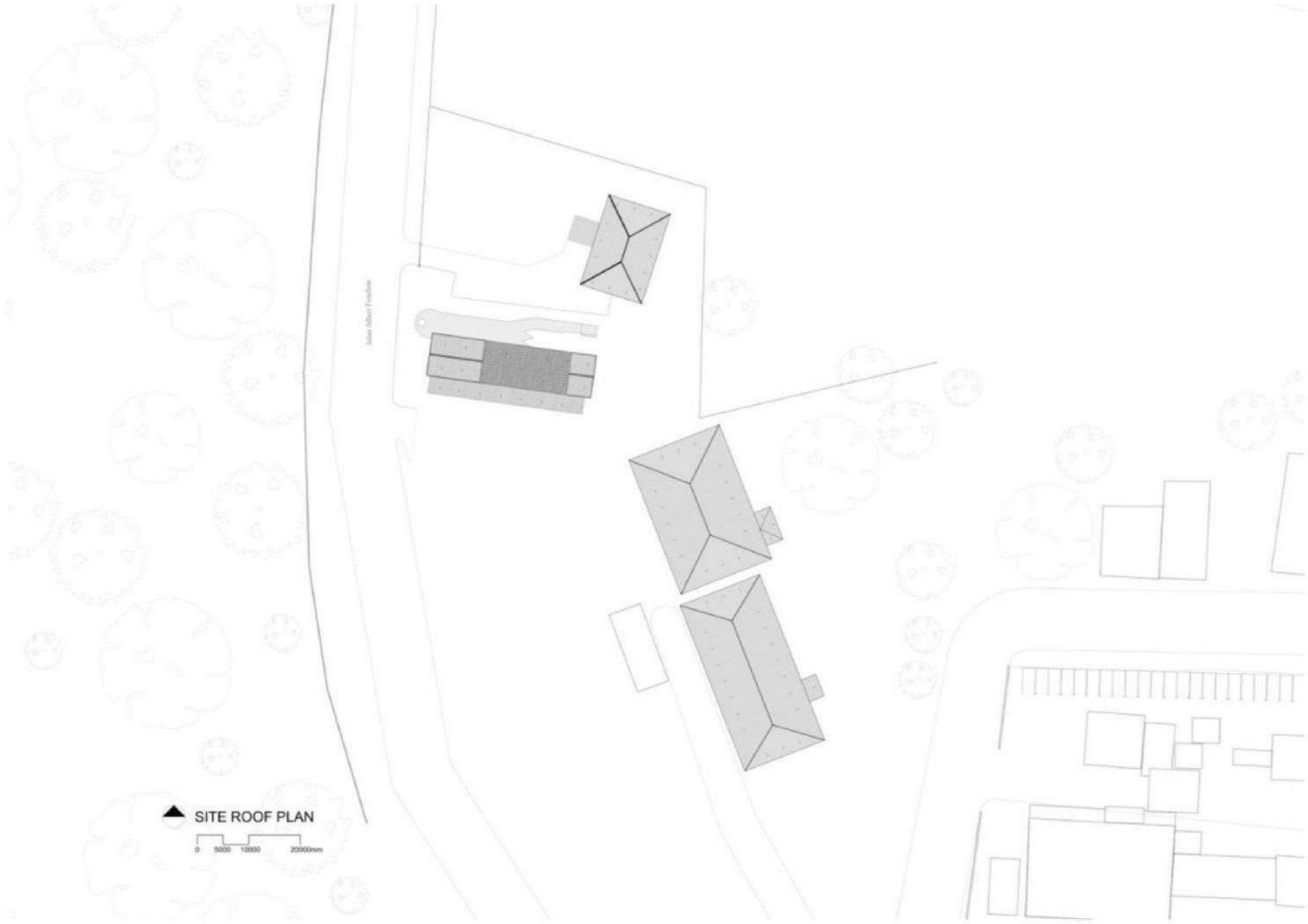
06 | SITE DATA, DRAWINGS & DIGITAL MODELING

In accordance with the coal mining heritage at Batu Arang, the site offers abandoned buildings and sites which still stand today as physical remnants of the past. Two key sites were chosen this semester; the Air Shaft Building Site and the Former Mine Workers Sports Club Site.



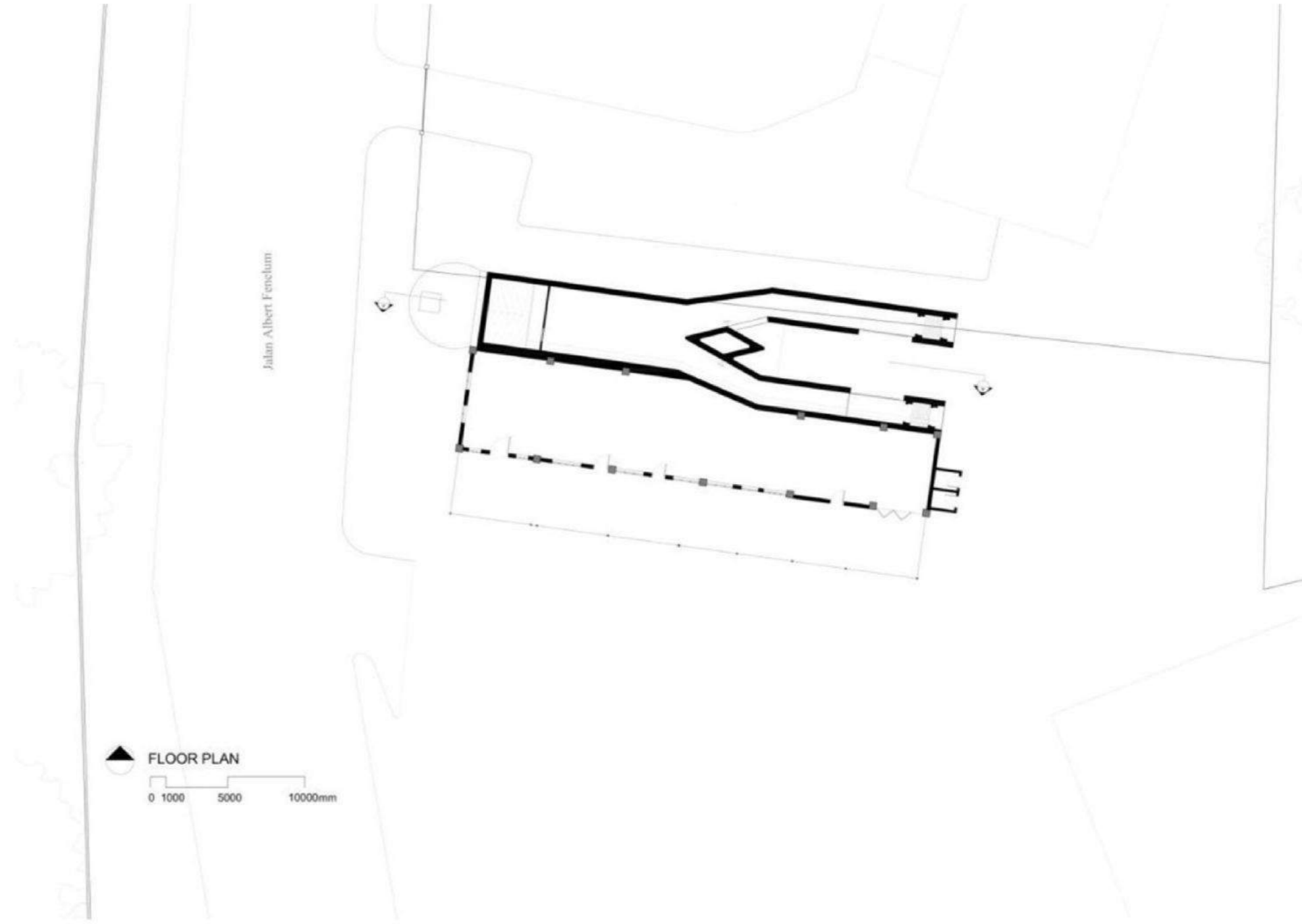
AIR SHAFT BUILDING SITE

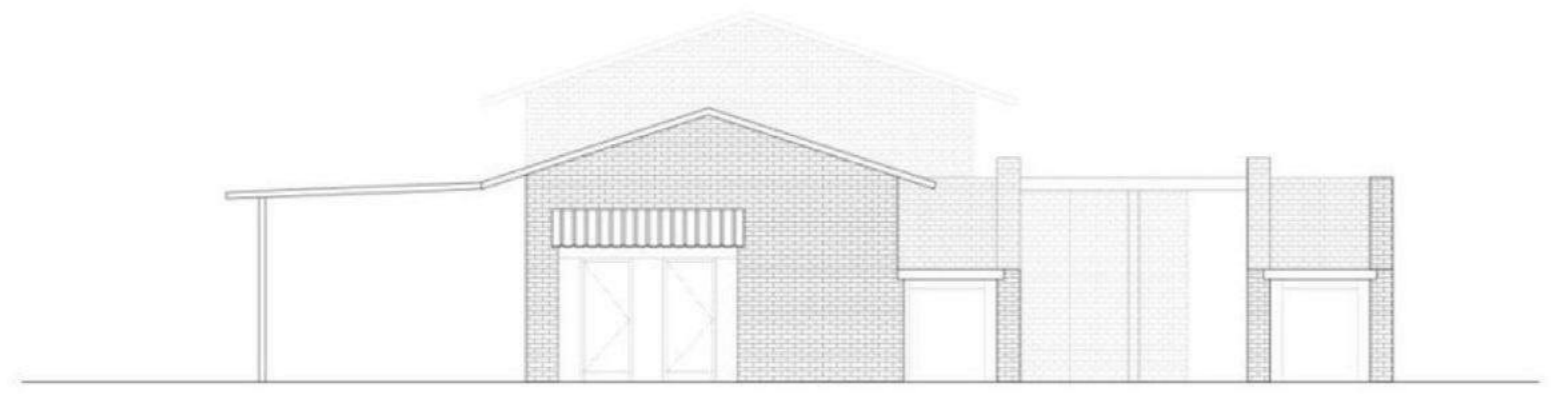
SURVEY DRAWINGS OF AIR SHAFT BUILDING SITE



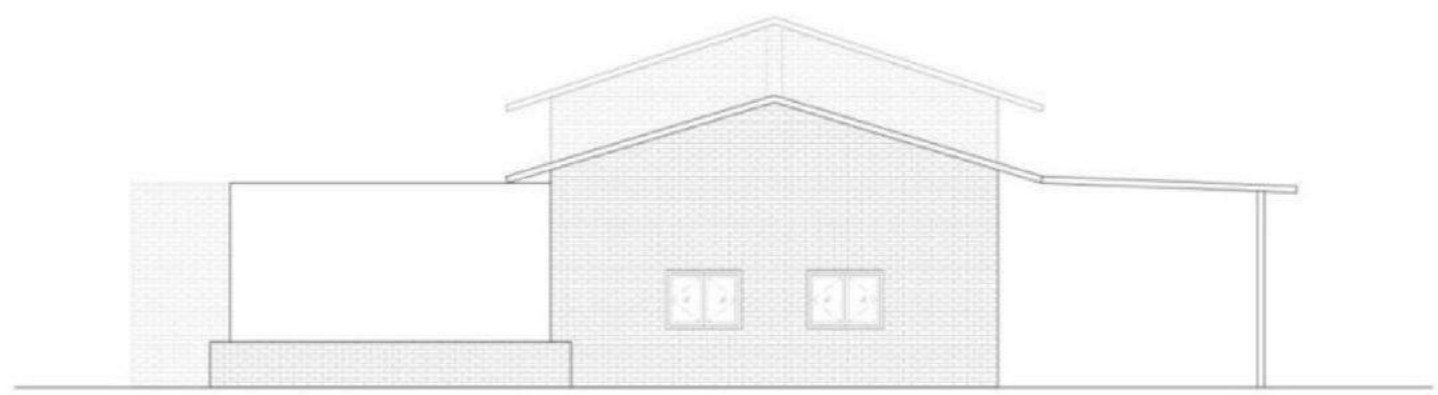
AIR SHAFT BUILDING

SURVEY DRAWINGS OF AIR SHAFT BUILDING SITE





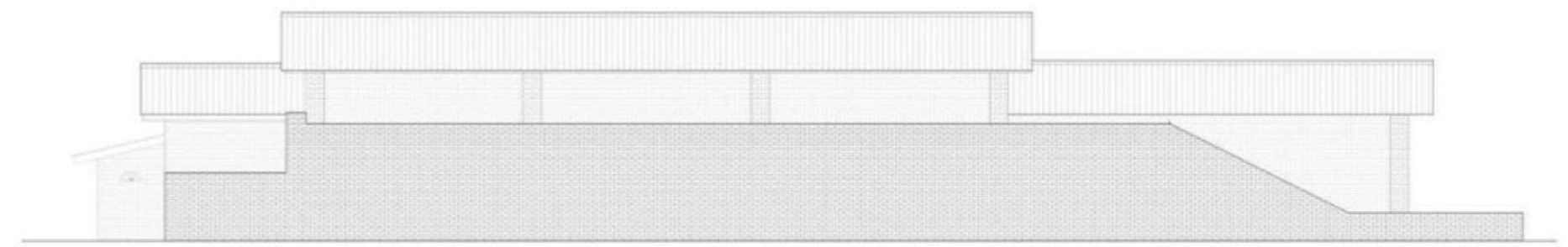
SOUTH ELEVATION
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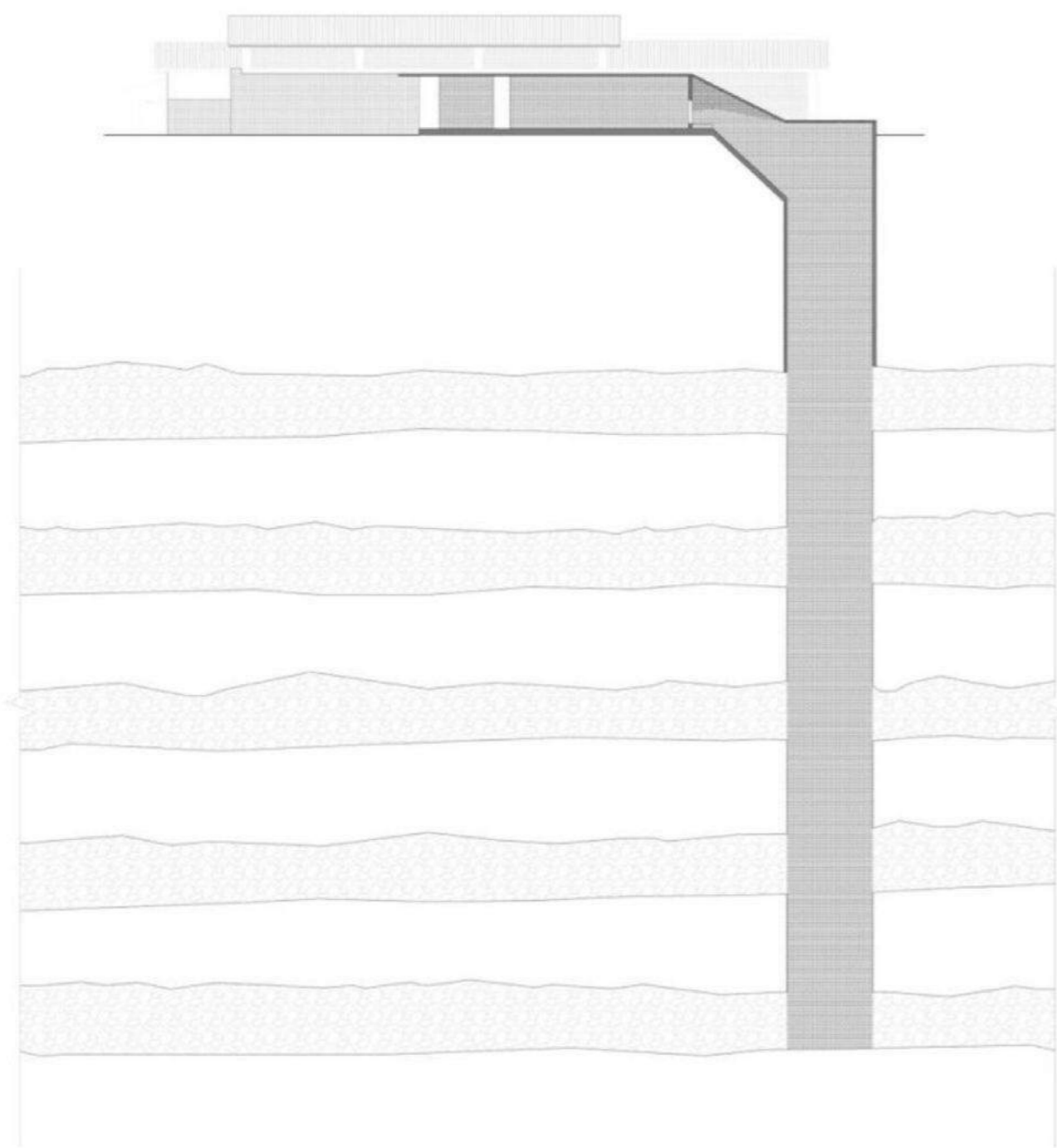
NORTH ELEVATION
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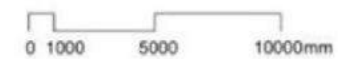
WEST ELEVATION
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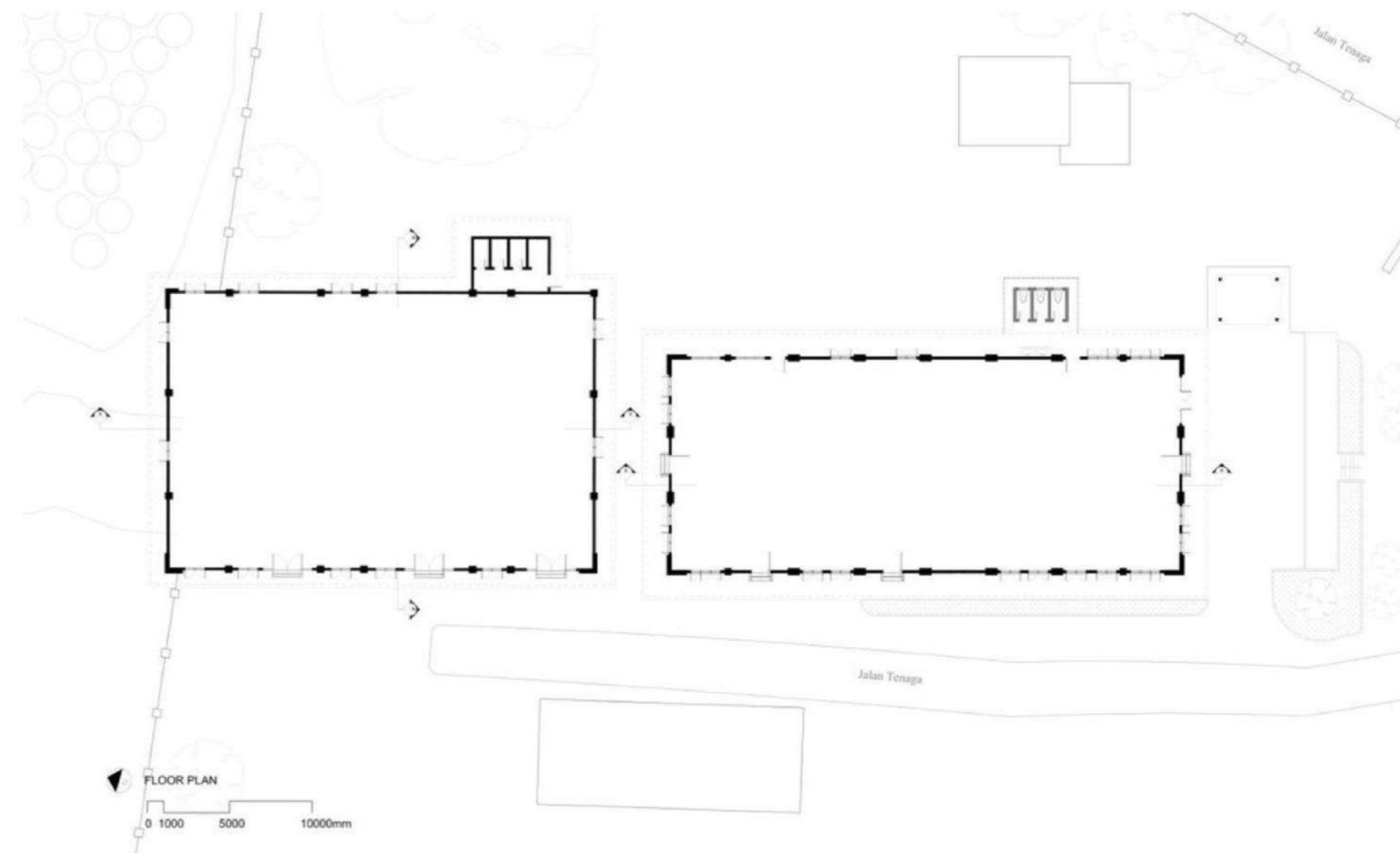
EAST ELEVATION
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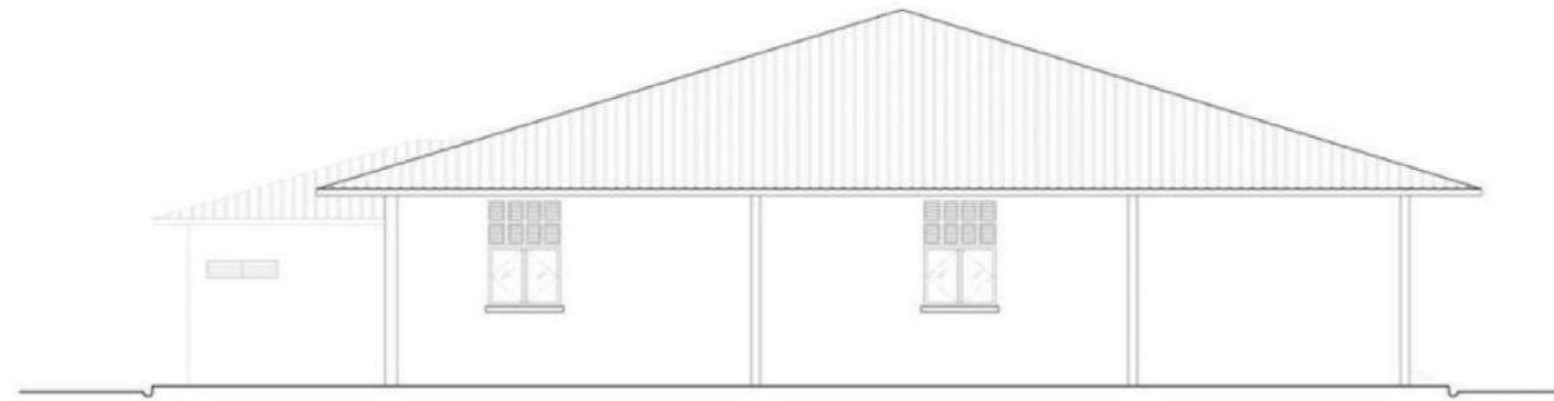
SECTION A-A



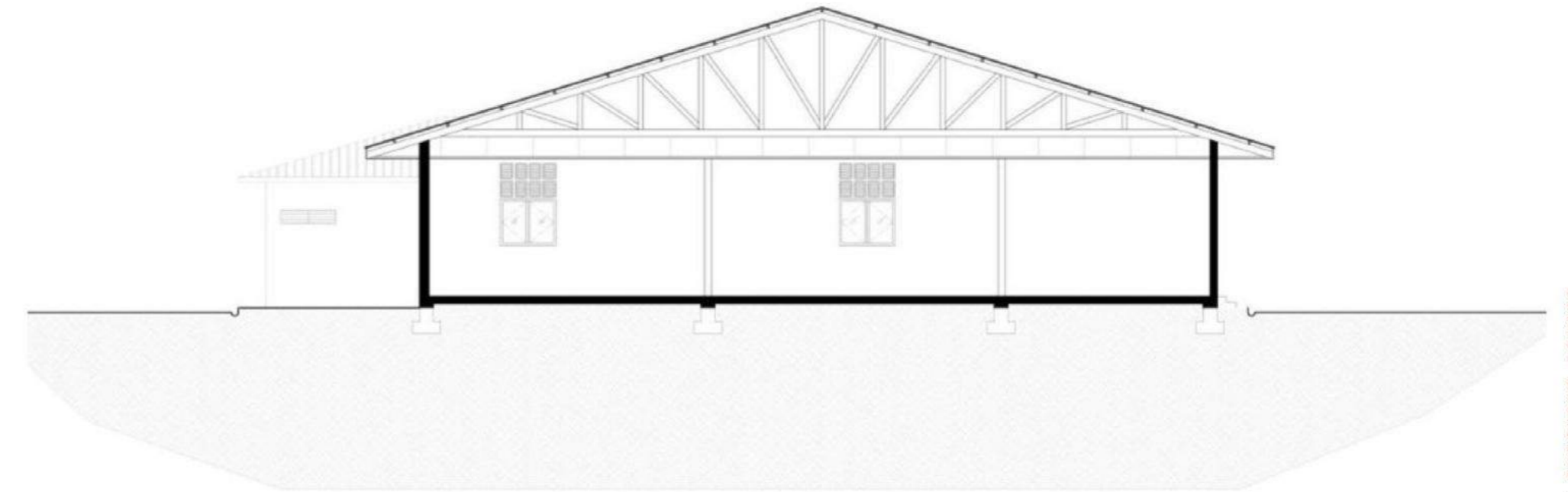
POLICE STATIONS



POLICE STATION 1



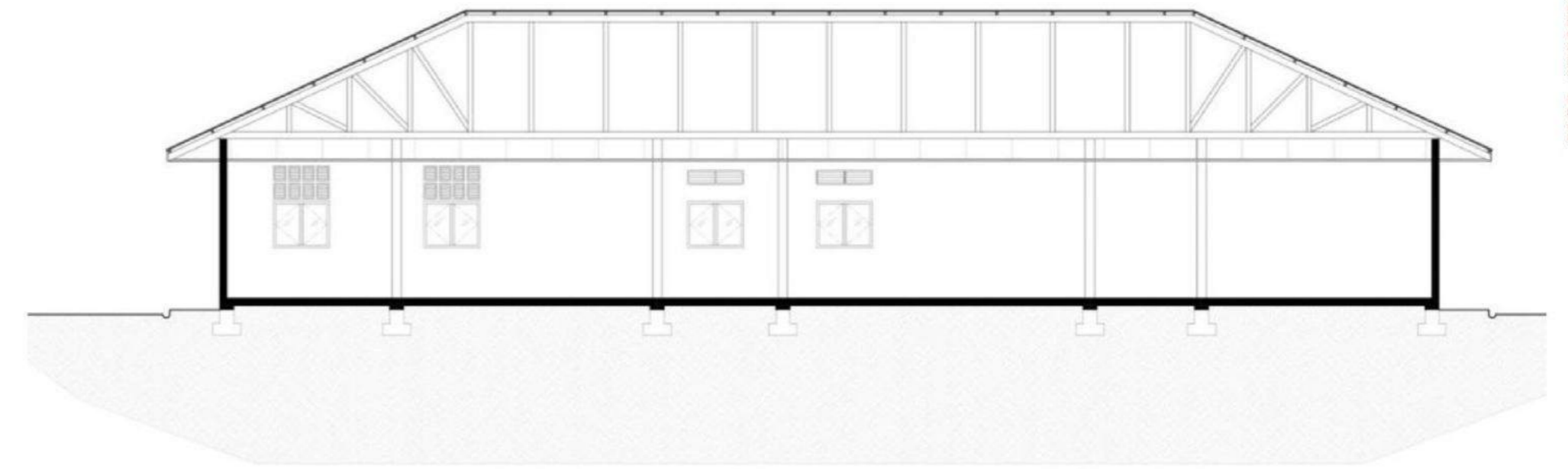
NORTH & SOUTH ELEVATION
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SECTION B-B
0 1000 2000 5000mm

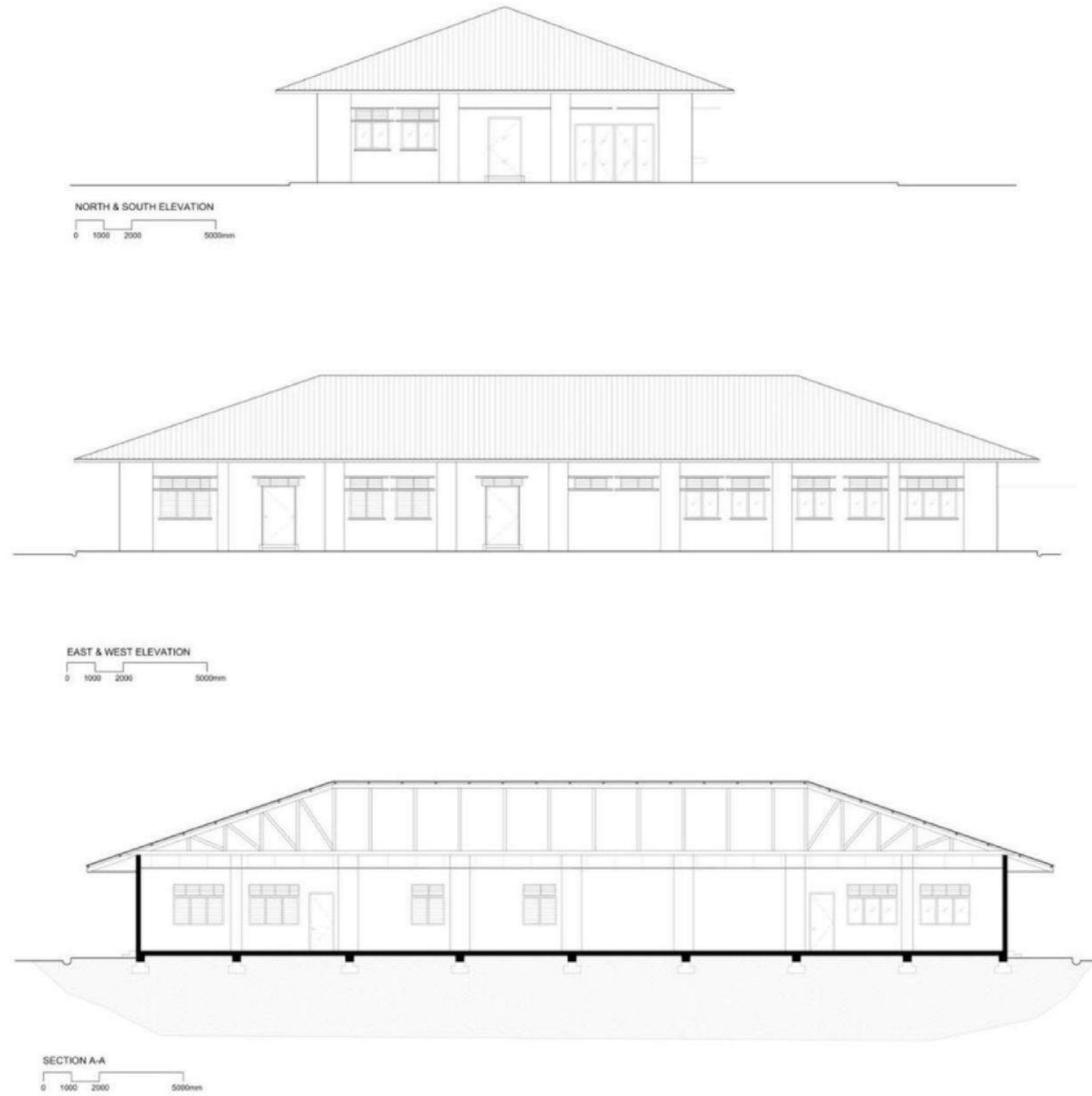


EAST & WEST ELEVATION
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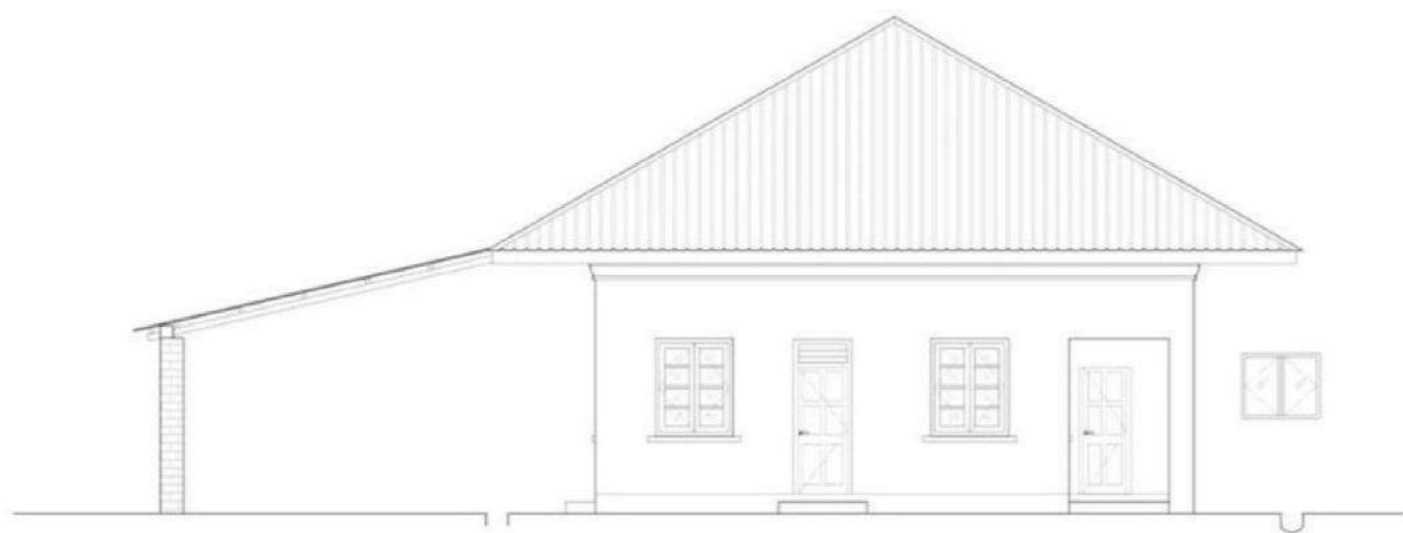
SECTION A-A
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POLICE STATION 2

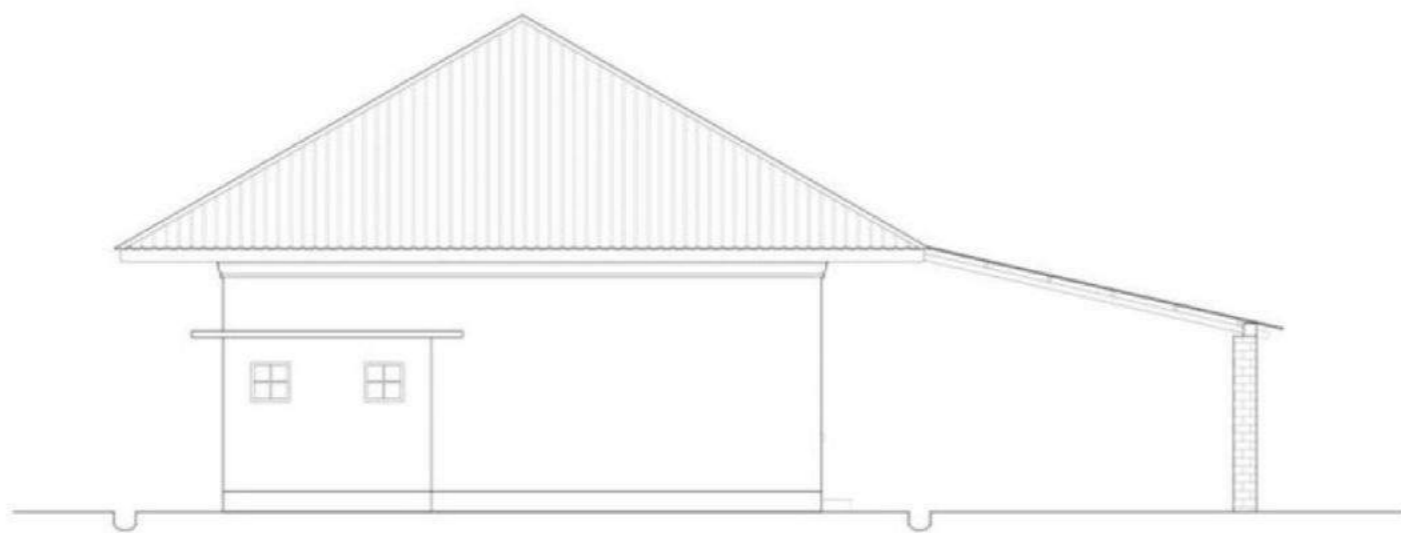


HISTORICAL BUILDING





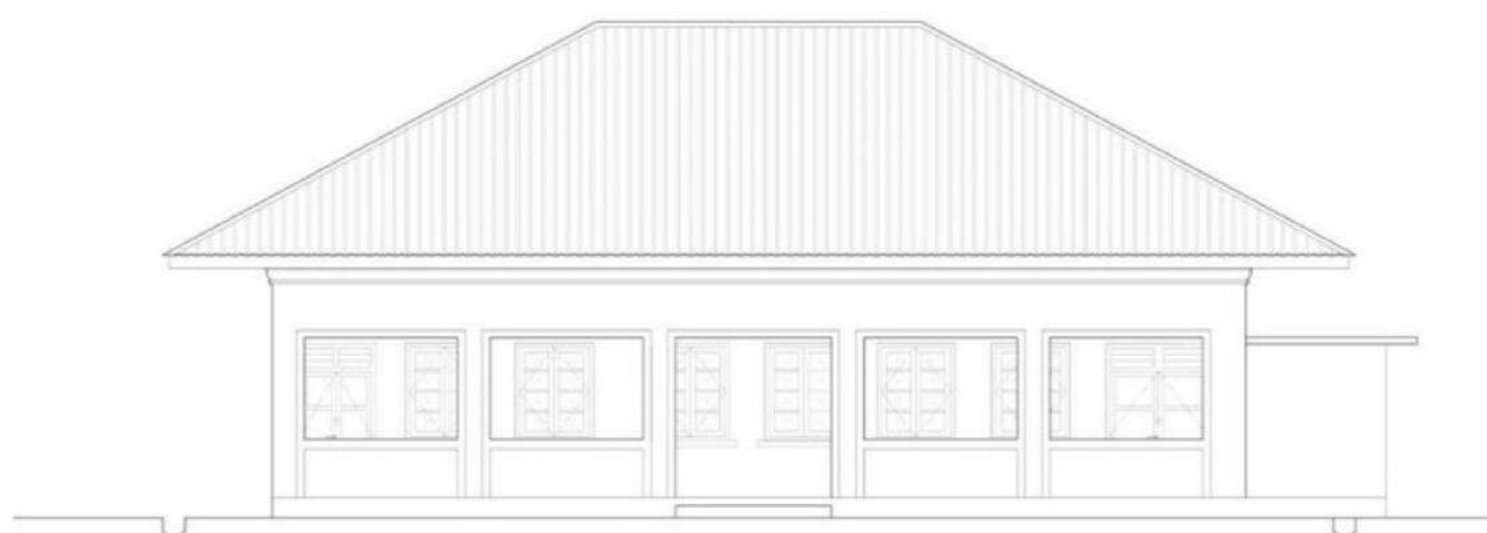
SOUTH ELEVATION



NORTH ELEVATION

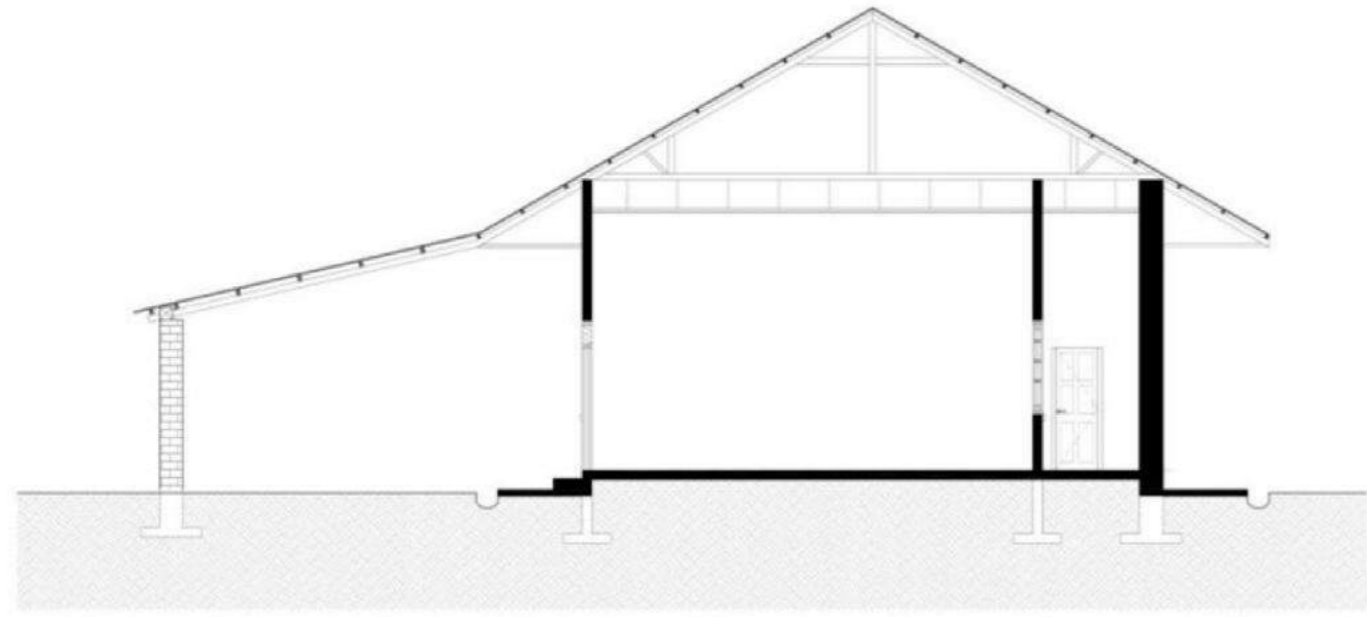


WEST ELEVATION

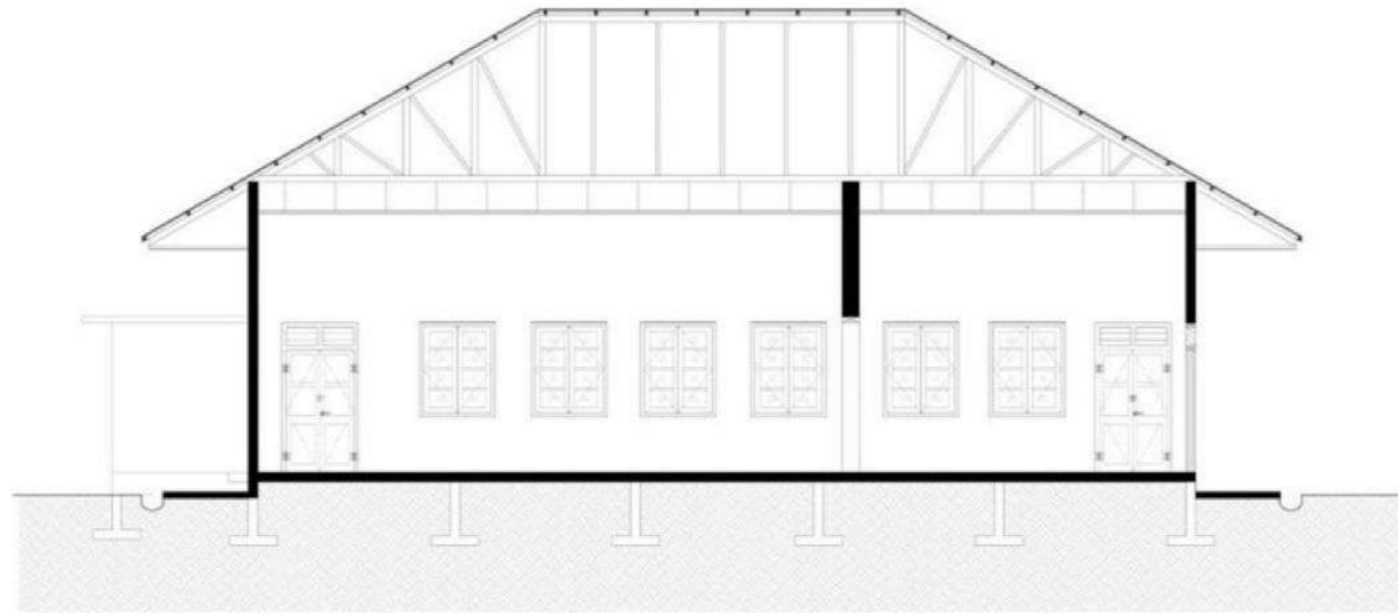


EAST ELEVATION

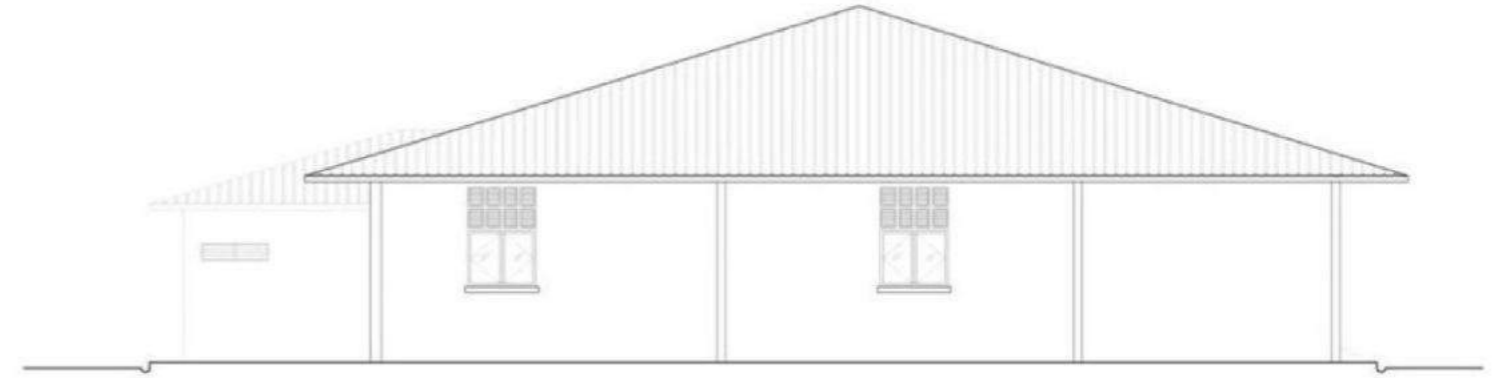




SECTION A-A
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SECTION B-B
0 1000 2000 5000mm



NORTH & SOUTH ELEVATION
0 1000 2000 5000mm

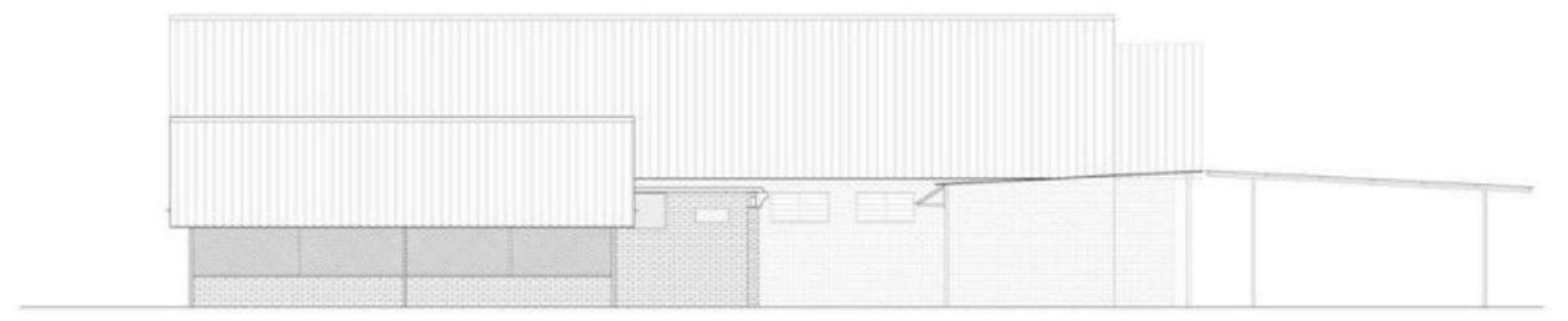
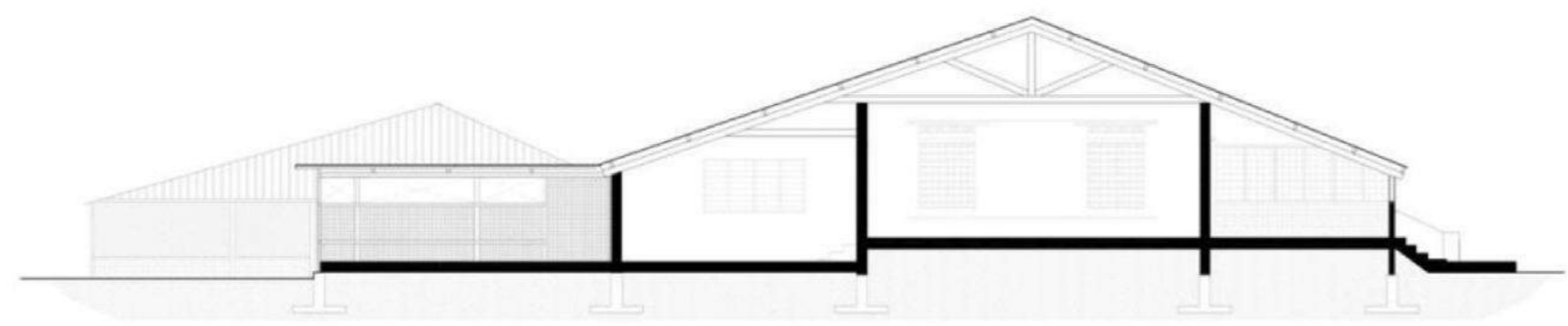
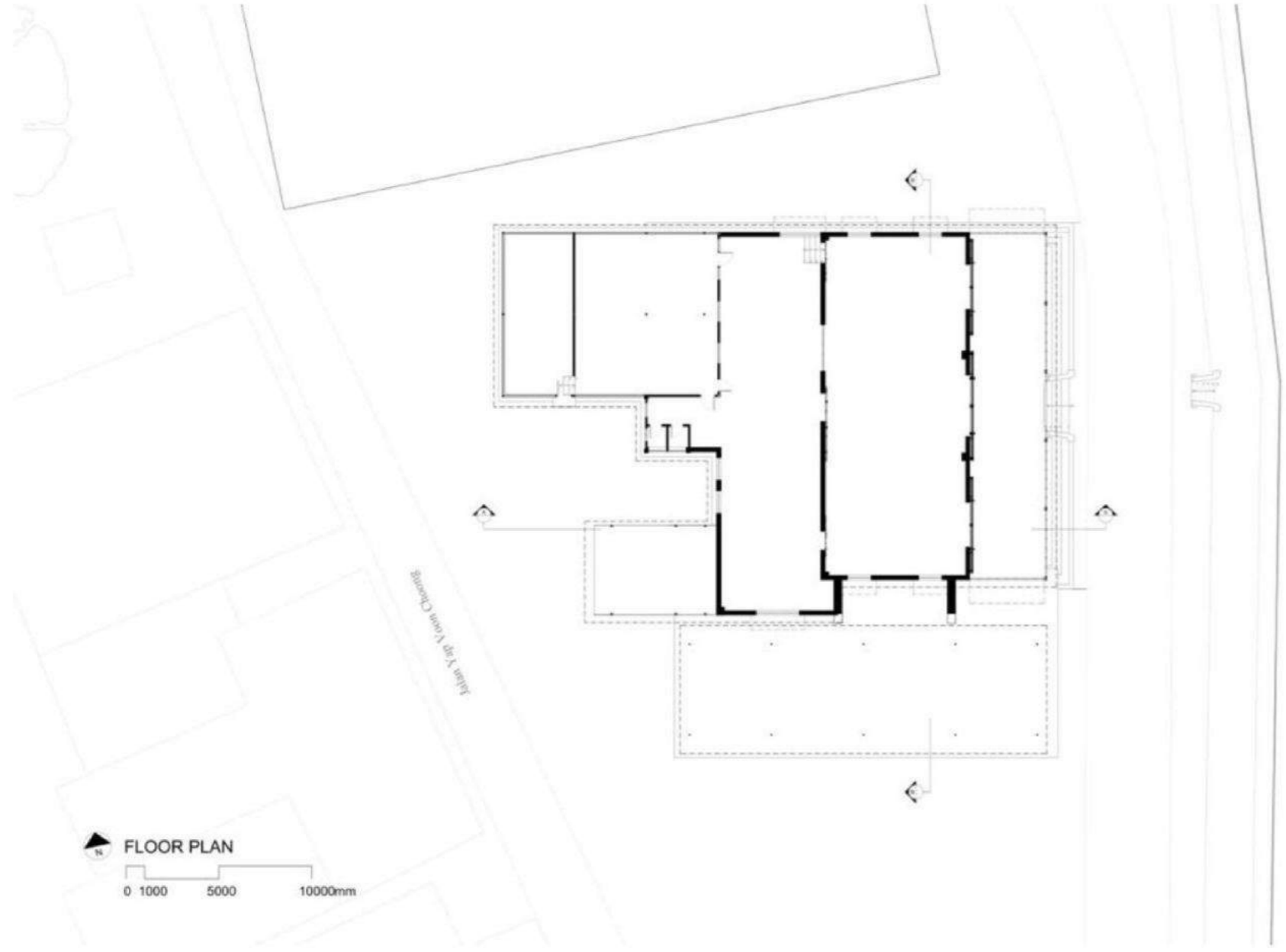


EAST & WEST ELEVATION
0 1000 2000 5000mm



FORMER WORKERS' OFFICE SITE

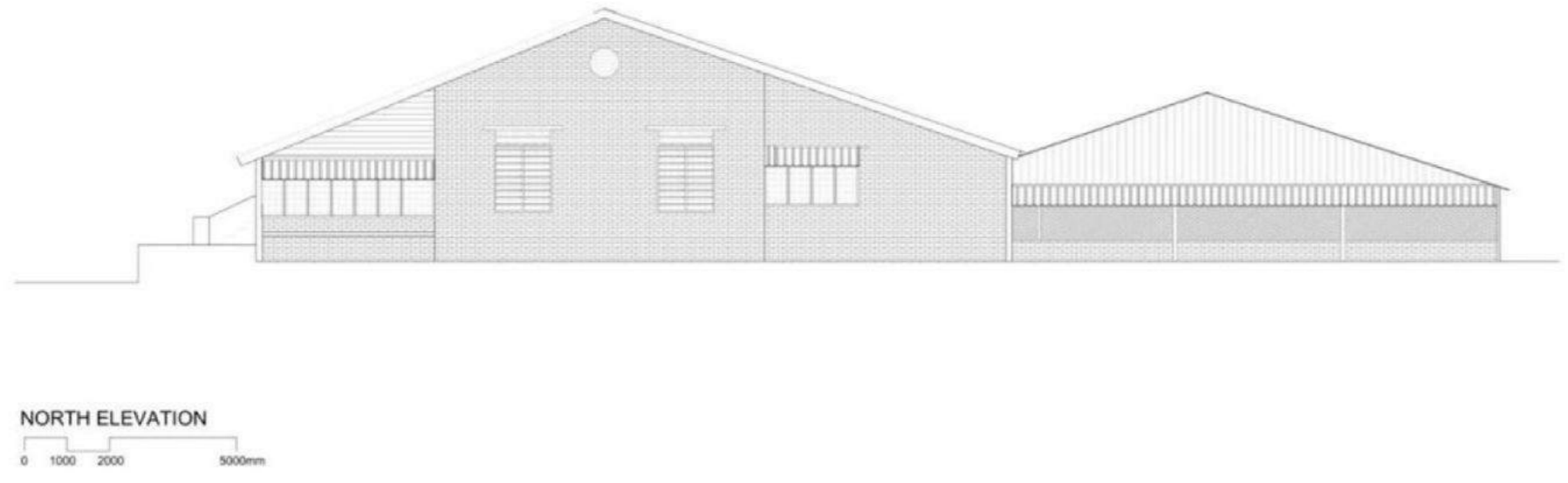




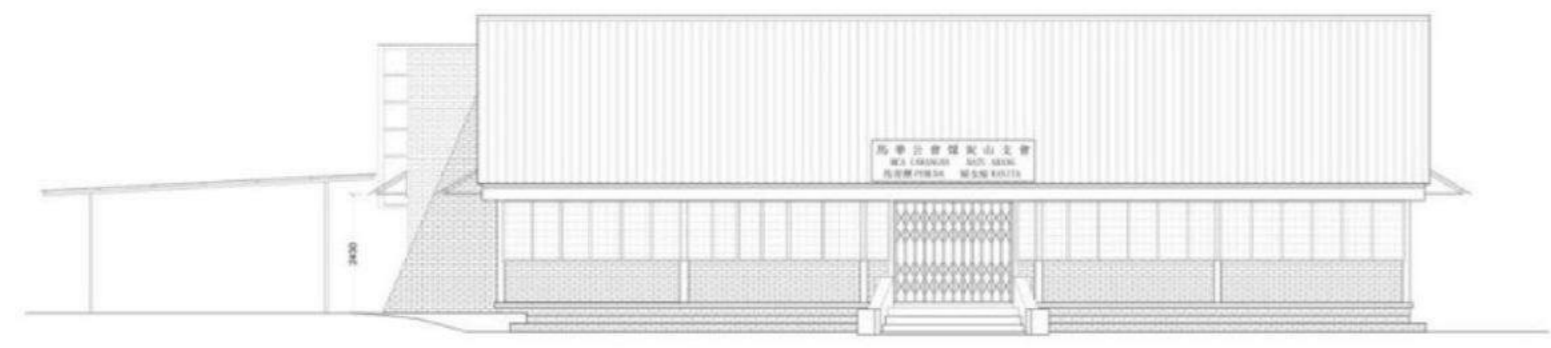
WEST ELEVATION
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SOUTH ELEVATION
0 1000 2000 5000mm



NORTH ELEVATION
0 1000 2000 5000mm



EAST ELEVATION
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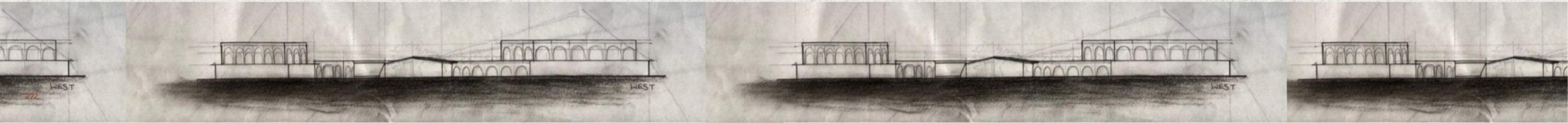


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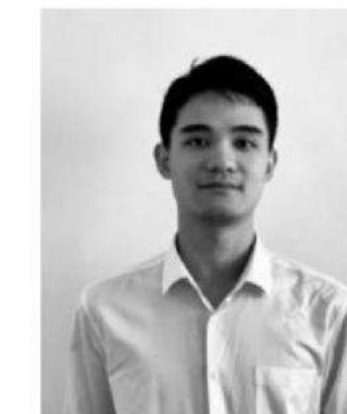
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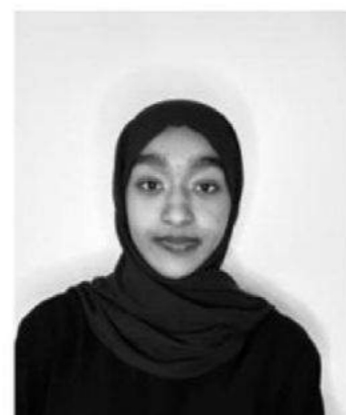
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