



# GROUND

Multi layered wine industry Heerlen

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# **GROUNDED**

essay on conversing industry's by archaeoloture

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The converse of the definition grounded,  
defining the richness of the regions soil and the scars on her soul.

1 ground-ed (*earthed*)

- earth or earthed: connected directly to the earth
- funded/rooted with ground surface

2 ground-ed (*funded*)

- funded: knowledgeable on theme or topic
- established: stabile, secure

3 ground-ed (*punishment*)

- punishment: assigned to one location, space or room

## **Grounded**

The ground, earth or soil defines the richness of Heerlen in the south of Limburg.  
Underground lie the treasures covered with layers of time overshadowing present potentials.

An archaeological quest is initiated to expose these treasures, learning from them and transforming them into a new industry.

The transition is defined by the result of demographic decline during the last decades as an effect of vanishing former industries. Heerlen has become a meaningless destination in the eyes of many spectators, visitors and also inhabitants.

Raising the question; are they grounded?

### **Treasures**

Found treasures by the archaeological quest give an insight in the meaningful heritage and how to learn from former inhabitants.

The oldest layer in time marks the Roman period, they defined this region in a very strong way; discovering geographic potentials as its strategic position between current country's as Belgium and Germany. Geomorphologic structures as hills and valleys are used in new ways of farming combined with the rich mineral ground sources as well as natural water flows.

This ground quality and presence of water in the form of the streams 'Geleenbeek' and 'Caumerbeek' meandering on the outskirts of Heerlen made this region also attractive within the Medieval period. Water was guided through the settlement to provide a life source for farming as well as a defensive structure around their settlement.

Within the modern period these streams have even gotten a more significant role within agriculture.

Over more than ten watermills were present besides the streams and used for producing wool and flour harvested from the land besides the mills.

Valuable treasures but totally overshadowed during the industrial period...

### **Underground**

The richness of the ground goes even further than just on the surface.

Over a depth of 120 to 1000 meter below surface mineshafts were constructed to extract coals. These coalmines made the region of Heerlen grow explosively, making it the richest region in the Netherlands with the largest (underground) industrial site in the country.

This development led to a flourishing region marking its position.

The downside by the canalised economic driven vision was that the potentials aboveground were lost out of sight. The landscape was literally used as dumpsites, defining the current 'Wilheminaberg' a manmade stone mountain out of the leftover products out of production.

The extracted underground treasure had a huge negative downside on the beauty and richness of the aboveground. Turning the region completely black.

### **Leftovers**

The region turned even more black when the announcement of the mine closure was spoken out. The once rich and flourishing image was gone. Knowledge, guest workers, inhabitant and economy declined rapidly. Even to the present day a demographic decline is defining the image of this region, a fallen icon.

What's left behind is a village in the jacket of a city. The urban scale is out of proportion for its current demographic state. Vacant office blocks, houses and business parks are defining the unattractive image Heerlen is dealing with.

One remarkable treasure is left behind on several layers underground. The abandoned mine tunnels which by stopping the pumps are currently filled with water. Usable as a thermal source, with different temperatures divided over the different levels of this structure.

### **Black to green**

Heerlen initiated a transformation strategy, which should turn the black landscape into a green landscape referring to the former glory days of Roman and Medieval times.

But just a fresh sight on trees and parks instead of the black dumpsites is only a part of what's needed to converse into an attractive region.

## **Conversing**

To lay out a new strategy it's necessary to learn and harvest from the treasures founded by the archaeological quest. The findings of former inhabitants, like under- and aboveground water flows, mineral ground sources and geomorphologic structures, are valuable treasures. Learning from the historic timetables provides new insights on how to deal with these conditions in the present time, as well as the development of climate change.

This requires a fresh eye on how to adapt and use the changing conditions.

A reassembly of the treasures results in a new-grounded industry.

Conversing, mining to wining.

## **Wine**

The aspect of wine was already present within the Roman period. As an attractive status symbol. Over 3000 hectares of vineyards were built on the hills within this region, but lost during new ways of farming in the modern period.

In the present time the wine industry is growing in the region of south Limburg. The climate change has a positive effect of the diversity of grapes, as well as the quality of the finished product.

An important aspect within the conversion is projecting these potentials on to the urban context. As mentioned this is still suffering by the pauperisation of un-demolished vacant properties. The government ambition is to reduce 50% of this vacancy for 'green' land within there 'black to green' strategy, but just 'green' its enough. Its necessary to make this land productive and regular agriculture isn't cutting today.

Wine farming defines an attractive and representative image like in the Roman times as well as a more effective economical output per hectare.

It provides a new non-overutilization industry that attracts knowledge, tourism and supplies in employment.

## **Between to worlds**

The new industry defines itself on multiple axis. The rural area outside Heerlen has the beauty an attractive image that is already appealing a large number of tourists. On these location vineyard are also most likely to initiate, but the goal is to project these potentials on the urban field, still seen as a black stain within its significant landscape.

By strategically using the 50% reduction ambition on vacant properties a horizontal connection can be made with the rural outskirts of Heerlen and its centre. Breaking the current black stain apart by reducing out of scale urban vacancy. Introducing attractive and productive urban vineyards. These vineyards will form the foundation of the new industry, for filling their role as new icon. The vertical relation will be initiated by the underground structures as water flow's the thermal network of mine tunnels as well as large number of basements beneath the vacant, to demolish properties.

These basements will converse the former aboveground production industry to a sub-zero level and projecting underground minerals to aboveground vineyard. Transforming underground mining to above ground wining.

## **Hospital cité**

On the east side of Heerlen lays the Valley Aambos, a hillside along the Caumerbeek.

Connected to this valley is a former hospital site located which reaches all to way to the centre of Heerlen with a surface of 4hectares. This site was a medical service centre during the mine period were personal was physically checked, monitored en when needed treated for there illnesses. After all it was a dirty job, working several hundredth of meters below surface.

The site has going through several transformations when the hospital was moved to the west side of Heerlen. Currently are most of the buildings there vacant and sum of them are even listed to demolish in the next couple of years.

The new industry is for those reasons located on this site. The building will make place for an urban vineyard of 3 hectares combined a transformed office block, which will function as a vertical greenhouse to grow indoor vines. A new typology on wine farming which is already initiated within the industry and can be further development with the presence of knowledge and research possibilities.

Beneath the visible building there is a large underground structure of basements present.

Among them the former hospital bed house on the edge of the site, which is connected to the main hospital building with an existing tunnel. The main hospital is located on the centre of the plot and will be transformed in a public wine production facility, which houses several public and interactive functions to generate the required attractivity. The present tunnel connection will be used within the process. The bed house will be transformed into a distribution centre connected to the main infrastructure situated along this plot.

Several other basements will be used for different purposes. The basement connected to the vertical greenhouse will be used as a 'traditional' subterranean greenhouse with a glass roof, functioning as an open field between the vineyard and the surrounding urban context.

Located on different height levels two basements will be used as water basins, to irrigate the land as well as supporting the production facility.

The result is diverse assembly of wine related production elements. A natural (urban) vineyard, a subterranean indoor vineyard and stacked vines with the vertical greenhouse.

This defines a new vision on the wine industry and supply's in multiple research, educative and development possibility's.

From hospital cite to 'Cité du Vin'.

### **Production-lines**

The main hospital which houses the hart of the vineyard with its production facility's is currently vacant and is in a bad state of decay. Making inevitable to demolish the built structure.

By clearing the ground the basement present beneath this building becomes visible.

With a footprint of 1500 square meters and a depth of 13 meters this basement is out of this world.

Formerly used as 'ketelhuis' for the hospital, providing in thermal energy, storage space for food and other supply's. A significant underground structure with an already industrial program. Former transport belts, air ducts and several staircases make this basement intriguing and very well suited to house a new production program dived over four levels within the 13-metre structure.

The former use of this basement defines the concept of the production-lines. Separated but still connect with each other to manage the different flow's and process required for the new winery.

### **Hidden icon**

By the placement of the winery on a subterranean level the new inserted architecture will be hidden at first sight. To only element above surface is a column structure that reflects the former building structure of the hospital site and relates to the 13metre depth of the basement with a similar height.

By approaching the winery surprise and astonishment will arise by seeing the basement in its full appearance. By inserting compact production lines as a tube-like architecture over multiple levels, shifting from each other in location and connected based on production and routing flows, an exceptional architecture will open up towards his visitors.

The slenderness of the volumes allows natural light to enter the building even on 13 meter below surface. Providing also an overview of the complete winery.

The horizontal facades as in roofs will be part of the architecture, usable as infrastructure but also as social, cultural event stages. Providing multiple platforms for social interactions.

### **People**

The social aspect is very essential from out the painful history and hesitation that is present in this region. A connection or grounding has to be made to succeed. The strong vision of the project hits multiple layers of the physical and social context and determines a clear perspective on this regions future. The inhabitants as well as visitors and tourist have to embrace this new industry to succeed as well, it has to become a part of this regions DNA. Multiple social aspects will stimulate this. Employment on in- and outdoor vineyards, educational programs connected to the agricultural school present and research facility's joined with local university's for fill an important role in the integration within social layer. Cultural enrichment provided by cultural programs already initiated on this location will be projected with the project by facilitating event spaces on a large scale on the outdoor platform of the project. Small-scale cultural programs are provided within the building. Leisure programs as a bar, restaurant and club facilitate these possibilities. The touristic attraction will be driven by the extraordinary concept of the project and its architecture. Supported by a hotel program on the two top levels within the vertical greenhouse, proving a stunning view on urban as well as the rural context of Heerlen.

### **Grounded**

To come back on the initiated question 'are they grounded?' the answer is: YES.

The current inhabitants of Heerlen believe and already experience the potentials this region has to offer. A further exposure and exploitation of the treasures Heerlen is rich on, will make this region appealing a worthy again like it has always been, but unfortunately lost out of sight. Buried beneath the surface.

By the extraction of the underground richness with its treasures of history, water, ground quality and architectural artefacts making this project significantly grounded with a subterranean architectural typology. Defining a humble statement suitable for this region and propagating a strong vision. Conversing former to future industry's by archaeolature.