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Power to the People
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Energy and Landscape Repair

Opening the Archive of the Land

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The land in the Rheinische Revier is heavily occupied by brown coal mining. Since the 19th century, the excavation of brown coal has been the fuel for industrial and economic growth in the region. The open pit mines have slowly advanced through the land, swallowing everything that lays in their way. They have erased both the cultural landscape and the local property structures.

RWE Power AG, the main energy producer and landowner in the region, is not only responsible for the mining activities since the 1920s, but also controls the planning of the post-mining landscape. Their efforts to recultivate the land imply wiping out the traces of the mining activities and overwriting of the existing archive of the land.

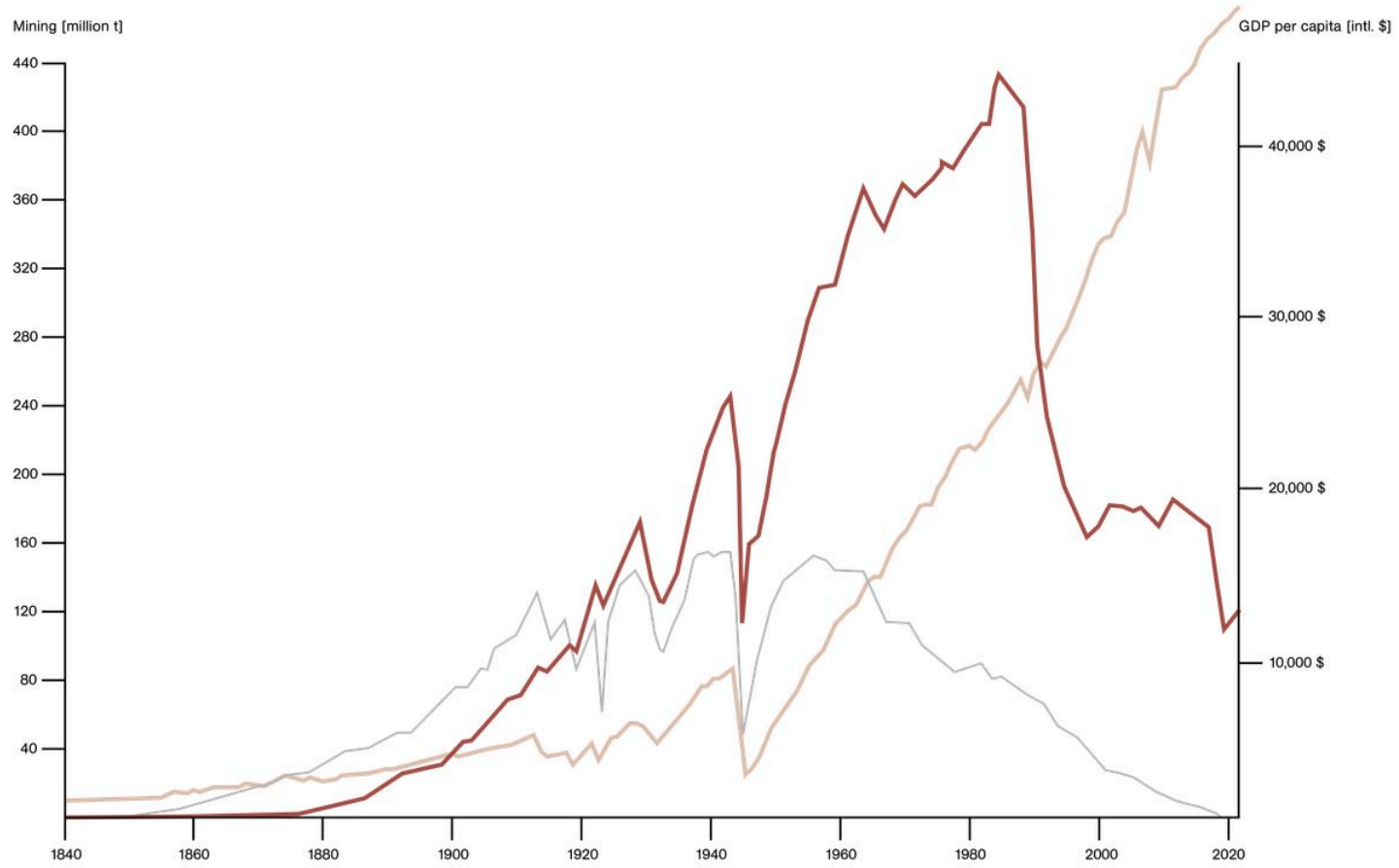
People are deeply connected to the land they shape in their everyday life. It is their memories that can help preserve the archive of the land and make its history palpable. Archiving those memories offers a way to preserve the intrinsic layers of the land for future generations and open them to everyone.

Mining and the Erasure of the Land Palimpsest

Since the 19th century brown coal has fuelled the economy in the Rheinische Revier. The rise of RWE as the only energy producer in the region concentrated significant control over land in the hands of a single company. As a result, the massive excavation in the large scale open pit mines rapidly erased the palimpsest of the cultural landscape that had been developed over thousands of years.

DESTRUCTION OPERA – EXPERIENCING LOSS
https://www.youtube.com/watch?v=VGZBhtfIOoM

When we travelled through the Rheinische Revier we heard the roaring of the massive machines excavating the brown coal and refilling the soil. The roaring sound became an omen for the destruction mining causes in the landscape.



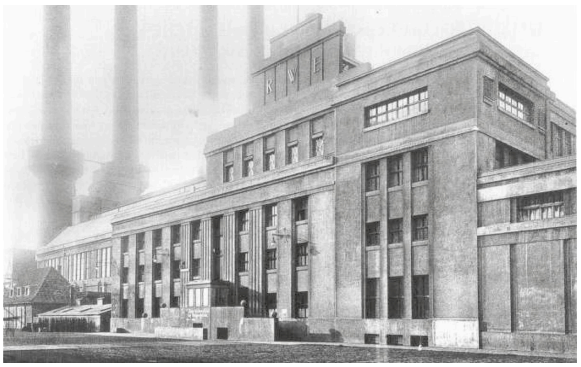
HISTORICAL DEVELOPMENT OF COAL MINING AND ECONOMIC GROWTH IN GERMANY
Source: Bundesanstalt für Geowissenschaften und Rohstoffe. [https://www.bgr.bund.de/DE/Themen/Min_rohstoffe/Downloads/rohsit-2020.pdf?__blob=publicationFile&v=4], Our World in Data. [https://ourworldindata.org/grapher/gdp-per-capita-maddison-2020?time=1820..2018&country=~DEU]

Brown coal Hard coal GDP per capita

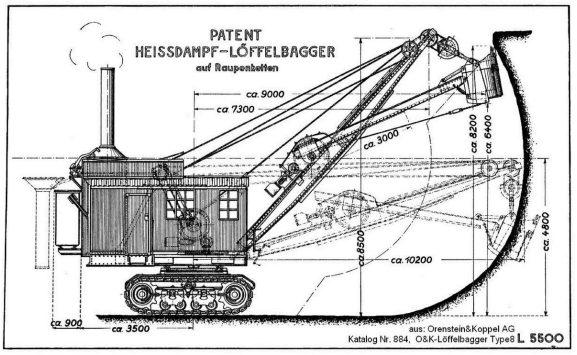
Brown coal has been the fuel of the German industry since the 19th century. It was the source of rapid industrialisation, economic growth and national energy autarky. People first used the brown coal to heat their homes and fuel the steam engines of the growing industries. Through the mechanisation of the excavation process it became a cheap energy. As a result, brown coal became the foundation for the constant growth of the capitalist economy.

UNION BRIQUET USED FOR HEATING, SOLD BY A COLLECTIVE OF BRIQUET FACTORIES IN THE RHEINISCHE REVIER
Photograph: Fotografeur, 2008.
[https://commons.wikimedia.org/wiki/File:Braunkohlebrikett_2.jpg]

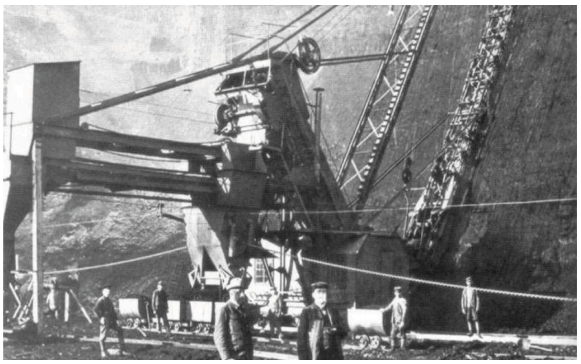
BROWN COAL TRANSPORTATION WITH HORSE-DRAWN LORRIES BEFORE RAILWAYS WERE ESTABLISHED
Photograph: LMBV-Archiv, 1912.
[https://www.bismit.de/themen/strukturwandel/geschichte]



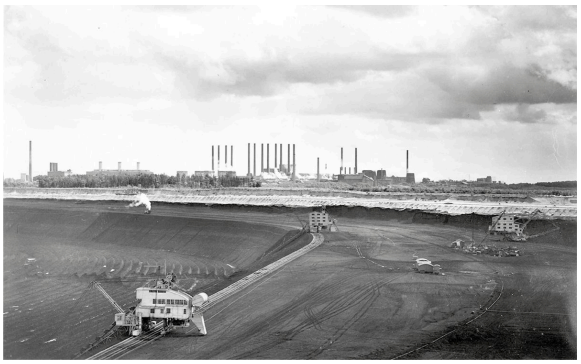
GOLDENBERG POWER PLANT IN KNAPSACK 1914, THE FIRST LARGE SCALE BROWN COAL POWER PLANT IN THE RHEINISCHE REVIER
Source: Rheinbraun Reproduktion in Cöllnisch Umbra. Das rheinische Braunkohlenrevier als Denkmalslandschaft. hrsg. v. Landschaftsverband Rheinland. Petersberg 2002. S.68.



EARLY MECHANISATION WITH STEAM-POWERED SHOVEL EXCAVATORS
Source: O&K Werkszeichnung, 1912.
[http://baggergalerie.blogspot.com/2017/08/orenstein-koppel-l5500-seilbagger.html]

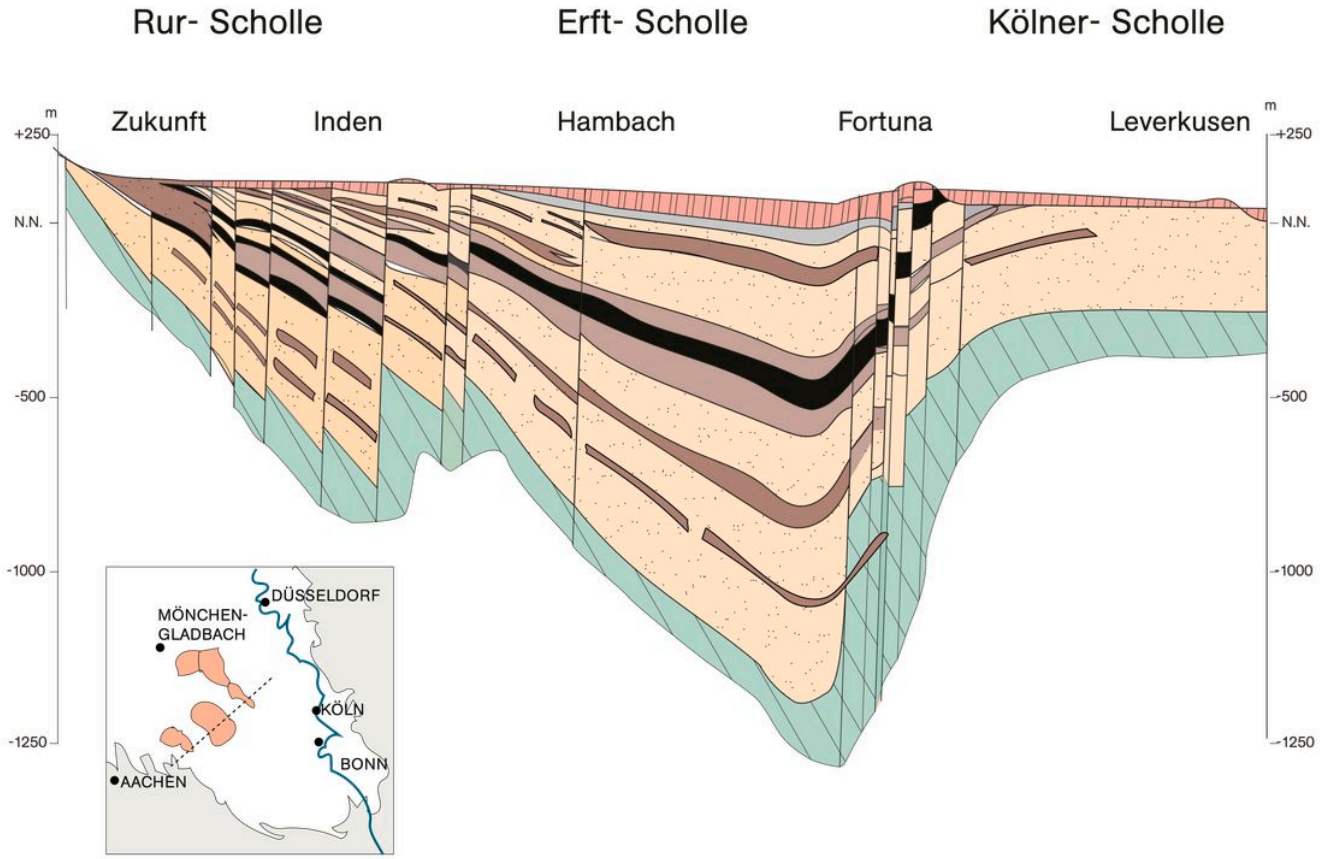


EISERNER MANN, THE FIRST CUTTING EXCAVATOR IN THE GRUHLWERK, 1907
Source: Wolfgang Drösser, Brühl. Geschichte-Bilder-Fakten-Zusammenhänge, Brühl, 2005.



BIG SCALE BROWN COAL MINING WITH BUCKET CHAIN EXCAVATORS IN THE VEREINIGTE VILLE MINING PIT, 1954.
Source: Vereinigte Ville, Historie.
[https://www.vereinigte-ville.de/historie.html]

In the Rheinische Revier brown coal is buried at shallow depths between 70 m and 400 m below the surface. Coupled with loose soils, this is the main reason why brown coal is mined from open pit mines. The extraction from the surface is cheaper than underground mining, only this method can achieve the economic viability of a low-efficiency product like brown coal. This made it an affordable and readily locally available resource.

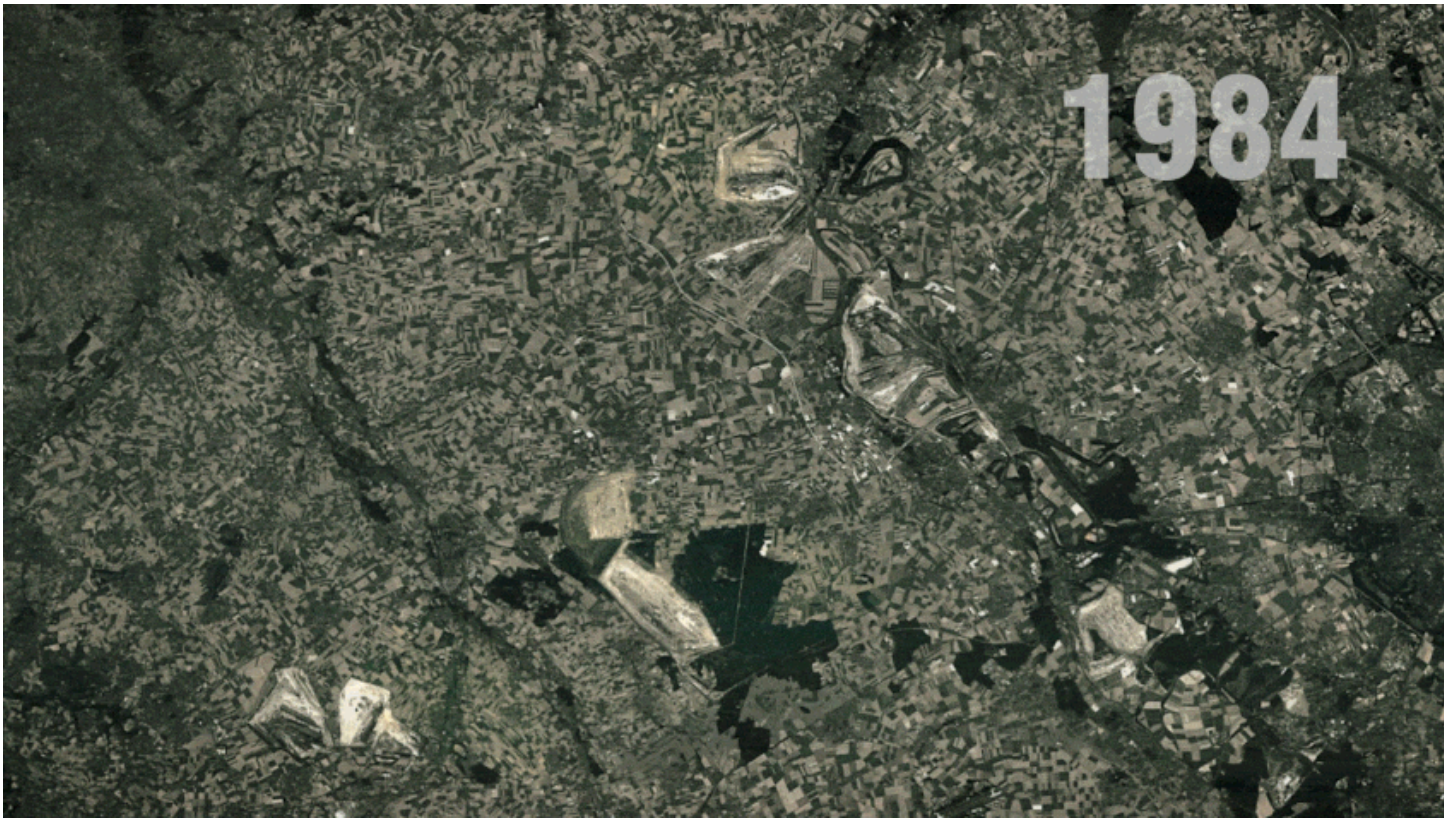


SOIL PROFILE OF THE RHEINISCHE REVIER, SHOWING THE SITUATION OF THE BROWN COAL SEAMS AND THE SOILS ABOVE THEM.
Source: Der Braunkohlentagebau, 2009.
[https://link.springer.com/content/pdf/10.1007/978-3-540-78401-2_2]

- Gravel and sand (Quarter)
- Sand and gravel (Tertiary)
- Sand and clay (Tertiary)
- Clay (Tertiary)
- Brown coal (Carboniferous)
- Clay and sand (Devonian)

The surface excavation requires giant open pits following the coal seams through the landscape. On their way, they swallow up everything that lays in their way: villages, farmland and forests. In the Rheinische Revier the three mining pits of Garzweiler, Hambach and Inden eat up 3,000 m^2 of land every day. In total the mining of brown coal has absorbed about 300 km^2 of land.

The movement of the pits illustrates a continuous land acquisition by the local mining operator RWE Power AG. As a de facto monopolistic energy producer in this region, it has today amassed a total of 12,000 ha of property. After the end of mining, RWE remains the owner of the land and has the power to plan the recultivation of the post-mining landscape.

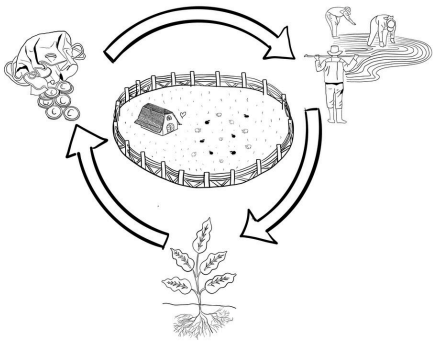


MINING PITS FOLLOWING THE BROWN COAL SEAMS THROUGH THE LANDSCAPE BETWEEN 1984 AND 2020, ILLUSTRATING THE CONTINUOUS LAND ACQUISITION BY RWE AND THE MASSIVE LAND USE OF EXTRACTION
Source: Google Earth Pro.

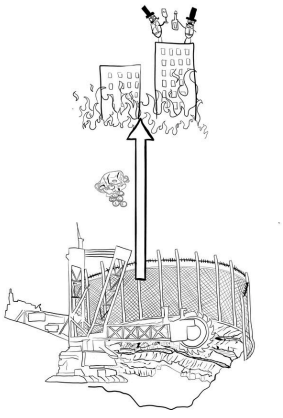
Land is deeply intertwined with human development. The land we see and relate to as our environment, is shaped by the relationship humans created with the ground. The cultural landscape that covers most of our world today is the direct result of people investing their labour into the land by clearing, ploughing and planting it. This cultivation is a constant and ongoing process.

THE CULTURAL LANDSCAPE IS THE RESULT OF
PEOPLE INVESTING LABOUR INTO THE LAND

The beginning of this process corresponds with people establishing ownership over the land as property. They wanted to benefit from the profits their labour generated. They created borders to denote what was theirs and what was not. The act of enclosing a plot of land gives it quality in a productive sense. In the subsistence model of the agrarian society this ownership over the land ensured a cyclical balance between labour and profits on the land. With the adaptation of a more linear society, land ownership and cultivation became more focused on growth.



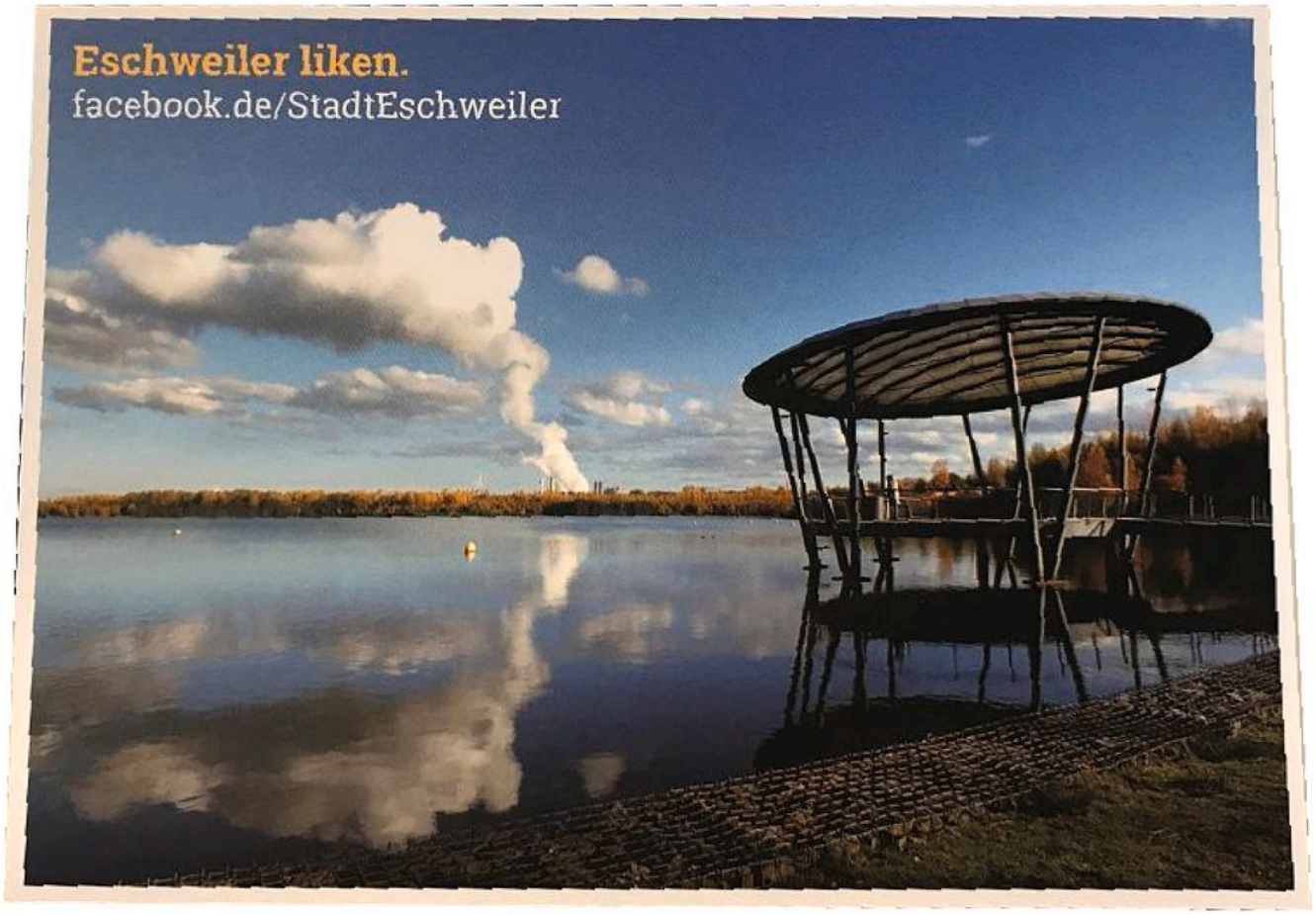
THE CYCLICAL MODEL: PEOPLE
ESTABLISH OWNERSHIP OVER THE LAND.
SUBSISTANCE CREATES BALANCE BETWEEN
LABOUR AND PROFIT ON THE LAND



THE LINEAR MODEL: ABSTRACTION
AND SIMPLIFICATION OF THE LAND.
CAPITALISM COMMODIFIES THE LAND AND
EXTRACTS PROFITS FROM THE NATURAL
MATERIALS

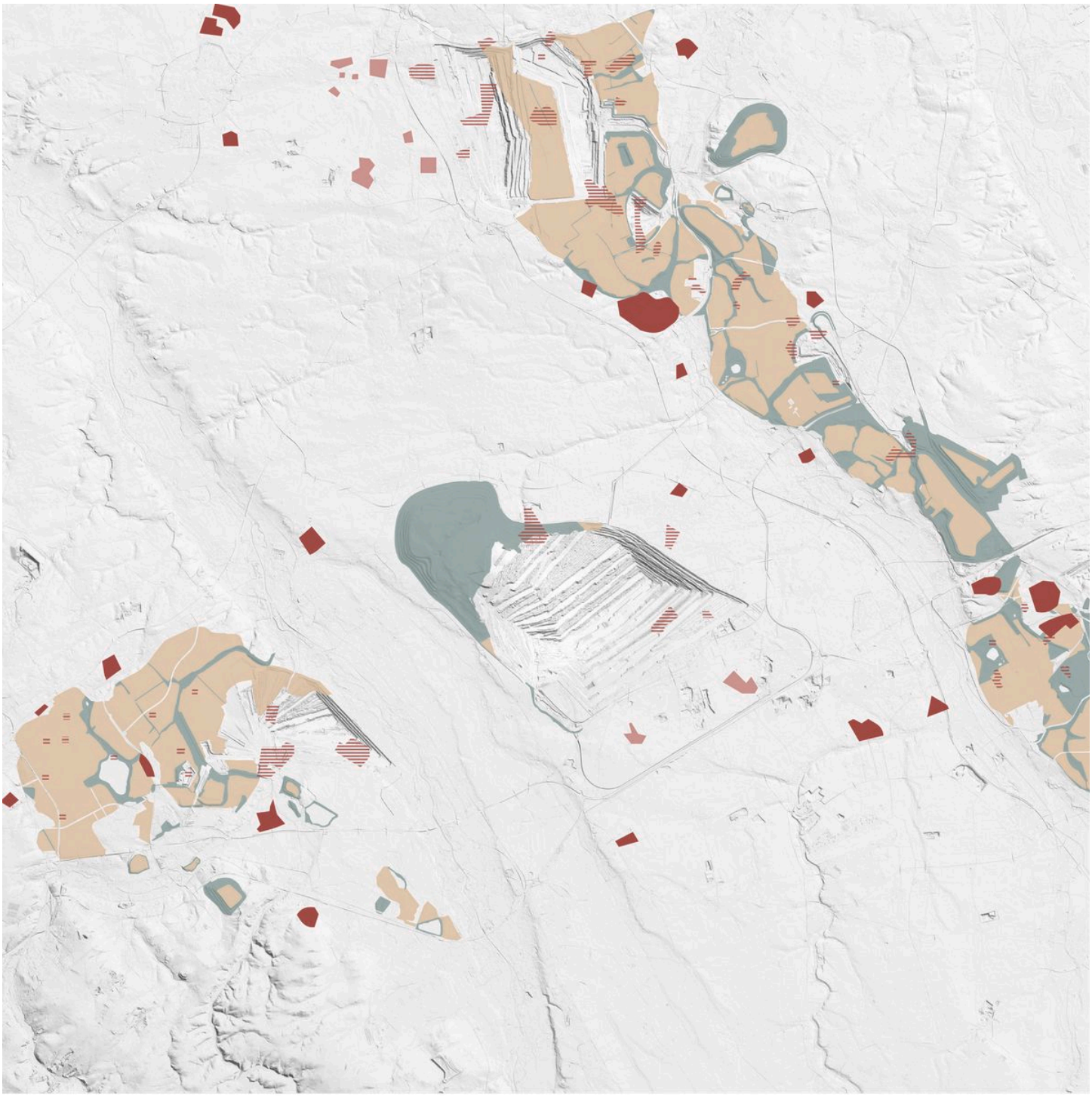
The mining pits are landscapes of labour. Through mining, layers are uncovered. By bringing them to the surface, the alignment of time and space inhabitants of the land built over generations collapses. The layers of the palimpsest of human cultivation in the land are erased. The result is a landscape shaped by ecological simplification and radical abstraction.

Overwriting the Archive



To mitigate the loss and erasure brown coal mining has caused on the land, RWE has been resettling people, recultivating agricultural land, and planting new forests. Additionally, their future plans include utopian lake projects. The goal of this recultivation effort is to eliminate the signs of the mining activity from the post-mining landscape.

The extraction of brown coal leaves behind a moon-like landscape which requires an elaborate reconstruction to handle the apocalyptic impacts on the environment. The land in the Rheinische Revier today is already dominated by the layers of the post-mining landscape. The reconstruction of the land is an attempt to overwrite and hide the wreckage the brown coal mining caused. The recultivation process is dominated by the RWE. As the owner of the land, they dictate the regional planning of land use and with that the character of the landscape. The post-mining landscape is shaped by three layers: The resettlement, which cannot fully restore the erased villages and their histories and traditions. The recultivation of agricultural land, with greatly minimised fertile soils. And the reforestation, which erases the delicate balances of the grown ecosystems.



THE THREE LAYERS OF RECULTIVATION IN THE POST-MINING LANDSCAPE OF THE RHEINISCHE REVIER
Source: Thomas Römer, wikimedia commons, 2018. [https://commons.wikimedia.org/wiki/File:Rheinisches_Braunkohlerevier_DE.png]

- Resettled villages
- Resettled villages, planned to be mined away
- Former village sites
- Recultivated agricultural land
- Reforested land

Resettlement or The Loss of Social Networks

When excavators eat up the land the people who live on it have to leave. They lose their home. Home is more than a house; it encompasses the social networks and traditions built over generations. The people associate their home with the many details that were constants in their life and often accompanied them since early childhood. Places like benches, foot paths, churches and cemeteries are deeply embedded in both the physical and immaterial memory that connects their path of life to the land.

IMPRESSIONS FROM THE FORMER VILLAGE SITES: THE OVER 1000-YEARS-OLD CHURCH OF MANHEIM WAS DECONSECRATED ON MAY 18TH, 2019.
Photograph: Dara Rüfenacht, 2022.

IMPRESSIONS FROM THE FORMER VILLAGE SITES: RWE STARTED TEARING DOWN THE HOUSES IN MANHEIM IN 2019.
Photograph: Dara Rüfenacht, 2022.

IMPRESSIONS FROM THE FORMER VILLAGE SITES: AFTER THE RESETTLEMENT THE HOUSES IN MORSCHENICH WERE LEFT STANDING AND BECAME HOMES FOR REFUGEES.
Photograph: Dara Rüfenacht, 2022.

IMPRESSIONS FROM THE FORMER VILLAGE SITES: KEYENBERG STARTED THE RESETTLEMENT IN 2016.
Photograph: Dara Rüfenacht, 2022.

IMPRESSIONS FROM THE FORMER VILLAGE SITES: BY THE TIME KEYENBERG WAS SAVED FROM THE DESTRUCTION BY THE 2030 PHASE OUT DEADLINE, 85 % OF INHABITANTS HAD MOVED ELSEWHERE.
Photograph: Dara Rüfenacht, 2022.

IMPRESSIONS FROM THE FORMER VILLAGE SITES: ACCORDING TO THE STATE GOVERNMENT ALL FORMER INHABITANTS OF KEYENBERG SHOULD BE ABLE TO BUY BACK THEIR OLD HOUSES.
Photograph: Dara Rüfenacht, 2022.

The problems already start before the resettlement becomes reality. The villages designated for removal are slowly dying. Businesses are leaving, and with them opportunities and future prospects. As a result, the younger inhabitants start moving to more attractive areas. Being placed on the red list puts a stop to any future development of the village until it is resettled in the new place, a process that can take years. Once in the new village, people have to get used to new neighbourhoods and new living situations. The formerly independent villages become new development areas of established towns, to limit the urban sprawl. For the inhabitants this means a rapid change in the structures of their daily life. They have to actively re-establish a social structure, something that is normally part of the slow organic processes that shape a village.

THE NEW CHURCH IN MORSCHENICH-NEU IS STILL UNDER CONSTRUCTION.
Photograph: Dara Rüfenacht, 2022.

FIRST CARNIVAL PARADE
IN MANHEIM-NEU IN 2015.
Photograph: Marco Jakobs, 2015.
[https://www.mcphotos.de/alben/dickbusch/events/karneval2015/]

THE NEW HOUSES ARE FINISHED BUT THE TREES AROUND THE PLAYGROUND IN MORSCHENICH-NEU STILL NEED SOME TIME TO GROW.
Photograph: Konrad Gutkowski, 2018.
[https://www.soundsofchanges.eu/sound/the-new-village-morschenich-neu-a-soundwalk/]

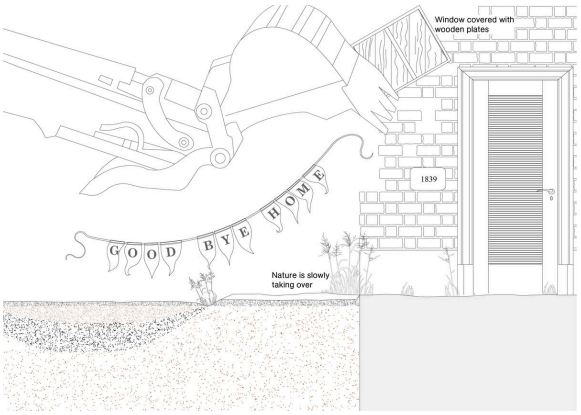
THE MARIENKAPELLE IS THE ONLY HISTORICAL BUILDING IN MANHEIM-NEU. IN 2017, IT WAS DECONSTRUCTED IN MANHEIM-ALT AND REBUILT FROM THE SAME MATERIALS IN THE NEW VILLAGE.
Photograph: Chris06, 2019.
[https://commons.wikimedia.org/wiki/File:Marienkapelle_(Manheim-neu)_(2).jpg]

PEOPLE HAVE ARE STARTING TO BUILD A HOME IN MORSCHENICH-NEU. THE PUBLIC SPACES AND STREETSCAPES ARE STILL UNFINISHED.
Photograph: Martin Kohlberger, 2022.

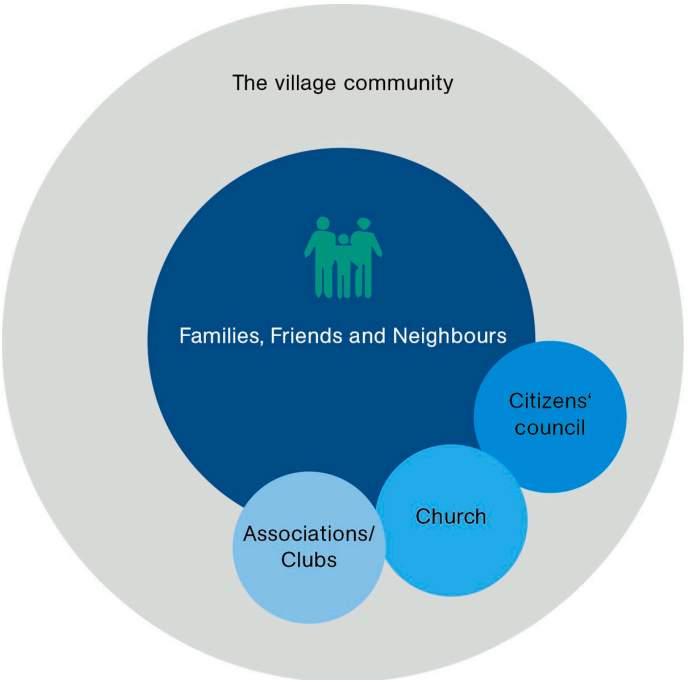
THE NEW CEMETERY IN KEYENBERG IS CONSECRATED AS A PLACE OF COMMUNICATION AND SOLACE FOR THE PEOPLE OF KEYENBERG AND KUCKUM WHO WILL NOW SHARE A CEMETERY.
Photograph: Stadt Erkelenz, 2019.
[https://www.erkelenz.de/newsarchiv/2019/november/friedhof-in-keyenberg-neu-eingesegnet/]

Like in many other rural areas the clubs and associations are the heart of social life. They structure, organise and represent public and social life in the village. So, it is unsurprising that they play an important role in the resettlement process. People often voice fears that the club life is crumbling at the new site. The reasons for that are directly based in the resettlement process. Some people did not move into the new village, while others might not have the financial means anymore to support the association. Despite the struggles they face the clubs are also the backbone of creating a new village culture. In fact, for several years all associations seem to deviate from their main goals towards supporting and rebuilding the village community first and foremost.

RESETTLEMENT OF THE VILLAGE COMMUNITY
RWE buys the properties from the people who not only leave behind their houses but also memories and stories connected with them.



DEMOLITION OF EMPTY HOUSES AS PREPARATION FOR THE MINING OPERATIONS
The empty houses are demolished long before the mining pit reaches the site. Some people want the village to be demolished as soon as possible after they moved out so their memory cannot be damaged any further by looters.



PRINCIPLE OF COLLECTIVE RESETTLEMENT OF A VILLAGE COMMUNITY
Source: RWE, Umsiedlung im Rheinland, 2019. [https://www.rwe.com/-/media/RWE/documents/10-nachbarschaft/umsiedlung/Umsiedlungen-im-Rheinland-Partnerschaft-sichert-Sozialvertraeglichkeit.pdf]

For the inhabitants of resettled villages it is very important to show that they are not victims of this process, but that they actively and successfully resettled and established a new community, despite the lack of support from the decision makers. In the Rheinische Revier more than 100 settlements have been destroyed so far, and over 40,000 people experienced this as a life-altering change.

Recultivating Agricultural Land or The Loss of Fertile Soil

IMPRESSIONS OF RECULTIVATED AGRICULTURAL LAND FOLLOWING THE INDEN MINING PIT
Photograph: Dara Rüfenacht, 2022.

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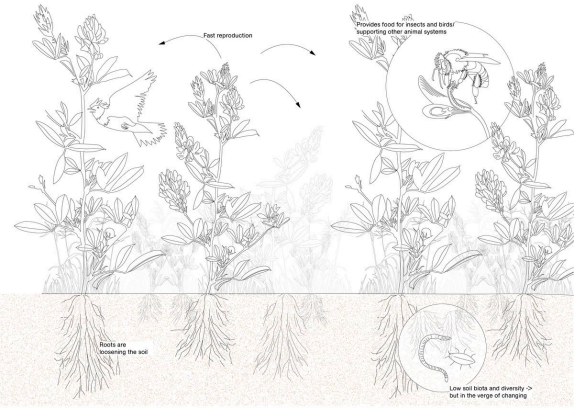
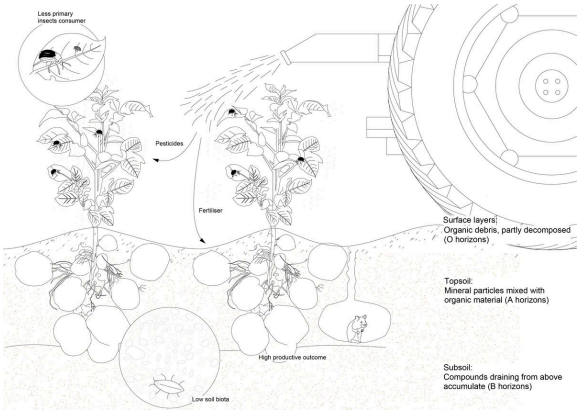
The soil in the lower rhine valley is known for its very fertile loess layer, which makes the land favourable for agricultural activities. Over the centuries, agriculture has become one of the major industries in the region. Recultivating agricultural land is therefore a priority for RWE, which has to compensate the farmers that were dispossessed during the mining operations. Famers usually get compensated with a new piece of land in a different part of the region, to ensure they receive the new land right after the expropriation.

This separates the farmers from the land their family have been cultivating for generations. They have to adapt to a new location and its particular conditions. With this process of redistribution, RWE has a dominating role in the land management of the region. So far, RWE has provided about 120 km^2 of recultivated agricultural land in the Rheinische Revier, which is more than half of the total recultivated area.



TEMPORARY PLANTING TO RECOVER SOIL FERTILITY

Alfalfa is planted as a transitional cultivation. The roots of this plant simultaneously loosen and stabilise the soil. When they are ploughed under they fertilise the soil. Additionally, they provide the basis to re-establish biodiversity on the land again.



RECULTIVATED AGRICULTURAL LAND

After the transition period, the agricultural land is cultivated by the farmers again. The farmers have to get used to their new plots and the specific soil and weather conditions.

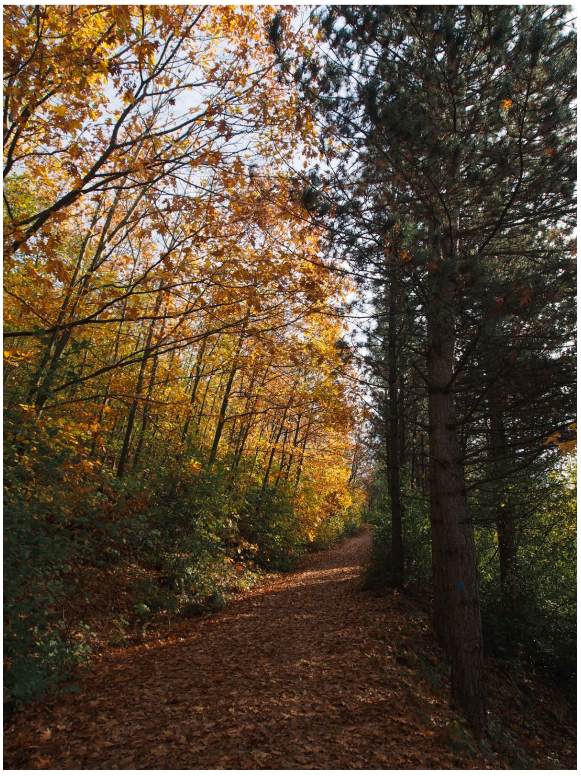
To preserve the quality of the soils the topsoil should be excavated, stored, and replaced separately. However, this layer measures only up to 30 cm in depth, but the excavators have a digging depth of minimum 3 m. As a result, the biologically active topsoil is mixed with the lifeless subsoil during excavation and redistribution. Under this new artificial layer of topsoil lays an almost 100 m heavy zone of refilled overburden material with no active groundwater horizons, as they get destroyed during the soil movements.

The particles in the reclaimed soil are not connected to each other, which makes the soil unstable. It can take up to 30 years before it is fully resilient again. The new soil requires special plantings and additional fertiliser to recover as much of the previous quality and fertility as possible. Even so it will only reach comparable yields again after 60 to 80 years, and ecological farming is impossible for a long time. The result is a significant loss of soil diversity that has grown naturally and been cultivated by farmers over millennia.

Reforestation or The Loss of Ecosystem Quality

IMPRESSIONS OF REFORESTATION ON THE SOPHIENHÖHE: ARTIFICIALLY INTRODUCED ANT HILL UNDER A PROTECTIVE COVER TO GROW THE UNDERGROUND ECOSYSTEM.
Photograph: Dara Rüfenacht, 2022.

NO VARIETY IN TREE AGES AND DEAD WOOD IS SPARSE: LITTLE DIVERSITY IN THE ECOSYSTEM
Photograph: Dara Rüfenacht, 2022.



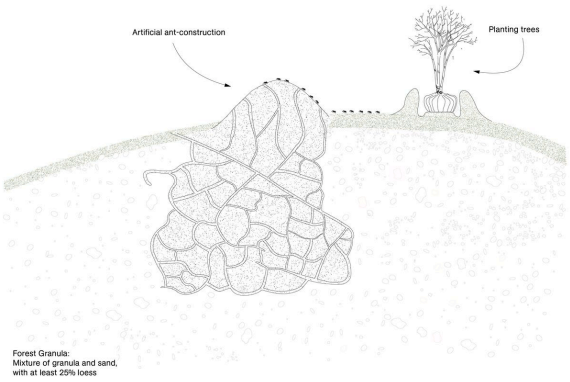
TREES PLANTED IN BATCHES OF THE SAME SPECIES: LITTLE DIVERSITY IN THE ECOSYSTEM

Photograph: Dara Rüfenacht, 2022.

MULTIFUNCTIONAL FOREST: TIMBER INDUSTRY
Photograph: Dara Rüfenacht, 2022.

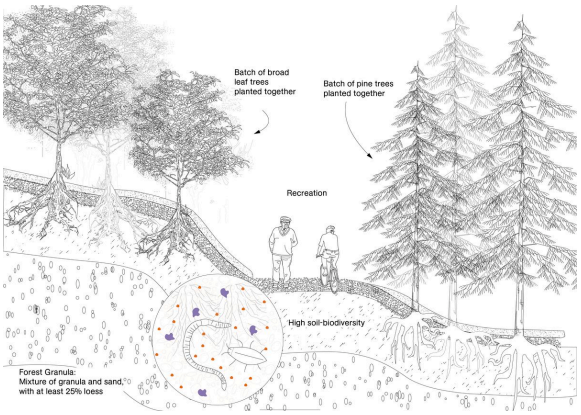
MULTIFUNCTIONAL FOREST:
RECREATIONAL SPACE
Photograph: Dara Rüfenacht, 2022.

Large parts of the Rheinische Revier were once covered by an extensive forest, the Bürgewald. Most of this forest has been mined away, mostly by the Hambach mine. RWE's reforestation measures aim to create a multifunctional forest. This new forest should accommodate the need for recreation, nature protection and provide a high economic value. Of all the recultivation efforts undertaken so far, reforestation is the slowest: the soil that is redistributed from the mining pit is too compact and not fertile enough to sustain a forest immediately. The RWE foresters have to prepare it with additional nitrogen and humus over several years to create a sustainable foundation. Nevertheless, the soil still lacks the typical mycorrhiza, a symbiotic connection between soil fungi and the root system of a plant, which many forest trees need for successful growth. The corresponding fungi are slow to return to the soil, but are essential for healthy plant growth, even for trees that do not depend on the symbiosis for survival. Similarly, the soil can store less water due to compaction, so the risk of the forest drying out in summer is high.



CONSTRUCTING A NEW ECOSYSTEM

Ants are introduced into the fresh soils to loosen it and support the growth of the underground ecosystem. Once the soil is ready 1–2 year old trees, grown from the seeds of the old forest, are planted.



A MULTIFUNCTIONAL FOREST

The growth of the trees takes a long time, at the same time the soil recovers its biodiversity. The new forest is planned to support ecological biodiversity, human recreation and economic use of timber.

For a long time, reforestation was meant to be realised as quickly as possible. To this end, RWE used foreign species of trees in order to speed up the growth and to create forests with pine trees and birch. Today, reforestation is done with seeds from the old forest to restore the former ecosystem. Despite that effort some species cannot achieve habitat transition to the new forest. They are limited to the last small pieces of remaining old forest, so their survival is questionable.

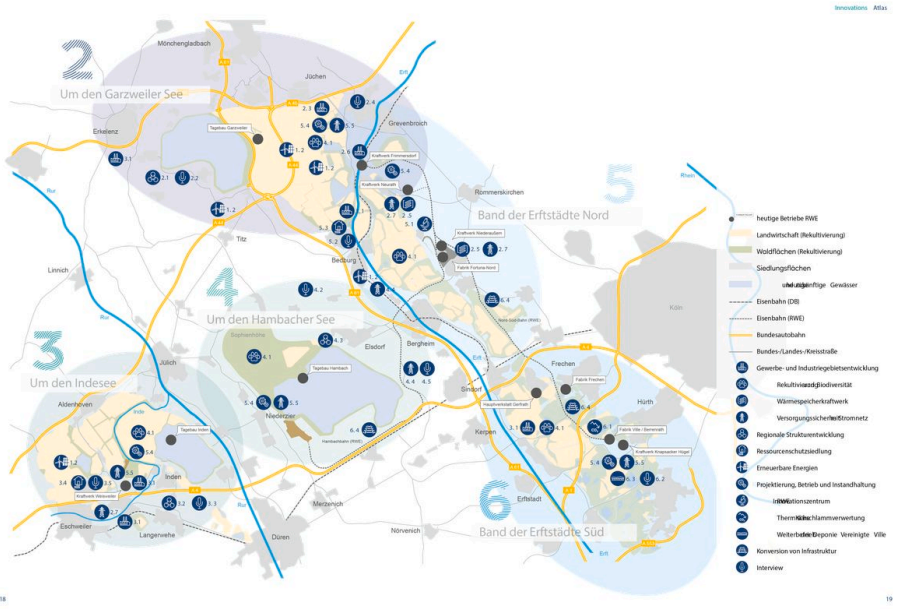
To date, RWE has reforested about 80 km^2 of land in the Rheinische Revier and thus failed to achieve its minimum goal of completely restoring the lost forest area. It remains to be seen whether the new afforestation can be viable and stable in the long term. The sustainability of the new ecosystem has yet to be determined. However, reforestation cannot replace the loss of the old forest ecosystem.

The Lake Project or The Attempt to Fix a Hole

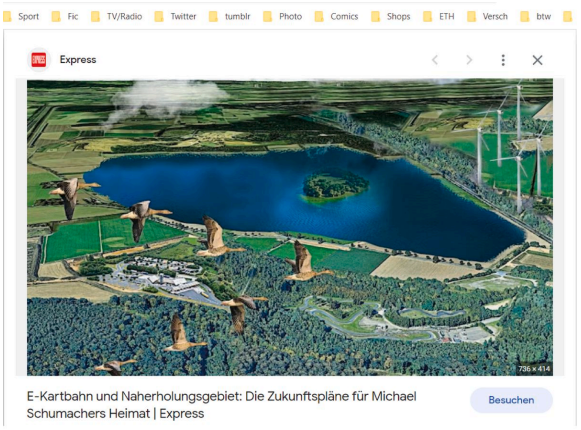
THE LAKE PROJECT IS AN EXPERIMENT TO COVER UP THE SCAR IN THE LAND

After the brown coal is extracted a hole in the ground is left behind. The groundwater will slowly start to rise to its old level, flooding the excavated area. However, being a slow natural process, it would take at least 500 years or more to happen. This is a time frame beyond most people's imagination.

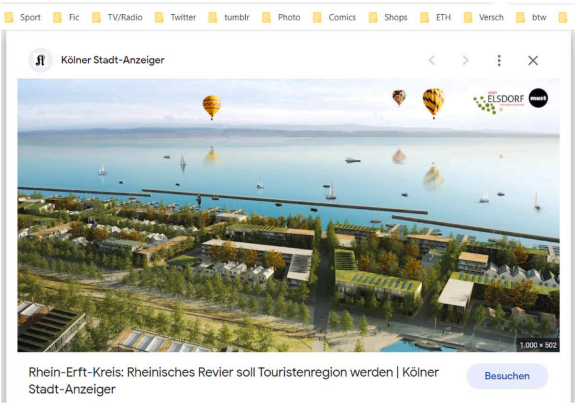
RWE wants to turn the pits into lakes. It seems the people in the area are more than happy to finally get something back from the firm that is responsible for the coal mining which has caused them so much loss and grief. The communes around the mining pits see it as an opportunity to replace the loss of economic value and jobs with the potential of a new tourism and recreation platform.



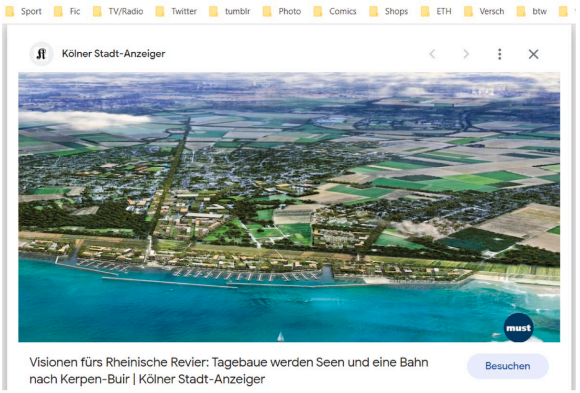
PLANS BY RWE FOR THE POST-MINING LANDSCAPE IN THE RHEINISCHE REVIER
Source: Innovationsatlas, RWE Power AG, 2020. [https://www.rwe.com/-/media/RWE/documents/10-nachbarschaft/rwe-innovations-atlas.pdf]



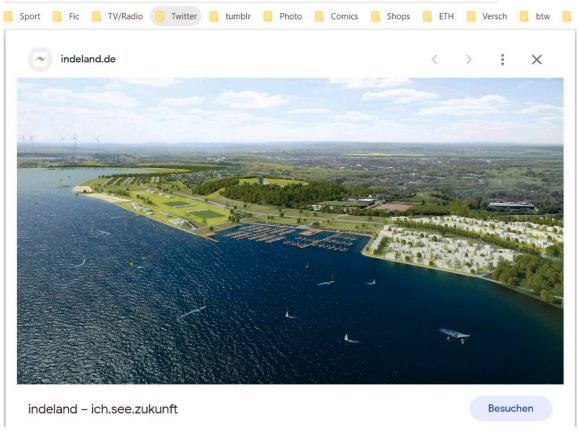
"ELECTRIC KART TRACK AND RECREATION AREA: THE FUTURE PLANS FOR MICHAEL SCHUMACHERS HOME"
Source: Oliver Reuter, Express, 2020. [https://www.express.de/sport/motorsport/e-kartbahn-und-naherholungsgebiet-die-zukunftsplaene-fuer-michael-schumachers-heimat-23766]



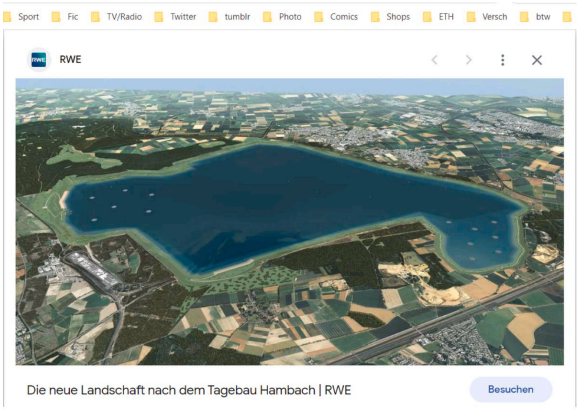
"RHEIN-ERFT-KREIS: THE RHEINISCHE REVIER IS SUPPOSED TO BECOME A TOURISM REGION"
Source: Niklas Pinner, Kölner Stadt-Anzeiger, 2022. [https://www.ksta.de/region/rhein-erft/rhein-erft-kreis-rheinisches-revier-soll-touristenregion-werden-173647]



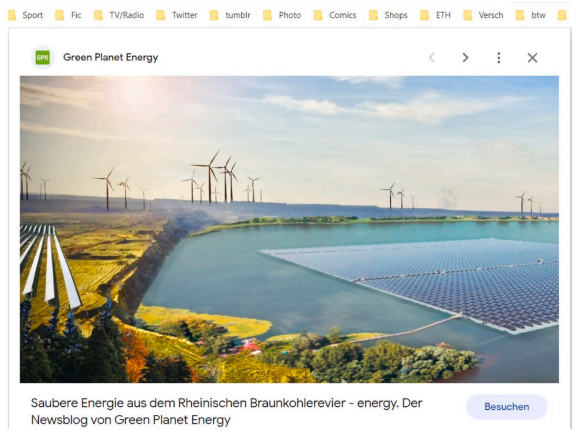
"VISIONS FOR THE RHEINISCHE REVIER: MINING PITS BECOME LAKES AND A TRAIN TO KERPEN-BUIR"
Source: Kölner Stadt-Anzeiger, 2021. [https://www.ksta.de/region/visionen-fuers-rheinische-revier-tagebaue-werden-seen-und-eine-bahn-nach-kerpen-buir-217684]



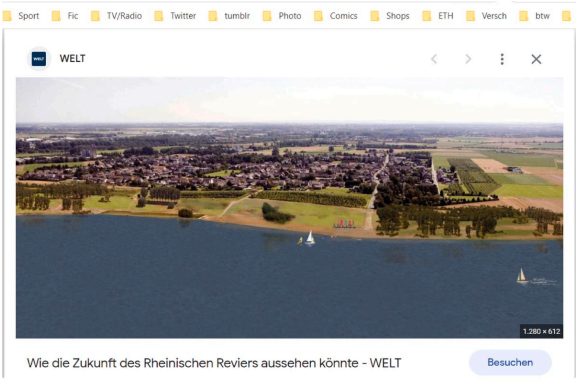
"I - SEE - FUTURE"
Source: indeland, 2017 [https://indeland.de/indesee/2060]



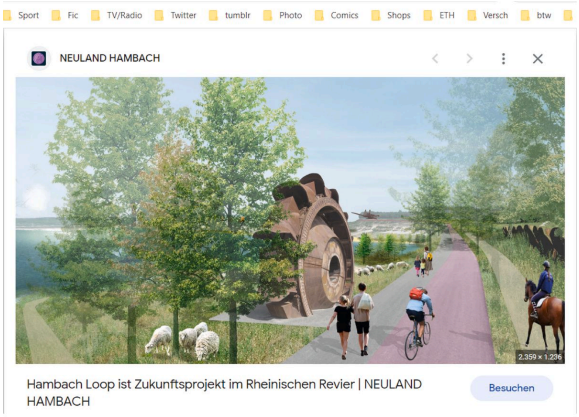
"THE NEW LANDSCAPE AFTER THE HABACH MINING PIT"
Source: RWE Power AG. [https://www.rwe.com/der-konzern/laender-und-standorte/tagebau-hambach/neue-landschaft-nach-dem-tagebau-hambach]



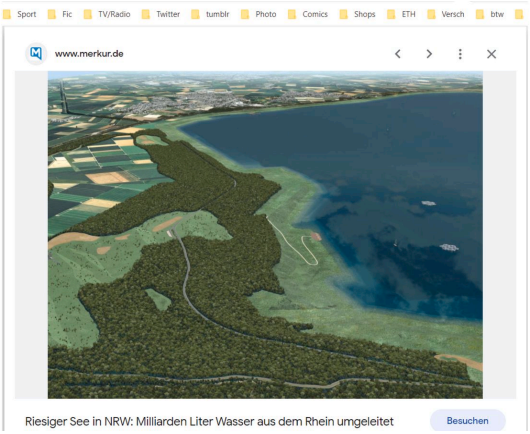
"CLEAN ENERGY FROM THE RHEINIHSCHE REVIER"
Source: Green Planet Energy, 2018 [https://green-planet-energy.de/blog/informieren/unternehmens-news/saubere-energie-aus-dem-rheinischen-braunkohlerevier/]



"HOW THE FUTURE OF THE RHEINISCHE REVIER COULD LOOK"
Source: Christiane Hoffmans, Welt, 2021. [https://www.welt.de/regionales/nrw/article231539137/Wie-die-Zukunft-des-Rheinischen-Reviers-aussehen-koennte.html]

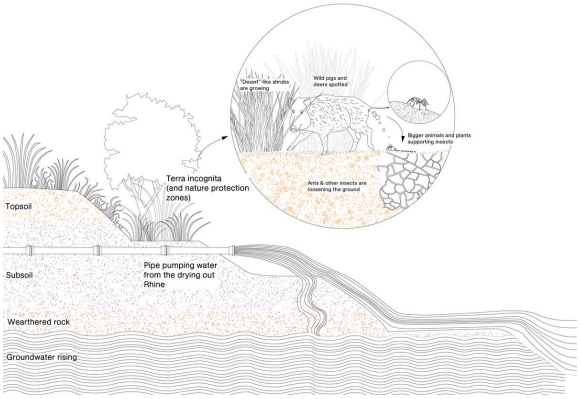


"THE HAMBACH LOOP IS A FUTURE PROJECT IN THE RHEINISCHE REVIER"
Source: Neiland Hambach. [https://www.neuland-hambach.de/aktuelles/artikel/hambach-loop-ist-zukunftsprojekt-im-rheinischen-revier]



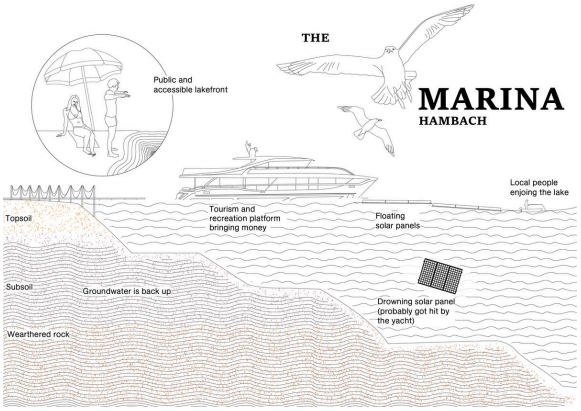
"HUGE LAKE IN NRW: BILLIONS OF LITRES OF WATER DIVERTED FROM THE RHINE"
Source: Peter Sieben, Merkur.de, 2022.
[https://www.merkur.de/deutschland/nordrhein-westfalen/streit-kritik-tagebau-hambach-rwe-forst-koeln-aachen-zrw-riesiger-see-nrw-hambacher-see-neu-91939133.html]

Filling up the mining pits with water is the simplest form of recultivation, it directly replaces the extracted brown coal with water, a process that is inevitable anyway. The water that will flood the mining holes will be sour with pH values between 2.5 and 3.5, as other brown coal areas have shown. This pH range is not viable for most animals and plants and does not meet the legal requirements for water quality for human use. In most cases the lakes have to be artificially treated with chalk and sodium hydroxide solution. Even with this treatment, it would take between 50 and 100 years for the hydrology to stabilise.



TRANSITIONAL POST-MINING LANDSCAPE

RWE is stabilising the banks of the mining pit and the already existing terra incognita of the border exists as a nature protection zone. A pipeline pumps water from the Rhine to speed up the natural flooding of the mining pit with the rising groundwater.



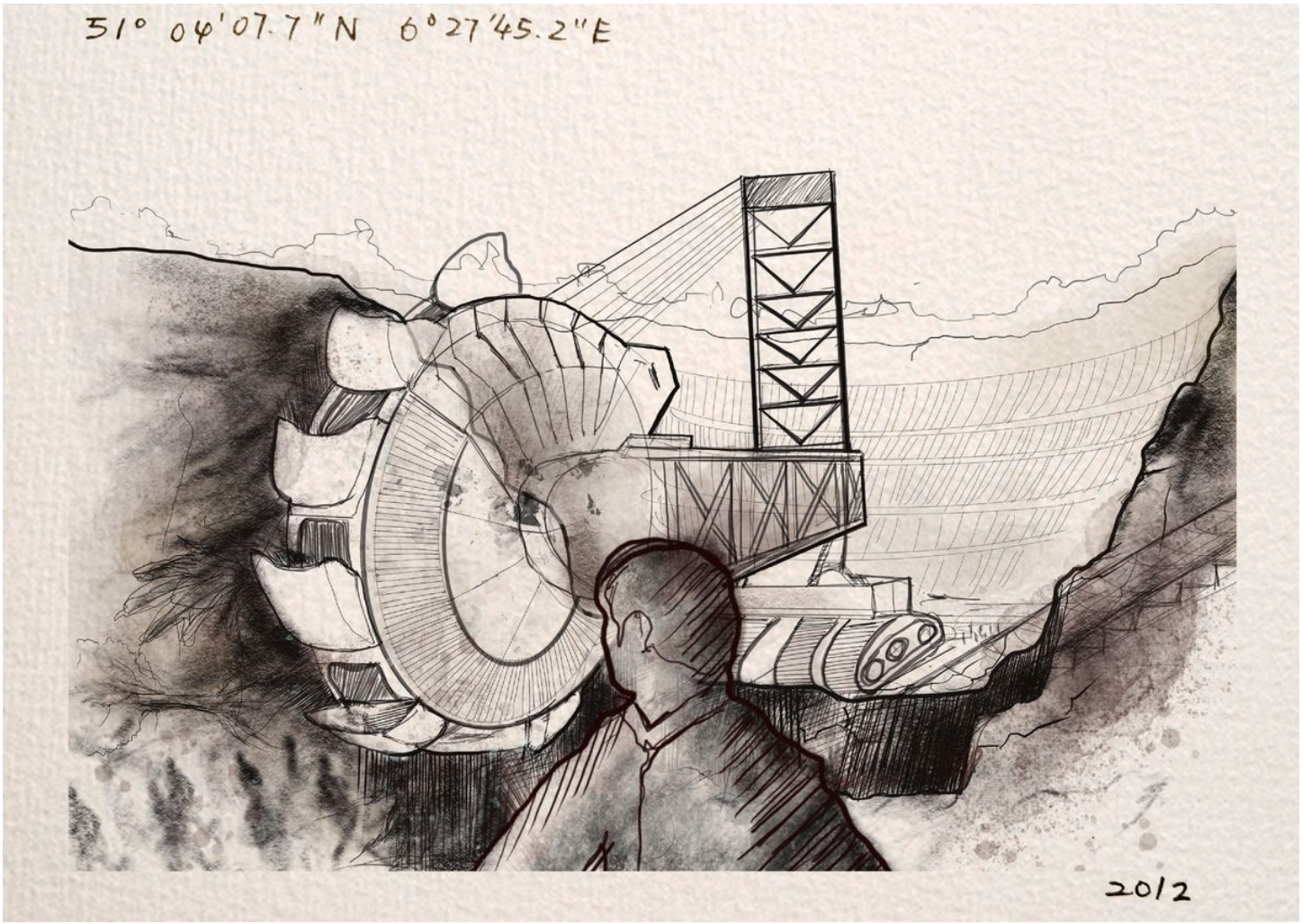
THE FUTURE LAKE LANDSCAPE

Once the mining pit is filled with water the lake is supposed to be a new tourism and recreation hotspot for the region.

To overcome some of the issues mentioned above, RWE plans to build a massive underground pipeline from the Rhine to the mining pits. The plan is to pump water from the Rhine, filling up the lakes in 40 years. How this is to be achieved, while the water levels of the Rhine might be permanently low due to ongoing climate change, is unclear. The introduction of unfiltered water from the Rhine into the landscape of the Rheinische Revier might pose new risks.

In addition, the ecological quality of the lake landscape as a whole has not yet been determined and the long-term effects of the creation of the lakes are still unknown.

Archiving Memories of the Disturbed Land

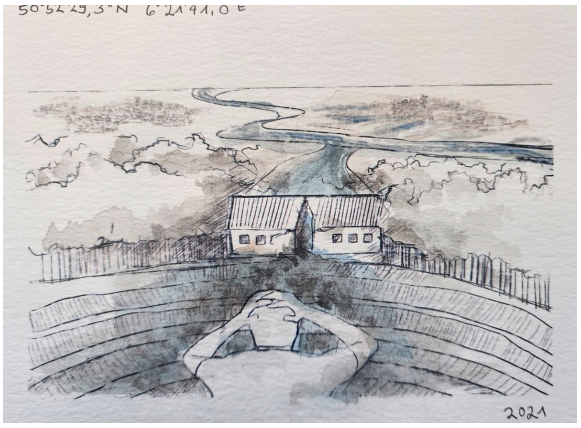


Natural and anthropogenic processes continuously shape the land. The various layers of this palimpsest create an archive, in which we can read both the past and the present. By archiving people's memories of the land, we can preserve the things that were lost, through mining and recultivation, and make them accessible for future generations.

LOCATING THE COLLECTED MEMORIES IN THE RHEINISCHE REVIER

Our research on the landscape transformations of the Rheinische Revier followed the concept that land is a shared material human experience, shaped by both individual and social agency. It is the result of political, social, and cultural developments. In this concept, land is an eco-fact as well as an arte-fact, created by both natural and anthropogenic influences. The land is not static, it is a palimpsest continuously overlaying all the different processes and developments that happened and are still happening today. Land is an active archive that allows us to read the history and the present of the region.

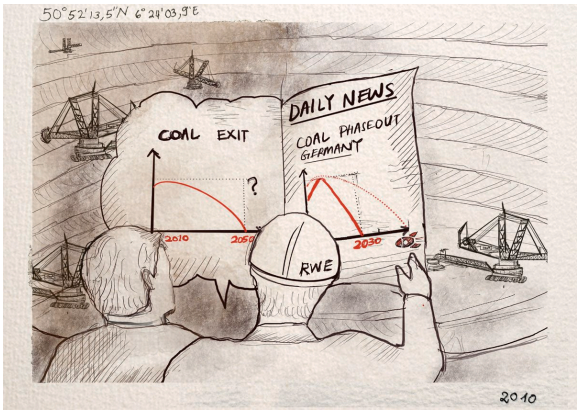
RWE is in the process of overwriting this archive and erasing many of its stories through its efforts to recultivate the land. This risks cutting the connection that people have built with the land through their everyday experiences. We present a method for preserving people's relationship with the land and keeping its archival function alive and accessible.



When it kept raining in the summer of 2021 and the water in the river Inde kept rising, it was both fascinating and terrifying to see what power water can have. The river dug its old bed back again, almost like it never forgot where it once ran. It flooded that mining pit with an unstoppable force. The good thing is that this probably saved the people in the villages and towns further downstream from worse flooding.

– Frank 2022, remembering the 2021 summer flooding of the Inde River.

FRANK, 2022, REMEMBERING THE 2021 SUMMER FLOODING OF THE INDE RIVER.



When I did my internship at RWE in 2010 I went to visit the pit Inden with two RWE employees. On the way, we stopped at the viewing platform. We looked into the mining pit and the two employees told me about the plans to phase out coal from the German energy mix until 2050. At the time they were very sceptical about whether this was going to happen or if it was even possible. Looking back, this is very interesting considering the phase-out is now set for 2030.

- Jann, December 2022, remembering a 2010 visit to the Inden mining-pit.

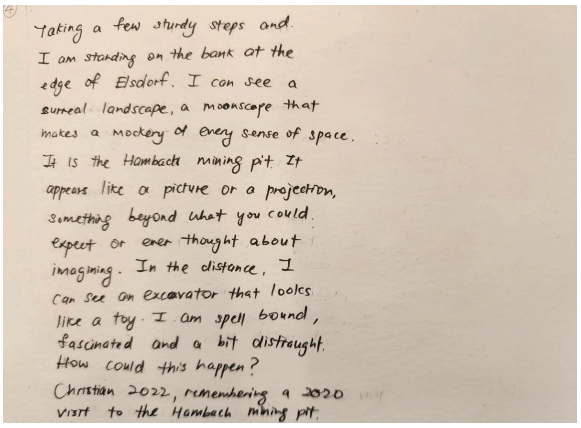
JANN, 2022, REMEMBERING A 2010 VISIT TO THE INDEN MINING PIT

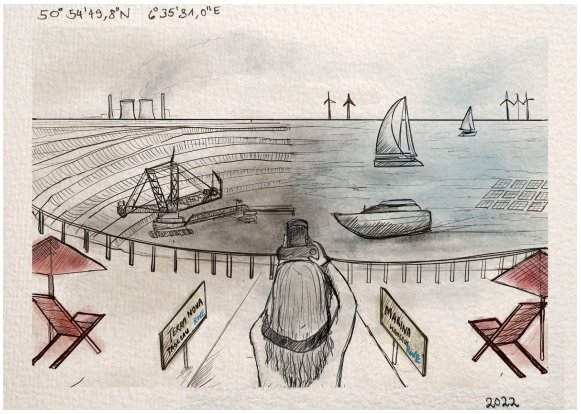
3 While climbing up the hill of Sophienhöhe on a wide switchback way. I wonder how this hill came to be. It is standing in the otherwise flat land like a giant molehill. looking at my map. I remember there was a village here once, down below in the belly of this mound of earth. Now here grows a thick forest meant for biking and hiking and for animals to hide in. The people from the village are gone and with them their stories, no traces left behind.

Dara 2022, remembering the 2022 Seminarweek trip to the Sophienhöhe.

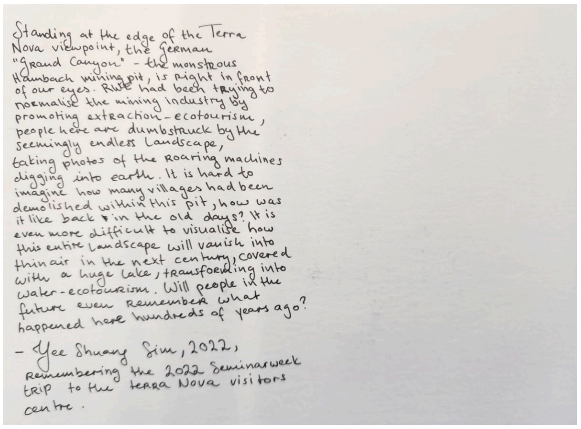
DARA, 2022, REMEMBERING THE 2022 SEMINARWEEK TRIP TO THE SOPHIENHÖHE

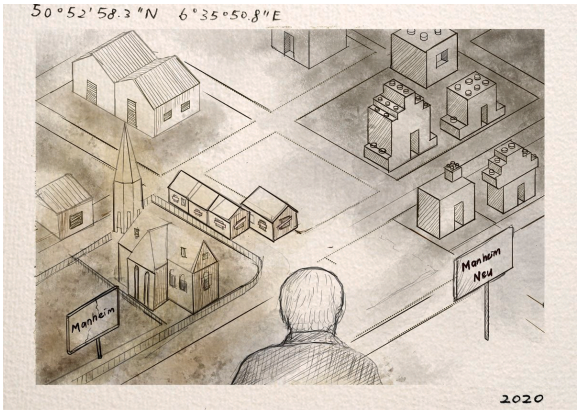
CHRISTIAN, 2022, REMEMBERING A 2020 VISIT TO THE HAMBACH MINING PIT



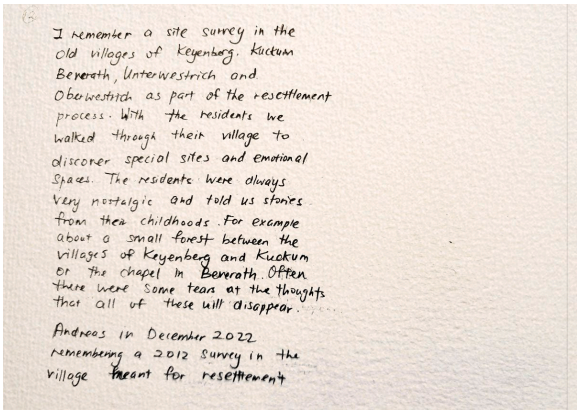


YEE SHUANG, 2022, REMEMBERING THE 2022 SEMINAR WEEK TRIP TO THE TERRA NOVA VISITORS CENTRE.





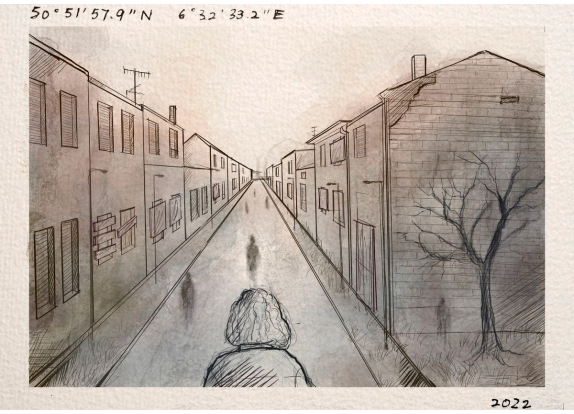
CHRISTIAN, 2022, REMEMBERING A 2020 VISIT TO MANHEIM ALT AND MANHEIM NEU



On October 6th 2018 50'000 people swarmed our demonstration in the Hambach forest. What was meant to be a protest against the imminent uprooting of the Hambach "Hambi", developed into a celebration. The day before the Oberverwaltungsgericht of the federal state granted our expriked injunction to stop the clearance. A historical success! This allowed us to rescue 650 hä of precious forest from the excavators. 1,1 billion tonnes of the climate killer stay in the ground and the region can finally start to develop a sustainable perspective for the future.

- Dirk 2022, remembering a successful 2018 demonstration against the brown coal mining

DIRK, 2022, REMEMBERING A SUCCESSFUL 2018 DEMONSTRATION AGAINST BROWN COAL MINING.



I am very tired, but I could be outraged if I weren't. We came to Morschenich to talk to the refugees setted here about that experience. We have seen none.

Why are refugees always locked away from important critical infrastructure and locals? Why are they made invisible? Why are they treated like ghosts?

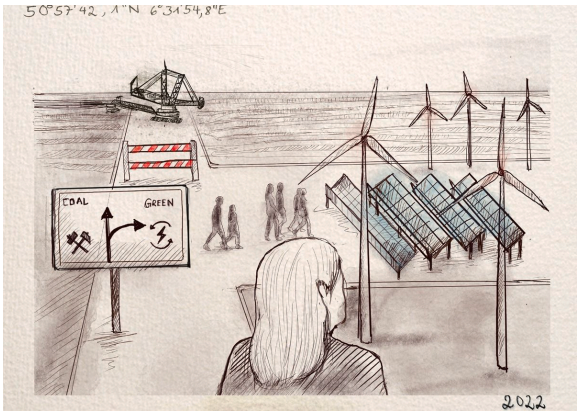
Shriya 2022, remembering the 2022 Seminar week trip to Morschenich.

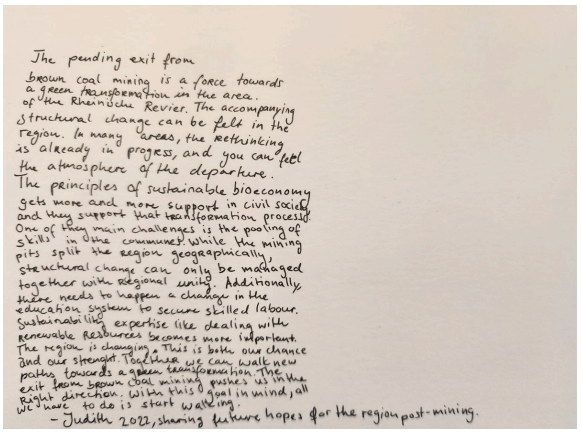
SHRIYA, 2022, REMEMBERING THE 2022 SEMINARWEEK TRIP TO MORSCHENICH

It is already freezing cold in October. This evening, we are sleeping on the train tracks. The coal power plant is shut down because of us today, resting as well. Everyone is packed in clothes, lots of clothes, a sleeping bag and a golden survival blanket. At quarter after four in the morning, the police cars are screaming for the tenth time the same unimportant message. I climb up and look at the train tracks covered in small golden pearls, in the mist of the night, shining under the police spotlights. I heard that ghosts are going to bring us warm soup soon.

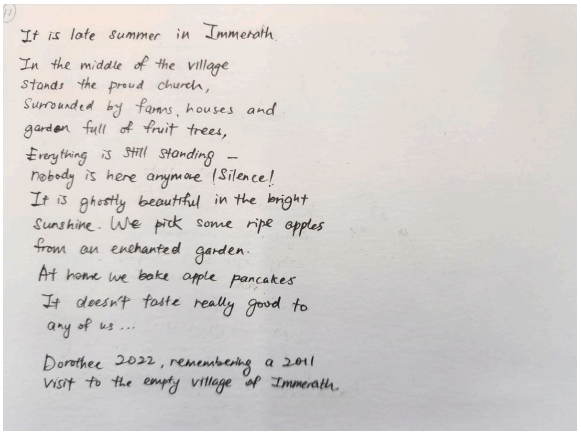
- Yaelle 2022, Remembering the 2018 Ende Gelände protests at the coal railway.

YAELLE, 2022, REMEMBERING THE 2018 ENDE GELÄNDE PROTESTS AT THE COAL RAILWAY.

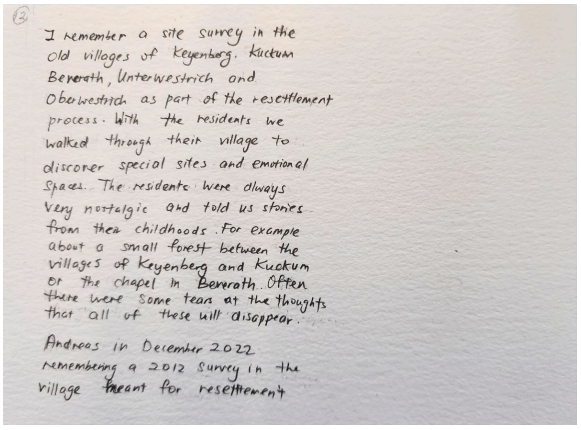




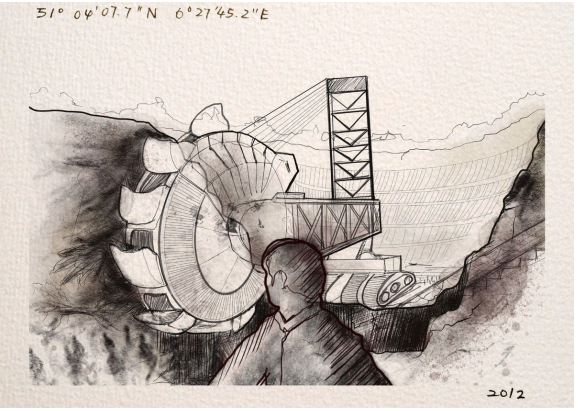
JUDITH, 2022, SHARING HER FUTURE HOPES FOR THE REGION POST-MINING

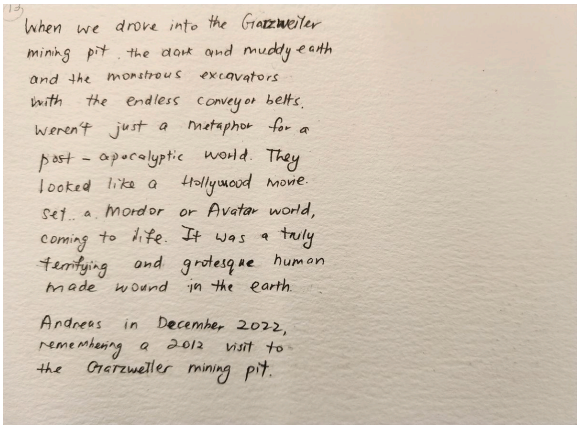


DOROTHEE, 2022, REMEMBERING A 2011 VISIT TO THE EMPTY VILLAGE OF IMMERATH



ANDREAS, 2022, REMEMBERING A 2012 SURVEY IN THE VILLAGES MEANT FOR RESETTLEMENT





ANDREAS, 2022, REMEMBERING A 2012 VISIT TO THE GARZWEILER MINING PIT

We looked at investigative memorialisation, a method coined by Milica Tomić, as a collective approach to memorialisation. We want to preserve and document the memories the land in the Rheinische Revier evokes in the people who experience it. This collection of memories is meant to preserve both the view of the outsider, experiencing the land for the first time, and the lifelong experience of local people.

By collecting memories of a disturbed land, we create a new archival layer, preserving stories of things that were lost and making them accessible for future generations. Similar to the land it is documenting, the memory archive is meant to be a continuous public project where people can document their history within the archive of the land.

THE ARCHIVE OF THE LAND IN THE RHEINISCHE REVIER

ACKNOWLEDGEMENTS

We want to thank Erik Schöddert und Christian Eling from RWE Power AG for answering our questions and providing us with helpful information about the mining pits, the recultivation projects and the groundwater management.

We also want to thank Dirk Jansen from BUND for taking time to speak to us and to answer our questions about nature protection in the region.

Last but not least we want to thank Jann Weinand, Judith Reinwarth, Dorothee Levacher, Christian Larisch, Andreas Klozoris, Dirk Jansen, Frank Meier and Yaelle for contributing their memories to our archive.

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