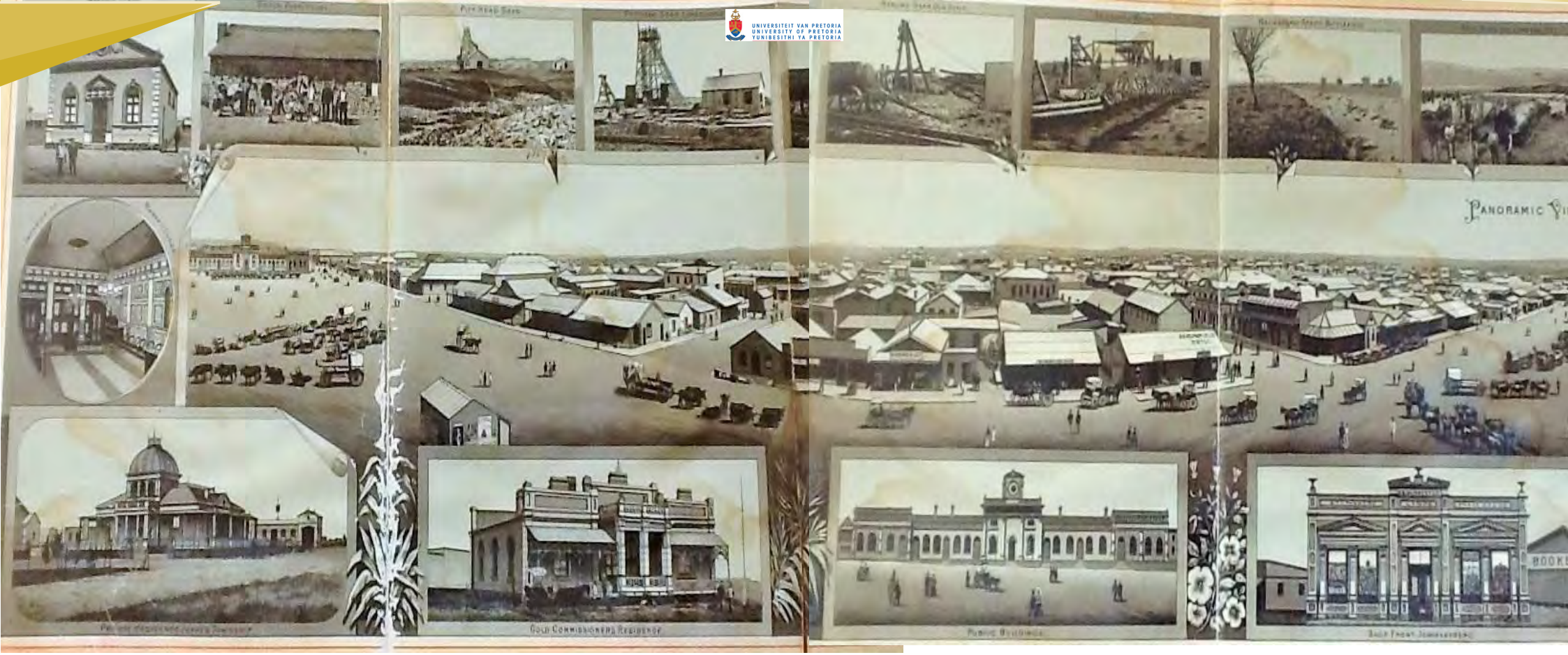
CHAPTER 2
CONTEXT

understanding the past



George Harrison Discovers main Gold reef
1886

1887
Lack of potable water sources become apparent

52 Mines Established
1889

1899
War between Transvaal and Great Britain

Socio-racial divisions begin
1904

1906
Union of SA (Granted autonomy from Great Britian)

Chinese Indentured Labourers Repatriated
1910

1919
70000 Black Migrant Miners Strike (Rand Revolt)

Cheaper Labour Due To Gold Price Drop
1921

1923
Segregated housing estates

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JOHANNESBUR
officially establishe
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FIG 7 : *Panorama of Johannesburg 1889 during the mining boom (Latilla, 2013)*

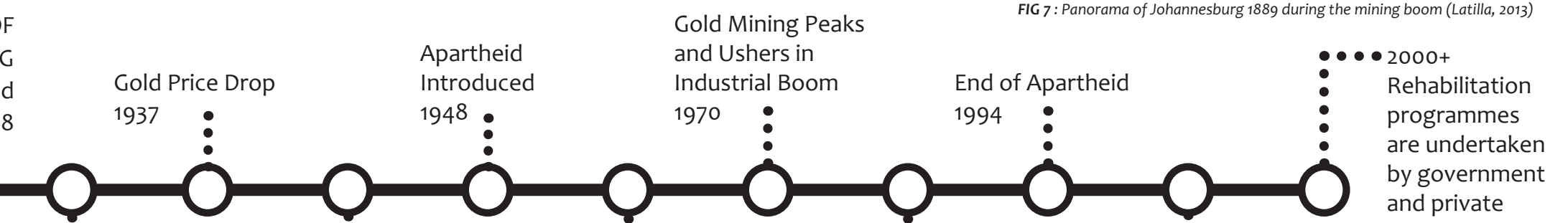


FIG 8 : *Timeline of johannesburg (Author, 2013)*

2.1 CONTEXTUAL STUDY

"The extent to which the ills and the virtues of the large and complex urban agglomeration, of which Johannesburg is the core, is owed to mining is poorly understood." (Harrison & Zack . 2012, 568)

To understand this a contextual historical study is needed. This history will focus on the 3 aforementioned lenses.

Johannesburg sits as a decentralized CBD in the ever-growing shadow of Sandton City. South of this lies the mining belt interspersed with industrial activities and huge mounds of mining waste. Robinson Deep landfill towers over the low-rise silhouette of Joburg South, as tall blue gum trees[8] wave in the dusty wind. This post-traumatic landscape is a result of a vibrant city with ever-present socio-ecological scars. The current spatial, socio-economic and ecological state of Johannesburg is a direct result of mining activity and this history must be explored to understand the need and reasoning for the proposed intervention.

FIG 9 : *Oblique View of current city conditions, towering waste mounds [old top star drive-in] in an industrial belt just South of Johannesburg CBD (Tang, Watkins, 2011)*

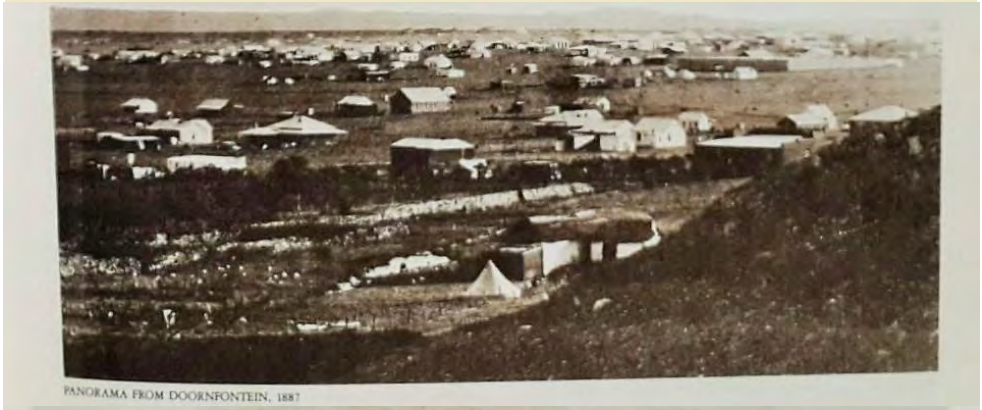


FIG 10 : *Progression of Development in Johannesburg 1887, 1888 and 1889 from top to bottom (Latilla, 2013)*

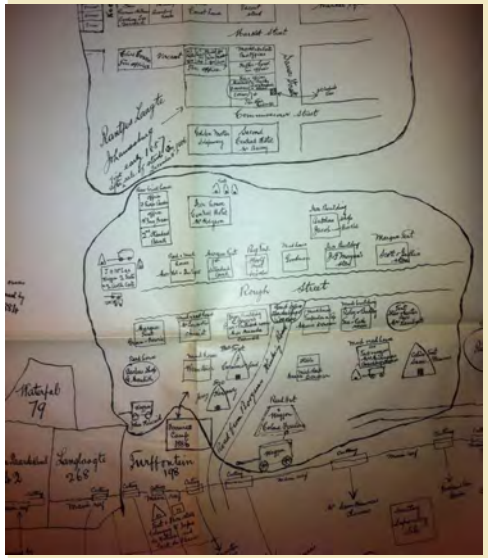


FIG 11 *:Sketch of Johannesburg's spatial layout (Latilla, 2013)*

FIG 12 *: old map of the original farms. "Uitvalgrond" marked out (Doucakis, 1997)*

FIG 13 *: "Uitvalgrond" original triangular piece of Johannesburg city (Jansen van Vuuren, 2012)*

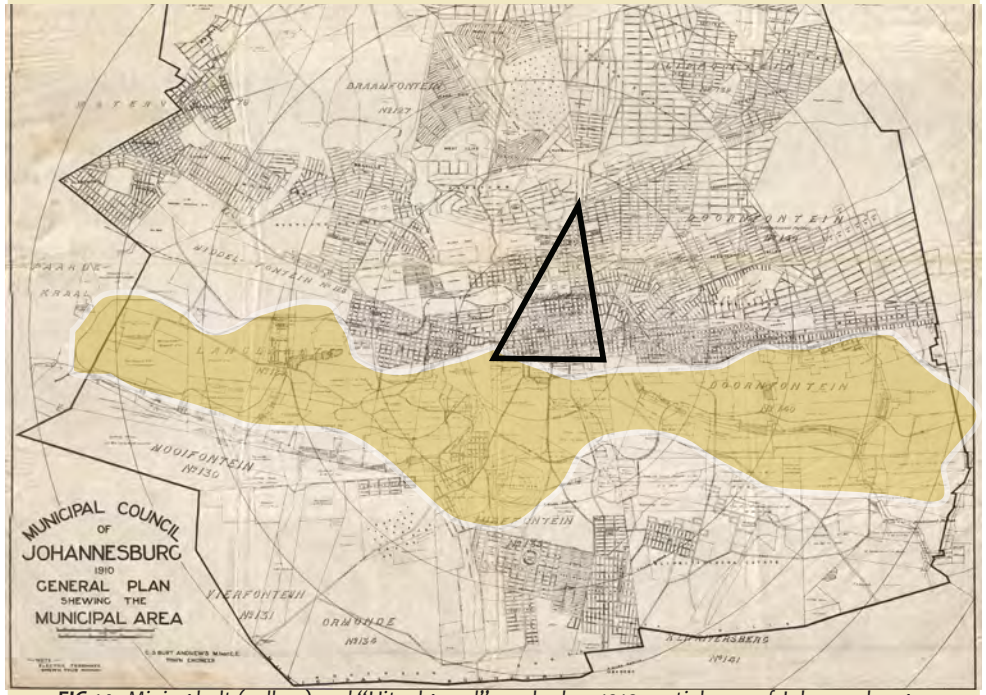


FIG 14 *: Mining belt (yellow) and "Uitvalgrond" marked on 1910 spatial map of Johannesburg (Author, 2017)*

2.2 SOCIO-ECONOMIC HISTORY OF JOHANNESBURG

In 1886 George Harrison discovered the main gold reef in present day Johannesburg, on the farm Langlaag. The original mining camp was established in Ferreira's town by Col Ignatius Ferreira. Due to the short-lived nature of mining settlements of the day, Johannesburg was planned for impermanence, the spatial layout was typical of nineteenth century mining camp planning. Even after it was discovered that the reef was large and deep and the MacArthur-Forrest cyanide process allowed deep excavation the town wasn't seen as a permanent city. The buildings maintained a prefabricated iron and timber composition as the town's lifespan wasn't seen as exceeding 25 years (South African History Online, 2011). Originally a community of 3000 people established the township of Johannesburg on the 3rd of October 1886. The mines grew from 1 mine in 1885 to 52 mines in 1889, most of which were open shaft.

Originally there was political unrest between Great Britain and the Zuid Afrikaansche Republiek (the old transvaal of which Gauteng is a part) due to the fact that the Witwatersrand was the largest gold producing region in the world. War erupted in 1899 and lead to Great Britain establishing political dominance. However, after the 1906 granting of autonomy to the Transvaal, the gold fields of the Witwatersrand became shaped by the Union of South Africa rather than British interests. (Harrison P & Zack T, 2012)
The main drawbacks faced by the inhabitants of the mining belt were their distance from major transport routes and the lack of nearby potable water. This issue has continued to today, with urbanized promise of Gauteng having a population of 8.5 million, water security and public transit are major city issues. (Harrison P & Zack T, 2012)

The mining sector was formative not only in terms of production and subsequent growth but also in the evolution of societal relations in the unique history of the migrant labour system and subsequent labour relations (Innes 1984,69)

Population growth was rapid from the moment the gold reef was discovered, a trend that is still prevalent today. The contextual study of the population growth is specifically focused on Migrant labour. The migrant labour system, which was a result of mining activity, was an economically driven, socially destructive construct. There were major changes in the composition and skills level of mining labour on the reef, often related to demand and fluctuations in the price of gold, but importantly because local labour was inadequate and migrant policies were intended to restrict labourers from establishing roots within the mining town. (Yudelman, 1984)

The South African War of 1899-1901 saw the first slump in economic activity. This eventually lead to the importation of 60000 Chinese indentured labourers who were all repatriated in 1910. This in turn resulted in the importation of black migrant labourers from Mozambique and further north within Southern Africa. This was because the "natives" could not adequately supply the workforce needed. Originally there was a colour bar that restricted the mining jobs to skilled but expensive Australian and British people. It was modified to replace them with cheaper labour when the gold price dropped again suddenly such as in 1921 (Harrison & Zack, 2012, 556).

After 1941 African labour became more militant (Chilvers 1948). Migrant Workers slept on shelves in the deprivation of the camps as depicted in fig 15(right). These labourers signed contracts and were uprooted from their families. They were also kept away from the better skilled jobs through legislation and subsequently kept away from training by laws and mining customs which enforced minimal training that would require supervision (Harrison & Zack, 2012). They were housed in camps and allowed to see their

FIG 15 : *Mining Camp Conditions, sleeping quarters with shelf beds. Poor housing conditions contributed to miners developing TB. (TBFacts.org, 2017)*

FIG 16 : *British officials collecting taxes from Zulu chieftains in the early 1900's* (Potenza, 1996)

FIG 17 : *Migrant Workers (Tang, Watkins, 2011)*

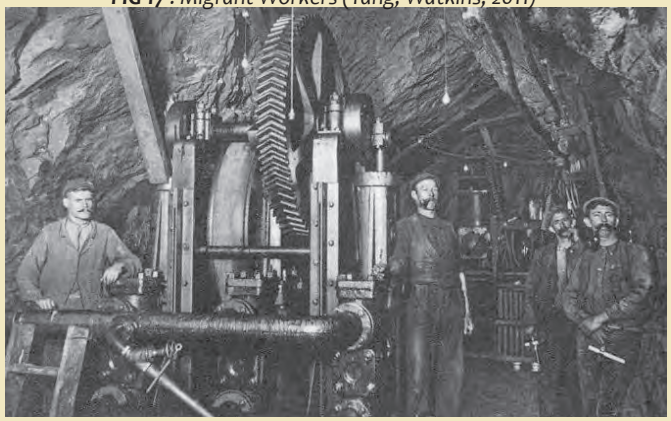


FIG 18 : *White (top) and Black Migrant Workers(bottom)*
(Johnson D. 2017)

families only twice a year. Contracts prohibited black migrant workers from establishing residences along the mining belt. They weren't allowed to settle their families here - this set the "groundwork" of later apartheid policies.

It had become a conglomeration of cyclical recruitment and return of migrant workers. This established a yearly turnover so the black working class couldn't establish roots in the community. Migrant workers came in the hundreds of thousands from all over Southern Africa. Due to these policies, wages and working conditions there were many resistance movements and uprisings throughout Johannesburg's mining history, a trend that carried through to today and is apparent in disputes such as the wages issue which eventually lead to the Marikana massacre. A disruptive and harmful legacy that makes it clear that with these practices mining "played a key role in shaping the racial oligarchy" within south Africa (Harrison P & Zack, 2012).

Johannesburg has evolved far past it's mining heritage and become a financial powerhouse this started at the end of world war 1. Johannesburg had established emergent industries due to the need of a self-sufficient system after imports were interrupted. (Innes 1984). The mining sector catapulted South Africa from a "quasi-state to a surprisingly advanced modern industrial state" in just 80 years (Yudelman 1984,9). Manufacturing eclipsed mining as the core local economy at around 1948 when the National Party came to power and introduced political policies like apartheid (Harrison P & Zack T, 2012, 552). Thus mining heritage formed the basis of Johannesburg's booming economy with it being the precursor, giving rise to the industrial sector and eventually giving rise to the financial sector. This is how Johannesburg survived the boom-bust effect, typical of mining town.

2.3 TECHNICAL AND AESTHETIC HISTORY OF JOHANNESBURG

The quintessential aspect of Johannesburg's heritage is the mining landscape and its resulting morphology. Originally huge steel machinery and frames scattered the landscape, some examples still standing today, such can be found and crown mines. This industrial fabric had a very specific formal and aesthetic quality which is explored through a series of pictures(Refer to Tectonic Precedent) depicting the past tactile experience of the mining landscape. The most prominent feature was the mining head frame structure which sat atop the shaft, a steel tectonic landmark that controlled the descent into the mine shafts below. Ore was collected and taken to industrial mills where it was processed by mine stamps.

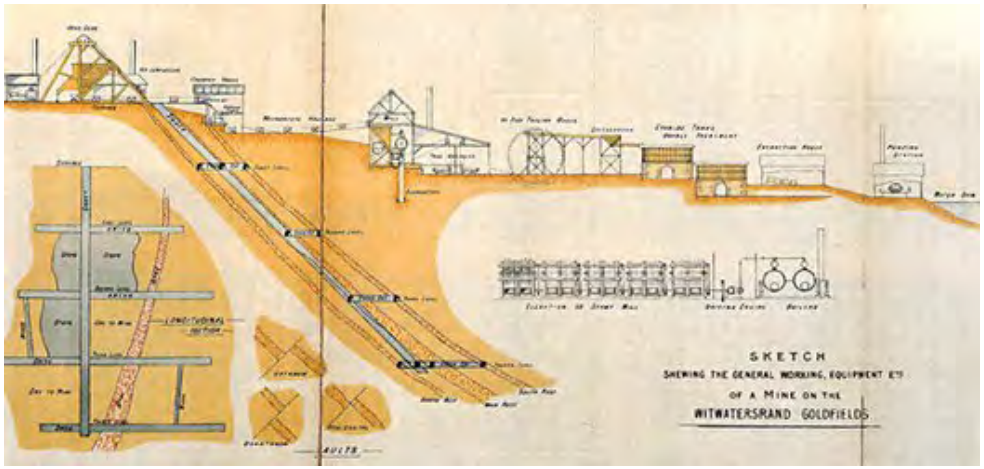


FIG 21 : *(left) " The Witwatersrand gold reserves exist in a one-meter thick "reef" that is remarkably deep, requiring mining shafts that reach up to four kilometers below the surface. Historically, horizontal tunnels were built to connect vertical shafts to the gold bearing reef, as the reef extended further underground at an angle. In deep mines, the main vertical shaft shifted several times to stay close to the reef. Although there is an abundance of gold ore within the region, the low gold content in individual reefs necessitated the removal of a large amount of earth. Over the past century, over 1.7 billion metric tons of material have been removed from the earth and deposited in mine dumps." (Tang, Watkins, 2011) [Image from "Witwatersrand Gold—100 Years," edited by E.S.A. Antrobus, 1986, courtesy of the Geological Society of South Africa.]*

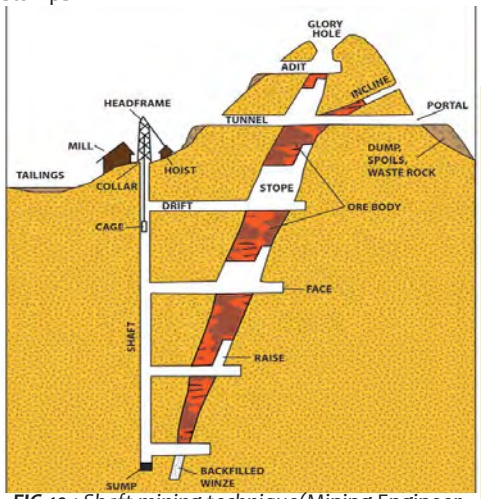


FIG 19 : *Shaft mining technique(*Mining Engineer, 2017)

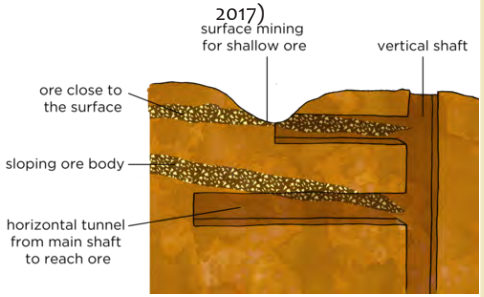


FIG 20 : *Shaft Mining* (Siyavula Education, 2017)

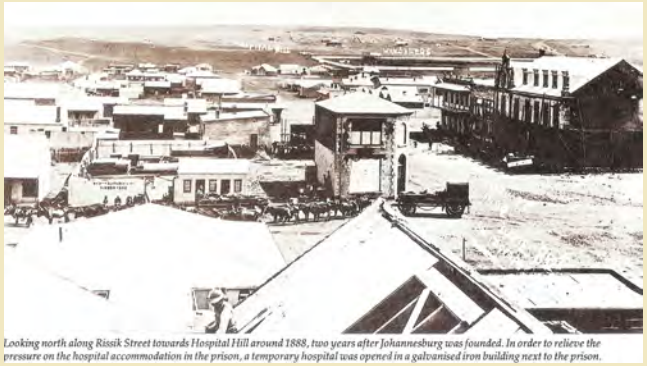
FIG 22 : Mining Landscape (Johnson D. 2017)

FIG 23 : PICTORIAL EXPLORATION OF JOHANNESBURG SPATIAL AND AESTHETIC QUALITIES DURING MINING BOOM *(Latilla, 2013)*

Notable features, the walkable streets, busy market spaces and move from impermanence to more permanent building typologies, left to right

View of Johannesburg 1888. It is interesting to note how Johannesburg has developed from a town on a flat, treeless plain into the attractive City of trees and gardens it is today.

COMMISSIONER STREET, JOHANNESBURG.



Looking north along Rissik Street towards Hospital Hill around 1888, two years after Johannesburg was founded. In order to relieve the pressure on the hospital accommodation in the prison, a temporary hospital was opened in a galvanised iron building next to the prison.

THE MARKET SQUARE, JOHANNESBURG.

2.4 SPATIAL HISTORY OF JOHANNESBURG

" the spatial evolution of early Johannesburg was profoundly shaped by the physical presence of mining and by the hierarchies and intersections of a society that emerged around the mines." (Harrison P & Zack T, 2012, 557)

The Witwatersrand mining belt with its associated infrastructure and tailing residue, is a significant geographic and spatial feature that stretches 50km East to West, splitting North from South. At first development of the city of Johannesburg was northward, with the South reserved for future mining activities. This split became entrenched with the North becoming synonymous with a privileged white elite such as the Randlords and the South, including the mining belt, hosting camps for the black community and migrant workers. (Harrison&Zack, 2012). The state-owned land of Johannesburg was originally marked out on a triangular piece of land just north of the mining belt. Because of its perceived impermanence it was crudely placed on a tight grid with small blocks (Beavon 2004).

The population had a steady growth and eventually in 1928 Johannesburg was proclaimed a city. With a surge in gold price the 1930s brought a massive boom in development and infrastructure and subsequently the repression of black settlements within the city controlled by the "booming white space." An industrial belt developed along the mining belt while high rises dominated the city. (Harrison P & Zack T, 2012, 558).

The theme of socio-racial segregation in the city's development is evident from as early as 1887. These patterns were firmly in place by 1904. (Bevan 2004.) Migrant labourers were housed in camps that originally were made from wood and steel but later, made up of concrete. However, these migrant labourers weren't the only black Africans in Johannesburg. Some found work in other sectors and accommodation in municipal compounds as well as slums in the city. It was

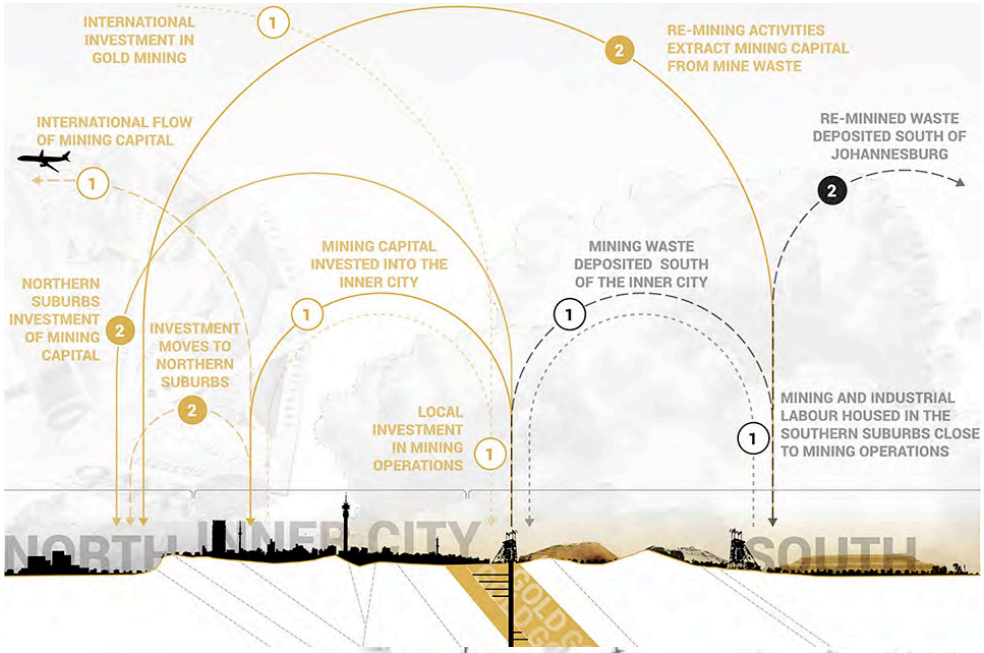


FIG 24 : *(Right) Processes of Extraction: Landscapes of wealth and waste. Diagram depicts historic (1), and modern extraction processes (2) along the Rand* (Trangos & Bobbins, 2015)

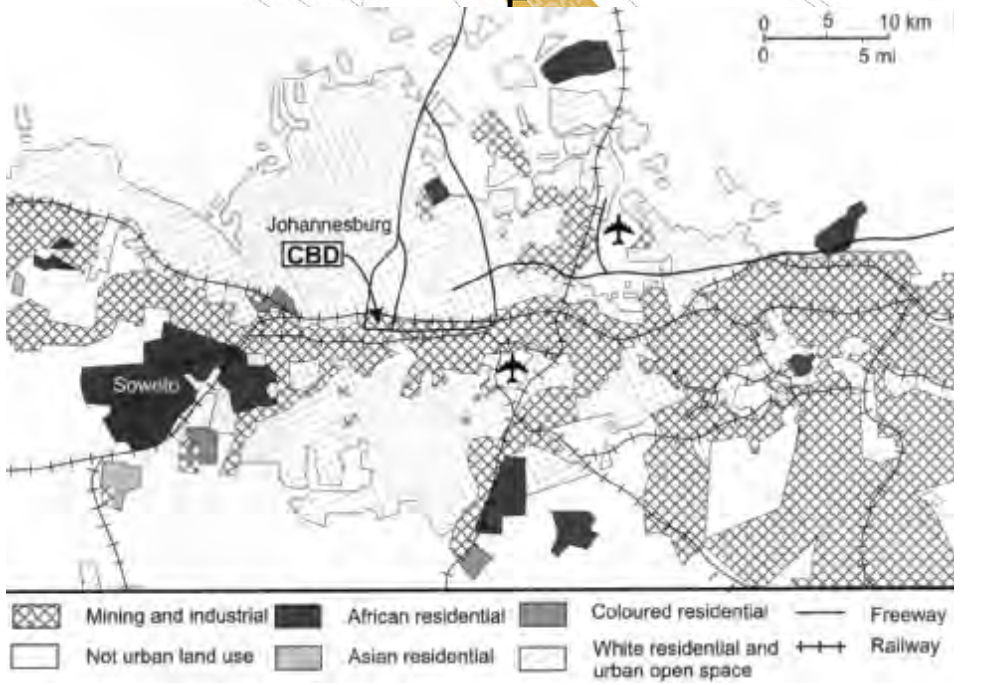


FIG 25 : *(Right) Urban Models of Apartheid Cities in Johannesburg* (Cole & De Blij,2007)

***FIG 26** : (Left) "This image from the 1950s offers a view to the west across the mining belt and illustrates the scale and enormity of the landscape transformation. Deep shaft gold mining and associated mine dumps across the 80-kilometer mining belt altered the topography, hydrology and ecology" (Tang, Watkins, 2011)* [Image courtesy of AOC Geomatics]

***FIG 27** : (Left) The legacy of extraction still impacts those living adjacent to mine waste* (Trangos & Bobbins, 2015)

this cross pollination of blacks and whites living arrangements that provoked the white lead agenda to segregate inter-racial spaces and proximity (Parnell and Mabin 1995).

"The mining industry was the key driver in the increasing levels of urban segregation, and provided the template for the socio-spatial engineering of the National Party government in later years." (Harrison&Zack, 2012)
This can be seen in the example of Soweto, which formed in 1903 after Black Africans living in current day Newtown were moved 16km to the remote settlement of Klipspruit. This was done under the guise of threats from the bubonic plague(Harrison&Zack, 2012). From the onset of the Native Urban Areas Act of 1923 segregated housing estates were developed. By 1933 Johannesburg was a white municipality creating a spatially disadvantaged network that persists today. Thus not only were migrant labourers uprooted from their homes for long work periods but also traveled long distances to work once they were relocated to areas like SOWETO. This oscillating migration is a culture that can still seen today with pendulum migration whereby the economically disadvantaged workforce has to leave their families for a time to travel far distances for jobs. This factor is made worse today by weak public transit connections, a job-housing disparity and a huge spatially disadvantaged city which was originally perpetuated by mining heritage. (guillaume 2001; Beall, Crankshaw and Parnell 2002; Murray 2008).

The fundamental divide of south and north was a structure to separate non-whites and whites, perpetuated by policies such as the slums act in 1934. This act "was applied for demolition of various inner but dilapidated suburbs ... The displaced Black populations were largely rehoused in segregated mono- racial municipal housing estates on the urban periphery" (Christopher 1994: 38) Black neighborhoods were moved to Orlando in Soweto (Tomlinson,

R., A. Beauregard, L. Bremner, and X. Mangcu, 2003) (Beavon 2004). The disparity was made more evident with Randlords living in northern suburbs away from the dust and noise of the mining belt. While apartheid is seen as the cause of racial segregation most of it was achieved before 1948. The mining sector was therefore a primary engineer of the socio-spatial network. This was used as a template for the National Party (Harrison & Zack, 2012).

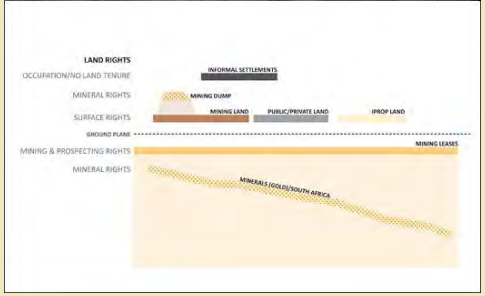
The gold price and production fluctuated, however in 1944 a resurgence for steady gold production began which reached its peaked in 1970. By 1980, mining activity declined (crush, jeeves, and yudelman 1991). Most mining activity in the central Rand district ceased after the 1970's with a resurgence in the clearing of mine tailings due to a sudden market price change in the early 2000's (Viljoen 2009). In the 1980's apartheid was coming to an end and the mining workforce was almost completely South African. Unions were established (NUM) which resulted in increased wages. (Crush, Jeeves, and Yudelman 1991). Finally, after the decline of the industrial boom in the 1970's, financial and service based industries became dominant.

The multi-national mining conglomerate, Anglo American had afforded the government a loan in the 1950s to build housing, shanty towns and emergency camps for families, specifically zoned within SOWETO, thus starting a long legacy of spatial disparities and disadvantaged areas. This translates today with housing and job densities that don't align. That separation results in difficult transport networks, not supported by government, forcing privately owned minibus taxi systems to transport people from the peripheries of the city. This mismatch is also the reason inner-city slums being formed with people wanting to live closer to work opportunities (Harrison P, Zack T, 2012)

While the rise of democracy brought about radical socio-economic change which encouraged expansion to periphery cities in the North. This process of "white flight" resulted in a degradation of Johannesburg's CBD and the financial wakening of the metropolitan core. Financial interests and investments also followed a northward trend and Sandton City took hold and the new financial CBD of the Johannesburg Metropolitan Area. As investments flowed North it only aggravated socio-spatial disparates (Harrison & Zack, 2012).RDP housing on the city edges, although meant to empower the poor, seem to be creating new slums of poverty due to their distant location from job opportunities, some 20km away from Johannesburg CBD.

What remains, after the closure of the mines and the movement of the population to the North and South West, is a belt of fragmented and toxic mine tailings that could be used for commercial, residential and industrial programs which is the city's main objective, A mixed-use east-west corridor to reconnect the poorer south with the richer north (Johannesburg SDF 2040, 2016). This will be examined more in the next chapter.

"Mine waste is such a critical part of our history and



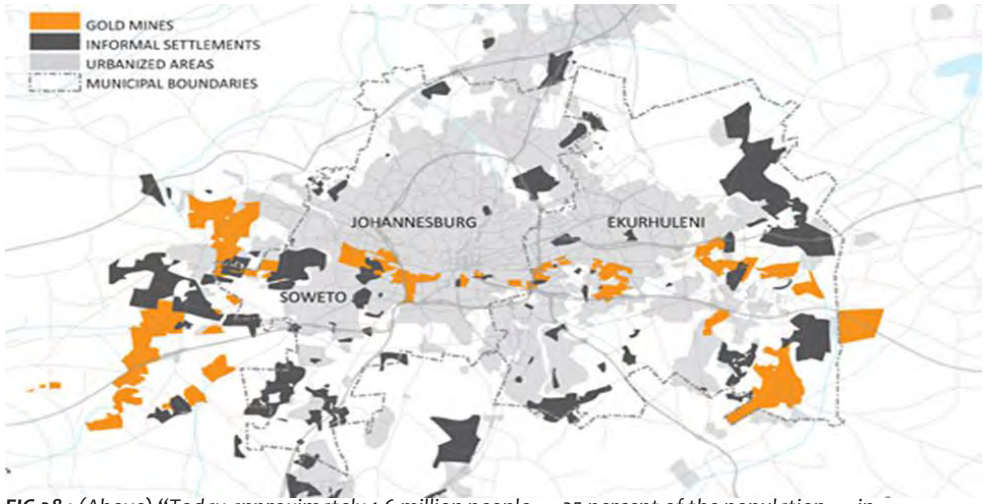


FIG 28 *: (Above) "Today approximately 1.6 million people — 25 percent of the population — in Johannesburg and Ekurhuleni live in informal settlements throughout the metropolitan region. Of this number approximately 400,000 people live in informal settlements in the mining belt that traverses the two municipalities" (Tang, Watkins, 2011)*

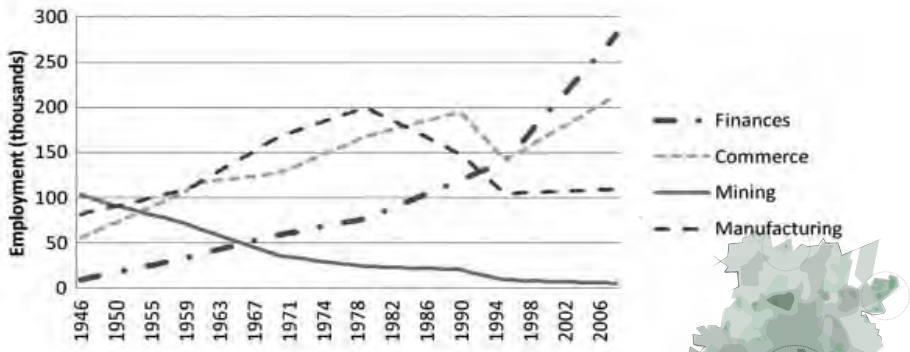


FIG 29 *: (Above) Change in employment by sector 1946-2009, Johannesburg (Beall, Crankshaw, and Parnell, 2002)*

FIG 30 *: (Left) 'Mining operations in South Africa involve a series of complicated land-right relationships. Surface rights allow landowners to build as they please, but the minerals themselves belong to the federal government, and mining companies obtain permission from the government for prospecting and mining. These relationships are further complicated by informal settlements that are home to approximately 400,000 "squatters" who have no legal rights to the land but have occupied it for decades' (Tang, Watkins, 2011)*

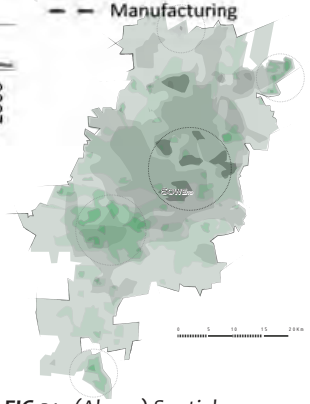


FIG 31 *: (Above) Spatial Inequalities job-housing mismatch (Joahnnesburg SDF 2040, 2016)*

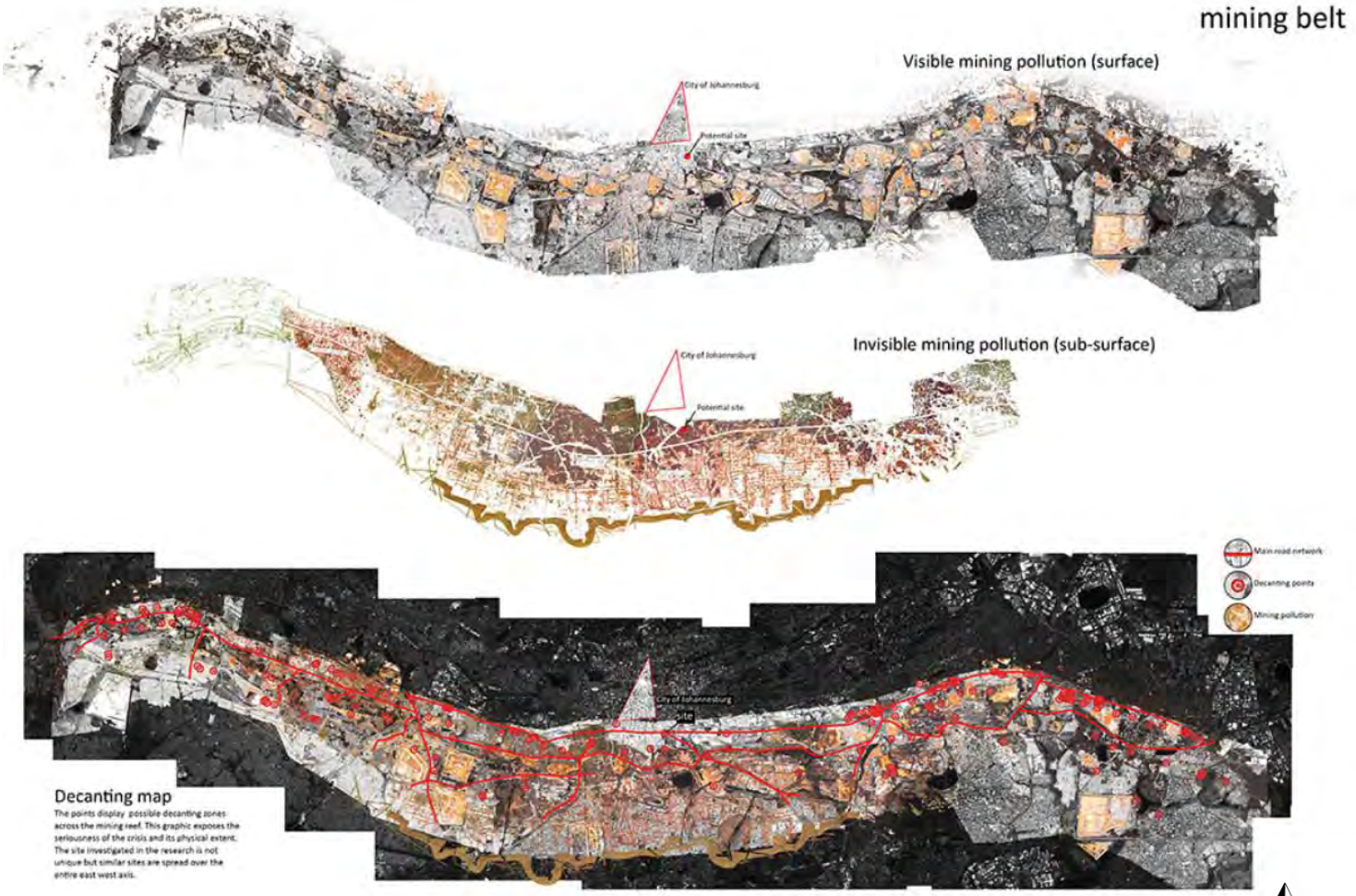


***FIG 32** : Pollution mapping from top to bottom 1)Mining sites, 2)Sub-surface pollution and lastly 3)decanting points and pipe network* (Coetser, 2012)

2.5 CONTEXTUAL ECOLOGICAL IMPACT

the identity of Johannesburg, and people are almost desensitized to both the negative and potential positive impacts." (Toffa t 2015)

The mine dumps legacy today involves illegal miners, called zama zama's trying to get an income finding gold in the mine tailings, many who live close to these tailings in informal settlements are in constant threat of respiratory, and other health related risks not only due to the uranium in the tailings but also the toxic AMD water and airborne dust.

According to the Johannesburg SDF 2040 "The former apartheid government placed many settlements near or even on top of the mining waste dumps."About 11000 people live around these areas today.

"With the closure of the mines, new land was released for development, but the toxicity of the land and the large number of slime dams and mine tailings was a major constraint." (Johannesburg SDF 2040, 2016) Although the mines produced 2.5 million pounds of gold, silver and uranium they are now volatile wastelands. These dumps are responsible for more than just surface value issues but also contribute to a toxic subterranean problem. Acid mine drainage pollutes water supplies with heavy metals creating by-products like sulphuric acid. It also creates sinkholes. Johannesburg's water department estimates about 92 million gallons of water per day of AMD water is produced. The Rehabilitation of AMD is of high importance because of its threat to water security especially for the Wonderfonteinspruit(West Rand)&Vaal water systems south of the city. (Department of Agriculture and rural development, 2009, 7).

The Witwaterstrand mine shafts started closing in the 1950's and thus water stopped being pumped out of these mines. From then water through rainfall and water tables has filled that void. As more shafts closed neighboring shafts had to pick

up the slack in decanting the water mass. East Rand Property Mines ltd was the last company left, keeping the water level at 1200m below surface eventually pumping out 40m liters a day. (McCarthy, 2010) The series of mine shafts were largely interconnected however divisions did exist and it is for this reason thats the West Basin filled at a quicker rate than the eastern basin. In 2008 ERPM stopped pumping and the water level sat at 600m below surface level in 2010. It is regularly monitored at the Crown Mines Shaft 14 (Gold Reef City). It is rising at a rate 15m per month. (McCarthy, 2010) Toxic AMD was set to decant in the central basin in 2014 however a decanting station was built in the East Rand which decants and processes the water with a simple lime wash. This does not make the water safe to discharge into water courses so further processes have to be undertaken to get the water to a naturally safe level. (McCarthy, 2010)

The potential risks of leaving this problem untreated are detrimental. It effects water security, buildings foundation, water courses, ecosystems, animal and plant life and the city as a whole with specific focus on Main Reef Road. This Toxic water could be running through the streets of Johannesburg putting business's and more importantly lives at risk. (McCarthy, 2010)

FIG 37 : *(Above) AMD formation* (Nayak S, 2017)

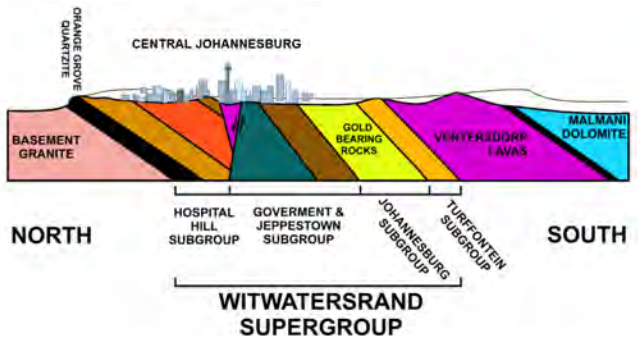


FIG 33 : *(left)* A diagrammatic north-south cross section through the Witwatersrand ridge/ plateau (Oggmus, 2014)

FIG 34 : *(left) Map depicting Witwaterstant* Catchments and basins *(Department of Water and sanitation, 2017)*

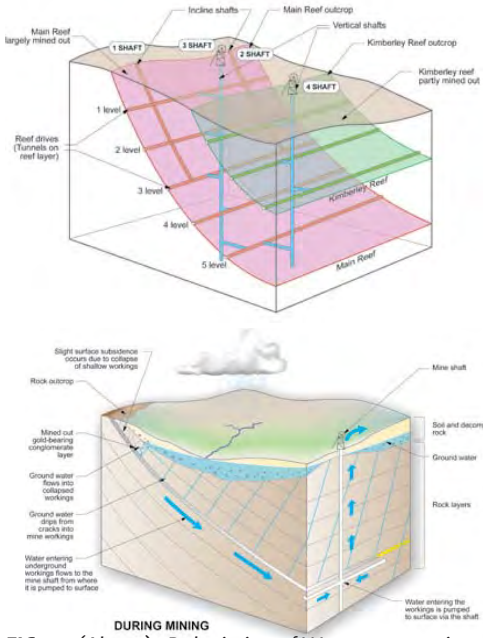


FIG 35 : *(Above) 3D depiction of Water seepage in Johannesburg mine shafts (Mccarthy, 2010)*

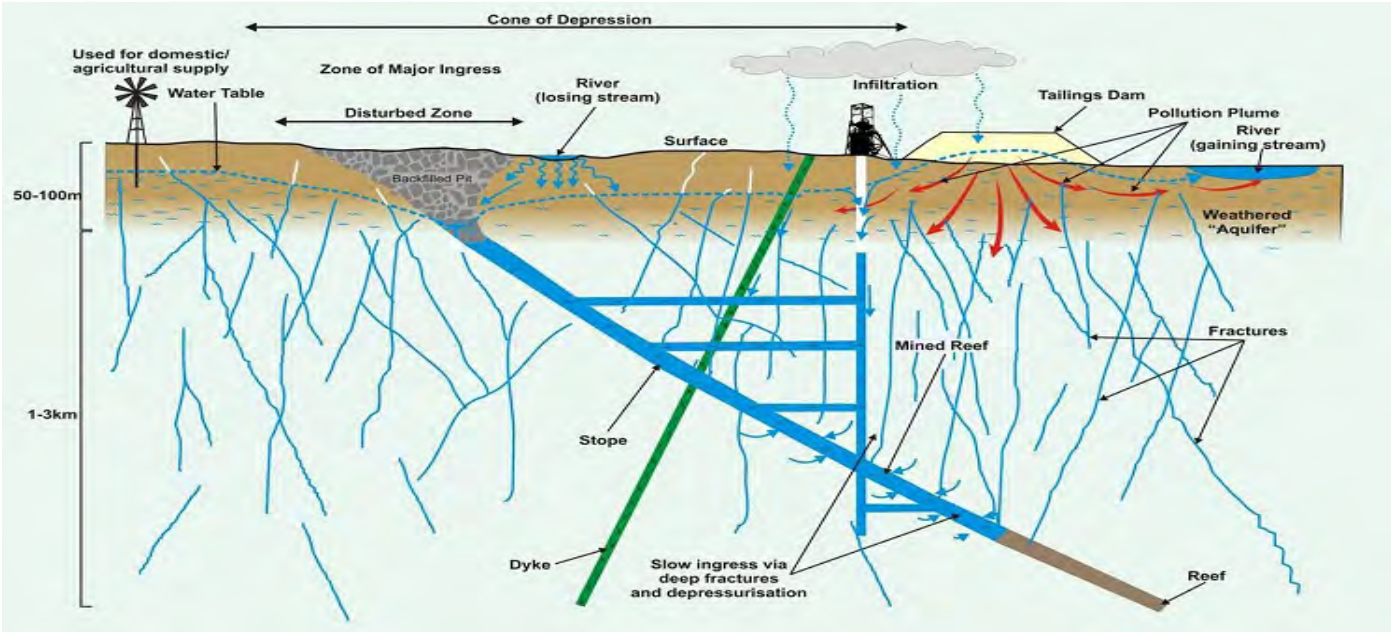
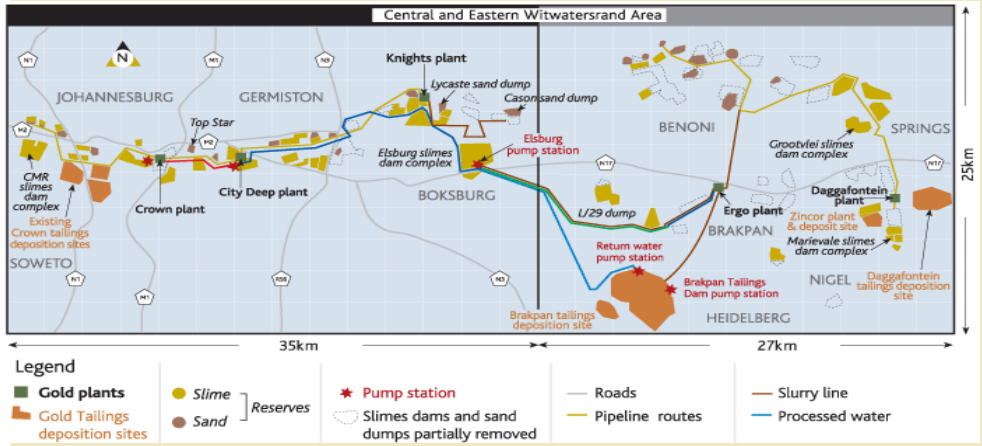
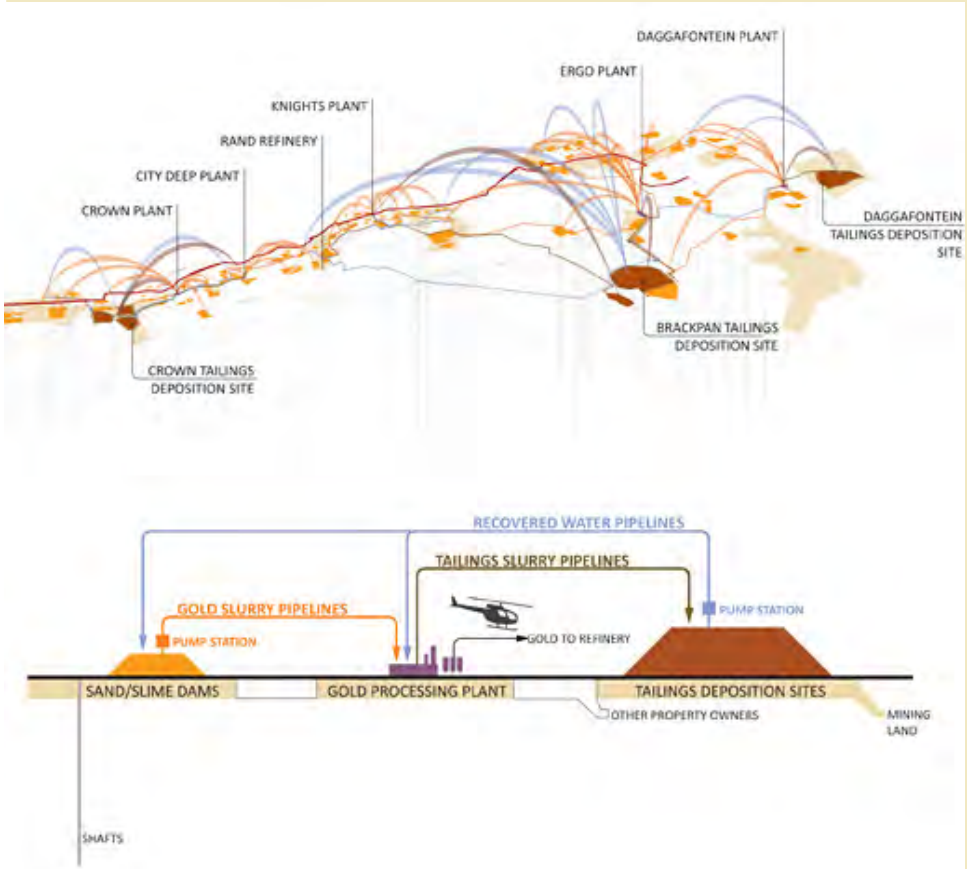


FIG 36 : *(Above) Hydrological model through the Witwaterstrand mine void (Department of Water and sanitation, 2017)*





The solution involves pumping stations that pump the water to the surface for basic treatment. Due to the blockages in connectivity within the central, west and east basins several decanting points need to be established. A minimum depth of 250m is needed to keep the Gold Reef City facility active which hosts mine tours.(McCarthy, 2010)

This would have to be a state funded initiative as the city of Johannesburg is the biggest stakeholder and will be most effected by AMD. As Reported by Fin24 News, government already has a few initiatives running with the relevant stakeholders (mining and water treatment companies) and has pledged to Invest 319 million in the Witwaterstrand AMD treatment initiative as of 2015.

***FIG 38** : (left) "Mining infrastructure in the early 1900s was based on rail connections between mineshafts, processing plants and dumps. Railroads were located along a natural shelf parallel to the mines, forming an east-west corridor that moved tailings, people and goods between mining facilities. Later, technological advancements in gold ore processing resulted in tailings with finer particles. Tailings were hydrated into slurry, and pipes replaced trains as the primary mode of transportation. The new method uses an extraordinary amount of water to move slurry through the pipes. These diagrams show the movement of slurry, waste and water in a massive gold reprocessing chain. Hydrated tailings are moved from older mine dumps — typically closer to existing urban areas — to reprocessing plants. After being reprocessed, the tailings are rehydrated and moved to new super dumps at the fringes of the city." (Tang, Watkins, 2011)*

While AMD lies as a subterranean issue, on the surface North Westerly winds carry debris from mine dumps that are not vegetated, about 42.24 metric tons of tailing-piles dust blowing into the air daily. (Olalde M, 2015) The exposure to this toxic material is through water contact and dust inhalation or consumption and even low levels of radiation. Although not enough investigation has been done there are risks of radioactive exposure. The radioactive threat can only be removed by removing the source material otherwise it can cause forms of cancer and respiratory diseases. (Olalde M, 2015)
"the only potential method is total removal of the mine residues and replace it somewhere else." (Department of Agriculture and rural development, 2009, 6)

***FIG 39** : (Above) "Over one thousand kilometers of pipeline connect the historic mine dumps, gold processing plants and new super dumps in a vast network that covers the region. Under 45 bars of pressure, the pipe network delivers new gold slurry to processing plants and reprocessed waste to super dumps. Roughly 30 percent of the water used in this cycle is lost to evaporation or seepage" (Tang, Watkins, 2011)*

Given this data it is clear that the ecological threat is pressing and immediate especially taking into account the proximity of this belt to the city and its inhabitants. The way in which the general population interacts with the waste tailings and mounds is worrying. It is seen as a recreational park by biking enthusiast or as sand mounds to board down. Children play in them and some people even live on them. As can be seen in the pictures on the right.

This Contextual study has provided insight into the potential lost heritage of mining that could be documented as well as the socio-spatial issues resulting from the mining belt. The spatial disparities need immediate attention while the lack of proper treatment and training of migrant labourers must be addressed. This obviously cannot be done directly but can be done through positive measure that counteract the injustices of the past such as skills development and integrating informal communities into urban schemes and projects. The last concern is that of AMD which has quite a clear solution but a poor urban integration. The reach and density of AMD decanting and treatment must be increased and appropriately dealt with.

Some mining dumps have been re-excavated leaving the land primed for rehabilitation. These plots have the potential to become new economic drivers. Taking Heritage into account, this transformative potential is akin to that of a massive adaptive reuse intervention along the mining belt. According to the Conceptual Study on Reclaimed mine land by the Department of agriculture and Rural Development, there are suggested land-use potentials such as

- Recreational resorts
- Urban Development
- Social activities
- Heritage sites

An Urban Vision is needed to proceed further which will be conducted in the following chapter.

FIG 40 : *(above) Current mining belt condition with pools of toxic water developing on the infected soil.(Tang, Watkins, 2011)*

FIG 41 : *(above) Collage of current uses of mining belt from top to bottom.*
kids playing in infected water
kids playing in toxic mine sand
dirt biking on radioactive mound
Informal Settlers
(Tang, Watkins, 2011)

FIG 42 : *Collection of images depicting remodeled Roman Quarry formal and aesthetic relationship to landscape*
(Archhello, 2017)

2.5 POST-TRAUMATIC LANDSCAPES

CONTEXTUAL PRECEDENT

2.5.1 REDESIGN OF THE ROMAN QUARRY, AUSTRIA

ARCHITECT: ALLESWIRDGUT
BUILT: 2008

This intervention is located within a disused quarry in Austria. Since closure it has been an open air performance venue with little architectural intervention. This intervention was about defining the journey to the performance venue as well as articulating it. The Journey is guided through a 400m series of disabled friendly ramps that are entrenched into yet defined from the landscape the user dives 16m all the way to the building entrance at the end of a cliff.

The materiality of this project is what entrenches it in it's heritage and context. The rock has been used to form a major part of the building and stone walls compliment this feature. Edges and cubes are defined with oxidized steel plates which honour a construction, machinery aesthetic.

This post-industrial, post-mining landscape has been sensitively interacted with even though prominent structures have been placed on it. The resulting place-form has been derived from existing site conditions including the topography and heritage. This conversation between built form and " natural" or existing landscape is one where neither is dominating over the other but is used to compliment the conditions while immediately giving a tactile sensory experience of the site.

2.5.2 LANDSCHAFTSPARK DUISBURG-NORD GERMANY

ARCHITECT: IBA-EMSCHER PARK
BUILT: 2000

This 200ha zone was a steel and iron works which stopped production in the mid 80s. This fostered ecological growth in the area which resulted in a renewal project in 1989. This post-industrial site was intended to become a industrial monument park with a network of green spaces and preservation projects it's aim was to give land back to the city.

Another main aspect of this project was the preservation and renewal of the Emscher watercourse. This river runs through the site and uses the factory's old cooling tanks to help regenerate the watercourse downstream through rainwater harvesting and controlled release.

The landscape has turned into a water and play-scape which is vegetated to offset the existing pollution. The building and interventions themselves are very interactive with cement climbing walls and a scuba diving facility. An educational farm completes this intervention.

The public square is a heritage inspired intervention, with smelted and recycled material forming blocks defining it. This disused mining zone is a sensitive ecologically inspired intervention that considers heritage and ecology as main drivers to foster high quality public space.

***FIG 43** : Collection of images depicting LANDSCHAFTSPARK DUISBURG-NORD re-use of space in a sensitive landscape intervention and celebration of existing industrial heritage* (latz+partner, 2002)