

THE IMPACT OF ILLEGALLY OCCUPIED RAILWAY LAND ON RAIL SAFETY IN SOUTH AFRICA

Nkululeko Poya¹ & Mabila Mathebula²

BTech: Civil Engineering

Railway Safety Regulator, South Africa



1. SUMMARY

"Most of the city's important social problems...are visible in the city, but like icebergs, their mass lies elsewhere, in the larger society. Urban policymakers can and do attempt to pound at the icebergs' tips..." Herson and Bolland¹.

Households who illegally occupy railway land immediately adjacent to the railway tracks (rail reserve) have been a major challenge to the South Africa rail industry, but this problem became more acute after the dawn of democracy in 1994. After the democratisation of the country, people left their villages in droves in search for more 'greener pastures' in the cities and the lack of proper housing became an entangled web and the majority of people opted to live in informal settlements out of heartfelt lack of housing alternatives.

It is interesting to note that housing has been one of the South African government's priorities since the dawn of democracy. The adoption of the Reconstruction and Development Programme by the government was a vehicle through which housing could be provided to the poor, but informal settlements are mushrooming at an unprecedented rate due to people who are migrating from the rural areas as well as neighbouring countries to the cities. In a nutshell; democracy in South Africa has been both a boon and a challenge. A boon in that, South Africa was admitted back to the community of nations, but a challenge in that housing particularly in the urban areas became a social problem that impacted negatively on railway safety.

In this paper, we will zero - in on how the Railway Safety Regulator intervened to solve this impasse for the collective good of the informal inhabitants as well as the railway industry in South Africa.

2. INTRODUCTION

In the second half of the 1990s the ANC government was solidly committed to deliver one million houses in the first five years, this commitment shaped housing politics in South Africa. While the ANC was deeply engrossed in delivering on their commitment; the informal settlements were growing and the eradication of slums did not capture the imagination of the ruling party. Huchzermeyer² argues that the ANC was not seeing the bigger picture but they were pounding at the tip of the iceberg. She states: "By 2000 the South African government was far from embracing informal settlement upgrading and instead focused on the relocation of households from informal settlements to transit camps (also called 'temporary relocation areas') or directly to new formal housing estates. Relocation to transit camps formed a continuation of apartheid practice)". In 2004 the Housing Department approved a comprehensive plan for the development of sustainable informal settlements called 'Breaking New Ground', but this did not address the thorny problem of the rail reserves.

Historically, rail operators maintained an open area on both sides of the railway line, called the rail reserve, for operational, maintenance and safety purposes. According to Nyama² the rail reserves were maintained and fenced off. The situation is now deplorable in that the informal inhabitants who encroach on railway land have literally removed the fence and it is becoming increasingly difficult and costly for operators to continue to construct and maintain fences that are damaged at whim.

For a number of years, Transnet Freight Rail, the Passenger Rail Agency of South Africa (PRASA), smaller railway operators including industrial operators; mining and municipal sidings have experienced an increasing trend of people encroaching on the railway reserves with informal housing settlements. Fencing is removed thus exposing the inhabitants to be struck by the trains and causing untold trauma to the train drivers, railway equipment is damaged, and the right of way polluted by the dumping of domestic refuse. In

addition, children play on the railway way and more often than not relieve themselves on the railway lines. The right of way has become a pedestrian access. People are struck by trains either because they are not aware of oncoming trains or deliberately jump to commit suicide. Thus informal housing has a potential to expose these inhabitants to various hazards.

The railways in South Africa are also partly to share the blame for the illegal occupation of their land. There is bitterness in acknowledging mistakes, but repudiation leads to salvation. During the dark days of apartheid, there were same sex compounds (hostels) that were used to house a sizeable number of employees under one roof. Dwellings were erected by the railways to accommodate low skilled workers whilst their wives and children remained in the villages. The migrant labour system in South Africa compelled the railways to accommodate their employees in the rail reserves. On the other side of the coin, there were also houses for railway employees in the railway reserves for Station Masters and other senior employees (these houses are still occupied). The question that comes flooding back is: Why is it now unsafe for people to live in the railway reserve whereas railway employees occupied rail reserves for years without any eviction order? The community expect to receive procedural justice from the rail authorities.

The paper argues that the solution to slums along the railway lines must not be narrowly viewed as a railway problem, but as a social and a global problem as aptly put by the slum dwellers in Uganda: **“We are the people! We are the problems! And we are the Solutions”**.

This paper seeks to highlight the difference between housing policy and housing politics in Africa or what is referred to as ‘progressive policy without progressive politics’. It further seeks to expose the risks investors may face if they want to invest in railways in Africa and to empower future investors to understand diversity management and the risk tolerant culture. Finally, it is the aim of the paper to galvanise railways internationally to club together if the operational safety of railway companies is being trampled upon.

3. CONSEQUENCES OF RESIDING IN THE RAIL RESERVES

The human encroachment on rail reserve has several serious consequences, among them:

- Risk to human safety due to proximity to active railway traffic;
- Unsafe operating conditions;
- Risk to property in the event of accidents or derailments;
- Dumping of waste onto the railway track which impedes track drainage and compromising track stability;
- Exposure of maintenance personnel to unhygienic working conditions and disease due to disposal of faecal and other waste on the track;
- Slow train speed which cause inordinate delay;
- Unsafe operating corridor;
- Increased incidents of train-human collision;
- Interruption of train services;
- Increase in crime incidents;
- Risk to railway employees;
- Risk to passengers;
- Increased cost of risk;
- Clearance of vegetation or environmental degradation;
- Interference with signalling systems which can lead to train collisions;
- Dangers such as high voltage overhead cables, hazardous material in transit;

3.1 Maslow's hierarchy of needs

Nyama³ opined that: “A derailment in which locomotives/ and trucks separate from the lines due to instability and crash down embankment onto the adjacent informal structures will have an extreme negative impact in terms of loss of lives and injury to the unlawful occupants of the rail reserves...” Given the above consequences, it would be important to ask the following research questions? What happened to safety and security needs of slum dwellers? If people expose themselves to danger does Maslow's theory still hold water for slum dwellers? Why are slum dwellers not taking their safety and security seriously according to Maslow's theory? Why are slum dwellers prioritising shelter at the cost of their safety and security?

Maslow's hierarchy of needs is a theory in Psychology proposed by Abraham Maslow in 1943 in a paper titled "A Theory of Human Motivation". The five stage theory model can be divided into basic needs (e.g. psychological, safety, love and esteem) and growth needs (self-actualisation).

Safety and security needs include:

- Personal security
- Financial security
- Health and well-being
- Safety net against accidents/illness and their adverse impacts

4. THE LAW AND THE RAIL RESERVES

The story of railways and slum dwellers resembles that of David and Goliath and the law serves a mediator between the two rivals. In developing countries such as South Africa and Kenya the law weigh heavily on the side of slum dwellers and against the railway companies. Importantly, in instances where railway companies won cases against slum dwellers, international organisations such as The Centre on Housing Rights and Evictions (COHRE) and international human right organisation intervened on behalf of slum dwellers. In addition, human right monitors from a number of countries including Egypt, Philippines, India and Brazil also intervened in favour of slum dwellers. On the other side of the coin, railway companies have nothing to lean against and the International Union of Railways has no power to help the railways to effect the removal of informal settlements on railway land. In a nutshell, the slum dwellers are globalised whereas the railway companies are operating solitarily from unitary states and what might have started as a battle to remove illegal squatters from the rail reserve could turn into a world bitter war.

4.1 Land issues in South Africa

It would be difficult to understand the problem of railway reserves if one did not understand the history of South Africa.

In the January 8 Statement the ANC⁴ said: "we meet 100 years since the promulgation of the 1913 Land Act, which dramatically robbed the indigenous people of our country 87 percent of their land, and turned them into pariahs and wondrous in the land of their birth". It is incumbent upon a non-racial South Africa to fully undo the damage done by the notorious 1913 Land Act through its land restitution and redistribution policies and programmes.

The 1913 Land Act had a number of both intended and unintended consequences. The formation of the ANC in 1912 was itself partly the consequences of the 1913 Land Act which was already been debated as a Bill in 1911. Sol Plaatje one of the founding fathers of the ANC asked: "Can a law be justified which forces the people to live only by means of chicanery?"

The Land Act was also the basis for a plethora of subsequent oppressive legislation. Once the Land Act was in place further legislation was promulgated to support it. The legislation included the Native Urban Areas Act of 1923 which allowed local authorities to regulate and control the so-called influx of Africans from the reserves into the urban centres.

The Group Areas Act of 1950 consolidated these Acts and ensured that there was a racial geography in the commercial and residential areas. White settlements would be near job opportunities in towns and cities, whilst African townships, Coloureds and Indian locations would be designated farther away from mines, factories and town centres. Black would not be allowed to buy properties in white designated areas.

4.2 The South African Constitution

The South African constitution⁵ has been lauded as the best in the world. This right-based constitution has provided great opportunities to social movements to bring cases that might challenge the type of policies that exist and the ways in which the policies get implemented. Chapter 2, Section 26 of the constitution states:

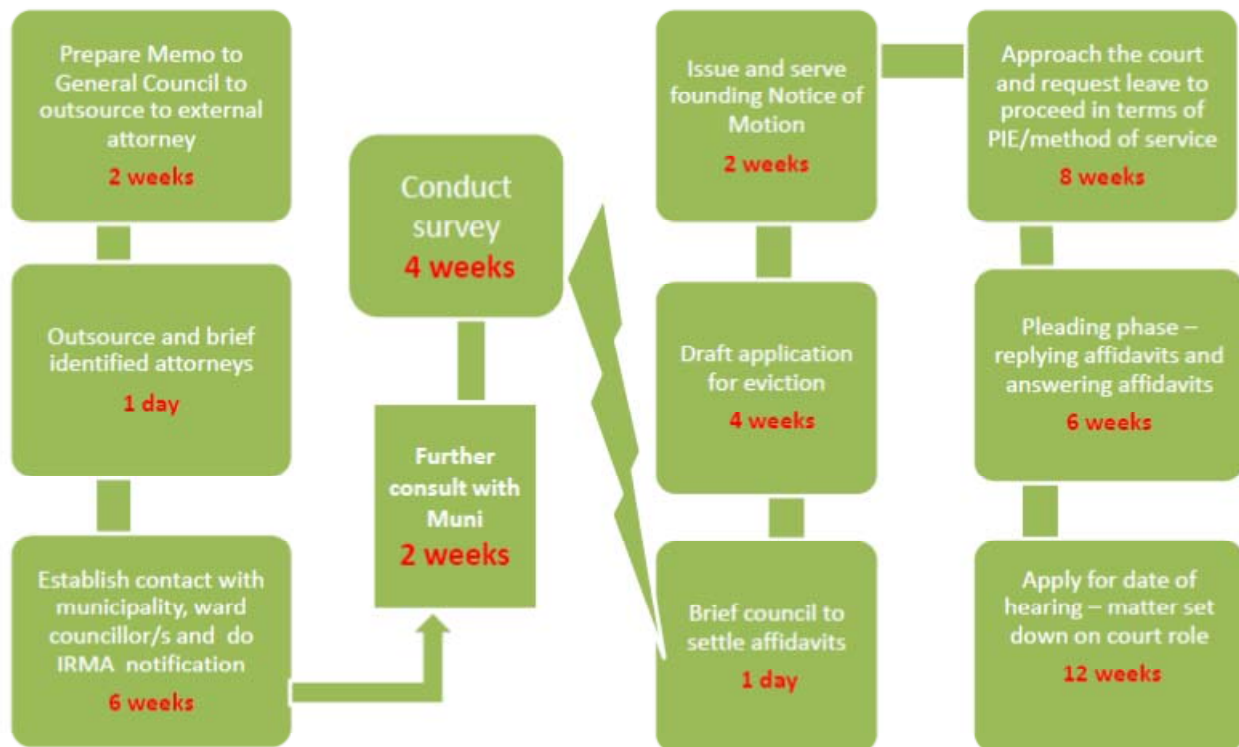
- (1) Everyone has the right to have access to adequate housing.
- (2) The state must take reasonable legislative and other measures within its available resources, to achieve the progressive realisation of this right.

- (3) No one may be evicted from their home, or have their home demolished, without an order of the court made after considering all the relevant circumstances. No legislation may permit arbitrary evictions.

4.3 The Prevention of Illegal Eviction and Occupation of Land Act (PIE), Act 19 of 1998

A key legal provision that has been used by many communities and social movements to prevent eviction from land whose occupation is not formally recognised is the PIE Act⁶. The act totally prohibits the eviction of any person from any land, structure or property, irrespective of the reason for the eviction, without a court order. There are certain stringent requirements that have to be met before any court will issue an eviction order, and this costly and time consuming legal process means that although people are living within the rail reserve and are in constant danger through rail operations and their own actions, they may not be evicted unless a court order had been obtained. It takes a period bordering on 46 weeks to obtain a court order if nothing absolutely goes wrong. The following tedious process is followed when applying for a court order:

Minimum Time Lapse = 46 weeks + 2 days



The history of colonialism and land dispossession in Africa makes it increasingly difficult for the authorities to evict people from an illegally occupied land. For example in the National Housing Act⁷ of 2012 as amended in Kenya, the following is included:

21 (1) No person shall be evicted from premises covered under this Act and no demolition of premises covered under this Act shall be carried out except in the following situations:

- Where a person or persons occupy railroads tracks, garbage dumps, river banks, shorelines waterway or any other area as the Minister may determine.
- Where land has been gazetted under section 18 of this Act. or
- Where a court has issued an order for eviction and demolition.

(2) No eviction or demolition orders shall be issued involving underprivileged and homeless persons unless:

- Notice has been effected upon the affected person at least 30 days prior to the date of eviction or demolition.

- (b) there has been adequate consultation on the matter of resettlement with the duly designated representatives of the affected community,
- (c) there is presence of local government officials or their representatives during the eviction and demolition,
- (d) there is proper identification of all persons taking part in the demolition, and
- (e) adequate provision has been made for the relocation of the affected persons.

It should be noted that the PIE Act says nothing about rail safety or 'railroad tracks' which makes the task of railway companies in South Africa increasingly difficult. As an industry, we know all the hazards that people in informal settlements face, but we are hamstrung by legislations.

4.4 The Rail Safety Regulatory Act, Act 16 of 2002 as amended

The act requires of an operator to ensure a safe operating corridor prior to being granted a licence to operate a rail transport service.

The Railway Safety Regulatory Act⁸ is paved with good intentions, but is being hamstrung by both the Constitution as well as the PIE Act.

4.5 Kirwa and Nine Ors v. Kenya Railways Corporation

Due to the complicated process of the PIE Act, the author would use cases from Kenya to demonstrate the difficulties encountered by railways when dealing with slum dwellers. The following court case demonstrates the sensitivity of courts when it comes to the eviction of slum dwellers in Africa:

The managing Director of the defendant should have heard the plaintiffs before issuing the notice. It should be noted that human compassion must soften the rough edges of justice in all situations. The eviction of squatters not only means their removal from their houses but the destruction of the houses themselves. The humbler the dwelling, the greater the suffering and more intense the sense of loss. It is the dialogue with the person likely to be affected by the proposed action which meets the requirement that justice must also be seen to be done.

I am of the view that squatters who settled and have been in existence for a long time, say for twenty years or more, and who have improved and developed the land on which they stand is required for public purpose, in which case alternative site or accommodation should be considered. Of course, the land which the plaintiffs occupy is owned by the defendant. It is required by the Responded for the use provided for under the Kenya Railway Corporation Act.

From the above analysis and findings it is in my humble view that the plaintiffs have established that they have a prima facie case with the probability of success...

[I]t is clear that plaintiffs are likely to suffer irreparable loss. No can quantify the amount of loss when children miss the benefit of free primary education or when their homes are demolished and their parents are evicted from the only known home...

The applicants have shown in their averments that they have ploughed their farms and have even planted crops on it. They have shown that they have been in occupation of the railway land reserve for over 30 years and the owner has not disturbed them.

It has also been shown by the notice issued that the Defendant [Railways] did not attach any reasons to it. I find that the plaintiffs are likely to be more inconvenienced if the order of injunction is not granted.

The other matter which has struck my attention is that the conduct of the defendant has not been impressive. They have allowed the plaintiff to occupy its land for a period of over 30 years without removing them. Why would it now give such citizens a 30 day notice to remove what they have invested for such a length of time? Why has the defendant failed to comply with Section 16 (3) of the Kenya Railway Corporation Act?

The above judgement did not take the safety and the security of the plaintiffs into account. Simply put, the hazards that slum dwellers face on daily basis were not taken into account in the judgement. This implies that even if the railways had done hazard identification and risk assessment and presented the facts to the court of law, 'human compassion must soften the rough edges of justice in all situations'. This seems like a losing battle because 'human compassion' overrides operational safety.

Nyama² in a paper entitled: "The impact of informal settlements on rail reserves" lamented the state of safety in the rail reserves and warned about the ticking time bomb that was ready to explode at any time. "The current situation in some settlements is a disaster waiting to happen. We, therefore, need to have emergency plans in place as well as relocate these settlements with all possible urgency".

5. IS JUST A PROBLEM FOR RAILWAY OPERATIONS?

This problem was addressed by Robertson⁹ in a paper titled: "Trespass and vandalism on Britain's railways". He opined that the problem was multipronged and that it was not only a railway problem, but a societal problem, a policing problem and a parenting problem. The problem of rail reserves is more complicated than trespassing and vandalism, it transcends one's border. In a nutshell, and it is also a global problem. For example, in Kibera, over eighty residents living on the railway reserves filed a case against in the High Court against the Kenya Railways Corporation civil society; faith based groups as well as international housing rights groups intervened. The Centre on Housing Rights and Evictions (COHRE) coupled with International human rights group based in Geneva issued a statement to the Kenyan government: "Examples from all over the world have shown that the social and economic cost of forced evictions includes deeper poverty, reduced levels of employment and lower health standards. COHRE strongly urges the Government of Kenya to abide by her legal obligations, which require the government to 'explore all feasible alternatives to the evictions that no person be rendered homeless, and that there be genuine consultation with those affected'".

South Africa has committed itself to the Millennium Development Goals (MDGs) in 2000. The slogan 'Cities Without Slums' is officially attached to Goal 7 Target 11 '[by] 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers' (Un, 2000, p.5). When dealing with the challenge of rail reserves the MDGs have to be taken into account.

A need for paradigm shift is needed in the railway world. As safety professionals we must avoid a 'sequenced' mindset and must adopt holistic thinking. According to Smuts¹⁰ holism underlies the synthetic tendency in the universe, and it is the principle which makes for the origin and progress of wholeness in the universe. Dr Shann Turnbull, an electronics engineer who became a corporate raider writes: "If there is a lesson to consider, it is that reliance on just one perspective is unlikely to be rewarding...An interdisciplinary holistic approach is required". Turnbull is the champion of 'ecological capitalism', which aims to build sustainable communities.

Railway safety is going through a challenging phase. The old beacon lights are growing dimmer, and the torch of new ideas has to be rekindled for our guidance. According to Mathebula¹¹ the advent of railroads in the 1820s was a "killer application". A killer application is one that alters the way society functions. With railroads, people could travel only between fixed points on the same track, based on a dictated timetable. The fixed plans, fixed rail, fixed stations and the fixed time schedule created a fixed mindset among railway employees and management. Railroads created a monolithic organisation, with no room for maneuverability. The fixed or 'sequenced mindset' would not solve our problems, we need to start to think outside the box. The world is not mechanistic; it is an infinite set of possibilities (the world is limitless). This was also enhanced by astronomer, James Jeans: "The universe begins to look more like a giant though than like a great machine".

Herson and Bolland's¹ analogy of an iceberg with policy makers pounding its tip appropriately depicts the informal settlement phenomenon in South Africa and the current railway operator's attempt to remove this phenomenon from the urban landscape. By looking at the problem of rail reserves from an operator's perspectives only, we are pounding at the iceberg. The slum dwellers are globally powerful and we need a send a signal to those who think that they could solve this problem alone and relegate other stakeholders to the background. The Titanic disaster is quintessential to those who ignore the signs. It is also important to note that the captain of the ship, E.J Smith had reached the zenith of his career and was due to retire at the end of the voyage. There is evidence that the captain was familiar with the route because he had sailed this route in the *Olympic* and he knew the hazards posed by ice in the North Atlantic. Several warnings of icebergs were sent by other ships, but some were overlooked or apparently not received. A smaller ship – the *Californian* – had stopped in the ice field nearby. Its crew saw the distress rockets sent up by the Titanic in the distance. But the captain did not grasp what they meant. The question is: will the organisation of the future repeat the mistakes of the past?

6. THE RAILWAY SAFETY REGULATOR

The Railway Safety Regulator (RSR) was established in terms of the National Railway Safety Act, Act 16 of 2002 ("the Act") as amended, to establish a national regulatory framework for South Africa and to monitor and enforce compliance within the rail sector. The primary legislative mandate of the RSR is to oversee and enforce safety performance by all railway operators in South Africa including those of the neighbouring

States whose rail operations enter South Africa. Notwithstanding the foregoing, operators are, in terms of the Act responsible and accountable for ensuring the safety of their railway operations.

In executing its legislative mandate, the RSR performs the following duties and functions:

- Issues and manages permits, conduct inspections and audits, and investigates railway occurrences.
- Develops regulations, safety standards, and related documents which form the basis of the regulatory regime.
- Issues notices of non-conformance and non-compliance and will in future impose penalties for non-compliance with the Act and safety standards adopted by the RSR Board of Directors.
- Safety and security matters are interconnected. The RSR has a primary role to play in safe railway operations and supporting role in occupational health and safety and security.
- The RSR co-operates with relevant organs of state to improve safety performance and oversight function.
- The RSR has international responsibilities.
- The RSR play a leading role in the alignment of the railway safety regime of South Africa with those of the Southern African Development Community railway

In order to achieve its objective in terms of the Act, the RSR may conduct a number of other activities relating to safe railway operations. This provision affords the RSR the opportunity to go beyond that which is expressly contained in the Act in order to achieve its objectives, provided of course that such actions further the objectives of the Act.

6.1 The RSR and rail reserves

According to the South African State of Safety Report¹¹² 2011/2012, operational occurrences resulted in 2510 people being injured, of that 412 people died which was a slight decrease of 9.8% compared to the previous year. However, the majority of the fatalities are still due to members of the public being struck by trains in section. To be precise, 354 in 2011/12 incidents were reported due to members of the public who crossed the railway line illegally without access. The contributing factors to this situation is attributable to informal settlements in the vicinity of the railway reserves, coupled with inadequate fencing and the absence of safe places for crossing the railway line. Some occurrences are accidental while others are suicidal.

The RSR observed that the problem of rail reserves warranted its attention due to a number of injuries and fatalities that were attributed to the rail reserves. Our priority is clear and inescapable we have a safety mandate to carry. We have to make fundamental change in the conditions under which people live and to solidly support our operators to carry on with railway operations without impediments. There are no short cut, no easy solution which can be applied to the problems of a developing country like South Africa. We have no alternative, but to apply ourselves scientifically and objectively to the problems of our country. Dealing with rail reserves is a purgatorial exercise because these are places which are perceived to be places of unbridled squander and unfathomable squalor.

The problem of slums who reside along the rail reserves has to be approached pragmatically and holistically. We took a leaf out of Sir William Van Horne's book who was a brilliant railway manager, credited with the rapid completion of CPR in the 1880s. "If we can't export the scenery," he said, "we'll import the tourist." As the RSR, we came to the realisation that since we cannot export the slum dwellers, we will import the best practices such as stakeholder-orientation governance – this is not a sprint, but a marathon. Community-led decision-making process is time-consuming, messy, and complicated and one has to exercise enough caution as well as patience.

6.2 Phase 1: How did we do it?

6.2.1 Railway Safety Regulator and Transnet Freight Rail site visits

The RSR in conjunction with TFR undertook an initiative to visit 'hot spots' informal settlements in the railway reserves in order to better analyse and grasp the magnitude of the problem as opposed to pounding at the iceberg.

The purpose of the project was to work together with the operator in order to have first hand information on the challenges that are faced by operators in the railway reserves.

The goals of the project were:

- to understand the social challenges faced by informal settlements dwellers.

- to understand the roles played by different stakeholders.
- to identify influential people who reside in the rail reserves.
- to determine ways of securing the rail reserves.
- to carve out a regulation or standard that would address rail reserves.

6.2.2 Summary of Observations on all 'hotspots':

- Pollution and sewage is a constant battle that has to be removed from the railway lines biweekly.
- The sense of danger is non-existent: children play on the rail reserve.
- People illegally connecting electric wires across the railway line and using the rail infrastructure to conceal the connection. This illegal connection is said to interfere with the signalling system of the railway operators and could result in SPAD'S (signal passed at danger).
- The informal settlement in Dunoon is situated far too close to the railway line and boundaries that were erected have effectively been removed.
- Pathways have been created by the informal residents to cross the railway line from the highway to the informal dwellings.
- Objects are being carried over the railway lines i.e. furniture and wagons carrying heavy loads.
- Sign posts erected by TFR warning people of the dangers of living in the area, have been removed and used as building material for these informal dwellings.
- Animals i.e. dogs are constantly roaming on the railway tracks.
- A plantation site is found adjacent to the Dunoon informal settlement, which is a cause for even greater concern in terms of safety.
- Deceased bodies are regularly found days, after being murdered in rail reserve settlements.
- Train slows down tremendously in the area, slowing down operations.

Table 1: Lessons Learned

Lessons Learned	Detailed Description
Success based on multi-talented team, good leadership, and timely sponsor.	The team concluded that project success primarily reflected a multi-talented team from RSR and TFR that was lead by an enthusiastic and well organised project manager and supported by the sponsor. It was interesting to note that the problem of the rail reserves was approach by the RSR from a learning perspective and not from a regulatory perspective.
Community leadership.	Community leaders were willing to do their best to solve the problem of rail reserves.
Seek clarification from sponsor of scope and preferences at the outset.	Get an idea from the sponsor if he agrees to visit a side or not in advance. Know all the approval process and restrictions.
Effective use of team skills and expertise	Team had good balance of expertise in administration, planning and communication. We had two interns on the project team who both specialised in International Relations and Communications; which served as an added benefit as far as the cross pollination of ideas were concerned.
Team member proximity and availability is key	When team member availability changes, the project manager needs to revise team responsibility, timelines and due dates where necessary (team members were able to meet and communicate daily and provided status reports to the sponsor).
Site selection	It is important for the team to visit sites that are not violent prone since land is a very contentious issue in South Africa.
Language	South Africa has eleven official languages when one deals with rail reserves one needs to speak the language of the inhabitants. Language ability plays an important role when it comes to

	communicating with people who live in the rail reserves.
Stakeholder Analysis	Stakeholder analysis is important because there a lot stakeholders who are involved in Human Settlement.

6.3 Phase 2: How did we do it?

The RSR conducted its own surveys independent of TFR.

6.3.1 Pilot Survey Analysis conducted in Mbekweni

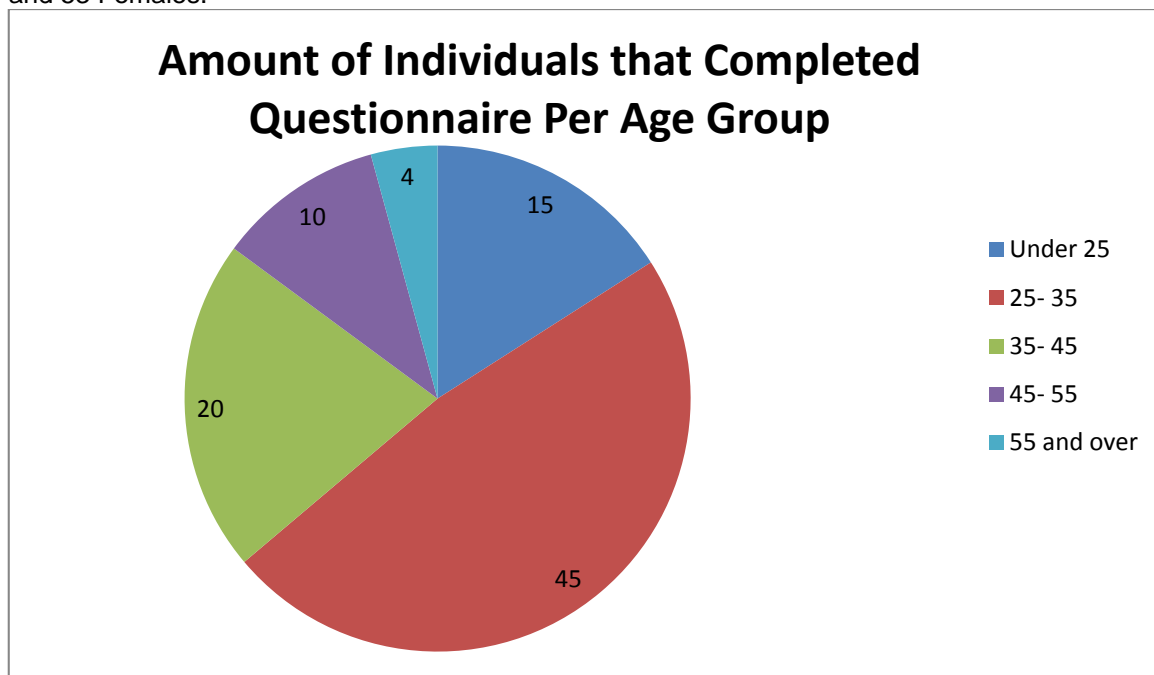
In October 2012 a pilot survey was conducted at Mbekweni (O.R informal settlement), Paarl to measure the awareness of the community regarding the hazards they were exposed to on daily basis.

The survey was conducted among male and female community members in different age groups (25 years and younger, 25-35 years, 35-45 years, 45-55 years and 55 years and older). Respondents were requested to complete a survey questionnaire. The survey allowed us to measure the awareness of the community pertaining to hazards. According to the survey, the majority of the sample population were aware of the dangers they are expose to. A number of slum dwellers have relocated from one informal settlement to another due to a number of reasons.

Concerns raised from the survey were:

- The community was unwilling to relocate further away from the railway line unless they were provided with a government house.
- Many believed that by living in the rail reserve gave them easier access to the railway transport system.
- Others have chosen to live in the area because of the hope that the government will give them a free housing.
- Even after moving to new government housing developments, some families sold their newly acquired houses to earn extra income.

The survey was conducted during working hours from Thursday the 25th to Friday the 26th of October 2012. A number of 73 questionnaire surveys were filled out per household currently based in the rail reserve area. The questionnaire was broken down into five different age groups: under 25, 25-35, 45-55 and 55 and over groupings. A combination of 94 rail reserve residents provided feedback, 41 of those residents being Males and 53 Females.



6.4 Phase 3: How we plan to do it

This will be an acid test of this three phase project. As a regulator, we know that theory without practice is empty and practice without theory is blind. We are also cognisant of the fact that the road to success is always under construction – one never arrives. The following activities will take place during this phase:

- Lobby parliament and impress upon the parliamentarians of the dangers of slums on operational safety.
- The PIE Act has been an impediment on operational safety; the RSR should ensure that safety considerations overrule the Act, like the Housing Act, in Kenya which allows for people to be removed if their safety on the railway reserves is at stake.
- Lobby the International Union of Railways to engage pressure groups who come to the aid of slum dwellers when they are removed from rail reserves for safety reasons.
- Educate the judiciary, municipalities and provincial governments about rail safety and simulate the consequences of recent train accidents in Spain, France and Canada in order for them to see the safety implications.
- Carve out regulations that won't be contradictory to the Millennium Developmental Goals as well the criteria that was set by UN-Habitat on housing.
- Educate slum dwellers on the dangers of living in rail reserves and allow them to educate you about their experiences in the rail reserves. The word slum conjures images of squalor, crime, and disease. The question of self reliance and creativity are more often than not relegated to back benches. Taking into account the following: "We are the people. We are the problem. And we are the solutions. People driven solution should be factored into the regulations.

7. CONCLUSION

In conclusion, the question of rail reserves is a titanic labour because as a regulator, we are empowered by the Act to regulate operators and not the at risk- behaviour of people who dwell in the rail reserves. In other to tackle the problem successfully, holism will be required; one has to see the difference between a tree and the forest. Slum dwellers are a globalised community and the railways around the world need to show some solidarity to railways that are faced with rail reserves. If this situation goes unbridled, our railway will soon turn into museums.

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