CHAPTER FOUR

RESEARCH FINDINGS AND ANALYSIS

4.1. Introduction

This chapter presents the findings and analysis of this research project. It is essential to indicate that getting findings is the main goal and objective of a research project, but a mere producing of research findings is, however, not a final step of the research process, and releasing results for public consumption at such a raw stage would not only be deceiving, but misleading as well. It is for that reason that a researcher has to take a step further, and make a thorough analysis and interpretation of the research findings. In essence, this chapter deals with the analysis of research findings as presented in the previous chapter.

The surveys conducted in this study have a direct tie with the research topic itself in that results from scenarios, expose radon and mine dust -which are in actual fact, people’s perception of former mining lands- as some of the actual barriers which hinder access to mining dump lands for the delivery of low-income housing. These are some of the barriers which the study sought to explore. This chapter attempts to give a fair and thorough analysis of the tabulations and the other format of the results from both surveys and document analysis. The overall results obtained through the surveys, as captured in 3.1 above, indicate that benefits of moving closer to the CBD – which means closer to economic opportunities, places of work, educational opportunities and better basic services, amongst others - surpasses the costs and health risks which potential housing beneficiaries will be faced with by opting for residence on former mining or
contaminated land. The survey findings clearly indicate that majority of the respondents are willing to utilize affordable housing constructed on former mining lands, closer to the CBD. My research project can thus be viewed as an extension of the Benefit-Cost Analysis project, since its main goal was to establish the possible barriers and risks likely to inhibit access and frustrate those potential housing beneficiaries who have shown willingness to reside in affordable housing on contaminated land.

4.2. Survey results

The high percentage of surveys conducted in Southgate, as reflected in Table 1, which is 49% of the total surveys, i.e. 105 of the total 216 surveys conducted, is due to the fact that Southgate was visited two times, not only because it serves people from our study area, but also because it serves people of different income groups. The age groups 30-39 and 40-49 boast between them, a total percentage 61% of the total age groups interviewed during the surveys. These are the working age groups who still have plans of moving to better places. Majority of the people who were interviewed earned more than R7500 per month, and this income group makes 30% of the total percentage of respondents (Appendix 3.7). This can be attributed to the fact that shopping malls are usually visited by better income groups, who usually own cars and are still active to move around. 26% of the interviewees managed to pass matric, while more than 40% of the interviewees had tertiary education, see Appendix 3.6.

Results of scenario A, as captured in Appendix 3.8 (a), which was an uncontaminated, remote home, located at a distance of an hour taxi ride from Johannesburg, indicated that
a total percentage of 94.4% of the respondents bid for affordable housing located at a distance of an hour’s taxi ride from Johannesburg CBD. It is crucial to indicate that this development is far away from the CBD, in fact, more far than any of the other survey areas. It is also important to indicate that this development is not sitting on contaminated land. A total of 186 out of 205 respondents were willing to reside in this development, and only 10 respondents indicated their unwillingness to stay in this development (the rest were invalid bids). The average bid in this scenario was discounted by 28%, the half bid by 3% while the top bid was discounted by a premium of 5%.

Scenario B’s results (see Appendix 3.8(b)) showed that 87% of the respondents had interest in residing in flats located at a distance of 10 minutes taxi ride from Johannesburg CBD. This development is situated closer to the CBD, but on contaminated land, although this is not mentioned. A mere fact that gardening is not possible on the ground, clearly attest to the contamination of the land. However, this might not have been clear and explicit enough to respondents to make a well-informed choice on this development. A total of 165 out of 205 respondents bid for this housing development, while 25 respondents did not bid for it. The average bid for this scenario was discounted by 34%, while the top half bid got an average discount of 6%, and the top quarter bid was a premium of 6%

Scenario C, as captured in Appendix 3.8(c) is very explicit on the fact that the flats were located on land that is contaminated by small amount of left over radioactive materials such as radon. This housing development is also within a distance of 10 minutes taxi ride
from Johannesburg CBD, and 73% of the respondents bid for this development, which has a small risk of having health problems in 20 years, owing to the availability of left over radioactive materials. Out of a total of 205 respondents, 141 bid for this development, while 52 were not interested, and the rest were invalid bids. The average bid got a discount of 54%, the top half bid was discounted by 31%, and the top quarter bid was a loss of 21%.

Results of scenario D (as seen in Appendix 3.8(d)) showed a total of 69% respondents who bid for this housing development, which is comprised of flats which are also located on contaminated land. The development is also within the distance of 10 minutes taxi ride from Johannesburg CBD. The scenario is very clear and explicit on the fact that this development is located next to mining dumps, which blow mine dust towards houses, which has a risk of health problems such as TB. A total of 165 of the 205 bids were in favour of this kind of housing development, and a number of 62 respondents did not bid for it. The average bid in this scenario was discounted by 68%, the top half bid was discounted by an average of 50%, while the top quarter bid was a loss of 36%.

A decline in the percentage of total bids, from 95% in scenario A to 87% in scenario B, then 73% in scenario C, and finally down to 69% in scenario D, is a clear indication of how respondents feel about radioactive materials such as radon, and being exposed to mine dust in residential areas. The decline in the percentage of bids shows a decline in the amount of respondents’ interest as we move from the totally uncontaminated lands towards the contaminated ones, which in all fairness, have their own health risks and challenges. A mere mention of radon or cancer during the survey was enough to make
some respondents reject housing on contaminated land. In some instances, I would be stopped even before I could finish the question about radon or cancer. Some of these respondents clearly and unequivocally indicated that they would not bid for housing on contaminated land. The increase in the number of respondents not bidding, from 10 in scenario A to 25 in scenario B, and then 52 in scenario C and up to 62 scenario D, indicate a decline in interest amongst the respondents as the interviews moved toward contaminated land. This decline in interest amongst the respondents, certainly indicates that, to a certain level, and to some other potential housing beneficiaries, radon and mine dust act as barriers or serious risks, which deter some of them from opting for affordable housing on contaminated land.

Results of the risk-taking question on page 3 of the survey instrument, which was raised in a more generalized context, show contaminated water as the most serious concern or risk factor to respondents, followed by HIV/AIDS, and then breathing problems caused by blowing mine dust at number three. Radon and small probability of cancer in 20 years comes out at number six, followed by other three more concerns which are also general concerns in nature, i.e. not directly related to housing on former mining land, which is our focus in this project. The coming out of contaminated water at the top of the list of worrying concerns to respondents, is not surprising at all. As already indicated in the previous chapter, there were cholera cases being reported at Delmas at the time of the surveys.
Out of the nine risk factors listed in the risk-taking question, only two are directly related to housing on former mining land, namely, breathing problems from blowing mining dust and radon with small probability of cancer in 20 years. The rest are, in actual fact, general concerns applicable to the general population, irrespective of where they live. If the question was to be re-contextualized specifically on contaminated land, the two risk factors as mentioned above, would undoubtedly be the most worrying ones to potential housing beneficiaries on former mining lands.

4.3. **Findings from document analysis**

Analysis of the Progress Report of the Gauteng Provincial Housing Department, as presented in the Performance Plan 2005-2006, singles out abnormally expensive land, lack of mandate on the part of the province to purchase land without having to go via municipalities, and inadequate funding, as possible barriers hampering access to land, and mining land in particular, for the construction of affordable houses closer to the CBD.

The question of pricing land out of the market by private landowners is a continuing worrying factor, not only to the government, but the nation in general. This kind of behaviour by private landowners can, to a certain extent, be interpreted to mean unwillingness to sell their land. Some owners are waiting for market value of the land to rocket in order to make more profit by the time they sell. But it is the extremely high prices of land irrespective of whether the market value of that land is low or high that is a serious concern in the whole process of land reform, to such an extent that it led even the State President Thabo Mbeki to suspect that there is manipulation of land prices by land
owners when delivering his State of the Nation Address 2006. The willing buyer-willing seller is also being condemned for stalling the pace of the land reform process. It was, amongst others, for that reason that a decision was taken at the Land Summit held in Johannesburg in 2005, to abandon the principle of willing buyer-willing seller, for it failed to speed up land redistribution processes in South Africa, hence the State President Thabo Mbeki called for this principle to be reviewed in his State of the Nation Address 2006. The government has, instead, resorted to expropriation of land, which has its own problems and challenges as well. Expropriation may sound harsher than the willing buyer-willing seller principle, but at the same time, the delay being experienced in land release processes, especially in urban areas, are not assisting either. It is for some of these twists and turns that municipalities fail to acquire more land to deliver affordable houses in order to reduce the ever-increasing housing backlog. Inadequate funding is also a vital finding to come out of this research project. The issue of lack or inadequate funding continues to impact negatively, not only on land acquisition, but on housing delivery in general.

Results from analysis of the National Nuclear Regulator Act, no.47 of 1999, and the Regulations on Safety and Regulatory Practices indicate, amongst others, that the site on which housing construction takes place must be inherently safe, which means that mining dumps and radioactive materials, radon included, must have been removed from the site to the level of 400 Bq per cubic metre. Cleaning and rehabilitating contaminated lands – as IPROP, which owns a number of former mines closer to the CBD, and which contributed enormously to this project, does- is not only costly, but time consuming as
well. Cleaning contaminated land to the required level as stated above, is also a very tough exercise. It is challenges such as these which make radon a health risk to potential housing beneficiaries, which in turn, becomes a barrier to accessing this kind of land for housing construction. The strict and uncompromising nature of the NNR Act of 1999 and the Environment Conservation Act of 1998, is also a serious deterrent for unlawful occupation of contaminated lands, unless if one wants to taste the wreath of the law. It is therefore vital to convert the toxic and contaminated land into a usable land for housing in accordance with the safety standards and regulations as set out by the NNR.

According to the Spatial Development Framework of Johannesburg, there is no development planned for this area at the moment. The land is not included in any of the planning schemes in the City and no form of land use is attached to this land as of now. The Integrated Development Plan (IDP) of the City also does not indicate any immediate plan for development on the study area. This is a plus factor for the move by this study for low-income housing to be constructed in this area, after the actual barriers shall have dealt with. However, the Johannesburg Spatial development framework does acknowledge that the mining belt is a dominant structuring element that creates a physical north south division across the central core of the city, which may be vital as a re-structuring element if north and south linkages are to be integrated in the broader city context. It is also interesting to note that one of the main development strategies of the City’s SDF is to ensure optimal accessibility to opportunities and the City experience. Similarly, the Gauteng Spatial Development Framework has as one of its main objectives, the increased access and mobility aiming at residential development in such a
manner that more equitable settlement patterns can be achieved. Other planning instruments that are also a serious consideration in improving access to this mining land include zoning of land, urban edge, geotechnical studies and infrastructure development (Simons et. al, 2005). In terms of the Growth and Development Strategy (GDS), launched in 2005, the vision of the Gauteng Province is to ultimately create a better life for all citizens. However, the government’s implementation of policies aimed at integrated and inclusive cities is still disappointing, to say the least. Reasons for this kind of failure include the argument and/or the myth by high income groups that low-income housing is unattractive, to the neighbourhood and also devalues adjacent residences (Mokonyane, 2006); the reluctance and stalling by the financial institutions to finance low-income housing, because they want the government to share the non-commercial risk before they provide the R42 billion in financing for new low-cost housing agreed upon under the finance sector charter (Banking Association of South Africa, 2006); over-pricing of urban land by private landowners, developers’ tendency “to shy away from this sector because of non-existence or low profits” (Banking Association of South Africa, 2006) as well as NNR’s unclear restrictions when it comes to construction on contaminated land.

4.4. Limitations of the research findings

The fact that remediation costs of contaminated land are usually very high, and also the fact that only flats are a suitable type of housing development required on this contaminated land, means that low-income earners will find it very hard to afford this type of housing. To make up for this limitation, the state and other interested formations
should make more funding towards rehabilitation projects of contaminated land, in order to enhance accessibility and affordability by potential housing beneficiaries. Scenario B does not clearly state that the land on which the housing development has been constructed is contaminated by radioactive materials such as radon, suffice to say that gardening on the ground is not possible. Chances are if this scenario was more explicit, the bidding percentage for this development could have been different to the existing one.

The TRPL 533 masters students who assisted in conducting surveys, were given monetary incentives in order to get them to do more surveys and to put more effort to their projects. In some instances, the involvement of monetary incentives in research projects, opens up loopholes for dishonesty, unfaithfulness, cheating and inaccuracy, which might, one way or the other, influence findings of a research project. But in order to make sure that this does not happen in this project, I was given the task of supervising the students and monitoring the actual conducting of surveys, in order to minimize chances of irregularities.

Another limitation to the findings and the project as a whole, may be the disregard and the failure to consider political factors when planning this research project. Some people may raise their concern about the idea of constructing affordable housing for the previously marginalized, excluded and isolated citizens, who are predominantly poor blacks, on contaminated land. It is therefore necessary to emphasize the right to freedom of choice, for anyone willing to reside in this type of housing development. It would also
be vital to stress that residence in this development is open to all citizens of any race, colour, gender and creed.

The cholera crisis which broke out in Delmas during the conducting of the surveys, one way or the other, had an influence on the findings of this project. Although this was a situation beyond our control as researchers, and a coincidence, it might have influenced the research findings to a certain extent.

4.5. Conclusion

Analysis of the research findings as presented in the previous chapter, assist in clarifying concerns, misunderstandings, misinterpretations and speculations. It is vital to indicate that an analysis of these findings led to the exposure of some of the possible barriers responsible for inhibiting and frustrating attempts to construct affordable housing on former mining or contaminated lands closer to Johannesburg CBD, and these are, amongst others, exorbitant prices for land on sale, unwillingness by some land owners to sell their land, people’s wrong perception about radon and mine dust, inadequate funding, and policies’ strictness on development on former mining lands.

It is these barriers which stand between the previously disadvantaged and marginalized people of Soweto and the neighbouring communities and the projected well-located, affordable housing closer to the CBD, with economic, employment, educational, health, transport and other opportunities which go together with residence closer to the CBD. This is where the roles of both the provincial and municipal governments should come in. Both spheres of government need to include former mining land in their IDPs. The
Greater Johannesburg Municipality needs to interact and negotiate with (private) owners of this land with the intention of buying it or accelerating its development processes in order for low-income housing construction processes to be enhanced. Both spheres of government need to effectively implement Breaking New Ground strategies, which, amongst others, seek to build settlements that promote both racial and class integration, while at the same time promoting economic growth (Mokonyane, 2006).

The Gauteng provincial government also needs to speed up the implementation of the newly found idea namely; the inclusionary housing programme, which seeks to allow low-income housing to become an integral part of commercially-driven development aimed at higher income groups (ibid). In short, policies and strategies are in place, what is needed is for both the provincial and municipal governments to intensify their implementation endeavours aimed at making urban land, particularly former mining land, more accessible for the construction of low-income type of housing.