



# ECO-ECONOMY DEVELOPMENT OF MONWABISI PARK, CAPE TOWN

An Interactive Qualifying Project:

Submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the

Degree of Bachelor of Science

Submitted by:

Jason Coddling  
Mark Dignum  
Mike Fitzpatrick  
Kelly Pastor

Submitted to:

Project Advisors:

Professor Scott Jiusto  
Professor Bob Hersh

Project Liaison:

Dianne Womersley, The Shaster Foundation

December 19, 2008

# **1 Executive Summary**

## ***1.1 Background***

Redevelopment of informal settlements in South Africa has been a struggle for volunteers, non-government organizations, and government organizations alike. To date, no organization has perfected a method for successfully implementing community redevelopment in informal settlements. The current method for redevelopment of informal settlements in Cape Town, South Africa has had some success in upgrading communities, however the current initiatives are overloaded and the government cannot keep up with the demand for new houses. It is crucial for redevelopment organizations to evaluate the way informal settlements have grown and how past redevelopment efforts have been successful, but also how these efforts have failed. This project seeks to investigate how local economic activity can grow and expand with more of an emphasis on community-based redevelopment.

The City of Cape Town has been doing major redevelopment in the informal settlements surrounding the city, but there are some basic limitations to their current approach. One major fault is that their efforts are geared toward giving housing to people in informal settlements based on a waiting list. This creates the undesirable expectation among informal settlement dwellers that housing should be provided for free and by waiting long enough they will receive improved housing. However, it is clear that this waiting list method is not working; According to Alastair Graham, from the Violence Protection through Urban Upgrading program, the government has the capacity to produce only 10,000 households per year and a waiting list of over 400,000 households to build (Graham, 2008). Therefore, it is critical that the government modify its current approach towards rebuilding informal settlements. By focusing redevelopment efforts on providing upgraded housing through private contractors the government misses a unique opportunity to help jumpstart community-involved development within the informal settlements. By supporting a redevelopment method that utilizes local labourers the city will be able to provide numerous economic opportunities within the community. A redevelopment effort in Monwabisi Park that addresses not just housing, but developing the other major aspects of a functioning society such as communication, economy, energy, water, transportation, safety and sanitation could serve as a model for redeveloping other areas.

The focus of this project is on the economy of the informal settlement of Monwabisi Park, located in the township of Khayelitsha on the outskirts of Cape Town. In Monwabisi Park the economy is struggling to support the growing population, and the unemployment rate is approximately 50 percent (Cape Town Social Survey, 2005). The formal economy of the surrounding area is unable to provide adequate jobs for the expansive informal population of approximately 20,000 people. As a result, 80 percent of households are unable to earn the minimum subsistence level of R1,900 (Cape Town Social Survey, 2005). In addition, the lack of literacy, trade skills, business training, and funding prevents the informal businesses of the region from expanding or serving as a base of economic stability for the community. To address these problems, the Monwabisi Park community is in great need of a structured community redevelopment effort with significant attention paid to economic growth.

## ***1.2 Current Economic Conditions***

While working in the community, the project team identified many issues that a redevelopment plan implemented in Monwabisi Park should address. The major issue affecting the people of Monwabisi Park is unemployment, and the lack of jobs in Cape Town and the

surrounding areas. The unemployment rates of informal settlements are a result of several issues. One major issue preventing people from getting jobs is the lack of formal training. Many community members possess skills in various trades, but often do not possess the paperwork certifying them in the discipline. This is mostly because formal training is too expensive for people living in cash-poor areas such as Monwabisi Park. While formally trained people are not abundant in Monwabisi Park, the team's research found that there is great enthusiasm to receive training in various fields, as people are anxious to be able to possess skills that may lead to a job. In addition to lack of training, people in informal settlements often do not have adequate knowledge of the current job market. There are very few employment agencies that can connect people with jobs, and the few that do exist are located far from the informal settlements. Along with low employment rates, there are several other factors that make poverty widespread and the Rand scarce in informal settlements. It is important to consider flow of Rand throughout the community because the Rand is necessary for survival and helps to stimulate local economic growth. There are some items that community members can only purchase in the formal market in Cape Town, resulting in an outflow of Rand. Adding to the outflow of Rand is the fact that most jobs people do possess are located in Cape Town, so they must pay for transportation, which is expensive. Along with those everyday expenses, another major factor to the outflow of Rand is the fact that many people do not consider Monwabisi Park to be their permanent home. Instead they come to Monwabisi Park to find work to send money back home, generally to the Eastern Cape. All the factors leading to low employment rates coupled with the factors resulting in an outflow of Rand create the struggling economy that is present in Monwabisi Park and most other informal settlements.

### **1.3 Project Team's Goals**

Taking into consideration these challenges, the team set forth a set of goals which aim to address the current economic situation for Monwabisi Park residents in conjunction with an overall community redevelopment process. The goals are as follows:

- Explore sustainable economic redevelopment strategies that are attainable and promote eco-village/permaculture principles
- Complete an economic overview of Monwabisi Park
- Develop an economic redevelopment plan for Monwabisi Park related to overall community redevelopment
- Implement part of the economic redevelopment plan

In order to fulfill the last two goals, the completion of the first goal was crucial to gain an understanding of strategies that could potentially be incorporated into the plan. Completing a study of the current economic conditions in Monwabisi Park allowed the team to determine the main problems that needed to be addressed in the economic redevelopment plan. Furthermore, since this project was a part of an integrated plan for overall community redevelopment, it was important for the team's economic redevelopment plan to incorporate key principles which revolved around this upgrading process. The team identified **the key principles of the economic redevelopment plan to be:**

- Job creation through the community redevelopment process
- Skill development and transfer through apprenticeship and training programs
- Community involvement in managing an investment
- Utilizing a complementary currency to lessen dependency on the Rand

These key principles served as the main points the economy team addresses in the economic redevelopment plan.

## **1.4 Methods**

The fulfilment of the first two goals was accomplished during the first half of the team's time in Cape Town in order to lay the groundwork for what needed to be incorporated in the economic redevelopment plan. Alternative economic strategies were researched specifically those set forth by the South African New Economics Network (SANE). By researching SANE's principles and also interviewing Joseph Edozien of SANE, the economy team came across the idea of using a complementary currency to stimulate local economic growth. Later on, this idea became an integral part of the team's economic redevelopment plan.

The next step to the development of an economic redevelopment plan was to gain an understanding of the current economic situation. In order to do so, the team conducted interviews with residents in Monwabisi Park regarding work experience and skills that they possess. The team also engaged in discussions with Monwabisi Park residents to gather information on what types of skills they would like to learn in order to obtain jobs. Using the survey devised by the communications team, rough unemployment rates were determined as well as modes of transportation to and from work. In addition, the team interviewed local business owners to learn more about the operations and limitations of informal enterprises. The information obtained through these methods assisted the team in developing an economic redevelopment plan.

## **1.5 Developing the Economic Plan**

Utilizing these findings and background research, the team began to develop an economic plan through the creation of three key industries which would stimulate local economic growth and also provide materials for the overall community redevelopment. The overall redevelopment involves the use of EcoBeam structures, which have been previously used in Monwabisi Park upgrading. EcoBeam housing structures are simple to construct and easy to learn, and thus conducive to utilizing local labour. In addition, the materials that go into EcoBeam houses, mainly EcoBeams and sandbags, can be produced in Monwabisi Park. An Ecobeam factory, which produces EcoBeams made of timber and thin steel strapping, does not require electricity and can employ a minimum of four individuals to construct these beams. Not only can this industry provide jobs for residents, it promotes the development of skills for factory workers in the area of carpentry and management.

In addition to the EcoBeam factory, the establishment of a sand bag sewing factory is critical to stimulating local economic growth and creating jobs for residents. Mike Tremeer, owner of EcoBeam, has agreed that if a factory in Monwabisi Park was established to purchase sand bags produced at a profit of R0.20. Once community redevelopment begins, these sand bags can be used in the EcoBeam houses and buildings. After an initial investment of sewing machines and a place to start the factory, the production and purchasing of the sand bags can ultimately pay the workers a considerable salary with Rand leftover to be put aside in a community redevelopment fund. The earnings, communal profit, and building material potential for one and eight workers working full-time in the factory is shown in *Figure 1 & Figure 2*.

<b>Scenario One (1 Worker)</b>	
Workers/Machines	1
Days Per Week	5
Hours Per Day	8
Daily Salary	ZAR 70.00
Gross Profit	ZAR 500.00
Expenses	ZAR 24.25
Salaries Paid	ZAR 350.00
Communal Profit	ZAR 125.75
Sandbags Produced	2,500
<b>Percentage of 6 Unit Housing Structure Completed</b>	<b>23.67%</b>

Figure 1

<b>Scenario Three (8 Workers)</b>	
Workers/Machines	8
Days Per Week	5
Hours Per Day	8
Daily Salary	ZAR 70.00
Gross Profit	ZAR 4,000.00
Expenses	ZAR 160.00
Salaries Paid	ZAR 2,800.00
Communal Profit	ZAR 1,040.00
Sandbags Produced	20,000
<b>Percentage of 6 Unit Housing Structure Completed</b>	<b>189.39%</b>

Figure 2

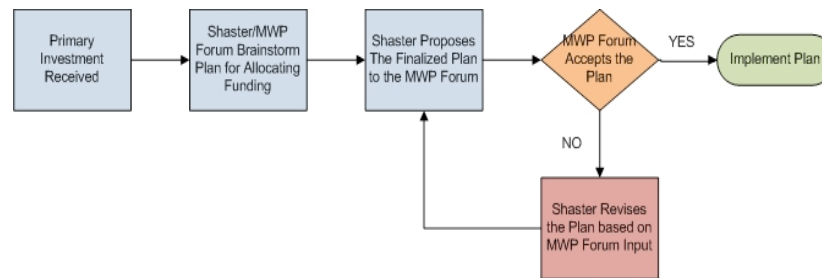
These figures were based on the assumption that one sand bag can be sewn per minute and are only rough estimates of productivity. By taking into account the inputs, the amount of sand bags sewn was related to the amount needed for housing redevelopment; working full-time for one week, an individual can produce more than enough sand bags to complete a new housing structure the size of an existing shack. Using these sand bags in the EcoBeam houses in MWP encourages the notion of “earning your house,” as the labour hours put in results in a product needed for housing redevelopment.

## 1.6 Management of Redevelopment

As the key redevelopment industries develop and the redevelopment advances, there will be a need for management within the industries. While there are many people who possess the raw skills for management in Monwabisi Park, many do not have the basic knowledge to manage groups of people, according to Di Womersley of the Shaster Foundation. In order to address this, the project team has created a plan to incorporate an apprenticeship program to train local community members in the basic management skills needed to run the EcoBeam factory, sand bag factory, and construction operations. At the start of redevelopment, the apprenticeship program will employ a trained manager from the formal market to come in and manage each operation. While they are managing the operation, they will have an apprentice from Monwabisi Park shadow them, learning all the necessary skills needed to run each operation. The program will last as long as necessary for the apprentice to learn the skills, and will end when the hired manager deems the apprentice fit to run the operation on their own. This program will create more jobs within the community while also making the redevelopment more sustainable

Along with management of key redevelopment industries, there will need to be some sort of management of the overall redevelopment. This management will be responsible for making decisions regarding what to do with incoming funding, such as where the funds get allocated. Currently the Shaster Foundation, a non-government organization, manages community development. However, when the rate and scale of development are increased additional management and oversight will be required. The project team has devised a plan for establishing a Monwabisi Park Forum to handle all decisions that affect the entire community. The forum will be comprised of representatives for members from nine aspects of the community: men, women, youth, health-care, elders, disabled, business, Shaster, and Indlovu. All members of the forum will be elected by their respective groups except for the Shaster and Indlovu representatives, who will be Dianne Womersley and Buyiswa Tonono (Womersley, 2008). Shaster will propose ideas for the use of funding to the Monwabisi Forum, who will then either accept or reject the idea. If the idea is accepted, it will be implemented in the redevelopment; if the idea is rejected, Shaster will then rework the idea and bring it back to the forum to be looked at again. This relationship is

shown in *Figure 3*. Involving the Community Forum in such a way will ensure that everyone has a voice in the redevelopment and the specific needs of the community are addressed.



*Figure 3: Shaster and Monwabisi Park Forum Relationship*

## **1.7 Financing the Redevelopment**

One of the major issues with the economy of informal settlements is the unbalanced flow of the Rand. There is very little Rand coming into informal settlements and most of the Rand earned is spent outside the local community. Creating a local exchange will make communities less reliant on the Rand and the formal market, a key aspect to becoming a sustainable, independent community. As Quintiliani suggests, complementary schemes in third world countries such as Brazil and Thailand have been successful in improving the quality of life for communities and also enabling local businesses to thrive and grow (Quintiliani, 2002).

A complementary currency scheme is essentially an agreement within a community to use and accept a non-national currency as a means of payment. This kind of strategy is beneficial in an informal settlement because it allows people who have no means to participate in the formal economy to be active contributors to the local economy (Quintiliani, 2002).

The implementation of a complementary currency is an ideal strategy to be included in the WPI plan for redevelopment because it works closely with the principles of self-help, local economic growth, and community involvement. This redevelopment initiative lends nicely to the creation of a complementary currency system because of the number of new programs and enterprises that will be established for community benefit. Because these organizations are entirely new to the community there is no expectation of how things are to be structured or managed. This allows for an experiment to see how a community embraces the idea of a complementary currency. This experiment is valuable because it introduces the complementary currency in a new, natural way instead of forcing local businesses change their current practices. A brief overview of the new enterprises that will arise from the redevelopment initiative is outline in *Figure 4: New Initiatives for Complementary Currency*. The project team's plan includes the creation of new jobs that will be critical to the successful implementation of a complementary currency strategy. The infrastructure and logistics for using a complementary currency scheme are written about in detail within the economy chapter of *Envisioning Endlovini: Options for Redevelopment*.

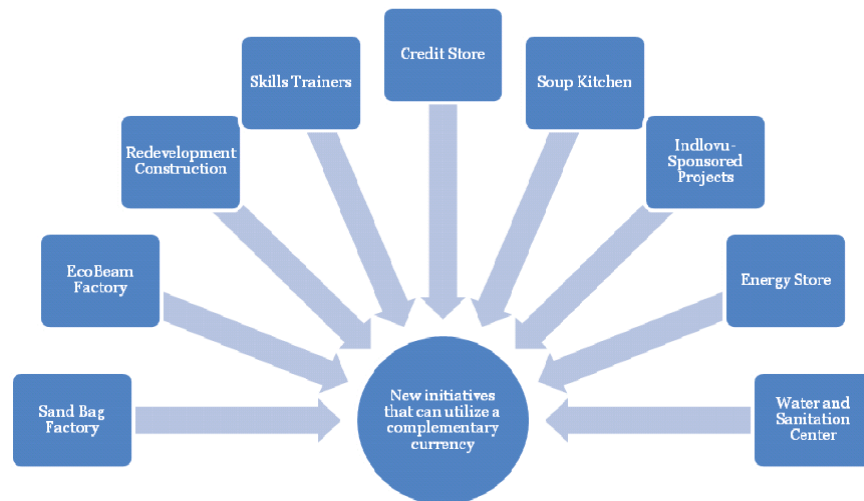


Figure 4: New Initiatives for Complementary Currency

## 1.8 Implementation

The economic redevelopment plan that the economy team has set forth in this document and in its chapter in *Envisioning Endlovini* has been developed to address the major economic challenges facing Monwabisi Park residents in an integrated approach to overall community redevelopment. This fulfills the team's third goal of setting forth a plan for economic redevelopment. Furthermore, the team made small strides towards the final goal of implementing the plan. The project team was able to accompany eight residents to a local sewing machine distributor for training on industrial sewing machine maintenance and operation. Two industrial sewing machines were purchased for the purpose of initiating the sand bag sewing factory. However, as a result of a fire tragedy that consumed all community buildings, the sewing machines were lost as well as the designated area for the factory. While the setback did not allow the complete implementation of the plan, the remaining details have been outlined by the team for further community discussion and eventual realization. The economy team hopes that this plan will be embraced by the community to stimulate economic growth and assist the overall community redevelopment effort.

These core issues have been explored as part of an integrated research and planning project conducted in Cape Town in 2008 and detailed in a report entitled, *Envisioning Endlovini: Options for Redevelopment in Monwabisi Park*. The document is authored by twenty-two Worcester Polytechnic Institute students and reports on efforts to plan and implement an ecovillage in Monwabisi Park to address problems of informal settlements. The overall effort is a collaboration among community residents and leaders, the WPI Cape Town Project Centre, the Shaster Foundation, the City of Cape Town, the Violence Protection through Urban Upgrading program, Ecobeam Technologies and others. Six WPI study teams investigated several aspects of ecovillage redevelopment including: buildings, water and sanitation, communications, energy, economics, and urban spatial planning. All research data and proposed options for re-development are included in the full report. This team's work is especially detailed in the economy chapter of *Envisioning Endlovini: Options for Redevelopment*. The full report can be accessed at <[www.wpi.edu/Academics/Depts/IGSD/People/jiusto.html](http://www.wpi.edu/Academics/Depts/IGSD/People/jiusto.html)>

## **Bibliography**

City of Cape Town Social Study 2004 Survey of Residents of Joe Slovo; Nonqubela K-section; Sweet Home (2005). Cape Town.

Graham, A. (2008, December 15). Cape Town and Informal Settlements. (W. E. Team, Interviewer)

Quintiliani, J. (2002). An Historical Analysis of Complementary Currencies and Implications for South Africa. Retrieved December 10, 2008, from [www.sane.org.za/pubs/index.htm](http://www.sane.org.za/pubs/index.htm)

Tremeer, M. (2008, December 1). EcoBeam Technologies. (W. E. Team, Interviewer)

Womersley, D. (2008, December 12). Shaster and Monwabisi Park. (W. E. Team, Interviewer)