BRICK MAKING

POVERTY ALLEVIATION PROJECT

BUSINESS PLAN

2005

KOPANONG LOCAL MUNICIPALITY

TABLE OF CONTENTS

1. INTRODUCTION

The programmes Committee resolved that the Brickmaking business plan should be split so that it can be able to relate to each Municipality as the situation in the two Municipalities is different. This business plan will therefore relate to the situation of Kopanong a Phofung Local Municipality. A concept paper was initially developed and has been able to deal with a number of issues that have been covered in the business plan. The purpose of the business plan will therefore not be to fundamentally depart from the initial work that has been done but will be more to put things in proper perspective and also to relate to issues that might have changed since the initial document was conceptualised. To this end this report will cover the following issues:

- The current state of affairs in as far as the project is concerned.
- The current challenges the project is facing.
- Provide recommendations that will ensure that the project is implemented in line with the Project Management Cycle document of the Free State Youth Commission.

2. FEASIBILITY STUDY

2.1 Background

As so much time has lapsed since the initial feasibility study was conducted the Programmes Development Officer and Researcher: Demographics were tasked with the updating of the information on the feasibility study so that it is able to relate to the current conditions and plans of both Municipalities and provincial government departments that have been identified as stakeholders and whose participation is key in the successful implementation of the project. In the case of Kopanong Local Municipality a questionnaire with specific questions that will provide detailed information that is required from the stakeholders was developed and send to senior Municipal officials. The idea was to get information

that will be able to be used as a tool to determine whether on the basis of the information that has been received the project will still be sustainable once it has been implemented. Secondly it was to establish whether the initial commitment to assist with the implementation of the project that was given by the stakeholders is still applicable.

The other objectives of the study were to:

- Formulate a reasonable report for the implementation of this project;
- Enable good human resource planning for the project;
- Facilitate the resource allocation process; and
- Enable the Unit to identify possible sites, markets, and partners for the implementation of this project.

2.2 Keys to Success

In order to ensure success, the project will have to strive to achieve the following goals:

- Maximum production of bricks as per the capacity of the machine
- Effective marketing of the bricks, and also availability of markets, particularly through the procurement systems of municipalities.
- Good and proper management of financial and human resources.

2.3 Production Process

2.3.1 Materials

2.3.1.1 Cement

Cement should comply with SABS EN 197-1. Strength class should be 42,5N or higher because the concrete must develop strength as rapidly as possible. Note that it is illegal to sell cement that does not bear the SABS mark.

2.2.1.2Aggregates

Sand and stone are used for most block productions.

Clinker or hard-burnt ash often contains harmful impurities and should not be used as aggregate unless it is found to be acceptable by laboratory test. Good quality clinker can be used instead of sand or stone but blending with sand or stone may be necessary.

Sand and stone are fragments of rock and differ only in size. Sand particles will pass through a sieve with 4, 75 mm square openings while stone particles will not.

All aggregates should be clean and not contain organic matter such as roots or humus. If the aggregates contain clay it should be in a very small fraction.

The following aggregates may be considered:

- Fine sand with particles mainly smaller than 1 mm: pit, fine river or dune sand
- Coarse sand with the biggest particles approximately 5 mm in size: crusher, pit or coarse river sand
- Stone with a maximum size of 13 mm for bricks or solid blocks or 10 mm for hollow blocks

It is normally possible to make blocks with coarse sand on its own. Alternatively combination of the following aggregates may be used:

- A blend of coarse sand and fine sand
- A blend of fine sand and stone
- A blend of fine sand, coarse sand and stone

For small-scale production, the best aggregate or combination of aggregates is normally found by trial and error. Information on a more scientific approach is given.

2.2.1.3Water

Water that is fit for drinking is suitable. Most river and borehole water may be used.

2.2.2 Production

All the processes that are indispensable for a production of good quality bricks will be adhered to during the actual production of bricks. These processes and principles will be entrenched into the beneficiaries (trainees) during training. Certain aspects on processes that will be looked at includes, inter alia:

- ***Batching*** – this is to ensure that the aggregate is well drained. This process must be supported by storing the different aggregate types separately and by ensuring that the material is protected from rain so as it remains dry before being mixed with the cement, thus avoiding to exceed the optimal moisture content (OMC).

- ***Mixing*** - Following the batching, the aggregates together with the binder, as well as pigment if, required, are discharged into a mixer and thoroughly mixed before any additional water is added. Once properly mixed, water will be added to the mixture to bring it to OMC. Uniformity will be ensured because differences in water content from batch to batch will result in differences in quality. The effect of pigmentation will not be overlooked. The mixture is stored in the hopper ready for dispensing into the moulds.

- ***Filling of moulds*** – During mixing, variations in density will result if the gauged quantities are not consistent or the mixture is not uniformly distributed within the mould. Over and above these variations are due to variations in moisture content. This undesirable situation is prevented by the filling the moulds.

- ***Compaction*** – This is another step to enhance the quality and durability of the blocks. Good compaction can be effectively achieved for blocks that are less than 80mm.

- ***Curing*** – the quality of concrete blocks is improved by water curing. This process is also intended to protect aesthetic of the blocks by preventing the migration of calcium hydroxide to the surface of the blocks. Curing can be effected in one of the three ways:
  i) *Moisture retention*
  ii) *Steam curing, and*
  iii) *Thermal curing.*

2.3 Technology

Although the project is designed in a good spirit of alleviating of poverty, it does not seek to achieve this goal by compromising quality and standard of both houses and roads through a production of poor quality products. The project is also designed to ultimately become a profit generating business.

To prevent the undesirable situation of low quality bricks, a Service Provider has to be appointed to provide training to the beneficiaries and this training must be supported by necessary material conditions (e.g. good technology) to enhance the quality and quantity of products.

Machinery

The Kopanong Local Municipality has donated a machine that will be used for the project. The machine has the capacity to develop 144 000 bricks per month but can develop up to 250 000 bricks per month if 3 hours shifts of 8 hors per day are used.

2.4Land

It is important that there is enough land for brick production, as the size of the land will determine the number of bricks produced per day. The site also has to have enough water supply because brick production requires a lot of water, and there also has to be access to electricity. In selecting a site, consideration should be given to location, access, ground slope and size. Each of these is discussed below.

2.4.1Location

The location should be considered in relation to:

- Supply of raw materials
- Market for products
- Location of the labour force
- Security of the area
- Availability of services, i.e. roads, water, sewerage, electricity, etc.

2.4.2 Access

The site must be accessible to trucks delivering aggregates and cement

and collecting finished products.

2.4.3 Ground slope

Ideally, the site should be level or nearly so. Steep slopes make handling and production difficult. Terracing a steep slope is expensive.

2.4.4 Size

The site should be big enough for aggregate stockpiles, cement storage, production (slab or stationary machine) block stacking, staff facilities, an office and on-site access.

3. PROJECT IDEA

3.1 Purpose of the Project

The purpose of the brick-making project is to firstly equip young people with skills to enable them to make bricks, and secondly to provide young people with the opportunity to start a business that can generate income, and therefore enabling them to alleviate poverty in order to sustain their livelihoods. It is also envisaged that this project will equip them with entrepreneurial skills, and as such they will be able to use them to contribute effectively in the economic development of their area and as they develop further in their lives it will help them to become responsible members of society who will contribute immensely in the development of their communities and themselves.

3.2 Objectives

- To establish youth brick making companies that specialises with pave-bricks for street paving and bricks for low cost housing.

- To accelerate a process of job-creation in Kopanong Local Municipality.
- To enable young people to contribute in the infrastructure and economic development of their area.
- To generally reduce the statistics of youth unemployment.
- To enhance the participation of young people into mainstream economy.
- To improve the quality of life of young people.

3.3 Project Sites

The Jaggersfontein area in Kopanong Local Municipality has been targeted because it is one of the areas that are stricken by poverty in the province and there is a high level of unemployment amongst the youth.

3.4 Strategy

The overall objective or purpose of the project is to make a significant contribution in alleviation of poverty amongst young people through transfer of necessary skills that will enhance their employability and promote their economic participation.

Amongst other principles of effective youth development adopted by the FSYC, one is that every programme should first identify exit opportunities for beneficiaries before it can be acknowledged as a youth development programme. The strategy is two fold, first is to provide young people with skills, and secondly to assist them in setting up a business for their livelihood.

4. BUSINESS SYSTEM

There are 10 beneficiaries have been identified for the project in Jagersfontein. They have all been drawn from the pool of the unemployed youth of the area. In their appointment, issues of gender balance and disability were taken into consideration, however due to the nature of the project it was very difficult to find

disabled beneficiaries to be part of the project. This was in the main informed by the fact that the project is very much labour intensive and could, by the nature of the work involved, exclude people with certain disabilities.

4.1 Operational Model

The project will start as a Poverty Alleviation Project for the first 12 months but it will ultimately be a business concern where all the 10 beneficiaries will have an equal share. The beneficiaries have already registered a close corporation and it is called Itsoseng Brick Suppliers. The benefits of registering a close corporation are the following:

A close corporation is a juristic person and has the powers of a natural person, to the extent that a juristic person may have such powers.

- All members may participate in the management of a close corporation. There is a separation between ownership and management. This may be changed by an association agreement entered into by the members and the close corporation

- A close corporation does not require an auditor only an accounting officer.

- It provides limited liability to its members. A member cannot be held liable for the debts of a close corporation, under normal circumstances. However, there are certain exceptions provided for in the act [Section 26(5), 63 and 64(1)]

- There are no directors in a close corporation, only members.

- The interest that a member has in a close corporation is expressed as a percentage.

The members will also have to elect amongst themselves, a management committee of 5 people, which will look after the day to day running of the project. The management committee will elect a chairperson, deputy chairperson, secretary, deputy secretary and treasurer.

4.2 Management Committee

Chairperson

- Shall act as the Site Manager Officer of the project.
- Shall preside over meetings of the Management Committee of the project.
- Shall supervise all work at the project in conformity with the code of conduct of the project as agreed upon by the steering committee and beneficiaries.
- Shall attend meetings of the Steering Committee.

Deputy Chairperson

- Shall deputise for the chairperson.
- Shall in the absence of the chairperson, assume his/her roles and responsibilities.

Secretary

- Shall be responsible for the minutes of the management committee and beneficiaries meetings.
- Shall be responsible for all other records of the project.
- Shall be responsible of the convening of project management committee.
- Shall present reports on a regular basis on the state of the project to the project Steering Committee.
- Shall attend meetings of the project steering committee.

Deputy Secretary

- Shall deputise for the secretary.

- Shall in the absence of the secretary, assume his/her roles and responsibilities.

Finance Officer

- Shall be responsible for the overall finances of the project.

- Shall operate a banking account on behalf of the project with the chairperson and secretary.

- Shall keep accounts, books and any other records necessary to clearly reflect the financial position of the project.

- Shall present on a regular basis financial reports of the project to the Steering Committee.

- Shall in consultation with the Free State Youth Commission and the Kopanong Local Municipality Finance Units ensure the presentation of annual audited financial statements to the Steering Committee.

- Shall be a member of the Steering Committee.

The elections of the management committee will be held annually, so as to ensure that all the members participate in leadership activities of the project. It is also important that members are trained in leadership, as part of the implementation of the project in skills training

Steering Committee

The Steering Committee will be the overall body of authority during the Poverty Alleviation phase of the project. It will be convened by the Free State Youth Commission and constituted by the Municipality, beneficiaries through the Chairperson, Secretary, Treasurer and Manager of the Management Committee representing the beneficiaries, departments of Labour, Public Works, Local Government and Housing, Construction Seta and the District Municipality. The Steering Committee will meet quarterly to evaluate the progress and the challenges of the project.

4.3 Training

The Department of Labour in Motheo will be approached to come on board as a stakeholder to provide training to the beneficiaries. The following training courses will be recommended.

- Brickmaking
- Concrete handling
- Basic Business Skills
- Business Management
- Paving and Slab laying / kerb layer
- Paving, slab laying and concrete laying.

There are also other institutes and institutions that can assist with training and these are the Cement and Concrete Institute, the Pan Mixer South Africa, and HOLCIM.

4.4 Monitoring

It is important that the project has effective and efficient monitoring systems, as these will allow for proper implementation of the project. The chairperson of the

steering committee will be the Site Manager for the duration in office, and all steering committee members will report to the chairperson.

The chairperson will in turn report to the Youth Development Officer and the LED Officer and the Youth Commission and this reporting would be done on a monthly basis. There will also be regular shareholder meetings to keep all the other shareholders abreast of the management of the projects, and these meetings would be held on a weekly basis with members on site.

The Youth Commission would then facilitate quarterly meetings with all other stakeholders identified, and the purpose of the meetings would be to discuss the progress of the projects and to also plan, and the Chairperson, Secretary and Treasurer of the project management committee would form part of these quarterly meetings.

4.5 Financial Management

Proper financial management systems need to be put in place so that there could be effective management of resources. It is therefore important that the Steering Committee together with the FSYC and the Municipalities assist in the development of proper management systems. Secondly there must be a code of conduct and policy that will regulate all issues that relates to the operations of the project that should be developed with the beneficiaries.

5. STAKEHOLDERS

For the effective implementation of the project the following stakeholders were identified.

Free State Youth Commission

- Shall be responsible for the facilitation of commitments by all stakeholders.
- Shall be responsible for monitoring and evaluation of the implementation programme.
- Shall be responsible to identify and secure market for the project.
- Shall lobby for the buy in of the project at all levels.
- Shall be responsible for the co-ordination of the project.

District and Local Municipalities

- Shall be responsible for the provision of land and all related services for the implementation of the project.
- Provide resources for skills development and training.
- Secure market for the project through Local Procurement System, which is favourable to the previously disadvantaged individuals and particularly the youth.
- To provide regular update to the Commission on the types of infrastructure development projects the Municipality will be undertaking at any given time that may require low cost bricks.

Department of Public-Works

- To create and provide markets for the project through favourable procurement systems.
- To provide regular update to the Commission on the infrastructure programmes that the Department will be undertaking in the District where the project will be implemented that may require low cost bricks.
- To provide a list of service providers on a regular basis who received tenders in the District in as far as housing and structural development is concerned.
- Assist with the accreditation of the programme with the relevant SETA.

- Assist with the marketing of the project.
- Provide in other form of assistance, which may be necessary in the successful implementation of the project.

Department of Local Government and Housing

- Shall perform the same responsibilities as the Department of public works.

Construction SETA

- To provide technical training and mentorship to the programme as well as quality assurance on the materials produced.

Department of Labour

- To provide training to the beneficiaries.
- Continuously monitor the training programme of the beneficiaries and where necessary recommend and implement new training programmes.

District and Local Youth Units

- To perform any other duties which are similar to those of the Free State Youth Commission.
- To provide any other form of assistance that may be relevant in the implementation of the project.

6. MARKets

The projections for the Kopanong municipality are based on projections that were made for the initial business plan, and this is due to the fact that all efforts were made to access the latest figures without much success.

The office was able to provide information on number of low-cost houses that will be built in the next 3 years within the municipal area. The statistics are as follows:

YEAR	NUMBER OF HOUSES
2003	1913
2004	936
2005	954

These houses will require the same type of bricks that the project will produce.

Municipal infrastructure

Roads and Streets
With regard to access roads to be upgraded per year for the next four years, the following information was provided:

YEAR	Area of the streets
2003	2.5 km x 6m
2004	3.8 km x 6m
2005	900 km x 6m

Other Infrastructure Development

Libraries

YEAR	Number
2003	1
2004	2
2005	2

Community Hall

YEAR	NUMBER OF HOUSES
2003	1

Competitor Analysis

There are no established Brick making companies in the area and the region. Municipality, companies and the community rely on the services of companies based in Bloemfontein.

7. FINANCE

When developing a budget, a number of factors had to be considered and amongst them were the following:

- Land
- Room or shade for the storage of raw materials
- Erection of the office Block
- Fencing of the site
- Production Materials
- Machine
- Water facilities, including pump, pipes, taps.
- Stipend for the beneficiaries
- Security at the project site
- Truck Rental for the delivery of products
- Repairs and maintenance

8. CURRENT STATUS

A vacant site has been identified in Jaggersfontein where the project will be implemented which is 40-50 ha and it is closer to the Municipality's sewerage network system. The location of the project makes it easy for water to be accessible for the project. Due to the high cost involved in the implementation of the project and the limited resources available the Municipal Manager had recommended that a temporary site will be availed by the Municipality for the project so that beneficiaries could start developing bricks which will be used for

the building of slabs to put on the brick, administration offices, store room for the cement, toilets and showers where after the project will move to It's permanent site.

8.1.1 Brick-making Machine

The Machine that has been donated to the Municipality has been fixed it is awaiting the start of the project.

8.1.2 Beneficiaries

The 10 beneficiaries that have been identified for the project have been trained in brick making by Unique Training Solution based in Bloemfontein.

8.1.4 CHALLENGES OF THE PROJECT

- For the project to function optimally, there will have to be a substantial cash injection, and currently the municipality has only budgeted R30 000.00 for youth development programmes. This amount will not be sufficient to kick start the project.
- There is a need to lobby other stakeholders for funding as the Municipality has indicated that they have no funds to inject into the project due to the state of their finances.

8.1.5 RECOMMENDATIONS

- That the Commission interact with the Municipality to establish whether is there a possibility that the Municipality can be able to increase the initial amount of money that has been set aside for the project.

- That Commission interacts with various stakeholders who can be able to inject money into the project, as it will be very difficult to implement the project with the amount of money available.
- That the Commission interacts with the Municipality to establish whether the Municipality is still committed to the implementation of the project.

10. CONCLUSION

The project on brick making is a labour intensive one and would need full commitment of beneficiaries in ensuring that they meet the targets on a daily basis for them to generate enough profit. However once the beneficiaries receive sufficient and require training they would have minimal technical challenges for them to achieve the desired target. It is evident from the assumptions made that the project would enable young people to participate in the economy of their municipalities and also that of the province, and in the process equip themselves with skills, and ultimately alleviate poverty and this then means that the project would have achieved its desired goal.

References

1. Brick Making Business Plan, 2002-2003, Free State Youth Commission
2. Cement and Concrete Institute, www.cnci.org.za