



This project is co-funded by the European Union



CONTINUOUS IMPROVEMENT

“An ongoing continuous effort to improve the production process and business management to reduce the negative environmental impacts, improve social responsibility and increase profitability”

1. Opportunities for Continuous Improvement.
2. Business management training.
3. An understanding and implementation of a business plan.
4. Production process training of clay brick manufacturing processes
5. Sustainability training.
6. Creation of business cooperatives and or incubators.
7. LED of guidance and collaboration towards access to finance.
8. Regulatory registration and management.

SUSTAINABILITY DEVELOPMENT GOALS

“The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity”

1. The SDGs build on decades of work by countries and the UN, including the UN Department of Economic and Social Affairs.
2. The SDG’s provide a shared blueprint for peace and prosperity for people and the planet, now and into the future.
3. At its heart are 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership.
4. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

“We do not inherit the Earth from our ancestors;
we borrow it from our children.” **Native American Proverb**

From the CBA Sustainability desk



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CLAYBRICK.ORG

Promoting Inclusive Sustainable Practices in the South African Clay Brick Sector

A three-year program to **Support, Promote, Realise** and **Stimulate** Sustainable Development within the South African Clay Brick sector



The South African clay brick manufacturing sector is both a diverse and geographically distributed industry which provides employment in both the organised, formal sector, as well as an informal sector made up of brickmakers located mostly in the rural under-developed areas.

The sector which produces about 3.6 billion clay bricks per year provides around 20,000 direct jobs with an additional 160,000 jobs in related services.

The South African clay brick sector is largely represented by the Clay Brick Association of Southern Africa (CBA) . For over a decade, the CBA with its members has driven sustainability in clay brick production and construction. The sector seeks to mitigate environmental degradation, resource depletion, energy usage and related emissions. The informal clay brick sector has so far not been addressed despite its obvious inefficiencies and negative environmental impacts.

As part of this initiative, the CBA, EcoMetrix Africa (EMA) and Partners for Innovation (Pfi) are in the process of implementing this European Union co-funded 3-year project for the promotion of sustainable practices in the clay brick sector.

A sustainable business is one that practices environmentally-friendly activities and ensures that all processes, products and activities address environmental concerns while maintaining a profit.

“Adopting Sustainable & Clean Production processes is a strategy that ensures overall efficiency and reduce damage and risks for humans and the environment.”



OPPORTUNITIES FOR ENERGY SAVINGS

“A reduction in energy directly impacts on the reduction of air pollution and green house gas emissions. It is often the largest production cost, so a reduction of energy has a large environmental impact as well as a direct impact on profitability”

1. Improve the quality of energy used.
2. Manage stored fuel stockpiles
3. Manage the production process and amount of fuel added or used.
4. Improve the kiln packing for better firing
5. Fuel Switching to alternative energy sources



OPPORTUNITIES FOR WATER SAVINGS

“Increasing water usage efficiency and water conservation practices can significantly contribute to the preservation of the scarce water resources of South Africa”

1. Use only sustainable sources of water.
2. Collect and use alternative sources of water such as rainwater.
3. Maximise the amount of water collected by managing the mining and production area
4. Prevent harmful sediments from coal and clay impacting downstream by managing run-off into streams, storm water canals or rivers.



OPPORTUNITIES FOR MATERIALS SAVINGS

“This includes the reduction of raw materials at the production stage, of energy and material inputs at the use stage, and of waste at the disposal stage”

1. Use better materials rather than just what is available.
2. Improve clay extraction (mining process).
3. Manage raw materials storage and reduce wastage.
4. Improve and manage the production process.
5. Allow the clay/water/fuel mix to sour before production.
6. Dematerialisation (by putting holes in bricks).
7. Recycle process waste.
8. Reduce production waste.



OPPORTUNITIES FOR WASTE REDUCTION

“This is a measure of the bricks lost during the production process as a percentage of green bricks made but also caters for waste streams that can be recycled and incorporated into clay brick production”

1. Allow the clay/water / fuel mix to stand a few days (sour) before production.
2. Use better materials rather than just what is available.
3. Improve and manage the production process.
4. Improve and manage the kiln building and firing process.
5. Ensure that the correct body fuel and ignition fuel is used.
6. Reduce production waste from bad handling, uneven working surfaces, bad molds or rain damage.
7. Waste Symbiosis - add waste that may add energy, improve the porosity of the clay body or water absorption properties.



OPPORTUNITIES FOR BIODIVERSITY

“Minimising the impacts of land degradation, biodiversity loss, invasive species support the efforts to protect and restore vital ecosystems and species”

1. Registration of clay brick producers and access to suitable land for brick production.
2. Minimise the area mined for raw materials.
3. Rehabilitate mined areas.
4. Minimise the loss of vegetation.
5. Avoid the random dumping of waste.
6. Support and promote the regrowth of plants in non-production zones.



OPPORTUNITIES FOR SOCIAL RESPONSIBILITY

“On top of its current socio-economic impact areas such as health and safety, employment, human rights and equity, the clay brick sector can further positively impact its employees, local communities as well as the wider public ”

1. Train employees on safe and proper work procedures.
2. Perform risk assessments for production activities.
3. Provide personal protective gear against hazards.
4. Strive to pay a fair wage timeously.
5. Engage the youth to enter the sector.
6. Practice gender equality and equal opportunity employment.
7. Do not employ underage children.
8. Ensure that there are no hazardous areas for the local community that may come into your production area

