

# CARBON SMART SKILLS DEVELOPMENT PROGRAMME



The Carbon-Smart Skills Development Programme is an innovative initiative run by the Biodiversity Management Branch, designed to integrate sustainable, green construction practices with community empowerment. Driven by the Expanded Public Works Programme (EPWP), the Carbon Smart Academy aims to employ members of vulnerable communities and educate them through structured tutelage over a three-year period.



Our mission is to focus on sustainable practice and product through educational grounding. By utilizing organic and inorganic waste materials to reduce the carbon footprint of construction, this programme can promote change while fostering social and economic growth.

## IMPACT OBJECTIVES

### Reduced Waste

Use of recycled material diverts waste from landfills into urban infrastructure.

### Securing Natural Resources

Invasive trees are utilized, augmenting limited water resources in the environment.

### Lower Carbon Emissions

Carbon-smart structures provide better insulation, lower energy costs, and enhanced fire resistance, replacing conventional practice

### Employment & Skills Development

Over 40 women have gained hands-on experience and certification in sustainable green construction.

### Stronger Community Resilience

Carbon Smart building solutions provide communities with sustainable options. Skill development educates communities about the environment.

### Education Advancement

Participants are offered accredited courses and encouraged to pursue further studies.

### Entrepreneurship Support

Participants receive small business training, creating pathways to financial independence.



## TESTIMONIALS

*"Before this programme, I had been without a job for 13 years. I joined as a general worker, and it has completely changed my life. I was able to go back to school! This job has allowed me to support my family of seven, and I could even help my daughter when she started university. That is something I never thought I'd be able to do. The biggest change in me? Confidence. I used to be afraid to speak in front of people, but working with this team of women has taught me to believe in myself. I will forever be grateful." - Gcobisa Ndabeni*

*"When I started in September 2023, I was unemployed for months and worried that my age would hold me back from finding a job. But then I got the chance to work here! The programme has given me so much, and today I'm a supervisor. I've also completed a lot of training, and even started a food garden! I've also got my learner's licence and I'm working hard on getting my driver's licence. My dream is to one day start my own business, and with the skills and support I've gained from this programme, I'm on my way. I'm so grateful for the opportunities I've had here." - Lynette Meyi*

# WHAT IS BRIC?



BIOMASS



PLASTIC



CEMENT



GLASS

Biomass-recycled- insulated concrete (BRIC) is an eco-friendly building material that includes invasive species biomass, cement and recyclables (plastic/glass). This carbon-neutral, lightweight aggregate is mixed into high-quality, load-bearing concrete. After rigorous testing, BRIC has proven to be effective and offers several benefits.

## DECORATIVE ITEMS

BRIC is a versatile material can be applied to create decorative products like countertops, furniture, staircases, plant boxes, and trophies. By incorporating various aggregates such as recycled fiber, plastics, glass, and ceramics, both functionality and sustainability of the product is enhanced.

# BENEFITS

-  Superior and thermal properties
-  Bullet Proof
-  Fire resistant - three-hour fire rating
-  Waste materials are recycled into BRIC mix.
-  Water saving process and product
-  Cost-competitive
-  Requires minimal equipment for erection of infrastructure
-  Lightweight concrete requires less structural reinforcement.
-  Gender equality. Lightweight material
-  Environmentally friendly
-  Sequesters carbon, reducing footprint.

# CONSTRUCTION

Due to unique properties, BRIC material is ideal for both pre-cast modular units and in-situ construction, offering remarkable efficiency and speed with customizable designs. Unlike traditional methods, BRIC construction is accelerated because walls can be assembled and stripped insitu. It integrates with environmental rehabilitation efforts, using alien vegetation as aggregate. This approach supports sustainability, boosts local job creation, and offers skills training, making building with BRIC a dynamic solution for eco-friendly, fast-tracked building projects.



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EXPANDED PUBLIC WORKS PROGRAMME