Brick Press Machine

a sustainable solution
for a most cost effective construction
by using local resources

in cooperation with:

BLUE RIDGE SCHOOL
ST. GEORGE, VIRGINIA

GoSmile
Uganda

Water Fi

KV-Tech
GmbH

Brick press at work in Uganda:

one press can produce up to 500 bricks per day, empower people, generate income, create low cost houses

Main advantages:

no burning ! no transport far away !
cost saving ! local people can be involved !
interlocking structure ! nearly no cement needed !

In our workshop in Hamburg we improve the press, adapt required forms and create CAD files

houses - watertanks - toilets - storage rooms and a school building in Uganda

The brick machine impact:

- Improves access to safe water
- Improves access to safe houses
- Creates most cheap and local made bricks
- Improves health
- Improves education and know-how sharing
- Creates jobs and working places
- Creates income generation
- Reduces rural exodus
- Respects local demands and environment
- Fights poverty
- Creates storage rooms for water
- Creates storage rooms for food
- We train the local people to use the machine
- We constantly improve the machine and its production
- We provide a control tool for the brick quality
- We pass on orders from international NGOs
- We improve with additional technics (straw/clay/fibres)
- We add a solution for using plastic waste
- Reduction of greenhouse gas
- CO_2 reduction (no burning)
- Possible income through CO_2 carbon compliance
- Using local resources
- Saving the ocean - no ocean sand required
  (as for usual construction)

Cooking stoves
from half round brick press

- less smoke
- less fire wood
- less charcoal
- grass can be used
- keeps the heat
- easy to move
- easy to assemble
- low costs
- creates business
- empower women

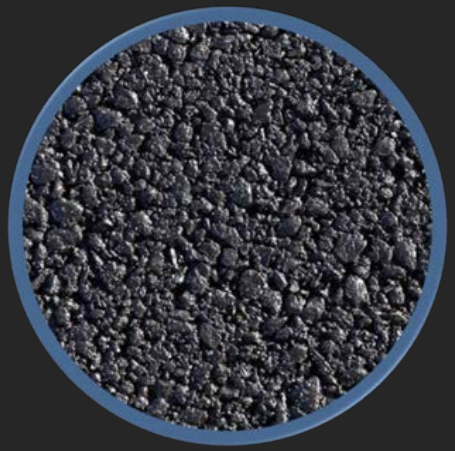
Road Construction

The following technology is a solution from our latest project partner.
It is much more cost effective than usual road construction, you can insert a lot of dirt and recycling material (such as plastic) and the basic components can come from natural resources, like from industry-hemp.

It is perfect for repair and to set up basic infrastructure after a disaster (e.g.). Many reasons to think and discuss about and check it out.

PAST ROAD OPTIONS

GRAVEL



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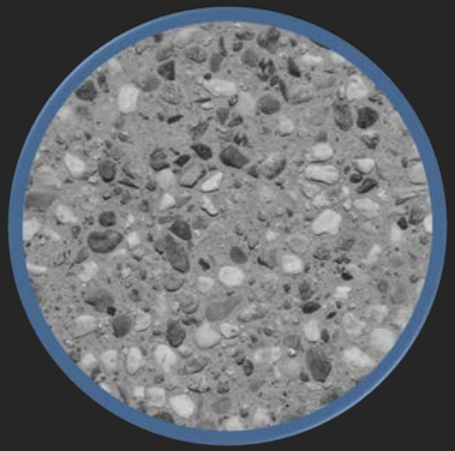

CONCRETE

TYPE	PROS	CONS	COST
Gravel	Low Installed Cost	Dust, Washboarding, Ruts Expensive Annual Maintenance	$50-$100k /mile ($30-$60/km)
Asphalt	Mid Cost Stronger	High Annual Maintenance Cost Frequent Repair	$200-$500 / mile ($120-$300/km)
Concrete	Strongest Road Least Maintenance	Highest Installed Cost Hard Install & Repair	$500-$1M / mile ($300-$600/km)

 Assumes road width of ft (lanes at ft ft of shoulder)

THE FUTURE OF ROADS

RhinoSnot

Acrylic Polymer Roads

- Similar to Cost of Gravel
- Strength of Concrete
- Lowest Maintenance
- Freeze/Thaw Resistant
- Can use local materials

TYPE	ALTERNATIVE TO:		COST ($/mile)
Rhinosnot	Gravel Roads	Cost is Roughly Half of Gravel Road Very Low Maintenance Strength exceeds Asphalts	$40-50k ($25-$30/km)
Rhinosnot+	Asphalt and Concrete Subbase for Highways	Cost comparable to Gravel Road Strength and Endurance of Concrete Tensile resistance Freeze/Thaw cycles	$100-120k ($60-$75/km)

* Assumes road width of 28 ft (2 lanes at 12 ft + 4 ft of shoulder) Implied Cost: $0.25-0.35/ft2 Rhinosnot $0.65-0.80/ft2 Rhinosnot +

Easy Installation

Heavy Traffic Roads with Rhinosnot+

Installation Process

Grade Road

Smooth out the dirt as desired, including crown, ditches and shoulders

Wet Dirt

Spread the Rhinosnot evenly onto the dirt to saturate the soil.

Mixer

Mix the dirt and Rhinosnot to coat the particles with either a mixer or a tiller

Compact

Compact the soil to the desired finish. Spray on color or other treatments. The road will cure by drying within hours

Much less equipment is required for Light Traffic Roads with Rhinosnot

How It Works




A basic road is made with the local dirt or a more complex road can be made with specialized base materials and options. The rest of the process is simply to grade, apply, and compact and there is a usable road within the day. From there:

- Emulsion polymer binds or agglomerates particulates together
- Top coat will help seal the surface
- Strong, but flexible molecular lattice (soil trapped in polymerized web)
- Mitigates the swell potential of soil
- Increases tensile strength of the soil
- Maintains compaction of the treated area

Applications

Roads

The primary use is as an alternative to pavement even for high traffic

Runways

Strong enough for heavy, military aircraft within 24 hours

Parking Lots

Easy and inexpensive Parking lots can be made in a. day

Highway Sub-base

Superior alternative for sub-base, requires no rebar

Pothole/Crack Repair

Simple and rapid repair of potholes and cracks in any surface

Erosion Control

Erosion and dust control over large areas in a single step

Quality Matters

Experience

 e have been in the industry for over   years. e not only manufacture the product but we oversee various pro ects

Quality Materials

 e blend the best polymers for the bb re uired. e use a high percentage of acrylics so our products will last in any environment.

Professional Work

EP A Envirotac will see every bb through no matter the size.

Unique Options: Phosphorescence

Our latest innovation is the addition of a phosphorescent topcoat

Both functional and decorative the

- Increases safety by improving visibility in roads and road edges
- Provides a inexpensive solution for rural roads with no lighting
- Adds decorative effects for driveways, parking lots, and walkways