Have you been in contact with anything made from plastic today? Chances are high that you have just answered yes. From the phone you are using, computer, buckets, comb, toothbrush, water bottle etc are all made from plastic.

There is so much plastic everywhere and the environment is struggling to deal with loads and loads of the non-biodegradable waste that is produced from our homes and offices daily. So what if I told you that you can start converting this waste into affordable roofing tiles?

You only need some plastic and sand to produce high quality roofing material which you can then sell at a good price to those building new homes, schools etc. Does this sound like something you would be honoured to do? Read the next few paragraphs to find out more.

**Step One: Identify The Need**

Affordable roofing has for many years remained a far-fetched dream for many people. Iron sheets and clay tiles are super expensive yet their durability and safety is not always guaranteed.

On the other hand, there is too much plastic being released to the environment in form of waster. For instance, Nairobi alone generates 560 metric tonnes of plastic waste every day.

And where does all this waste end up? You guessed it, it ends up in Dandora, Nairobi River or drainage systems clogging up everything and endangering our very own health. So there is a need to first get an affordable roofing solution and secondly a need to get rid of the mountains of trash that are choking our environment.

**Step Two: Collect Plastics and Sand**

\*Collect The Plastic

The process is very simple. First you need to collect a decent amount of high density polymer plastic. Examples of high density polymer plastics are: used jerry cans, computer cases, 59

old pipes, water buckets, mobile phone cases and so forth. You can hire a few street boys or women to assist you with this. Normally they are paid Ksh.170 per Kilogram brought in.

\*You Will Need Some Sand

Sand is the second most important ingredient needed here. You can collect this from the river beds or quarries around you. Just make sure you find the finest sand with no particles. The smoother and cleaner the sand, the better.

**Step Three: Ooops I Forgot About The Machines**

In order for you to do this business effectively, you will require two very important machines. The first machine is the Plastic Shredder. Just as its name suggests a shredder is a machine that chops plastic into small pieces. The second machine you will require is a Plastic Extruder.

This is the machine that will mix and melt the plastic and combine it with the sand. These two are nothing fancy really, in fact you can find them locally at Kariobangi Light Industries, Nyarweco Engineering, Makiga Engineering or Polystar. Alternatively if you would like to import one from abroad then you can link up with companies like Archana in India or Yaoan Plastic Machinery in China.

**Step Four: Start Making Tiles**

Now that you have the machine and raw materials, the process of making tiles will be pretty straight-forward. You simply shred the plastic, then mix with the sand and pour inside the extruder.

The extruder will do its job and you will collect a molten mixture of sand and plastic on the other end. This you will place in a molder (supplied alongside the machines) which will shape out the roofing tile and within 10 minutes your roofing tiles will be ready. 60

In addition to making tiles, you can as well make plastic poles or manhole covers. These require the same process only that you will replace the sand with saw-dust and adjust the molding process accordingly.

Tip: Mix 70% plastic with 30% sand for best quality roofing tiles.

**Market**

Construction sites and government projects.

**Recommended Starting Budget**

Ksh.1,500,000 ($15,000)…a perfect idea for a chama.

**Estimated Returns Per Month**

Ksh.1,000,000 ($10,000)

**Final Word**

This is such an interesting idea because you will be in a position to hire many people as the business grows. For instance, you will create employment for that woman in the streets who will be collecting waste plastic for you. You will also create employment for labourers in your plant.

Further you will create employment for retailers and marketers who will deliver your product to the market. Keep in mind that you will also be providing affordable roofing for the Kenyan builders and playing a part in improving our environment at the same time. 61