

UPCYCLED SHADOW



UPCYCLING IDEAS FOR PUBLIC SPACE

REFUGEE SETTLEMENT IN KALOBEYEI,
KENYA

ENTWURF 6, FS2021

SHADOW



<https://eccentric99.wordpress.com/tag/dida-galgalla-desert/>

IDENTITY



<https://tailormademedi.com/filming-kakuma-refugee-camp-kenya/>

two main topics

The concept is based on two main topics.

Shadow and identity. The burning sun should be broken up through installations and vegetation which allows shadow to form.

To give the refugees and the host community identity and orientation in the settlement, the clear structure of the buildings will be broken up through interventions with upcycled products.

shadow

Shadow and protection from wind becomes a real luxury in a settlement which is surrounded by desert and confronted with the burning sun including strong blowing winds. Shadow can provide a comfortable atmosphere, where people like to chat. Like this, the Settlement becomes a readable and adaptable public space which strengthens the collectively living.

RECYCLING MATERIALS



<https://recyclingportal.eu/Archive/49190>

plastic

The important point in this concept is, to work with recycling products or garbage. This is actually a win win situation, because there are no costs for the raw materials and it can help to keep the settlement cleaner.

upcycling

Material that is seemingly seen as garbage, will be used again in an upgraded version. The Material can be just used in a different way or it can go through a transformation to an other object. In the opposite, recycling is reuse the same material for the same product or object again.



<https://recyclinginside.com/recycle-cardboard/>

paper



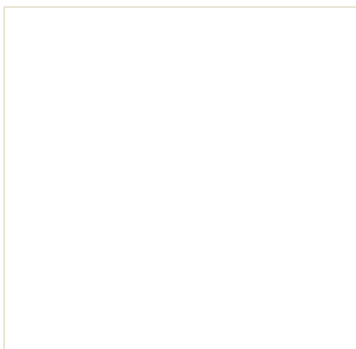
<https://eatlocal.org/textile-recycling/>

textiles

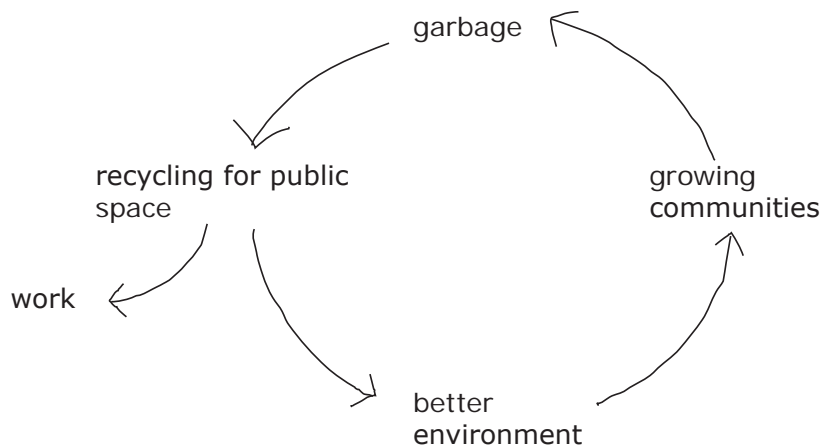
three materials for the beginning

All construction elements and interventions should be done with local recycling products. In the following pages, there are ideas for the three materials that occur the most in the settlement of Kalobeyei.

Further is the idea to create companies within the settlement that produce products out of recycling products. These would create work for the refugees and the host community.



others

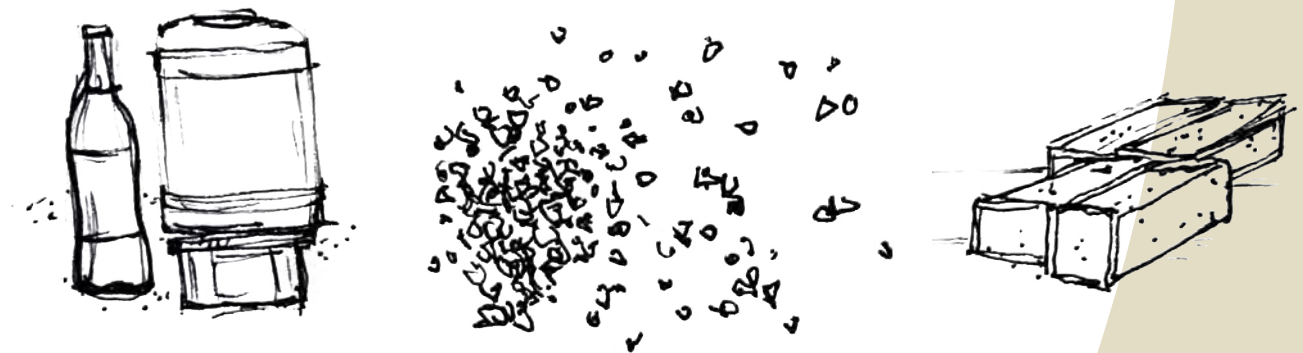


PLASTIC

Plastic will be collected and afterwards shredded with a machine. The shredded, small pieces can be developed in new products with a vast diversity.

In Nairobi there`s a company called Gjenge Makers (<https://gjenge.co.ke/>), that produces bricks for pavement out of recycled plastic. It would be worth to think about a collaboration between this company and the refugee settlement, to have the possibility having a factory within the settlements.

Another possibility would be to start small, with help from the platform preciousplastic.com. This platform provides manuals for building simple machines to work with plastic upcycling and as well drawings for some products.

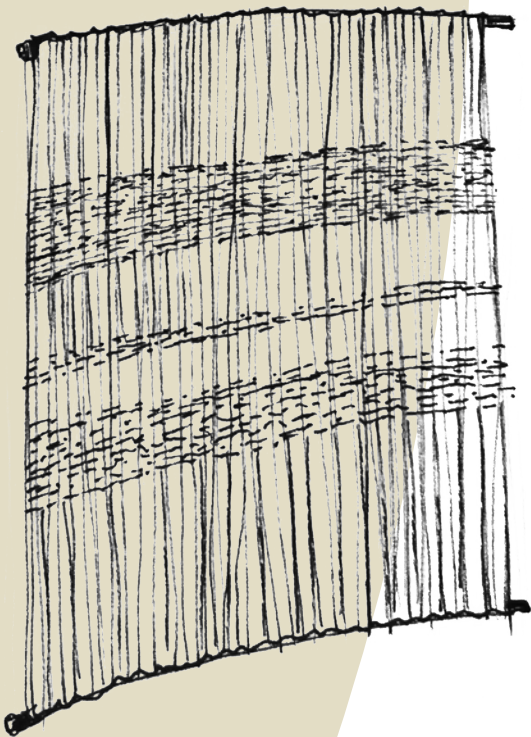
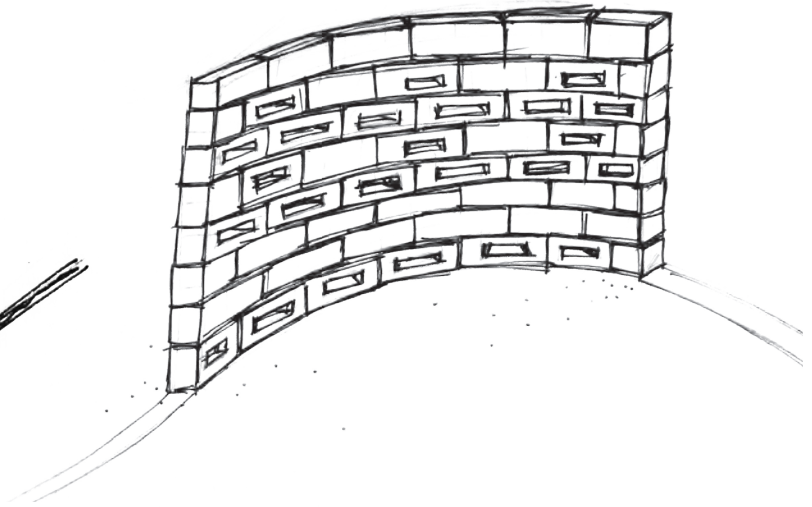
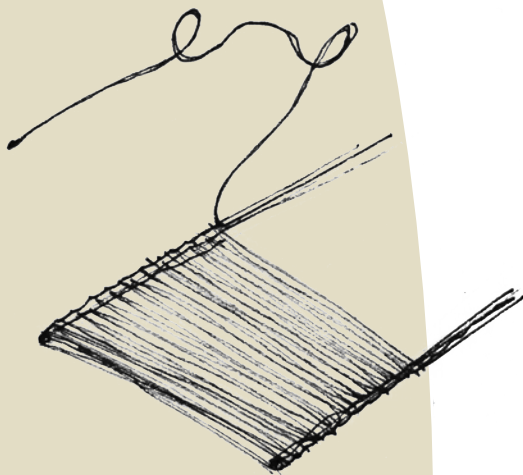


pavement

As in other cities, the idea is to pave the pedestrian area. Priority have important places, for example the mainstreets with its corners or the area around the bridges between two settlements.

The pavement becomes important while creating a place of identity which stands out from the surroundings. The result should be a more inviting atmosphere which helps the shops around and improves the public life.

The pavement could also improve the consequences during flooding and minimize the creation of puddles.



shelter

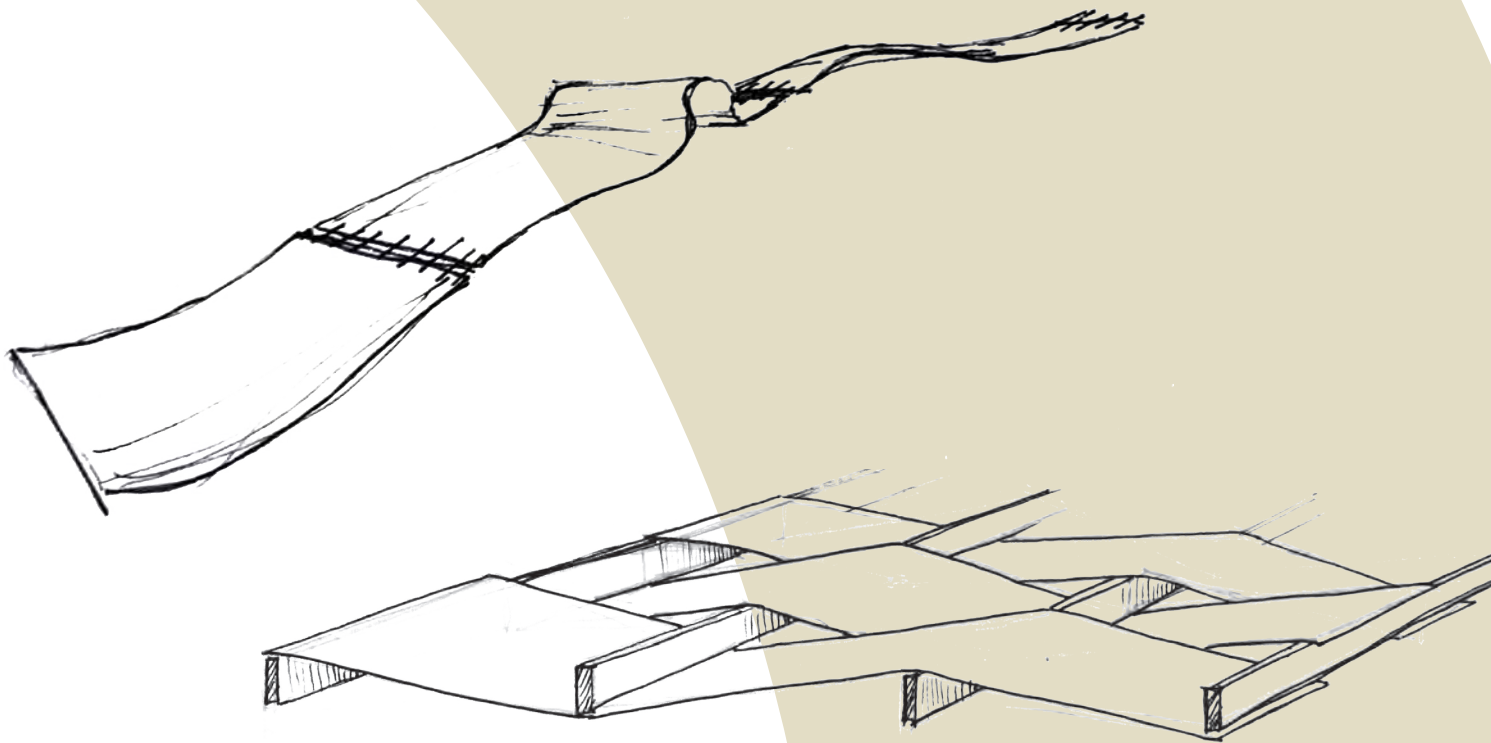
Upcycled plastic can be used in form of bricks or for example as cords. Both could be used to create a shelter to spend some shadow. Through the colours and the contrasting surfaces, a small architecture like this can contribute to orientation or the identity of an area within the settlement. Manuals how to create this raw material are under preciousplastic.com.

TEXTILES

Another recycling material are textiles. Collected textiles will be cutted to size and sewed together to fit the specific construction. Sewed together for example to long tapes.

The goal is to provide work for refugees and host community. An opportunity is to do the work spreaded in households, so that the mothers or fathers could be at home with their children. This requires a kit with all the necessary tools and materials that can be borrowed. Otherwise the residents need to come to a studio where the work will be done.

New created textiles could then be used for shadow and on the other hand create a comfortable atmosphere in the public space.



shadow construction

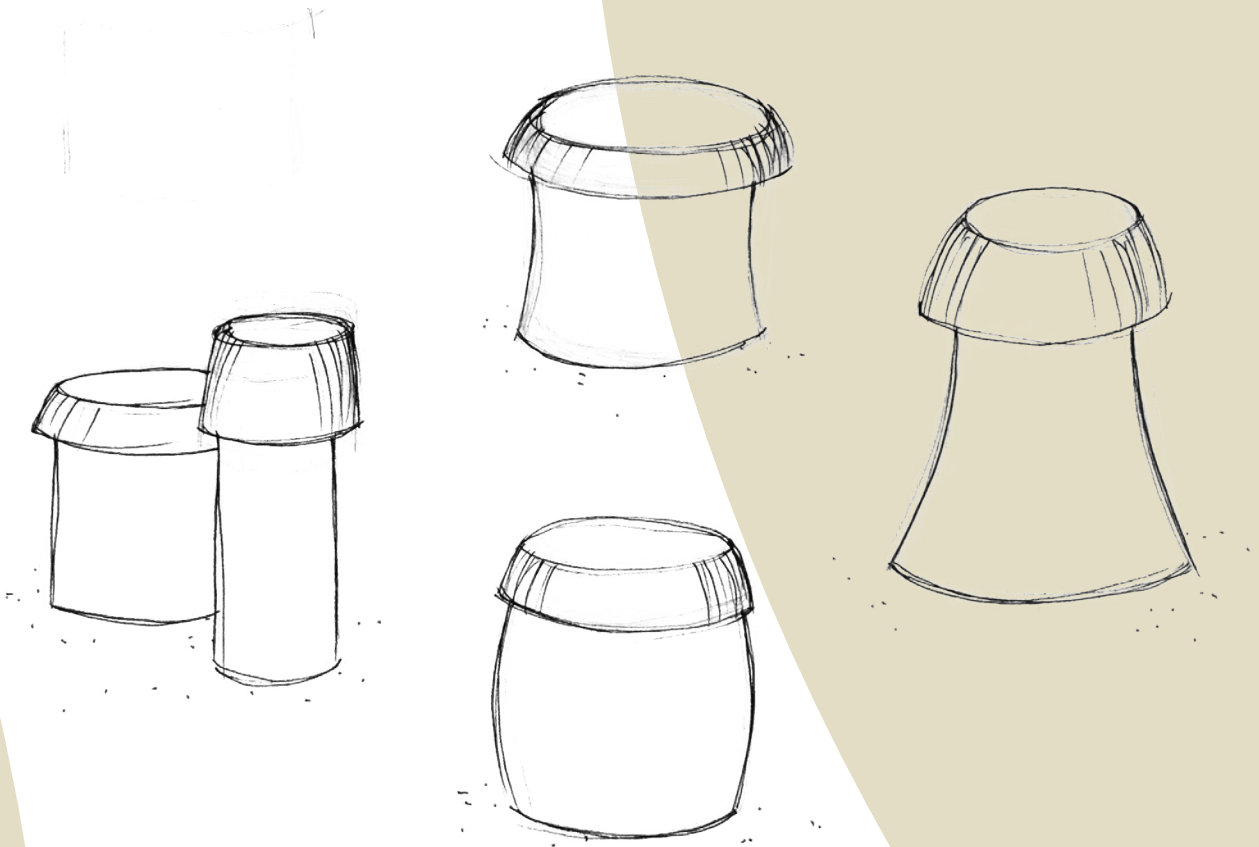
Through a construction that spends shadow, the atmosphere can be way more comfortable and it can replace trees until they grew up and gain a certain size.

Especially in mainstreets shadow could lead to more small talk and through that stimulate the market.

At important recreation areas shadow contributes enormously to a better life quality and with room for chats strengthens the collaborative living within the neighbourhood.

PAPER

As much as possible containers will be placed all over the settlement to collect garbage. The containers will be emptied by coworkers and transported to the specific factory. The containers should prevent the garbage from landing on the streets and staying unused. Another function of the containers is to bring the recycling process present in the all day life of the residents.



containers

These containers are produced from used cardboard or paper and will be used to collect garbage. Paper will be softened in water and mashed to a mixture. Cement will be added to bind the mixture. Then this mixture is pressed on a existing form. The cement allows the material to produce the necessary strength and staying light at the same time.

VEGETATION

Working with vegetation in this document has nothing to do with recycling or upcycling but, biological objects are sustainable anyway. So trees would be the best, to spend shadow and give the all day life a better environment. But cause of the climate and a huge demand of wood, its difficult to have trees in public space. The idea is to concentrate on the area around the laggas, which is the border between the settlements.

bushes

the bushes are lined up and follow a wavy line. This helps to protect the agricultere area from wind an erosion.

trees

Spreading trees all over the area gives shadow for seedlings or a small chat with the neighbour. As an example, larger trees could create the possibility to play boardgames.

AESTHETICS



<https://www.motourismo.com/de/listings/3001-australien-auf-die-harte-tour>



<https://kanere.org/tag/crime/>



https://de.m.wikipedia.org/wiki/Da-tei:Acacia_tortilis_1_.JPG



<https://eatlocal.org/textile-recycling/>

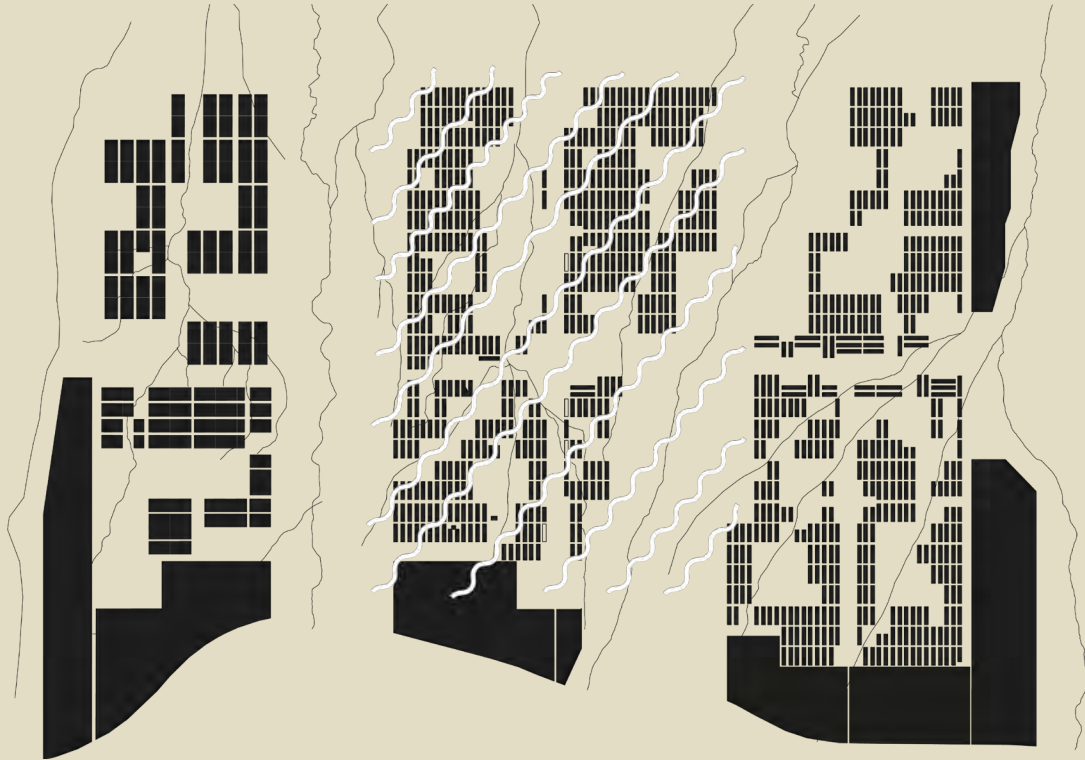


<https://wockawock.tumblr.com/post/37344140617>



<https://worldarchitecture.org/article-links/egmeg/kenyan-startup-founder-nzambi-matee-recycles-plastic-to-make-bricks-that-are-stronger-than-concrete.html>

LINEAR AESTHETICS



In all the public space, a form of a wavy line is repeated. The form refers to the rivers and can be in different scales or directions. Like this it could also look really abstract. The aesthetic should be a contrast to the clear structure of the buildings and on the other hand create orientation and identity.

HOT SPOTS

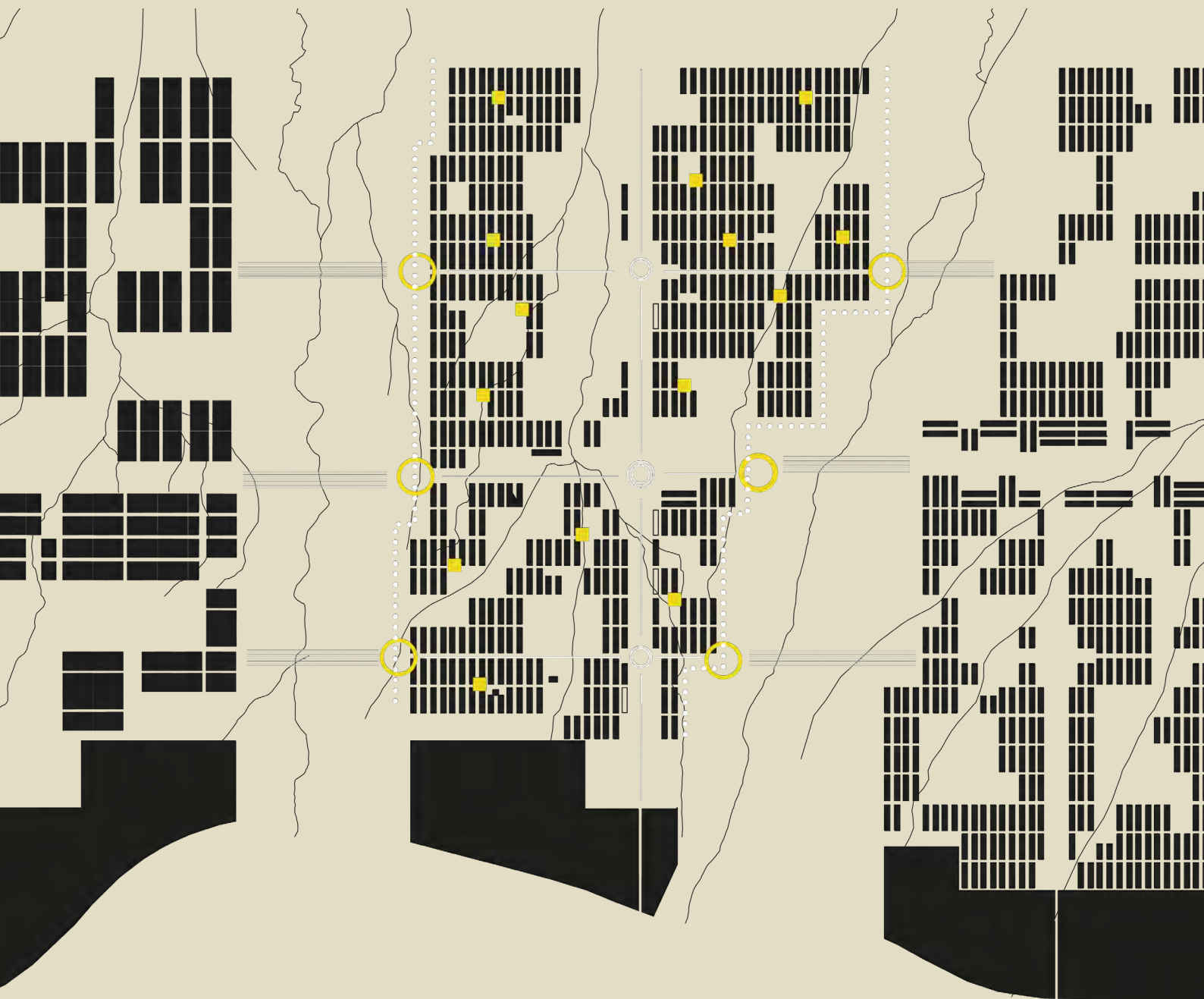
The plan shows different Hot Spots, that are interesting for a first intervention. From these Hotspots on, the ideas and upcycled infrastructure can spread through the whole settlement.

○ *mainstreets with corners*

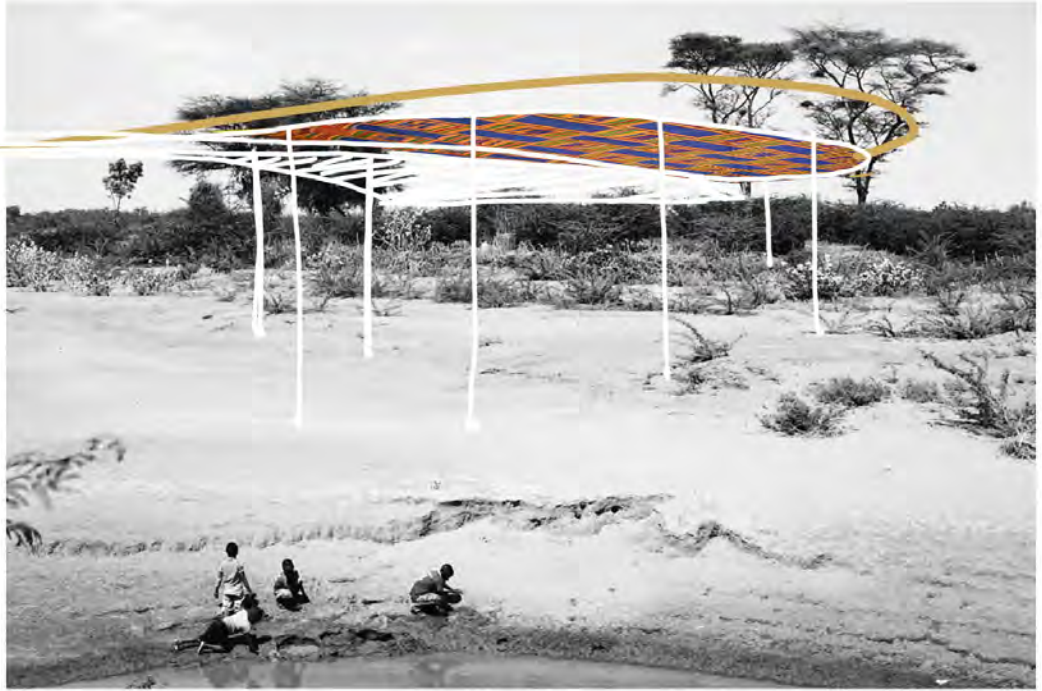
≡ *bridges and connection to the agriculture area*

... *border of the settlement*

■ *waterstations*

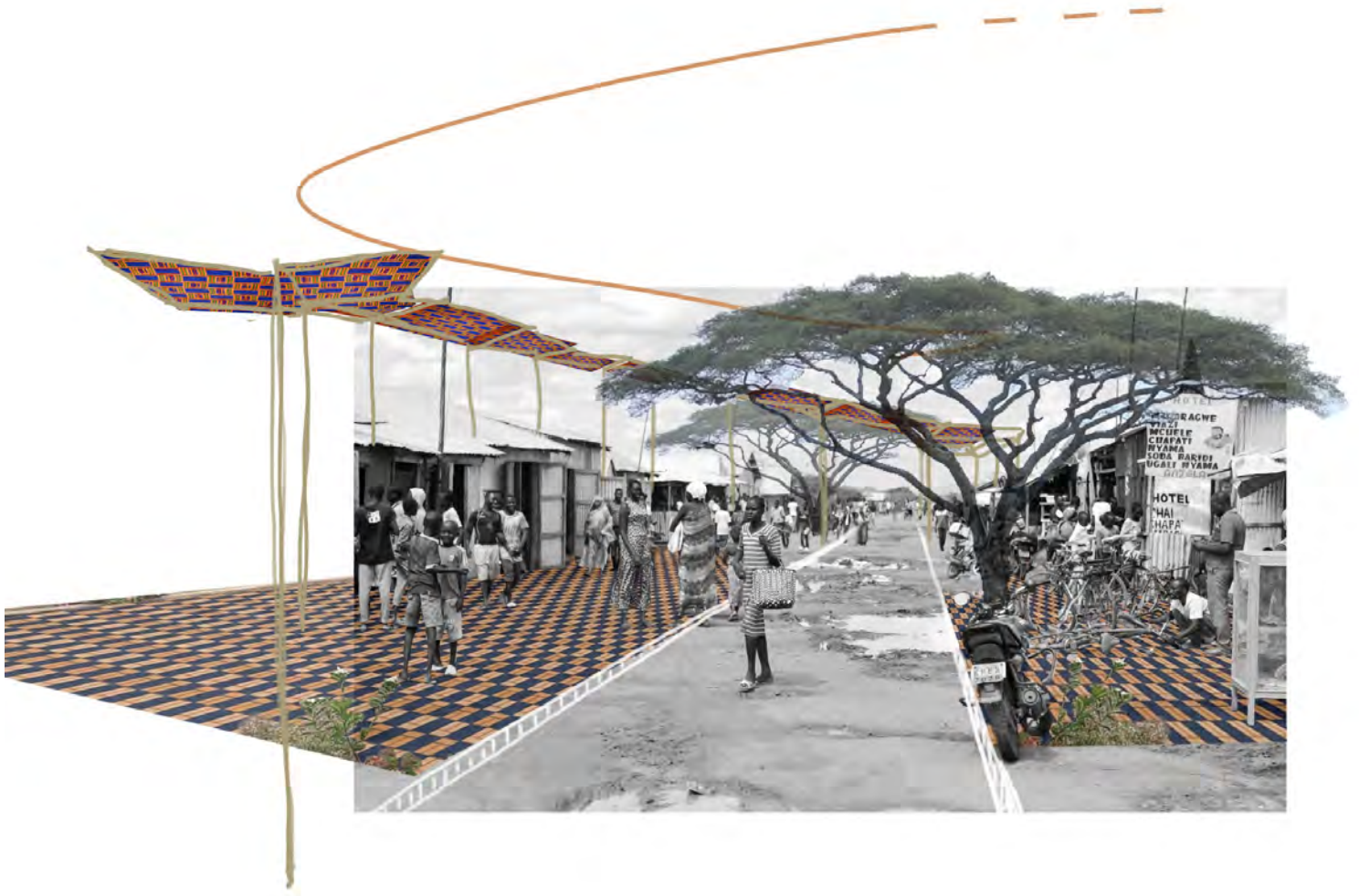


BRIDGE



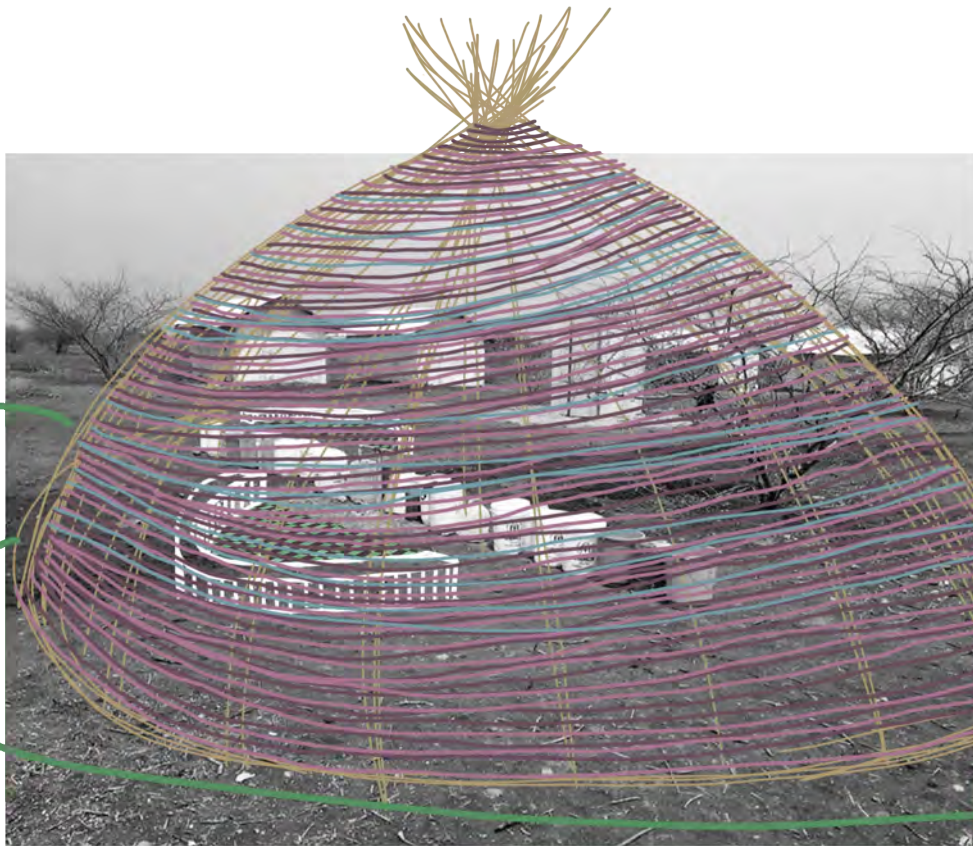
An extra roof can be added to the bridge, to spend some shadow for the growing trees underneath. The roof is made from textiles, and fixed with enough distance between them, so the rain and sun can come through.

MAINSTREET AND CORNER



Mainstreets and the corners should use their potential to give room for the urban life. The atmosphere will be more inviting to chat and meet people, through a construction that spends shadow. Additional it would be great to have a clear zoning, especially for the stores. This could be done by paved walkways, at least around the corners.

WATER STATION



Waterstations get a shelter made out of old plastic bottles or any other plastic containers. The plastic cord from a fabric within the settlement is made out of old plastic. The time waiting for water can be spend in shade and could be used to have a small chat with other communities.

BORDERAREA



The borderarea between the settlement and the riverbeds is mainly used for agriculture. The area could be structured with some traditional hedges, to create different rooms. Trees could structure the area and give room for a nice atmosphere.



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