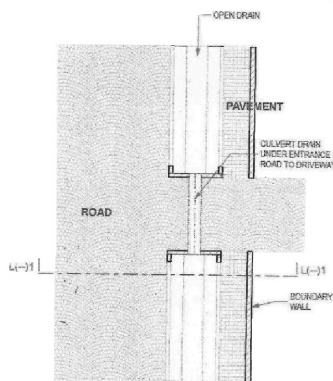


Environmental improvement proposal (1) Braeburn School, Nairobi, Kenya

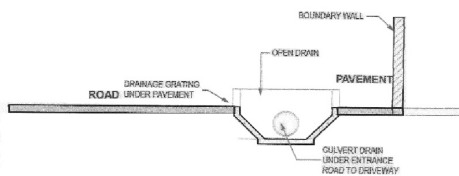
Students' proposal for drainage system

Aim of project: To find a sustainable and efficient way of harvesting rainwater

Currently, in Kenya the percentage of the rural population with access to an improved water source [an improved drinking water source such as piped water on premises, household water connection, public taps etc.] is 57%. This means that nearly half of our population do not have access to a clean water source. We came up with a solution that could possibly increase the percentage.



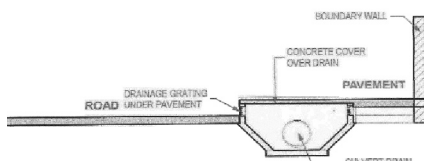
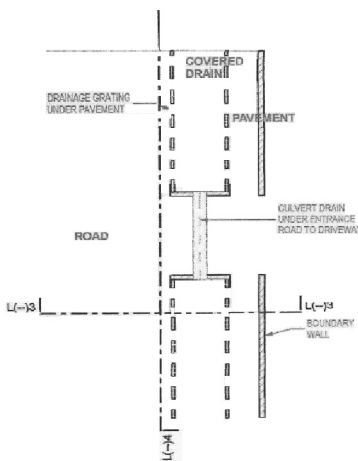
The diagram shown on the left shows what we currently have in Nairobi. The open drains allow easy access for rubbish to enter leading to a blocked drain. When the drains are blocked, water cannot pass through. This stagnant water attracts mosquitoes. In order to allow the water to constantly flow, we need to cover the drains to reduce rubbish inside the drains. In this case we assume that the road is cambered and sloped, to allow a constant flow of water.



The diagram on the left shows what we plan to do. The diagram shows the original drain, but covered. There will be gaps [with grating] along the side of what will be the pavement, with a grating to block the rubbish.

What we will do:

Our plan is to cover the current drains, leaving gaps [with grating] along the side of what will be the pavement. These drains will then lead to dams in and around Nairobi. The water will be filtered at stations and then distributed around the country to households, farms etc.



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Currently in Nairobi, rubbish builds up in the drains over time; eventually, it is cleaned up, usually before the rainy season. What comes out of the drain is very unpleasant for someone to be cleaning up. This dirt gets left on the pavement. Soon after it rains, the dirt goes back into the drain where it came from.

We realise that rubbish will build up along the road. To solve this problem we decided that we could employ workers to clean up the rubbish on a regular basis. We could also introduce a self-help scheme where farmers [for example] contribute to the cleaning up of the rubbish and therefore receive a supply of water. We are open to ideas, as to how we can reduce or make it easier to clean the amount of rubbish that builds up on the road sides, as we see this as one of the issues we may have during this project.

These drains will lead to several dams around Nairobi. This water will then be filtered and cleaned in order for it to be used either agriculturally or simply as a clean water supply to households. This water is especially important, because it can be stored carefully to be used during the drought season, when it is most needed.

This project has many advantages. Roads in Kenya are typically known to have potholes, this is mainly caused by the standing water on the roads that gets absorbed into it, thereby damaging it. By blocking the rubbish from getting into the drains, we are minimizing the chances of water standing on the road. This will therefore save money, due to the fact that the city council will not have to spend out on constantly having to repair roads.

In addition, our agricultural sector will grow, with farmers being able to produce during the drought, with the help of our filtered water that will be stored. This means that farmers can be able to work throughout the year, and communities that rely on farming as their source of food will be able to continue farming.

In order to see this project through, we need to educate communities on the importance of recycling, reusing and reducing. If we start with the youth, by teaching in public schools we will slowly be able to get the message across to the whole of Nairobi. Also, if there is an increased amount of rubbish bins around the city, this may reduce the amount of litter that is on the streets as people have somewhere to throw it. By spreading awareness, we are letting people know the importance of NOT littering the streets.

This is our original idea and we are still in the process of gathering information from different areas of expertise in order to improve our project. We appreciate you giving us this opportunity.



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