ABSTRACT

Rainwater harvesting is a technology used to collect and store water for domestic or industrial use for later use from surfaces such as roofs, land or rock catchments.

The main objective for carrying out this study is to find a secondary/alternative source of water to be supplied in the University of Nairobi, specifically the civil engineering block, to mitigate the effects of the recurring water shortages.

A number experiments were conducted to ascertain whether the collected water was safe and viable for use. In addition to this, a slight reconnaissance was done to determine the water demand of the university. This activity was undertaken in a bid to estimate the tank capacity required to adequately sustain the population consisting of both the student body and the faculty members.

The main criteria used when choosing the water harvesting method and the storage vessel apart from functionality was cost. The following report showed a comparison between hand calculations as well as software methods of design. The tank to be designed was an underground reinforced concrete circular tank that was designed based on Eurocode 2: Design of concrete structures (EN 1992.2004), Eurocode 7.