ABSTRACT

The present study focuses on the impact of conventional ground improvement techniques on the environment, supporting the argument with documental evidence and alternatives to these techniques. The study aims at testing the effectiveness of alterative materials as soil stabilizers to see how effective the new alternative is in serving their purpose and saving the environment. Construction of building in black cotton soil involves lot of difficulties. This is because of expansive property of the black cotton soil which makes it to shrink and swell according to the water content that causes cracks and settlement on the structure built over there. So, we have added Low density polyethylene to the black cotton soil to stabilize the soil. The Low density polyethylene is added to the black cotton soil at various proportions. Tests aredone on the sample mix of low density polyethylene , and the soil. Based on the results ofthe tests, the optimum percentage of low density polyethylene to be added with the black cotton soil is determined. This can be used for stabilizing soil acting as bearing medium. The use of low density polyethylene , an industrial waste helps in waste management and promotes sustainable development of local construction.