

Green City Development Concept Pilot Project in Serpong Urban Residential

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Abstract

In recent times, continuous population growth and rising urbanization in many countries has made some considerable impact in the quality of life of people living in the urban area and in the environment itself. The increasing number of people in an area will create a scarcity of resources and also degrade its environmental condition, especially the water resources. In order to counter these negative impacts, a sustainable urban development concept is put in place. This study uses three main focuses related to green city development concept, which are low water footprint, low carbon footprint, and zero/less delta runoff. The object of study is the implementation of the three main focuses selected in Serpong Urban Residential, as a pilot project of an integrated modern and rapid-growing residential area. This study includes the water balance produced from the calculation, and the strategic recommendation proposed for managing the water resources based on the review of the aspects. From the water balance, it is known that the area will have a water deficit in initial forecasted years. In this case, the amount of forecasted water deficit can be covered by utilizing either rainwater harvesting method or water recycling method. Therefore, Serpong Urban Residential can become a pioneer for developers with its integrated study related to the green city development concept.

Keywords

Green city development concept; Rainwater harvesting; Serpong urban residential