THE INFLUENCE OF URBAN PARK GREEN SPACES, PLANT MATERIAL SPECIFICATIONS AND SPATIAL DESIGN ORGANIZATION AND PATTERN TOWARDS CARBON SEQUESTRATION RATE

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Abstract

Urban parks planning and management is a crucial issue in the context of the urban environment and community development by creating space for social interactions, recreation, aesthetics and provide natural habitats. Apart from that, the value of the ecological functions such as air purification, storm water regulation and carbon storage are also crucial for biodiversity conservation within the urban context. This study provides a case study of the quantification of carbon sequestration rate by a selected urban park with a hybrid design landscape setting in Putra Heights, Mukim Damansara, Selangor. The carbon sequestration rate was calculated by biomass equations, using field data inventory, measurements, plan analysis and survey data analysis. This study aimed to discuss the influence of urban park green spaces, plant materials specifications and spatial design organization and pattern towards carbon sequestration rate. The significant outcome of this study is the determination of key factors that influenced the Carbon Sequestration Rate. This study proved that higher plants specification plays an important role in sequestering more carbon. The larger green area also contributes to higher carbon sequestration rate. These findings will become a novel landscape design approach to neutralize carbon emission with cost-effective and environmentally friendly.

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