

# Investigating the Compressive Strengths of Guanapo Recycled Aggregate Concrete as Compared with that of its Waste Material

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**Abstract:** *The use of Construction and demolish wastes and industrial wastes as construction materials represents an attractive solution to landfill disposal of waste especially in small Caribbean islands where the arable land is very scarce. In this paper, an investigation is conducted to determine and compare the compressive strength parameters of concrete manufactured using recycled Guanapo coarse and fine aggregates and that of its source waste material using sustainable blended cement. Compressive strength testing was conducted according to ASTM C39 and correlations on the data obtained from testing were determined using the one-way ANOVA statistical method. The results show that it is indeed a viable option to use recycled Guanapo aggregates as a suitable substitute to natural aggregate and that waste material from construction demolition waste (CDW) can easily be recycled to produce concrete of comparable properties to that of its source waste material.*

**Keywords:** *Recycled Aggregate, Guanapo Aggregate, Compressive Strength, Waste Material, ANOVA*