

ABSTRACT

Construction is a major contributor to economic and social growth in emerging nations, but it is also a major producer of entropic materials. Therefore, environmental consciousness, natural resource conservation, and sustainable development are all essential factors in modern construction requirements. Concrete recycling is regarded as essential in the present-day overall effort to achieve sustainable development. In the same vein, it is closely associated with an increase in demolished structures beyond their life cycle and a demand for construction of new structures.

This project looks into the up cycling of C&D wastes; particularly recycled concrete aggregates; and exploring the performance of RCA in concrete in comparison with normal coarse aggregates, the challenges and possibilities associated with the growth of a market for recycled and reused building materials.

The results of this experimental study are aimed at examining the properties and strength of RCA concrete made from different replacement ratios of RCA from normal coarse aggregates and to evaluate the strength of recycled concrete aggregate to check its suitability and usability as structural concrete.

Therefore, the rationale behind undertaking this project is to investigate a suitable, sustainable substitute for conventional normal coarse aggregate material for the purpose of construction.