Title of the Research: COMPARATIVE STUDY BETWEEN CONCRETE BLOCK (CB) AGGREGATES AND OTHER CONVENTIONAL AGGREGATES

Abstract:

Aggregates are one of the most important ingredients for concrete, which is combined with a paste of cement and water. Stone aggregate is traditional ingredient of concrete in the world and it is available foreign country. But in the region in Bangladesh stone aggregate is not available and also most expensive. In Bangladesh, Brick aggregate are easily available and much cheaper than stone aggregate as a result brick aggregate is mostly used in concrete instead stone aggregate. But Brick burning contributes to environmental pollution, ecosystem damage and also to absorption of greenhouse gases in the atmosphere in higher quantities. Brick kilns have long term and short-term impacts on the environment.

For this reason, both brick production and use are opposed to sustainable development. So it is necessary to use of alternative aggregate in any construction site to reduce the uses of brick aggregate. Therefore, This study inquire into the prospect of Concrete Block Aggregate (CB aggregate) used as coarse aggregate in Brick aggregate replacement.

Objectives:

This major objective of this research work is to introduce high quality block chips substitute to other conventional chips used in the construction works. A comparative study between the aggregates will be performed by crushing cylinders, flexural test beam by two-point loading and pull-out test (Bond strength test).

The objectives of this study are as follows;

- Developed alternative coarse aggregate from the concrete block instead of burn clay brick aggregate.
- To analyze the effect on concrete strength for the using of CB aggregate.
- To know the various properties of CB aggregate and also compare the properties of Brick aggregate.

Key Researcher:

1.Name: Md Arifujjaman Phone: 01936067799	2. Name: Syed Ahmed Tasnim Phone: 01768457847	3. Md Ibnul Warah Phone: 01717939118

Research Team:

Md.Ashraful alam	Director General, HBRI	Advisor
Md. Arifujjaman	Senior Research Engineer, HBRI	Supervisor
Syed Ahmed Tasnim	Research Engineer, HBRI	Co-supervisor
Md Ibnul Warah	Research Engineer, HBRI	Key Researcher