

ABSTRACT

The construction industry has portrayed its gloom and boom throughout the world for the past few years. For that reason itself, rapid construction shows that the nation is trying to reach global modernization by having massive buildings and also skyscrapers built all around the world. However, there is always a cost to pay on the environmental such as global warming in which is one of the effects that occurs due to these construction activities.

In this research, the carbon calculation of building materials is focused on a high rise office building. The CO₂ emissions from buildings are investigated in this research by calculating the carbon footprint. The building materials used for construction is the main source for carbon footprint calculation of this study. Through the extraction of data of the building materials used in construction obtained from the Bill of Quantity (BQ), we can obtain the carbon emission values of the building in terms of carbon equivalence. This bill of quantity (BQ) precisely records the materials used in construction together with its usage amounts and this is absolutely crucial for calculating the carbon emission through carbon equivalence for this developed calculator.

The values of carbon dioxide emitted from buildings are the final founding at the end of this research. These values obtained from the carbon calculator will help stakeholders to consider the usage of low-emission type of building materials that can be used for future high rise building construction in Malaysia.