Lately the construction industry has become more interested in designing and constructing environmentally friendly buildings (e.g. sustainable buildings) that can provide both high performance and monetary savings.This paper presents a methodology that integrates BIM and LCA tools with a database for designing sustainable building projects.Designers will not be able to quantify the environmental impacts of these materials to support the decisions needed to design sustainable buildings due to the following reasons: (1) a lack of information about the sustainable materials that are stored in the database, (2) a lack of interoperability between the design and analysis tools that enable full life cycle assessments (LCAs) of buildings.The methodology describes the development and implementation of a model that incorporates a database in which information about sustainable materials is stored and linked to a BIM (3D) module along with an LCA module and a certification and cost .module