

Abstract

While much has been written about the barriers to sustainable construction globally and particularly in South Africa, the implementation of the concept is still a challenge. The aim of this research is to investigate the awareness and understanding towards environmental aspects specifically on-site Construction Waste management (Handling of waste, use of prefabrication and reuse of waste) as sustainable practise amongst construction contractors in South Africa. These barriers have limited adaptability within the industry and hence depriving the industries of the expected benefits associated with sustainable construction practices. This research focuses on the knowledge, implementation and the impact of construction waste management and the use of prefabrication as sustainable construction practices in South African buildings projects, Gauteng. A questionnaire on construction waste management was directed to experienced professionals, on recently completed building projects and on-going building projects. Previous results shown that construction waste management by **reduction, re-use and recycle** is one of the major benefits of **using prefabrication** compared with conventional construction.

In this study it was observed that South Africa contractors, particularly in the Gauteng province, fail to adopt basics of sustainable construction practices in construction of buildings projects. Observed also was the eight (8) most common barriers to the construction of sustainable buildings are Knowledge and Implementation, Prefabrication as a substantial componentry, Waste management as a sustainable construction practice reduces cost, Precast as sustainable construction practice at design stages, Materials recycle and re-use on your projects as sustainable construction practice. Others are; the effect of cost of sustainable materials compared to normal construction, environmental management, exposure to experts in one's profession and the commitment of construction firm/ organisation. Also noticed was that some contractors mentioned government involvement or funding into the practice of sustainable construction practices.

In conclusion, the research demonstrates that much needs to be done in Gauteng province with regards to waste management and sustainable construction practise be it by the government through funding and schools including professionals working in the industry.