

NON-CONVENTIONAL BUILDING TECHNOLOGIES AS A PANACEA AGAINST THE COVID-19 PANDEMIC

Bruno Tayo¹, Jeffrey Mahachi², Benson Wekesa²

¹Department of Civil Engineering Science, University of Johannesburg
PO Box 524, Johannesburg, South Africa
200945847@student.uj.ac.za; jmahachi@uj.ac.za

²Department of Civil Engineering Science, University of Johannesburg
PO Box 524, Johannesburg, South Africa
wekesabw@yahoo.co.uk

Abstract - The impact of the COVID-19 pandemic has shown the lack of adequate housing and infrastructures around the world. The crisis has brought to light the fact that many countries do not have the means to offer adequate treatment medical centres for their population promptly. According to the World Health Organisation (WHO), a COVID patient must be appropriately quarantined or isolated for treatment and this requires a comfortable and safe space to facilitate the speedy recovery of the patient. However, most of the existing hospitals and clinics are built with concrete, timber, and steel (generally referred to as conventional building technologies), which take more time and sometimes costly to construct. Fortunately, other methods can speed up the construction process and also offer an improved environment for the patient and other users in comparison to the conventional building technologies. One such method is known as the non-conventional building technology, also known under various nomenclatures such as Modular Building Systems (MBS), Alternative Building Technologies (ABTs), and Innovative Building Technologies (IBTs). These technologies are available on the market and are generally referred to as Green Building (GB) products. In addition to being environmentally friendly, GB also promotes sustainability and can be used to reduce the lack of housing stock and infrastructure in the community. This article reviews non-conventional building technologies presented by many authors. The adoption of the non-conventional building technologies differs from one country to another, with each country having its standards and procedures to approve the products. As in any technology, there are advantages and disadvantages, but this paper shows that the use of non-conventional building technologies can be used as a panacea to fight against the impact of the COVID – 19 crises.

Keywords: COVID-19, Conventional Building Technologies, Non-conventional Building Technologies, Advantages, Disadvantages.