The Sustainability Handbook. Volume

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Abstract

This, the second Sustainability Handbook, sees the world still in the reactionary grip of the coronavirus. Uncertainty in South Africa continues amidst the emergence of a third wave, lingering lockdown and the promise of widely accessible vaccines. Decisive cultural shifts have rendered working, studying and playing from home first necessary, then acceptable and finally, in some respects, desirable. The pressure for government and its entities to provide services, already challenged, has intensified under State of Disaster reprioritisation and mobility restrictions. During the preceding year, load-shedding has been a constant, unwelcome companion; potholes are a source of consternation and water security remains fragile. This disruptive force has served up some inexorable change. These dynamics, coupled with changing economic conditions and circumstances, have interesting implications for the design, engineering and transformation of space, place and fit-out, both in the immediate and long-term. Strengthened online markets and redefined distribution networks, as well as ICT infrastructure, platforms, content for working, teaching and learning, previously nascent, are becoming ubiquitous. The role of home has been redefined. So, too, has that of commercial and workspace. Physical office, retail and business space – including some recently coveted – lie fallow. Large logistic warehouses continue to be constructed: economic transitions rendered visible. This natural and unwanted experiment may have restructured possibilities in the public imagination. Extensive investments have been made in modifying infrastructure to fit new purposes and stressors. Widespread changes individuals and organisations have made to adapt to new modes of interacting and functioning may have been temporary at the outset, but have surely led to enduring and transformative change. This handbook contains a rich variety of contributions, reflecting this multitude of concerns. The issue of resource planning and management is raised in two chapters on water futures. Energy is discussed in terms of what nuclear energy may have to offer, based on Nigerian experiences. as well as sharing procurement lessons learned in the journey CSIR is taking to make an energy autonomous campus in its Pretoria operations. A chapter provides some discussion on geotechnical considerations for PV installations. Waste is discussed in terms of its potential for utilising foundry waste as a resource and in terms of potential for the application of virtual reality technologies. South Africa has recently published its first two ecolabelling standards, for paint and for carpets, with more in the pipeline. The study presented from Nigeria on how psychosocial factors provide barriers to green building practices in the residential sector becomes interesting as it frames eco-labelling as applying to a whole building, rather than its elemental parts. The

handbook provides the opportunity to share and challenge these endeavours as they are being crafted. The format has been well received as it provides a multi-disciplinary platform, as well as rapid turn-around times and opensource publishing. We will work to reaching out to other academic institutions also. We hope to improve indexing and searchability and to extend the awareness of the publication to the target audience of sustainability experts and practitioners.