**Design of an Environmentally Sustainable Business and Cultural Centre for Indigenous People in Yarrabah Community, Australia**

Steve Burroughs, PhD

Architectural and Project Management, 38 Blackman Crescent, Macquarie, ACT 2614, Australia.

Adjunct Professor, Centre for Creative and Cultural Research, Donald Horne Institute, Faculty of Arts and Design, University of Canberra, ACT 2601, Australia. drsteve@drsteveburroughs.com.au

#### Summary

Yarrabah is a community in Queensland, Australia, comprising 2,700 people of whom 97% are Indigenous. The Yarrabah Council is considering constructing a multi-purpose business and cultural centre, with a view to enhancing economic, cultural, and environmental sustainability in the area. The author’s proposed design for the building incorporates design/construction elements and operational performance that meet recognised Australian environmental standards and ratings. Environmental aspects of the design include elements of passive solar energy utilisation and control, the use of natural sources of ventilation and light, solar-based power generation, an energy management system, and a self-sufficient water supply. Life cycle analysis is considered for all materials, systems, and processes.

The proposed design also incorporates culturally responsive elements as a result of applying Indigenous knowledge and cultural values. Consultation with Indigenous groups and examination of historical documents indicated that local tribes practiced sustainability and used natural materials to construct huts and shelters that were domed and circular in shape. Conceptually, the building is presented as a creative and innovative sustainable design, encapsulating the essence of an Indigenous spiritual entity by taking on the shape of a sea eagle and also containing domed and circular elements. Due consideration is given to both internal and external spaces.

The proposed building represents a fusion of modern materials/methods and Indigenous knowledge/culture in an ethnoscientific approach to design, meaning that the centre will possess both environmental integrity and cultural significance.

**Keywords:** environmentally sustainable building, indigenous people, culturally responsive design, enthnoscientific approach, Australia.