Energy consumption in buildings has been tremendously increased in Bangladesh due to high population growth along with rapid Urbanization. Sustainable design of building elements can have great impact on reducing energy consumption in Bangladesh. Extensive field works have been done on several buildings with roofs of different treatments (Flat Concrete, Water proofing-Lime terracing, with pot plants, Corrugated Sheet with Double Roof, with plants on bamboo structure, with water body) of Residential areas in Dhaka. The combined effects on Air Temperature in overheated period (June) have been investigated while assuming that the temperature of interior space of the top floor is an indicator of Space Performance. These data have been correlated to find out the effects of different treatments of roof on Internal Temperature of buildings. This study provides recommendations about sustainable Roof Design to reduce the immense pressure on Energy thereby create more sustainable Residential Environment in Dhaka.

Key words: Thermal Change, Roof Treatment, Energy Crisis, Building Design Elements, Urbanizations.

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EFFECTS OF ROOF TREATMENT ON THERMAL CHANGE OF RESIDENTIAL BUILDINGS IN DHAKA