



Sustainable Environment and the built Space: Integrating Ecology, Planning and Human Well-being

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**THE ONITSHA TRADE GATEWAY: A SUSTAINABLE TRAIN STATION FRAMEWORK FOR
TRADE, MOBILITY, AND CLEANER TRANSPORT IN ANAMBRA STATE**

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Abstract

The roads connecting Onitsha and Aba, two of the busiest commercial cities in Nigeria, represent some of the most economically vital yet overstretched transport corridors in southeastern Nigeria. These routes are characterised by market inefficiency, mobility deprivation, and vehicle-generated air pollution, which have become defining features of everyday life for traders, commuters, and residents in the region. This paper draws on local and foreign case studies, as well as universal design principles for public infrastructure, to develop a framework for a sustainable train station at Onitsha, as an attempt to directly reduce these three interconnected challenges. The Onitsha Trade Gateway is a conceptual framework modelled to 1) support and amplify regional commerce by providing an integrated market, freight, and cold chain infrastructure; 2) ease the burden of daily commuting by offering a reliable and dignified rail alternative that reduces dependence on the congested road network; 3) improve ambient air quality by drawing significant volumes of goods and passengers off the roads, directly reducing the vehicular congestion that is the primary source of exhaust emissions along the corridor. The framework is designed to reflect the ecological realities of the Niger River Basin, and demonstrates that a train station, when conceived with intention and context-sensitivity, can simultaneously function as an economic catalyst, a mobility solution, and an instrument of environmental health, thus contributing meaningfully to sustainable infrastructure development in Anambra State and the broader region of southeastern Nigeria.

Keywords: Air Pollution, Regional Mobility, Sustainable Road Infrastructure, Trade Facilitation, Train Station Design