IMPLEMENTING ENERGY EFFICIENCY STRATEGIES IN THE DESIGN OF A PUBLIC LIBRARY IN LEKKI, LAGOS

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JULY, 2023

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc.) DEGREE IN ARCHITECTURE IN THE DEPARTMENT OF ARCHITECTURE, COLLEGE OF SCIENCE AND TECHNOLOGY, COVENANT UNIVERSITY OTA, OGUN STATE, NIGERIA

JULY, 2023

ACCEPTANCE

This is to attest that this dissertation is accepted in partial fulfilment of the requirements for the award of the degree of Master of Science [M.Sc.] in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Nigeria and has been accepted by the School of Postgraduate Studies, Covenant University, Ota, Ogun state.

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Prof. Akan B. Williams
(Dean, School of Postgraduate Studies) **Signature and Date**

DECLARATION

I, **JOHNSON OLUWAPELUMI PEACE (17CA022937)**, declare that this dissertation is a representation of my work, and is written and implemented by me under the supervision of Doctor Omoyeni A. Fulani of the Department of Architecture, Covenant University, Ota, Nigeria. I attest that this dissertation has in no way been submitted either wholly or partially to any other university or institution of higher learning for the award of a masters' degree. All information cited from published and unpublished literature has been duly referenced.

JOHNSON, OLUWAPELUMI PEACE

Signature and Date

CERTIFICATION

This is to certify that this dissertation titled **"IMPLEMENTING ENERGY EFFICIENCY STRATEGIES IN THE DESIGN OF A PUBLIC LIBRARY IN LEKKI, LAGOS"** is an original research work carried out by **JOHNSON OLUWAPELUMI (17CA022937)** in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun state, Nigeria under the supervision of Dr. O. A. Fulani. This dissertation has met the required standard for the award of Master of Science (M.Sc.) in Architecture.

Dr. Omoyeni. A. Fulani
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(Head of Department) **Signature and Date**

Dr. Oluwafemi K. Akande
(External Examiner) **Signature and Date**

Professor Akan B. Williams
(Dean, School of Postgraduate Studies) **Signature and Date**

DEDICATION

This research work is dedicated first and foremost to God Almighty, the custodian of all wisdom, knowledge, and understanding, for His grace and favour throughout the duration of carrying out this research, then to my family for their endless support and love.

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ABSTRACT

This study investigates the implementation of energy efficiency strategies in public libraries in Lagos, Nigeria. The study explores the various energy-efficient design strategies that can be incorporated into the library's design to minimize energy consumption and reduce operational costs. It also examines the challenges and opportunities associated with the implementation of energy-efficient design strategies in public buildings in Nigeria. The study adopts a qualitative approach, using interviews and case studies to gather data. The findings reveal the level of implementation of energy efficient design strategies in Nigerian public libraries and provide insights into ways thy can be seamlessly implemented in future public library designs. The study concludes with recommendations for architects, building professionals, and policymakers on how to promote and support energy-efficient design in public buildings in Nigeria.

***Keywords: Energy efficiency, public library, sustainability*.**