

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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LANDSCAPE EFFECT ON THE BUILDING ENERGY SAVING

BY

Safynaz Reda Ahmed

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE

In
Architectural Engineering

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Title of Thesis: **Landscape effect on the building energy saving**

Key Words:

Green roofs, Shade trees, Green areas effect on buildings, Landscape for cleaner environment, Landscape for energy efficiency.

Summary:

A green roof is a vegetative layer grown on a rooftop. Green roofs remove heat from the air through the process of evapotranspiration, and also act as insulators for buildings, reducing the energy needed to provide cooling and heating. Using green roofs in cities or other built environments with limited vegetation can moderate the heat island effect, particularly during the day. Green roofs can reduce building energy use compared to conventional

roofs, reducing peak electricity demand. Green roofs provide aesthetic value and habitat for plant and animal species. Shade trees offer significant benefits in reducing building air-conditioning demand and improving urban air quality by reducing smog. The right tree in the right place provides wind protection, shade, and cool air, while adding beauty, privacy, and wildlife habitat to the landscape.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all source used and have cited them in the references section.

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