



بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / مني مغربي أحمد

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

مسئولية عن محتوى هذه الرسالة.

ملاحظات: لا يوجد





AIN SHAMS UNIVERSITY  
FACULTY OF ENGINEERING

Urban Planning

# A Regenerative Framework for Urban Interventions in Heritage Sites

**A Thesis submitted in partial fulfillment of the requirements of the degree of**

**Doctor of Philosophy in Architectural Engineering**

**(Urban Planning)**

**by**

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**Master of Science in Architectural Engineering**

**(Architecture Engineering)**

**Faculty of Engineering, Arab Academy for Science and Maritime Transport, 2015**

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**Cairo - (2022)**



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## **Statement**

This thesis is submitted as partial fulfilment of Doctor of Philosophy in Architectural Engineering Engineering, Faculty of Engineering, Ain shams University.

The author carried out the work included in this thesis, and no part of it has been submitted for a degree or a qualification at any other scientific entity.

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## **Acknowledgement**

First, praise and thank to Allah the Almighty, Most Gracious, and the Most Merciful for his blessings during my study and completing this research work.

I want to express my deep and sincere gratitude to my research supervisors, Professor Dr Ghada Farouk Hassan, Professor and Head, Urban design and planning department, Ain Shams University and Associate Professor Dr Rowaida Mohamed Omar Rashed, Urban design and planning department, Ain Shams University, for allowing me to do the research and providing invaluable guidance throughout the thesis work and the publication phase. They provided vital provisions to conduct and present the research works as clearly as possible. It was a great privilege and honor to work and study under their professional guidance. I am extending my thanks to Engineer Ahmed Diftar, owner of Moselay Media Development and developer Mina Samir for their help in devising the empirical study for my research work and bearing the constant stress I have exerted. Moreover, I would like to extend my profound thanks to Dr Abeer El Shater, Urban design and planning department, Ain Shams University, for her constant support and guidance through the journal publishing phase.

I am extremely grateful to my parents for their love, prayers, caring, and sacrifices to educate and prepare me for my future. I am extending my profound thanks to my husband, Architect Yahya Abdulkadir and my daughters, Judy, and Talia, for their unparalleled love, understanding, prayers and continuous support, acceptance, and patience to complete this research work during my thesis preparation. Also, I express my thanks to my sisters for their support and valuable prayers. Finally, my thanks go to my friends who have supported me to complete the research work directly or indirectly.

Samar El Nagar

## **Abstract**

Heritage sites are 'pieces of art,' a non-renewable source of significance to the city. Its urban fabric displays continuity and differentiation, affected by time, social, economic, and environmental aspects of different development ages. Several organizations have given great attention to setting Agendas and key principles to conserve many Heritage sites, e.g., UNESCO, ICOMOS, NGO'S, etc..... Not only do problems occur when interventions change or eliminate a physical part of the urban fabric, affecting the integrity of the social and cultural value of the heritage sites. But ongoing and future developments threaten the authenticity of the heritage sites as a significant part of the city's history and future existence. Several types of this development are affected by the growing needs, e.g., climatic change, mass tourism, digital simulation, etc... Consequently, this intimidates the heritage site to be responding and resilient when addressing regenerative development and sustainability.

Hence, the importance of this research lies in devising a regenerative framework for assessing the urban interventions in heritage sites. This framework is set on a theoretical basis of reviewing guidelines for dealing with heritage sites and the key principles of regenerative development on the other hand. This is followed by the analysis of varied case studies of the best practices of regenerative development. This theoretical base sets the first layer of the regenerative framework to be assessed in the following empirical research. The framework parameters are verified and evaluated upon a local case study through a qualitative approach where findings are confirmed in the urban realm. This results in recommendations for key players and actors in the conservation plans of heritage sites for attaining regenerative development.



In the end, it is essential to mention that heritage sites are crucial for the city's identity. Not only do they behold different users and developments that respond to the economic, cultural, and social sustainability of the city itself. But also form a crucial part of the city's 'eco-system, which, when considered a closed 'regenerative' cycle, aims at sustainable development for future generations.

Keywords: *Sustainable development – Cultural heritage sites-Digitization- Historic Urban Landscape approach- Human dimension.*





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