

BEE'AH

RATING SYSTEM

Assessment and Adaptation of an Appropriate Residential Green Rating System
for Riyadh, Saudi Arabia

Thesis by: Ammar Alammar



Assessment and Adaptation of an Appropriate Residential Green Rating System for
Riyadh, Saudi Arabia

BEE'AH RATING SYSTEM

As an adaptation of beea'h rating system in the development of a real residential
project

A thesis presented to the Faculty of
NewSchool of Architecture & Design

In Partial Fulfillment
of the Requirements for the degree of
Master of Architecture

By
Ammar Alammar
San Diego, 2015

ABSTRACT

The purpose of this research is to develop an effective residential green rating system in accordance with the local context of Riyadh City. Developing the system is necessary in the developing world to mitigate the environmental issues that are associated with building houses, apartments, and residential complexes. The establishment and adaptation of such a system will contribute to the improvement of the performance of buildings by reducing their consumption of energy and water and their production of waste materials, thereby improving public health. Therefore, in this thesis, different methods were investigated for achieving the study's goals through comparing and analyzing well-known Middle Eastern and international rating systems, such as LEED, BREEAM, ESTIDAMA, QSAS, and GBRS.

In addition, other methods (such as surveys, interviews, and AHP methods) are investigated in this research for evaluating the proposed system, thus ensuring its accuracy, appropriateness, and applicability to the city and taking into consideration the city's local context. Surveys and expert interviews were conducted with specific stakeholders who are familiar with the issues that are facing the city

The outcome of the research was a suggested green residential rating system for Riyadh city that considers its environment, weather, culture, and economics. This rating system is known as the Bee'ah Homes Rating System. Additionally, the proposed green residential rating system was implemented in an actual residential project to provide a baseline of results and serve as a guideline for future users.