

**PLANNING  
SUSTAINABLE CITIES  
IN MALAYSIA**

---

**Issues and Challenges**



MARIANA MOHAMED OSMAN  
ALIAS ABDULLAH  
MOHAMMAD ABDUL MOHIT  
AZILA AHMAD SARKAWI



IIUM PRESS  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

PLANNING SUSTAINABLE  
CITIES IN MALAYSIA  
Issues and Challenges

MARIANA MOHAMED OSMAN  
ALIAS ABDULLAH  
MOHAMMAD ABDUL MOHIT  
AZILA AHMAD SARKAWI



IIUM PRESS  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

Published by:  
IIUM Press  
International Islamic University Malaysia

First Edition, 2011  
© IIUM Press, IIUM

Individual contributors copyright © Prof. Dato' Dr. Mansor Ibrahim, Prof. Dato' Dr. Alias Abdullah, Prof. Dr. Mohammad Abdul Mohit, Assoc. Prof. Dr. Abdul Azeez Kadar Hamsa, Asst. Prof. Dr. Rustam Khairi Zahari, Asst. Prof. Dr. Mariana Mohamed Osman, Br. Samsuddin Jaafar, Asst. Prof. Dr. Lukman Hakim Mahamod, Asst. Prof. Dr. M. Zainora Asmawi, Asst. Prof. Dr. Azila Ahmad Sarkawi, Asst. Prof. Dr. Syafiee Shuid, Asst. Prof. Dr. Norzailawati Mohd Nor.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without any prior written permission of the publisher.

Mariana Mohamed Osman  
Built Environment Selected Writings  
Mariana Mohamed Osman

ISBN : 978-967-418-047-8

Printed by:  
IIUM PRINTING SDN.BHD.  
No. 1, Jalan Industri Batu Caves 1/3  
Taman Perindustrian Batu Caves  
Batu Caves Centre Point  
68100 Batu Caves  
Selangor Darul Ehsan

## CONTENTS

	<u>Page No.</u>
Contents	v
List of Tables	vii
List of Figures	viii
Foreword	ix
Preface	xi
Contributors	xiii
<b>CHAPTER 1: THE PROVISION OD <i>MUSALLA</i> FACILITIES IN SELECTED MULTI-LEVEL SHOPPING COMPLEXES OF KUALA LUMPUR, MALAYSIA</b> <i>Mohammad Abdul Mohit and Suraiya Alisa</i>	1
<b>CHAPTER 2: APPLICATION OF GIS SITE SUITABILITY ANALYSIS TO IDENTIFY SITES FOR POLICE STATIONS IN URBAN AREAS: A CASE STUDY OF WANGSA MAJU, KUALA LUMPUR</b> <i>Samsuddin Jaafar and Zul Aiman Md. Salleh</i>	12
<b>CHAPTER 3: A STUDY ON THE EFFECTIVENESS OF NEW STATIC INFORMATION SIGNAGE IN INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA, GOMBAK CAMPUS</b> <i>Syahriah Bachok and Syazwani Sahrir</i>	20
<b>CHAPTER 4: FACTORS INFLUENCING THE DECISION TO WALK IN CAMPUS: A CASE STUDY OF UNIVERSITY OF MALAYA, PETALING JAYA</b> <i>Mariana Mohamed Osman and Nuraihan Mohd Ibrahim</i>	33
<b>CHAPTER 5: ASSESSING TRAFFIC MANAGEMENT MEASURES IN THE CITY ROADS OF KUALA LUMPUR</b> <i>Abdul Azeez Kadar Hamsa</i>	44
<b>CHAPTER 6: AN OVERVIEW OF GIS BASED ANALYSIS IN SCHOOL SITING IN MALAYSIA</b> <i>Alias Abdullah, M Zainora Asmawi and Md Farabi Yussof Md Yussof</i>	51

<b>CHAPTER 7:</b>	<b>STATE INTERVATION IN LOW COST HOUSING ALLOCATION IN MALAYSIA UNDER THE COMPUTERISED OPEN REGISTRATION SYSTEM (ORS)</b>	<b>59</b>
	<i>Syafiee Shuid</i>	
<b>CHAPTER 8:</b>	<b>THE EFFECTS OF AIRBONE PARTICULATE FROM COAL POWER PLANT TOWARDS THE RESIDENCE AT MANJONG, PERAK</b>	<b>75</b>
	<i>Shamzani Affendy Mohd Din and Muhammad Ihsan Shaharil</i>	
<b>CHAPTER 9:</b>	<b>RIGHTS AND OBLIGATIONS OF NEIGHBOURING LANDOWNERS IN DEVELOPMENT PLANNING</b>	<b>83</b>
	<i>Azila Ahmad Sarkawi</i>	
<b>CHAPTER 10:</b>	<b>PLANNING AND FOOD SECURITY</b>	<b>90</b>
	<i>Rustam Khairi Zahari, Raja Noriza Raja Ariffin, Mohammed Amer Younus and Nurul Hidayah Yahya</i>	

## CHAPTER 2

### APPLICATION OF GIS SITE SUITABILITY ANALYSIS TO IDENTIFY SITES FOR POLICE STATIONS IN URBAN AREAS: A CASE STUDY OF WANGSA MAJU, KUALA LUMPUR

*Samsuddin Jaafar and Zul Aiman bin Hj. Md. Salleh*

#### ABSTRACT

The inadequacy of safety and security facilities, such as police stations, has been identified as one of the contributory factors to rising crime rates in urban areas in Malaysia. However, to provide for these facilities in such an area is becoming increasingly difficult due to land scarcity and stiff competition for land with other land uses. Due to scarcity of resources, both land and funds, it is imperative that the siting of police stations must be optimized, not only in terms of resources but also in terms of service efficiency. This paper discusses the application of GIS site suitability analysis to identify the most optimize location for siting police stations in urban areas.

**Keywords:** GIS, safety facilities, site suitability analysis, police stations

#### INTRODUCTION

Providing adequate safety and security facilities in an area is crucial so as to ensure security and protection for its community. Moreover, shortage in the provision of safety and security facilities not only affects the safety and security level of an area, but also indirectly affects the economic prosperity of the area. Investors would have less confidence in area with high crime rates. High crime rates also tend to depreciate the value of properties in the area.

In Malaysia, the inadequacy of safety and security facilities is often considered as one of the factors that contribute to the increase in crime rates, especially in the urban areas. However, as urban areas becoming more developed, it is increasingly difficult for the authorities to provide sufficient safety and security facilities due to several factors, but chiefly lack of suitable land.

The emergence of Geographical Information System (GIS) had contributed a lot in the planning decision making. The capabilities afforded by GIS in mapping out potential areas, deficiency areas and performing proximity analysis facilitate and automate analysis and planning for emergency response and its implementation (Parentela and Nambisan, 2000, p.181). Locating safety and security facilities such as police stations at the right location is very important in promoting safe and peaceful environment especially in urban areas. Hence, this paper focuses on the use of GIS's site suitability analysis in determining suitable locations of police stations in urban areas.

#### **Aim and Scope**