Issues in Facilities Management and Maintenance Malaysian Perspective





IIUM PRESS
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

ISSUES IN FACILITIES MANAGEMENT AND MAINTENANCE A MALAYSIAN PERSPECTIVE

MASARAH ALI PUTERI SHIREEN JAHNKASSIM



Published by: IIUM Press International Islamic University Malaysia

First Edition, 2011 ©HUM Press, HUM

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.

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Maisarah Ali

Issues in Facilities Management and Maintenance: A Malaysian Perspective Maisarah Ali ... [et al.].

ISBN: 978-967-418-035-5

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM (Malaysian Scholarly Publishing Council)

Printed By:

HUM 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

Tel: +603-6188 1542 / 44 / 45 Fax: +603-6188 1543 EMAIL: iiumprinting@yahoo.com

CONTENTS

		Page No.
Contents		iii
List of Tables		v
List of Figures		vi
Foreword		ix
Preface		X
Editors Note		xi
Contributors		xiv
CHAPTER 1:	MOULD GROWTH PREVENTION IN PUBLIC	
	HOSPITALS	1
	FUNDAMENTALS, CHALLENGES AND ISSUES	
	Maisarah Ali, Shireen Jahnkassim, Mohd Shariffuddin Ibrahim, Ibrahim Bamgbopa	
CHAPTER 2:	MAINTENANCE MANAGEMENT OF QARIAH	
	MASJIDS IN THE KLANG VALLEY ISSUES AND PERSPECTIVES	40
	Md Najih Ibrahim, Anis Azura Abdul Rashid	
	wa naja toranin, anis azara aban tasina	
CHAPTER 3:	ENERGY MANAGEMENT ISSUES AND	
	PRACTICES IN REGIONAL TRANSPORTATION	61
	HUBS A CASE STUDY OF AIRPORT TERMINAL	
	Shireen Jahnkassim , Zulkefli Yaacob and Abdul	
	Mahtheen Mohammed	
	Manneen Monamea	
CHAPTER 4:	FLAT ROOF CONSTRUCTION AND SYSTEMS	
CHAITER 4.	PRINCIPLES AND ISSUES IN MAINTENANCE	77
	MANAGEMENT	,,
	Maisarah Ali, Salawati Zainuddin	
CHAPTER 5:	DEFECTS AND DETERIORATION OF MULTI-	
	STOREYBUILDING FACADES	95
	ISSUES AND CHALLENGES	
	Maisarah Ali, Rosmawati Ali	

CHAPTER 6:	FIRE SAFETY IN BUILDINGS AND FIRE DOOR ASSESSMENT PRINCIPLES AND STANDARDS Tay Hao Giang, Maisarah Ali, Dewi Sarah	119
CHAPTER 7:	FIRE RISK ASSESSMENTS IN MAINTENANCE MANAGEMENT: THE CASE OF HERITAGE BUILDINGS IN MALAYSIA Md Najib Ibrahim, Khirani Abdul Hamid	140
CHAPTER 8:	SOLID WASTE MANAGEMENT AND THE POTENTIAL OF RECYCLED GLASS A MALAYSIAN PERSPECTIVE Muhammad Abu Eusuf, Atikah Razali	172
CHAPTER 9:	WASTE MANAGEMENT IN THE WORKING ENVIRONMENT PRINCIPLES, ISSUES AND IMPLEMENTATION Khairusy Syakirin Has-Yun Hashim, Puteri Shireen Jahn Kassim	198
CHAPTER 10:	PERFORMANCE BASED APPROACH IN FIRE SAFETY ASSESSMENT THE CASE OF EVACUATION TIME IN SHOPPING COMPLEXES Puteri Shireen Jahn Kassim, Normala Sulliaman	215

FLAT ROOF CONSTRUTION AND SYSTEMS PRINCIPLES AND ISSUES IN MAINTENANCE MANAGEMENT

Maisarah Ali, Salawati Zainuddin

International Islamic University Malaysia

1.1 ROOF MAINTENANCE – THE ISSUES

A roof assembly is one of the most important components of a building. Its function is to protect the building's interior, its content and human occupants from the external weather. Roofs are the single most-critical element in buildings (Griffins, 1995) as it is constantly damaged from normal environmental wear and tear, and require regular maintenance (Non Khuncumchoo, 2007).

An issue commonly faced by facility managers when determining the maintenance regime of roof components is that they have no specific standards with which to evaluate the existing components (James, W.P., 2004). To help the facility manager faced the problem, they generally need a straightforward, systematic approach that can objectively evaluate and rate the condition of the existing roof components in the building. Hence the aim of this chapter is to discuss the issues involve and highlight the significance of this problem in facility maintenance.

1.2. PAST STUDIES ON ROOF MAINTENANCE

A roof system is one of the largest and most-important investments in a building (NRCA 2000). Compared to other parts of the building envelope, roofs are less durable, and more trouble prone building's components (Miller and Desjarlais, Wilson 1984). Nearly 655 of all lawsuits brought against architects originated from roof problems (Patterson and Mehta, 2001). Due to their inherent functions, roofs are exposed to a more severe weather exposure than other building components.

Roofs have to resist not only precipitation but solar radiation and even human abuses.