Issues in Facilities Management and Maintenance: A Malaysian Perspective

Maisarah Ali
Puteri Shireen Jahn Kassim

IIUM PRESS
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
ISSUES IN FACILITIES
MANAGEMENT AND
MAINTENANCE
A MALAYSIAN PERSPECTIVE

MASARAH ALI
PUTERI SHIREEN JAHNKASSIM

IIUM Press
Published by:
IIUM Press
International Islamic University Malaysia

©IIUM Press, IIUM

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.]


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

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

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
FUNDAMENTALS, CHALLENGES AND ISSUES
Maisarah Ali, Shireen Jahnkassiim, Mohd Shariffuddin Ibrahim, Ibrahim Bamgbopa

CHAPTER 2: MAINTENANCE MANAGEMENT OF QARIAH MASJIDS IN THE KLANG VALLEY
ISSUES AND PERSPECTIVES
Md Najib Ibrahim, Anis Azura Abdul Rashid

CHAPTER 3: ENERGY MANAGEMENT ISSUES AND PRACTICES IN REGIONAL TRANSPORTATION HUBS
A CASE STUDY OF AIRPORT TERMINAL
Shireen Jahnkassiim, Zulkefli Yaacob and Abdul Maffeem Mohammed

CHAPTER 4: FLAT ROOF CONSTRUCTION AND SYSTEMS PRINCIPLES AND ISSUES IN MAINTENANCE MANAGEMENT
Maisarah Ali, Salawati Zainuddin

CHAPTER 5: DEFECTS AND DETERIORATION OF MULTI-STOREROYBUILDING FACADES
ISSUES AND CHALLENGES
Maisarah Ali, Rosmawati Ali
CHAPTER 6: FIRE SAFETY IN BUILDINGS AND FIRE DOOR ASSESSMENT PRINCIPLES AND STANDARDS 119 
Tay Hao Giang, Maisarah Ali, Dewi Sarah

CHAPTER 7: FIRE RISK ASSESSMENTS IN MAINTENANCE MANAGEMENT: THE CASE OF HERITAGE BUILDINGS IN MALAYSIA 140 
Md Najib Ibrahim, Khirani Abdul Hamid

CHAPTER 8: SOLID WASTE MANAGEMENT AND THE POTENTIAL OF RECYCLED GLASS A MALAYSIAN PERSPECTIVE 172 
Muhammad Abu Eusuf, Atikah Razali

CHAPTER 9: WASTE MANAGEMENT IN THE WORKING ENVIRONMENT PRINCIPLES, ISSUES AND IMPLEMENTATION 198 
Khairusy Syakirin Has-Yun Hashim, Puteri Shireen Jahn Kassim

CHAPTER 10: PERFORMANCE BASED APPROACH IN FIRE SAFETY ASSESSMENT THE CASE OF EVACUATION TIME IN SHOPPING COMPLEXES 215 
Puteri Shireen Jahn Kassim, Normala Sulliaman
FIRE RISK ASSESSMENT IN MAINTENANCE MANAGEMENT

THE CASE OF HERITAGE BUILDINGS IN MALAYSIA

Md. Najib Ibrahim, Khirani Abdul Hamid

International Islamic University Malaysia

1.1 INTRODUCTION

There is a growing interest in the adaptive re-use of heritage buildings and converting existing building stock into new functions. Bacon (2001) describes adaptive re-use as a method of renovating old buildings to accommodate new uses. It also represents a common means of preserving heritage buildings by providing economically viable alternatives to find new uses for vacant deteriorating structures, underused structures or building demolition in the cities. In Kuala Lumpur, there are currently many buildings that have adopted this concept of conservation. However, in doing so, fire safety and fire risks are significant issues that must be taken into consideration. These represent inherent risks associated with the adaptive re-use of buildings.

Due to these trends, there must be an assessment of the inherent fire risks and hazards in such heritage buildings. The protection of heritage buildings from fire damage is important as most of these buildings were built without much thought given to fire protection (Ab. Wahab, 2001). Historic (heritage) buildings also pose a particular risk in relation to fires due to their building materials, construction techniques, their use and often, within the sites where they are located (Larsen and Marstein, 2000). The spread of fire in heritage buildings is aggravated by the nature of the historic fabric such as the building materials and void in buildings (Kidd, 2001). For example timber is used excessively as part of their structure and architectural elements of heritage buildings and timber structures are particularly vulnerable to fire. The situation is worsened with the non-existence of automatic fire detection or extinguishment systems in the majority of heritage buildings which will further exaggerate the fire risk.