

Table of Contents

Preface

Chapter 1: Architecture and Urban Planning in the Context of Built Environment

Challenges of Green Highway Concept towards Implementation of Green Highway F. Najwa Mohd Nusa, I.R. Endut and S.Z. Ishak	3
The Application of Principles of Green Building in Traditional Housing in Iraq M. Qays Oleiwi, A. Ali, N. Utaberta and M. Surat	7
Green Facade (Vertical Greening): Benefits and Threats M. Rakhshandehroo, M.J. Mohd Yusof and M. Deghati Najd	12
Living Wall (Vertical Greening): Benefits and Threats M. Rakhshandehroo, M.J. Mohd Yusof and R. Arabi	16
Parametric Visualization Tools for Land Use Planning towards Improved Green City F.U. Sjarifudin	20
Green Architecture and Islamic Architecture: The Islamic Arabic City and the Traditional Islamic House A. Ali, N. Utaberta, M. Surat and M. Qays Oleiwi	24
The Genius Idea of Using Local Material on Javanese House Architecture Hardiyati, J. Prijotomo and M. Rachmawati	28
Green Agenda: A Socio-Cultural Response to Sick Building Syndrom (SBS) and Building Related Illness (BRI) in African Domestic Architecture E. Eghosa Noel and A.A. Babajide	32
A Critical Analysis of 20th Century Modern Terrace Housing in Malaysia N. Utaberta, N.F. Elina, M.T. Mohd Rasdi and M.A. Othuman Mydin	36
Kuala Lumpur Chinatown Pre-War Shophouses (Adaptive Re-Use) and City Image Y.S. Toong and N. Utaberta	40
Opportunity for New Entrepreneurial Ventures from Sustainable Public Open Space Adaptive Used Implementation (Case Study: Taman Fatahillah, Jakarta Old City) W. Hary Susilo	44
Post Modern Cross Comparative Analysis on the Mosque Ornamentation in Malaysia: (A Case Study of Charles Jencks) N. Utaberta, A.N. Handryant and M.A.O. Mydin	48
Understanding the Potential of Modern Community Center as Social Architectural Spaces in Malaysia N. Utaberta and N. Spalie	52
Evaluating the Customs and Rituals of the Malay Culture and its Contribution on Space Design in Modern Terrace House N. Utaberta, N.F. Elina and M.T. Mohd Rasdi	56
Heritage Buildings Conservation Issues of Shophouses in Kuala Lumpur Chinatown Y.S. Toong and N. Utaberta	60
Changing Transportation System in University Campus by Cycling and its Impact on Socio-Cultural Characteristics S. Vosoughi, M.J. Mohd Yusof and N. Baharuddin	64
The Transformation of the Traditional Balinese House in Tourist Villages: Maintaining the Culture and Obtaining Economic Benefit I.D.G.A.D. Putra, M. Lozanovska and R. Fuller	68
Significance of the Application of Universal Design in Mosque Buildings in Malaysia M. Dabbagh Niya, N. Utaberta and S. Maulan	72
Unique Elements of the Traditional and Vernacular Masjids in Malaysia; Traditional Elements Acquainting Practical Sustainability R. binti Othman, L.H. Mahamod and S. Aripin	76

Value-Based Architectural Conservation Practice as an Alternative Solution to Sustainability Problems P. Praptidita Suratman and Denny	80
The Conservation of Balinese Traditional Architecture: The Integration of Village Pattern and Housing Pattern in Indigenous Villages N.M. Yudiantini and D. Jones	84
The Aspects of Visual Privacy and Interior Design Elements of Malay Dwelling (MD) in Melaka N.H. binti Mohd Razali and A. bin Talib	88
Historic Urban Areas in Heritage Tourism: Kuala Lumpur Historic City Centre, a Potential Asset M. Deghati Najd, N.A. Ismail, M.Y. Mohd Yunos and S. Maulan	93
Post Occupancy Evaluation of Putra Perdana Park N. Talib, N. Mohamed, M.K. Hussein and S.F. Abd Shukor	97
Measuring Ecological Values of Green Open Space Using Normalized Different Vegetation Index Parameter R.B. Budiyaniti	101
The Characteristics of Residents at Low Cost Housing in Jakarta - Indonesia and their Culture to Green Principles N. Nurdiani	105
Visual Landscape Management of Scenic Peucang Island and Ujung Kulon Peninsula in Ujung Kulon National Park, Indonesia I. Krisantia and N.I. Mangunsong	109
Transport Policy in the Klang Valley, Malaysia: The Sustainability Agenda R.N. Raja Ariffin, R. Khairi Zahari and M. Tumin	123
Green Infrastructure Development in Sustainable Water Resources Management System Q. Uniaty	127
Attributes and Characteristics of Place Attachment B. Karsono and J. Wahid	132
Brigdeheader Space for Dwell in Jakarta Deni and Salwin	136
Identifying Functional Factor for Developing the Community Centre in Kuala Lumpur N. Jafari and N. Utaberta	141
Sustainability is Important Part of the Identity in the Dimension of Regionalism Architecture M.I. Hidayatun, J. Prijotomo and M. Rachmawati	145
The Integration of Universal Design in Interior Design as a Green Design Approach for Diverse Users in Malaysia N. Mansor, R. Ibrahim and A.R. Awang	149
Importance of Preserving the Non-Use Value of the Cultural Heritage: Case Study of George Town, Penang World Heritage Site N.F. Mohd Ariffin, Y. Ahmad and A. Alias	153
A Study on African Vernacular Mosque: A Lesson from Tradition M.M. Osman, B. Hassanpour and N. Utaberta	157
Perceived Pedestrian Environment Functional Factors which are Associated with Walking in Tropical University Campus B. Afsar, M.Y. Mohd Yunos, M.A. Othuman Mydin and M.J. Mohd Yusof	161
Preference on Social Spaces in High Density Condominiums in Malaysia P. Amini Fard, M.K. Mohd Shariff, M.Y. Mohd Yunos and M.A. Othuman Mydin	165
Spiritual Values in Urban Residential Garden: A Mitos or Reality? N.A. Ismail and M.Y. Mohd Yunos	168
Cross-Cultural Ethnic Identity in Urban Residential Area: An Epistemology N.A. Ismail and M.Y. Mohd Yunos	172
Evaluating Mobility in Marketing Places for Entrepreneurial Disabled, Case Study: Central Market Area Kuala Lumpur B. Fardnia, N. Abdul Rahman, M.Y. Mohd Yunos and M.A. Othuman Mydin	176
Assessing the Residents' Preference of Awareness Regarding Urban Agriculture at Rooftop Garden N. Jafari, M.Y. Mohd Yunos, M.A.O. Mydin and O. Mohd Tahir	180

Landscape Architects' Perspective on Public Participation Technique in Landscape Planning and Design: A Case Study of Kuala Lumpur M.Y. Mohd Yunos, N.K. Mohd Isa, J. Hillier and N.A. Ismail	184
Non-Structural Elements of the Traditional Malay Houses in the East Coast and Northern Peninsular Malaysia: Similarities and Differences M. Ismail, A.H. Abu Bakar, N.F. Abas, R. Roosli and S. Abdullah	188
Considering Ephemeral Monuments: Towards a Greener Architectural Theory R. Budi Santosa, J. Prijotomo and M. Rachmawati	192
Legal Provision Allied to Conservation of Heritage Buildings in Penang M.A. Othuman Mydin, S. Jasme, M.N. Mohd Nawi, N. Utaberta and M.Y. Mohd Yunos	198
Landscape Heritage Conservation along Sanur Beach Borderline in Bali: Perspectives of the Local Government and Visitors T. Anggraini Prajnowrdhi, S. Karuppannan and A. Sivam	202

Chapter 2: Green Building Materials

Appraisal of Thermal Comfort of Paper Waste as Wall Element in Building A. Fikriarini Muchlis, A.D. Aziiz, M. Ishomuddin and A. Barata	209
Residual Compressive Strength of Lightweight Foamed Concrete after Exposure to High Temperatures M.A. Othuman Mydin, M.Y. Mohd Yunos, M.N. Mohd Nawi and A.I. Che Ani	213
Durability Performance of Oil Palm Shell Lightweight Concrete as Insulation Concrete E. Serri, M.Z. Sulieman and M.A. Othuman Mydin	217
Green Materials Comparison of Sawdust and Coconut Fiber Acoustical Waffle Panel E. Setyowati, G. Hardiman and S.T. Atmaja	221
The Influence of Compressive Strength of EPS Concrete Using Fiberglass with Curing and Non Curing Treatment I. Hidayat and J.D. Halim	226
Thermal Properties of Foamed Concrete with Various Densities and Additives at Ambient Temperature S. Ganesan, M.A. Othuman Mydin, M.Y. Mohd Yunos and M.N. Mohd Nawi	230
The Mechanical Performance of Waste Concrete Ash as Cement Replacement Materials in Concrete A.H. Husain and N.F. Abas	234
Polyacrylate Modified Binder for Sustainable Asphalt Pavement Performances Using Superpave Mix Design W.A. Ismail, I.R. Endut and S.Z. Ishak	238
Compressive Strength Improvement of Stabilized Peat Soil by Pond Ash - Hydrated Lime Admixture Z. Md Yusof, S.N. Mohd Harris and K. Mohamed	242
The Potency of Waste Paper "Egg Tray" as a Noise-Reduction Material E. Setiyowati and I. Nasrullah	246
Prefab Materials for Self Build Housing System in Malaysia W.S. Wan Mohamed, Y. Ahmad, N.F. Nik Mat and A. Azlan	250

Chapter 3: Technologies and Decisions for Providing of Environmental Sustainability

Affordable Onsite <i>E. coli</i> Testing Device for Community Engagement A. Kikuchi, M. Syafinas, Romaidi, A.M. Mahmood, W.E. Putra, B. Muchtaromah, E.S. Savitri, I.A.I. Nangkula Uaberta, M.I. bin Abd Aziz and M. Musa	257
Preliminary Study on Climate Change Biomitigation by Improving CO₂ Removal and CO₂ Utilization Efficiency Using Microalgae Culture in Photobioreactor A. Nugroho, E. Kardena, D.I. Astuti and K. Dewi	261
Developing Low-Carbon Awareness and Low-Carbon Behavior Framework for Tackling CO₂ Emission in a City N.J. Abdul Aziz, M.Y. Mohd Yunos, N.A. Ismail and M.A. Othuman Mydin	265

To Develop a Greener Recycled Paper Production by Determining Potential Environmental Impacts through Life Cycle Perspective N.F. Mohd Ghazali, S.Y. Wong and A. Hamzah Sharaai	269
Facilitate Recycle Activities via ICT and Physical Approach W.N. Wan Ab Rahman and J. Ng Yi Shien	273
Optimizing Multi Response Green Machining Using Taguchi Method Based on Grey Relational Analysis M.I. Mustajib, T. Prasetyo, H.A. Ilhamsah, R. Soenoko and Sugiono	277
Towards a Green Quail Meat Production through Life Cycle Perspective A. Hamzah Sharaai, M.Z. Mat Zainol and K.I. bin Muhammad	282
Preparation Model of Allergen Inhalant Reduction Level on House Dust in the Rural Based Built Environment Using Structural Equation Modeling Technique A. Rofieq	286
Carbon-Capability Framework for Malaysia: Towards Encouraging Low-Carbon Community Lifestyles A.S. Abas, M.Y. Mohd Yunos, N.K. Mohd Isa, N.A. Ismail and F. Abdul Aziz	290
Fish Distribution and Composition of Kelantan River Systems, Kelantan, Malaysia R. Hashim, M.R.P. Azlan, W.M.A. Mohd Zainuddin, S.A. Jusoh and A.S.R. Md Sah	294
The Influence of Land Use in Controlling Potential Damage of the Upper Brantas River Basin S. Harini	298
Community Participation in Management of Mangrove Villages with Renewable Energy in Teluk Naga District of Tangerang A. Gunarsa, I. Krisantia and N.I. Mangunsong	302
Traditional and Local Ecological Knowledge for Land Use Mapping N. Mohd Ayob, N. Ismail and T. Masron	306
Land Use Diversion in the Tourism Area at Sub Watershed Konto Hulu T. Kusumadewi	310
An Analysis of Grey Water Treatment System in the National University of Malaysia Mosque N. Utaberta, A.N. Handryant and M.A. Othuman Mydin	313
The Application of Rain Water Harvesting Method on a Low Income Flat in Cengkareng, Jakarta Y. Mariana, J. Ngadinata, R. Katili and R. Hendarti	317
Maintenance Performance Quadrant for Rainwater Harvesting System H. Yahaya, I. Ismail, A.I. Che Ani, S. Johar and M. Surat	321
Green Renewable Energy – Risk Need to Be Tackled in Going Green for Air Transportation H. Mohd Noh, G.A. Rodrigues and N.A. Abdul Rahman	325
Daylighting Strategies in Iranian Vernacular Residential Buildings in Hot and Dry Climate E. Maghsoudi Nia, T. Hajihasani, M.Y. Mohd Yunos and N. Abdul Rahman	329
A Biomimicry Approach on an Architectural Design and Planning Case Study: The Application of Photovoltaic and Green Roof Technologies R. Hendarti and Y. Mariana	333
Integration PV and Wind into the Grid to Supply Electricity in Palu (Indonesia) S. Dewi	337
Soil Arthropods Diversity in Manggis Natural Reserve and Coffee Agroforestry System Kediri Regency, Indonesia D. Suheriyanto, Soemarno, B. Yanuwadi and A.S. Leksono	341

Chapter 4: Monitoring and Assessment of Facilities, Disaster Prevention

Condition Survey Protocol: A System for Building Condition Assessment A.I. Che-Ani, I. Ismail, S. Johar, M.Z. Abd-Razak and N. Hamzah	347
Flat Roof Defect: Preliminary Condition Survey for Water Ponding Monitoring A.E. Hashim, M.I.F. Maruzuki, N. Mohd Tawil, M.Z. Abd-Razak and A.I. Che-Ani	351
Building Defects or Building Failures: Misconception and Understanding S. Abdullah, E. Iskandar and A. Abdul Razak	355

Common Defects on Floating Mosque: Tengku Tengah Zaharah Mosque, Kuala Ibai, Kuala Terengganu	
E.M. Mazlan, A.I. Che-Ani, A. Mohd Sarman, M.A. Othuman Mydin and I.M.S. Usman	359
The Conceptual Framework of Building Performance-Risk Indicators (PRI) for Buildings Users in Higher Education Institutions	
N. Khalil, S.N. Kamaruzzaman, A.H. Nawawi, H.N. Husin and A.E. Hashim	363
Well-Being of Malaysia's Disaster-Affected Coastal Communities	
R.K. Zahari, R.N. Raja Ariffin, M.Z. Asmawi and A.N. Ibrahim	367
Sustainable Urban Drainage System to Land Use/ Land Cover Change in Samarinda, Indonesia	
E.S. Butar Butar, A. Sabar and M. Handajani	371
Dynamic Analysis on PCI Girder Bridge	
M. Suangga and Santi	375
Development of Microcontroller Based Potentiometric Transduction Circuit for a Continuous Fluid Level Sensor	
F.N. Mohd Nusa, M.F. Abdullah, S. Setumin, S. Mohd Firdaus, A.I. Che Ani and N. Mohd Tawil	379