



THE INSTITUTION OF ENGINEERS, MALAYSIA

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Pre- AGM Talk on

“DeLIGHT: Design for Low Income Groups Housing through Technology”

(Organised by: Public Sector Engineers Special Interest Group)

Date : 24th August 2019 (Saturday)
Time : 9.00am – 11.00am (*Refreshments will be served at 8.30am*)
Venue : Auditorium Tan Sri Prof. Chin Fung Kee, 3rd Floor, Wisma IEM, PJ
Speaker : Pn Maria Zura binti Mohd Zain, Construction Research Institute of Malaysia (CREAM)

SYNOPSIS

With the onset global rapid urbanisation, provision of adequate and affordable housing remains the key priority in majority of the world urbanisation cities. Over the last five decades, half of the world's population live in the cities and the urban population is growing rapidly. The most dramatic changes of all have been the movement of people from the low-income groups to the cities. Therefore, government policies play a vital role in providing housing for this group with efforts that focusses on smart planning, design and construction method. Along with the *Dasar Perumahan Negara (DRN)*, *Dasar Perumahan Mampu Milik (DRMM)* and Construction Industry Standard (CIS 26): *Standard Perumahan Kebangsaan* as supporting documents, government is urged to increase the quality of affordable housing and reduce cost of construction. To achieve that, the new technology has ventured in the affordable housing projects which are the use of modern method and modern technology with the concept of modernization, mechanization and industrialization in the implementation of the Industrialized Building System (IBS) in real estate is essential. This paper examines the design of low-income groups housing in terms of their responses to the local environment, culture and lifestyle. It also looks at how industrialised methods in the form of Building Information Modelling (BIM) and Industrialised Building System (IBS) can be used to achieve more efficient ways to meet the target for better quality and affordable housing. Achieving comfortable conditions remain one of the most important aspects of design in hot humid tropical conditions. Use of passive design strategies are emphasised in low-income housing where layouts are designed in such a way that natural lighting levels and air flow are increased throughout all the internal spaces. In addition to this, modular design and industrialised systems are also explored as methods of improving low income housing in terms of design, cost and deliverability. There are many benefits in adopting this approach, namely economy of scale, greater control of completion time, greater reliability and improved quality.

SPEAKER BIODATA



Maria Zura Mohd. Zain is a Manager at Construction Research Institute of Malaysia (CREAM). CREAM is a research institute established under the Construction Industry Development Board (CIDB), which she joined in August 2006. She started her career as a researcher in Forest Research Institute of Malaysia (FRIM) in 2002 under the unit of timber engineering. She holds a B. Eng (Hons) in Civil engineering from the Universiti Sains Malaysia and she gained her Masters in Structural and Civil Engineering also from Universiti Sains Malaysia. She also a member of Board of Engineers Malaysia (BEM) and appointed as one of the Editorial Advisory Board for Malaysian Construction Research Journal (MCRJ). Her research interests are in advance material, environment and sustainable and also Green Technology. She has published various technical books, guidelines, technical papers, technical report, journals, proceedings and articles. Previously, she was part of technical committee developing standard such as Construction Industry Standard CIS 26:2019 *Standard Perumahan Kebangsaan* and main editor in Guidelines for Volumetric Module House Manufacturing Design and Construction for Malaysia. She also involved in development of standard for temporary construction site workers' amenities and accommodation (MS 2593:2015). She and team had developed IBS Catalogue for Precast Concrete Building System Revision 2017 for construction industry player as a reference for design, detailing and manufacturing IBS Component. Currently, she pursues his PHD at Universiti Kebangsaan Malaysia and lead the research entitles: Humanising Low Income Groups Housing Through Technology and Innovation.

Ir. Mustaffa bin Tek
Chairman
Public Sector Engineers Special Interest Group

FEE ANNOUNCEMENT (Effective: 1st October 2017)

Members:

- (i) Registration Fee: No Charge
- (ii) Administrative Fee:
 - (a) Online RM15
 - (b) Walk-In RM20

Non-Members:

- (i) Registration Fee: RM50
- (ii) Administrative Fee: RM20

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