

Community Project on DJROA Rain Harvesting System (SPAH)

STANDING COMMITTEE ON WELFARE AND SERVICE MATTERS



by Ir. Fong Tian Yong

IEM'S involvement in community projects through its Standing Committee on Welfare and Service Matters dated back to 2008 when IEM was requested to provide technical advice for village projects by a few village committees. IEM has assisted three villages, namely, Sg. Penjuring, a village in Bentong, as well Plentong and Jementah, two villages in Johor, in the design and construction of SPAH projects.



Figure 1: Datuk Bandar MBPJ representative and VIPs splashing rainwater from SPAH system

The fourth SPAH project was mooted by Damansara Jaya Residents and Owners Association (DJROA) as a demonstration project in support of the government's call for going green.

At the request of DJROA, IEM helped to prepare a technical paper with the design sketch of the SPAH demo project. With this, DJROA was able to obtain a grant of RM14,700 from MBPJ in August 2010. Subsequently, the



Figure 2: IEM representative Datuk Ir. Rosaline Ganendra briefing the crowd on the SPAH designed by IEM



Figure 3: IEM representative Datuk Ir. Rosaline Ganendra receiving a token of appreciation from DJROA President

IEM team assisted in preparing the final design, supervision and certification of the project completion.

The main components of this project are:

i) Gutter System

To channel rainwater to the rainwater tank.

ii) Leaf Eater

Leaf eater is a hopper with sloping netting to block leaves from entering the conveying pipes.



Figure 4: IEM representative Datuk Ir. Rosaline Ganendra with MBPJ councillors, officials and DJROA committee members

iii) First Flush

The first flush is a device to discard the first 10 minutes of rainwater which is contaminated with dust and bird droppings on the roof. The system consists of a tube installed before the rainwater tank. When the tube is full, a ball

floating on top is designed to block the top of the tube thus allowing subsequent rainwater to flow into the rain water tank. In this demonstration project, a transparent tube was used to allow visitors to understand the system better.

iv) Rainwater (RW) Tank

The capacity of the RW tank is computed based on the roof area of collection as per the guideline of 3m³ to 5m³ for every 100m² of roof area.

v) Rain Bank

Rain Bank is an electronic device installed above the pump that gives priority to discharge water from the RW tank first when the tap is turned on. When the RW tank is empty, the Rain Bank will then switch to the normal water supply (SYABAS supply).



Figure 5: IEM community project – SPAH in Sg. Penjuring village, Bentong, Pahang, officiated by Minister of Housing and Local Government and Minister of Health with IEM representatives Ir Choo Kok Beng and Ir. Yim Jan 2009

The IEM team assisted in designing the display board on a schematic diagram. The team also designed an information board which introduces the SPAH concept, local and foreign experiences as well as the global movement of SPAH. These boards will be useful and informative to visitors who wish to learn more about SPAH.

The DJROA SPAH project was officiated by the Datuk Bandar of MBPJ on 6 November 2010 at the DJROA community centre. The function was attended by MBPJ officials, the state assemblyman of Damansara Utama, government officers, councillors from several local authorities, residents and the public. The president of DJROA gave credit to IEM for its technical assistance in making the project a reality. In his speech, the Datuk Bandar was full of praise for this project as it is their first green project built with the partnership of the local community and NGO.

In her speech, IEM representative Datuk Ir. Rosaline Ganendra explained the importance of water conservation and IEM's CSR initiatives under the Standing Committee on Welfare and Service Matters. She expressed her gratitude to MBPJ and DJROA for inviting IEM to be part of the project. As engineers, IEM is duty bound to put forward innovative engineering solutions that can sustain and boost the nation's development. ■



Figure 6: IEM-designed SPAH system installed at Sg. Penjuring village, Bentong

Answer for 1Sudoku published on page 10 of this issue.

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