



## **Small Scale Rainwater Harvesting System towards Green Campus UTHM**

### **Introduction**

A suitable rainwater harvesting system can found less polluting water resources. Rainwater harvesting allows rainwater to be collected and flow to a storage tank before it can be reused for non-potable purposes such as landscape, recreational use, and car-washing activities. This project aims to build up the small-scale rainwater harvesting at an external building for vehicles wash. It is also easier for maintenance. The rainwater harvesting system will be built at Block D9 (Figure 4.2u), a strategic location because it is located near the garage to wash official UTHM's vehicles.

### **Duration**

2018-December 2020

### **Objective**

The objective of this study is

To identify external building water activity in UTHM main campus

To choose the appropriate water tank system

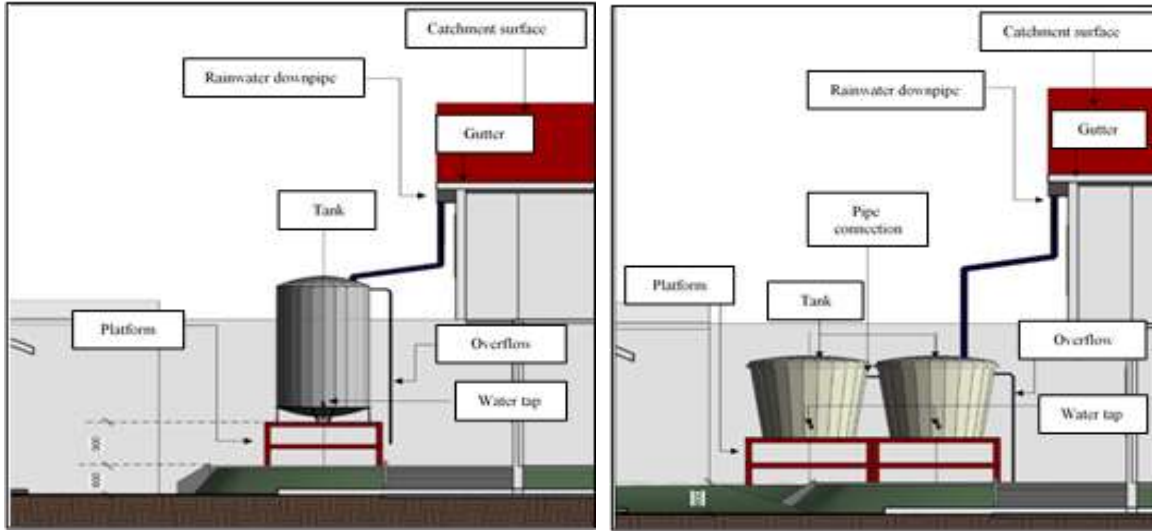
To suggest a rainwater harvesting design for external building water purposes in main campus UTHM.

### **Progress**

#### **Grantt Close**

**(a) first RWH design proposal**

**(b) second RWH design proposal**

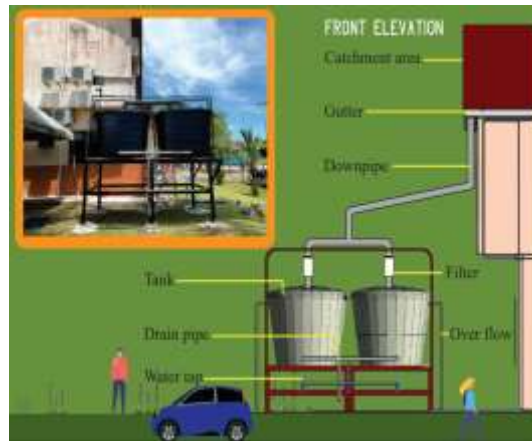


Pictures of product : E-SPAH (LY2020002691)

Side elevation



Front elevation



E-APAH AT BLOCK D9 UTHM



Novelty & Inventiveness, usefulness/benefit to society

**USEFULNESS/BENEFIT TO SOCIETY**

NATURAL RESOURCES

EASY MAINTENANCE

WASTE REDUCTION

COST SAVING

EASY INSTALLATION

**NOVELTY & INVENTIVENESS**

USER-FRIENDLY

GREEN TECHNOLOGY

WATER & ENERGY EFFICIENT

NEW TECHNOLOGY  
E-SPAH (LY2020002691)

**UTHM**  
**RISE 2019**  
INTERNATIONAL RESEARCH AND INNOVATION SYMPOSIUM AND EXPOSITION 2019

*Certificate of Award*

This is to certify that

**Ts. Sharifah Meryam binti Shareh Musa, Azlina Md Yassin, Rozlin Zainal, Muhammad Faizal bin Mostafa, Assoc. Prof Dr. Haryati Shafii**

with the project of

**Small Scale Rainwater Harvesting System Towards Green Campus UTHM**

has won

**SILVER**

in the

**INTERNATIONAL RESEARCH AND INNOVATION SYMPOSIUM AND EXPOSITION 2019 (RISE2019)**

24 September 2019  
Dewan Sultan Ibrahim  
Universiti Tun Hussein Onn Malaysia

*Prof. Dr. Azman Kadir Rahim*  
Deputy Vice-Chancellor (Research and Innovation)  
Universiti Tun Hussein Onn Malaysia

KEMENTERIAN PENDIDIKAN MALAYSIA

Ur Ma PA

*Certificate of Award*

**BRONZE MEDAL**

This Certificate of Award is presented to

**MUHAMAD FAIZAL BIN MOSTAFA AZLINA BINTI MD YASSIN, ROZLIN ZAINAL, HARYATI SHAFII & SHARIFAH MERYAM BINTI SHAREH MUSA**

For the invention / invention of

**REKA BENTUK SISTEM PENUAIAN AIR HUJAN (SPAH) BAGI SKALA KECIL UNTUK KEGUNAAN LUAR BANGUNAN**

INTERNATIONAL FESTIVAL OF INNOVATION ON GREEN TECHNOLOGY 2019 (IFINOG) & IDEAS  
19 – 21 April 2019, Universiti Malaysia Pahang

*Prof. Dr. Yusoff Bin Zakrudin*  
PROFESSOR DATO' DR. YUSOFF BIN ZAKRUDIN  
Deputy Vice-Chancellor (Student Affairs & Alumni)  
Universiti Malaysia Pahang

**Ts. Sherifah Maryam Binti Shareh Must**  
Melalui dan salinan; Dekan Fakulti Pengurusan Teknologi dan Perniagaan

Puan,

**MAKLUMAN PENDAFTARAN HAK CIPTA**  
NAMA PRODUK : E-SPAH  
NO PENDAFTARAN : LY2020002891

Dengan hormatnya diarah merujuk kepada perkara di atas.

2. Suka-cita dimaklumkan bersama – sama ini disertakan salinan dokumen pendaftaran Hak Cipta bagi Karya 'E-Spah' (LY2020002891) yang telah didaftarkan untuk makluman dan simpanan pihak puan.


3. Sehubungan itu, mohon kerjasama pihak puan dapat memaklumkan kepada ahli penyeliaik bersama mengenai perkara ini.

Kerjasama dan perhatian yang diberikan amat dihargai.

Sekian, terima kasih.

**'DENGAN HIKMAH, KITA MENEROKA'**

Yang benar,



**PROF. MADYA Ts. DR. NORZILA BINTI OTHMAN**  
Pegawai  
Pusat Inovasi dan Pengkomersian  
Universiti Tun Hussein Onn Malaysia  
Semb : 8314

MS/Inovasi/07.000/Pengkomersian/Harta Intelektual