Supplementary 1

Weighting each objective in six dimensions adopted from Villeneuve and Riffon (2012)

|  |  |
| --- | --- |
| Weighing value | Description |
| 1 | ﻿Desirable objective: Achieving this objective is deemed unimportant, or it has low value to fulfill identified needs |
| 2 | ﻿Important objective: Achieving this objective is deemed important but is not directly associated with identified needs regarding the project |
| 3 | ﻿Essential objective: Achieving this objective is deemed essential and will contribute directly to the satisfaction of identified needs. It is considered essential to the success of the project |

Supplementary 2

Evaluation values reflects the ﻿performance of a given project based on Villeneuve and Riffon (2012)

|  |  |
| --- | --- |
| Evaluation value | Description |
| ﻿From 0% to 9% | ﻿An objective that is ignored in the project |
| ﻿From 10% to 24% | ﻿An objective on which the PSPP has indirect effects; that is not tied to project outcomes |
| ﻿From 25% to 39% | ﻿An objective that is marginally addressed by the project |
| ﻿From 40% to 59% | ﻿An objective that is moderately addressed by the project |
| ﻿From 60% to 79% | ﻿An objective that is taken into account, but still improvable |
| ﻿From 80% to 89% | The project ﻿stands out by its innovations and the amount of consideration given to this objective by the choices made |
| ﻿From 90% to 100% | The project ﻿is a model of innovation regarding this given objective |

Supplementary 4

The amount of rainwater which can be collected using the rooftop area for single sloping roof freely exposed to the wind as provided by National Hydraulic Research Institute of Malaysia (2016).

Rooftop area (A) : base (m) x height (m) Eq. 1

2.36m x 6.096m

14.387m2



Roof area

Supplementary 5

For monthly water supply stored in rainwater harvesting system, mean monthly rainfall in Malacca with roof material which is tiled with runoff coefficient were included in Equation 3. Equation 3 represents typical roof pitch in Malaysia which less than 40 degree. Roof material in this school is tiles with runoff coefficient value of 0.85 suggested by (United Nations Environment Programme 2009). The annual water supply can be supplied from the rainwater harvesting system is calculated using Equation #.

Monthly water supply stored in rainwater harvesting system (m3) = C x I x A

= 0.85 x 152.4mm x 14.387m2

= 1.863m3

= 1863m3

Where:

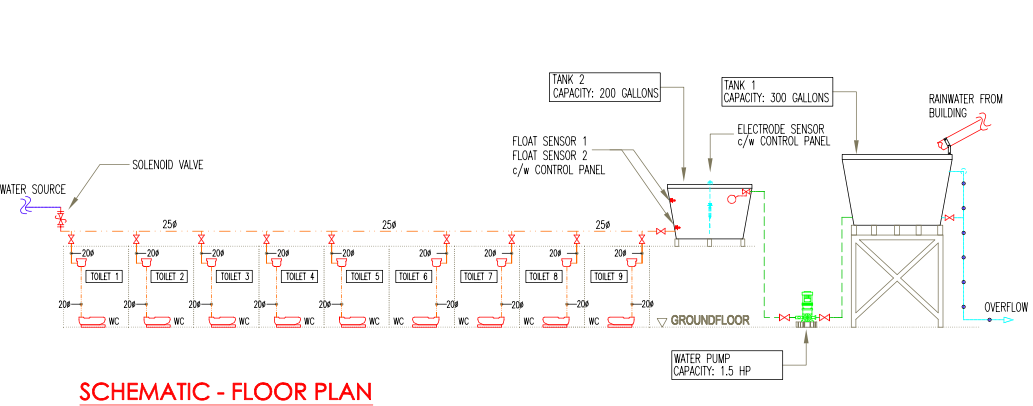
C = runoff coefficient

I = mean monthly rainfall in Malacca (mm)

A = rooftop area (m2)

Supplementary 6

Rainwater harvesting system installed in school toilet building



**A large white building

Description automatically generated**