

Technical Visit to DSD Happy Valley Underground Stormwater Storage Scheme

By Mr. Justin PANG

Technical Visit to DSD Happy Valley Underground Stormwater Storage Scheme (HVUSSS) was successfully held on 17th March 2018. The visit began with an introductory talk presented in a tiny presentation hall, which was artfully integrated with a fan room. There were mini games installed, and a scaled model of showing the water storage tank, allowing audience to have easier understanding of the entire project.

The scheme involved a large underground stormwater storage tank, which can hold 60,000 cum of stormwater. Located below five football pitches at the Happy Valley recreation ground inside the Happy Valley Racecourse, its setup was driven by its three-pronged approach towards flood protection covering: the upstream, midstream and downstream areas of the northern part of Hong Kong Island. It is an effective way to prevent flooding by temporarily storing excessive stormwater during peak flows via a side weir on a major box culvert.

You may think, how to clear the large capacity of water in the tank? One of the feature is movable weirs, also known as the 'Smart sluice'. The participants were brought inside the storage tank to have an on-site tour to investigate more detail. Inside the gigantic water storage space, there were fifteen movable weirs which were installed between the box culvert and the storage tank to control the flow of stormwater into the latter. After a heavy rain, the movable weirs will be further lowered to allow up to one-third of the stored stormwater to drain back into the box culvert through gravity, while the remaining amount of water is pumped away using pumps. This feature can effectively reduce the need for utilising pumps and achieving a more energy-saving design.

More than that, the participants were provided with Augmented Reality (AR) game to feel and see the situation when the weirs were opened inside the tank. It was a very interesting experience in having such realistic perception, which leave profound impression and understand towards the facility. On behalf of the YMC, we would like to thank Mr. Elton TANG from DSD giving us a unforgettable and fruitful event.

