

CI 02 Evolution of the underground drainage system in Galle Fort

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The Galle Fort is one of the few living forts in the world. Prior to the construction of the Fort, this area was an uninhabited peninsula. First Portuguese built a rampart in the Northern part of the peninsula. This intercepted the natural drainage path. Therefore, a pool of water has been accumulated on the southern side of the rampart. In order to find the solutions to this problem, they have designed a drainage network to convey water under the rampart to the sea. Subsequently, this drainage network was combined with the sewer system. After Dutch took over the Fort, they expanded it covering the whole peninsula. Dutch built a complex drainage system spreading over the area, with a unique flushing mechanism. They used sea water, to flush the drains. The water was pumped to the rampart level using a windmill. The windmill was located on the Triton bastion. It continuously pumped water from sea at sufficient wind energy. Pumped water was then taken away using bullock carts to flush the drainage system and for watering the dirt roads. British have not carried out any major construction work on the drainage system. However, they maintained and rehabilitated the system where necessary. Subsequently, British constructed a storage facility near the windmill to store excess water. As a pilot project, they constructed a clay pipeline to take the water from the storage facility to one of the flushing inlets. However, this was not extended to other areas. Windmill was not durable and had continuous breakdowns. As such, they abandoned the windmill and introduced a bucket system to dispose human excreta. This made the importance of the drainage system trivial. Even though this system is currently functional, it needs to be modified using the latest technology while preserving the heritage value of the Fort.

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