Abstract
The City of Darwin has over $3 million worth of underground stormwater drainage assets. These assets form a network consisting of 350 kilometres of underground pipes, culverts and pits. The majority of the assets were built in the 1970’s with the oldest recorded assets only dating back to 1947 (65 years old). The relatively young age of the assets has meant that the underground infrastructure has been left to its own devices with reactive maintenance only occurring as it is discovered and no significant replacement works having occurred over the lives of the assets.

With the invention and accessibility of high resolution closed circuit television (CCTV) footage and software such as WINCAN, the inspection of this previously overlooked asset is now achievable. The days of having people entering pipes for condition inspections, particularly smaller diameter pipes, are over.

As the City of Darwin has an extensive underground stormwater network it is quite a task to identify areas to survey for analysis, prioritise works and select appropriate treatments. The maintenance aspects also need to be considered in conjunction with stormwater investigations. As the City of Darwin grows and urban densification occurs, the current infrastructure can outgrow its capacity, which leads to essential upgrade works and also the possible reduction in useful lives of existing infrastructure.

A process has been developed within the City of Darwin to inspect, analyse and undertake maintenance on stormwater pipes, including the consideration of potential capacity issues and possible upgrades. This process is limited by funding across all aspects of investigation and implementation, so Asset Management techniques are utilised to assist in the improvement of programs and their effectiveness, which will help to maintain Darwin’s extensive underground infrastructure into the future.

Key Words: Stormwater; Drainage; Underground; Asset; Inspection; Maintenance; Management; Treatment; Darwin