Stormwater pipe condition assessments - if only animals could talk

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Moreton Bay Regional Council (Council) has nearly 250,000 stormwater assets valued at around 2.0 billion dollars. The large majority of these assets are buried underground and form part of a network, making them very difficult to inspect. To combat this, Council utilises CCTV technology to inspect their buried stormwater assets.

Council invested in their own van and camera unit to conduct inspections of stormwater pipes in 2015 and added a second in 2017. The data from these inspections was used to support the creation of a five million dollar per annum renewal program, as well as informing the ongoing maintenance program.

Council has come across some interesting issues over the years, including:

- A pipe with CCTV before and after a service had been built through it
- Two adjacent networks whose inverts had been corroded away
- A collapsed network that could not be located even with CCTV, ground penetrating radar, potholing, and excavation
- A damaged pipe suspiciously located under a recent road rehabilitation
- Twin box culverts in private property severely blocked by tree roots with no access for 50 metres either side

Council has also learnt some invaluable lessons since acquiring the vans, including:

- The importance of accurate asset records
- The difficulty with training and retaining CCTV operators
- Ideas for improved inspection techniques and improving the quality of the data
- The common cause of failures in newer pipe networks
- The value of coordinating with other projects and organisations
- The need to budget for future issues not just known issues

This paper will describe the history of Council's CCTV inspection, renewal, and maintenance programs, provide a number of examples of interesting projects Council has come across over the years, compare some of the alternative pipe inspection technologies, and discuss some of the lessons learnt; including that stormwater pipes are a favourite hideout for a myriad of animals.