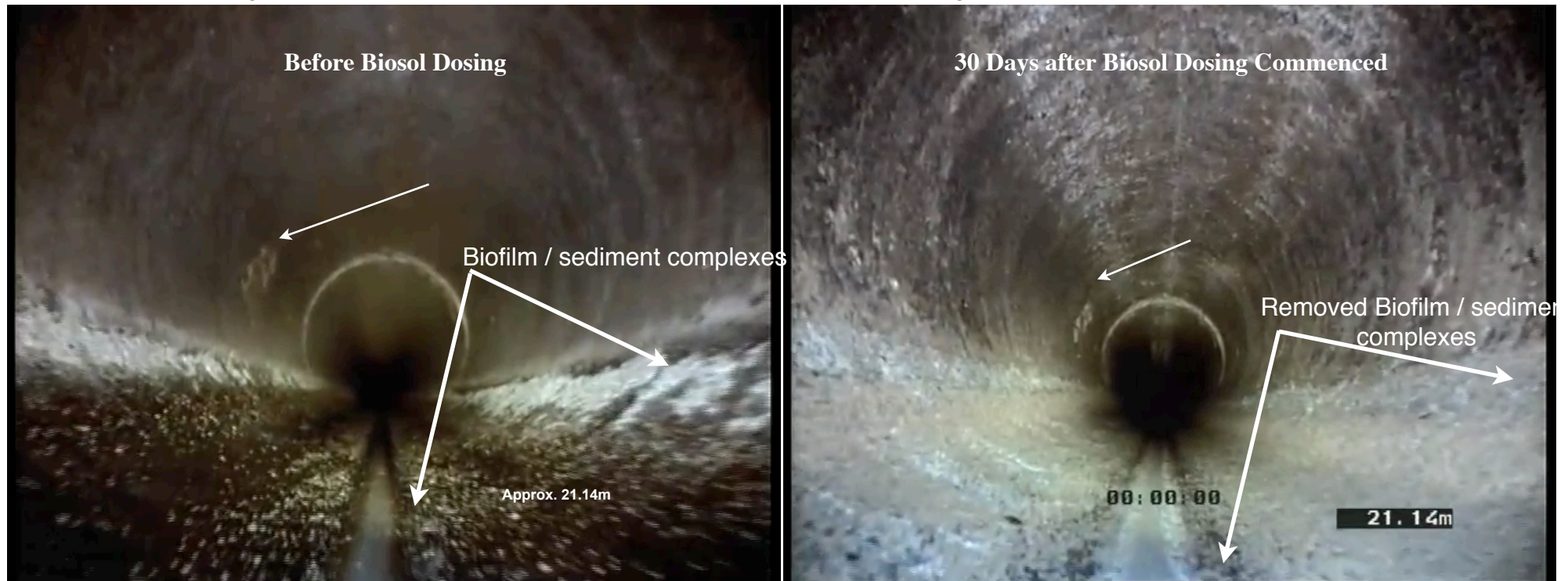


## Odour Corrosion & Greenhouse Gas Emissions Biosol Treats the Cause, not the Symptom.

**Sewage odour and Methane gas are generated in the biofilm (slimes) complexes in sewer pipes<sup>1, 2, 3</sup>. Removal or reduction of the biofilm / sediment complexes in the pipe network, will minimise biogas (odour) generation and thus infrastructure corrosion.** Based on AWWA data, the cost of sewage infrastructure corrosion in Australian is estimated at about **\$1.1 Billion / year** or greater than \$50.00 / person / year. Removing biofilm / sediments as shown below, will minimise odour generation and thus sulfuric acid induced infrastructure corrosion. That substantially reduces the risk and costs associated with sewer repairs, catastrophic sewer failure, blockages from sediment accumulation, as well as fat, oil and grease in the pipe network. Removal / reduction in the biofilm / sediment complexes, also reduces methane gas generation and its associated OH&S and **Greenhouse gas emission risks.**

The Return On Investment from the use of Biosol products is estimated to be > 2:1 and in many instances > 8:1

According to Pomeroy's Corrosion Model (US EPA), if you halve the sulfides in concrete gravity mains, you approximately double the asset life.



<sup>1</sup> Bowker Robert P.G. et al. *Design Manual, Odour and Corrosion in Sanitary Sewerage Systems and Treatment Plants* Pg.9 United States EPA Publication N-497

<sup>2</sup> Mishina, F., Nonaka, T., Hikosaka, Y., Koga, M., Mori, T. "Microbial Corrosion of Concrete Pipes, H<sub>2</sub>S production from Sediments and Determination of Corrosion Rates", *Water Science and Technology* WSTED4 Vol.23 No.7/9 p1275-1282, 1991.

<sup>3</sup> Guisasola, A. et al. "Methane formation in sewer systems" *WATER RESEARCH* 42 (2008) 1421-1430