National Green Infrastructure Facility

Assessment, Costing and enHancement of long lIfe, Long Linear assEtS - ACHILLES

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Long linear assets (LLAs) are crucial in the delivery of critical services, such as road and railway slopes, pipeline bedding, and flood protection structures, over long distances. Failure of these assets results in high repair costs, and vulnerability to these failures is significant. However, the exact reasons for, and timing of the failure is not well understood. ACHILLES aims at developing knowledge and tools for predictable and improved long-term, long-linear asset performance at an affordable cost. The project will deliver multi-scale data – from tens of millimetres up to metres – to gain insights into deterioration processes of soil. Researchers at the National Green Infrastructure Facility (NGIF) have designed a lysimeter experiment to investigate crack formation via various techniques, e.g. photogrammetry, laser scanning, thermal imaging, and to observe the changes in permeability, conductivity and soil water retention properties under various climatic conditions. The outcomes will help our researchers to refine their knowledge of weather-driven deterioration mechanisms in heterogeneous and cracked soils.

For more information on this project, please contact:

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