

DURABILITY OF CONCRETE SEWERS: MONITORING, ASSESSMENT AND ENVIRONMENTAL FACTORS

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Abstract. The durability of concrete sewer pipes is affected by a variety of degradation mechanisms such as sulphuric acid, chloride and sulphate attack. The problem of degradation of concrete sewer pipes has been a growing problem as these infrastructure assets age. The destructive mechanisms can vary due to increase in the environmental factors such as acidity and temperature. This study aims to investigate and compare the current monitoring and assessment methods for concrete sewers with suggestions for improving their durability. The results of a comprehensive lab experiment in the UK for investigating the combined effect of temperature and acidity on concrete durability is also reviewed. The study also highlights the areas of research which need to be addressed for more sustainable concrete sewer systems (in terms of materials as well as management).