

Process Envelopes for Cement-based Stabilisation/Solidification ----- ProCeSS

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For many residual hazardous wastes, stabilisation/solidification (S/S) with cementitious or pozzolanic binders is considered the most appropriate treatment prior to landfilling. However, development and design of S/S formulations is complicated since the presence of industrial wastes can have deleterious effects on cements.

The ProCeSS project aims to support good practice by developing process envelopes that describe the limits of applicability of generic S/S of the most common UK residual waste types. A series of laboratory research projects have been conducted to find relationships between engineering and leaching properties and S/S product composition. Threshold values of the key properties can be used to define a process envelope. The data is also valuable in developing a scientific understanding of the mechanisms to predict and evaluate the long-term risk. This poster introduces the research activities led by University College London with involvement of 21 partners from UK top universities, cementitious material suppliers, waste generators, waste management industry and consultants.