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### Presentation Abstract

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### Using Sulphate Activated Pozzolans in Controlled Low Strength Materials

The product formed from intergrinding blastfurnace slag and hemihydrate gypsum is known as supersulphated cement (SSC) and this was widely used in foundation engineering until the advent of sulphate-resisting cements in the mid 20<sup>th</sup> century. The use of SSC has declined in recent decades for economic reasons, yet it remains an eminently viable engineering material.

A potential new use for sulphate activated pozzolans is to make Controlled Low Strength Materials which are low strength mortars and are used for waste containment, trench-fill and other general backfill applications. These materials are rapidly gaining market share from conventional products such as foamed concretes. Concretes for sub-bases for car parks and other hard standing are other potential uses. Gypsum is already permitted in EU standard prEN14227-3 for road foundations containing ash.

The work in this project is based on using gypsum which contains too many impurities to be used in plasterboard or cement production and mixing it with other waste materials such as basic oxygen slag from steel production and cement kiln dust.

The main source of gypsum for the project is titanium oxide pigment production yields which 250kt of "red" gypsum per year in the UK. Worldwide production of red gypsum is 1.25Mt from one producer alone. Waste gypsum also arises from plasterboard off-cuts from construction sites and spent casting cores from foundries and very many areas of chemical manufacturing produce secondary gypsum from acid neutralisation.

This presentation will describe the background to the research project which is being carried out by Coventry University, Imperial College London and Birmingham University. The results from testing these materials in the laboratory and a site trial will also be presented.

For more details of my research please see [www.claisse.info](http://www.claisse.info)