

Short Course

Turning excavated masses into a construction product

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Demolition and construction works and remediation of contaminated sites produces an extensive surplus of mineral waste, excavated soil and rock materials which are more or less contaminated. The disposal of these materials causes a substantial part of the transport work generated within the construction sector. Contaminated materials are, at present, landfilled to a great extent in Sweden and many other European countries. Recycling of these materials in civil engineering applications represents a great potential for more sustainable solutions. However, to ensure both resource efficiency and to prevent the spread of contaminants, the properties of recycled materials need to be customized to the requirements of the construction where they are recycled.

The European Construction Products Regulation (CPR) provides a framework for environmental assessment and declaration of performance of construction products including byproducts or waste that are recycled in construction works. Standardization work that set off in 2005 has now generated a number of technical standards and reports on content and emission of regulated dangerous substances. These methods provide a basis for assessment of substances that can cause adverse environmental effects. National requirements on the environmental performance of materials recycled into construction works are obliged to relate to these standards.

When remediating contaminated sites it can be economically and environmentally advantageous if the volume of soil that is transported to an external facility for treatment is reduced. One way of obtaining this is pretreatment of the contaminated soil on site, for example by sieving. SGI is working on a guidance document on recycling of excavated contaminated soil, with specific focus on sieving. Experiences from some Swedish remediation sites where sieving has been part of the treatment train are reported.

The course will present:

- The framework for environmental assessment of construction products provided by the Construction Products Regulation (CPR)
- Provided instruments and harmonized standards for characterization of properties
- Guidance on assessment and verification of constancy of product performance
- Examples and guidelines on recycling of non-contaminated fractions of contaminated soil