

Report Overview

This report contains the findings of a review of available literature for selected recycled materials used in geoconstruction. The use of recycled materials gained acceptance in the engineering community decades ago, and over the last fifteen years their use has become more widespread from efforts to improve sustainability in most areas of design and product life cycle.

Based on a survey of recycled materials most widely used in civil engineering and discussions with several CGPR members actively involved in use of recycled materials, the following materials are reviewed in this report:

- Reclaimed concrete aggregate,
- Reclaimed asphalt aggregate,
- Tire derived aggregate,
- Blast furnace, steel and non ferrous slags,
- Coal fly and bottom ash,
- Foundry sand.

Each section of the report focuses on one material and the individual sections are intended to be independent of one another. Sections begin with a broad overview of the material and a brief summary of findings. A more detailed discussion of laboratory test methods, field placement, physical and chemical properties and potential problems resulting from use then follows. Physical and/or chemical properties are included when it could be determined that the values were derived using reliable testing and data interpretation methods. This information is also provided when available for blends of recycled and virgin aggregate or native soil. Case histories are briefly described when available.

Material property values and performance data provided in each section are provided as general guidance for comparing materials and how blends of recycled and other materials might behave in the field. In all cases, project specific material property data should be determined for each recycled material or blend of materials being considered.

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