

# WASTE DERIVED FILL

## WASTE DERIVED FILL (WDF) SOURCES

- 1. Waste Soils** - Waste soil can consist of soil, clay, rock, sand or other natural mineralogical matter and minor amounts of naturally occurring inclusions such as vegetation and organic matter but should not contain other wastes.
- 2. Homogeneous Mineral-Based Industrial Residues** - Industrial residues produced by various processes may be considered for reuse as WDF under certain circumstances.



## GENERIC WDF PRODUCT SPECIFICATION

- well graded (i.e. mixture of granular and fine material)
- only contains negligible amounts of foreign inclusions
- generally free of organic matter or any other decomposing matter
- geotechnically suitable for the intended fill application
- incoming materials must be spade able and contain no free liquids.

## GENERAL ENVIRONMENT PROTECTION AUTHORITY REQUIREMENTS (TESTING)

Any volume of waste soil from single source domestic premises, or less than 100 tonnes (in total) of waste soil from any other single source site where no potentially contaminating activities [PCA]^ have occurred is considered low risk.

The EPA does not require sampling and assessment of small volumes of waste soils considered to be of low risk. In these cases only the general obligations and requirements of the WDF Standard apply.

Waste soil from sites where no PCA has occurred is lower risk than waste soil from a site where a PCA has occurred.

However, the potential risk of contamination increases with larger volumes of waste soil. As large volumes of waste soil are usually generated by commercial operators, it is reasonable to expect that appropriate measures are taken to ensure the material is free from contamination and poses no risk of harm to the receiving environment. Therefore, sampling and assessment should be undertaken before large volumes of waste soil are deposited at our facilities irrespective of whether a PCA has occurred at the generating site.

Your Account Manager can provide further advice.

## BULK FILL SUPPLY

Certified sources of WDF can also be re-supplied as a bulk engineered fill to projects where large volumes of material are required.

It should be noted that WDF materials are generally a non-select bulk fill material initially sourced as a waste material that is recovered and processed (where necessary) to make a product for use in a bulk fill application. WDF can be processed to meet the detailed technical specifications and usage requirements of clients.

^ Schedule 3 of the Environment Protection Regulations 2009 define potentially contaminating activities. We can forward a copy of the EPA's standard for the production and use of waste derived fill on request.



### GEOTECHNICAL PROPERTIES OF FILL MATERIAL

Below are some common geotechnical properties that are assessed in a laboratory setting to determine the physical attributes of fill materials.

#### Dry Density and Moisture Content:

- Assesses ability to compact soils when used as a bulk fill material.
- The optimum moisture content for a soil is the moisture condition where the dry density of the soil is maximised for a given compactive effort.

#### Atterberg Limits:

- Provide a basic measure of the nature and behaviour of a fine grained soil.
- Tests are used to assess for suitability to support building structures.
- Tests measure soil plasticity and the susceptibility of a soil to undergo desiccation cracking.

#### California Bearing Ratio (CBR):

- Developed for measuring the load-bearing capacity of soils and is an evaluation of mechanical strength of road sub-grades, base courses etc.
- Generally the harder the surface the higher the CBR rating.

### INTERMEDIATE WASTE SOIL

Intermediate Waste Soil (IWS) can be sourced from a variety of sites and is the product of various excavation and earthworks activities.

Common examples of these sites include:

- commercial and industrial construction site excavations (footings, basements, under-crofts etc.)
- domestic housing site excavations (footings, site levelling etc.)
- trenching works
- site stripping / earthworks.

IWS includes soil, clay, rock, sand or other mineralogical matter but must not contain other waste material or asbestos.

IWS must comply with the Chemical Criteria listed in the EPA's WDF Standard and occur in line with the EPA Auditor Protocol if proposed for reuse as WDF.

Waste soils exceeding IWS criteria are not permitted for reuse as WDF by the EPA and need to be directed to suitably licensed and authorised facilities.

### GENERAL EPA REQUIREMENTS (TESTING)

To be classified as IWS, material must be sampled and assessed in line with the EPA's WDF Standard.

Sampling and analysis should be undertaken by suitably qualified persons and results submitted to ResourceCo for approval before any material can be received for WDF reuse purposes. To support this process ResourceCo can arrange for soil analysis at competitive rates.

#### TRANSPORT OF WASTE FILL

ResourceCo Material Solutions can transport materials from source to disposal sites at competitive rates.

#### TRANSPORT OF IWS

IWS must be transported by appropriately EPA licensed vehicles. EPA Waste Transport Certificates must also be completed before transport.

Waste Transport Certificates are available from the EPA electronic WasteTracker system. ResourceCo Material Solutions can transport IWS from source to disposal sites at competitive rates.