

WALLEYS QUARRY

PRESS INFORMATION

Date: 11.11.2021

Title: Gas Management

Landfill Engineering

In order to be ready for the acceptance and final deposit of waste, there are a number of specialised engineering activities which need to be undertaken at Walleys Quarry, prior to waste being received at site. This is to ensure that the facility provides the containment structures needed to encapsulate the waste, allowing it to degrade over time in a safe, contained, and managed method. These structures must meet current legislation, be approved by the regulator, the Environment Agency and be installed under the independent supervision of a specialist engineer. At Walleys Quarry there are 4 principal structures engineered for the receipt of waste, which are termed “cells” as they are constructed separately to each other, each allowing waste to be landfilled within them upon their installation.

To facilitate the construction of a cell, a specification is produced in advance of the works detailing the design, materials of construction, installation methodology, personnel, plant, and equipment being used in the build. In addition, a regime of conformance testing for the materials of construction and their installation will be produced. This process is called Construction, Quality Assurance (CQA) and is undertaken through our specialist engineering consultants and provided to the regulator, the Environment Agency prior to works commencing for their approval. The cells at Walleys Quarry are constructed of intertwined and compacted layers of low permeability, engineering clay installed at a maximum thickness of 3m. This clay is sourced locally and provides the ideal medium to provide a containment layer between the waste and the underlying strata. This is the first part of the overall encapsulation process.

Once the construction of the cell is complete and the Environment Agency has confirmed their acceptance of the specification, installation and conformance testing, the cell is then able to receive incoming wastes for disposal. The cell will enter an operational phase, with the active deposit of waste commencing. The operational phase will continue, working to clear levels and profiles, determined under the sites permissions and consents called “pre-settlement” levels. Once waste reaches these pre-agreed and consented levels, operations within this section of the site will cease and the area will enter a period of settlement, prior to capping. This allows the deposited waste, under its own weight to settle as it degrades, and air is driven out from the pore spaces within the mass.

Following settlement, the waste will then be available for capping; the second part of the encapsulation process. Again, under a detailed CQA process undertaken by our specialist engineering consultants and contractors, the waste is capped utilising either low permeability, engineering clay or a high-quality plastic membrane. The capping is effectively “tied” into the basal cell engineering to provide a “package” of deposited waste. This ensures that the infiltration of rainwater is minimised and allows for the area to be prepared for restoration, the process of restoring the landfill for its long-term use and care.

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For press information please contact press@walleysquarry.co.uk

Notes to editors:

Website: <https://www.walleysquarry.co.uk>

About Walleys Quarry:

Walleys Quarry in Newcastle-Under-Lyme, Staffordshire is a landfill site, offering safe disposal of waste that cannot otherwise be re-used or recycled.